FOOD COMPETENCE FRAMEWORK

SUPSI

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Milestone 5

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Contents

Introduction

This deliverable describes the **Food Chase Competence Framework,** developed in the context of the Food chase project. This framework is intended to represent the reference framework for professional skills regarding food loss and food waste reduction in the food industry at EU level. It aims to connect educators and organizations operating in the sector to better apply theory to practice in order to increase the sustainability of the food industry and support the circular economy.

The framework also represents a reference point for the creation of innovative curricula and practical experiences aimed at reskilling and upskilling workers in the food industry. In particular, it focuses on the skill gaps and future skills in the food industry's waste management for each of the different phases of the supply chain: production, processing, distribution, consumption. It collects the competences of the From Farm to Fork Specialist, expressed in terms of learning outcomes, as specified by Cedefop[1].

It is structured into five tables: the first one describes generic competences a Food Loss and Waste (FLW) expert must have as fundamental knowledge and skills; the other tables refer to the specific competences connected to the four phases mentioned above, to be acquired in addition to the generic ones.

Each table is hierarchically organized in terms of *macro-competences*, *competences*, and *learning outcomes*. The first column contains *macro-competences*, i.e., collection of related competences. The second column lists *competences*, better detailed in the other columns. The third column specifies macro area(s) the competence belongs to; four different macro-areas have been identified: technical, green, digital, entrepreneurship and resilience. The fourth column describes each competence, by summarizing what expressed in the related learning outcomes. The fifth column details the learning outcomes associated with the competence; the sixth column illustrates potential alignments between the defined competence and other competences expressed in reference competence frameworks such as GreenComp, DigComp, EntreComp. For example, it illustrates how specific agricultural competences align with broader sustainability principles outlined in the GreenComp framework.

It is worth noting that the learning outcomes are classified according to three categories, as defined by Cedefop and DigComp[2]: knowledge (K), skills (S) and attitudes (A).

K	Knowledge is the outcome of the assimilation of theoretical or factual information by learning, e.g., body of facts, principles, theories and practices related to a field of work or study.
S	Skills means the ability to apply knowledge and use know-how to complete tasks and solve problems. Skills can be cognitive or practical.
A	Attitudes are motivators of performance and include values, aspirations and priorities.

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[1] https://www.cedefop.europa.eu
[2] https://publications.jrc.ec.europa.eu/repository/handle/JRC128415

The Food Competence framework is the result of an iterative process involving stakeholders and experts in the food industry. A Permanent Observatory (PO) was set up at the beginning of the project with the objective to understand the skill gaps and the future skills on the four different phases of the food supply-chain. This information was mainly gathered through surveys, debates, and expert's interviews. The PO activity brought to a report that was the basis for first version of the Food Competence Framework; the framework was refined several times to produce the current Food Competence Framework presented here.

The rest of the document firstly presents the generic competences, and then introduces the specific competences related to the four specializations corresponding to the phases.
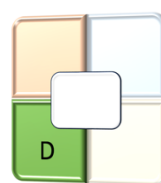
Generic	Agricultural Production	Food Processing	Food Distribution	Food Consumption

The **Food Competence Framework Tables**

Generic competences

The following table includes macro-competences, competences and learning outcomes that any FLW expert must own, as fundamental knowledge and skills. These are a common basis for the other specializations.

MACRO COMPETENCE	COMPETENCE	MAIN CORE	DESCRIPTION	LEARNING OUTCOMES The FLW expert is able to:	ALIGNMENT
Food Waste Prevention, Reduction, Identification, Quantification and Measurement	Food Waste Identification, Quantification and Measurement	Technical	This competence is about monitoring, measuring, and analysing food waste levels across the supply chain, using appropriate techniques for different contexts.	Analyse food waste in the agricultural, processing, distribution and consumption sectors (S) Quantify food waste to develop reduction strategies (S) Identify the main contributors to food waste in various contexts (K) Apply methods to quantify food waste levels (S)	
	Food Waste Prevention and Reduction Strategies	Technical	This competence focuses on implementing best practices and strategies to minimize food waste at all levels of the supply chain, with consideration for local production and consumer habits.	Design food waste prevention strategies for national food systems (S) Apply prevention strategies across multiple stages of the food system (S) Develop tailored waste reduction strategies for food management (K) Implement waste minimization practices to optimize resource use (S) Demonstrate best practices for efficient resource utilization (A)	
Sustainable Food Redistribution and Recovery Systems	Food Recovery, Redistribution and Donation Systems	Technical	This competence is about creating mechanisms and logistics for redistributing surplus food to communities in need through	Design food redistribution programs that address surplus management and community needs (S)	

			partnerships with various organizations.	Manage food donation programs to ensure efficient operations and measurable impact (S) Develop practical solutions for surplus food recovery in collaboration with stakeholders (S) Support social initiatives through participation in food recovery and redistribution activities (S)	
	Digital Platforms for Food Redistribution	Digital	This competence is about utilizing apps and digital platforms to redistribute surplus food and connect food suppliers with recipients.	Implement digital tools for surplus food redistribution (S) Manage platforms supporting redistribution (S) Coordinate digital redistribution initiatives within the national context (S)	[with **DigComp**] 2.4 Collaborating through digital technologies 5.3 Creatively using digital Technologies
	Sustainable Food Surplus Management	Green	This competence is about developing methods to responsibly repurpose and redistribute surplus food to minimize waste and support communities.	Plan frameworks for the redistribution of surplus food (S)	[with **GreenComp**] 1.2 supporting fairness 4.2 collective action
Regulatory Compliance and Waste Disposal Schemes for national and European food system	**Regulatory Compliance in the Food Sector**	Technical Entrepreneurial	This competence focuses on understanding and applying EU and national laws related to food waste management to support sustainable production processes and assist in developing efficient waste disposal schemes that reduce food loss and waste.	Identify legal regulations, incentives, tax supports, and penalties related to food production and food waste management at national and EU levels (K) Apply food waste regulations to ensure legal compliance and support sustainable production practices (S) Organize mechanisms to monitor changes in EU and national legislation related to food systems and waste management (S) Assist in the development, promotion, and implementation of waste disposal schemes aligned with legal and environmental standards (A)	
	Environmental Compliance for Food Waste Disposal	Green Entrepreneurial	This competence focuses on understanding and applying legal and environmental regulations to ensure that business operations support	Explain key environmental regulations and legal requirements, and interpret how they impact sustainability and efficiency in food production (K) Apply environmental regulations in daily business operations to	[with **GreenComp**] 1.1 Valuing sustainability 2.2 Critical thinking

				sustainable, efficient production processes and contribute to the reduction of food loss and waste.	ensure compliance with local, national, and international laws (S) Recommend policies and implement corrective actions to promote sustainable production and address compliance gaps identified during audits or inspections (A)	4.2 Collective action [with **EntreComp**] 2.1 Self-awareness and self-efficacy 2.3 Mobilizing resources 2.4 Financial and economic literacy
Technology and Data Management for Waste Tracking and Analytics in Food Systems	**Smart Technologies for Food Waste Monitoring and Reduction**	Technical Digital		This competence focuses on using technology—such as data analytics, mobile apps, IoT sensors, and AI tools—to track, monitor, and optimize food waste management in businesses through efficient inventory control, real-time monitoring, and improved transportation.	Implement best practices in food storage, handling, inventory management, portion control, and menu planning to reduce food waste in food service and consumer settings (S) Identify available digital tools—including mobile apps and tracking technologies—for monitoring food losses and improving inventory management (K) Apply IoT, AI-based systems, and predictive analytics to optimize tracking, transportation, and spoilage reduction across the food supply chain (S) Use data analytics and smart tools to monitor real-time waste patterns, identify hotspots, and improve operational efficiency (S) Explain the main digital marketing channels and techniques for promoting food waste prevention and sustainable consumption (K)	[with **DigComp**] 1.3 Managing data, information and digital content 2.4 Collaborating through digital technologies 3.1 Developing digital content 3.2 Integrating and re-elaborating digital content 3.4 Programming 4.1 Protecting devices 5.1 Solving technical problems 5.2 Identifying needs and technological responses 5.3 Creatively using digital technologies
	Data Management and Analytics for Food Waste Reduction	Digital		This competence involves collecting, managing, and analysing food waste data to identify patterns, measure impact, and support data-driven strategies for waste reduction.	Analyse food waste patterns and trends (A) Describe the role of data collection and management in supporting food waste tracking and decision-making (K)	[with **DigComp**] 1.1 Browsing, searching and filtering data, information and digital content 1.2 Evaluating data information

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				Interpret key food waste metrics (e.g., weight, cost, environmental impact) (K) Explain technologies used in food waste data tracking (e.g., AI, IoT, blockchain) (S) Use data analytics to evaluate food waste reduction strategies (S) Optimize operations through insight-based planning (S) Use software solutions to generate performance dashboards and reports (A)	and digital content 1.3 Managing data, information and digital content 2.2 Sharing information and content through digital technologies 5.2 Identifying needs and technological responses 5.4 Identifying digital competence gaps
Circular Economy Principles and Sustainable Practices in Food Systems	**Circular Economy Principles in Food Systems**	Green	This competence is about understanding and applying circular economy principles in food systems to minimize waste, promote resource efficiency, and ensure sustainable practices.	Describe the principles of a circular economy in food systems (K) Identify strategies for food waste prevention, reduction, and valorisation (S) Design sustainable recovery and repurposing systems aligned with circular economy principles (S)	[with **GreenComp**] 1.1 Valuing sustainability 2.1 Systems thinking 3.1 Futures literacy
	Environmental Impact Assessment and Management	Green	This competence focuses on evaluating the ecological consequences of food waste and implementing strategies to reduce environmental impacts throughout the food system.	Explain the environmental impacts of food waste, loss, and production processes on ecosystems and natural resources (K) Apply life cycle assessment (LCA) and other tools to measure the environmental impact of products and food systems (A) Identify effective strategies to reduce food waste and its environmental footprint (S) Assess product design and production methods using established environmental sustainability criteria (S) Recommend strategies to reduce the environmental footprint of food systems and product designs (S)	[with **GreenComp**] 1.1 Valuing sustainability 1.3 Promoting nature 2.2 Critical thinking 3.1 Futures literacy 3.2 Adaptability 3.3 Exploratory thinking

	Sustainable Waste and Resource Management Practices	Green	This competence focuses on efficiently managing resources and minimizing environmental impact across the food supply chain through sustainable waste reduction, recovery methods, and eco-friendly packaging solutions.	Explain the importance of resource conservation, recycling, and sustainable production methods that protect the environment and human health (K) Describe food waste recovery options such as composting, biogas production, and reuse for animal feed (K) Apply resource and waste management techniques to reduce consumption, food loss, and environmental impact in business operations (S) Implement waste reduction and composting systems in public and private sectors (S) Analyse and optimize logistics and transportation to reduce spoilage and inefficiencies across the food supply chain (S) Evaluate and apply eco-friendly packaging materials and design principles for sustainable product development (A) Promote sustainability through integrated food system planning and organic waste recycling (S) Demonstrate commitment to sustainability by identifying and acting on opportunities for conservation and innovation (A)	[with **GreenComp**] 1.1 Valuing sustainability 1.2 Supporting fairness 1.3 Promoting nature 2.1 Systems thinking 3.1 Futures literacy 3.2 Adaptability 4.1 Political agency 4.2 Collective action 4.3 Individual initiative
Smart and Sustainable Food Production Systems	**Sustainable Production and Process Management**	Technical	This competence focuses on planning and optimizing production processes, managing equipment, and applying specialized techniques to prevent product loss and food waste across all stages of the supply chain—from cultivation to storage.	Explain how key performance indicators, raw material processing, and maintenance schedules influence production efficiency and food waste (K) Apply effective techniques for raw material preparation, processing, storage, and handling to reduce food loss and ensure product quality (S) Monitor production and equipment performance in real-time to identify inefficiencies and ensure continuous operations (S) Develop solutions to improve production efficiency, minimize delays, and reduce food waste (A)	

				Recommend improvements in raw material and equipment handling to enhance sustainability and reduce operational waste (A) Apply agricultural techniques such as soil cultivation, fertilization, pest control, and resistant plant growth to prevent crop loss (S) Explain optimal harvesting and storage conditions based on product characteristics to reduce spoilage (K)	
	Digital and Climate-Smart Farming	Digital Resilience	This competence focuses on applying digital technologies and smart farming equipment to monitor and optimize agricultural production while adapting food processing techniques to address the impacts of climate change, improve efficiency, and reduce food loss and waste.	Explain how digital technologies (e.g., drones, sensors) are used in agricultural production and maintenance (K) Apply digital tools and techniques to perform maintenance and monitor agricultural systems efficiently (S) Describe the impacts of climate change and global warming on raw material supply, weather patterns, and production efficiency (K) Apply climate-resilient processing and farming techniques to reduce food loss and minimize crop losses (S) Evaluate sustainable strategies that mitigate the effects of climate change on food production systems (A)	[with **DigComp**] 1.2 Evaluating data, information and digital content 2.1 Interacting through digital technologies 2.4 Collaborating through digital technologies
Business Opportunities and Circular Business Models in Food Waste Management	**Entrepreneurial Opportunities in Food Waste and Sustainability**	Entrepreneurial	This competence focuses on identifying and evaluating market opportunities, trends, and innovative approaches—including sustainable logistics, renewable energy, and circular business models—to create new ventures and reduce food waste across the supply chain.	Identify business opportunities in food waste management by analysing market trends, customer needs, and technological advancements (K) Explain the role of innovation and creativity in recognizing and shaping business opportunities (K) Develop creative and innovative business models focused on waste reduction, recovery, and customer value creation (S) Apply sustainability concepts, including renewable energy, to design environmentally responsible business strategies (S)	[with **EntreComp**] 1.1 Spotting opportunities 1.2 Creativity 1.3. Vision 1.4 Valuing ideas 2.3 Mobilizing resources 2.4 Financial and economic literacy 3.1 Taking the Initiative

				Explain renewable energy sources applicable to agricultural production and how to implement supporting systems (K) Build a network of stakeholders and implement sustainable logistics solutions to support business development and opportunity recognition (A)	3.4 Working with Others
	Circular Innovation and Value Creation	Entrepreneurial	This competence focuses on designing sustainable products and innovative services, developing circular economy business models that reduce food loss and waste—such as upcycled products or waste-to-energy solutions—and creating community-driven ventures for food redistribution.	Design eco-friendly packaging, sustainable menus, and value-added product prototypes to support food waste reduction (A) Develop zero-waste food production systems and circular business models to repurpose food waste (S) Create sustainable business models that turn food waste into valuable products and services (S) Implement initiatives that engage local communities in reducing food loss and waste (S) Lead awareness campaigns, redistribution efforts, and food rescue startups to address surplus food (S) Manage business operations focused on food loss and waste reduction (S)	[with **EntreComp**] 1.1 Spotting opportunities 1.2 Creativity 1.4 Valuing ideas 1.5 Ethical and sustainable thinking 2.4 Financial and economic literacy
	Financial Management in Waste Reduction / Managing Budgets	Entrepreneurial	This competence focuses on making informed financial and strategic decisions by prioritizing budgets, securing funding, allocating resources efficiently, and managing risks to support sustainable waste reduction initiatives and optimize business operations.	Explain how to assess resource needs and understand the factors influencing decisions and risks in sustainable business operations (K) Develop financial strategies and prepare funding applications to support waste reduction businesses (S) Apply techniques to monitor resource usage, divide costs effectively, and reduce waste through optimal allocation (S) Assess risks before making decisions, using data and risk types (financial, operational, market) to inform planning (S)	[with **EntreComp**] 1.1 Spotting opportunities 1.4 Valuing ideas 2.1 Self-awareness & Self-efficacy 2.3 Mobilizing Resources 2.4 Financial and economic literacy 3.1 Taking the Initiative

				Apply decision-making frameworks and risk assessment tools to make strategic, sustainable business decisions (A)	3.2 Planning & Management 3.3 Coping with Ambiguity, Uncertainty & Risk
	Developing Business Models	Entrepreneurial	This competence is about developing business models with a focus on reducing food waste.	Explain how to develop business models focused on reducing food waste and loss at the consumer level (K)	3.2 Planning and management 3.1 Taking the initiative
Risk Management and Crisis Adaptation in Food Systems	**Risk Management in Food Systems**	Resilience	This competence focuses on identifying and addressing risks throughout the food supply chain that contribute to food waste and developing mitigation strategies.	Identify the risks related to food waste and the factors that contribute to disruptions in the system (K) Develop mitigation and contingency plans to prevent or manage disruptions in food waste systems (S)	
	Crisis Adaptation and Management	Resilience	This competence is about implementing adaptation and mitigation strategies when crises arise in food systems, and developing effective responses to emergencies that disrupt waste management operations.	Design adaptation, mitigation, and crisis response strategies to ensure continuity in food waste management and food security (A) Apply measures to reduce food waste and maintain food system resilience during crises (S)	
Community Engagement, Awareness, and Behavioral Change	**Community Engagement and Communication for Food Waste Prevention**	Resilience Digital	This competence focuses on engaging local stakeholders, educating communities, promoting behaviour change, and using digital platforms to raise awareness and encourage collaborative, sustainable solutions for food waste prevention.	Engage local communities and build partnerships to co-create solutions and raise awareness on food loss and waste (S) Organize educational initiatives, workshops, and campaigns to foster behavioural change in food waste prevention (A) Describe the role of digital platforms in educating the public about food waste and sustainable consumption (K) Design and recommend digital media strategies to promote food waste reduction and sustainable consumption habits (A)	[with **DigComp**] 1.3 Managing data, information and digital content 3.1 Developing digital content 3.2 Integrating and re-elaborating digital content
	Teamwork and Personal Resilience for Sustainable Food Practices	Resilience	This competence focuses on fostering a collaborative, team-oriented environment in food transportation and logistics while demonstrating emotional resilience	Implement collaborative problem-solving strategies and promote shared responsibility in food handling and waste prevention (A) Understand the importance of emotional control in high-	

			and positive leadership to ensure sustainable and efficient waste management practices.	pressure situations and its impact on decision-making and well-being (K) Build emotional resilience by identifying triggers, applying self-regulation techniques, and leading effectively in food waste management environments (A)	
Strategic Problem-Solving and Adaptability in Food Systems	**Adaptability and Change Management in Food Systems**	Resilience	This competence focuses on strategic planning and the ability to adapt business management approaches to changing conditions, including shifts in food waste policies, market trends, and emerging challenges, to ensure effective waste reduction.	Recognize how external factors—such as market trends, regulations, and consumer behaviour—impact business performance and the need for adaptive strategies (K) Apply strategic planning techniques to personalize business strategies and keep operations aligned with evolving regulations, technologies, and market conditions (S) Analyse business performance and propose flexible solutions to continuously improve and respond to food waste management challenges (A)	
	Problem-Solving and Digital Innovation for Sustainable Food Solutions	Resilience Digital	This competence focuses on identifying solutions to obstacles by leveraging digital tools and platforms to detect issues, innovate responses, and optimize business processes.	Explain key problem-solving techniques—such as brainstorming, root cause analysis, and the use of digital tools—to address business challenges (K) Apply critical thinking, data analysis, and digital technologies to evaluate challenges and develop effective business solutions (S) Integrate problem-solving methods and digital innovation to identify issues, enhance performance, and create value across business operations (A)	[with **DigComp**] 1.3 Managing data, information, and digital content 3.2 Integrating and re-elaborating digital content 5.2 Identifying needs and technological responses
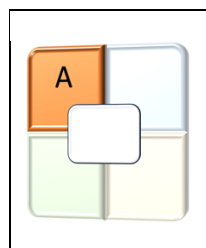
Agricultural Production competences

The following table includes specialized macro-competences, competences and learning outcomes of an expert in agricultural production.

MACRO COMPETENCE	COMPETENCE	MAIN CORE	DESCRIPTION	LEARNING OUTCOMES The agricultural FLW Management Expert is able to:	ALIGNMENT
Soil Management	**Soil Management**	Technical & Green	This competence covers understanding and applying methods to maintain soil fertility, prevent soil loss, and assess the effects of soil management on crop productivity and sustainability.	Describe methods to improve and protect soil fertility and prevent soil loss (K) Discuss how different soil management practices influence crop yield, soil structure, and overall farm sustainability (K)	[with **GreenComp**] 1.1. Valuing sustainability 1.3 promoting nature
	Fertilization Planning	Technical & Green	This competence covers managing crop rotation and soil fatigue prevention to enhance soil fertility, while applying sustainable agricultural practices that support long-term productivity and environmental balance.	Manage issues such as crop rotation and soil fatigue prevention practices to increase soil fertility (S) Implement sustainable agricultural practices to ensure long-term agricultural productivity (S)	[with **GreenComp**] 1.1. Valuing sustainability 1.3 promoting nature
Crop Management	**Crop Production Techniques**	Technical & Green	This competence involves understanding and implementing modern methods for cultivating crops throughout various production stages.	Apply techniques like taking soil samples, tillage, planting, irrigation, fertilization, spraying and harvesting in agricultural production (S)	[with **GreenComp**] 1.1. Valuing sustainability 1.3 promoting nature
	Sustainable Agricultural Practices	Technical & Green	This competence focuses on applying sustainable and agroecological farming techniques to minimize food loss at the production stage, enhance biodiversity, soil fertility, and resilience. All of this is	Apply effective farming strategies that reduce FLW in line with sustainable agriculture principles (S) Apply agroecological techniques such as cover cropping and intercropping to improve soil health and pest control (S)	[with GreenComp] 1.1. Valuing sustainability 1.3 promoting nature

			done with a focus on enhancing agricultural production sustainability, reducing environmental impact, and protecting both the environment and human health.	Describe how to protect the environment and human health with sustainable and environmentally friendly production methods (K)	
Water Management	**Irrigation Techniques**	Technical	This competence involves understanding and implementing different irrigation techniques in agricultural systems to improve production.	Discuss irrigation techniques and systems to prevent water loss and optimise production, according to the water needs of plants (S)	
	Water Management	Technical & Green	This competence focuses on understanding and implementing efficient water management strategies in agricultural systems to prevent water loss and conserve water resources.	Manage water resources efficiently by using innovative technologies to prevent water waste in agricultural practices (S)	[with **GreenComp**] 1.3 promoting nature
Plant Protection	**Pest and disease management**	Technical & Green	This competence focuses on understanding the problems caused by pests and diseases, developing strategies to control them with minimal environmental impact, and implementing effective solutions.	Detail the effect of diseases and pests on production and the methods of combating diseases and pests (K) Implement environmentally friendly combat methods (S)	
	Precision Plant Protection and Agricultural Biodiversity	Green & Digital	This competence focuses on integrating digital tools and advanced technologies for targeted plant protection, while simultaneously understanding and leveraging agricultural biodiversity to enhance ecosystem resilience and reduce reliance on chemical inputs.	Explain the importance of using precision farming tools and IoT devices for efficiency in crop and livestock production (K) Describe the role of agricultural biodiversity and ecosystems in protecting agricultural production and enhancing resilience against pests and diseases (K)	[with **DigiComp**] 1.1 Browsing, searching and filtering data, information and digital content 1.2 Evaluating data, information and digital content 2.1 Interacting through digital technologies

					2.4 Collaborating through digital technologies
Post-Harvest and Circular Systems	**Post-Harvest Handling**	Technical	This competence focuses on optimizing post-harvest processes and storage conditions to minimize spoilage and food loss.	Implement processing, storage and packaging techniques to reduce post-harvest deterioration (S) Describe key factors affecting post-harvest quality and causes of product losses such as logistic, cold chain, storage diseases, pests, temperature and humidity (K)	
	Circular Economy	Technical & Green	This competence focuses on promoting circular economy models in agricultural production by repurposing organic waste into valuable products and implementing efficient waste management strategies.	Implement circular economy solutions for Food Loss and Waste (FLW) at the farm and supply chain levels (S) Evaluate the conversion of organic waste into valuable products (e.g. dried fruit and vegetables, compost, biogas, animal feed) through efficient valorisation strategies (S)	
Smart and Digital Agriculture	**Smart Agriculture**	Digital	This competence focuses on applying advanced digital tools and technologies to optimize agricultural practices, enhance efficiency, improve decision-making, and promote sustainability across the value chain	Apply precision farming technologies (GPS, drones, sensors, IoT devices) for input use, crop monitoring, and livestock management (S)	[with **DigiComp**] 1.1 Browsing, searching and filtering data, Information and digital content 1.2 Evaluating data, Information and digital content 2.1 Interacting through digital technologies 2.4 Collaborating through digital technologies
	Digital Technologies	Digital	This competence specifically addresses the application of AI, IoT, big data, and blockchain within agricultural contexts.	Use digital tools (e.g., software, blockchain) to plan operations, track data, ensure traceability, and reduce food loss and waste (S) Demonstrate digital literacy in interpreting and applying digital data from various sources for production and risk assessment (S)	[with **DigiComp**] 1.1 Browsing, searching and filtering data, information and digital content 1.2 Evaluating data, information and digital content

					2.1 Interacting through digital technologies 2.4 Collaborating through digital technologies
Entrepreneurship and Agribusiness Development	**Agribusiness Management**	Entrepreneurial	This competence focuses on effectively managing sustainable agricultural businesses, encompassing strategic planning, financial management, marketing, and resource mobilization.	Develop comprehensive business plans by analyzing agricultural markets (S) Manage agricultural finance, including budgeting, accounting, and accessing funding sources (e.g., grants, loans) (S) Implement effective marketing strategies, including the use of e-commerce platforms, to promote agricultural products (S) Fill application forms in the correct way to successfully take the grants (S)	[with **EntreComp**] 1.1 Spotting opportunities 1.2 Creativity 1.3. Vision 1.5 Ethical and sustainable thinking 2.2 Motivation and perseverance 2.3 Mobilizing resources 2.4 Financial and economic literacy 3.2 Planning and management 3.4 Working with others
	Innovation	Entrepreneurial & Green	This competence focuses on identifying market opportunities and developing innovative solutions within the agricultural sector.	Implement renewable energy solutions for cost reduction and environmental sustainability in farm operations (K) Discuss value chains and supply chain efficiency from production to market (S) Engage in social and cooperative entrepreneurship for collective action and resource mobilization (S)	[with **EntreComp**] 1.1 Spotting opportunities 1.2 Creativity 1.3. Vision 1.5 Ethical and sustainable thinking 2.2 Motivation and perseverance 2.3 Mobilizing resources 2.4 Financial and economic literacy 3.2 Planning and management 3.4 Working with others

Sustainability, Resilience & Climate Adaptation	Climate Resilience, Agricultural Risk Management & Sustainability	Green & Resilience	This competence focuses on understanding the impacts of climate change on agriculture, identifying and assessing associated risks, and developing effective adaptation and crisis management strategies to enhance agricultural resilience through sustainable practices.	Assess the impacts of climate change on agricultural production and climate-related risks (e.g., drought, extreme weather, pests) (S) Implement adaptation strategies to mitigate production losses and enhance farm resilience to changing environmental conditions (S) Describe the role of agricultural policies and regulations in promoting climate adaptation and sustainability (K) Apply renewable energy solutions such as solar, wind, and biogas to reduce energy consumption in agricultural production (S)	
	Agricultural Policy, Regulations, & Compliance	Resilience	This competence focuses on understanding and ensuring compliance with relevant national and international (e.g., EU) regulations and policies pertaining to food safety, environmental standards, and agricultural practices.	Monitor national and EU food safety policies and regulations (K) Apply regulations pertaining to waste reduction and environmental standards in agricultural practices (S) Explain agricultural rules to ensure practices are safe, sustainable, and environmentally responsible (K) Discuss the importance of transparent record-keeping for regulatory compliance and sound operational planning (K) Detail occupational safety in production (K)	

Food Processing competences

The following table includes specialized macro-competences, competences and learning outcomes of an expert in food processing.

MACRO COMPETENCE	COMPETENCE	MAIN CORE	DESCRIPTION	LEARNING OUTCOMES	ALIGNMENT
				The industrial processing FLW Management Expert is able to:	
Fundamentals of food composition and chemistry	**Food composition and chemistry**	technical	This competence focuses on basic food components (water, proteins, fats, carbohydrates, vitamins, minerals); Food additives and functional ingredients; Effects of processing on nutritional quality.	Identify the major components of food, including water, proteins, fats, carbohydrates, vitamins, and minerals (K) Explain the roles of food additives and functional ingredients in food processing and preservation (K) Describe the effects of common processing methods on the nutritional quality of foods (K) Analyze food labels to interpret nutritional composition, ingredient lists, and the presence of additives or functional compounds (S)	
Food processing technologies and automation	**Food Processing Technology & Efficient Processing**	technical	This competence focuses on understanding fundamental concepts of industrial food processing techniques, implementing best practices to minimize food waste during manufacturing, packaging, and storage.	Explain the different food processing techniques for Food Defence, e.g., to ensure product quality, safety, efficiency, sustainability, and protection against tampering (K) Identify best practices in food production processes (K) Assess how different processing methods influence production costs, resource efficiency, and food waste generation (K) Adjust food processing parameters (temperature, pressure, time) to maintain product quality and minimize losses (S)	

				Analyse industrial food processing techniques to enhance efficiency and reduce waste (S)

Analyze problems encountered in production processes and propose solutions to reduce inefficiencies and food loss (S)

Assess needs and opportunities in the food processing supply chain (S)

Recommend strategies to improve sustainability and reduce food waste (A)

Refine processing practices to ensure quality while improving cost-efficiency and sustainability (A) | |
| | **Food Processing Automation** | digital | This competence focuses on implementing automation technologies to improve efficiency and accuracy in production. | Operate automated systems for food processing (S)

Manage automated systems to optimize food processing efficiency (S) | [with **DigComp**]

1.1 Browsing, searching and filtering data, information and digital content

1.3 Managing data, information and digital content

2.4 Collaborating through digital technologies |
| | **System Optimization** | digital | This competence is about optimizing production processes to reduce food loss and improve waste management efficiency. | Apply system optimization principles, it develops waste prevention strategies and ensures sustainability in production processes (S) | [with **DigComp**]

1.2 Evaluating data, information and digital content

3.2 Integrating and re-elaborating digital content

4.4 Protecting the environment

5.2 Identifying needs and technological responses |
| | **Data Analytics for Food Processing** | digital | This competence is about using data to optimize production processes, predict | Explain how data analytics can help reduce food waste in processing by forecasting | [with **DigComp**]

1.1 Browsing, searching and |

				trends, forecast demand, optimize production schedules, and manage inventory to reduce waste, spoilage and costs.	demand and improving production efficiency (K) Use established tools to interpret production and historical data in order to support demand forecasting, adjust schedules, and contribute to improving efficiency and reducing waste and costs, under limited supervision (k) Analyse production data to enhance efficiency and reduce costs (S) Analyze historical data and trends to predict demand and adjust production schedules to avoid overproduction and waste (S) Refine food processing operations using data analysis in order to reduce food waste (A)	filtering data, information and digital content 1.2 Evaluating data, information, and digital content 1.3 Managing data, information and digital content 2.4 Collaborating through digital technologies
Food preservation, safety and quality management	**Proper Storage Techniques**	technical		This competence involves understanding and applying the optimal storage conditions for raw materials and finished products to maintain their quality, extend shelf life, and reduce waste.	Describe optimal storage conditions for raw materials and finished products (e.g., temperature, humidity, light control) (K) Make adjustments to storage environments based on real-time data (S) Implement proper storage protocols to ensure food safety and prevent waste (A)	
	Quality Assurance & Product Authenticity	technical		This competence is about methods to ensure the authenticity and quality of agri-food products, protecting them against counterfeiting.	Identify key traceability tools, such as blockchain technology and geographical indications (GI), to safeguard product authenticity (S) Implement quality assurance plans to meet high standards in domestic and international markets (S) Apply certification processes to align with EU regulations and protect traditional product branding (A)	
	Food Safety, Quality Control & Food Safety	technical		This competence is about ensuring food safety and hygiene standards to prevent food losses caused by contamination or mishandling, including the application of	Implement HACCP and ISO 22000 standards to optimize food safety management in processing plants (S)	

				standards and protocols.	
	Digital Quality Monitoring Systems	digital	This competence is about using digital tools for monitoring and controlling quality parameters in food production.	Use sensors and IoT devices to ensure real-time quality control (S)	[with **DigComp**] 1.1 Browsing, searching and filtering data, information and digital content 1.3 Managing data, information and digital content 2.4 Collaborating through digital technologies
	Thermal Processing Techniques	technical	This competence is about knowledge of pasteurization, sterilization, and blanching methods in food production.	Monitor thermal processes to ensure product stability (S) Evaluate the effectiveness of thermal processes in maintaining product stability (S)	
	Food Storage and Preservation Knowledge	resilience	This competence focuses on improving education on food storage conditions and packaging choices to reduce food loss, extend shelf life, and minimize environmental impact.	Describe appropriate food storage methods to prevent economic and environmental waste (K) Identify the role of packaging in preserving food quality and extending shelf life (K) Know the best practices for storing different food types to ensure freshness and minimize loss (S) Assess the effectiveness of various food storage conditions (A) Evaluate sustainable packaging technologies and recommend materials based on environmental impact and product type (A)	
Resource efficiency and waste management in food systems	**Raw Materials & Waste Management**	technical	This competence focuses on managing raw materials in the chain of processing and implementing best practices during the processing chain to prevent waste.	Apply best practices for managing raw materials and minimizing waste during processing (S) Evaluate the usability and value of raw materials in different processing contexts (S) Identify critical points where waste occurs during processing stages (S)	

	Staff Training on Waste Management	technical	This competence focuses on the ability to train staff in measuring and minimizing food waste.	Conduct training modules on waste reduction techniques (A) Explain methodologies for waste tracking (S)	
	Raw Material Control	Resilience	This competence is about identifying and mitigating risks related to the availability and quality of raw materials, especially during supply disruptions like climate events or market fluctuations.	Indicate supply chain dynamics and raw material sourcing patterns to ensure consistent availability of ingredients for food processing (K) Identify alternative suppliers to manage procurement processes effectively (S) Monitor the effectiveness of risk mitigation strategies in raw material sourcing, adjusting plans as necessary (A)	
	Energy & Water Efficiency in Processing	green	This competence is about reducing energy and water consumption in food manufacturing while maintaining productivity, and keeping energy production low to prevent costs and energy loss.	Find solutions to reduce energy consumption during processing without compromising productivity (A) Utilize digital twins to optimize processing (S) Apply AI-driven analytics to optimize energy and water usage, and reduce waste (S) Analyse water-efficient systems and recycle water in production (K)	[with **GreenComp**] 1.1 Valuing sustainability 3.3 Exploratory thinking
	Waste Valorization & Circular Economy	green	This competence is about repurposing food waste into by-products such as bioenergy, animal feed, or ingredients for new products, applying circular economy principles and sustainable practices to minimize food processing waste by transforming by-products into valuable resources.	Apply energy-saving technologies and water recycling methods to improve resource efficiency in food processing, supporting circular economy models (S) Identify opportunities to transform food processing waste into valuable by-products and explain strategies for reducing waste and improving resource efficiency (S) Create innovative solutions for transforming food by-products into new marketable products in food processing (A) Identify the role of education and awareness in promoting effective waste reuse and recycling practices in food processing (K)	[with **GreenComp**] 1.1 Valuing sustainability 1.2 Supporting fairness 1.3 Promoting nature. 2.1 Systems thinking 2.3 Problem framing 3.1 Futures literacy 3.2 Adaptability

|				3.3 Exploratory thinking
	Resource Management	green	This competence focuses on improving resource management to prevent inefficient production, food loss, and excessive resource use.	Identify the impact of inadequate resource management knowledge on food production processes (K)	[with **GreenComp**] 1.3 Promoting nature 2.1 Systems thinking 2.3 Problem framing
	IoT and Smart Sensors	digital	This competence involves using IoT devices and smart sensors to prevent spoilage, waste, and ensure optimal processing conditions.	Understand the principles of IoT devices and smart sensors in food processing, including how they monitor conditions like temperature, humidity, and moisture levels (K) Operate smart sensors to monitor and track processing conditions in real time (S) Make informed decisions based on real-time sensor information to adjust environmental conditions and prevent food degradation (S) Automatically adjust processing equipment (e.g., refrigeration or drying systems) based on IoT sensor inputs to maintain optimal conditions and preserve food quality, under supervising (S)	[with **DigComp**] 1.2 Evaluating data, information and digital content 1.3 Managing data, information and digital content 2.2 Sharing information and content through digital technologies 2.4 Collaborating through digital technologies 5.1 Solving technical problems
	Waste Monitoring Software	digital	This competence engages utilizing waste monitoring software to track and analyse food waste across different stages of the food processing process.	Identify types of waste generated during different food processing stages (K) Explain how waste monitoring software functions and how its use supports food waste reduction and sustainability (K) Operate waste monitoring software to collect data on food waste throughout the processing stages (S) Encourage the adoption of waste monitoring technologies by demonstrating their benefits and supporting team members in their practical use (A)	[with **DigComp**] 1.1. Browsing, searching and filtering data, information and digital content 1.3. Managing data, information and digital content 2.4. Collaborating through digital technologies

	Logistics & Supply Chain Optimization	technical	This competence is about improving coordination between production, storage, and distribution to prevent overproduction and spoilage.	Describe just-in-time production models to minimize waste (S) Apply inventory control strategies to prevent spoilage (S)	
	Collecting and Processing Data from Sensors	digital	This competence is about using sensor data to monitor and analyse production processes, reducing food loss and waste.	Describe the impact of insufficient data collection and sensor processing on food production and waste (K) Operate digital tools to collect and process sensor data in real time to detect inefficiencies (S)	[with **DigComp**] 1.3 Managing data, information and digital content 5.1 Solving technical problems 5.3 Creatively using digital technologies
	Smart Manufacturing & Industry 4.0	digital	This competence is about using IoT, AI, digital twins and big data to monitor production efficiency and waste generation in real-time.	Utilize digital twins to enhance process optimization (S)	[with **DigComp**] 3.4 Programming 5.1 Solving technical problems,
Sustainable packaging and product innovation	**Sustainable Packaging & Eco-friendly Packaging Materials**	green	This competence focuses on understanding the advantages of different eco-friendly materials, developing and using biodegradable and recyclable packaging to reduce industrial waste, and creating packaging solutions that reduce environmental impact.	Explain the properties of biodegradable, compostable, and recyclable packaging materials, and compare them with conventional packaging in terms of their environmental impact and how they affect the quality of food products (K) Describe relevant EU and national regulations regarding packaging waste and sustainability (K) Select appropriate eco-friendly materials for specific packaging needs, based on environmental criteria and product requirements (S)(plastic wrap vs biodegradable wrap, vacuum plastic pouch vs PLA/PHA pouch, plastic trays vs cardboard trays etc) Analyse case studies to extract best practices in sustainable packaging innovation (S)	[with **GreenComp**] 1.1 Valuing Sustainability 1.3 Promoting nature 2.1 Systems thinking 3.1 Futures literacy 3.3 Exploratory thinking 4.3 Individual initiative

	Sustainable Food Processing	green	This competence focuses on skills to minimise the environmental impact of food production.	Develop strategies to reduce energy consumption in food processing operations by adopting renewable energy sources and improving energy efficiency (S)	[with **GreenComp**] 1.1 Valuing sustainability
				Understand how water recycling systems function and the necessary steps for their implementation in food processing (K)	
				Understand the principles and processes of Waste-to-Energy technologies used to convert food and packaging waste into energy (K)	
	Life-cycle Assessment of Food Products	green	This competence is about evaluating the environmental footprint of food products from production to disposal.	Describe the life cycle of sustainable practices (S)	[with **GreenComp**] 1.1 Valuing sustainability 3.1 Futures literacy 3.3 Exploratory thinking
	Business Innovation & Sustainable Business Models	entrepreneurial	This competence focuses on developing innovative business models that integrate FLW reduction into food processing and designing business strategies that prioritize sustainability.	Explain the characteristics of sustainable business models and their relevance in the food processing sector (K)	[with **EntreComp**] 3.1 Taking the Initiative 3.2 Planning & Management 2.1 Self-awareness & Self-efficacy 2.2 Motivation & Perseverance 2.4 Financial & Economic Literacy
				Describe the main sources of food loss and waste along the value chain and their economic and environmental impact (K)	
				Identify practices, technologies, or business processes that could reduce FLW and improve sustainability in food processing (S)	
				Analyse and adapt business models to include FLW-reduction strategies (S)	
				Evaluate the balance between sustainability efforts and profitability (S)	
				Develop strategies that integrate environmental goals into business objectives (A)	
	Value Addition & Product Differentiation	entrepreneurial	This competence focuses on enhancing the value of food products through innovative processing	Understand value addition and product differentiation in the food processing sector, and explain why they are important for market success (K)	[with **Entreomp**] 1.1 Spotting opportunities

			and packaging and creating distinct products that stand out in competitive markets.	Identify opportunities for value addition in food products (packaging, nutritional value, local ingredients etc) (S) Compare food products and identify key elements (taste, packaging, origin, branding) that create differentiation from competitors (S)	1.4 Valuing ideas 2.4 Financial and economic literacy
	Marketing around Sustainability	entrepreneurial	This competence involves promoting a brand's commitment to sustainability by highlighting eco-friendly practices and ethical values.	Describe current sustainability issues and consumer behaviour related to eco-friendly products and services (K) Analyse how specific sustainable actions (reducing plastic, energy efficiency) affect the brand image and how to clearly present these impacts to the public (S) Use digital platforms effectively to raise awareness about a company's sustainability values and engage with environmentally-conscious consumers (S) Incorporate sustainability values into overall marketing strategies, aligning with the brand's mission (A)	[with **EntreComp**] 1.1 Spotting Opportunities 1.2 Creativity 1.3 Vision 1.4 Valuing Ideas 1.5 Ethical & Sustainable Thinking 3.4 Working with Others
Digitalization and traceability in the food supply chain	**Traceability Systems**	digital	This competence focuses on using digital tools to monitor processing, trace problems, enhance food traceability and transparency through blockchain and digital tracking.	Explain how digital traceability systems work in the food processing industry, and their role in enhancing food safety and quality (K) Use smart sensors (temperature and humidity sensors) to monitor critical conditions in food processing environments (S) Interpret data collected from digital tools to adjust processes and reduce product loss (S) Interpret basic Human Machine Interfaces (HMI) to track food quality indicators in real time (S) Apply QR code and barcode systems to track the food product's journey from origin to consumer (S)	[with **DigComp**] 1.1 Browsing, searching and filtering data 1.2 Evaluating data, information and digital content 1.3 Managing data, information and digital content 2.1 Interacting through digital technologies, 2.4 Collaborating through digital technologies 4.1 Protecting devices

Operational and financial management	Operational Efficiency and Cost Management	entrepreneurial	This competence emphasizes optimizing production processes to increase output while minimizing waste and costs.	Describe common food production workflows and identify inefficiencies (K) Apply process optimization strategies to reduce waste and enhance production (S)	
	Training on Startup Finance	entrepreneurial	This competence is about improving financial skills to support sustainable, innovative projects that reduce food waste and loss.	Explain the challenges in raising capital, managing financial resources, and finding investors for sustainable food projects (K)	[with **EntreComp**] 2.3 Mobilizing resources 2.4 Financial and economic literacy
	Economic Flexibility	resilience	This competence focuses on adapting to economic instability by managing price fluctuations and market volatility to ensure financial sustainability.	Define financial management and cost optimization strategies to ensure efficient resource use while maintaining product quality and safety (K)	
Stakeholder engagement, innovation and lifelong learning	Collaboration with Stakeholders	entrepreneurial	This competence is about identifying which stakeholders can add value to processing procedures and strengthening partnerships with suppliers and distributors to manage surplus production.	Collaborate with stakeholders (A) Facilitate upcycling through inter-sector collaboration (S)	[with **EntreComp**] 2.3 Mobilising resources 3.4 Working with others
	Collaboration and Networking	Resilience	This competence is about building partnerships and networks to enhance resilience in food processing through shared resources and expertise.	Establish collaborative networks with industry stakeholders to share resources, expertise, and support effective food redistribution efforts (S)	
	Continuous Learning	resilience	This competence focuses on gaining new knowledge constantly to improve practices and stay updated in the field.	Improve knowledge of new best practices (K)	
	Resilience and Innovation	resilience	This competence is about building resilience against supply chain disruptions through innovation and developing products aligned with consumer trends.	Develop innovative products aligned with consumer trends (S) Design systems to maintain food supply stability (S)	

Food policy, regulatory frameworks and strategic risk management	Policy Compliance & Regulatory Adaptation	resilience	This competence focuses on understanding national and EU food waste regulations, implementing changes in safety, quality, and environmental regulations, and adapting business operations accordingly.	Ensure compliance with food waste reduction laws by adapting operations with regulatory frameworks (K)	
	Food Policy Awareness	technical	This competence is about the ability to be constantly updated about the policies adopted at the local level.	Compare best practices and regulatory requirements to achieve sustainable goals (A)	
	Risk Management & Crisis Management	resilience	This competence is about identifying and mitigating risks in food processing procedures, production, supply, and distribution, as well as preparing for and responding to crises such as contamination or supply chain breakdowns.	Develop and implement risk management plans, crisis protocols, and recovery strategies to effectively address operational disruptions (S)	
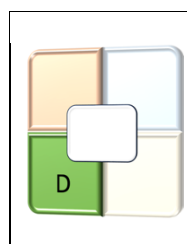
Food Distribution competences

The following table includes specialized macro-competences, competences and learning outcomes of an expert in food distribution.

MACRO COMPETENCE	COMPETENCE	MAIN CORE	DESCRIPTION	LEARNING OUTCOMES The Expert in Innovative distribution against FLW is able to:	ALIGNMENT
Food safety, quality and cold chain management	**Food safety and quality in distribution**	Technical	This competence focuses on ensuring food products are handled, stored, and transported in compliance with health regulations to maintain product integrity throughout the distribution chain, including temperature control and hygiene protocols.	Explain key food safety and quality standards in distribution, including the role of temperature control, hygiene, and labelling in compliance and product integrity (K) Apply Food Defence measures to ensure safety and reliability, including temperature control, sanitation, and hygiene protocols, to ensure compliance during distribution (S) Promote a culture of food safety and quality within the distribution team, ensuring adherence to safety standards at all stages of the distribution process (A)	
	Cold chain management and transportation conditions	Technical	This competence focuses on managing refrigerated storage and transport systems to maintain food safety and quality, including proper temperature monitoring, vehicle loading, and handling practices throughout the distribution process.	Monitor cold chain systems and transport conditions to minimise spoilage and preserve product quality throughout distribution. (S) Apply best practices in handling, packaging, and stacking techniques to maintain product safety and distribution efficiency (K) Implement strategies for optimal vehicle loading and efficient space utilization to maximize transport efficiency and ensure product safety (S)	

	Inventory and stock management	Technical	This competence is about implementing efficient inventory control systems to track and manage stock levels, prevent waste due to overstocking or poor management, and ensure proper storage conditions for food products.	Use appropriate inventory management systems and control methods to reduce waste, meet demand, and improve efficiency and risk management in food distribution (S) Apply stock handling procedures, including correct product placement and rotation methods such as FIFO and LIFO, to prevent deterioration and ensure proper inventory flow (S) Monitor expiration dates, storage conditions, and transport practices to reduce food loss and prioritize waste reduction across the distribution chain (S/A)	
Sustainable logistics and environmental impact in the food system	**Green logistic and sustainable transportation**	Green	This competence focuses on optimizing distribution systems to reduce emissions, implementing eco-friendly transportation methods, and integrating renewable energy into logistics operations.	Optimize distribution routes using eco-efficient methods to reduce environmental impact and avoid unnecessary travel (S) Assess renewable and energy-efficient solutions—such as solar, wind, or hybrid systems—to enhance the sustainability of logistics operations (S)	[with **GreenComp**] 1.1 Valuing sustainability 1.3 promoting nature 2.1 Systems thinking 2.2 Critical thinking 3.1 Futures literacy 3.2 Adaptability 3.3 Exploratory thinking
	Sustainable packaging and transportation in distribution	Green and technical	This competence focuses on implementing innovative and sustainable packaging solutions—using eco-friendly materials and efficient, "less is more" designs—to reduce food loss and environmental impact while ensuring product safety during distribution.	Identify sustainable packaging materials and minimalist techniques, explaining their benefits in reducing environmental impact and waste (K) Apply sustainable packaging solutions in the distribution chain, considering environmental impact, cost-efficiency, and product protection (S) Foster a proactive commitment to selecting and promoting sustainable packaging throughout the distribution process (A)	[with **GreenComp**] 1.1 valuing sustainability 1.2 Supporting fairness 1.3 promoting nature 2.1 systems thinking 3.2 Adaptability

					3.3 Exploratory thinking 4.2 Collective action
	Waste reduction in food distribution	Green	This competence is about minimizing food waste throughout the supply chain by identifying opportunities for more efficient use of resources, optimizing transport methods, and implementing circular practices.	Design processes and strategies to repurpose surplus food and reduce waste across the distribution network (S) Optimize routes, packaging, and transport methods within the distribution network (S)	[with GreenComp] 1.1 Valuing sustainability 2.1 Systems thinking 2.2 Critical thinking 2.3 Problem framing
	Carbon footprint analysis in distribution	Green	This competence is about measuring and mitigating the environmental impact of food distribution through carbon audits and emission reduction strategies.	Conduct carbon audits and propose strategies to lower emissions (S)	[with **GreenComp**] 1.1 Valuing sustainability 3.1 Futures literacy 3.3 Exploratory thinking
Smart distribution technologies for food distribution	**Digital tracking and IoT systems**	Digital	This competence focuses on implementing and using Internet of Things (IoT), RFID, and other digital technologies to monitor food quality parameters such as temperature, location, and shelf life during transportation and storage.	Use digital tools to monitor temperature, location, and other key parameters during food distribution (S) Monitor shelf life of products in transit (S) Integrate IoT for temperature, location, and quality tracking (S) Analyse RFID-based tracking systems (S) Implement compliance measures (S)	[with **DigComp**] 1.3 Managing data, information and digital content 3.1 Developing digital content 3.2 Integrating and re-elaborating digital content 3.4 Programming 5.1 Solving technical problems
	Blockchains and digital food traceability	Digital	This competence is about using advanced digital tools like blockchain to track food products from origin to destination, ensuring transparency, accountability, and	Define key technologies used in digital food traceability systems (e.g., blockchain, RFID, QR codes) to reduce food loss and waste (K) Implement blockchain-based traceability systems and analyse their data to detect risks,	[with **DigComp**] 1.1 Browsing, searching and filtering data, information and digital content

				compliance throughout the supply chain.	inefficiencies, and quality issues across the food supply chain (A)	1.2 Evaluating data, information and digital content 1.3 Managing data, information and digital content 2.4 Collaborating through digital technologies 5.2 Identifying needs and technological responses
	AI in logistics and packaging optimisation	Digital	This competence is about applying artificial intelligence technologies to improve routing, scheduling, inventory control, and packaging solutions for enhanced efficiency and sustainability in food distribution.	Use artificial intelligence and smart technologies to optimize logistics performance and improve sustainable packaging solutions (K)	[with **DigComp**] 1.1 Browsing, searching and filtering data, information and digital content 1.3 Managing data, information and digital content 2.4 Collaborating through digital technologies 3.1 Developing digital content 3.2 Integrating and re-elaborating digital content 3.4 Programming 5.2 Identifying needs and technological responses 5.3 Creatively using digital Technologies	
	Delivery routes planning and optimisation	Green	This competence focuses on optimizing routes, reducing fuel consumption, and minimizing carbon emissions in the transportation of food products through	Identify key factors affecting delivery efficiency and explain how optimized routing contributes to waste reduction and improved resource utilization (K) Apply route optimization tools and real-time data to design and	[with **GreenComp**] 1.3 promoting nature 2.1 Systems Thinking

|					
			efficient planning and real-time adjustments.	adapt efficient delivery schedules that minimize fuel use, time, and food spoilage (S)	2.2 Critical Thinking 3.1 Futures Literacy
Digital management of warehouse and food supply chain	**Digital solutions for food distribution and logistics**	Digital	This competence focuses on using digital platforms and software solutions to efficiently manage food distribution networks, optimize storage, inventory management, and logistics operations.	Identify key components of warehouse and supply chain systems, and apply software solutions to monitor inventory, manage orders, and optimize logistics operations (K/S) Integrate innovative technologies and automation to streamline warehouse and supply chain processes (A)	[with **DigComp**] 1.1 Browsing, searching and filtering data, information and digital content 1.2 Evaluating data, information and digital content 1.3 Managing data, information and digital content 2.4 Collaborating through digital technologies 3.1 Developing digital content 5.3 Creatively using digital technologies 5.4 Identifying digital competence gaps
	Supply chain and traceability systems	Technical	This competence focuses on understanding and optimizing food distribution processes through effective supply chain management and implementing advanced traceability systems for improved transparency.	Manage efficient supply chains to optimize the distribution and overall performance of food products (S) Explain RFID and other traceability tools to improve inventory management, optimize logistics, and explain their role in ensuring product safety, quality, and regulatory compliance (K/S)	
	Data analytics and decision making	Digital	This competence is about collecting, processing, and analyzing large volumes of data to identify trends, make informed decisions, predict demand, optimize routes, and improve efficiency in food distribution operations.	Analyze logistics and supply chain data to support informed decision-making, reduce waste, and optimize operational processes such as inventory and resource management (A) Use key data analytics tools and techniques to analyze logistics operations and support sustainable decision-making (K)	[with **DigComp**] 1.1 Browsing, searching and filtering data, information and digital content 1.2 Evaluation data, information and digital content

					1.3 Managing data, information and digital content 2.4 Collaborating through digital technologies 5.1 Solving technical problems
	Application of digital tools in supply chain management	Digital	This competence focuses on leveraging digital systems such as Warehouse Management Systems (WMS), Retail Management Systems (RMS), and Enterprise Resource Planning (ERP) tools to improve inventory control, resource management, and workforce readiness in food distribution operations.	Identify the functionalities of digital tools like Warehouse Management Systems (WMS), Retail Management Systems (RMS), and Enterprise Resource Planning (ERP) in supply chain operations (K) Design training programs to onboard employees in using digital systems (S) Optimize inventory and resource management through the application of digital technologies (S)	[with **DigComp**] 1.2 Evaluation data, information and digital content 1.3 Managing data, information and digital content 2.2 sharing information and content through digital technologies 2.4 Collaborating through digital technologies
E-commerce and sustainable food distribution channels	**E-commerce and digital food delivery**	Digital	This competence focuses on developing and managing digital platforms to facilitate efficient food distribution, reduce unnecessary transport miles, and enhance customer experience	Design e-commerce platforms for food delivery (S) Manage digital tools for low-waste food distribution (S)	[with **Digicomp**] 2.1 Interacting through digital technologies 2.5 Netiquette
	International trade and export management	Entrepreneurial	This competence is about managing international food distribution operations and ensuring compliance with trade regulations to facilitate smooth global transactions.	Prepare export logistics to ensure smooth international transactions (S) Manage commercial requirements for efficient export operation (S)	[with **EntreComp**] 1.1 Spotting opportunities 1.4 Valuing ideas 2.4 Financial and economic literacy
Business strategy and financial sustainability in food waste reduction	**Strategic and financial planning for sustainable food systems**	Entrepreneurial	This competence focuses on developing sustainable business models and applying strategic planning and financial management to support long-term viability and impact in food waste reduction.	Describe key factors for improving sustainability, efficiency, and competitiveness in food distribution systems (K) Establish operational processes and logistics structures that support quality, efficiency, and food waste reduction (K)	[with **EntreComp**] 1.1 Spotting opportunities 1.2 Creativity 1.4 Valuing ideas

				Develop sustainable business models and financial plans to support redistribution and circular economy goals (S) Implement waste-to-value initiatives to repurpose surplus food into marketable products or services (S) Allocate resources to improve food waste operations and support sustainable growth (S) Explain key financial metrics (e.g., ROI) and how they inform sustainability investment decisions in food systems (K) Assess the economic feasibility of food waste reduction and green investment projects (S) Evaluate the impact of emerging technologies and innovations on the sustainability and performance of food distribution (A)	1.5 Ethical and sustainable thinking 2.3 Mobilising resources 2.4 Financial & economic literacy 1.2 Creativity 3.2 Planning and management 3.3 Coping with ambiguity, uncertainty & risk 3.4 Working with others 3.5. Learning through experience
	Market analysis and opportunity identification	Entrepreneurial	This competence is about analyzing current market trends, customer demands, and emerging needs to discover new areas for business growth in the food distribution sector.	Explain methods and tools—such as market research, competitive analysis, and consumer behavior analysis—to assess market opportunities in food distribution and waste reduction (K) Analyze market data to identify gaps and opportunities for innovative solutions in food distribution and food loss prevention (S) Interpret the impact of market opportunities on business sustainability and food system performance (A) Develop commercial plans for distribution initiatives that enhance sustainability and reduce food loss (S)	[with **EntreComp**] 1.1 Spotting opportunities 1.2 Creativity 1.3 Vision 1.4 Valuing ideas 1.5 Ethical & sustainable thinking 2.4 Financial and economic literacy
	Supply chain and value chain optimisation	Resilience	This competence focuses on improving efficiency, sustainability, and transparency across the food supply and value chains to minimize waste and maximize resource use.	Identify basic causes of food loss during distribution and suggest simple corrective actions (S) Follow standard procedures for proper food storage, handling, and transport to reduce spoilage (S) Apply logistics and inventory practices to improve food	

| | | | | distribution efficiency and minimize waste (S)

Use digital tools and tracking systems to ensure product quality and traceability in food transport (S)

Collaborate with supply chain partners to implement coordinated food waste reduction measures (A)

Evaluate and redesign distribution processes based on performance indicators to reduce food loss (S)

Develop integrated strategies for recovering and redistributing surplus food across the value chain (S) | |
|---|---|---|---|---|---|
| | **Human and operational factors in sustainable food distribution** | Resilience | This competence focuses on understanding logistics operations and integrating food safety, quality standards, workforce development, and retention strategies to promote innovation, efficiency, and sustainability in food distribution systems. | Understand food logistics operations and their relevance to sustainable distribution (K)

Apply food safety and quality standards within food distribution processes (K)

Implement workforce training programs to promote innovation and efficiency in food distribution (A)

Develop employee retention strategies that support workforce stability in food logistics operations (A) | |
| **Partnership building and stakeholder engagement for food system innovation** | **Building strategic networks and partnerships** | Green Entrepreneurial | This competence focuses on fostering collaborative partnerships with stakeholders across the food distribution value chain to minimize waste, redistribute surplus food, and enhance resource efficiency. | Identify key collaborators across the food distribution sector, including value chain actors and non-profit organizations (K)

Align sourcing strategies with sustainability goals to support food loss and waste reduction (K)

Establish partnerships across the food value chain to promote redistribution and efficiency (S)

Share best practices with stakeholders to improve joint food waste reduction efforts (S)

Develop partnerships with waste valorization actors to support circular food systems (A) | [with **Greencomp**]

1.1 Valuing sustainability

3.1 Futures literacy

3.3 Exploratory thinking

4.1 Political agency

4.2 collective action

[with **EntreComp**]

2.4 Financial and economic literacy |

					2.3 Mobilising resources
					3.4 Working with others
					2.5 mobilising others
					3.4 working with others
	Stakeholder communication and engagement	Resilience	This competence involves engaging effectively with diverse stakeholders, using appropriate communication tools and approaches to foster collaboration, build trust, and align interests toward shared goals in reducing food loss and waste.	Stay updated on food waste regulations to ensure compliance in distribution practices (A) Advocate for policies that promote sustainable food distribution and waste reduction (A) Promote partnerships that enhance the efficiency and resilience of food distribution networks (S) Explain the importance of communication in managing disruptions and maintaining trust in food distribution systems (K) Adopt timely and clear communication methods to manage client expectations during distribution emergencies (S) Assess client feedback to improve communication strategies and distribution performance (A)	
Risk management and supply chain resilience to prevent food loss	**Risk management & crisis response**	Resilience	This competence is about identifying potential risks in distribution networks and developing strategies to deal with unforeseen situations, disruptions, and emergencies to ensure business continuity and minimize food loss.	Define risk management principles in the context of food distribution logistics (K) Identify key risks and vulnerabilities that may disrupt food distribution, including operational, financial, legal, and environmental factors (K) Develop contingency plans to ensure business continuity and minimize food loss during disruptions (S) Apply crisis management techniques to reduce the impact of unexpected challenges in food logistics (S) Implement recovery strategies that minimize losses and restore distribution operations (S)	

| | | | | Strengthen resilience in food logistics through flexible supply chain design and stakeholder collaboration (A)

Evaluate past disruptions in food distribution to improve future crisis responses and risk mitigation strategies (A) | |
|---|---|---|---|---|---|
| | **Supply chain resilience and adaptability** | Resilience | This competence focuses on building flexible and resilient food supply chains that can adapt to changing market conditions, fluctuations in demand, and unexpected disruptions by establishing backup routes, local hubs, and diversified supplier networks | Analyze market trends to identify opportunities and challenges in the food supply chain (S)

Adapt operations in the food distribution system to align with evolving market trends (S)

Describe the principles of building a flexible and resilient food supply chain (K)

Evaluate changes in the food supply chain and recommend improvements to increase efficiency and reduce risks (A) | |
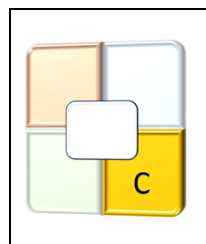
Food Consumption competences

The following table includes specialized macro-competences, competences and learning outcomes of an expert in food distribution.

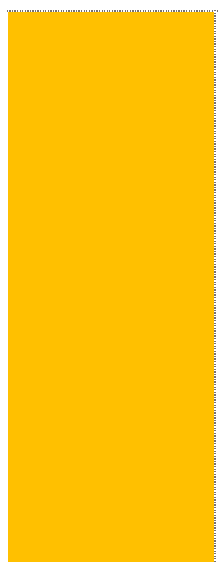| MACRO COMPETENCE	COMPETENCE	MAIN CORE	DESCRIPTION	LEARNING OUTCOMES The Expert in consumption against FLW is able to:	ALIGNMENT
Food information and consumer communication	**Food labelling and smart labelling**	Technical & Digital	This competence focuses on understanding food labelling regulations and interpreting nutritional information to make informed consumer choices. It is also about the use of digital technologies, such as QR codes, RFID tags, and NFC systems, to provide detailed, real-time information about food products.	Evaluate food labels to assess nutritional information (S) Explain food labels to help others make informed choices (S) Educate consumers on making informed nutritional choices based on food labels (S) Identify essential information to include on smart food labels (S) Use digital tools (e.g., apps, QR scanners) to access and interpret smart label data (S) Implement smart labelling systems that provide real-time product information in food consumption sector (A)	[with **DigComp**] 1.2. Evaluating data, information and digital content 2.3. Engaging in citizenship through digital technologies 3.2. Integrating and re-elaborating digital content
	Food Allergies and Intolerances	Technical	This competence is about understanding common food allergens and their impact on consumers' health and safety.	Identify allergens and intolerance-related ingredients in food products to assess health risks (S) Explain allergen-related risks to help others make safe food choices (S) Provide recommendations for safe consumption based on allergen identification (S)	
	Expiry Date Management	Digital	This competence consists of using technology to track and manage products throughout their shelf life, ensuring that food products are	Define the importance of expiry date management in ensuring food safety, reducing waste, and maintaining compliance with regulatory standards in the food consumption sector (K)	1.2. Evaluating data, information, and digital content 5.2. Identifying needs and

			consumed while still safe and fresh.	Use available data (e.g., labels, digital records) to identify near-expiry products and recommend stock rotation strategies to minimize waste. (S) Use systems for tracking and monitoring expiry dates using digital technologies, such as RFID, QR codes, or inventory management software (A) Monitor expiry data and suggest improvements to household or community-level practices that reduce spoilage and improve consumption planning (S)	technological responses 5.3. Creatively using digital Technologies
Food safety in the consumption sector	**Food Safety Regulations and Hygiene**	Technical	This competence is about ensuring proper handling, preparation, and storage of food to avoid contamination and maintain safe food practices. It also focuses on understanding and applying the legal requirements and standards set by regulatory authorities to ensure that food is safe for consumption.	Implement safe food practices to ensure hygiene and safety (S) Implement HACCP procedures to ensure the food produced is safe (A) Explain hygiene rules and proper food handling to others (S) Apply food safety regulations in daily operations to ensure compliance with legal standards for food safety and hygiene (S) Describe the legal requirements for food safety, packaging, and storage as stipulated by national food safety authorities (K) Organize regular audits to ensure compliance with food safety regulations and identify any potential gaps in adherence to legal requirements (S)	
	Food Handling Protocols	Technical	This competence is about following the specific procedures and best practices required to maintain food safety during storage, preparation, and serving.	Explain the key food handling protocols for storing, preparing, and serving food safely in the food consumption sector (K) Apply proper food handling techniques, including safe temperature controls, personal hygiene practices, and cross-contamination prevention (S) Train staff in following proper food handling protocols (A)	
Digital competences for food	**Data Analytics for Food Management**	Technical Digital	This competence focuses on effectively implementing data analysis and big data methods to identify	Recognize data types relevant to food consumption analysis (e.g., quantity prepared, served, returned, customer satisfaction) (K)	[with **DigComp**] 1.1 Browsing, searching and filtering data,

consumption management			sources of food waste, understand consumption patterns, predict food trends, and optimize food management processes to support more sustainable and healthier food consumption practices.	Describe several methods for collecting data about food consumption and waste (customer feedback forms, Google Forms, Excel spreadsheets) (K) Use basic tools (Excel functions or filters) to sort, count, and calculate waste percentages (S) Use digital applications (Expiratory date reminder, Expiration date scanner etc)) to monitor product expiry dates and to donate leftovers (S) Suggest actions to reduce food waste based on the data collect (adjusting portion sizes, modifying menu options, improving food presentation) (A) Use data analysis to help consumers make informed decisions (trend and comparative analysis) (S) Create dashboards and visual reports (charts, graphs, infographics) to monitor food consumption and waste trends (S)	information and digital content 1.3 Managing data, information and digital content 2.4 Collaborating through digital Technologies 4.1 Protecting devices 5.2 Identifying needs and technological responses 5.4: Identifying digital competence gaps
	Demand Forecasting in food consumption	Green	This competence focuses on predicting future food demand to minimize waste, optimize inventory management, and ensure efficient use of resources.	Describe key methods and tools used in demand forecasting to predict food consumption patterns and optimize inventory management (K) Explain the role of demand forecasting in reducing food waste and enhancing sustainability (K) Analyze historical data to identify trends and predict future food demand (S) Identify key factors that influence food demand in consumption settings (e.g. day of the week, weather, seasonality, events) (S) Collaborate with suppliers and stakeholders to align inventory planning with demand forecasts and prevent stockouts or overstocking (S)	2.1 Systems Thinking 2.2 Critical Thinking 3.2 Adaptability

Financial management for the food consumption sector	**Circular Economy Principles**	Green	This competence is about understanding how the linear economy model produces waste and implementing circular approaches in food systems.	Explain key principles of the circular economy and how they apply to sustainable food systems. (K) Identify strategies for food waste prevention in consumption (S)	
	Financial Management & Investment	Entrepreneurial	This competence is about budgeting, financial planning, and securing investment for food-related businesses and waste reduction projects.	Provide cost management techniques to effectively optimize business operations (S) Apply daily sustainable practices, offering tools and techniques to overcome the financial barriers for organic food (S) Design sustainable and profitable business models that address food system challenges. (S) Determine the necessary steps to access appropriate financing sources (public funds, private sector investments, social impact investments, crowdfunding, etc.) for projects that aim to reduce food waste at the consumption stage (S)	[with **EntreComp**] 1.1 Spotting opportunities 1.4 Valuing ideas 2.4 Financial and economic literacy
Food waste management	**Portion Control**	Technical	This competence focuses on implementing effective portion control practices to reduce excess waste at individual or household levels.	Prevent over-preparation and food waste (S) Use techniques to manage portion sizes effectively with the context of HoReCa (S)	
	Food Preservation & Storage	Technical	This competence is about applying food storage methods that preserve food quality and extend shelf life, reducing the likelihood of food spoilage and waste.	Implement food preservation methods that minimize waste (S) Apply storage techniques that extend shelf life (S)	
	Waste Management and Minimization	Technical Green	This competence focuses on applying waste management strategies and implementing reduction practices across the food supply chain by developing planning, storage, and consumption approaches that minimize food waste in households and communities.	Implement waste separation techniques (S) Manage organic waste to reduce landfill impact (S) Integrate waste reduction strategies such as lean manufacturing and reverse logistics into food supply chain operations (S) Promote the implementation of systems at the household level to reduce waste (S)	[with **GreenComp**] 1.1 Valuing sustainability 1.3: Promoting nature 4.2 Collective action 3.1 Futures literacy

				Increase food utilization through conscious choices (S) Develop action plans to reduce waste and repurpose leftovers (S)	
	Repurposing Leftovers	Green	This competence involves using leftover food or ingredients to create new meals or products, reducing food waste and promoting sustainability.	Explain the environmental and economic benefits of repurposing leftovers to reduce food waste (K) Evaluate the quality and safety of repurposed ingredients to ensure the food remains healthy and compliant with regulations (S) Create menu items or recipes that creatively incorporate repurposed leftovers without compromising food quality (S) Implement strategies to repurpose leftovers effectively, ensuring the safe transformation of surplus food into new dishes (A)	[with **GreenComp**] 1.2 Creativity 1.3 Vision 1.4 Valuing Ideas 2.3 Problem Framing
	Business models and lean management for waste reduction	Entrepreneurial	This competence is about designing innovative business models and strategies dedicated to food waste management at the consumption level, incorporating circular economy principles.	Design sustainable and circular business models to reduce food waste (S) Create and offer sustainable products or services that support consumer needs (S) Apply circular economy models and practices to reduce and repurpose food waste (S) Evaluate the cost-benefit of green initiatives to support decision-making (A) Explain lean management principles for improving sustainability and reducing waste (K) Implement lean management strategies to optimize food inventory and minimize waste (S) Assess food consumption operations to identify improvements and reduce waste (A)	[with **EntreComp**] 1.1 Spotting Opportunities 1.2 Creativity 2.4 financial and economic literacy 3.2 planning and management 3.3 Vision

	Community Food Redistribution	Resilience	This competence focuses on establishing resilient systems for redistributing excess food to reduce waste and improve food security in communities.	Develop local systems for redistributing surplus food (S) Avoid waste through structured redistribution (S)	
Environmental attitude in food consumption	**Sustainable consumption habits**	Green	This competence is about promoting sustainable food choices and behaviors at the consumer level, reducing the environmental footprint of food consumption and developing responsible habits.	Calculate the environmental footprint of different diets to assess sustainability (S) Communicate the environmental impact of dietary choices to raise awareness (S) Promote conscious and sustainable food consumption practices (A) Apply sustainable behaviors such as food reuse, waste reduction, and local purchasing (A) Identify sustainable food products and distinguish the meaning of eco-labels and certificates (K) Develop responsible habits to reduce waste and support environmentally friendly food systems (A) Give practical examples of how to integrate sustainability principles in daily food-related decisions (K) Reduce reliance on imported foods by encouraging locally sourced alternatives (A)	[with **GreenComp**] 1.1 Valuing sustainability 1.2 Supporting fairness 2.2 Critical thinking 3.1 Futures literacy 3.3 Exploratory thinking 4.3 Individual initiative
	Sustainable Packaging	Green	This competence focuses on knowledge of sustainable materials and their application, as well as the ability to recognize more environmentally friendly packaging options.	Promote zero-waste food consumption practices, including the adoption of alternatives to single-use packaging (A) Engage stakeholders through communication and collaboration strategies to support environmentally friendly packaging solutions (S) Identify eco-friendly packaging options and their applications in sustainable food systems (K)	[with **GreenComp**] 1.1 valuing sustainability 2.2 critical thinking 2.3 problem framing 3.2 Adaptability 4.3 Individual initiative
	Promoting Environmentally Sustainable	Green Resilience	This competence focuses on enhancing sustainability in food consumption by	Explain the benefits and feasibility of responsible and sustainable food consumption (K)	[with **GreenComp**]

	Food Consumption		connecting pro-environmental attitudes with real consumer behaviors through community-based approaches.	Budget healthy and environmentally friendly food choices (S) Promote nutrition education for sustainable and affordable diets. (A) Describe community-based food sharing and cooperative models (K) Organize local food-sharing or cooperative platforms (S) Support mutual aid networks to enhance food security (A)	3.1 futures literacy 4.3 individual initiatives
Food technology for a sustainable food consumption sector	**Food Waste Tracking Platforms & Software**	Digital	This competence is about monitoring, managing, and reducing food waste by using digital tools to track waste sources, optimize inventory, and enhance sustainability through the identification of excess waste and inefficiencies.	Define how food waste tracking tools support inventory management, waste reduction, and sustainability (K) Use food waste tracking software to identify waste sources and inefficiencies (S) Assess food waste patterns to create actionable plans for waste reduction and cost savings (A) Integrate food tracking apps to optimize nutritional outcomes and provide examples (S)	[with **DigComp**] 1.1 Browsing, searching and filtering data, information and digital content 1.2. Evaluating data, information, and digital content 1.3 Managing data, information and digital content 2.4 Collaborating through digital technologies 3.4 programming 4.1 protecting devices 4.2 protecting personal data and privacy 5.3. Creatively using digital technologies
	E-Commerce for Food Products	Digital	This competence focuses on effectively using online platforms to search for and purchase quality food ingredients and products.	Use online platforms to purchase food items efficiently (K) Recommend food items based on analysis of online platforms and consumer needs (K)	1.1 Browsing, searching and filtering data, information and digital content 1.3 Managing data, information

				and digital content
				2.4 Collaborating through digital technologies
Digital Communication & Collaboration	Digital	This competence is about the effective use of digital platforms and tools for communication, collaboration, and tracking systems in food waste management.	Use digital platforms and tools that can be used to effectively communicate and collaborate with stakeholders in food consumption (S) Use digital technologies and tools to track and manage food waste and loss (S)	[with **DigComp**] 2.1. Interaction through digital technologies 2.2. Sharing information and content through digital technologies 2.4. Collaborating through digital technologies 5.3. Creatively using digital technologies
Education, training and consumer service in the food consumption sector / **Public Awareness for sustainable consumption**	Entrepreneurial	This competence focuses on creating social awareness and educational programs about sustainable food consumption and waste reduction.	Create social awareness on sustainable food consumption (S) Launch awareness campaigns on food waste reduction (S) Manage educational programs that support sustainable practices (S) Design marketing campaigns that highlight sustainability (S) Propose innovative retail ideas to enhance consumer engagement (S) List key concepts related to sustainable food consumption, mindful eating, and food-waste awareness campaigns (K) Explain the environmental, economic, and social impacts of food waste (K) Compare different awareness campaign methods—like debates, guest speakers, digital tools—and assess which might resonate best with specific audiences (S) Assess proposed awareness campaigns for reach, inclusivity,	[with **EntreComp**] 1.1 Spotting opportunities 1.4 Valuing ideas 2.4 Financial and economic literacy 2.5 Mobilizing others

				cultural relevance, and educational effectiveness (S) Design a multi-channel awareness campaign (using posters, workshops, social media, events) to foster sustainable consumption within a targeted community (S)	
	Customer Service Training in HoReCa	Entrepreneurial	This competence focuses on developing the skills and strategies needed to engage and serve customers effectively, which directly impacts business growth, customer loyalty, and overall success.	Describe the core principles of excellent customer service, including communication skills, active listening, and problem-solving (K) Apply effective communication techniques to interact with customers and address their concerns professionally (S) Cultivate a positive and supportive attitude towards customer service, understanding its impact on business growth (A)	[with **EntreComp**] 1.1 Spotting Opportunities 2.1 Self-awareness & Self-efficacy
	Nutrition and Well-being Education	Resilience Technical	This competence is about promoting healthy and sustainable dietary habits while understanding the connection between food choices, nutrition, and mental well-being.	Teach methods for budget-friendly, nutritious meals (S) Encourage reduction of food waste through proper storage (A) Advocate for balanced diets to improve public health (A) Recommend dietary habits that support emotional resilience (A) Provide guidance on managing dietary challenges during difficult times (A) Analyze dietary needs to identify nutritional requirements (S) Recommend balanced meal plans based on dietary analysis (S)	
	Consumer Behavior and Claims Management	Resilience	This competence focuses on studying the decision-making processes of consumers when selecting, purchasing, and consuming food products, as well as handling consumer complaints and product issues.	Discuss key drivers of consumer behavior, such as health trends, sustainability, and socio-economic factors influencing food choices (K) Analyze consumer data through market research, surveys, and social listening to forecast shifts in demand and preferences (S) Prioritize responsiveness to the evolving needs of consumers (A)	

				Explain the process of handling customer complaints, legal claims, and product recalls (K) Acquire skills in communication and conflict resolution to effectively handle customer claims and maintain positive relationships (S) Examine consumer claims with critical thinking to identify root causes and areas for improvement (A)	
	Stress Management	Resilience	This competence is about understanding and applying techniques to manage stress related to food systems, dietary changes, and business management.	Describe stress management techniques (K) Apply stress management techniques (S)	
Risk management in food systems	**Risk Management**	Entrepren eurial	This competence is about analyzing risk factors associated with food waste reduction initiatives.	Analyze the various risk factors (e.g., supply chain risks, technological risks, financial risks, legal and regulatory risks, and market risks) associated with entrepreneurial activities focused on reducing food loss (S) Explain how each risk category—such as supply chain disruptions or regulatory compliance issues—specifically hampers food-loss entrepreneurship (K) Describe real-world examples or case studies illustrating the impact of these risks on food-waste ventures (K) Classify risks into appropriate categories based on hypothetical or actual scenarios from food-waste projects (S) Use a risk-assessment framework to identify and rate the severity and likelihood of specific risks in a given food-reduction initiative (A) Compare how supply chain risks versus market risks uniquely affect project viability (K) Design a comprehensive risk-management plan that	[with **EntreComp**] 3.3 Coping with uncertainty, ambiguity and risk

				addresses supply chain, technological, financial, legal, and market risks for a new food-loss startup (A) Integrate mitigation measures—such as diversifying suppliers or securing lines of credit—into a cohesive risk register tailored to food-waste reduction efforts (A) Develop contingency plans and early-warning indicators for critical /high risks (A)	
	Adaptive Consumption Strategies	Resilience	This competence is about developing flexible consumption behaviors and risk management strategies in response to changing conditions, crises, and potential food waste risks.	Create strategies to adapt consumption behavior during crises (A) Minimize waste and address shortages in critical periods (S) Establish strategies to reduce food loss caused by poor storage or overbuying (S) Manage food risks at household level (S) Know the characteristics of adaptability and flexibility behaviours to increase resilience in business management (K)	