Mediterranean Youth, NEETs and Women Advancing Skills, Employment and Awareness in the Blue and Green Economy (MYSEA)

Activity 4.1.1: Designing the Curricula Methodology

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1. The MYSEA Project and its Beneficiaries

MYSEA project promotes social inclusion and fight against poverty by increasing the employability of 1000 youth (18-24 years old), women (all ages) and NEETs (up to 30 years old) in the agrifood and waste management in five Mediterranean countries. MYSEA aims to provide the youth, women and NEETs with the marketable skills to boost their employment rates, make career choices and improve their life. MYSEA builds on the outputs of WP3 to design a total of four cross-border training curricula aiming at the enhancement of transversal skills, digital skills, sector-related skills and entrepreneurial skills. The training programmes will be translated into the five consortium languages (AR, GR, IT, ENG, FR).

The training intends to bridge the skills gaps between labour market needs and supply and equip participants with the much-needed competencies to embark on an entrepreneurship journey through founding their own associations. MYSEA foresees a total of 15 associations launched at the end of the project following a total of 350 hours of mentoring and coaching with leading mentors to strengthen personal skills and offer career guidance for promoting safe employment options. MYSEA aims to align the experience gap. Trained and mentored individuals will have opportunities to enhance their soft and hard skills through the training and mentoring activities. To achieve this objective the project is structured in two phases:

1. In principle, the Partners gathered all relevant information about the skills that the Primary Beneficiaries already possess and the ones most required by the Economic Actors of the Blue and Green Economy in every Country, to identify the gaps.
2. The second includes the development of 20 modules for the development and/ or enhancement of the necessary knowledge, skills and competences required to integrate in the labour market and are based on the following 4 cross border topics:
   - Transversal skills;
   - Digital skills;
   - Sector Related skills;
   - Entrepreneurial skills

In particular, Youth, Women and NEETs have been identified as the Primary Beneficiaries of the project because they are strongly disadvantaged and underrepresented in the labour market. They are facing high unemployment rates, have scarce work opportunities (especially the graduates and the skilled youth compared to their level of qualifications), have lower quality jobs and are paid lower wages (especially women) compared to the average.

On the other hand, Agri-food and Waste Management are two of the most important sectors for creating job opportunities and attracting investments in the future in the participating countries, given that the European Union and the international Governments are significantly promoting the Blue and Green Economy. The international Communities are concerned about the impact of the current consumption levels, about inequalities that are affecting specific population groups and areas in the planet, about global warming and the consequences of climate change and they are asking for producing and consuming in a more sustainable way. They are fostering the application of the Circular Economy Concept and the Eco-Responsible Innovation, which are key concepts for the design of the modules and training courses of the Skills Development Agenda.

The selected primary beneficiaries of the project (Youth, Women and NEETs) are characterised by a high degree of heterogeneity, in terms of age, field of specialisation, skills and general background. For this reason, the consortium partners have decided, based on the findings of the research carried out, to develop the selected modules in such a way so as to be attended by both low skilled participants and highly skilled ones across all the PPs Countries.

Activity 4.1.1: Scope and Aim

Activity 4.1.1, Designing the Curricula Methodology, is part of MYSEA's Output 4.1. The Output foresees 1 document that outlines the methodology of curricula. The document identifies and defines: the goal and tasks of the training process to follow as part of WP4; theoretical and practical knowledge of trainees, skills and competencies that are to be adopted; education and teaching process (i.e. knowledge, skills, and attitudes); the organizational forms, strategies and methods; means to be used; anthropological, psychological and social peculiarities and characteristics of trainees; practical aspects of the trainings such as where and when is the

learning. The Methodology document is prepared with input from all Project Partners, and it aims to help them in the development of other Outputs that are part of WP4. In particular, Activity 4.1.1 foresees that PPs and experts working for TVET and economic actors shall adopt an innovative approach to developing the cross-border curricula methodology. Through design thinking in learning, PPs shall ensure an innovative, creative and human-centered process and mindset that employs collaborative and multidisciplinary teams in order to generate user-focused training packages.

In the above context, this document is organized in 5 distinct Chapters. The first one is an Introductory Chapter to the context of the Activity, introducing the Project, its beneficiaries, and the scope of the document. This is followed by Chapter 2, that describes the peculiarities that characterize the development of a Cross-Border Curriculum. Chapter 3 introduces the Design Thinking Approach, how it can be utilized in learning and education, and how it pertains in regards to the Activities of WP4 in the MYSEA Project. Subsequently, Chapter 4 details the Learning Goals and Tasks of all Project's Training Packages. This Chapter is therefore considered to be very important for the implementation of the training, and will guide the courses' content development. Finally, Chapter 5 defines the Educational Tools and Methods to be used by the Content Developers and the Trainers. Besides offering the basic theoretical background of the training and evaluation approaches to be followed, the Chapter also provides an array of tangible and practical set of tools and methods to be adopted by the trainers.

2. Designing of Cross-Border Curricula

All the PPs Countries are characterised by high percentages of youth unemployment, skill mismatch, gender inequalities, social marginalisation, poverty, the persistence of socio-cultural norms, rigid regulations and very serious problems caused by immigration (refugees and migrants) and emigration (brain drain). These countries are in need of reforms and modernisation, in principle of the general education and TVET provision, in order to become more attractive providing high quality education and training options for youth, and addressing the skills needs of companies and governments towards innovation, competitiveness and progress.

The MYSEA project has identified the weaknesses of these national contexts and has designed the project results in such a way so as to help the most disadvantaged people to enter in the labour market through the enhancement of their skills towards the Green and Blue Economy.

The beneficiaries have different ages, nations of origin, levels of education, fields of qualification and backgrounds but the Skills Development Agenda Scheme has to indicate a common ground for skills development in the name of a common Mediterranean identity of the countries involved in the MYSEA project. The cross-border training curricula aim at the enhancement of skills and acquisition of competences of Mediterranean Youth, Women and NEETs and to foster cooperation, integration, mobility and peace in the Region in the selected sectors (Green & Blue Economy).

For the design of the modules the consortium partners relied on the collection of feedback from the project stakeholders and in particular representatives from the agri-food and waste management sectors. For the collection of feedback, the partners developed tailored questionnaires for carrying out interviews aimed at identifying the skills needs.

The majority of the participants have shown appreciation for the MYSEA project and gave useful suggestions, opinions and comments on their Sustainability perspectives, Social Inclusion, Waste Management and Good Practices adopted at national level or by the Companies.

A Skills Development Agenda Scheme was designed, taking in consideration all the findings from the survey and all the recommendations that the Partners reported in their Territorial Analysis. The scheme highlights the main topics for designing the 20 modules for the development of the training curricula of transversal, digital, sector-related and entrepreneurship skills.

The consortium members agreed to develop five courses for every typology of cross-border training curricula that have been carefully calibrated and selected for improving the skills of the main Beneficiaries of the MYSEA project that could be low skilled recipients and high skilled recipients in all the PPs Countries.

The last recommendation of the Cross-border Analysis is to adopt a common ground of skills development among the PPs Countries but to adapt the typology of training courses to the national contexts and specificities when it is necessary, for example when it comes to the sector-related skills.

The curriculum development process organises what will be taught, who will teach it, and how it will be taught in a methodical manner. Each component has an effect on and interacts with the others. For instance, what will be taught is contingent upon who will be taught (e.g., their stage of development in age, maturity, and education). The manner in which content is taught is influenced by the profile of the participants, their characteristics, and the objective.

1. The first step includes consideration of social and academic needs for the training programme, as well as the necessary resources. The social needs have been identified by consultation with the stakeholders. The academic needs have been defined as a result of comparing skills demand and supply and with the objective of increasing the employability potential of the project beneficiaries.

2. Definition of trainers' profile. It is necessary to define the level of the training programme, taking into account European and National level descriptors. This step also includes defining the objective of the programme, in the case of the MYSEA Project, to enhance the employability potential of youth, women and NEETs in the agri-food and waste management sectors in the participating countries.

3. Definition of the learning objectives. This step includes the definition of what the programme aims to achieve for the participants.

4. Definition of generic and subject-specific skill and competences, which should be obtained through the participation in the programme. In order to define the related competencies it is necessary to take into account the EQF/ NQF, feedback/ information from employers, professionals, and associations, and sector-specific data.

5. Definition of learning outcomes. While competencies are a dynamic blend of knowledge, understanding, skills and abilities, learning outcomes are assertions about what a student is expected to know, comprehend, and/ or demonstrate upon completion of the training process. Consequently, achieving the learning objectives contributes to acquiring the competencies. As a result, the learner must attain multiple learning outcomes in order to acquire a single competency. Bloom's taxonomy may be beneficial when determining learning outcomes.

6. Curriculum development includes defining content and structure. In relation to learning outcomes the map of courses (modules) has to be developed, to define the curriculum structure.

3. Design Thinking in Learning

Education is evolving as a result of the rapid expansion of information and communication technology in the Industrial Revolution 4.0 era (IR 4.0). IR 4.0 entails the use of technology to alter human cognition, the global economic system, and social roles. Not only are the economic, social, and political systems changing as a result of IR 4.0, but so is the educational system. The learning landscape of the twenty-first century is shifting away from a teacher-centred approach toward a more learner-centred one. It focuses on information retrieval and serves as a catalyst for inquiry-based learning. To meet these objectives, teachers should no longer be reliant on the traditional technique of conducting classroom activities. Design Thinking (DT) has been found to be effective in preparing students for IR 4.0. DT is a kind of education that functions as a cycle and a collection of strategies for cultivating creativity and innovation. Both of these factors have a significant impact on industrial development[1].
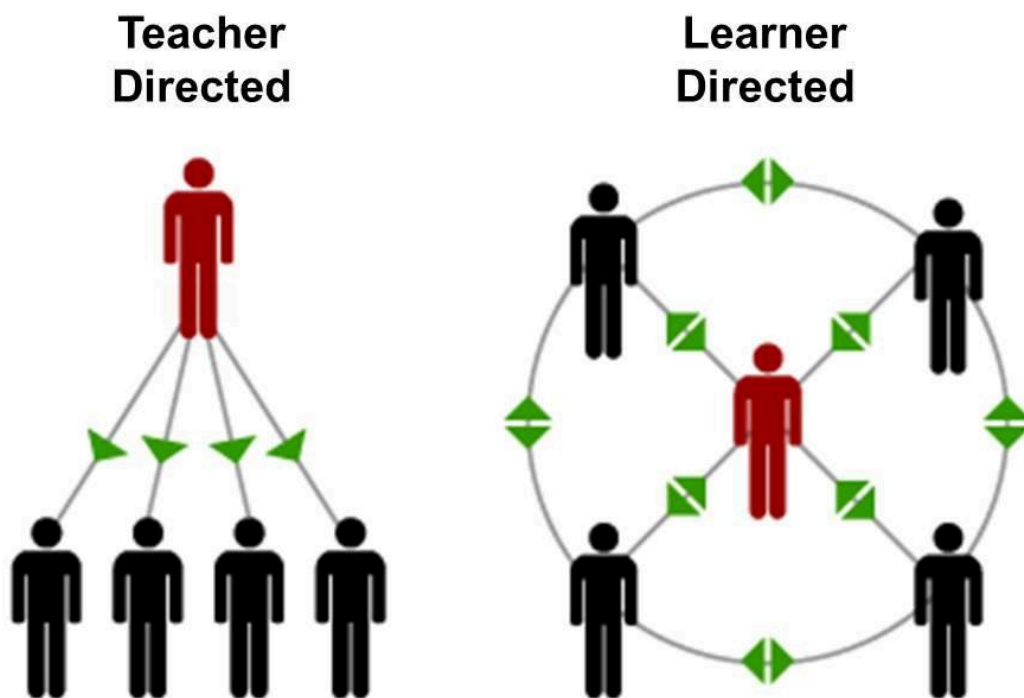
Figure 1: Schematic representation of the differences between the teacher-centred and the learner-centred approach. Source: https://atlascorps.org/designing-for-learner-centered-activities/

[1] O. Simsek and T. Yazar, "Examining the Self-Efficacy of Prospective Teachers in Technology Integration According to their Subject Areas: The Case of Turkey," Contemporary Educational Technology, vol. 10. no. 3, pp. 289-308, Jul. 2019.

DT is the process of identifying challenges, gathering information, generating solutions, testing them, and repeating the cycle in order to refine the final product. Each stage of the process can be revisited many times as needed, receive more or less focus, and in general be customized according to the project.
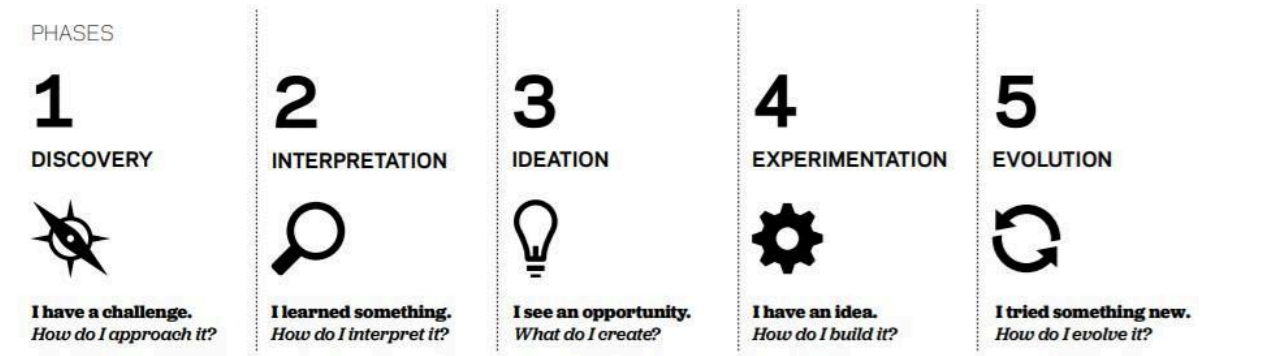
PHASES

1 DISCOVERY
I have a challenge.
How do I approach it?

2 INTERPRETATION
I learned something.
How do I interpret it?

3 IDEATION
I see an opportunity.
What do I create?

4 EXPERIMENTATION
I have an idea.
How do I build it?

5 EVOLUTION
I tried something new.
How do I evolve it?

Figure 2: Phases of the Design Thinking Approach. Source: Design Thinking for Educators Toolkit https://page.ideo.com/design-thinking-edu-toolkit

DT directs and shapes behaviours as a process and a toolkit for confronting uncertainty and developing problem-solving abilities. DT is a durable and adaptive method for directing teachers and influencing their creativity when confronted with real challenges[2]. Teachers must be conditioned to have a DT mindset in order to practice it. Although DT is more widely acknowledged in innovation, entrepreneurship and product and service design, it is gaining traction in education.

Design-based projects and curricula have been shown to empower cross-disciplinary teams by enabling highly collaborative activities such as information gathering, knowledge generation, communication, empathy, and user-focused outputs. DT is often used to guide the development of learning experiences (curricula), learning environments (spaces), training programs and experiences (processes and tools), and system strategies, goals, and policies (systems).

A DT approach can be helpful in order to develop the training methodology, training packages and workshops, and mentoring guidelines of WP4, according to the goals that we have set: A needs-based approach for different target groups in different countries.

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[2] B. Robandi, E. Kurniati, and R. P. Sari, "Pedagogy in the Era of Industrial Revolution 4.0," 8th UPI-UPSI International Conference 2018 (UPI-UPSI 2018), Atlantis Press, Apr. 2019.

The general objective of WP4 is to bridge the gap between market needs and target group skills. This fits with the information gathering, empathy and communication, and end user-focused approach of DT. The MYSEA partnership is a cross-border team. DT can foster dialogue, collaboration and co-creation between team members with different needs, backgrounds, expertise, and outlook.

The MYSEA activities that can benefit from the DT approach are:

- 4.1.1: Training goals and methods can be decided based on information of WP3 survey results
- 4.2.2: Communication with target group members in order to listen to their needs, assess the situation. Based on this information we will proceed with training strategies dependent on their individual profiles.
- 4.3.1-4.3.2-4.3.3-4.7.1: Training package content and modules will be co-created based on country and trainee needs.
- 4.5.1: The successful and efficient implementation of traineeships can only be achieved by coordinating the needs of all involved stakeholders.
- 4.6.1-4.6.2: The mentor/mentee framework needs to be built by listening to and taking under consideration the needs of the target groups in relation to the needs of the industry sectors.

4. Learning Goals and Tasks

As stated before, MYSEA foresees 4 training packages on transversal skills, digital skills, sector-related skills, and entrepreneurial skills. Every training package contains 5 modules of 20 hour each, as well as self-assessment and evaluation forms (with measurable goals) to allow learners to measure their progress. Packages should be designed in accordance to the curricula methodology outlined in this document. After their development in English, the material needs to be translated in order to be available in the other Project languages (5 languages in total: FR, ENG, GR, IT, AR).

The packages seek to understand what employers want, what trainees need, and bridge any gap between the two, as indicated by the results of the WP3 Analysis and the collaboration and exchange of input between all Project Partners. The general aims of the packages are:

- **Transversal Skills**: to successfully adapt to changes and to lead a productive life.
- **Digital Skills**: to equip the trainees with the needed tools to be active in the digital society and introduce them to multimedia products.
- **Sectoral Skills**: to aid the trainees to acquire sector-related skills related to agrifood and waste management.
- **Entrepreneurial Skills**: to aid the trainees' inclusion into starts-up, SMEs or associations and to advance knowledge in management, administration and bureaucratic aspects.

In this Chapter, a detailed overview of the Scope, Description, and Level of Training is presented for each Training Package. In addition, there are details about the Theoretical Knowledge, Practical Knowledge, and Skills and Competencies that each Module aims to provide to the trainees.

4.1. Transversal Skills Package

Transversal Skills

Scope
"Transversal skills and competences (TSCs) are learned and proven abilities which are commonly seen as necessary or valuable for effective action in virtually any kind of work, learning or life activity. They are "transversal" because they are not exclusively related to any particular context (job, occupation, academic discipline, civic or community engagement, occupational sector, group of occupational sectors, etc.)."[3]

Description
The objective of this training programme is to improve managerial and communication performance by enhancing the relevant skills and competencies. Individuals with transversal skills are better prepared to deal with the demands and challenges of everyday life. Teamwork, effective communication, problem solving, time management and conflict resolution are examples of skills that make a difference both at personal, as well as professional level. Soft skills are "life skills," which are defined as "behaviours employed successfully and ethically in handling personal concerns." Through the development of this training programme, the aim is to provide trainees with tools that will allow them to successfully adjust to changes and live a productive life.

EQF Level/ Competence/Level of autonomy
4 Exercise self-management within the guidelines of work that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work activities

Module 1: Interpersonal Skills

Theoretical Knowledge

- What is interpersonal communication
- Active listening
- How to contribute to conflict resolution

Practical Knowledge

- How to give feedback
- Techniques for conflict resolution
- Techniques for problem solving

Skills and competencies

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[3] Unpacking transversal skills and competences - ESCO's new Transversal Skills Hierarchy

- Identify and examine the components of effective interpersonal communication abilities.
- Examine personal communication styles and the underlying attitudes, beliefs, and values through self-analysis and reflection.
- Develop interpersonal communication skills in order to build and strengthen personal and professional relationships that are characterised by open and honest communication and effective conflict resolution.
- Employ effective communication skills that are suited for the situation, the purpose, and the audience.

Module 2: Written and Verbal Communication

Theoretical Knowledge

- The importance of written and verbal communication
- Characteristics of effective communication
- Understanding and respecting the audience
- What is active listening
- Understanding body language and posture
- How the voice across its whole range can be used as a tool for improving communication

Practical Knowledge

- Strategies for improved presentation skills
- How to adapt communication styles depending on the situation and the audience
- Techniques for effective communication
- How to show empathy
- Emotional intelligence - identifying and managing your emotions, as well as other people's emotions
- The principles of effective teamwork

Skills and competencies

- Recognise and compose readable texts, defined by clear and coherent structure and well-constructed paragraphs and sentences
- Recognise and formulate effective written and oral communication, taking into account audience, context, and format
- Analyse arguments in order to construct ones that are well supported, well reasoned, and well controlled
- Understanding and applying appropriate techniques for each audience
- Applying an empathetic approach in both written and verbal communication

Module 3: Career Development Skills

Theoretical Knowledge

- What is a career plan and how it is developed
- Understanding our own skillset, abilities and strengths
- Relating personal traits to career goals
- Learning how to search for the desired position
- Understanding the importance of tailored self-presentation to the future employer
- Understanding the needs of the labour market in terms of qualifications and personality qualities
- Looking for background information on the employer and understanding their culture

Practical Knowledge

- Development of a career plan
- Job hunting techniques
- Tailored CV preparation
- Drafting the suitable cover letter
- How to prepare for an interview

Skills and competencies

- Understand what type of employment one can search for, based on their own skillset and career goals
- Know where and how to search for employment
- Know how to develop a CV for a specific position
- Understanding what leads to a successful interview

Module 4: Advancing Professional Skills for the Agri-Food & Waste Management Sector

Theoretical Knowledge

- The principles of Project Management-Key concepts and tools
- Quality assurance and assessment-International Standards
- Marketing principles
- Fostering innovation in the Agri-food/ Waste management sector

Practical Knowledge

- From ideation to MVP
- Project management fundamentals
- Project planning and monitoring tools
- Quality assurance & evaluation fundamentals
- Putting together a marketing plan

Skills and competencies

- Understand the basic concepts related to Project Management
- Know how to use the PM tools to monitor the progress of a project

- Understand the basic concepts of Quality Assurance and Evaluation
- Become familiar with the marketing principles
- Know how to develop a marketing plan

Module 5: Thematic Oriented Skills

Theoretical Knowledge

- Innovation in the Agri-food/ waste management sector
- The role of digital transformation in the agri-food/ waste management sector
- New trends at international and national level
- The social aspects related to the agri-food/ waste management sector

Practical Knowledge

- What makes a product/ service innovative
- Best practices
- Agri-food/ waste management and environmental sustainability

Skills and competencies

- Become familiar with innovative practices in the sector
- Understand the impact of digital transformation
- Understand the importance of environmental sustainability in the sector

4.2. Digital Skills Package

Digital Skills
Scope
The objective of this training package is to equip the trainees with the needed tools to be active in the digital society and introduce them to multimedia products.
Description
In the training curricula of the digital Skills the trainees are invited to be active in the digital society because although there are cultural, social and economic differences among the economies of the Countries involved by the MYSEA project, digital skills are a necessity for achieving employment status.   This package introduces digital products that lead to innovation, social media marketing, web presence (from web analytics to creation of websites and blogs), cyber security (for understanding the vulnerabilities of the web and know the tools for protection) and decisions based on digital data analysis and interpretation (how to analyse data and make decisions based on use of software).
EQF Level/ Competence/Level of autonomy
4   Exercise self-management within the guidelines of work that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work activities
Module 1: Foundation Module for IT Skills (Introductory training and basic IT skills)

Theoretical Knowledge

- Identifying the components of digital transformation in the agri-food/ waste management sector
- Technology and decision making in agri-food/ waste management
- The principles of social media marketing
- Cyber security fundamentals

Practical Knowledge

- Digital solutions that facilitate day to day work and virtual collaboration
- Basic marketing and social media tools for the agri-food/ waste management sector
- Security fundamentals (device, connection, emails, backup)

Skills and competencies

- Become familiar with digital transformation elements that facilitate how work is carried out in the agri-food/ waste management sectors

- Understand the basic principles of marketing and how to utilise social media to achieve the marketing objectives
- Know how to perform basic tasks that protect the device, the data and the communications

Module 2: IT skills for the Agri-food sector (including IoT applications, e-agriculture, etc.)

Theoretical Knowledge

- The digital agriculture revolution
- Defining the terms "Agriculture 4.0" and "Digital Farming"
- Digital agripreneurship and innovation culture
- Internet of Food and Farming 2020

Practical Knowledge

- Robotic systems
- Temperature and Moisture Sensors
- Precision Agriculture
- GPS Technology
- Smart farming and food security

Skills and competencies

- Understand the key concepts around the digital agriculture revolution
- Become familiar with the different digital tools and how these can benefit the agri-food sector
- Know how to utlise the different digital technologies to achieve the desired objectives

Module 3: IT skills for the Waste Management sector (including IoT applications)

Theoretical Knowledge

- Digital technologies for more effective waste management regimes
- Advanced digitalisation in waste management and treatment (e-trading platforms, waste-specific software and business analytics)
- How can digital transformation in the waste management sector can foster the development of circular economy

Practical Knowledge

- Robotics applications in the waste management sector
- AI applications in the sector
- How IoT can contribute to logistics optimisation
- Cloud computing solutions
- Data analytics for waste management

Skills and competencies

- Understand the ways in which digital transformation has contributed to the optimisation of waste management processes
- Know how the different technologies impact the sector
- Utilise the appropriate applications to achieve the desired objectives

Module 4: IT Skills for Web-design and Development

Theoretical Knowledge

- The importance of web accessibility
- The principles for a website which is functional, attractive and successful
- What is UX and strategy fundamentals

Practical Knowledge

- UX strategy development and how it reflects on content & design
- Development of Information Architecture
- Target user needs and expectations
- Design and develop a B2B website

Skills and competencies

- Understand the principles and benefits of good UX and how to apply it to your website
- Know how to develop the information architecture based on the UX strategy
- Know how to develop a B2B website

Module 5: IT skills to support SMEs innovation

Theoretical Knowledge

- The economic and technological factors that are at the heart of the digital
- Differences between innovation and entrepreneurship and how the two work in conjunction to create dynamic SMEs
- How digital technologies can facilitate innovation in SMEs
- The role of AI in promoting innovation for start-ups

Practical Knowledge

- AI technologies and applications
- Lean startup fundamentals to design new business models
- Serious games for cultural and organisational changes
- Big Data developments
- Data-driven business models
- Responsible Data Sharing

Skills and competencies

- Have an awareness of the range of emerging and converging technologies that are poised to deliver disruptive innovations that improve SME sustainability and productivity
- Understand how their organization creates, delivers, and captures value for customers
- Design strategies for the creation of non-compete spaces
- Apply a continuous innovation model to improve their businesses
- Understand environment and the impact of change in the organisation
- Apply the knowledge obtained to design and carry out an action plan to boost innovation within the organisation

4.3. Sector Based Skills Package

Sector Based Skills

Scope
The scope of this training package is to help the participants acquire sector-related skills related to agri-food and waste management, and prepare them for the work-based learning workshops.

Description
The sector related skills training package aims at providing the participants with sector specific knowledge to better prepare them for the work -based learning workshops. In the context of this training package, fundamental information on the Blue and Green Economy is provided, an overview of the trends in the agri-food and waste management sectors, information on the supply chain and elements of innovation, sustainability and environmental conservation. development of modules for enhancing general tasks of manual workers or specific tasks of skilled workers

EQF Level/ Competence/Level of autonomy
4 Exercise self-management within the guidelines of work that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work activities

Module 1: Foundation Module in the Green and Blue Economy

Theoretical Knowledge

- The rationale for advancing an inclusive green economy
- Opportunities and challenges at global and national level to achieve low-carbon, resource efficient and socially inclusive development
- The emerging concept of Blue Economy: origin and relation with Blue Growth
- Current challenges and opportunities in resource resilience
- Sustainability: Environmental awareness, Environmental impact assessment

Practical Knowledge

- Key sectors with high greening potential
- Strategies and planning for reaching policy objectives
- International frameworks and initiatives to support an inclusive green economy
- Fisheries & Aquaculture
- Marine Tourism
- Ocean-based renewable sources of energy
- Offshore wind power

Skills and competencies

- Identify enabling conditions for greening national economies
- Understand basic concepts about inclusive green & blue economies.
- Identify enabling conditions for greening national economies
- Understand the elements of Blue economy
- Outline principal opportunities and challenges in the sectors
- Distinguish international frameworks and initiatives in support of an inclusive green economy

Module 2: Introduction to the industry activities, production, processing and logistics for the Agri-food Sector. (agriculture, zootechnics, fishing industry, etc)

Theoretical Knowledge

- Meet the Food System: understanding food through an integrated, systems-thinking lens
- Industrialisation of agriculture
- Agri-food: Botany, Agronomy, Agricultural mechanisation, tropical and subtropical crops, mechanical training
- Zootechnics and fishing industry: animal nutrition and wellbeing, apiculture, fisheries and aquaculture, animal waste management

Practical Knowledge

- Techniques for integrated production, organic farming, use of ecological fertilizer and pesticides for control of plants disease, design and maintenance of green areas,
- Forest conservation, gardening,
- Food processing, dried fruit (diagnosis and maintenance of machineries),
- Processing, refrigeration training (cold chain), packaging and shipping food,
- Local handicrafts, chemical knowledge,
- Irrigation and hydraulic engineering, agri-business

Skills and competencies

- Understand supply chain and explore relationships among food, health, society, and the environment
- Understand the benefits from the industrialised agriculture
- Familiarise with basic processes related to the agri-food sector

Module 3: Introduction to the industry activities, production, processing and logistics for the Waste Management Sector (recycling, reusing, upcycling, etc)

Theoretical Knowledge

- Classification of waste
- Waste prevention through chain optimization

- Guide to recycling and use of biodegradable and eco sustainable plastics and products
- Environmental problems caused by waste mismanagement of products
- Circular economy and innovation in the waste management sector

Practical Knowledge

- How to project landfills and plants
- How to temporary store waste in a company
- How to treat waste (from composting to mechanical-biological treatment and waste-to-energy plants for burning waste and producing energy
- How product design can support efficient recycling and remanufacturing

Skills and competencies

- Know the different classifications of waste
- Understand how waste mismanagement can affect the environment
- Become familiar with the benefits from efficient recycling

Module 4: Supply Chain, Operations and Sales focusing on the Agri-food and Waste Management Sectors

Theoretical Knowledge

- Supply chain and agri-food/ waste management
- Supply chain management
- Sales & Operations planning

Practical Knowledge

- Supply chain logistics
- Supply chain operations
- Supply chain Sourcing
- Positioning strategy
- Strategy deployment: definition & processes

Skills and competencies

- Understanding what is involved in supply chain management and how it affects business operations
- Get information on process planning for batch and continuous processes as well as the sourcing continuum, process analysis methods and the financial justification for new technology
- Learn the definition of capacity and how it is measured. See what the differences are in process, product and fixed-position layouts, and how analytical tools can help make capacity decisions.
- Become familiar with the process of setting strategic goals as well as supply chain uncertainty, risk pooling and the bullwhip effect

Module 5: Innovation, Sustainability and Environmental Conservation (with a focus in the Agri-food and Waste Management Industry

Theoretical Knowledge

- Understanding AgriBusiness & AgriFood Market Trends
- The role of disruptive technologies in the industry

Practical Knowledge

- Remanufacturing and refurbishment systems: return of product (reverse logistics), disassembly and repair of the product, market demand and economics.
- Product design using better recycling or remanufacturing and refurbishment. Substitution of materials
- New business models to generate profits from products that last longer
- Identify emerging and disruptive technologies across informatics, engineering and biotechnologies in the agri-food/ waste management sphere, encompassing topics such as AI and machine learning, internet of things, automation, robotics, 3D printing, virtual and augmented reality, genomics and synthetic biology

Skills and competencies

- Be able to explain the role and contribution of research and innovation to generate outputs, impacts and outcomes on society and economy in the arena of agrifood sustainability and technology.
- Identify and critically evaluate the range of informatics (including big data, artificial intelligence & virtual/augmented reality) and digital technologies that can be applied to agri-food/ waste management systems.

4.4. Entrepreneurial Skills Package

Entrepreneurial Skills

Scope
Entrepreneurial skills are highly in demand for starts-up, SMEs or associations. The package aims to advance knowledge in management, administration and bureaucratic aspects.

Description
This training package is targeted to enhance the required entrepreneurial skills for Youth, Women and NEETs that are highly in demand for start-ups and for SMEs in the Agri-food & Waste Management Sectors. *To train and educate leaders who are agents of change with the ability to analyse, innovate, validate, and start new businesses, in a culture of excellence. Graduates will develop the knowledge necessary to evaluate, transfer, and implement high-impact, innovative, sustainable solutions within a global environment.*

EQF Level/ Competence/Level of autonomy
4   Exercise self-management within the guidelines of work that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work activities

Module 1: Business creation

Theoretical Knowledge

- General Management and Business Concepts

Practical Knowledge

- Discovery -- identifying opportunities and shaping them into business concepts
- Feasibility analysis and assessment
- Business plan creation
- Business launch
- Growing the business

Skills and competencies

- Become familiar with the theoretical framework of general management
- Understand what steps need to be made to create a business out of an idea
- Familiarise with the preliminary steps of business creation
- Understand the parameters that will make the business grow

Module 2: Human Resources

Theoretical Knowledge

- Fundamentals of HR management
- Human capital development
- Talent management

Practical Knowledge

- Recruiting techniques
- Interpersonal relations
- Diversity and inclusion
- Ethical leadership
- Managing organisational change
- Rewards and performance management

Skills and competencies

- Understand the principles of HR management
- Become familiar with the different elements of HR management
- Explain human behaviour and the elements that influence employee behaviour
- Identify and explain the theories of motivation and establish strategies to motivate and build staff morale in the organisation
- Understand the factors which result to successful HR management

Module 3: Business administration skills (decision making, systems operation, organization)

Theoretical Knowledge

- Business Policy and Strategy
- Operations management

Practical Knowledge

- Financial Accounting Principles
- Managerial Accounting Principles
- Management Information Systems
- Risk management
- Decision making
- Quality Principles and Productivity

Skills and competencies

- Demonstrate an understanding of the nature of management
- Identify and explain management functions, roles and responsibilities
- Explain the major concepts in the functional areas of accounting, finance, management, and management information systems.
- Understand key concepts related to decision making, risk management and quality
- Demonstrate responsible and effective workplace behaviour skills and traits in a professional business environment.

Module 4: Business, marketing and market analysis

Theoretical Knowledge

- Fundamentals of market analysis & marketing
- Product and Brand Management
- Consumer behaviour

Practical Knowledge

- Consumer Behaviour
- Digital Marketing and Social Media Strategy
- Pricing Strategy
- Advertising and Marketing Communications
- Data analysis and decision making

Skills and competencies

- Demonstrate understanding of basic concepts around market characteristics
- Understand how data can lead to strategic decisions
- Become familiar with the principles of digital marketing
- Know how to develop a pricing strategy based on market data

Module 5: Financial management

Theoretical Knowledge

- Introduction to financial management
- Capital markets and financial management

Practical Knowledge

- Overview of financial statements
- Budgeting
- Measuring financial performance
- Project budget analysis
- Budget preparation

Skills and competencies

- Apply the basic concepts of financial management and financial decision-making
- Assess financial statements in order to identify organisational strengths and weaknesses
- Analyse and evaluate the financial viability of selected projects
- Prepare a budget

5. Educational Methods and Tools

5.1. Training Approach

MYSEA and the Constructivist Paradigm

The MYSEA courses are constructivist in nature. Learners are in the epicentre to the constructivist paradigm since they are active creators and constructors of their own knowledge. Active learning approaches are used, providing learners with a high degree of autonomy and control over the learning process. The outcomes of learning are based on a holistic, generalised idea of competence that is evaluated through the lens of the persons and their personalities and talents.

The following are the primary implications of constructivism in MYSEA courses:

1. Trainees construct their own reality based on prior experience, mental structures, and beliefs.

2. It is critical for learners to have pre-existing beliefs and knowledge. They are investigated, addressed, and new knowledge is built upon during training.

3. Trainees reflect on their own experiences, assumptions, and expectations and practice critical thinking in a safe space by analysing and evaluating ideas and schemes. This enables them to have a new perspective on their profession.

4. Learners take ownership of their own learning by actively participating in the training process and exploring.

5. Trainers serve as facilitators, assisting trainees in constructing knowledge rather than simply reproducing facts. Problem-based learning, investigative work, situational learning, experimental learning, and action learning all play a critical role in this context. Facilitating discovery requires the provision of resources and the appropriate use of questions.

6. On-the-job training is critical because learners can work on real tasks while being coached by specialists.

7. Trainees acquire metacognitive abilities. They are able to analyse, monitor, and assess the learning process once they become aware of it. They must understand how to learn well through the development of effective learning strategies.

8. Collaborative learning is facilitated by encouraging group effort and collaboration in the process of knowledge construction, rather than competition. Peer learning and peer interaction are encouraged. Trainers are urged to give opportunities for participants with varying levels of expertise to learn from one another. There is a strong emphasis on discussion and debate.

9. Constructivism is receptive to many interpretations and manifestations of learning. Each trainee will interpret material differently, which is anticipated and acceptable.

10. The evaluation is performance-based and makes no claim to total objectivity. It is heavily weighted toward portfolios, projects, role-playing, case studies, and self-evaluation, among other things.

Adult Training and Education in the MYSEA Context

Adult education is based largely on the assumptions and principles of the constructivist approach. In the development of the training methodology of MYSEA the following adult education principles have been considered:

Principles	Application
Adults add their life experiences and knowledge to the educational setting. Experience is seen as a source of knowledge.	- Adults' experience and knowledge should be valued. - Training should build on them and encourage learners to take an active role in the production of new experiences and the sharing of their knowledge and experiences. - Activities for learning should be designed in such a way that they promote the use of prior experience and knowledge.
Adults generally prefer self-directed, self-directed learning	- Adult learners require control over their educational process. This empowers and requires them to take on further responsibility and initiative. Additionally, it enables users to choose, monitor, and assess their learning. - Learners should be involved in goal planning and decision-making. - The trainer should act as a facilitator, coach, and supporter, identifying ways to engage participants and eliciting information about what they wish to learn.

	● Opportunities for learners to direct their own learning should be provided. ● Learners should be supplied with action planning tools and templates to assist them in developing and focusing their self-directed efforts and to support learning.
Adults have preferences for the way in which they learn	● Acceptance that not all learners respond to a given teaching method or technique. ● Providing a customized learning approach according to learners' needs and developing the appropriate learning strategy. ● Use of a wide variety of methods corresponding to all learners' preferences in training delivery. ● Make trainers aware of their own learning preferences.
Adults learn best through collaboration and reciprocity. An environment where people learn with others while sharing what they already know	● Low-risk environments for learning should be provided, capitalizing the different levels of knowledge and skills within the learning groups. ● The learners' self-esteem should be strengthened through team-based learning on mutual trust and respect.
Adults are motivated to learn by a wide variety of factors	● Adults are motivated by a variety of factors such as personal aspirations, expectations, internal desire or interest, and escape from a situation. ● Adults need internal motivation for learning rather than external. ● Learning should respond to their needs, interests and real-life problems, in other words, be meaningful and relevant. ● Relevance is the key factor to motivation so it is important to inquire into the reasons why participants are interested in learning. ● The learners should be invited to identify the link between learning and satisfaction of their personal needs. ● A connection should be made between the learning content and the long term objectives of each learner, in work and life.

Adults learners are goal oriented, relevancy oriented and practical	● Learners should be asked to identify what they would like to learn. ● Clear learning objectives should be established and it should be explained how they relate to training activities. ● Learners should be engaged in identifying the challenges they face and the value of addressing these challenges. ● Training must show relevance to the job or other interests. ● Learning has to be applicable to adult work duties or other responsibilities and focus on practical skills, tools, methods. ● Opportunities should be given to trainees to apply the knowledge to practical skills and use methods to solve problems.
Adult learners need to be respected and learn in an appropriate learning environment	● Respect, trust and acceptance are vital for successful adult training. ● Learners need to feel safe in order to participate freely, take initiatives, experiment, and express themselves. ● Mistakes have to be viewed and used as improvement aids and not as failures. ● Creativity and an agreeable atmosphere are important, but they have to be balanced with cognitive achievements, stability, and clarity of purpose. ● The wealth of knowledge and experiences the participants bring to training should be acknowledged. ● Learners should be treated as equals. ● The participants should be allowed to voice their opinions freely.
Adult prefer active learning	● The more actively engaged the learner is, the more learning takes place. ● Different training methodology and techniques have greater rates of retention.
Adults want guidance	● Adults want information that will help them to improve their situation. ● Adults do not want to be told what to do, but they want to choose options based on their needs.

Adults have different learning styles	● Every individual has his/her own learning style depending on the preferred perception channel - visual, auditory, or kinaesthetic.
	● Techniques appropriate for all types of learners should be used and combined in such a way that different perception channels are employed.
	● There are also different personal learning styles referring to order, analysis level, abstraction and type of information presented and processed, that may be influenced either by the individual's personality and cognitive characteristics or by the educational system, cultural factors and professional specialization.
	● The learning styles preferred by each group of trainees should be found, in order for the learning experience to be modified accordingly.

Notes on the Training Approach for Soft Skills

Even though there is a lack of consensus on how to define soft skills, there is a common understanding that soft skills are the interpersonal human and behavioural skills needed by someone in order to apply technical skills and knowledge in the workplace. Five categories of soft skills constructs have been identified by academics, which are communication skills, problem-solving and thinking skills, leadership and team working skills, ethical and moral values, and self-management. The EQAVET working group suggested another typology introducing three interrelated categories of soft skills: a) communication skills, including aspects like oral communication and conversation, b) interpersonal skills, namely the ability to work in teams, relate to people, manage/mediate conflicts, discussions, negotiations and bargaining, and c) problem solving.

Given that soft skills have been positively linked to a strong performance level of professionalism, it is essential for the MYSEA project to follow the common principles of soft skills training given below, as they have been detected in a broad literature review in order for the training to be successful.

- The success of training in soft skills depends on the facilitation of experts, the contextual awareness, and the provision of support, real-world application, self-study and self-awareness.

- Soft skills are more experience-based and need to be reinforced throughout a person's lifetime. Their development is a dynamic process that needs to be refreshed over time to reflect on career and education changes.

- Active participation of learners, employees and employers is a guarantee that an intervention for soft skills development is "fit for purpose".

- Not everybody learns soft skills in the same way; active learning (cooperative learning, problem-based learning), transformative learning, and making meaning of learners' experiences through reflection, are important.

- Soft skills are imparted in small groups and innovative material is needed. Training material needs to integrate a number of sources in order to achieve real and impactful results and external providers are needed to be brought.

- Since behavioural change happens over long periods of time, individual soft skills development interventions or courses are not enough. Such interventions require multidisciplinary teams to create complex real-life scenarios and simulations.

- Tools should be used interactively, there must be interaction between heterogeneous groups, and learners should act autonomously.

The variety of areas covered in MYSEA training implies that the teaching approach should follow the principles for teaching the rest of Practical and Technical skills such as:

- Embedding and integrated: learning should be related to the purposes and needs of learners. For example, the development and application of ICT skills should be integrated with other subjects, workplace activities and wider interests.

- Personalization: each learner should be offered an individual programme with opportunities for progression. This especially applies to the national context, educational background, and personal interests (agri-food or waste management) for each learner or group of learners.

- Active learning: active learning methods should be used to maintain motivation by ensuring that skills are applied in real and relevant contexts.
- Collaborative learning: encouraging collaborative learning whenever possible.

Online Training Approach

Online training has been developed to provide cost-effective and improved learning experiences beyond those available in classrooms. It is about the delivery of all activities of education such as instructing, teaching and learning through various electronic media. The appropriate instructional design, including the selection of appropriate theories and principles, is very important to the success of e-learning.

The theory of constructivism has been widely used in e-learning environments. Elements of constructivism such as the design of learning activities (collaboration, cooperation, multiple perspectives, real-world examples, scaffolding, self-reflection, multiple representations of ideas, and social negotiation), the learning assessment (instructor assessment, collaborative assessment, and self-assessment), and the role of the instructor (coaching, guiding, mentoring, acknowledging, providing feedback, and assessing student learning) have been included in the development of e-learning models.

The following pedagogic principles have been suggested to be followed for successful e-learning provision:

- Match to the curriculum: there must be clear objectives, relevance to content covered, appropriateness of students' activities.
- Inclusion: inclusive practices should be seen in terms of different types and range of achievement, physical disabilities, different social and ethnic groups and gender.
- Learner engagement: learners should be engaged and motivated, activities should have a worthwhile educational aim, not just to occupy the learners, be enjoyable, not to produce adverse emotional reactions, improving the learning atmosphere.
- Effective learning: promoting personalized learning, learner autonomy; encouraging metacognitive thinking and collaboration, providing authentic learning exhibiting multiple perspectives on a topic.

- Provision of formative and summative assessment for the purposes of improving and grade learners.

- Coherence, consistency and transparency: objectives, content, activities, and assessment should match to each other. It should be clear to the user what to expect.

- Ease of use: being open and accessible, intuitive and not requiring guidance on use, providing appropriate guidance to learners of teachers.

In accordance with the theoretical training methodology background presented before, the training methods and techniques recommended for the delivery of MYSEA online training are the following:

- **Self-paced online training**. Self-paced online training has many advantages. It is highly flexible, which makes participation in the training easy. This is critical, as the main beneficiaries of MYSEA training are youth, women and NEETs, with different lifestyles, needs and obligations, so flexibility is key for them. Furthermore, self-paced online training can also improve learning retention, as the learners often retain content better when they have time to absorb concepts between lessons. Additional benefits exist, after the completion of the course, as it continues to be a great reference tool when questions arise during WBL or on the job.

- **Asynchronous online training** to promote learner autonomy. Asynchronous events are time-independent, so each learner is able to participate in the online training according to their programme. A self-paced course is an example of asynchronous Learning because online learning can take place at any time.

- **Learner-centred content**. Learner-centred content presents many benefits. It provides self-reflection opportunities, as the learners want to know, how information relates to and benefits them directly, enables personalization and responds to individuals' needs. So, the online Open Educational Resources should be relevant and specific to the learner's needs and responsibilities in professional life.

- **Personalisation** to promote effective learning. Self-study courses should be customizable to reflect the learner's interests and needs. In addition, learners should be able to build their

own customized learning path, as when you allow your learners to choose what they want to learn, they feel valued.

Face-to-face Training Approach

Besides the basic principles of adult education and training, it is useful to have a common framework for the approach that should be followed for the face-to-face training, in case such an option is chosen by the partners. The COVID-19 crisis put a temporary pause in the implementation of face-to-face training activities, but as the pandemic is getting more under control, face-to-face training is expected to be implemented again either as the main type of training or as part of a blended training approach. In-person training can offer several advantages compared to online training, such as increased social interaction between the trainer and the trainees or among the trainees themselves, significantly more opportunities of flexibility and personalization in the delivery of the training material, and fewer chances of distractions and multi-tasking for the trainees that have been shown to decrease their focus.

Most of the pedagogic principles described above for successful e-learning provision, also apply to in-person training. In this section a few technical aspects of in-person training are further highlighted.

- **Familiarity with the content.** The trainer should be well prepared, and should take time to study and learn the training material. The recommended preparation time is double the duration of the training. It is highly important to be well acquainted with the material, and note the units that require special focus beforehand. This establishes the trainer as a competent and confident professional. It also facilitates effective delivery of the material and an increased capacity to answer trainees' questions.

- **Adding a personal touch**. The training will be better received and the trainer will be more confident if they express the important points in their own unique style and wording. Memorizing a script reflects badly on the trainer and does not leave room for flexibility and adaptation to the differences of each training group.

- **Active Listening**. To the extent that it is possible, the trainer should aim to get to know the trainees and their individuality of skills, experiences and the ideas that they bring to the

group. Respecting the way the trainees want to be addressed, inviting them to speak and interact, actively listening to their needs and ideas, and allowing them time to respond are important to make them feel heard and included. This becomes especially relevant in the learner-centered training approach in contrast to the teacher-centered approach. By active listening the trainer finally has the opportunity to facilitate dialogue instead of guiding dialogue or monopolizing the discussions.

● **Create a practical checklist.** The trainer can benefit by creating a checklist of practicalities that need to be addressed in the first training session, or the beginning of each new session. This includes making sure they have all the material and equipment that they will need with them (i.e., presentation, stationery, computer, Wi-Fi connection, nametags), creating and announcing a set of rules that need to be respected during the trainings (i.e., be respectful of others, don't interrupt, appropriate time for questions and feedback), implementing one or more ice-breaking activities, sharing the learning outcomes and expectations of the session with the trainees in each session, or anything else applicable to the specific training sessions.

5.2. Assessment Approach

Numerous concepts and ideals should influence the conception and implementation of assessment in training. The most significant of them are listed here.

Validity of assessment is critical: Validity is a term that refers to an assessment's accuracy. When an assessment is appropriate for its purpose, that is, when it measures what was intended to be measured, it is deemed valid. It enables meaningful and justified interpretations and conclusions to be derived from assessment outcomes. There are three distinct categories of validity. The term "content validity" refers to the degree to which the assessment's content is representative of the domain being measured. Face validity relates to the amount to which the assessment instrument makes sense as a realistic method of assessing the subject matter. The construct validity of an assessment refers to the extent to which it assesses what it is intended to measure. Validity of all types is accomplished through the use of proper evaluation procedures and tools.

Assessments should be credible: Authenticity relates to ascertaining that the assessed accomplishments are the learner's. The achievement of targeted learning outcomes should be quantified in terms that are as close to the intended objectives as possible.

Assessments should be trustworthy: Reliability refers to the degree to which the outcomes are consistent and precise. It relates to the degree to which the evaluation would provide the same results if repeated.

Assessments should be adequate: Sufficient evidence refers to the need that sufficient evidence be produced in accordance with the evidence requirements and evaluation process described.

Assessment should be fair and equitable, which means that all learners should have an equal opportunity to achieve regardless of their prior experiences. This is especially true for work-based learning. Never should assessment procedures be used to make distinctions between learners. Assessment instruments should not place somebody in an unfavourable position.

Transparency in assessment is necessary: Transparency refers to the requirement that assessment be consistent with the desired learning outcomes and scope of learning. Learners must have a firm grasp on assessment criteria [16].

Assessment should drive learners to learn: Assessment should reinforce the learning structure and encourage learners to make choices about their learning through self-assessment and monitoring activities.

Assessment should support deep learning: Learners should not be compelled to engage in surface learning as a result of the assessment methods used [16].

Assessments should be conducted on a timely and gradual basis: Assessments towards the conclusion of learning are ineffective at providing feedback; earlier opportunities for rehearsal and feedback should be provided. Continuous feedback to learners is necessary.

Assessment should be efficient and manageable: neither the resource burden nor the demands placed on learners when completing assessment tasks should be excessive.

Types of Assessment

There are different types of assessment that serve different purposes as described below.

Summative assessment is a more formal style of evaluation that typically occurs at the conclusion of a course. Summative evaluation enables learners, trainers, and training providers to determine whether and to what extent the desired learning goals were accomplished throughout the training course. It contains the learner's final profile. Summative evaluation is designed to facilitate reporting at the conclusion of training for certification purposes. It is largely passive and has little direct effect on learning.

Formative assessment serves as a monitoring mechanism, allowing trainers and trainees to evaluate progress, assess the effectiveness of training methods, and make required adjustments. In other words, formative assessment fulfils three critical functions. a) where learners are at in their learning process, b) where they need to go, and c) how they will get there. Formative assessment is a continuous cycle of activities that incorporates the following critical components: a) the establishment of defined goals that are shared with learners; and b) learners are at the centre of the process. c) learners assist in acquiring and interpreting evidence on target attainment, d) trainers (if available) and learners collaborate on next steps, and e) learners receive feedback that is utilized to adjust training. Thus, formative assessment is a technique that aims to improve learning while it is occurring and to feed forward rather than to provide feedback after learning.

Diagnostic assessment: is used to determine the learners' current status in terms of knowledge, abilities, attitudes, and competencies, as well as any potential learning problems prior to the commencement of training. This enables the detection of learners' unique learning needs and the modification of training.

Adult learners are more self-directed and must take responsibility for their own education. Self-assessment is critical for learning since learners can only accomplish a learning objective if they comprehend it and can appraise the steps necessary to do it. In the case of

self-assessment, the desired learning objectives and the requirements for effectively completing the activities must be made apparent. Self-assessment is beneficial for several reasons: a) it promotes learning by providing judgments that aid the learning process, b) it increases awareness of perceived abilities, c) it motivates goal orientation, d) it broadens the range of assessment techniques, e) it involves learners in their own evaluation, and f) it results in beneficial post-course effects. Because ownership of learning is transferred to learners through self-assessment, engagement is increased. Self-assessment reinforces learning, reveals new levels of comprehension, and dispels misconceptions.

Finding the Right Assessment Methods

Numerous aspects should be considered when selecting the appropriate assessment methods, including the learning activities that learners engage in, the learning outcomes, and other factors to be examined. When developing an assessment, it is also necessary to consider the various types of cognitive demand. The levels of cognition (i.e. knowledge, manipulation, application, analysis, synthesis, and evaluation) and the appropriate method of assessment should be determined based on Bloom's taxonomy of educational objectives.

When constructing an assessment plan, numerous decisions must be made; some essential guiding questions for designing assessments are mentioned below:

- Who is going to collect the data?
- How will data be gathered and analysed?
- How will data be collected, stored, and communicated?
- Is the assessment method chosen in accordance with the learning outcomes?
- Is the method reasonably efficient in terms of time spent by learners and staff?
- What alternatives are available, and what are their relative merits and demerits?
- Do the assessment tasks correspond to the desired outcomes?
- Are the schemes and criteria that have been established appropriate?

In MYSEA assessment methodology we follow the argument that "the emphasis should shift from summative to continual, diagnostic and formative assessment throughout the learning process" which is in line with the constructivist approach which is also employed in MYSEA. Constructivism is in favour of evaluation for learning (formative and self-assessment) rather than evaluation of learning (summative assessment). Such a shift takes into account the application of learning instead of standardizing learners and allows the individual differences to surface.

MYSEA assessment methodology also takes into consideration the argument that assessment should reflect the practice of the profession or practice being assessed, while at the same time giving learners the opportunity to demonstrate their knowledge and skills and connect them to their own previous experience. This argument is also considered an essential aspect of adult learning.

At the same time, we take into consideration the fact that constructivist assessment techniques have been surrounded by controversy. Most trainers acknowledge the significance of using formative assessment and self-assessment but at the same time, they are advocating the validity and reliability of standardised testing which are supported by summative assessment. They argue that through assessment the performance of learners, i.e. their knowledge, expertise, skills and competences need to be measured using predefined criteria, namely the learning outcomes.

Thus, the assessment methodology suggested for MYSEA training courses is drawn upon a combination of constructivism assessment principles as well as more traditional ones. In MYSEA assessment methodology, formative and summative assessment as well as self-assessment are followed.

A combination of formative assessment and self-assessment is applicable throughout the learning procedure and to all phases of training (face-to-face, e-learning and work-based learning) and has a cumulative use. It is guided by the principles of the constructivism approach. The methods and tools used are described in the following sections.

Summative assessment will be carried out in two ways. First, the results of ongoing (formative) assessment are collected in the personal files of each learner, so that the individual learner profile is constructed (this is not applicable for the e-learning phase of training). Second, after the completion of each of the training phases (face-to-face, e-learning and work-based learning) of the courses the learners will be asked to demonstrate how they will be able to combine and integrate multiple aspects of training in complex situations. The methods and tools used are described in the respective section.

The combination of cumulative assessment and final tasks compiles the final assessment of each learner. The details of the monitoring and assessment methodology applied to each phase of training are presented in the following sections.

Monitoring and Assessment Methodology for Training

Given the general objectives and structure of MYSEA assessment presented above, formative and summative assessment as well as self-assessment will be implemented. Self-assessment is a particularly useful method for adults when assessing transversal competences. The tools to be used for assessment are in line with the teaching methodologies presented above. Monitoring will be ongoing and it will be implemented throughout the duration of face-to-face training using specific tools and exploiting data provided by assessment. The assessment tools that are described in detail in the following paragraph are recommended for each type of assessment (formative, summative, self-assessment).

The assessment structure and tools proposed for MYSEA training are presented in the table that follows. **The partners and trainers can select the appropriate tools** according to the characteristics of the trainees and the purposes of assessment.

Tools	Assessment Type			
	Diagnostic	Formative	Self-assessment	Summative
Case study		x	x	x
Group/team work		x		
Portfolio		x	x	x
Presentation		x		x
Peer evaluation		x		
Role playing		x		x
Mid Test				x
Final test				x
Checklist	x		x	
Rating scale			x	

The assessment tools have been selected on the basis of their compatibility with the principles of constructivism and adult learning and are presented briefly as follows.

Case study: Case studies are popular tools used for both formative and summative assessment as well as self-assessment. They depict real life situations in which problems need to be solved. Trainees are introduced to a real or fictional case study, either as individuals or in groups, and they are asked to identify a set of problems, and subsequently apply their knowledge of the subject to the case. Case studies are a powerful learning tool for developing cognitive skills of students; when conducted in groups they can enhance oral communication and team building.

Group/team work: allows for the employment of different skills, knowledge and experiences that individuals have. It can be approached both as a skill to be learned and as a means of carrying forward curriculum concerns and of enriching classroom experience.

Portfolio: Portfolios are a collection of student work that allows assessment by providing evidence of effort and accomplishments in relation to specific instructional goals. They can be

used both as a record of students' development in a number of areas, as well as a means of summative assessment. Portfolios can contain evidence reflecting a wide range of skills and attitudes and can reflect development.

Presentation: It is often used to assess students' learning in individual or group projects. It is the process of showing and explaining a topic to an audience. Presentation assessment usually consists of a topic for the student to research, discuss and present. Questions and answers are usually following the presentation.

Peer evaluation: It helps to create a learning community within a classroom. Students are exposed to the thinking of their peers and their alternative feedback as peers' observations may differ from each other. With peer evaluation, students see each other as resources for understanding and checking for quality work against previously established criteria.

Role-playing: it is considered as a form of experiential learning. Students learn through their exploration as they are provided with opportunities for learning situated in a real-life context through simulating the activities of their profession. Role playing significantly contributes to learning and assessment as it provides opportunities to reflect on learning, to show how tacit knowledge works etc. At a culminating academic moment (such as the end of a module) a role play can take the form of an exhibition or demonstration and can serve as a summative assessment tool.

Tests: depending on the knowledge, skills and competences that need to be assessed, mid-term tests are types of summative assessment. They can be oral or written. In the case of oral exams the presentation skills become an essential aspect of what is evaluated. Written tests can be composed of multiple choice questions, close questions, short answers, matching questions, and structured questions.

Final test: it can be oral or written, depending on the knowledge, skills and competences that need to be assessed, and is a type of summative assessment. In the case of oral exams the presentation skills become an essential aspect of what is evaluated. Oral exams can take the form of an one-to-one interview as a means to explore what students have learned by using a more personalized oral interaction. An important element here is that the trainer can influence

how the interview proceeds in order to test certain skills. Written final tests can be composed of multiple choice questions, close questions, short answers, matching questions, and structured questions.

Monitoring and Assessment of the Impact of Training

A final element that needs assessment is the impact of the training according to the Project's Effectiveness Matrix and Indicators, following the ENI CBC MED Programme Rules.

5.3. Supporting Documents for Training Verification

In order to verify and prove that the training took place, a variety of sources of verification is required. These can be gathered before, during, and after the implementation of the training workshops. All original documents should be kept in both hard and digital copies, signed by the trainer and/or trainees as applicable, and stamped where applicable as well. The documents have to be kept for at least 3 years after MYSEA's project closure, as they will be used for audit and verification purposes. A detailed list follows:

Sources of Verification

- Timetable/Schedule of training hours in case of face-to-face or synchronous e-learning.
- Attendance Lists signed by trainees and trainers in case of face-to-face training.
- Attendance Lists or similar reports extracted from the on-line platform used in case of e-learning. (e.g, Log reports in case of asynchronous e-learning sessions).
- Screenshots of synchronous e-learning sessions.
- Photos of face-to-face training sessions.
- Student Lists stating their Name, Gender, Age, Contact Details, etc. In the case of e-learning, on-line lists (e.g. google form lists).
- Trainer's List and Details.
- Assessment Reports of the training activities filled by the trainees.
- Assessment Reports of the training activities filled by the trainers (asynchronous e-learning is excluded).