ECO TEX

Design and Definition of the professional qualification "Sustainability Expert"

Circular Economy Innovative Skills in the Textile Sector
Intellectual Output 2
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Contents

Introduction

There is a general awareness of sustainability issues in the textiles and clothing industry professions as well as a growing focus on using technical skills to provide sustainability solutions. In recent years the subject of sustainability has increasingly come to the fore at a strategic level within companies of the sector.

However, it is not yet absolutely clarified which skill sets genuinely facilitate the delivery of sustainable outcomes even though – or perhaps because – education and training providers deliver a bewildering array of products. While sustainability knowledge and skills continue to be so poorly defined, sustainability itself will continue to lack credibility, which in turn will hinder people's ability to identify and acquire the skills they need to deliver sustainability solutions.

This IO2 will define the tasks and competences that were identified for the development of the occupational profile of the sustainability expert.

This core knowledge and these skills are essentially for the sustainability expert who works for the textiles and clothing industry.

1. Description of the "Sustainability Expert"

Sustainability Expert is a senior-level director, officer or manager who communicates and coordinates with management, shareholders, customers and employees to address sustainability issues. These professionals oversee a comprehensive suite of activities related to reducing environmental impacts and applying sustainability principles. As a result, Sustainability Expert develops, implements and evaluates programmes for their employers that support social, environmental, and economic sustainability objectives. Most Sustainability Experts come from diverse professional backgrounds and enter this position through past experience leading junior staff and managers. In their role as key organizational leaders, Sustainability Experts must have outstanding skills in strategic planning, human resources management, and relationship-building.

2. Duties of the "Sustainability Expert"

As part of their work, Sustainability Officers focus on:

- Creating an overarching strategy for sustainability in their organizations with an accompanying mission or vision and clear operating principles.
- Building short and long-range operational planning that incorporates sustainability practices.
- Acting as an internal sustainability consultant in the organization to educate colleagues on emerging trends, programs and issues in sustainability.
- Directly managing all aspects of sustainability initiatives and programs, including administration of office, staff and budgets.
- Managing sustainable activities such as recycling, energy efficiency, and water conservation.
- Conducting an analysis of current policies, costs and benefits associated with implementing sustainable practices in an organization.
- Developing and implementing systems to measure the progress of sustainability initiatives.
- Fundraising (especially grant writing) to support sustainability projects.
- Engaging with a variety of stakeholders to ensure that their input is reflected in your organization's sustainability policy.

In order to be efficient, the Sustainability Expert should have a minimum of a level 5 (EQF / NQF) in one of the following areas:

- Environmental Policy
- Law (specializing in Environmental Law)
- Business or Public Administration
- Engineering
- Textile Engineering

It is recommended to possess complementary knowledge acquired in her/his bachelor studies (aforementioned areas).

In addition to the fields of study mentioned above, Sustainability Officers also need extensive management experience. Current sustainability practitioners can boost their soft skills for a future Sustainability Officer role with professional development courses in:

- Public speaking and presenting
- Organizational management
- Human resources management
- Financial management or budgeting

SUMMARY OF PROFESSIONNAL ACTIVITIES AND TASKS: See ANNEX I

3. European Qualification Framework for lifelong learning ECVET in "Sustainability Expert" Ecotex Project.

Sustainability Expert Ecotex Project is based the professional qualification profile on ECVET which allows learners to have references to accumulate, transfer and use their learning in units as these units are achieved. This enables building a qualification at learners' own pace from learning outcomes acquired in formal, non-formal and informal contexts, in their own country and abroad. The system is based on units of learning outcomes as part of qualifications that can be assessed and validated.

It offers a framework for making learners more mobile and qualifications more portable, laying down principles and technical specifications and making use of existing national legislation and regulations. It applies to VET (vocational education and training) qualifications at all levels of the European qualification's framework.

Teaching methods: The modules are delivered as a non-formal training. The learners have to study the units (available on the Platform or in the web site) regarding CSR and Circular Economy. The modules are designed to inform decision-making about different topics and help learners to identify and manage this issue they are likely to encounter in their career.
Assessment: Quizzes assess the level of knowledge acquired by the learner. Quiz answers can take different forms, from short answer to true/false and multiple choice. Digitally designed quizzes, question order and options can be randomized, so each learner's quiz is unique that learners could do through platform.

The next tables provide an overview of the technological framework for each ECVET module.

Module 1. Sustainability Management

REFERENCE QUALIFICATIONS	**SM Expert in textiles and clothing sector**	
EQF LEVEL	5	
LEARNING OUTCOME	The Textile and Clothing supply chain is segmented, long, complex and often lacks transparency – therefore, it is important to implement the principles of sustainable development in order to improve environmental and social performance. Module 1 is an introductory module for the sustainability expert learn about sustainable business organization principles in order to be able to manage and coordinate sustainability procedures and maintain processes according to good practices, policies and standardization.	
Unit 1.1	**Sustainability definition and policies**	
Knowledge	**Skills**	**Competencies**
Knows definition of sustainability - Environmental sustainability; Social sustainability; Economic sustainability; sustainable materials and production. Knows the sustainability policies.	Develops sustainability policies in the enterprise; Defines sustainability and assesses the ways that sustainability topics are approached by a diversity of textiles and clothing sector; Defines the textile Value Chain.	Understands the basic sustainability concepts covering the Planet, People and Profit (3P) issues and the application of those concepts in textiles and clothing sector. Understands the definition and particularities of Sustainable Materials and Production.
Unit 1.2	**Sustainable development (Business models)**	
Knowledge	**Skills**	**Competencies**
Knows tools for sustainable business modeling and Sustainable Business Modeling Processes.	Develops a business sustainability strategy for reduce the negative environmental impacts, like decreasing of the amount of waste in the environment; not releasing toxins, greenhouse gas emissions and persistent pollutants; reduces the amount resources mined out of the earth's crust, and for improve the social responsibility, considering the society in general and the company workers and clients in particular.	Understand the processes and regulations of business models where in terms of sustainability internalize all external costs; create no toxic, or otherwise harmful, outputs. Design and manage business development that meets the needs of the present without

		compromising the ability of future generations to meet their own needs.
Unit 1.3	**Application of Certifications and Policies**	
Knowledge	**Skills**	**Competencies**
Knows norms, policies, standards relating to environmental, social, ethical, and safety issues.	Ability to develop and implement methodologies, tools and procedures of specific sustainability management issues. Develop an elementary ability to identify and analyze situations and documents to solve environmental and social problems in a business context.	Understands the processes of environmental and social changes, apply regulations to prevent environment hazards and social problems. Understands principal causes of unsustainability, manages application of certifications and policies documents. Define objectives and programs to improve the business sustainability performance.
Unit 1.4	**Sustainability Assessment**	
Knowledge	**Skills**	**Competencies**
Knows four domains model of sustainability: Economics, Ecology, Politics and Culture.	Select the most appropriate methods to teach the work-team about the sustainability and its management in all four models (components) of sustainable business strategy.	Understands and applies circles of sustainability: four domains model: economic domain associated with the production, use, and management of resources-ecological domain that occur across the intersection between the social and the natural realms political domain associated with basic issues of social power cultural domain which, over time, express continuities and discontinuities of social meaning.

Unit 1.5	**Internal sustainability**	
Knowledge	**Skills**	**Competencies**
Describe internal and corporate sustainability: employee sustainability, technology and equipment sustainability, quality and procurement sustainability.	Select the most suitable methods to analyze treatments needed to ensure that business is carried out in a way that is environmentally, socially and economically responsible.	Implement the supervision of: safety with the highest priority, constantly striving to eliminate the causes of incidents in our quest for an injury-free workplace; responsible and proactive attitude and is committed to minimizing the harmful effects of operations; include minimizing disruption; fostering local involvement and enterprise through the use of local labor, equipment and materials; engaging effectively with the local community

Module 1 ECVET resume

SM Expert in textiles and clothing industry			
EQF Level : 5			
Total number of ECVET points: 1,5			
Training hours: 20			
Units of learning outcomes	Relative weight in the frame of the qualification (%)	Number of ECVET points	Estimated work time in hours
1.1. Sustainability definition and policies	10	0,15	2
1.2. Sustainable development (Business models)	20	0,30	4
1.3. Application of Certifications and Policies	10	0,15	2

1.4. Sustainability Assessment	30	0,45	6
1.5. Internal sustainability	30	0,45	6

Module 2. Environmental Performance

REFERENCE QUALIFICATIONS	**EP Expert in textiles and clothing sector**	
EQF LEVEL	5	
LEARNING OUTCOME	By the end of this Module, the learners will be able to manage environmental performance`s metrics according the got results by using environmental systems analysis tools in a company. Gain a solid understanding of: environmental performance issues relating to global metrics for the environment performance; environmental systems analysis tools and resource economics. This module is designed to encourage decision-making about manufacturing systems according the results of engineering systems analyses, taking in account technical change and innovation, societal development, and the natural environment. This module will provide an opportunity for new specialist to manage the company's production systems in continuous development in a sustainable and environmentally friendly manner.	
Unit 2.1	**Environmental performance management**	
Knowledge	**Skills**	**Competencies**
Knows the terms of Environmental Performance; Knows how to measure environmental performance index (EPI). Knows global metrics for environmental performance and two dimensions of Environmental Performance - environmental health and ecosystem vitality.	Finds and applies the information about environment's global metrics, Environmental Performance Index (EPI) in everyday work; Evaluates and compares environmental performance index values; Summarizes company's indicators needed to calculate environmental health and ecosystem vitality indexes	Understands information about environment's global metrics, environmental performance index (EPI) in everyday work; Understands company's indicators needed to calculate environmental health and ecosystem vitality indexes.
Unit 2.2	**Remanufacturing and eco efficiency**	
Knowledge	**Skills**	**Competencies**
Knows the terms: Manufacturing and remanufacturing systems. Knows the concept of ecoefficiency, its importance as a measureable indicator of sustainability performance. Knows the technologies and systems for textile and clothing manufacturing and remanufacturing.	Uses the concept of ecoefficiency as a measurable indicator of sustainability performance and as a benchmark in comparing alternative technologies and production systems. Decides and designs ecoefficient technological processes and systems for Manufacturing and Remanufacturing of textile and clothing goods.	Understands the factors driving and shaping the management of environmental efforts in the textile industry. Understands how to develop production processes using lower amounts of water, pesticides, insecticides, hazardous chemicals or lower releases of GHG etc. Understands the

		concept of Eco-Efficiency and the roles it can play
Unit 2.3	**Best Available Techniques (BAT) in the textile industry**	
Knowledge	**Skills**	**Competencies**
Knows the definition of Best Available Techniques (BAT) Describes the concept of BAT. Knows BAT assessment methodology	Ability to identify and analyse situations to solve environmental problems in a textile industry. Evaluates and selects BAT in the textile sector for reducing negative environmental impacts	Understands the concept of BAT, applies BAT Reference Documents (BREFs) Understands the benefits of BAT application in textiles sector.
Unit 2.4	**Textile products environmental performance**	
Knowledge	**Skills**	**Competencies**
Knows Life Cycle Assessment (LCA) definition Knows the concepts, framework and application of Life Cycle Assessment method for carbon footprint and water footprint assessing	Evaluates the Environmental Performance of products and systems by using Life Cycle Assessment method	Applies water footprinting and carbon footprinting analysis for decision-making in production company by using the Life Cycle Assessment method
Unit 2.5	**Environmental legislation for the textile sector**	
Knowledge	**Skills**	**Competencies**
Knows directives, standards and regulations surrounding textile industry. Knows what REACH stands for and how companies can obtain it.	Finds and applies the information about directives, standards and regulations surrounding textile industry	Understands how to use standards and how to get companied certified for REACH.

Module 2. ECVET resume

EP Expert in textiles and clothing-sector			
EQF Level: 5			
Total number of ECVET points: 1,5			
Training hours: 20			
Units of learning outcomes	Relative weight in the frame of the qualification (%)	Number of ECVET points	Estimated work time in hours
2.1. Environmental performance management.	10	0,15	2
2.2. Remanufacturing and eco efficiency	30	0,30	5
2.3. Best Available Techniques (BAT) in the textile industry	30	0,45	5
2.4. Textile products environmental	20	0,30	5

performance			
2.5. Environmental legislation for the textile sector	10	0,15	3

Module 3. Corporate Social Responsibility (CSR)

REFERENCE QUALIFICATIONS	**CSR Expert in textiles and clothing sector**	
EQF LEVEL	5	
LEARNING OUTCOME	By the end of this module, the learners will be able to define and discuss critical elements regarding corporate social responsibility, including business ethics, in the context of sustainability. The module is designed to inform decision-making about ethical challenges arising in business and help the learners to identify and manage difficult ethical dilemmas they are likely to encounter in their career.	
Unit 3.1	**CSR definition and scope**	
Knowledge	**Skills**	**Competencies**
Describe the concept of Corporate Responsibility. Define the scope and complexity of corporate social responsibility (CSR). Define the concept of stakeholders and their relationship to business and impact on managerial decision-making.	Develop an elementary ability to identify and analyse ethical issues and to solve ethical problems in a business context.	Apply the fundamentals of CSR in the organization; Design an action plan to improve the stakeholder's relationship to business.
Unit 3.2	**Fundamentals of corporate social responsibility (CSR)**	
Knowledge	**Skills**	**Competencies**
Understand the concept of corporate social responsibility: definition, theoretical perspectives and historical review; Describe the principle and limits of CSR; Describe corporate social responsibility as a value creating activity. Triple Bottom Line (People, Planet, Profit).	Formulate a clearer understanding of global sustainability and corporate social responsibility issues. Explain the main principles of CSR.	Use the CSR issues in the context of business sustainability; Design CSR as a valuecreating activity.

Unit 3.3	**Organizational culture and CSR**	
Knowledge	**Skills**	**Competencies**
Define the Instrumental and Intrinsic form of Corporate social responsibility; Discuss Corporate social responsibility initiatives; Describe Institutionalism of CSR and Ethics; Relate Professional Role and Obligations.	Develop and improve skills in designing and implementing corporate social responsibility programs; Summarize the level of commitment to CSR of various organizations and explain how it can be a source of competitive advantage. Explain the connections between corporate strategy and CSR and the impact on foundational organizational principles such as mission and vision	Apply ethics, instruments and initiatives of CSR in the organization;
Unit 3.4	**Implement and evaluate CSR**	
Knowledge	**Skills**	**Competencies**
Explain the International standards used to define and implement CSR; Describe how to measure CSR performance and how to assess the CSR. Reporting on CSR performance; Understanding the concept of materiality in CSR and the CSR reporting process	-Analyze the impact of CSR implementation on corporate culture, particularly as it relates to social issues; -Analyze the CSR performance in the organization.	-Use International Standards to define and implement CSR; -Use the results of the CSR performance report to improve the organization responsibilities to customers and client and to create competitive advantage.
Unit 3.5	**Occupational Health and Safety legislation for the textile sector**	
Knowledge	**Skills**	**Competencies**

-Explain the European and national OHS legislation -Discuss Equipment safety in the textile industry	-Select the most appropriate methods to the work-team awareness about the importance of OHS to reduce the risks; -Adapt to emergencies (difficult situations).	- Use the national and European legislation of OHS in the organization; -Apply proper measurements in the emergencies (difficult situations).

Module 3. ECVET resume

CSR Expert in textiles and clothing industry			
EQF Level: 5			
Total number of ECVET points: 1,5			
Training hours: 20			
Units of learning outcomes	Relative weight in the frame of the qualification (%)	Number of ECVET points	Estimated work time in hours
3.1. CSR definition and scope	10	0,15	2
3.2. The fundamentals of Corporate social responsibility (CSR).	20	0,3	5
3.3. Organizational culture and CSR	30	0,45	5
3.4. Implement and evaluate CSR	20	0,3	5
3.5.Occupational Health and Safety at Work legislation for the textile sector	20	0,3	3

Module 4. Circular Economy (CE)

REFERENCE QUALIFICATIONS	**CE Expert in textiles and clothing sector**
EQF LEVEL	5
LEARNING OUTCOME	By following this module, the learner will be able to understand the CE strategies, policies and terminology and its importance in the 21-th century. The understanding of the principles of CE will help the expert to design an action plan or a strategy with proper tools to transform their businesses from a classic type (linear) to a circular one.
Unit 4.1	**Circular Economy definition and principles**

Knowledge	Skills	Competencies
Define the methods for implementing the CE strategies.	Select the most suitable methods to prepare and implement the strategies in the company.	Implement the selected strategies and principles in the textile sector Use Decision-making capacity
Unit 4.2	**Identification of environmental legislation regarding Waste Management**	
Knowledge	**Skills**	**Competencies**
Describe the national and European environmental legislation related with wastes management Describe different types of waste and their final destination Define the European waste codes	Select the most suitable methods to analyze the waste management options and the boundaries for the textile industry	Apply the national and European legislation regarding Waste management; Apply the principle of waste control to promote the separate collection; Implement the final supervision in the final waste destination.
Unit 4.3	**Circular Economy in the textile sector**	
Knowledge	**Skills**	**Competencies**
Discuss sustainability and supply chain; Describe apparel production chain, materials properties and technologies which are used in the textile industry to re-orientate the company business to a model which is based on preservation of resources. Discuss recycling process (fibers, materials, products, etc.) To know about specific certifications of circularity	Design a framework for implementing the principles of CE in the company. Test the capacity of changing the current linear model of value chain into a closed loop.	Use flexible supply chains or create new ones to reduce the stocks; Apply alternative ways of transportation, logistics and communication; Select the suitable supplier (local) who can supply eco-friendly materials.
Unit 4.4	**Eco-design**	
Knowledge	**Skills**	**Competencies**
Discuss methods for reducing the material consumption and	Design products with minimum types of materials,	Select proper materials to produce the model with

waste generation Discuss eco-friendly materials; Describe Eco-certification and Eco-label. Discuss about the value chain textile sector	number of pieces to minimize the waste production. Design/ re-designed products with reused/ recycled or recovered elements/ pieces Design a virtual prototype to reduce the number of physical ones.	minimum waste; Select the suitable eco materials to replace the others (protect the environment, reduce material use); Use computer design tools to re-design the Eco-product.
Unit 4.5	**Circular business models for the textile sector**	
Knowledge	**Skills**	**Competencies**
Define circular business models; Describe new concepts: system thinking, cradle to cradle, resource recovery.	Test the capacity of changing the classic business model into a circular one.	Organize a work team, manage and supervise it; Apply the CE framework principles to build a Business Model; Analyze the opportunities and challenges along each stage.

Module 4. ECVET resume

CE Expert in textiles and clothing industry			
EQF Level: 5			
Total number of ECVET points: 1,5			
Training hours: 20			
Units of learning outcomes	Relative weight in the frame of the qualification (%)	Number of ECVET points	Estimated work time in hours
4.1. Circular economy definition and principles	10	0,15	2
4.2. Identification of environmental legislation regarding Waste Management	10	0,15	2
4.3. Circular Economy in the textile sector	20	0,3	4
4.4. Eco-design	30	0,45	6
4.5. Circular business models for the textile sector	30	0,45	6

SUSTAINABILITY EXPERT – ECVET TECHNOLOGICAL FRAMEWORK: See ANNEX II

ANNEX I

SUMMARY OF PROFESSIONNAL ACTIVITIES AND TASKS

Activity	Tasks		Items/comments
A1 Administrative Activities	T1. Performing administrative activities to manage staff and budgets.	T1.1. Managing administrative and office aspects	Directly managing all aspects of sustainability initiatives and programs, including administration of office, staff and budgets.
A2 Sustainability Programmes and projects	T1. Developing, implementing and evaluating sustainability programmes and projects.	T1.1. Creating an overarching strategy for sustainability in their organizations with an accompanying mission or vision and clear operating principles	
		T1.2. Building short and long-range operational planning that incorporates sustainability practices	
		T1.3. Writing reports for upper management about the progress of sustainability projects	
		T1.4. Attending training seminars to stay up-to-date with new developments in sustainability policy, practices and technology	Acting as an internal sustainability consultant in the company to educate colleagues on emerging trends, programmes and issues in sustainability.

A3. Conducting researches, analysis and implementing systems	T1. Conducting research to identify new sources of funding and writing grant proposals to request additional funding sources	T1.1. Fundraising (especially grant writing) to support sustainability projects.	
	T2. Conducting an analysis of current policies, costs and benefits associated with implementing sustainable practices in a company.		
	T3. Developing and implementing systems to measure the progress of sustainability initiatives.	T1.1. Managing sustainable activities such as recycling, energy efficiency, and water conservation.	
A4 Managing relations and contacts with stakeholders	T1. Engaging with a variety of stakeholders to ensure that their input is reflected in company's sustainability policy.	T1.1. Participating in stakeholder engagement meetings to assess the needs and interests of key people in the industry.	

ANNEX II

Sustainability Expert – ECVET Technological Framework

Sustainability Expert – ECVET Technological Framework EQF Level 5			
Modules	**Units**	**Training Hours**	**ECVET Points**
M 1: Sustainability Management	Unit 1.1: Sustainability definition and policies Unit 1.2: Sustainable development (Business models) Unit 1.3: Application of Certifications and Policies Unit 1.4: Circles of sustainability Unit 1.5: Internal sustainability	20h	1,5
M 2: Environmental Performance	Unit 2.1: Environmental performance definition and environment's global metrics Unit 2.2: Manufacturing and remanufacturing systems and technologies Unit 2.3: Environmental systems analysis tools Unit 2.4: Environmental and resource economics Unit 2.5: Technical change and the environment	20h	1,5
M 3: Corporate Social Responsibility	Unit 3.1: CSR definition and scope Unit 3.2: Fundamentals of corporate social responsibility (CSR) Unit 3.3: Organizational culture and CSR Unit 3.4: Implement and evaluate CSR Unit 3.5: Occupational Health and Safety legislation for the textile sector	20h	1,5
M 4: Circular Economy	Unit 4.1: Identification of Circular Economy strategies Unit 4.2: Identification of environmental legislation regarding Waste Management Unit 4.3: CE in the textile sector Unit 4.4: Eco-design Unit 4.5: Circular business models for the textile sector	20h	1,5
	Total	80h	6