



Step 2
Sustainability

The New Occupation and Qualification Profile

*How to Implement Sustainable Manufacturing in Footwear
- new occupational profile and training opportunities*

*“Expert on Sustainable
Manufacturing in Footwear”*

How to Implement Sustainable Manufacturing in Footwear - New Occupational Profile and Training Opportunities

Credits

Title

The New Occupation and Qualification Profile by
STEP 2 SUSTAINABILITY project partnership

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1. Designation of occupation (two levels)

Level 4 - Technician on Footwear Sustainable Manufacturing.

Level 5 - Specialist Technician on Sustainability for Footwear Industry.

2. Methodology

For the definition of the occupational profile “Technician in sustainable manufacture of footwear”, the methodology described in the European Qualifications Framework for lifelong learning (EQF) has been followed.

The European Qualifications Framework (EQF) is a common European reference framework. It acts as a translation grid which links countries' qualifications systems/framework. It covers qualifications at all levels and in all sub-systems of education and training (general and adult education, vocational education and training as well as higher education). Its main role is to make qualifications more readable and understandable across different countries and systems.

The EQF will relate different countries' national qualifications systems and frameworks together around a common European reference – its eight reference levels. The levels span the full scale of qualifications, from basic (Level 1, for example school leaving certificates) to advanced (Level 8, for example Doctorates) levels. The eight reference levels are described in terms of learning outcomes.

In the EQF a learning outcome is defined as a statement of what a learner knows, understands and is able to do on completion of a learning process. The EQF therefore emphasises the results of learning rather than focusing on inputs such as length of study. Learning outcomes are specified in three categories – as knowledge, skills and competence. This signals that qualifications – in different combinations – capture a broad scope of learning outcomes, including theoretical knowledge, practical and technical skills, and social competences where the ability to work with others will be crucial.

The three categories are defined as follows:

‘Knowledge’: means the outcome of the assimilation of information through learning. Knowledge is the body of facts, principles, theories and practices that is related to a field of work or study. In the context of the European Qualifications Framework, knowledge is described as theoretical and/or factual.

‘Skills’: means the ability to apply knowledge and use know-how to complete tasks and solve problems. In the context of the European Qualifications Framework, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) or practical (involving manual dexterity and the use of methods, materials, tools and instruments).

‘Competences’: means the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development. In the context of the European Qualifications Framework, competence is described in terms of responsibility and autonomy.

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The table below provides details about the descriptors used to define the EQF levels:

		KNOWLEDGE	SKILLS	COMPETENCE
	Each of the 8 levels is defined by a set of descriptors indicating the learning outcomes relevant to qualifications at that level in any system of qualifications.	In the context of EQF, knowledge is described as theoretical and/or factual.	Skills are described as cognitive (involving the use of logical, intuitive and creative thinking) and practical (involving manual dexterity and the use of methods, materials, tools and instruments).	In the context of EQF, competence is described in terms of responsibility and autonomy.
Level 1	The learning outcomes relevant to Level 1 are:	Basic general knowledge.	Basic skills required to carry out simple task.	Work or study under direct supervision in a structured context.
Level 2	The learning outcomes relevant to Level 2 are:	Basic factual knowledge of a field of work or study.	Basic cognitive and practical skills required to use relevant information in order to carry out task and to solve routine problems using simple rules and tools.	Work or study under supervision with some autonomy.
Level 3	The learning outcomes relevant to Level 3 are:	Knowledge of facts, principles, processes and general concepts, in a field work or study.	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information.	Take responsibility for completion of tasks in work or study. Adapt own behaviour to circumstances in solving problems.
Level 4	The learning outcomes relevant to Level 4 are:	Factual and theoretical knowledge in broad contexts within a field of work or study.	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study.	Exercises self-management within the guidelines of work or study contexts 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 or study activities.
Level 5	The learning outcomes relevant to Level 5 are:	Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge.	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems.	Exercise management and supervision in contexts of work or study activities where there is unpredictable change. Review and develop performance of self and others.
Level 6	The learning outcomes relevant to Level 6 are:	Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles.	Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study.	Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts. Take responsibility for managing professional development of individuals and groups.
Level 7	The learning outcomes relevant to Level 7 are:	Highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research. Critical awareness of knowledge issues in a field and at the interface between different fields.	Specialised problem-solving skills required in research and/or innovation in order to development new knowledge and procedures and to integrate knowledge from different fields.	Manage and transform work or study context that are complex, unpredictable and require new strategic approaches. Take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams.
Level 8	The learning outcomes relevant to Level 8 are:	Knowledge at the most advanced frontier of a field of work or study and at the interface between fields.	The most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice.	Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research.

Based on the EQF and according to the European Credit System for Vocational Education and Training (ECVET), the most suitable levels for the training programme have been selected according to the tasks and competences that were identified for the development of the occupational profile. The levels selected based on the tasks and competences described in section 4, are level 4 and level 5.

Level 4 – Technician on Footwear Sustainable Manufacturing (to be provided by VET institutes) (double certification – scholar and professional).

Level 5 – Specialist Technician on Sustainability for Footwear Industry (to be provided by VET institutes in articulation with High Education Entities).

3. Description of the occupation

3.1. General description

Mainly, professionals should coordinate the environmental management of the footwear company, analysing the geographic location of the industry and taking certain environmental factors as a reference, such as the contamination of air and water, toxic waste, etc. They should also be familiar with the footwear manufacturing processes, machines and raw materials used, hazardous chemicals used in the production processes and present in materials, etc.

Furthermore, they should know about environmentally-friendly materials that may replace other materials that have an impact on the environment, environmentally-friendly packaging techniques and materials, as well as distribution and commercialisation techniques that minimise environmental impacts.

3.2. Qualification Standards

A search among international, national, European and Spanish qualification standards has been conducted in order to find out if there is currently any qualification related to the occupational profile to be developed in the framework of the project.

INTERNATIONAL QUALIFICATIONS:

International Labour Organization (ILO)

The ILO is custodian of two international classifications, which are part of the international family of economic and social classifications and for which it is responsible for their maintenance, updating and revision. These classifications are:

International Standard Classification of Occupations (ISCO)

International Classification of Status in Employment (ICSE)

ISCO: The International Standard Classification of Occupations (ISCO) is one of the main international classifications for which ILO is responsible. It belongs to the international family of economic and social classifications (ISIC).

ISCO is a tool for organizing jobs into a clearly defined set of groups according to the tasks and duties undertaken in the job. Its main aims are to provide:

- a basis for the international reporting, comparison and exchange of statistical and administrative data about occupations;
- a model for the development of national and regional classifications of occupations;
- a system that can be used directly in countries that have not developed their own national classifications.

Among the ISCO classifications, the following one could be related to the occupational profile to be developed:

2143 Environmental Engineers

ICSE: International Classification of Status in Employment. This classification is a set of discrete values which can be assigned to the variable “type of contract which a persons has with other persons or organizations when performing a particular job” when that is measured in a statistical survey or registered in other administrative files. The “type of contract” for a job is determined by the type of economic risks and authority which are involved when carrying out the tasks and duties of the job.

Australian and New Zealand Standard Classification of Occupations (ANZSCO).

From the 1.2 version (2013) of the Australian and New Zealand Standard Classification of Occupations, the following professional groups have been identified, which can be related to the occupational profile to be developed:

UNIT GROUP 2513 OCCUPATIONAL AND ENVIRONMENTAL HEALTH PROFESSIONALS

OCCUPATIONAL AND ENVIRONMENTAL HEALTH PROFESSIONALS develop, implement and evaluate policies and programs to monitor environmental health and occupational health and safety and related legislation to ensure safe and healthy working conditions, and assist injured staff through the workers' compensation and rehabilitation process.

Indicative Skill Level: In Australia and New Zealand:

Most occupations in this unit group have a level of skill commensurate with a bachelor degree or higher qualification. In some instances relevant experience and/or on the job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks Include:

- developing, implementing and reviewing environmental health management plans and occupational health and safety plans;
- preparing and implementing plans and strategies for the safe, economic and suitable disposal of commercial, industrial, medical and household wastes;
- advising on and enforcing legislation, implementing prevention programs and strategies for communicable diseases, food safety, waste water treatment and disposal systems, recreation and domestic water quality, contaminated and hazardous substances, and minimising air, sea, water and noise pollution to improve health outcomes;
- identifying hazards, and assessing and controlling risks in the workplace;
- developing, implementing and monitoring programs minimising workplace and environmental pollution involving chemical and physical hazards;
- promoting ergonomic principles within the workplace such as matching furniture, equipment and work activities to the needs of employees;
- inspecting and auditing workplaces, processes, plant, and chemical and physical hazards for legislative compliance;
- training employees in personal protective equipment and safe working procedures;
- recording and investigating injuries and equipment damage, and reporting safety performance;
- coordinating the return of injured workers into the workplace.

Occupations:

251311 Environmental Health Officer
251312 Occupational Health and Safety Adviser

251311 Environmental Health Officer

Develops, enforces and evaluates environmental health policies, programs and strategies to improve health outcomes, and oversees the implementation and monitoring of environmental health legislation. Registration or licensing may be required.

Specialisations:

Food Safety Auditor
Food Safety Officer

251312 Occupational Health and Safety Adviser

Alternative Titles:

Occupational Health and Safety Coordinator
Occupational Health and Safety Officer

Develops, implements and evaluates risk management policies and programs, trains employees in occupational health and safety procedures, monitors and audits the workplace, and records and investigates incidents to ensure safe and healthy working conditions.

Specialisations:

Occupational Hygienist
Workplace Rehabilitation Officer

233915 Environmental Engineer

Assesses the impact on air, water, soil and noise levels in the vicinity of engineering projects, plans and designs equipment and processes for the treatment and safe disposal of waste material, and assesses what may cause problems for the environment in the long-term. Registration or licensing is required.

The Standard Occupational Classification (SOC) is a common classification of occupational information for the United Kingdom.

Within the context of the classification jobs are classified in terms of their skill level and skill content.

It is used for career information to labour market entrants, job matching by employment agencies and the development of government labour market policies. The following professional group can be related to the occupational profile to be developed:

MINOR GROUP 214-CONSERVATION AND ENVIRONMENT PROFESSIONALS

Conservation and environment professionals use specialist skills and knowledge to manage and conserve the environment, its associated species and its cycles of life, to address the environmental impacts of human activities and industrial processes, and to promote the sustainable use of resources and a wider public understanding and enjoyment of the environment. (It should be noted that Conservators are classified with Librarians and Related Professionals in minor group 245.)

2142 Environment professionals

Jobholders in this unit group investigate, address, and advise on a variety of terrestrial and marine environment and resource management issues, including the development and implementation of environmental policies and remedies that address the impacts of human activities and industrial processes on the environment.

Typical entry routes and associated qualifications:

A good degree in a relevant subject is normally a minimum entry qualification, and some employers will require a postgraduate qualification. Relevant work experience to complement academic qualifications is highly desirable. Professional qualifications across a wide range of areas of work are available.

Tasks:

- identifies contamination of land, air or water and assesses any adverse impact on the environment;
- advises on and provides solutions for mitigating the effects of such contamination;
- implements remediation works;
- carries out environment-related desk-based research and fieldwork to collect, analyse and interpret data to determine their validity, quality and significance;
- carries out environmental audits and environmental impact assessments;
- communicates scientific and technical information to relevant audiences in an appropriate form, via reports, workshops, educational events, public hearings;
- assists organisations to conduct their activities in an environmentally appropriate manner;
- implements, reviews and advises on regulatory and legislative standards, guidelines and policies;
- provides professional guidance to clients, government agencies, regulators and other relevant bodies, having regard for sustainable approaches and solutions.

Related job titles:

- Energy manager
- Environmental consultant
- Environmental engineer
- Environmental protection officer
- Environmental scientist
- Landfill engineer

NACE_r2: Statistical classification of economic activities in the European Community, Rev. 2 (NACE Rev. 2)

NACE is not an occupational classification but can be useful in identifying the activities that are most closely related to the occupational profile to be developed in the framework of the project.

NACE Revision 2 includes the references below, which could be related to the project's occupational profile.

EP_SPE Private and public specialised producers of environmental protection services (E37 (sewerage), E38.1 (waste collection), E38.2 (waste treatment and disposal) and E39 (remediation activities and other waste management services)).

E383 Materials recovery.

S9523 Repair of footwear and leather goods.

National Occupational Classification (CNO-11) – Spanish Classification.

The National Occupational Classification 2011 (CNO-11) is the Spanish system used to collect and incorporate data relative to occupations, which ensures coherence in the stages of data collection, tabulation, dissemination and analysis, and thus constitutes a harmonisation tool and statistical infrastructure. This codification system aims to process occupational information in a uniform and consistent manner for statistical purposes.

The codes that are most closely related to the occupational profile to be developed are the following ones:

2469 Technical engineers other than those classified under other categories.

This primary group includes technical engineers (except agricultural engineers, forest engineers, electrical and electronic engineers) that are not separately classified in subgroup 246: 'Technical engineers (except agricultural engineers, forest engineers, electrical and electronic engineers)'.

Tasks include:

- advising on work organisation, with regard to time and motion, and monitoring implementation;
- performing related tasks;
- supervising other workers.

Related job titles:

- Industrial technical engineers, efficiency;
- Technical engineers, time and motion study.

2426 Environmental protection professionals

Environmental protection professionals investigate and assess the impacts of human activities on the environment, such as air, sea, water, soil and noise pollution, climate change, toxic waste, natural resources depletion and degradation. They develop and implement plans and remedies for environment protection, conservation and recovery, risk minimisation and prevention.

Tasks include:

- carrying out research, testing, sample collection, and field and laboratory analyses in order to identify the origin of environmental issues and prevent, control and mitigating the impact of such issues;
- assessing the potential environmental impact of activities, projects and potential or proposed initiatives, and advising on their continuation;

- developing and coordinating the implementation of environmental management systems that enable organisations to identify, monitor and control the environmental impacts of their activities, products and services;
- carrying out environmental audits on activities, processes, noise and substances;
- assessing the compliance with public and internal provisions and guidelines relative to environment protection, identifying any infringement and the required corrective measures;
- assisting and providing technical guidance to organisations to conduct their activities in an environmentally appropriate manner to address environmental issues, reduce environmental impact and minimise economic losses;
- developing conservation plans.

Related job titles:

- Air pollution analyst
- Environmental consultant
- Environmental auditor
- Environmental consultant
- Environmental researcher
- Environmental scientist
- Water quality analyst

4. Activities, tasks, Knowledge, skills and competences for the occupational profile:

The activities, tasks, knowledge and competences of the occupational profile are described below.

It is necessary that the technician has some common transversal skills to perform all the tasks, as the ones described below.

Common transversal skills/competences (EQF Level 4 and 5):

- To have computer skills, have the analytical capacity for information (texts, news, databases, courses,...), ability to interpret reports and to be efficient;
- Responsibility for the completion of tasks;
- To adapt own behaviour to circumstances in solving problems during the realisation of the activity;
- To be able to convey to the work team the sustainable principles regarding legal environmental requirements;

- To be able to work in teams in different functional areas within the company, understanding their needs and doubts, providing support on the compliance with legal environmental requirements;

- To be able to promote an “environmentally-friendly” view toward the creative team, promoting training on sustainability when and if needed;

- To have leadership abilities;

- To be able to implement and control the compliance with certain requirements;

- To be able to manage self training, being innovative.

Common transversal knowledge (EQF Level 4 and 5):

- General knowledge of footwear production.

	DESCRIPTION	SECTORAL	NON SECTORAL
ACTIVITY 1	IDENTIFICATION AND CONTROL OF THE COMPLIANCE WITH THE ENVIRONMENTAL LEGISLATION FOR THE FOOTWEAR INDUSTRY	X	X
Task 1 (A1-T1)	Searching footwear sector-related environmental legislation		
Knowledge	– Know the general structure of national and European legislations regarding air, water, waste, noise; – Meet legislative databases and search engines;	X	
Task 2 (A1-T2)	Identification of mandatory environmental legislation		
Knowledge	– Extensive knowledge of environmental issues, especially regarding air, water, waste, noise.	X	
Specific Skill/ Competences	– To be able to select the environmental parameters and their limits that affect the footwear industry;	X	

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	DESCRIPTION	SECTORAL	NON SECTORAL
Task 3 (A1-T3)	Control of the compliance with the mandatory environmental legislation for the footwear industry		
	<ul style="list-style-type: none"> - Extensive knowledge of the types of materials used in footwear; Substances and mixtures safety data sheets; - Chemical risks; - Volatile organic compounds (VOC) concentration inside and outside the factory; - Dust in the work environment; - Legislation on water restrictions compliance; - Legislations on noise at work (inside and around the factory); for example: noise of outside ventilation systems for VOC and dust. Is very important when the factory isn't, in industrial zone, so it is surrounded with houses; 		
Knowledge	<ul style="list-style-type: none"> - Waste management; <ul style="list-style-type: none"> - Acknowledge of his country waste codes; - Acknowledge of different wastes and their final destination: For example: Hazardous/Non hazardous; Valuable/Non Valuable; Recyclable/Non Recyclable; Organic/Non Organic. - REACH legislation; - National and European legislation; - Raw material suppliers that certify compliance with the legislation about hazardous substances; - Insurance regarding environmental damages. 	X	
	<ul style="list-style-type: none"> - To be able to control the legal parameters associated to environmental aspects, namely to minimise production water usage, VOC , paper usage, printings and other practices that imply extra resources other than the minimum necessary, water misuse, etc; - Management and supervision in the work environment; 		
Specific Skill/ Competences	<ul style="list-style-type: none"> - Decision-making capacity; - To check own and others' performance; - Responsible for the compliance with the legislation; - Supplier selection; - To report their immediate superiors with respect to situations of risk. 	X	

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	DESCRIPTION	SECTORAL	NON SECTORAL
ACTIVITY 2	IDENTIFICATION AND CONTROL OF THE COMPLIANCE WITH OTHER LEGISLATION FOR THE FOOTWEAR INDUSTRY	X	
Task 1 (A2-T1)	Control of the compliance with the mandatory Health and Safety at Work (HSW) legislation for the footwear industry		
	– Knowledge of HSW, emergency and firefighting, first-aids, national and European legislations;		
Knowledge	– General knowledge of risk control; – General knowledge of machines/equipment safety and safety maintenance.	X	
Specific Skill/ Competences	– Communication skills - To be able to convey to the work team the legal requirements regarding HSW and the importance of complying with them in order to reduce risks; – To be able to build a team to act in emergency situations.	X	
Task 2 (A2-T2)	Control of the compliance with the mandatory product legislation for the footwear industry (REACH and consumer safety)		
	– Knowledge of legislation applicable to materials and products, national and European legislation;		
Knowledge	– Restricted substances and their restriction limits; – Knowledge of accredited testing laboratories for the control of materials; – Raw material suppliers that certify compliance with the legislation about hazardous substances.	X	
Specific Skill/ Competences	– Communication skills - To be able to convey to the design and materials acquisition teams the legal requirements regarding REACH and the importance of complying with them.	x	
ACTIVITY 3	IDENTIFICATION AND CONTROL OF NON LEGISLATED ENVIRONMENTAL IMPACTS PRODUCED BY FOOTWEAR COMPANIES	X	
Task 1 (A3-T1)	Use of environmentally-friendly materials		
	– Extensive knowledge of the types of materials used in footwear; – Knowledge of suppliers of raw materials with ecological characteristics:		
Knowledge	- water based adhesives - metal free leathers - biodegradable materials - Quality control - Marketing - Eco-certification; Eco-label	X	
Specific Skill/ Competences	– To be able to decide on the substitution of certain materials by eco-friendly ones, maintaining the same level of functionality and other characteristics of the model. Supplier selection.	X	

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	DESCRIPTION	SECTORAL	NON SECTORAL
Task 2 (A3-T2)	Eco-design		
Knowledge	<ul style="list-style-type: none"> – Computer-aided design tools (3D CAD design) to make fewer prototypes and reduce material consumption and time; – Concepts about how to design reducing waste generation, material consumption and time; – Eco-certification; eco-label. 	X	
Specific Skill/ Competences	<ul style="list-style-type: none"> – To manage environmental information affecting the footwear sector, including raw materials; – To manage environmental information relating to the footwear sector, including raw materials; – To know how to use raw materials with eco-friendly characteristics; – To be able to optimise consumptions and production time – suggest changes to the models in order to achieve a better material and production time optimisation; – To minimise the variety of materials in one single product; – To be able to use computer design tools (PhotoShop, 3D CAD design, etc.), as a way to reduce the quantity of prototypes; – To make decisions at the design stage in order to define the eco-efficient production characteristics. 	X	
Task 3 (A3-T3)	Eco-processes and technologies		
Knowledge	<ul style="list-style-type: none"> – Knowledge of production process; – Knowledge of energy sources and energy efficiency systems; – Knowledge of more environmentally friendly production techniques. 	X	
Specific Skill/ Competences	<ul style="list-style-type: none"> – To minimise the variety and quantity of materials; – To minimise the number of components; – To promote the use of local materials and prevent their transportation; – To minimise energy consumption; – To promote the use of renewable energy sources; – To minimise the production of waste; – To use clean production technologies (eg. replacing water curtain finishing booths with dry filter booths); – To use processes that make the most efficient use of materials (eg. computer-aided leather cutting machines); – To use materials that do not require additional treatments (eg. surface treatments for soles); – To reduce production process stages and time (automatic cutting systems, use of robots in manufacturing operations, etc.); – To use resource-conscious machines and processes (RCMP). 	X	

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	DESCRIPTION	SECTORAL	NON SECTORAL
Task 4 (A3-T4)	Control of packing and packaging resources		
Knowledge	– To know the most environmentally-friendly packaging techniques (recyclable materials, biodegradable materials, etc.), designs of reusable packaging, and to know the suppliers that can provide them.		X
Specific Skill/ Competences	– To be able to use more environmentally-friendly raw materials that are recyclable or biodegradable; to use preferably packaging made from one material only, with the lowest weight and volume possible. To avoid over-packaging; – Power to replace suppliers with others who can supply more environmentally-friendly packaging.		X

Activities, tasks, knowledge and competences for the level 5 occupational profile – **Specialist Technician on Sustainability for Footwear Industry**

ACTIVITY 1	IDENTIFICATION AND CONTROL OF THE COMPLIANCE WITH THE ENVIRONMENTAL LEGISLATION FOR THE FOOTWEAR INDUSTRY	X	X
Task 1 (A1-T1)	Searching footwear sector-related environmental legislation		
Knowledge	– Know the general structure of national and European legislations regarding air, water, waste, noise; – Meet legislative databases and search engines;	X	
Task 2 (A1-T2)	Identification of mandatory environmental legislation		
Knowledge	– Extensive knowledge of environmental issues, especially regarding air, water, waste, noise.	X	
Specific Skill/ Competences	– To be able to select the environmental parameters and their limits that affect the footwear industry;	X	
Task 3 (A1-T3)	Control of the compliance with the mandatory environmental legislation for the footwear industry		
Knowledge	– Extensive knowledge of the types of materials used in footwear; Substances and mixtures safety data sheets; – Chemical risks; – Volatile organic compounds (VOC) concentration inside and outside the factory; – Dust in the work environment; – Legislation on water restrictions compliance; Legislations on noise at work (inside and around the factory); for example: noise of outside ventilation systems for VOC and dust. Is very important when the factory isn't, in industrial zone, so it is surrounded with houses. – Waste management. - Acknowledge of his country waste codes. - Acknowledge of different wastes and their final destination: For example: Hazardous/Non hazardous; Valuable/Non Valuable; Recyclable/Non Recyclable; Organic/Non Organic. – REACH legislation; – National and European legislation; – Raw material suppliers that certify compliance with the legislation about hazardous substances; – Insurance regarding environmental damages.	X	

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	DESCRIPTION	SECTORAL	NON SECTORAL
Specific Skill/ Competences	– To be able to control the legal parameters associated to environmental aspects, namely to minimise production water usage, VOC, paper usage, printings and other practices that imply extra resources other than the minimum necessary, water misuse, etc;		
	– Management and supervision in the work environment;		
	– Decision-making capacity;	X	
	– To check own and others' performance;		
	– Responsible for the compliance with the legislation;		
	– Supplier selection;		
	– To report their immediate superiors with respect to situations of risk.		
ACTIVITY 2	IDENTIFICATION AND CONTROL OF THE COMPLIANCE WITH OTHER LEGISLATION FOR THE FOOTWEAR INDUSTRY	X	
Task 1 (A2-T1)	Control of the compliance with the mandatory Health and Safety at Work (HSW) legislation for the footwear industry		
Knowledge	– Knowledge of HSW, emergency and firefighting, first-aids, national and European legislations;		
	– General knowledge of risk control;	X	
	– General knowledge of machines/equipment safety and safety maintenance.		
Specific Skill/ Competences	– Communication skills - To be able to convey to the work team the legal requirements regarding HSW and the importance of complying with them in order to reduce risks;	X	
	– To be able to build a team to act in emergency situations.		
Task 2 (A2-T2)	Control of the compliance with the mandatory product legislation for the footwear industry (REACH and consumer safety)		
Knowledge	– Knowledge of legislation applicable to materials and products, national and European legislation;		
	– Restricted substances and their restriction limits;	X	
	Knowledge of accredited testing laboratories for the control of materials;		
	– Raw material suppliers that certify compliance with the legislation about hazardous substances.		
Specific Skill/ Competences	– Communication skills - To be able to convey to the design and materials acquisition teams the legal requirements regarding REACH and the importance of complying with them.	X	
Task 3 (A2-T3)	Control of the compliance with the mandatory labour, social and trade legislation		
Knowledge	– Extensive knowledge of legislation regarding human rights, labour rules, social aspects and fair trade, national and European legislation.		X
Specific Skill/ Competences	– Communication skills - To be able to convey to the human resources, financial and sales departments the legal requirements and the importance of complying with them.		X

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	DESCRIPTION	SECTORAL	NON SECTORAL
ACTIVITY 3	IDENTIFICATION AND CONTROL OF NON LEGISLATED ENVIRONMENTAL IMPACTS PRODUCED BY FOOTWEAR COMPANIES	X	
Task 1 (A3-T1)	Identification of non legislated environmental impacts produced by footwear companies.		
Knowledge	– Extensive knowledge of environmental issues;	X	X
Specific Skill/ Competences	– To adapt own behaviour to circumstances in solving problems during the realisation of the activity.	X	X
Task 2 (A3-T2)	Use of environmentally-friendly materials		
Knowledge	– Extensive knowledge of the types of materials used in footwear; Knowledge of suppliers of raw materials with ecological characteristics: – water based adhesives – metal free leathers – biodegradable materials – Quality control – Marketing – Eco-certification; Eco-label	X	
Specific Skill/ Competences	– To be able to decide on the substitution of certain materials by eco-friendly ones, maintaining the same level of functionality and other characteristics of the model. Supplier selection.	X	
Task 3 (A3-T3)	Eco-design		
Knowledge	– Computer-aided design tools (3D CAD design) to make fewer prototypes and reduce material consumption and time; – Concepts about how to design reducing waste generation, material consumption and time; – Eco-certification; – Eco-label.	X	
Specific Skill/ Competences	– To manage environmental information relating to the footwear sector, including raw materials; – To know how to use raw materials with eco-friendly characteristics; – To be able to optimise consumptions and production time – suggest changes to the models in order to achieve a better material and production time optimisation; – To minimise the variety of materials in one single product; – To be able to use computer design tools (PhotoShop, 3D CAD design, etc.), as a way to reduce the quantity of prototypes; – To make decisions at the design stage in order to define the eco-efficient production characteristics.	X	

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	DESCRIPTION	SECTORAL	NON SECTORAL
Task 4 (A3-T4)	Eco-processes and technologies		
Knowledge	<ul style="list-style-type: none"> – Knowledge of production process; – Knowledge of energy sources and energy efficiency systems; – Knowledge of more environmentally friendly production techniques. 	X	
Specific Skill/ Competences	<ul style="list-style-type: none"> – To minimise the variety and quantity of materials; – To minimise the number of components; – To promote the use of local materials and prevent their transportation; – To minimise energy consumption; – To promote the use of renewable energy sources; – To minimise the production of waste; – To use clean production technologies (eg. replacing water curtain finishing booths with dry filter booths); – To use processes that make the most efficient use of materials (eg. computer-aided leather cutting machines); – To use materials that do not require additional treatments (eg. surface treatments for soles); – To reduce production process stages and time (automatic cutting systems, use of robots in manufacturing operations, etc.); – To use resource-conscious machines and processes (RCMP). 	X	
Task 5 (A3-T5)	Control of packing and packaging resources		
Knowledge	<ul style="list-style-type: none"> – To know the most environmentally-friendly packaging techniques (recyclable materials, biodegradable materials, etc.), designs of reusable packaging, and to know the suppliers that can provide them. 		X
Specific Skill/ Competences	<ul style="list-style-type: none"> – To be able to use more environmentally-friendly raw materials that are recyclable or biodegradable; to use preferably packaging made from one material only, with the lowest weight and volume possible. To avoid over-packaging; – Power to replace suppliers with others who can supply more environmentally-friendly packaging. 		X
Task 6 (A3-T6)	Control of logistic resources (storage, transportation and distribution)		
Knowledge	<ul style="list-style-type: none"> – To know energy-efficient transportation means; – To know advanced internal and external logistic solutions (AIELS); – To know highly-receptive techniques of production (HRTOP) on demand; – To know the RFID technique for the accurate control of inventories and the systematic verification of orders and goods received; – Lean manufacturing concepts and principles and associated organisation methodologies such as 6S... 		X

THE NEW OCCUPATION AND QUALIFICATION PROFILE

	DESCRIPTION	SECTORAL	NON SECTORAL
Specific Skill/ Competences	<ul style="list-style-type: none"> – To use energy-efficient transportation and logistic means (sea or train transportation instead of road transportation) and routes; – To be aware of the need of working with local suppliers in order to reduce transportation costs and stocks thanks to geographical proximity; – To be able to use alternative ways of communication in order to reduce travel; – To be able to adopt alternative ways of supply chain management in order to reduce the stocks therefore the space and all associated resources; – To be able to suggest and support the implementation of lay-out in order to reduce space and handling of loads indoor; – Power and responsibility to make the sales department aware of the need to make the company's logistics as efficient as possible. 		X
ACTIVITY 4	IDENTIFICATION AND CONTROL OF OTHER NON LEGISLATED IMPACTS PRODUCED BY FOOTWEAR COMPANIES	X	
Task 1 (A4-T1)	Control of implementation of certification systems		
Knowledge	<ul style="list-style-type: none"> – Applicable standards: ISO 9001:2015, ISO 14000,OSHAS, SA 8000, ... – Basic requirements / advantages for the company; – Methodology of implementation – general principles; – Integration of systems. 		X
Specific Skill/ Competences	<ul style="list-style-type: none"> – To be able to suggest the approach to the standards, decide on the added value for the company, in terms of organisation, sustainability and image improvement; – To be able to accompany the implementation of a certification system in the company. 		X
Task 2 (A4-T2)	Control of Social Corporate Responsibility Practices		
Knowledge	<ul style="list-style-type: none"> – Knowledge of SCR: Labour law, Health and Safety, Discrimination, working hours, Control of suppliers, ...Outside communication; – Labour law – national and international level. 		X
Specific Skill/ Competences	<ul style="list-style-type: none"> – To care for the implementation of good SCR practices; – To be able to accompany the implementation and maintenance of the good SCR practices. 		X



Lifelong
Learning
Programme

Project Number:
539823-LLP-1-PT-LEONARDO-LMP

Project Duration:
30 months
October 2013 - March 2016

How to implement Sustainable Manufacturing in Footwear- new occupational profile and training opportunities

The project ***STEP to SUSTAINABILITY*** aims at:

Developing a new qualification profile
and correspondent training in the field
of sustainable manufacturing.

Training technicians with knowledge and
skills to implement manufacturing
strategies envisaging the sustainability in
Footwear and Leather goods.

www.step2sustainability.eu