# **Global Report**





WP 2 - Mapping Qualification needs and WBL good practices for the textile and clothing sector



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MODATEX	MODATEX - Portugal	www.modatex.pt
Associação Téxtil e Vestuário de Portugal	ATP - Portugal	www.atp.pt
INOVA+	INOVA+ - Portugal	www.inova.business
eaitex® textile research institute	AITEX - Spain	www.aitex.es
asociación de empresas de confección y moda de la comunidad de madrid	ASECOM - Spain	www.asecom.org
NEDTP	INCDTP - Romania	www.certex.ro
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# €Costume

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# **1** Introduction

The global report is the result of the desk and filed research carried in Portugal, Romania and Spain. The national outputs are summarised in three national reports that converge now in a global report.

Partners have merged efforts to carry out an exhaustive research on all the relevant issues connected to the mapping of qualification needs and skill gaps existing in each respective country to what regards textile and clothing industry as well as the WBL practices. In this regard, a number of activities have been carried out, namely collecting data from all the relevant authorised sources (academic and institutional) concerning the National Qualification Frameworks and training curriculum of VET for the clothing and textile sector; along with the development of field research with particular focus on establishing a dialogue with companies of relevance for the project and VET providers with expertise in the matter of study, being the major outcomes of this dialogue the collection of relevant information through a questionnaire specifically designed for this purpose.

A focus group was also organised, where opinions from the two groups of interest regarding the most critical questions of the matter in hand were confronted, leading to the conclusions that will be presented in the final sections of this report. All the findings gathered during the desk-based research and the field-based research phases of the study previously referred will be as well reflected in the following sections.

The main goal of the current document is to present concrete skill needs and gaps in qualifications frameworks in the T&C industries (mainly in the manufacture of clothing, home textile and technical textile) and WBL good practices from the three abovementioned countries.

# 1.1 Brief overview of the state of art at national level

In each partner country, the desk and field research activities allowed to compile information about the different profiles related to the clothing technician profile. This exercise will allow to identify other profiles that encompass relevant knowledge and skills that could be of interest for the development of the renewed clothing technician profile.

In **Portugal**, these profiles are: Industrial Knitwear Seamstress; Industrial Fabric Seamstress; Seamstress / Dressmaker; Tailor; Clothing Modelist; Clothing Design





Technician; Fashion Design Technician. Per each profile, it was analysed the structure, in terms of duration, credit system and the relation between EQF and NQF.

In **Spain**, the following profiles were identified: Basic Professional Title in Arrangement and Repair of Textile and Leather Articles, Basic Professional Title in Upholstery and Curtains, Clothing and fashion technician, Technician in Manufacturing and Ennoblement of Textile Products, Superior Technician in Textile and Leather Technical Design, Superior Technician in Pattern and Fashion and Superior Technician in Customized and acting Costumes.

In **Romania**, the existent main profiles are: Clothing designer technician, Technician in textile industry, Tailor for customized clothing, Technician in textile industry, Technologist of garment and knitwear, Foreman in textile industry (in the textile, clothing and footwear sector) and Clothing pattern designer.



# 2 Summary of the evidences collected through WP 2

# 2.1 Desk-based research

This section describes the main findings obtained from the desk-based research carried in the three countries.

# 1. Professional Profiles Offer

Table 1: Professional Profiles Offer

	Professional Profiles Offer
Provider of Educational Offer	In general, public and private schools and training providers are those institutions common to all the three countries. However, in Romania, there are also Technological High schools and Technological Colleges that offer professional profiles related to clothing technician.
	There is an exhaustive list of professional profiles from the 3 countries that are relevant to build the new clothing technician profile. However, below there are only the 3 most related profiles.
	• In Portugal: Industrial Knitwear Seamstress (NQF Level: 2; EQF Level: 2; Total credit points: 136.50) Industrial Fabric Seamstress (NQF Level: 2; EQF Level: 2; Total credit points: 136.50) Seamstress / Dressmaker (NQF Level: 2; EQF Level: 2; Total credit points: 136.50)
Professional Profiles	<ul> <li>In Romania: Technician in textile industry, NQF Level 3 (according HG no.866/2008) Level 4 (according HG 918/2013), EQF Level 4 Tailor for customized clothing, NQF Level 2 (according HG no.866/2008) Level 3 (according HG 918/2013), EQF Level 3 Technologist of garment and knitwear, NQF and EQF levels unknown, not indicated in the SO (Occupational standard), edition 2000 Clothing pattern designer, NQF and EQF levels unknown, not indicated in the SO (Occupational standard), edition 1999</li> <li>In Spain:</li> </ul>
	Basic Professional Title in Arrangement and Repair of Textile and Leather Articles (2 NQF, 4 EQF, 2000 hours)





	Basic Professional Title in Upholstery and Curtains (2 NQF, 4 EQF, 2000 hours) Technician in Manufacturing and Ennoblement of Textile Products ( 2 NQF, 4 EQF, 2000 hours)
Common Competences	<ul> <li>Common knowledge (i.e. subjects): <ul> <li>Mathematics</li> <li>Legislation (applied to professional activity)</li> <li>Quality control, Safety, hygiene, health and environmental protection</li> <li>Use effectively the sources of information to analyse fashion trends applicable</li> <li>Interpret technical data sheets and procedure manuals</li> </ul> </li> <li>Common competences: <ul> <li>Identification, selection of the materials, mechanisms and textile products used in the manufacture process</li> <li>Setting up the tools and machinery needed for the manufacturing process</li> <li>Application of health and safety norms (NSSM) and environmental protection in textile industry</li> <li>Cutting</li> <li>Assembling</li> <li>Technical design</li> <li>Using technical graphic language in specific representations of the textile field</li> <li>Using design elements for the realization of products specific to the textile product</li> <li>Planning and organizing production</li> <li>Ensure quality and technical and economic viability of the final</li> </ul> </li> </ul>
Common Modules / Training Units	<ul> <li>product</li> <li>Textile, clothing and leather materials</li> <li>Training and career guidance</li> <li>Enterprise and entrepreneurial initiative</li> <li>Training in work centres</li> <li>Utilization of technical graphical language in specific representations for the textile domain</li> <li>Pattern design</li> <li>Identification and selection of raw materials</li> <li>Application of health and safety regulation (SSM) and environmental protection in textile industry</li> <li>Utilization of design elements for realization of products specific for the textile domain</li> <li>Realization of technological operations for the manufacturing of products specific for the textile domain</li> <li>Planning and organization of the production</li> <li>Manufacture processes</li> <li>Analysis of textile and leather designs</li> <li>Fashion and trends</li> </ul>





# 2. National representative for the European/National Qualifications Framework

i. Please provide a short overview of this organisations of the 3 countries, and please include their contact details.

## <u>Portugal</u>

In Portugal there is the Regulatory Entity for the education and training system, the **ANQEP - National Agency for Qualification and Vocational Education.** The National Qualifications Framework approved by Portuguese Law no. 782/2009 of 23 July adopts the mains to the European Qualifications Framework in accordance with the Recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the For Lifelong Learning (JO, n°C 111, of 6 May 2008).

The National Agency for Qualification and Vocational Education, I.P. (ANQEP, IP) is a public institute integrated in the indirect administration of the Portuguese State, with administrative, financial and pedagogical autonomy in the development of its functions, under the superintendence and joint tutelage of the Ministries of Education, and of Labor, Solidarity and Social Security, in coordination with the Ministry of Economy.

ANQEP manages the national catalogue of qualifications, as well as sectoral councils for each area of education and training, and the catalogue is available at www.catalogo.anqep.gov.pt.

## <u>Spain</u>

In Spain, the National entity in charge of regulating all the matters concerning the qualifications framework for VET is the **National Institute of Qualifications** (hereinafter, **INCUAL**). It is a body dependent on the Ministry of Education. It was created by Royal Decree 375/1999, of March 5 and is the technical instrument endowed with capacity and independence of criteria which supports the General Vocational Training Council to attain the objectives of the National Qualifications and Vocational Training System.

In sum, INCUAL has as its fundamental mission to elaborate and update the National Catalogue of Professional Qualifications, which is the reference that allows the integration between Vocational Training systems in the field of Education and Vocational Training for Employment and is the benchmark for Accreditation of Professional Competences acquired through work experience and non-formal learning.



## <u>Romania</u>

**The National Centre for the Development of Vocational and Technical Education** (http://www.tvet.ro) is a specialized body subordinated to the Ministry of Education, a public institution with legal personality established by Government Decision no. 855 of November 26, 1998. The CNDIPT was established with the purpose of continuing the reform of the vocational education (IPT), which started with the assistance of the European Union through the Phare VET program RO 9405. Through the subsequent amendments and completions of the decision to set up, the institution has diversified its attributions in the development of vocational and technical education. In achieving its objectives of continuous improvement of vocational and technical education, CNDIPT fulfils the following main attributions:

- Proposes principles of educational policy and strategies for the development of initial vocational training through the network of school units of vocational and technical education, as well as the principles of correlating professional and specialty education in pre-university and university education;
- Ensures the scientific coordination of the innovation projects and the development of the vocational and technical education;
- Ensures scientific coordination and develops the methodologies for design, development, implementation and revision of the curriculum for vocational and technical education;
- Ensures scientific coordination and develops methodologies for designing the vocational training assessment and certification system specific to vocational and technical education;

**The National Authority for Qualifications (ANC)** regulates and coordinates the general framework of adult education and training. ANC (<u>http://site.anc.edu.ro/</u>) develops the National Qualifications Framework and manages the National Register of Qualifications, the National Register of Approved Vocational Training Providers and the National Register of Graduates of Adult Training Authorization Programs. ANC also coordinates and controls the authorization and licensing process of adult vocational training providers and professional competence assessment centres, as well as the certification of professional competence assessors.

## **3.** National Qualifications Framework

a) Please specify the links between the EQF and National Qualifications Frameworks of the 3 countries.

i. How many levels does NQF of each country have?



#### Portugal, Spain and Romania: Eight levels

ii. What is the structure of the NQF of the 3 countries?

#### Portugal:

Level 1 - Primary Education - It is applicable to the 2nd cycle of basic schooling

Level 2 – Primary Education - It is applicable to the 3rd cycle of basic schooling or educational and professional certification.

Level 3 – Secondary Education - to proceed to the higher education degree.

Level 4 - Secondary Education - obtained by Educational and Professional Certification or Secondary Education School with a professional internship - minimum of six months to proceed to the higher education degree.

Level 5 - Post-Secondary non-Tertiary Education - level qualification not exceeded with credits to proceed the studies of higher education degree.

Level 6 - Tertiary Education - Higher Education Degree

Level 7 – Tertiary Education – Master's Degree

Level 8 – Tertiary Education – Doctorate

#### Spain:

In order to adequately understand the way Spanish NQF (MECU) is divided, it is necessary to take into consideration the fact that VET and Higher Education are regulated separately (by CNCP and MECES respectively) and by different regulatory bodies (INCUAL and ANECA in each case). As a result, on one side, Vocational and Educational Training is divided in 3 levels of learning (level 1 to 3 of the general framework defined by de MECU); And on the other side, Higher Education is composed by 4 different levels of learning. Level 1 of the Framework for Higher Education (MECES) is considered as the equivalent to level 3 for VET according to National Catalogue of Professional Qualifications (CNCP) classification. Above that, there are 4 other categories, being level 4 established by the MECES the highest among the entire Spanish NQF (MECU).

#### Romania:

The National Qualifications Framework means an instrument for classifying qualifications according to a set of criteria corresponding to specific learning levels achieved, the





purpose of which is to integrate and coordinate national qualifications subsystems and to improve the transparency, access, progress and quality of qualifications in relation to the labour market and civil society.

The national qualifications system means all aspects of a Member State's activity related to the recognition of learning and other mechanisms that link education and training to the lab or market and civil society. It includes the development and implementation of institutional arrangements and processes relating to quality assurance, evaluation and the award of qualifications. A national qualification system may consist of several subsystems and may include a national qualifications framework.

#### iii. Are these structures comparable to the EQF?

**Portugal:** The National Qualifications Framework approved by Portuguese Law no. 782/2009 of 23 July adopts the mains to the European Qualifications Framework in accordance with the Recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the For Lifelong Learning (JO, n<sup>o</sup> C 111, of 6 May 2008).

**Spain:** As the Spanish Ministry of Education sets forth, the EQF consists of 8 levels, all of which have been designed based on learning outcomes, what makes possible to draw a correlation between levels in each of the systems (National and European) even if they are structured in a distinct manner.

**Romania:** By HG no. 918 in 2013 has ensured comparability between the national and the European qualifications frameworks.

iv. Please provide a diagram of your NQF and the EQF.

#### <u>Portugal</u>

Competence comprehension / learning outcomes	The concept of learning outcomes is understood in the way it is expressed in the European Qualifications Framework, where it is defined as "the description of what a learner knows, understands and is able to do after following a learning process, described in terms of knowledge_skills and attitudes"
Structure of competence dimensions	Three Domains are divided in two descriptors <ol> <li>Knowledge         <ul> <li>Depth of knowledge</li> <li>understanding</li> </ul> </li> <li>Skills         <ul> <li>Depth and Breadth</li> <li>Purpose</li> </ul> </li> </ol>





	3. A	ttitudes							
	-Autonomy								
	-Responsibility								
	a) <b>Knowledge</b> – "the body of facts, principles, theories and								
	practices related to a field of study or professional activity":								
	b) <b>Skill</b> – "the ability to apply knowledge and use know-how								
	to ca	rry out	tasks and	solve pr	oblems. A skill may be cognitive				
	(invo	lving th	e use of l	ogical, ir	tuitive and creative thinking) or				
	pract	ical (inv	volving m	anual de	xterity and the use of methods,				
	mate	erials, to	ols and i	nstrumer	nts);				
	c) <b>A</b>	ttitude	e – "the	ability	to carry out tasks and solve				
	probl	lems of	elesser of	or great	er degrees of complexity and				
	invol	ving va	rious leve	els of aut	onomy and responsibility".				
Levels / degrees	8								
Correspondence to	Figure	2: The refere	ncing of Portugu	ese NQF to the	EQF				
EQF			_						
		NQF		EQF					
			]						
		Level 1	$\rightarrow$	Level 1					
		Level 2	$\rightarrow$	Level 2					
		Level 3	$\rightarrow$	Level 3					
		Level 4	$\rightarrow$	Level 4					
		Level 5	$\rightarrow$	Level 5					
		Level 6	*	Level 6					
		Level 7	*	Level 7					
		Level 8	*	Level 8					
	·								
	The	nurner	no of r	oforonci	a the Portuguese National				
	Qualifications Framework is more focused on demonstrating								
	Qualifications Framework is more focused on demonstrating								
	qualifications produced and the framework in use - than it is								
	qualifications produced and the indifference in use - than it is								
	fram	ework :	and the	target F	uropean framework given that				
	these	e do not	, on the f	face of it	, differ significantly.				

# <u>Spain</u>

As it was previously stated, the Spanish National Catalogue of Professional Qualifications (CNCP) establishes the qualifications corresponding to levels 1, 2 and 3 of the Spanish NQF (MECU). Those levels conform the initial professional training (middle and upper), as well as Vocational Training for Employment in the field of lifelong learning. They are are equivalent to levels 1, 2, 3, 4 and 5 of the EQF. The equivalences between levels are the ones stated in the following table:





EQF	NQF	ACREDITATION
1	1	OPERATIVE WORKER
2		
3	2	MIDDLE TECHNICIAN
4		
5	3	HIGHER TECHNICIAN

Since the EQF is a common frame of reference that is intended to simplify the possibility of comparison and the transferability of the qualifications of professionals among the various member states of the UE, a connection between the latter and the Spanish NQF can easily be made.

As the Spanish Ministry of Education sets forth, the EQF consists of 8 levels, all of which have been designed based on learning outcomes, what makes possible to draw a correlation between levels in each of the systems (National and European) even if they are structured in a distinct manner.





#### <u>Romania</u>



Source: ORDIN no. 5289 in 9 September 2008 on the bachelor's degree and the Diploma Supplement, emitted by the Ministry of Education, Research, Youth and Sport



Source: CNDIPT



#### 4. Identified WBL (work-based learning) good practices in your country

## <u>Portugal</u>

The WBL is mainly development by internships. The internships in Portugal are structured in long-term and short-term internships. The long-term is applicable at de VET system with youngers and a short-term for the adults about 320 hours. The internships are always in companies, in a field related to the profile of the course.

On the other hand, in Portugal, the WBL is developed by the companies, for its employees, formal with courses of improvement and specialization and an informal or non-formal by the normal development of the work tasks. For the certification of non-formal and informal competences, there is regulated in Portugal by ANQEP the RVCC - Recognition, Validation and Certification of Competencies device, with reference to professional profile, which allows to evaluate whether the adult holds the competencies of the reference, developed of the life. Validated skills are certified, with Certificate equivalent to that obtained in professional training courses.

**Title**: Elite Seamstresses | **Author**: CITEVE, Modatex, TMG group, IEFP, Vila Nova de Famalicão Municipality, Lectra Portugal

**Summary**: The project was innovative and has promoted the attractiveness of a professional activity with a history of mastery in Portugal, valuing who performs it. The training in Sewing Techniques gave significant inputs to the development of a new profile and reference of the sewing training, taking account the current challenges in the fashion industry and society. The "Elite Seamstresses " project was born from a survey of recruitment and training needs, made in 2015, with a wide range of companies, which highlighted the difficulty in recruiting seamstresses.

In 2014, in partnership with MODATEX and the Employment Centre of Penafiel, PETRATEX promoted the opportunity for several young people to be part of an integrated training strategy and acquire a set of competencies aligned with the current needs of the market and the company. The course focused on the modular training method, with a total of 695 hours of training divided into three different modules. The course was held inside the company, integrating diverse learning tools (between resources and activities). The course offered the possibility of experiencing a closer interaction with the rest of the employees and managers of Petratex.





## <u>Spain</u>

In Spain, the coming into force of a Royal decree in 2012 set the basis for the implementation of a new and innovative educational programme directly connected to WBL: The Dual Vocational Training Programme. It is an educational model that combines the teaching of educational content in schools with practical training in companies. The main objectives that this system seeks to achieve, as outlined in the law, are:

- To Increase the number of persons able to obtain a post-compulsory secondary education degree through the vocational training courses.
- To generate greater motivation among students reducing therefore the early school dropout.

## <u>Romania</u>

**Leather goods technician** RAMONA ANDREIA FUGARU graduated from Tătărăni general school and opted, from the start, for learning a job. In 2005 he enrolled at the School of Arts and Crafts "SF. ECATERINA "from Husi, Vaslui, in the Textiles - Leather domain. The young woman proved to be a conscientious student, with a good sense, with a positive attitude towards the instructive-educational activities. She learned relatively fast the phases, the textile production operations, worked with great accuracy and a lot of devotion. "I chose to work in the textile-leather business because I felt I had the skills to practice this job. The vocational school assures me this qualification and the opportunity to hire me immediately after graduation. Time has shown me that I made the best choice. If you want to develop professionally and personally, the flexibility of our education system always allows you to do this. I started out as a simple textile manufacturer and now I work as a technician in a Bangladesh branch of a major shoe company, CARMENS. "

**Clothing manufacturer** SZILAGY KALIN ANDREA graduated from Simion Bărnuţiu Technological Highschool founded in 1950 in Carei. In 1993 it became Agricultural School Group, consisting of a vocational school, high school education and a school of foremen in agriculture. This educational institution has a rich tradition in the agricultural field. However, in the last few years she has also trained workforce for the textile companies in the area. Katalin Andreea Silaghy has also come to learn and practice the craftmanship. Students in promotion 2016/2017 are employed at a rate of 75% at the economic agents where they have practiced.



# 2.2 Field-based research

# **2.2.1 Companies questionnaires**

# a) Description of how many companies answered; brief description of them per country (questions 2 to 9).

# <u>Portugal</u>

In order to avoid duplicated contacts, ATP, CITEVE and MODATEX divided the companies to be contacted by region:

- ATP: Braga, Guimarães, Vila nova de Famalicão
- CITEVE: Barcelos
- MODATEX: Porto region and South (between Porto and Lisbon)

In total, 167 companies were contacted by e-mail, by phone or by personal contact. Around 32 valid answers were registered until the 28<sup>th</sup> of January. The activities most represented are "clothing manufacturing" with 24 companies involved in this activity, followed by "kitting of textiles" with 11 companies and "technical textiles manufacturing "with 9 companies and "design of textiles products" with 8 companies with this activity.

- 69% of the companies increased their turnover in the last 5 years and 66% have perspectives of growing in this indicator in the next 5 years.
- 69% of the companies increased their work force in the last 5 years.
- 53% of the companies employed workers in the last year just after they have completed a vocational or apprentice school, mainly with the following qualification: clothing modelist, seamstress/ dressmaker and clothing designer technician.
- 66% of the companies are looking for new employees.

# <u>Spain</u>

In total, 50 companies were contacted by AITEX and ASECOM, the two national partners. From the total of companies contacted, 31 of them agreed to take part in the questionnaire. The size and volume of business of the companies contacted vary from one to another. The smallest one has only 1 worker and the biggest one has 330 workers. Most of them are what is usually referred to as medium size enterprises, with several workers between 30 to 150. In addition, the clothing manufacturing and design of textile is the most prevalent activity among the companies contacted, as it is presented in table below.

Regarding the turnover, companies seem optimistic about the future perspective: 22 of the total 31 companies surveyed declared to expect an increase of the turnover in the





next 5 years, only 3 declared to expect a decrease of their revenue and 6 said that they expected it to remain the same. When it comes to the last 5 years there are more diverse answers, nevertheless the number of companies from the 31 enquired that indicate that the turnover has either decreased or at the most maintained is higher if taken together (19 in total) that the ones that have experimented a growth of their revenue (12).

The workforce trend in the last 5 years shows a similar pattern to that of the turnover: 13 companies declared to have experienced an increase in the employees hired during that period and 18 of them stated that it had either decreased or maintained (9 and 9 respectively).

Regarding the hiring of a new employee/s just after completing a vocational or apprentice school in last year, it should be highlighted that almost half of the companies did so, 15 against 16 that did not. About the active search of employees, that means companies currently willing to hire: less than the half, only 13 out of 31 companies.

#### <u>Romania</u>

The Romanian partners, INCDTP and ASTRICO NE contacted the textile-clothing companies through email correspondence, telephone contacts and meetings, in order to rise their awareness about the CosTUmE project and give their input on the questionnaires elaborated in the project.

The number of companies interested in this subject was very high, so 32 textile-clothing companies respond to the questionnaire. The textile-clothing companies involved in the field-based research were from all 4 categories:

- 12 micro-companies (1 to 9 employees);
- 6 small companies (10 to 49 employees);
- 8 medium companies (50 to 249 employees);
- 6 big companies (over 250 to 600 employees).

#### Table 2: Resume of information about the companies enquired

RESUME OF INFORMATION ABOUT THE COMPANIES ENQUIRED									
Total number of companies	32	31	32	95					
Total <b>number of workers</b>	4.394	1.827	3.862	10.083					
Activities	РТ	ES	RO	TOTAL					
Knitting of textiles	24	3	3	26					
Clothing manufacturing	11	24	24	56					
Embroidery	9	18	18	4					





Technical textiles manufacturing	4		15			
Distribution/retail of textile products	4	4		18		
Design of textile products	5	2	2		35	
Home textiles manufacturing	2		10			
Dyeing and spinning yarns	3	4	4		4	
Finishing of textiles	7	5	5		11	
Weaving of textiles	24	1	1		7	
Turnover in the last 5 years:						
Decreased	3	9	5		17	
Increased	22	12	16		50	
Maintained	7	10	11		28	
Turnover perspectives for the next 5 years	·		·			
Decrease	3		6			
Increase	22	18		61		
Maintain	6	11	28			
Work force in the last 5 years:						
Decreased	14	.4 2				
Increased	22	13	8	8		
Maintained	4	9	10		23	
Number of companies which had employ a new employee/s just after completing a vocational or apprentice school in last year	17	15	8		40	
Professional qualification area of this new em	ıployee		РТ	ES	RO	TOTAL
Tailor			0	2	0	2
Industrial Knitwear Seamstress		2	1	2	5	
Industrial Fabric Seamstress	1		1	2		
Seamstress / Dressmaker	6	1	3	10		
Clothing Modelist		7	0	2	9	
Clothing designer technician		6	6	2	14	
Other. Please, specify: Designer and Marketeer, Co Sales Support, Warehouse, Logistics Support, Mecl Technician or Engineer, Spinner	ommercial a hatronics	nd	3	5	1	9





Number of companies looking for new employees	21	13	29	63
Number of companies with initiatives and/or campaigns to attract young people for this industry	12	7	16	35
Number of companies with apprenticeship training programmes	25	24	11	60

In summary, the activities most identified by the 95 companies are clothing manufacturing, design of textile products and knitting of textiles. In the past 5 years, companies have been adopting different strategies since the number of companies who had deceased, increased or maintained its workforce, is similar. However, majority of respondents foresees an increase in their workforce in the upcoming 5 years, which explains the difference between the number of companies who hired new employees after their VET qualification, and those who are looking for new employees.

In Portugal, and Spain, around 50% of the companies enquired state that have hired new employees just after they completed a VET course. In Romania, this rate refers only to one quarter. The professional qualifications hired by these companies are clothing designer technician, seamstress/dressmaker and clothing modelist. In Spain, there also demand for the logistics and sales department, engineering, Marketing and Spinning areas.

Despite the demand for new employees, it is observed that only one quarter of the participating companies have carried campaigns or initiatives targeting young workers to the textile industry. The most used initiative is, however, the apprenticeship training programmes.

#### b) Most important technical competences for a technician of clothing:

Tahle	3.	Most	imr	ortant	technical	com	netences
labie	<b>.</b> .	riusi	mp	<i>Vilant</i>	technicar	com	petences

MOST IMPORTANT TECHNICAL COMPETENCES	РТ	ES	RO	TOTAL
Develop technical and general draw.	11	7	19	37
Develop technical patterns.	6	20	25	51
Analyse fashion trends.	7	8	6	21
Use products, processes and materials innovative.	14	9	12	35
Ensure technical and economic viability of the final product.	21	12	9	42
Draw up the necessary documentation for the execution of the final product.	13	9	20	42
Apply manual modelling concept.	10	7	9	26
Use correctly modelling ICT equipment.	10	3	12	25
In depth knowledge of the production process.	22	13	27	60
Organization of the production process.	20	20	18	58



Monitoring of the production process.	16	10	22	1
Elaboration and control of time norms during the operative process.	22	10	18	50
Perform the operations of cutting.	7	6	16	29
Interpret technical sheets and procedure manuals.	20	18	26	64
Elaborate technical sheets.	11	10	21	42
Determine the manufacturing process.	15	6	17	38
Manufacture, modification, adjustment and repair of garments/products.	16	7	23	46
Perform the finishing of garments and accessories.	9	5	15	29
Integrate the norms of safety, hygiene, health and environmental protection in the exercise of professional activity.	18	8	9	35
Ensure quality and technical standards.	21	9	13	33
Ensure machine operation.	17	9	9	35
Operate different production machines.	17	9	20	36
Use the processes of conservation and cleaning of equipment and tools.	10	8	12	30
Other. Please, specify: specific technical skills for operating sewing machines and looms.	1	0	0	1

The technical knowledge and competences pointed out by companies as the most relevant for a clothing technician are related to interpretation of technical sheets and procedures manual, depth understanding and organisation of the production process, develop technical patterns as well as elaboration and control of time norms during the operative process. In Portugal, it is also relevant for a clothing technician to ensure quality and technical standards and in Romania, it is valued to manufacture, modify, adjust and repair garments and other textile products.

## c) Most important transversal competences for a technician of clothing:

MOST IMPORTANT TRANSVERSAL COMPETENCES	ΡΤ	ES	RO	TOTAL
Numeracy	10	0	11	22
Digital skills	11	14	12	47
Communication and oral skills	18	15	28	61
Teamwork	29	28	30	87
Foreign language	15	10	13	37
Work management	27	15	14	56
Adapt to repetitive and routine tasks	13	3	21	37
Other. Please, specify: ability to adapt to changes	1	0	0	1

Table 4: Most important transversal competences





To what concerns the transversal competences, in general, teamwork, communication and management of work are those most valuable for a clothing technician according to the companies that participated in this study. Additionally, digital skills are also identified for almost half of the 95 companies. Yet in Romania, around 66% of the companies still consider important for clothing technicians to perform repetitive and routine tasks.

# d) Most important emergent challenges for the companies:

 Table 5: Most important emergent challenges

MOST IMPORTANT EMERGENT CHALLENGES	РТ	ES	RO	TOTAL
Circular economy	8	11	12	31
Industry 4.0	11	23	11	45
New materials	14	17	21	52
Digital economy	9	6	10	25
Sustainability	25	24	18	67
Prototyping	7	5	16	28
Other. Please, specify	0	0	0	0

Textile and clothing companies from Portugal, Spain and Romania advocate that the emergent challenges for them are related to sustainability of the sector and activities, to the adoption and use of new materials in their products as well as the digitisation and industry 4.0. In Romania, however, prototyping is also a challenge in which companies identified as emergent.

e) Most important initiatives that companies can develop in partnership with other stakeholders to attract young people to this profession and for this industry:

#### Table 6: Initiatives to attract young people

INITIATIVES TO ATTRACT YOUNG PEOPLE	РТ	ES	RO	TOTAL
Campaigns	1	14	10	25
Contact with schools/colleges/universities	29	28	27	84
Contacts with Job Centre Plus/Careers Services/Technological Centres	20	12	16	42
Other. Please, specify: internship	1	0	0	1



From the 3 countries, Spain is where campaigns are most used to attract young people to the textile and clothing sectors. Almost all companies enquired have contact with schools, colleges and universities, through job fairs, internships and other actions.

# f) Most important initiatives that companies can develop internally to attract young people to this profession and for this industry:

COMPANIES INITIATIVES TO ATTRACT YOUNG PEOPLE	РТ	ES	RO	TOTAL
Offer common social areas (canteen, bar, living room, gym)	15	5	14	34
Measures to reconcile professional life with personal life	22	22	16	60
Flexibility of the working time	11	19	21	51
Health insurance	12	6	14	32
Work medicine	8	3	11	22
Team building initiatives	13	18	15	46
Other. Please, specify: higher wages	1	0	0	1

#### Table 7: Companies initiatives to attract young people

The initiatives most identified as those which companies can perform internally are measures that allow employees to match professional and personal life, flexibility with the working time and team building initiatives. In Portugal, social areas such as canteen, bar, living room, gym or others are also part of companies' strategy to attract young people for the textile and clothing sectors.

# g) Companies with apprenticeship training programmes and main areas of application:

AREAS OF APPLICATION OF COMPANIES TRAINING PROGRAMMES	РТ	ES	RO	TOTAL
Design	17	12	2	31
Tailor	1	9	5	15
Maintenance	5	4	2	11
Clothing technologist	9	5	5	19
Information technology professional	3	10	0	13
Other. Please, specify: knitting technician and weaving technician, pattern design, spinning, knitwear production, textile products manufacturer, Shima Seiki programmer, Clothing manufacturer	0	2	6	8

 Table 8: Areas of application of companies training programmes





Portuguese and Spanish companies are those who provide more training programmes opportunities for young people. The areas were these training programmes are mostly applied are in design and clothing technologist positions. One third of the Spanish companies also offer training programmes for IT professionals.

# **2.2.2 VET providers questionnaires**

a) Description of how many VET providers answered; brief description of them per country (e.g. how many organizations have a technician of clothing profile training, what courses they have related to this profile, EQF level of delivered courses).

#### <u>Portugal</u>

CITEVE and MODATEX have invited 18 VET providers to participate in this questionnaire; the invitation was made mainly by e-mail, phone and direct contacts. We got a total of 17 answers; the majority of the respondents give training in MODATEX and CITEVE but also in other providers such as Universities and Professional schools. None of these entities has the clothing profile training as an integral part of the national catalogue of qualifications, because in Portugal this profile is not yet part of it. Nevertheless, they deliver other courses that cover part of the curricula of this profile. It is the case of modular training (25 or 50 hours) related with clothing field (e.g. Analyse fashion trends; Interpret technical sheets and procedure manuals; Elaborate technical sheets, etc.). Most of the delivered courses from these VET providers have a 4 or 5 EQF level.

#### <u>Spain</u>

15 VET providers were reached by AITEX and ASECOM and invited to take part in the questionnaire; the invitations were mainly made by e-mail, phone and also direct contacts. We got a total of 11 answers; Among the VET providers involved, there are both public and private centres delivering courses in the area of study. 4 of them deliver a technician of clothing profile training as recognised in the Spanish National Qualification Catalogue. The remaining 7 include in their training offer courses that cover part of the curriculum corresponding to the profile and that show close connection with it. Almost the totality of the delivered courses from the VET providers sample hereinafter presented have a level equivalent to 4 or 5 EQF level.





## <u>Romania</u>

The Romanian partners, INCDTP and ASTRICO NE contacted 10 VET providers/experts active in the textile-clothing domain, through email correspondence/telephone contacts/meetings, in order to involve them in the activities of the COSTUME project and give their input on the questionnaires elaborated in the project. Just half of the VET providers/experts involved have a technician of clothing profile training. The courses that they have related to this profile and the EQF level of delivered courses are the following:

- Operator in clothing industry, EQF level 3 or less;
- Tailor for customized clothing for women and men, EQF level 3 or less;
- Clothing pattern designer, EQF level 4;
- Clothing designer technician, EQF level 5.

#### b) Most important technical competences for a technician of clothing:

#### Table 9: Most important technical competences

MOST IMPORTANT TECHNICAL COMPETENCES	ΡΤ	ES	RO	TOTAL
Develop technical and general draw.	8	5	10	23
Develop technical patterns.	10	7	10	27
Analyse fashion trends.	10	5	6	21
Use products, processes and materials innovative.	13	8	10	31
Ensure technical and economic viability of the final product.	14	8	8	30
Draw up the necessary documentation for the execution of the final product.	14	11	10	35
Apply manual modelling concept.	11	5	8	24
Use correctly modelling ICT equipment.	12	4	7	23
In depth knowledge of the production process.	14	10	10	34
Organization of the production process.	14	8	9	31
Monitoring of the production process.	14	5	9	28
Elaboration and control of time norms during the operative process.	12	5	7	24
Perform the operations of cutting.	10	10	9	29
Interpret technical sheets and procedure manuals.	16	11	10	37
Elaborate technical sheets.	17	7	8	32
Determine the manufacturing process.	12	9	7	28
Manufacture, modification, adjustment and repair of garments/products.	12	11	10	33
Perform the finishing of garments and accessories.	11	11	9	31
Integrate the norms of safety, hygiene, health and environmental protection in the exercise of professional activity.	15	10	10	35
Ensure quality and technical standards.	15	11	10	36
Ensure machine operation.	10	10	8	28



Operate different production machines.	13	11	9	33
Use the processes of conservation and cleaning of equipment and tools.	11	10	7	28
Other. Please, specify: solving all technical problems in the production process, using drawing software in designing clothing products, identifying and anticipating problems through market research, using pattern design software (like Lectra), knowing the safety rules for operating the machines and protect the workers, Knowing the parameters and the characteristics for operating the machines	0	0	6	6

The technical knowledge and competences most appointed by training providers and professionals are related with interpretation of technical sheets and procedure manuals, guarantee of quality and technical standards as well as norms of safety, hygiene, health and environmental protection, and drafting documentation for the execution of the final product. However, it is possible to observe slight differences in each country, since in Portugal, there is also attention to the knowledge and competences regarding production processes. In Spain, there is a tendency for VET providers spot competences related to the manoeuvre and operations with machines. In addition of those already mentioned previously, Romanian VET providers also identify as relevant competences using innovative products, processes and materials, as well as technical draw and patterns.

#### c) Most important transversal competences for a technician of clothing:

MOST IMPORTANT TRANSVERSAL COMPETENCES	РТ	ES	RO	TOTAL
Numeracy	9	1	4	14
Digital skills	15	9	7	21
Communication and oral skills	15	9	10	24
Teamwork	17	11	9	37
Foreign language	15	6	7	28
Work management	11	9	7	27
Adapt to repetitive and routine tasks	0	0	0	0
Other. Please, specify: creativity, Software, web design and, patience	0	0	2	2

#### Table 10: Most important transversal competences

From the VET providers' perspective, the most important transversal competences for a clothing technician are teamwork, foreign languages and management of work.



#### d) Most important emergent challenges for the industry:

#### Table 11: Most important emergent challenges

MOST IMPORTANT EMERGENT CHALLENGES	РТ	ES	RO	TOTAL
Circular economy	10	4	2	14
Industry 4.0	12	10	7	29
New materials	15	11	8	34
Digital economy	8	4	6	18
Sustainability	16	10	9	35
Prototyping	0	0	0	0
Other. Please, specify: new business management standards	0	1	2	1

VET providers from Portugal, Spain and Romania stated that sustainability, the use of new materials and industry 4.0 are urgent challenges of the textile and clothing sectors.

e) Which pedagogical methods are best suited for the development of the most important competences? (Classroom training/ Internship/ E-learning/ Other)

BEST PEDAGOGICAL METHODS BY COMPETENCE (insert the number of answers received for each option)												
		Internship				E-learning						
Competences	ЪТ	ES	RO	τοται	РТ	ES	RO	ΤΟΤΑΙ	РТ	ES	RO	τοται
Develop technical and general draw.	13	8	6	27	4	2	9	15	3	2	4	9
Develop technical patterns.	16	11	6	33	5	5	9	19	0	0	4	4
Analyse fashion trends.	10	5	7	22	6	4	0	10	6	8	1	15
Use products, processes and materials innovative.	12	10	9	31	7	6	6	19	2	3	0	5
Ensure technical and economic viability of the final product.	10	5	5	20	8	6	0	14	2	6	3	11
Draw up the necessary documentation for the execution of the final product.	12	8	7	27	7	6	9	23	4	4	4	12
Apply manual modelling concept.	14	11	8	33	5	6	6	17	1	1	0	2
Use correctly modelling ICT equipment.	12	6	3	21	8	4	3	15	3	1	8	12
In depth knowledge of the production process.	11	6	7	24	10	6	7	23	3	6	0	9
Organization of the production process.	11	8	7	26	10	6	9	25	3	3	1	7

#### Table 12: Best pedagogical methods by competence



Monitoring of the production process.	9	8	6	23	13	5	9	27	3	2	1	6
Elaboration and control of time norms during the operative process.	14	6	4	24	11	6	6	23	1	5	0	6
Perform the operations of cutting.	13	10	1	24	8	5	10	23	1	0	0	1
Interpret technical sheets and procedure manuals.	13	9	4	26	7	6	8	21	4	8	0	12
Elaborate technical sheets.	13	6	9	28	6	5	7	18	4	3	3	10
Determine the manufacturing process.	11	8	1	20	8	6	7	21	2	3	2	7
Manufacture, modification, adjustment and repair of garments/products.	15	9	1	25	8	6	10	24	0	1	0	1
Perform the finishing of garments and accessories.	13	8	6	27	10	6	10	26	0	6	0	6
Integrate the norms of safety, hygiene, health and environmental protection in the exercise of professional activity.	12	7	10	29	9	6	4	19	5	4	0	9
Ensure quality and technical standards.	12	9	9	30	10	6	7	23	3	0	4	7
Ensure machine operation.	13	9	4	26	8	6	9	23	1	0	0	1
Operate different production machines.	14	8	4	26	9	6	9	24	0	0	3	3
Use the processes of conservation and cleaning of equipment and tools.	13	8	7	38	7	6	7	13	2	0	0	2
Other. Please, specify:	0	0	0	0	0	0	0	0	0	0	0	0

The most used pedagogical method by Portuguese, Spanish and Romanian VET providers is classroom training, mostly to develop competences on technical patters, on manual modelling concepts, on innovative products, processes and materials as well as on quality and technical standards. It is on the production processes related competences that VET providers most use internships as a pedagogical method, in addition of manufacturing, modification, adjustment and repairing garments/products and on finishing garments/accessories. It is observed that e-learning is not a common pedagogical method used in acquiring competences in the textile and clothing sectors. However, 15 VET providers offer e-learning courses/materials to analyse fashion trends, to draft documentation for the execution of the final product, to use ICT equipment for modelling and to interpret technical sheets and procedure manuals.





f) Which methodologies are best suited for the development of the 15 most important competences? (Active/ Expository/ Interrogative/ Demonstrative /Other)

BEST METHODOLOGIES BY COMPETENCE (insert the number of answers received for each option)																
	Active				Expository				Interrogative				Demonstrative			
Competences	РТ	ES	RO	TOTAL	РТ	ES	RO	TOTAL	ЪТ	ES	RO	TOTAL	РТ	ES	RO	TOTAL
Develop technical and general draw.	12	6	8	26	8	3	7	18	2	0	5	7	12	7	5	24
Develop technical patterns.	14	8	10	32	6	3	1	10	2	1	1	4	12	7	5	24
Analyse fashion trends.	7	9	4	20	12	6	4	22	6	5	8	19	7	7	4	18
Use products, processes and materials innovative.	9	8	5	22	8	4	9	21	3	1	5	9	12	9	6	17
Ensure technical and economic viability of the final product.	7	9	7	23	11	6	4	21	4	3	5	12	9	7	4	20
Draw up the necessary documentation for the execution of the final product.	11	8	6	25	9	6	7	22	4	2	5	11	10	6	8	24
Apply manual modelling concept.	10	7	5	22	9	4	5	18	2	1	1	4	11	0	5	16
Use correctly modelling ICT equipment.	12	6	10	28	6	4	3	13	1	0	2	3	11	7	5	23
In depth knowledge of the production process.	10	9	5	24	7	7	8	22	1	3	5	9	13	7	5	25
Organization of the production process.	10	8	7	25	11	7	6	24	4	1	5	8	10	7	8	25
Monitoring of the production process.	10	8	6	24	11	4	6	20	4	0	5	9	12	6	9	27
Elaboration and control of time norms during the operative process.	11	9	6	16	8	5	4	17	3	2	0	5	15	6	4	25
Perform the operations of cutting.	12	8	8	28	7	5	1	13	2	2	5	9	15	8	7	30
Interpret technical sheets and procedure manuals.	10	8	10	28	10	6	2	18	5	4	5	14	10	9	6	25
Elaborate technical sheets.	13	6	8	27	10	3	2	15	4	4	5	13	11	8	8	27
Determine the manufacturing process.	11	7	9	27	9	3	0	12	4	2	0	6	12	8	5	25
Manufacture, modification, adjustment and repair of garments/products.	13	7	7	27	6	4	1	11	4	3	5	12	13	9	9	31

#### Table 13: List of quantitative and qualitative indicators





Perform the finishing of garments and accessories.	14	8	9	31	8	5	5	18	4	1	6	11	13	9	5	27
Integrate the norms of safety, hygiene, health and environmental protection in the exercise of professional activity.	6	9	6	21	12	4	7	23	5	3	8	16	9	7	6	22
Ensure quality and technical standards.	9	8	8	25	13	5	5	23	3	4	6	13	10	8	5	23
Ensure machine operation.	13	9	9	31	7	6	4	17	2	3	5	10	14	9	4	27
Operate different production machines.	13	8	6	27	7	3	4	14	2	1	5	8	15	9	7	31
Use the processes of conservation and cleaning of equipment and tools.	12	6	5	23	9	3	5	17	1	3	6	10	13	9	8	30
Other. Please, specify:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Overall, the active methodology is appointed to be most used to develop technical patterns competences, to perform finishing of garments and accessories as well as to operate with machines. Reflecting and sharing personal experience seems to be also used in the 3 countries to acquire competences in using ICT modelling equipment, in performing cutting operations and interpreting technical sheets and procedures manual.

The expository methodology is not so used as the active and demonstrative methodology. However, this methodology is used to pass knowledge regarding understanding and organisation of the production process, ensuring quality and technical standards, analysing fashion trends and using innovative products, processes and materials, and drafting documents for the execution of a final product.

The interrogative method seems not so relevant to acquire certain technical competences. Yet, 15 VET providers affirm to use this methodology to analyse fashion trends, to integrate the norms of safety, hygiene, health and environmental protection in the exercise of professional activity, and to interpret and elaborate technical sheets and procedures manual.

On the other hand, the demonstrative pedagogical methodology seems to be relevant to acquired competences regarding manufacture, modification, adjustment and repair of garments/products, to operate in different production machines, perform the operations of cutting and use the processes of conservation and cleaning of equipment and tools. Concluding, almost all competences above-listed use the demonstrative methodology, yet some of them at a lower extent.





# g) Percentage of VET providers that are aware of Work Based Learning practices implemented in this profession area and examples of WBL practices given:

**Portugal:** 47% of the VET providers inquired (8 answers) said that they are aware of WBL practices but only one mention as an example of a WBL the work done by MODATEX through the training courses that they develop in the companies.

**Spain:** 82%, that means 9 from the total of 11 VET providers that were surveyed were aware WBL practices implemented in the profession area.

**Romania:** 100%, which means that 10 Romanian VET providers are aware and use WBL practices, such as learning by doing, learning by discovering, apprenticeship at work, practice stage of minimum 3 months, internships, job training and mentoring.

# h) Most important initiatives that VET providers can develop to attract young people to this profession and for this industry:

INITIATIVES TO ATTRACT YOUNG PEOPLE	РТ	ES	RO	TOTAL
Campaigns	9	8	6	23
Contact with schools/colleges/universities	13	11	7	31
Contacts with Job Centre Plus/Careers Services/Technological Centres	17	6	8	31
Other. Please, specify: promote student visits in the companies, use of social media	1	3	0	4

#### Table 14: Initiatives to attract young people

# 2.2.3 Focus group

# a) Participants (number and brief activity description per country)

## Portugal:

The Focus Group (FG) was organized on the 10th of January, in the morning (9h00-11h00) at ATP premises. All the companies and VET providers involved in the questionnaires were invited to be present. The invitation was made by ATP, CITEVE and MODATEX, by e-mail, phone or personal contacts. Some reminders were needed, in order to have the minimum attendance for this FG.

In total 14 persons attended this FG (4 project members and 10 participants – Companies and Trainers). From the companies we had 6 persons from 5 companies. We





got 2 trainers from CITEVE and 2 trainers from MODATEX, making a total of 4 VET providers.

After welcoming words, by Ana Dinis from ATP, it was explained briefly the WP2 and the objective of the FG, Alexandra Cardoso from CITEVE presented briefly the project and its activities and results and led the activity of focus group which main objectives were compile and validate information from companies and VET providers.

## Spain:

The Focus Group (FG) was organized in the morning of the 17th of January. It lasted around 2 hours, and took place between 9h00 and 11h00, at ASECOM premises.

All the companies and VET providers that had taken part in the questionnaires were invited to be present. The invitation was made to them by the organisers (ASECOM assisted by AITEX) by e-mail, phone and personal contact when necessary in order to attain the expected number of participants.

In total 13 people joined the Focus Group meeting. From the total of participants, 4 belonged to project partner's organisations (AITEX and ASECOM) and the other 9 participants were companies and VET providers and experts.

There was a total of 5 people representing 5 different companies in the meeting, all the representatives present had been involved in the answering of the questionnaire and were therefore aware of the issues to be discussed.

In the beginning there were some welcome words by Juan Campos from AITEX and Claudia Adeba from ASECOM, followed by a brief explanation regarding WP2 and the main objectives pursued by the FG. After that, the meeting was conducted by Claudia Adeba from ASECOM assisted by Juan Campos from AITEX, including a brief presentation of the project and its activities and results. After that the activity fundamentally sought to compile and validate the information obtained from companies and VET providers in prior phases of the study.

## Romania:

The focus group took place on 18 of January 2019, at Romanian Textile Concept Cluster and association premises in Bucharest with the participation via Skype of the project team and experts gather at ASTRICO NE premises in Savinesti. The duration of the focus group was around 2 hours. Regarding the methodology, the companies and VET providers were contacted by INCDTP and ASTRICO through email correspondence/telephone contacts/meetings.

The focus group attendance was performed by 12 participants, representatives of the companies, VET experts, cluster/association representative and project members. The indicators of the focus group were obtained by involving:





- 5 companies SC Iceland Inmar SRL, SC Datsa Textile SRL, SC S&B COMP SRL, SC RIFIL SA, SC ASTRICO NORD EST SRL;
- 3 VET experts
- 2 associations/cluster Astrico Nord Est Textile Cluster, Romanian Textile Concept Cluster.

# b) Topics/questions raised and main conclusions from 3 countries:

Торіс	S/QUESTIONS RAISED AND MAIN CONCLUSIONS
What <b>technical</b> <b>competences</b> should a technician of clothing have?	<ul> <li>Interpret technical and general draw;</li> <li>To know how to use innovative products, processes and materials</li> <li>To know how manual modelling concept</li> <li>To know how to use modelling ICT equipment</li> <li>In depth knowledge of the production process.</li> <li>Organization of the production process.</li> <li>Monitoring of the production process.</li> <li>Elaboration and control of time norms during the operative process.</li> <li>Interpret technical sheets and procedure manuals.</li> <li>To know how to determine the manufacturing process</li> <li>Integrate the norms of safety, hygiene, health and environmental protection in the exercise of professional activity.</li> <li>Ensure quality and technical standards.</li> <li>To know how to operate different production machines</li> <li>Use the processes of conservation and cleaning of equipment and tools</li> <li>Knowledge in fashion trends</li> <li>Machine operation</li> </ul>
What <b>transversal</b> <b>competences</b> should a technician of clothing have?	<ul> <li>Digital skills</li> <li>Communication and oral skills</li> <li>Teamwork</li> <li>Foreign language (EN applied to technical skills)</li> <li>Work management</li> <li>Adapt to repetitive and routine tasks</li> <li>Learning and assimilation of information</li> </ul>
What are the most important <b>emergent</b> challenges for this	<ul><li>Prototyping</li><li>Sustainability</li><li>New materials</li></ul>

Table 15: Topics/Questions raised and Main Conclusions





industry and what will be the <b>impact in terms of</b> <b>competences</b> for a technician of clothing?	<ul> <li>Quality management</li> <li>Industry 4.0: impact - learning and assimilation of new information</li> <li>Circular economy</li> <li>Price/quality marketability</li> </ul>				
Which <b>pedagogical</b> <b>methods and</b> <b>methodologies</b> are best suited for the development of different competences?	<ul> <li>Internships</li> <li>Active participation</li> <li>Interactive learning</li> <li>Practical demonstrations</li> </ul>				
What initiatives can companies /VET providers /other stakeholders to attract young people to this profession and for this industry?	<ul> <li>Contact with schools</li> <li>Discussions with parents</li> <li>Promotion campaign presenting advantages and disadvantages (through short movies)</li> <li>Co-involvement</li> </ul>				
What initiatives can companies develop internally to attract young people to this profession and for this industry?	<ul> <li>Improvement of working conditions (working hours, salaries, permanent contracts, pay leave conditions, provide benefits in products, life-work balance)</li> <li>Improvement of working environment (greater proximity between employees, employees feel good and valued, team buildings, rewarding ideas for improving the workplace, recreation areas)</li> <li>Recognition and valorisation of the profession</li> <li>Adjustment of leadership style by supervisors and superiors</li> <li>Dual training</li> </ul>				
Work Based Learning practices implemented in this profession area	The Portuguese companies present in the FG do not have much experience of receiving trainees in this area. However, in Spain, companies remarked that they found a lack of preparation in relevant competences needed to adequately develop the assigned tasks. In general, the traineeships or apprenticeship programmes were not very positive experience for the Spanish companies. VET providers remarked the inadequate duration of the traineeship/apprenticeship programmes (too short). In Romania, companies are implementing internships, apprenticeships and workplace trainings.				
Other questions/topics	Portugal:     the knowledge of the technology involved in the process is critical;				
	1				





<ul> <li>the interpretation of the datasheets is very important: it is necessary to understand the customer's needs and requirements (there is information that the customer may not value); in this situation, the experience is very important; the models of the datasheets may have to be re-thought according to the reality of each company;</li> <li>quality: the quality intended for the product varies according to the customer's requirements;</li> <li>the mastery of the confection process is fundamental (need of knowledge for a great variety of products);</li> <li>specific knowledge vs comprehensive knowledge;</li> <li>importance of a greater comprehensiveness of knowledge about machines and equipment required, confection technology for each process / article, technical data sheets;</li> <li>the technician must be a professional who must have a transversal knowledge of the different departments / areas, integrating specific confection knowledge: he / she must know how to decompose an article into operations to know what machines, equipment, materials and accessories he/she needs to manage and to control production;</li> <li>Comprehensive vision is important to plan, organize and even discuss with the client;</li> <li>But we have the limitation of the number of hours, hence the importance of complementary training through seminars, workshops, etc;</li> <li>for the profile we must concentrate on the technicality of the technician.</li> </ul>
<u>Spain:</u>
<ul> <li>The main points addressed related to the training curricula and training methodology that trainees of the technician of clothing and similar professional profiles currently receive and the manner in which this should be redefined to improve and match industry needs. In this sense some interesting points were outlined: <ul> <li>More machine operation learning is needed (more hours dedicated to this and the schools and centres).</li> <li>However, VET providers argue that resources at their disposal (machines, rooms, tools etc.) are very limited and they cannot provide as technical and specific training as they would like to because of it.</li> <li>Furthermore, there is a big demand of this type of training offers and as a result, pupils/trainees in these courses outnumber the resources available.</li> <li>VET experts claim that in the Community of Madrid more public centres providing training in the area are extremely necessary.</li> <li>On the other hand, it is clear that an actualisation of the training curricula is necessary. As it was put forward, many hours are being dedicated to modules that happen to be useless in the practice.</li> </ul> </li> </ul>





<ul> <li>Need to adapt the competences trained to real companies' needs.</li> <li>The person representing the INCUAL commented in this regard that from the body they have been long working towards this objective. In fact, she added, there are new qualifications created since 2015 intending to give solution to actual problems in the sector and the mismatch between training and industry, that still have not been officially approved (bureaucracy, difficult administrative procedures).</li> <li>In that regard, more involvement and activism were asked from companies (need from them to make pressure over competent regulatory bodies to make things change).</li> </ul>
Apart from this it was said that the age gap in the industry is difficult to overcome, not only because there is fewer young people joining the industry but because older employees show big reluctance to share knowledge with them when they incorporate (secrets regarding know how and techniques).

# €Costure

# **3 Conclusions**

# 3.1 Summary of the research

From the desk and field research results, it can be drawn the conclusion that the clothing and textile sectors are facing serious and urgent challenges. Both companies and VET providers advocate that sustainability of the sector and activities, the adoption and use of new materials in their products as well as the digitisation and industry 4.0 are the biggest challenges. From the focus groups it can be said that replacement of older workers is also a challenge due to the lack of specialised training offer and low attractivity of youngers to the clothing field.

Indeed, looking for the initiatives from companies and VET provides of the 3 countries, it can be observed that they only focus in trainings/internship programmes that are too short or do not provide the expected result that companies desire. A few campaigns and partnerships with schools/universities are also carried by companies but they seem not to be sufficient to bring youngers to the qualification and workforce of the clothing field.

As a result, companies are striving to attract young people, retain and prolong the working life of the experienced employees. The most appointed examples of internal initiatives to face these challenges are creating measures to balance work-life aspects, provide flexible working hours and organise team building activities.

At the same time, companies stated that employees should develop transversal skills such as teamwork, communication and management of work are those most valuable for a clothing technician Additionally, digital skills are also identified for almost half of the 95 companies. However, VET providers also identify foreign languages, mostly English technical language, to be of utmost need for the industry.

The technical knowledge and competences pointed out by companies as the most relevant for a clothing technician are related to interpretation of technical sheets and procedures manual, depth understanding and organisation of the production process, develop technical patterns as well as elaboration and control of time norms during the operative process. In Portugal, it is also relevant for a clothing technician to ensure quality and technical standards and in Romania, it is valued to manufacture, modify, adjust and repair garments and other textile products.

The technical knowledge and competences most appointed by training providers and professionals are related with interpretation of technical sheets and procedure manuals, guarantee of quality and technical standards as well as norms of safety, hygiene, health and environmental protection, and drafting documentation for the execution of the final product. However, it is possible to observe slight differences in each country, since in Portugal, there is also attention to the knowledge and competences regarding production processes. In Spain, there is a tendency for VET providers spot competences related to the manoeuvre and operations with machines. In addition of those already mentioned





previously, Romanian VET providers also identify as relevant competences using innovative products, processes and materials, as well as technical draw and patterns.

The most used pedagogical method by Portuguese, Spanish and Romanian VET providers is classroom training, mostly to develop competences on technical patters, on manual modelling concepts, on innovative products, processes and materials as well as on quality and technical standards. It is on the production processes related competences that VET providers most use internships as a pedagogical method, in addition of manufacturing, modification, adjustment and repairing garments/products and on finishing garments/accessories. It is observed that e-learning is not a common pedagogical method used in acquiring competences in the textile and clothing sectors. However, 15 VET providers offer e-learning courses/materials to analyse fashion trends, to draft documentation for the execution of the final product, to use ICT equipment for modelling and to interpret technical sheets and procedure manuals.

# **3.2** Critical issues: possible solutions.

The field-based research aimed to collect field evidences and validate assumptions from the desk research, through surveys and focus groups, within the textile and clothing sector at national level. The general conclusion was validated by companies' representatives that the existing clothing technician's profile is not suitable for the new demands of the sector. Also, new competences like:

- technical competences
  - Knowledge of production equipment settings
  - Participates in solving all technical problems in the production process
  - Use pattern design software for clothing (like Lectra)
  - Identifying and anticipating problems through market research
  - Knowing the safety rules for operating the machines and protect the workers
  - Knowing the parameters and the characteristics for operating the machines
  - transversal competences
    - $\circ$   $\;$  Learning and assimilation of information
    - $\circ$  Communication
    - $\circ$   $\;$  Teamwork, especially for production activity
    - $\circ$   $\;$  Adaptation to repetitive and routine tasks
    - Foreign languages
    - Work management

were identified and will be integrated in the technician of clothing training curricula. However, there is a constraint on the maximum number of hours for the training and the resources at disposal of the trainers. The participants recommend that it is important to focus on those which are the priority competencies and all other necessary skills could be acquired through seminars, workshops, and other forms.

It has been identified a clear need to reschedule the learning plan of the professionals trained in this field of expertise and to implement more WBL practices, something that





the trainers and the people in the industry see as vital for a satisfactory subsequent incorporation to the industry.

Companies should also start or reinforce the following actions as a way of attracting youngers to the sector. The following solutions have been drawn up from the focus groups:

- Recognition and valorisation of the profession
- Adjustment of leadership style by supervisors and superiors
- Dual training
- Improvement of working conditions (working hours, salaries, permanent contracts, pay leave conditions, provide benefits in products, life-work balance)
- Improvement of working environment (greater proximity between employees, employees feel good and valued, team buildings, rewarding ideas for improving the workplace, recreation areas)

Finally, companies should demonstrate commitment and involvement in these problems and make pressure on the authorities competent so that effective measures are finally adopted (e.g. in VET qualification regulatory bodies and others).









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