



Innovative cross-border approaches
for Textile and Clothing Clusters
co-development in the Mediterranean basin

TOWARDS A MEDITERRANEAN TEXTILE AND CLOTHING CLUSTER

An Assessment of the Clusters involved
in the TEX-MED Clusters Project – Work Package 4



Project
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Statement

The 2007-2013 ENPI CBC Mediterranean Sea Basin Programme is a multilateral Cross-Border Cooperation initiative funded by the European Neighbourhood and Partnership Instrument (ENPI). The Programme objective is to promote the sustainable and harmonious cooperation process at the Mediterranean Basin level by dealing with the common challenges and enhancing its endogenous potential. It finances cooperation projects as a contribution to the economic, social, environmental and cultural development of the Mediterranean region. The following 14 countries participate in the Programme: Cyprus, Egypt, France, Greece, Israel, Italy, Jordan, Lebanon, Malta, Palestine, Portugal, Spain, Syria (participation currently suspended), Tunisia. The Joint Managing Authority (JMA) is the Autonomous Region of Sardinia (Italy). Official Programme languages are Arabic, English and French (www.enpicbmed.eu).

Disclaimer

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FOREWORD

This report is the main output of WP4 of TEX-MED Clusters Project. It contains the assessment of each cluster (including SWOT), the outline of the envisaged “Textile and Clothing (T/C) Mediterranean Hyper-cluster” and finally, the strategy and next actions aiming at implementing the Hyper-cluster by the development of cross-border cooperation and partnerships. The ample and timely accomplishment of all activities foreseen in the project action plan for WP4, the project significantly improved the Knowledge of cluster value chains and the business models of each cluster. The SWOT analysis for each cluster and the whole area (the so called Hyper-cluster) allowing it to establish a shared vision aiming PPs and a long-term strategy of the Mediterranean T/C industry.

The report benefited from the contribution of many inputs coming either from the PPs and from the TAM, who coordinated all activities (desk and field), conducted the Wrap Up seminar, delivered the draft documents and, finally, drew the final version.

The report consists of three parts:

1. Cluster assessment
2. An outline of the Mediterranean Hyper-cluster
3. Conclusions and the identification of potential areas for cross-border cooperation.

1. ASSESSMENT OF THE CLUSTERS

1.1 PRATO – Toscana/Italy

Unione Industriale Pratese - Applicant

1.1.1 OUTLINE OF THE CLUSTER

a) Size

- a1. **Geographical perimeter** (area covered and population)
The textile and clothing cluster of Prato is located in the north of Tuscany and is encompassed by the boundaries of the province of Prato which have to be added to the neighbouring municipalities of Calenzano and Campi Bisenzio in the province of Florence and those of Agliana, Montale and Quarrata in the province of Pistoia. The cluster spreads over an area of 560-squared Km and its total population is 367,000
- a2. **Number of enterprises in the T/C industry**
6.495 (latest figures)
- a3. **Total turnover of T/C industry**
4.415 million euro (latest figures)
- a4. **Total local employment direct T/C industry**
34.746 (latest figures)
- a5. **Estimation of total indirect employment (providing material inputs or services to the T/C industry such as:** logistics, software, design, chemicals, packaging and hangers, consultants, technicians, etc.)
58.000
- a6. **Exports**
Total 2.446 million euro, Europe 75%; Asia 16% (of which Hong Kong and China 9%).

b) Specialization

- b1. **Core activity of the cluster** (characterization)
Prato is the largest textile industrial district of Europe and one the most important sourcing places for the leading firms of the fashion business. A prominent and historical feature of Prato is its success in international markets.
For more information see below: g) History/evolution of the cluster
- b2. **Typical or prevailing products**
Prevailing products (50%) are woven and knitted fabrics for apparel industry from wool and other natural and synthetic fibres
- b3. **Other relevant products**
 - Apparel and knitwear (25%)
 - Yarns for weaving and knitwear (15%)
 - Special fabrics (fur, bonded, technical, pile, etc.) for apparel, upholstery and footwear industries, carpets and nonwoven fabrics (10%).
- b4. **Prevailing technology/production processes**
Weaving, dyeing and finishing
- b5. **Other relevant technologies/processes present in the cluster**
Spinning, twisting, reeling and knitting

b6. **Distinctive skills and/or competences of the cluster**

- The ability to offer constant creativity and fast reaction times to the requirements of the market
- The capacity to propose top-quality articles with a high fashion content
- Strong entrepreneurial resources
- An integrated textile chain with, in every stage of the entire textile cycle, hundreds of small-medium specialized companies
- Strong internal competition with spread cooperative attitudes
- High level of trust that helps to create informal but strong business networks and cut transaction costs
- The know-how and facilities in carded wool processing

b7. **Driving force of the cluster**

Its size as a system and its internal organization which results in the capacity of combining the advantages of industrial production (efficiency, reliability) with the advantages of the craftsman's small trade.

c) **Structure and internal organization of the cluster**

c1. Given that in each cluster there is a "core" production phase (i.e.: weaving or clothing) the size/importance of other phases throughout the cluster value chain (upstream or downstream) are:

Negligible	
Minor but present	
Minor but with a key supporting role	
Almost as important as the core activity	X
All other phases put together are larger than the core activity	

c2. Within the same production phase of the value chain, the sector is: fragmented (many micro and small units); specialized (a number of smart competitors); oligopolistic (very few suppliers).

	Fragmented	Specialized	Oligopolistic
Fibre preparation	X		
Spinning/yarn treatments	X		
Weaving	X		
Knitting	X		
Finishing		X	
Final Products		X	
Others	X		

d) **Cluster linkages**

d1. Internal linkages (business relations within companies of the cluster) are assessed as (tick as appropriate):

Very strong	
Strong	X
Rather weak	
Very weak	

d2. How much the supply chain (inputs/outputs of materials/products) is internal of the cluster?

Almost totally internal	
Significantly internal	X
Significantly external	
Almost totally external (outsourcing)	

d3. External linkages are related to:

	100%	Largely	Moderate	Negligible
Procurement of raw materials	X			
Procurement of equipment or technology		X		
Procurement of services			X	
Sales of T/C products		X		
Sales of non T/C products			X	
Sales of services				X
Others			X	

e) Cluster champions

e1. Who are the companies that drive the cluster?

Mainly the companies that deal with the external markets and keep in touch with the clients design the product and coordinate the activities of the subcontracting firms. But it is also the role played by subcontractors which is very important, especially dyeing and finishing firms, which are not only providers of productive capacity but take part in product innovation and development

e2. For which reason can they be called “champions”?

In the cluster there is quite a large number of leading companies, but it is difficult to call them “champions”

e3. Ten years ago were they the same companies?

Indeed over the last ten years there has been a deep turnover in the group of the leading companies

e4. Are champions the largest companies of the cluster?

Usually there is a high correlation between the group of the largest company and the leading ones.

f) Cluster governance

f1. Who coordinates/manages the cluster?

A unique managing body	
Representative body that coordinates	
Several bodies that coordinate/take care of different activities	X

f2. Cluster facilities. Please select and rate:

a. Yes Good - b. Yes Average - c. Yes Poor - d. No Absent

Service centre	a
Quality test lab	a
Technology R&D centre	b
Vocational education/training centre (school, college, etc.)	a
Exhibition centre	d
Export consortia	a
Procurement consortia	d
Others Specify	-

1.1.2 HISTORY/EVOLUTION OF THE CLUSTER

Driving forces of the past

Prato began to specialize in wool textiles in the Middle Age but, of course, industrial activities got under way at the end of the 19th century. The industrial take-off was pushed by distinctive competencies held in carded wool processing fuelled by the cost advantage granted by producing recovered wool obtained from shredding old clothes and industrial scraps. Up to World War II the Prato textile industry was divided in two production circuits: one based on large vertically integrated companies with generally low-level standard productions (rugs, military blankets, etc.) made for export to the poorer markets (Africa, India, etc.); the other based on groups of firms carrying out subcontract work for the production of articles designed for the clothing markets.

Between the post-war period and the early 1950s, the outlets towards low-level standard production markets (India, Africa, etc.) rapidly disappeared, and the large vertically organized companies quickly dissolved. The production system underwent a rapid evolution, and the result was an original form of organization largely based on the widespread distribution of work among small-scale enterprises (the so-called “industrial district”). The two dynamic factors of the new system were: (a) the subcontracting firms, which carried out the actual production, and (b) the front-end firms, which were involved in product design, work organization and sales.

The district-based model was especially in line with the new profile assumed by the marketplace. The main business was still processing carded wool from recycled materials; however, a crucial innovation made carded wool more competitive and more suitable for the clothing industry’s requirements for lighter fabrics: the introduction of nylon, which could be spun into yarns having a much finer count and could be interwoven with wool as “backing”.

This innovation helped to consolidate Prato’s position in its market segment (adding a wider range of patterns, colours, effects, etc.) and fuelled a rapid development that found fertile ground in the district in terms of expertise, propensity for entrepreneurial risk-taking, availability of capital (also thanks to the local bank), a common language and a high degree of cooperation and mutual trust between all the parties involved.

Subsequent evolution and changes

The Prato district became thoroughly established during the 1970s. The emerging of fashion as a mass phenomenon, together with the higher salaries and the revolution in customs, marked a historical division in the clothing market (and not only), and the demand became more fragmented, differentiated, unsteady and seasonal. These variables disrupted the production and distribution chain forcing the structures to become more flexible, responsive and agile. The district was spurred to develop a “structural coupling” that resulted in its making a great leap forward — a surprising feat at a time when textile industries were in decline throughout Europe and in non-district Italy (and with other national districts showing a poor performance). During that period the Prato district underwent a fundamental transformation, from a product-oriented, wool-processing district to a market-oriented, fashion/textile district. The re-orientation of its competitive identity in terms of “satisfied needs” cleared the way for a considerable increase in the variety of products and production technologies.

During the seventies and the eighties new possibilities were explored and developed, often with a pioneering spirit, in textiles (patterned combed yarns for knitwear, knitted fabrics, furs, coated fabrics, flock fabrics, etc.). Since then, the fashion world (the world leaders in prêt-à-porter, the garment-makers for industrial brands, the large industrial retailers) would turn to Prato to find what other textile districts could not provide: constantly renewed collections of great variety and creativity and the ability to answer increasingly complex service requests. Even though the second half of the 1980s proved a difficult period (the district was forced to dispose of the excess of investments in carded wool made during the previous decades, since the market for those products was rapidly dwindling.) the crisis would be absorbed by the local system in the 1990s thanks to a further shift towards productions of greater added value and to a further differentiation of supply (e.g. fleece, chenille, etc.). The rebalance of the exchange rate of the Italian currency and the favourable international outlook (especially from 1993 onwards) prompted the district to invest heavily in production facilities, particularly in the finishing process, which became one of the most important sectors of the local production chain, with companies of above-average dimensions. A comparison between 1991 and 2001 census data shows the importance that the textile industry continued to have in Prato's economy while in the rest of Italy the trend was somewhat worse.

Current situation

At the beginning of the new century this state of affairs was deeply altered by a combination of factors. The major and structural factor of change has been the increasing international integration of emerging economies, mainly China, India, Turkey, with strong manufacturing capacities (not only in textiles!) and lower factor costs (also thanks to “illegal and/or asymmetric” competition).

During the first decade of the new century Prato's textile industry underwent a serious downsizing losing that part of its output addressed to the medium-low end of the market but keeping its strength in the higher value-added production. Of course Prato suffered also the 2007-2009 recession and the downturn that has been concerning the domestic market since the second half of 2011.

However, looking at the structural aspects, the wealth of expertise and organizational skills that Prato has developed over the years seem hardly assailable by the new competitors. Especially:

- the ability to offer constant creativity and fast reaction times to the requirements of the market seem consistent with the end markets, that need to be continuously stimulated, and with a supply chain that needs to cut the interval from design to production, with a view, among other things, to minimize the risk of unsold goods
- the capacity to propose top-quality articles with a high fashion content appears consistent with the demands of market segments that seem to be progressively growing (leaving aside the cycles and nervousness caused by the fluctuations of economic trends)
- the know-how and facilities in carded wool processing accumulated over the years do not seem vulnerable to the new competitors, given their modest importance in the global fibre-processing sector (in general, wool represents 3% of global fibre production).

1.1.3 SWOT ANALYSIS

Strengths	Weaknesses
<ul style="list-style-type: none"> • Entrepreneurship with high competence and creativity in product development (fashion) • Rich diversification of specializations, business models, products (biodiversity) • Technical specialization in the dyeing and finishing stages • Ability to offer top-quality articles with a high fashion content • Unique know-how and facilities in carded wool processing. 	<ul style="list-style-type: none"> • High structural costs: labour, energy, tax, administration • Cultural inability of enterprises to become big (individualism, family business, focus on niches and top end specializations). • External structural limits to business growth: labour code, rigid regulations, etc. • Weakened textile chain especially in some segments like spinning and weaving • Ageing entrepreneurs and ageing technicians.
Opportunities	Threats
<ul style="list-style-type: none"> • Renewed attention to quality by international fashion brands and leading independent retailers and refocus of EU large buyers to neighbouring areas which can offer “total value for money” (design, products, services) • Growing market for guaranteed certificated or “green” goods and production processes. 	<ul style="list-style-type: none"> • Oligopoly of retail (luxury chains, low cost fashion, private labels) • Decreasing social value of “fashion” and reduction of the fashion medium/upper segment • Low demand in Europe • Over-valuation of the euro • Difficult access to credit.

1.1.4 CHARACTERIZATION

Distinctive features

- Fashion
- Dyeing, finishing (wet), yarns (melange), fabrics (texture)
- Bio-diversity (Polymorphism)
- Technical Innovation
- Water management
- Only small and micro companies.

K issue

Targeting or creating market niches or segments where “fashion innovation” and “technical innovation” can contribute to the structural costs of the cluster (productivity and structural/external costs reduction).

Prato needs to

- find new market niches, primarily as inputs for the fashion sector but also in technical textiles and clothing
- rejuvenate the cluster by starting from HR (technicians and entrepreneurs)
- market (and make the most of) the innovative assets already available in the cluster.

Prato offers

- high competence in a wide range of technologies and production processes
- facilities and structures/processes for innovation (technical, design, testing, prototyping, etc.)
- skilled (and still vital) entrepreneurship (risk taking)
- links with other leading North Italian T/C clusters as well as the European markets/buyers.

1.1.5 PERSPECTIVES

The on site mission confirmed the industry situation as described in the data collection document and in the SWOT analysis done by Unione Industriale Pratese (above “Characterization of the cluster”). Nevertheless, meetings with several cluster’s key players and additional in depth considerations with Unione Industriale Pratese officers, provided significant added value for the overall comprehension of the local T/C industry and the challenges that the cluster has to deal with in the near future.

In brief the findings:

1. despite that Prato’s identity is founded on “carded wool fabrics”, today the cluster presents a very high “business diversity” (a “biodiversity” as a figure of speech) either throughout the value chain (from yarn preparation to clothing manufacturing) or in the array of products (fashion, technical textiles, home, etc.). Currently, the “carded wool fabric” business is relatively minor. Conversely, activities related to dyeing and finishing (yarns, fabrics and final garments) play a remarkable role. Bio-diversity (or polymorphism) has two main features: on one hand it makes the cluster less “efficient” due to the intrinsic “entropy” of the system; on the other, it makes it more “resilient” that is able to resist to external shocks
2. due to the subsequent crisis of the last 10/15 years (global competition, decrease of demand, financial crisis in Italy), the cluster underwent a significant modification in its morphology. It shrunk in size and became more fragmented (the size of the “average enterprise” became even smaller). We can define the Prato cluster as a “molecular aggregation of enterprises” or MSEs (Micro and Small Enterprises: indeed, companies with more than 100 employees are considered “big”). The molecularity of the cluster is consistent with its competitive position which is:
 - a. Fashion

- b. small lots
- c. quick response

Or, to sum up, Prato is a cluster “biologically fit for fashion”.

3. “Fit for fashion” means immediate adaptation to customers’ requests. This is possible only if production and technologies are flexible or adaptable. Small lots and quick response require technologies that are elastic (that is: able to manage large and small quantities) and flexible (changes/shifts). In some cases “elasticity” is obtained by “modularity” (example: looms); in others it is provided by advanced technology (spinning, dying) that can hardly be afforded today by micro or small companies of thin financial margins.
4. The need to always be “attractive” for the fashion industry multiplies the offer of samples and collections. As a consequence, stocks (leftovers) are often significant. This has negative effects either from a financial standpoint (the cost of working capital) as well as an operational one (space in warehouses). Generally, the intrinsic quality of the unsold items is very good and they could be fruitfully used for clothing elsewhere than seasonal fashion.
5. The severe downsizing of the cluster greatly reduced the flow of investments in technology as well as in human resources. Plants are becoming obsolete and the park of human resource is getting rather old. Despite the dire environmental circumstances, a general rejuvenation of the cluster is slowly under way in all areas: machinery, equipment, technicians and entrepreneurs.
6. The need of quick response is facilitated by “Buy” instead of “Make”. The outsourcing of inputs, previously made in Prato (in particular for raw yarns and fabrics) is impacting on the balance of cooperative-competitive relationships among SMEs. The historical mix of cooperation and competition, which has always been one of the key and unique features of the cluster, is to be adjusted to the current global standard of the T/C and fashion business.
7. Differently from many other T/C European clusters, Prato did not internationalize its production. There are only rare cases of delocalization or international subcontracting. The international dimension of the cluster resides on the selling side (exports) and, partially, in the sourcing of imported semi-finished or intermediate-products. Prato is still “very Italian” in terms of production.
8. The cluster is very “structured”. In time, many supporting bodies and organizations sprang and grew beside the T/C industry. Indeed, the cluster is endowed with many “cluster assets”, which are widely recognized and reputed even at national or continental level. The most well-known are “Next Technology Tecnotessile” (R&D, Innovation, technical textiles), Gida and Progetto Acqua (water treatment/recycling). Other active organizations are: Prato Futura (economic and social lab); Prato export consortia, the Textile Museum, Centro per l’impiego - FIL (the local job placement/re-placement agency), the Chamber of Commerce, the Municipality (that is evermore a key player in the economic development of Prato). This massive presence of service providers has many positive outcomes (coordination, synergies, wide array of supports) but may present some drawbacks:
 - a. the coordination effort is complex
 - b. sometimes the real (positive) impact of supporting bodies on the T/C business is not clear or visible in the short term.

9. Among the organizations that characterize Prato some are to mention for the particular interest they may have in the TEX-MED Clusters project:

- Next Technology Tecnotessile (R&D, Innovation, technical textiles) is an “excellence centre for innovation” at national/European level. It is based in Prato but its horizon is by far beyond the boundaries of the cluster. Enterprises of Prato, which should primarily benefit from its location, must be active to grasp the innovation locally created. It appears that Next Technology Tecnotessile is able to produce more innovation than the cluster is able to absorb. Part of the “innovative outcomes” (new products, new applications, new patents, etc.) remains idle because there is a gap in the ability to transform them into “business”. This is due to many causes such as:
 - a. the “risky” nature of all innovation (general cause)
 - b. the unavoidable asymmetry in knowledge between innovators, enterprises and final users (consumers) (general cause)
 - c. the inconsistency between the size of the companies of the cluster and the resources needed for making the innovation a business (specific cause).

So far, the focus of R&D centres (Next Technology Tecnotessile among them) has been the “production” of innovation; now efforts are to be made to foster the spreading out, the “marketing” of innovation to be able to exploit the assets and opportunities for innovation that are “in the drawer”

- Gida has a long experience (over 30 years) of water treatment and recycling for both industrial and urban water waste. It is considered a historic case of best-practice at European level. Yearly, about 4 million m³ of treated water are recycled into the industrial plants. The recycled water is distributed through a network of pipelines of 64 km
- Polo Universitario, Istituto Buzzi, Centro per l’Impiego FIL and Prato Futura (all involved in HR and competence development): Prato has to face all kinds of problems concerning human resources
 - unemployment, re-qualification and replacement
 - loss of technical expertise and the difficult generation of young technicians
 - generational change for entrepreneurs
 - upgrading competences on new technologies
 - integration of foreign workforce (immigrants).

The widespread effort for rejuvenation/upgrading of the workforce, the technicians, the management and the entrepreneurs is a key issue.

10. Finally, it is to mention that in Prato there are two clusters:

- a. the Italian cluster (on which we have been focusing so far)
- b. the “Chinese” cluster which counts thousands of SMEs and about 30.000 inhabitants.

The Chinese cluster is specialized in the “pronto moda” segment. It is composed of SMEs of Chinese ownership/management producing low cost clothing (mainly for ladies and kids). Products are labelled “made in Italy”, manufactured by Chinese workforce and sold in all Europe. The business is huge (about 2,5-3 billion euros). All figures are estimations because of the significant informal nature of the cluster. The business contacts or links between the two clusters are very limited. They share a number of

services (professional services) or infrastructures (logistics) but nothing more. It is nevertheless obvious that the mere physical vicinity generates common interests and, sooner or later, the links between the two clusters will increase. Significant steps have been made in the field of education (Corso Cedic a specialized training course on China culture and business).

11. To summarize, the Prato cluster is: specially “fit for fashion”, “molecular” (small units), “bio-diverse” or “polymorphic” (diversified business), “plastic” (easily adaptable), excellent in “dying/finishing”, in a process of rejuvenation, very Italian in manufacturing, well-structured. Finally, it is also “dual”: Italian and Chinese; and the Chinese part is totally separated (as a business) from the Italian one.

1.2 SABADELL – Catalonia/Spain

TEXFOR: Project Partner 1

1.2.1 OUTLINE OF THE CLUSTER

a) Size

- a1. **Geographical perimeter** (area covered and population)
Catalonia is one of the 17 autonomous communities in Spain. Its capital is Barcelona and the area covered is about 31.895 km². Catalonia has a population of 7.451.281 inhabitants (July 2013 data) and it represents the 16% of the population in Spain
- a2. **Number of enterprises in the T/C industry**
2.572 companies (30% of the Spanish T/C industry, 2013)
- a3. **Total turnover of T/C industry**
4.127 mil € (corresponding to 44% of the Spanish T/C industry, 2013)
- a4. **Total local employment direct T/C industry**
39.881 people (31% of the Spanish TC industry, 2013)
- a5. **Estimation of total indirect employment** (providing material inputs or services to the T/C industry such as: logistics, software, design, chemicals, packaging and hangers, consultants, technicians, etc.)
4.357 people (34% of the direct employment)
- a6. **Exports**
Total 4.369.5 mil € (37% of the Spanish T/C industry – year 2013): EU: 70%, others relevant (13%) to the Mediterranean area (Morocco, Algeria, Tunisia, Libya, Egypt, Turkey, Israel, Jordan, Lebanon and Syria).

b) Specialization

- b1. **Core activity of the cluster** (characterization)
60% of this cluster's activity is related to the textiles and 40% to the clothing sector. 50% of the textile products are for the clothing industry, 30% for the home textiles market and 20% of technical textiles.
Most of the companies are family SMEs, out of which 97% are micro and small companies and 3% are big companies.
- b2. **Typical or prevailing products**
The textile sector is compound by companies in the following categories:
 - fibre preparation
 - spinning
 - weaving
 - finishingCatalonia is strong in manufacturing fabrics and yarns. These companies have high tech processes and a great innovation in the product or the process. The companies have strengthened its competitive factors. They have a high international presence.
- b3. **Other relevant products**
In recent years the technical textiles have increased their importance.

b4. Prevailing technology/production processes

The wool production processes have dramatically decreased. The cotton or silk processes are the main ones. The knitting production also has an important role inside the cluster.

b5. Other relevant technologies/processes present in the cluster

The rest of the processes.

b6. Distinctive skills and/or competences of the cluster

- Renewed traditional sector
- High international presence
- Recent improvements in its competitiveness thanks to:
 - innovation (design and materials)
 - better service (quick response, flexibility and adaptation capacity)
 - dequate prices (lower production prices and more productivity)
 - improvement in the training
 - integrated supply chain

b7. Driving force of the cluster

The most dynamic exporters that supply their products and services worldwide represent the driving force of the cluster.

c) Structure and internal organization of the cluster

c1. Given that in each cluster there is a “core” production phase (i.e.: weaving or clothing) the size/importance of other phases throughout the cluster value chain (upstream or down stream) are:

Negligible	
Minor but present	
Minor but with a key supporting role	X
Almost as important as the core activity	
All other phases put together are larger than the core activity	

c2. Within the same production phase of the value chain, the sector is: fragmented (many micro and small units); specialized (a number of smart competitors); oligopolistic (very few suppliers).

	Fragmented	Specialized	Oligopolistic
Fibre preparation			X
Spinning/yarn treatments		X	
Weaving	X		
Knitting	X		
Finishing		X	
Final Products	X		
Others			

d) Cluster linkages

d1. Internal linkages (business relations within companies of the cluster) are assessed as (tick as appropriate):

Very strong	
Strong	X
Rather weak	
Very weak	

d2. How much is the supply chain (inputs/outputs of materials/products) internal of the cluster?

Almost totally internal	
Significantly internal	X
Significantly external	
Almost totally external (outsourcing)	

d3. External linkages are related to:

	100%	Largely	Moderate	Negligible
Procurement of raw materials				X
Procurement of equipment or technology			X	
Procurement of services			X	
Sales of T/C products				X
Sales of non T/C products		X		
Sales of services		X		
Others				

e) Cluster champions

e1. Who are the companies that drive the cluster?

We have the champions as individual companies that they are the winners in volume of sales and visibility. Then we have the “hidden champions” that they represent the base of our cluster, these are the SME companies interconnected and linked inside the cluster.

e2. For which reason can they be called “champion”?

The “hidden champions” represent the essence of the cluster.

e3. Ten years ago were they the same companies?

Yes, most of them. They had other qualities, were less professional and less international oriented.

e4. Are champions the largest companies of the cluster?

The big champions are the largest, the leaders. The “hidden champions” are all of them SME.

f) Cluster governance

f1. Who coordinates/manages the cluster?

A unique managing body	
Representative body that coordinates	
Several bodies that coordinate/take care of different activities	X

f2. Cluster facilities. Please select and rate:

a. Yes Good - b. Yes Average - c. Yes Poor - d. No Absent

Service centre	a
Quality test lab	a
Technology R&D centre	a
Vocational education/training centre (school, college, etc.)	a
Exhibition centre	b
Export consortia	b
Procurement consortia	c
Others Specify	-

1.2.2 HISTORY/EVOLUTION OF THE CLUSTER

Driving forces of the past and subsequent evolution and changes

The textile sector was one of the industrialization bases in the XIX century in Spain, located mainly in Catalonia and Valencia, and had a prevailing role until the 50's. In 1960 20% of the industrial labour force was in the textile sector.

In the 60's there was a structural diversification in the Spanish industry due to the economic development, the sector started losing importance in front of other growing sectors (chemistry, food, metal, automotive, etc.). In 1985 the textile labour force represented 13% of the industry employment. The entrance to the EU in 1986 represented a historical change, the sector oriented to the domestic market started to coexist with the international competitors. The companies started the export effort to compensate its loss of domestic market share. This effort was not significant until 1992, the crisis after the Barcelona Olympic Games. From 1992-2000 is the period of the international expansion. The exports were increasing 16% per year and for the first time they reached the volume of 5000 million of exports.

The entrance in the XXI century represented some more important changes, the consolidation in the international markets of the sector. The causes are well known: the industrial power of China, cheaper freight costs, irruption of the TIC, etc. The trade policy in Europe provoked an industrial reconversion of the sector. Due to these factors between 2000 and 2013 we suffered a high increase of the imports (+80%) but the export effort has been higher (+113%), consequently the deficit in trade balance has been reduced. The Asian imports have been prevailing since 2005, they represent almost 50% of our total imports. Before our main supplier was the EU. China is our main supplier (24% of the total).

Current situation

Nowadays Catalonia has a smaller sector with less companies but more competition. They have the capacity to be present in the international markets and are more interconnected. The actual companies stand out in factors like design, logistics, quick response to the market changes, innovation (technological and non material), and global concept. There is a new model of companies, global in production and sales.

CATALONIA	2009	2010	2011	2012	2013
Companies	3.751	3.241	2.929	2.737	2.572
Employment	51.480	47.060	45.110	42.380	39.881
Turnover (million €)	4.258	4.121	4.289	4.245	4.127
Imports (million €)	4.465	5.207	5.514	5.218	5.391
Exports (million €)	2.956	3.275	3.638	3.820	4.369

1.2.3 SWOT ANALYSIS

Strengths	Weaknesses
<ul style="list-style-type: none"> • Innovation & design (technological and non material) • Ample vision concerning markets, niches, segments (fashion, casual, functional, technical, etc.) • Important industrial capacity • Improved training and more professionals in the sector • More integrated supply chain (ex. spinners or weavers with the final consumer). 	<ul style="list-style-type: none"> • Investment capacity of cluster SMEs. High threshold for innovation (financial and know how barriers) • High structural costs of Spain • Not all links of the supply chain are fully connected (ex. weavers with the clothing manufacturer) • Low entrepreneurship in the textile sector. More in the clothing.
Opportunities	Threats
<ul style="list-style-type: none"> • A new generation of products originating from innovation and R&D as a combination of "style and performance" • The worldwide Spanish image in the segment "fashion for all" • Image of EU company associated to quality, added value, CSR, etc. • Increase in the middle class of developing markets • Strengthen cooperation with neighbouring countries. 	<ul style="list-style-type: none"> • The global goodwill of Spanish big brands (Zara, Mango, etc.) benefits foreign low cost competitors rather than Catalanian firms • Additional structural costs due to austerity policies (taxes, cost of utilities and infrastructures, etc.) • Access to finance and credit • Decrease in demand of the traditional markets • Unfair competition from third countries.

1.2.4 CHARACTERIZATION

Distinctive features

- The "niche" specialists (functional products, applications, etc.)
- Performance with Style
- On the way to consolidate a global vision approach
- Strong supporting system for Technical/Product Innovation.

K issue

Looking (creating) market niches or segments where the success factor is "technical performance with style/design".

Sabadell needs

- technical improvements: innovation in materials, finishing processes, design of final

products.

- cooperation with partners (suppliers) that are able to provide competences and skills for innovation and design beside production capacities (co-contracting for innovation)
- share costs for better services (i.e.: decentralized warehouses)
- find solutions to reduce the cost of energy.

Sabadell offers

- structured support/research/innovation facilities (R&D centres, training, education)
- entrepreneurship growing “international” and willing to compete globally
- a breed of new entrepreneurs mentally oriented to innovation and used to operating in a difficult business environment.

1.2.5 PERSPECTIVES

The Catalonian T/C cluster is one of the oldest in Europe and one of the strongest. Traditionally, the cluster’s core activities are the spinning and weaving segments representing more than the 60% of the Catalonian production of this value chain, the rest of the production is for circular knitting and clothing/apparel. Similarly to all other European T/C clusters, the Catalonian cluster has been suffering a long and painful period of restructuring following the complete liberalization of the T/C sector (lifting of quotas) and the globalization of the markets (entry of China into the WTO). Currently, the cluster is slowly emerging from the consequences of the financial crisis that has been hitting Spain since 2008.

The industrial restructuring heavily impacted on the size and on features of the cluster.

The final outcome can be summarized as follows:

- a drastic downsizing of the cluster
- a general reorientation and market repositioning of the enterprises
- a disrupting/redesigning of the cluster’s values chain as well as of the linkages among its SMEs.

Downsizing of the cluster

In terms of installed production capacity, employment, quantity produced it can be estimated that the cluster is approximately one third/one fourth of the size it was in 1990. Conversely, the total turnover of the cluster did not decline as much. Today the cluster is a mix of activities throughout the value chain. Some of them that are still present in Catalonia such as the weaving/finishing phases (spinning is significantly reduced) while the clothing manufacturing has been partially delocalized and/or outsourced internationally.

The cluster “thinks internationally” both in terms of inputs and outputs.

Therefore, the entrepreneurial “mind” of the cluster still remains in Catalonia while the “standard” manufacturing (lower added value) disappeared or emigrated. On the other hand, the production of higher value and/or productivity remains active.

It is to underline that throughout this process of cluster reshaping, companies constantly improved the quality of their products and their services. Concurrently also the average quality of the management and entrepreneurship have been improving.

General re-orientation of the offer and market positioning of local SMEs

Companies that survived were able to re-think their offer by changing their market mix as well as upgrading their product mix. They tried to maintain their turnover by searching for new selling opportunities in the international markets. Actually, exports have been steadily increasing in the past years despite the dire financial conditions in which they operate. Exports figures provide a positive signal about the vitality and entrepreneurship of the cluster. Therefore:

1. the previous crisis of the sector (liberalization, globalization) taught companies how to survive:
 - a. without “local manufacturing”
 - b. in a “asymmetric” environment (where non-European competitors take advantage of cost, social, custom and legislative conditions which are much more favourable)
 - c. by emphasizing specialization
2. the recent financial crisis taught them how to develop without finance.

It is to mention that, so far, exports are less profitable than domestic sales (higher selling costs) and that the effort for internationalization has been conducted with meagre financial resources. Therefore adopted tools for boosting exports were very basic and traditional: personal contacts and visits and product customization. The positive side of the commercial efforts to satisfy foreign customers’ needs is that it fuelled companies’ specialization and, finally, it fostered diversifies “niche strategies”.

Currently, the market mix as well as the product mix of the cluster is much larger and richer and this requires a continuous upgrading of design, organization, marketing, technology and technical skills.

The cluster is endowed with several players who can provide substantial support to innovation. Generally, in Catalonia, innovation centres are involved in many sectors and application, generating opportunities for cross fertilization and “lateral” innovation.

The continuous industrial downsizing caused a process of aging/obsolescence of technicians and finally a possible impoverishment of the technical skills. The threat of a technical decline is very dangerous considering that products’ performances are a critical factor for the repositioning of Catalonian companies. In order to avoid the decline, the cluster re-launched the vocational training. In 2012, a public education institute initiated a new course for young textile technicians and some 20 students have attended courses yearly.

Higher technical education (textile engineering) is still in the curricula of Terrassa University.

The large and successful Spanish retailers such as Inditex (main brand: Zara), Punto FA (main brand: Mango), Desigual, etc. did not play a particular role in the described cluster’s evolution.

These companies, which brought Spain to gain a worldwide leadership in the large segment “fashion for all”, have only marginal links with the cluster even when their headquarters are located in Catalonia (as in the case of Mango). Actually these groups outsource and/or subcontract at global level and Catalonia is still too expensive for low cost/low added value items. In fact only 15% of Zara products are made in the Iberian peninsula and mainly in the regions of Galicia (E) and Minho (PT). Additionally, suppliers of Inditex and Mango are

'compelled' to re-design their business model in order to fit to the service requirements of these giants leaving very little room for individual strategies (business models with low or very low entrepreneurship).

Fashion is still an important issue. However, many local companies try to find different segments/markets since other European locations still preserve some advantages in the fashion business: Paris, Milan and London in particular. Furthermore, innovation based only on design/style appears to be not very defensible since design and style are easily copied or counterfeited and any effort of design/style innovation is quickly overridden.

For its morphology, its cost structure and its location (keeping in mind that Barcelona is anyway one of the leading cities in Europe regarding creativity, innovation and modernity), the Catalonian cluster is better shaped for targeting medium/upper level segments, requiring creative/innovative products that combine design and technical performances.

The Catalonian cluster is evolving in order to be highly competitive for small lots, customization, quick delivery, and product innovation. All these competitive factors in a renewed commercial aggressiveness find the operational tool to penetrate international markets.

Time and quick delivery, particularly in small quantities, is a factor that can provide significant competitive advantages. Some companies are thinking to re-introduce a "production to stock", taking into consideration that the cost of additional working capital (and the commercial risks involved) can be offset by the benefits of additional turnover and/or a better price.

Small warehouses scattered in the different locations of sourcing (not necessarily in Catalonia) may be a practical solution. The cluster's business model emphasizes: creativity, technical innovation, service and entrepreneurship.

Such a business model has many features similar to a typical "Italian" cluster. General ingredients are very similar but with a significant difference: the Italians still thrive on fashion and their image of design/style creators, while the Catalonians combine their products design (form) with technical performance (function).

What are the elements that may prevent this development? (cluster's needs)

1. The structural costs of energy, in particular for dyers and finishers
2. The still weak availability of young mid-level young technicians
3. The human and financial resources to access niches at international level
4. The promotional effort for re-positioning the Catalonian cluster as specialized "performance with style" textiles.

Disrupting/redesigning of the linkages throughout the cluster's values chain

Currently, the value chain shows the following:

1. spinning has almost disappeared and there are very few remaining companies producing grey yarn. On the contrary, yarn finishing resisted much better to the crisis. Competitive finishers are present
2. the production of woven and knitted fabric is still significant. However companies of the cluster compete better in specialized niches (fabric finishing segment included) and find their potential customers also (or mainly) outside the cluster boundaries. There is

- a gap in the local supply chain between fabric producers and final manufacturers
3. in the search of defendable niches, technical textiles gained an increasing weight. Despite being a business quantitatively minor compared to the traditional one, it has a leading cultural role. Technical textiles foster innovation and innovation finds its natural environment in the technical textile
 4. the production of finished products (apparels) has remarkably shrunk, however it still exists for higher quality and services levels.

Catalonia well represents the typical evolution of a historically established T/C cluster:

1. the territorial boundaries or continuity of the cluster is not a feature when referring to production or manufacturing anymore
2. the physical supply chain of the cluster is not a continuous flow but presents gaps since companies in each segment of the supply chain try to specialize, customize and are in search of customers wherever possible
3. the linkages of the cluster (strong linkages among companies are the specific features of a cluster) are mainly based on more “cultural” issues and a shared way to express entrepreneurship is one of the strongest
4. modern T/C clusters share a common vision, a set of services and activities that support companies to build up their individual strategies in line with that general vision, and finally an entrepreneurial culture that fuel imagination, innovation and the “style and approach” of that cluster.

1.3 THESSALONIKI – Central Macedonia/Greece

SEPEE: Project Partner 2

1.3.1 OUTLINE OF THE CLUSTER

a) Size

a1. **Geographical perimeter of the cluster** (area covered and population)

The geographical perimeter of the cluster is Central Macedonia (Kentriki Makedonia). Central Macedonia is one of the 13 regions in Greece, located in the north-central part of Greece. The area covers 18.111 km² and has a population of 1.900.000 inhabitants (17.3%) of the total population of Greece, which was 11.000.000 (Census 2011).

Thessaloniki is the capital city with a population of 1.100.000 inhabitants.

a2. **Number of enterprises in the T/C industry**

- Greece (total): 2.180
- Central Macedonia: 942 (43%)
(latest figures, 2012)

a3. **Total turnover of T/C industry**

- Greece (total): 2.077 mil. €
- Central Macedonia: 1.060 mil. € (51%)
(latest figures, 2012)

a4. **Total local employment direct T/C industry**

- Greece (total): 27.223
- Central Macedonia: 12.523 (46%)
(latest figures, 2012)

a5. **Estimation of total indirect employment** (providing material inputs or services to the T/C industry such as: logistics, software, design, chemicals, packaging and hangers, consultants, technicians, etc., 2012):

	other	trade	cotton growers	
• Greece (total)	10.000 +	30.000 +	100.000 =	140.000
• Central Macedonia	5.000 +	10.000 +	30.000 =	45.000

a6. **Exports**

- Greece (total): 1.333 mil €
- Central Macedonia: 860 mil € (66%) of which EU 79%
(2012).

b) Specialization

b1. **Core activity of the cluster** (characterization)

The core activity model of the cluster is export oriented mainly in EU major markets with large and medium clients either retailers or product brands

b2. **Typical or prevailing products**

Knitted apparels from cotton and other mixtures

b3. **Other relevant products**

Cotton yarns, knitted fabrics, dyeing & finishing services and woven apparel

b4. **Prevailing technology/production processes**

The majority of the companies in the cluster are export-oriented companies of

knitted apparel. They are mainly “service” providers such as specialized co-contractors with manufacturing capacities in neighbouring countries like Bulgaria, FYROM, etc.

b5. **Other relevant technologies/processes present in the cluster**

Spinning mills, knitting houses, dyeing & finishing houses and apparel brands

b6. **Distinctive skills and/or competences of the cluster**

- The availability of very good quality cotton in the region
- An integrated textile chain from raw materials to the final products
- The possibility of delocalization of the garment production in short distance low cost countries (Bulgaria, FYROM, Albania)
- Long cooperation with the main European markets
- Fast delivery, flexibility, small quantities and custom service
- Widespread entrepreneurship.

b7. **Driving force of the cluster**

Export-oriented companies.

c) Structure and internal organization of the cluster

c1. Given that in each cluster there is a “core” production phase (i.e.: weaving or clothing) the size/importance of other phases throughout the cluster value chain (upstream or down stream) are:

Negligible	
Minor but present	
Minor but with a key supporting role	X
Almost as important as the core activity	
All other phases put together are larger than the core activity	

c2. Within the same production phase of the value chain, the sector is: fragmented (many micro and small units); specialized (a number of smart competitors); oligopolistic (very few suppliers).

	Fragmented	Specialized	Oligopolistic
Fibre preparation		X	
Spinning/yarn treatments		X	
Weaving			X
Knitting		X	
Finishing		X	
Final Products	X		
Others		X	

d) Cluster linkages

d1. Internal linkages (business relations within companies of the cluster) are assessed as (tick as appropriate):

Very strong	
Strong	
Rather weak	X
Very weak	

d2. How much the supply chain (inputs/outputs of materials/products) is internal of the cluster?

Almost totally internal	
Significantly internal	X
Significantly external	
Almost totally external (outsourcing)	

d3. External linkages are related to:

	100%	Largely	Moderate	Negligible
Procurement of raw materials			X	
Procurement of equipment or technology		X		
Procurement of services				X
Sales of T/C products		X		
Sales of non T/C products			X	
Sales of services			X	
Others			X	

e) Cluster champions

e1. Who are the companies that drive the cluster?

The export oriented clothing manufacturers

e2. For which reason can they be called “champion”?

They cover the largest number of companies in the area and they contribute to almost 80% of the exports of the cluster

e3. Ten years ago were they the same companies?

Yes, they were the same but with a much more prevailing role

e4. Are champion the largest companies of the cluster?

To some extent yes. The largest companies are the leaders in their field of activity.

f) Cluster governance

f1. Who coordinates/manages the cluster?

A unique managing body	
Representative body that coordinates	
Several bodies that coordinate/take care of different activities	X

f2. Cluster facilities. Please select and rate:

a. Yes Good - b. Yes Average - c. Yes Poor - d. No Absent

Service centre	a
Quality test lab	a
Technology R&D centre	b
Vocational education/training centre (school, college, etc.)	b
Exhibition centre	c
Export consortia	a
Procurement consortia	d
Others Specify	-

1.3.2 HISTORY/EVOLUTION OF THE CLUSTER

Driving forces of the past

For a long time the area around Thessaloniki, central Macedonia has been an important textile and clothing region in the European landscape. Its historically relevant position is mainly due to two key factors:

- the availability of local cotton, grown in the surrounding regions of Macedonia, Thessaly and Central Greece for a total acreage of about 300.000 hectares (2013).
- the logistic position of Thessaloniki, which remains an important crossroads between the Balkans and the Mediterranean/Middle East countries.

These favourable conditions allowed companies in the region to take full advantage of the expansion of the textile and clothing business during the 70s and the 80s. In that period, companies strengthened their position significantly and became mostly exporters to the European markets. The T/C region around Thessaloniki evolved towards a mature and articulated industrial cluster consisting of an integrated textile chain - cotton specialized - which stretched from raw materials to the final products including: fibre production (ginned cotton), spinning mills (yarns), knitters (fabrics), dyers, finishers, and clothing manufacturers as well as a significant endowment of horizontal services provided by public institutions and private initiatives.

In the early 1990s Thessaloniki was the most important T/C centre in South East Europe, having a lead even on Istanbul, which was competing, with Thessaloniki in terms of advanced services and activities, know-how and marketing for the sector. The T/C industry in central Macedonia reached its peak at the beginning of the 1990s with approx. 75.000 employees and 5.000 registered companies.

The prevailing business model was export oriented mainly to Germany and other European countries, with large clients either retailers or product brands.

Subsequent evolution and changes

From then onwards the T/C industry in the region underwent a constant transformation under the combined influences of mounting competition from low-cost producer countries and the new investment opportunities offered by the collapse of communist regimes in neighbouring countries.

Greek entrepreneurs, especially small and medium clothing manufacturers, were quick to delocalize labour intensive productions at first in Bulgaria and later in FYROM, Romania and Albania where low-cost labour clothing plants were readily available. This process was particularly noticeable in Southern Bulgaria where Greek entrepreneurs and managers could easily commute from Thessaloniki and other T/C centres. Within a few years a sort of T/C specialised area with a strong presence of Greek entrepreneurs developed between the border and the region South of Sofia. Initially, Greek garment producers continued to use Greek-made fabrics for the delocalized clothing units, with a tendency, over time, to replace them partially with imports from Turkey.

The delocalization process was necessary to maintain cost competitiveness especially after the signing of the EU-Turkey Customs Union in 1995. At that time a number of EU programmes were funded to support the Greek T/C sector and many T/C companies invested in a major upgrading of technology with some of them also trying to develop their own brands.

Delocalization boosted competitiveness, thanks to the low costs afforded by low wages

in the clothing sector in neighbouring countries, and exports to the mainly EU markets continued to grow reaching a peak of 2,5 billion euro in 2003 (1,5 billion in clothing and 1 billion in textiles). From that time onward the T/C sector in the region started to decline.

Major declining factors have been:

- the competitiveness of China and other Asian low cost countries, which exerted a strong, cost pressure. The pressure was further reinforced especially after 2005 with the quota abolishment
- the growing importance of Turkey as a T/C powerhouse and of Istanbul as one of the new capitals of the T/C industry
- the increasing dis-integration of the local cotton chain. First, Greek cotton growers received incentives to increase production, but no requirements on maintaining quality standards were applied. Raw and ginned cotton was traded on the spot commodity market instead of supplying the local cotton textile chain directly. Second, strong competition of everybody against everybody reduced margins for all, and pushed companies to find customers “anyway and anyhow” therefore weakening the internal links of the area
- increasing market competitive pressures, lower margins, and decline of leadership caused a continuous loss of attractiveness for the T/C sector in the Thessaloniki area leading a significant number of SMEs entrepreneurs to reallocate their assets in other businesses such as real estate, photovoltaic, tourism and finance
- the international financial crisis in 2008 and mainly the domestic economic crisis that erupted in Greece in 2009 struck dramatically the industries of the sector. At first the exporting industries and subsequently (from the end of 2009) the companies that were focused on the domestic market (local brands).

Current situation

Despite being weakened, Thessaloniki and central Macedonia still remains a major centre of the Greek clothing industry. This area represents more than 45% of total Greek employment and almost 80% of national export of the T/C industry.

The 5-year period (2009-2013) of the economic crisis in Greece had a very dramatic effect on the T/C sector. The consumption and the retail sales went down by more than 60%, the turnover by 55% and the sector lost more than 50% of the work force. During this period Greek brands started focusing on exports. Also due to the difficulties in financing Greek brands moved their production back to Greece replacing a part of their imports from Asia. In 2013 the situation improved a lot both in local market as well as in exports.

In local market the retail sales went down by 2,5%, but the turnover in clothing went up by 1%. In exports there was an increase in apparel by 1,5%.

In central Macedonia enterprises are still present -even less- in all segments of the T/C chain from cotton crops to the final products with a significant component in the capital intensive operations of spinning, knitting and finishing and in advanced services such as design, CAD/CAM, marketing & logistics.

The unstable economic situation in Europe, force many European retailers and brands in manufacturing closer to the markets. Greece has the possibility to take advantage of this trend increasing its exports in both directions, branded products and specialized co-contracting.

1.3.3 SWOT ANALYSIS

Strengths	Weaknesses
<ul style="list-style-type: none"> • Possibility of delocalization in low-cost manufacturing areas within commuting distance • Technical competencies throughout the chain, from cotton fibre to finishing and confection (some marketing) • Widespread entrepreneurship with high commercial orientation • Goodwill in large European markets • Growing specialization in some technical applications (protech). 	<ul style="list-style-type: none"> • Dependence on sales agents in Europe • Proximity to Turkey (which can benefit from an asymmetrical competitive edge) • Weakened textile chain • Low attitude of SMEs to act as an integrated system • Aging entrepreneurs and workers • Medium high structural costs in Greece • Difficult economic and business environment (credit, tax, lack of institutional support).
Opportunities	Threats
<ul style="list-style-type: none"> • Refocus of EU big buyers to nearby areas offering a medium low total cost, logistic pluses and short delivery time • Growing preference of EU consumer towards guaranteed or certificated goods for safety and sustainability (materials and treatments: dyeing & finishing). 	<ul style="list-style-type: none"> • High degree of uncertainty in Greece (economic and political) • The continuation of a general policy (austerity) that penalises manufacturing in Greece • Shrinking demand in Western markets • Unfair competition of illegal imports from low-cost countries.

1.3.4 CHARACTERIZATION

Distinctive features

- The T/C business cluster with a “low cost” CMT backyard
- Very skilled entrepreneurship for assembling and combining a wide array of factors along the supply chain at international level
- A business culture/approach favourable to co-contracting

K issue

Looking for clients that appreciate a “high level of service” (modern co-contractors) that is: encompassing a mix of abilities in product design, industrialization (flexibility and elasticity), CMT, delivery, etc.

Thessaloniki needs to

- strengthen the “quantity and quality” of services offered
- access new markets and lower the dependence on agents
- improve the quality of the cotton fibre (seeds, fibre preparation)
- improve the ability to “stay on the edge” of applied innovation (digital printing, finishing, ICT technologies)
- lower costs of energy
- support new entrepreneurship and second/third generations
- sustain the development of local/Greek brands.

Thessaloniki offers

- experience and competences in co-contracting with large European customers
- significant examples of high level “modern” entrepreneurship both in co-contracting as well as small and medium (domestic) brands often integrated with own retailing
- a significant/good cotton fibre production (crop and ginned cotton)
- good assets for the support of the T/C value chain: software houses, service centres, vocational training etc.

1.3.5 PERSPECTIVES

After several waves of T/C industry restructuring due to liberalization and globalization (1995-2005), the latest Greek financial crisis (credit crunch and vertical drop of the domestic market) caused additional shake out of companies. In the last 5 years a severe “Darwinian process of selection” occurred in the cluster. Actually, still existing companies, which learned how to survive (and even develop) in a particularly difficult economic environment, are stronger than before.

Now the cluster is “populated” by companies that show a high (or very high) degree of entrepreneurship and that are better equipped to access the international markets.

Two “species” of companies lead the cluster:

1. small and medium brands, with evolved/complex business models (often including the retail phase); some of these companies have also international operations after having developed in Greece
2. co-contractors that offer a wide and customized set of services to leading European fashion brands. These companies perceive themselves as providers of “high level services” to the T/C sector; they do certainly not perceive themselves as simple “clothing manufacturers”. Innovation, flexibility and quality being the key factors of their strategy.

These two segments have developed outstanding skills in assembling and coordinating different activities. In particular, they excel in managing the relations with their customers (being big brands or the final consumer) and in the optimization of production (production planning and quality control). Skills in design and modelling are also widespread.

Leading companies do not limit their manufacturing to the surrounding low cost regions of the Balkans (which are the “de facto” workshops of the cluster) but have a global reach for product sourcing, which include China and other Asian countries.

Beside these two segments, a third group of manufacturing companies appear in a strong position: the cotton producers/ginners. Unfortunately, starting from late '80s, when the share of exported cotton was below 20% of local production, Greek cotton does not supply the local spinning industry neither Greek companies that manufacture abroad. The cotton business acts independently from the cluster.

Greek cotton is “high quality among the medium-length staples”.

Recently, new efforts have been exerted to improve the seeds and the agriculture part of the production, it is also envisaged that improvements of the technical performances of cotton might be possible in the ginning phase and/or in treatments before the spinning

phase. A highly performing cotton (techno-cotton) would be in line with the market demand that goes towards a highly diversified “functionalization” of the products.

High entrepreneurship as well as a high level of technical skills characterizes also the entire textile value chain in Central Macedonia that is including specialized services to the T/C business. In particular, dyers and finishers are catching up with the best practices in Europe (Italy in particular), while some companies have adopted quickly and developed digital printing with success.

Other T/C related businesses had to rethink and to revise their strategy; examples are the ITC services that, in order to cope with the drastic fall of the domestic demand, went international and diversified their catalogues in terms of services and software.

In conclusion, the sequence of shocks that have been impacting on the cluster since the mid 90s had different outcomes:

1. a significant shake out of companies (shrinking/downsizing of the cluster), particularly in the mid part of the supply chain (spinners, knitters and finishers). The selection rewards the best performing enterprises and, ultimately, raises the average entrepreneurial quality of the cluster (fewer but better)
2. the transfer of the manufacturing activities outside the geographical perimeter of the cluster (in the surrounding areas) making Macedonia a “cluster without local manufacturing”. However, this circumstance has not limited accordingly the total production controlled by Greek companies. The production is not “made in Greece” but the products are “owned by Greek” companies. Consequently, drawing conclusions just considering the country statistics is misleading; it is true that the quantities “made in Greece” are much lower than before however it is not true that the turnover generated and controlled by Greek (or Macedonian) companies has decreased as much
3. an evolution of the surviving companies towards more complex business models. That is:
 - a. from subcontractors of large European buyers (private labels) to advanced co-contractors able to sell services and competencies (instead of mere “working capacities”) to leading chains and fashion brands;
 - b. from unbranded producers to medium-small brands enterprises able to reach the final consumer, initially in the domestic market and subsequently also the international markets (in this case the SMEs of the Thessaloniki cluster are following the example of first movers from Athens)
4. the disruption of the supply chain within the central Macedonia T/C cluster (in the sense that there is no continuity in the flows of inputs-outputs from upstream to downstream operations in the cluster). This splitting weakens the internal physical linkages but, on the other hand, frees SMEs from internal dependence allowing more flexibility and boosting entrepreneurship.
5. the general improvement in managing finance. It can be said that in the recent years the cluster has learned to survive and develop without credit.

To sum up, today the Central Macedonian cluster is a mature, evolved and in many ways “advanced” cluster where entrepreneurship is strong and keeps the cluster vital and still competitive (although shrunk). The local scene is much less gloomy than the quantitative figures say.

However, still many problems and difficulties are present.

Beside those related to the economic and financial situation of Greece and those that affect the whole European T/C industry (imports from low cost countries, illegal imports, counterfeited products, tax pressure, high rigidity in labour) other specific drawbacks have been highlighted:

1. the cost of energy, which in Greece (similarly to Italy and Spain) is very high. It causes a structural disadvantage, in particular for dyers, finishers, knitters and spinners.
2. the still very low demand of domestic market, which remains important for a number of SME Brands.
3. the closeness to the Turkish competitor. Indeed, Greek companies are penalized by an asymmetrical situation that gives, even in presence of the same cost structure, unparalleled advantages to Turkish companies.

1.4 THE “STANDARD” TEXTILE/CLOTHING CLUSTER - Ben Arous/ Monastir

CETTEX: Project Partner 3

1.4.1 OUTLINE OF THE CLUSTER

a) Size

a1. **Geographical perimeter of the cluster** (area covered and population)

The geographical perimeter of the cluster is central Tunisia (Monastir, Sousse, and Mahdia). Central Tunisia is the most important textile zone in Tunisia, located in the central part of Tunisia. The total population of this area was 1 581 600 300 inhabitants (15%) of the total population of Tunisia, which was 10 777 500 (Census 2012).

Area	Number of inhabitants
Sousse	641 700
Monastir	539 400
Mahdia	400 500
Total	1 581 600

a2. **Number of enterprises in the T/C industry**

- Tunisia (total): 1.826
- Central Tunisia: 807 (40%)
(latest figures, 2013)

a3. **Total turnover of T/C industry**

- Tunisia (total): 2.421,0 M€
- Central Tunisia: 968,4 M€ (40%)
(latest figures, 2013)

a4. **Total local employment direct T/C industry**

- Tunisia (total): 175.000
- Central Tunisia: 75.250 (43%)
(latest figures, 2013)

a5. **Estimation of total indirect employment** (providing material inputs or services to the T/C industry such as: logistics, software, etc.):

	others	trade	
• Tunisia (total)	15.000 +	40.000 =	55.000
• Central Tunisia	8.000 +	20.00 =	28.000

(2012 estimation)

a6. **Exports**

- Tunisia (total): 2.421 M€
- Central Tunisia: 968,4 M€ (40%)
- %EU: 94%
- Others relevant%: 6%
(2013)

b) Specialization

- b1. **Core activity of the cluster** (characterization)
The core activity model of the cluster is export oriented mainly in EU major markets with large and medium clients either retailers or product brands
- b2. **Typical or prevailing products**
Sports wear in denim and other fabrics from cotton and other mixtures
- b3. **Other relevant products**
Cotton and mixture yarns, knitted fabrics, dyeing & finishing services, non-woven products
- b4. **Prevailing technology/production processes**
The majority of companies are export-oriented; we find companies making clothes sportswear in denim and knitwear. They are mainly subcontractors, but we also find the contractors and companies that make the finished product. 83% of the workforces are employed in the production of clothing. Customers are mostly Europeans
- b5. **Other relevant technologies/processes present in the cluster**
Spinning, knitting, dyeing and finishing, nonwoven, embroidery, screen printing, garment manufacturers and technical articles such as straps and ropes.
- b6. **Distinctive skills and/or competences of the cluster**
Other items: swimwear, lingerie, work-wear in technical textile.
- b7. **Driving force of the cluster**
 - Know how, proximity and reactivity
 - A good knowledge enabling staff to work on any kind of items
 - A country more and more specialized in short time production
 - Long cooperation with the main European markets
 - Fast delivery, flexibility, small quantities and custom service

c) Structure and internal organization of the cluster

- c1. Given that in each cluster there is a “core” production phase (i.e.: weaving or clothing) the size/importance of other phases along the cluster value chain (upstream or down stream) are:

Negligible	
Minor but present	
Minor but with a key supporting role	
Almost as important as the core activity	X
All other phases put together are larger than the core activity	

- c2. Within the same production phase of the value chain, the sector is: fragmented (many micro and small units); specialized (a number of smart competitors); oligopolistic (very few suppliers).

	Fragmented	Specialized	Oligopolistic
Fibre preparation			
Spinning/yarn treatments			X
Weaving		X	
Knitting		X	
Finishing		X	
Final Products	X		
Non-woven			X
Embroidery	X		
Screen printing	X		

d) Cluster linkages

- d1. Internal linkages (business relations within companies of the cluster) are assessed as (tick as appropriate):

Very strong	
Strong	X
Rather weak	
Very weak	

- d2. How much the supply chain (inputs/outputs of materials/products) is internal of the cluster?

Almost totally internal	
Significantly internal	X
Significantly external	
Almost totally external (outsourcing)	

- d3. External linkages are related to:

	100%	Largely	Moderate	Negligible
Procurement of raw materials			X	
Procurement of equipment or technology		X		
Procurement of services			X	
Sales of T/C products			X	
Sales of non T/C products			X	
Sales of services		X		
Others				

e) Cluster champions

- e1. Who are the companies that drive the cluster?
Exporting and integrated textile companies

- e2. For which reason can they be called “champion”?
For their export parts and their services. They contribute to almost 80% of the exports of the cluster
- e3. Ten years ago were they the same companies?
Yes, they were the same but with a much more prevailing role
- e4. Are champions the largest companies of the cluster?
To some extent yes. The largest companies are the leaders in their field of activity

f) Cluster governance

f1. Who coordinates/manages the Cluster?

A unique managing body	
Representative body that coordinates	
Several bodies that coordinate/take care of different activities	X

f2. Cluster facilities. Please select and rate:

Yes Good - b. Yes Average - c. Yes Poor - d. No Absent	
Service centre	b
Quality test lab	a
Technology R&D centre	c
Vocational education/training centre (school, college, etc.)	b
Exhibition centre	b
Export consortia	d
Procurement consortia	d
Others Specify	-

1.4.2 HISTORY/EVOLUTION OF THE CLUSTER

Driving forces of the past

During a long period, the central region was only as a subcontractor for the following reasons:

- low cost of labour
- proximity to Europe.

During the early 1970s the central region was the most important group of textiles and clothing in the south side of the Mediterranean, the T/C industry in central Tunisia reached its peak in the mid 1990s with approx. 240.000 employees representing 50% of the workforce.

The current business model has gradually evolved into mainly export to countries like, France, Germany, Italy and other European countries with major customers or retailers or brands.

Subsequent evolution and changes

The T/C industry in the region has undergone constant transformation under the combined influences of increasing competition from low-cost producer's countries and new investment opportunities offered by the relocation of the leading Europeans producers.

In fact, small and medium-sized manufacturing clothing in Europe quickly relocated productions for intensive labour to Tunisia.

The relocation of these factories was necessary to maintain cost competitiveness especially after the signing of the free trade agreement.

Few number of EU programs have been funded to support the Tunisian textile and clothing sector. Many companies have invested to upgrade their businesses in technology but also in terms of productivity. Some industrial companies have even invested in developing their own brands.

Current situation

The central region of Tunisia will always remain an important centre of the garment industry in the country. This area represents more than 40% of Tunisian textile and apparel jobs and 40% of national exports of textile and clothing sector.

In 2012, the Tunisian T/C exports fell by 7% compared to their 2011 level. This decrease is mainly due to the contraction in European demand and not by a loss of competitiveness of Tunisian industry. The fall in exports mainly occurred in March, April and May 2012.

Since September 2012, exports have rebounded to evolve to a level comparable to that of the exports of the same month of 2011 pace.

It should be noted that in 2012, the Tunisian T/C imports declined 6.4%.

In terms of markets, the situation is heterogeneous: Tunisian exports held up well in France (-2.4%), Belgium (-0.3%), the Netherlands (-1.4%) and to a lesser extent in the UK (-6.2%) while they are sharply down to Italy (-11.5%), Germany (-16.9%) and Spain (-15,2%).

On products, Tunisian exports jeans are stable (-0.4%), while those of most other product families are falling: work clothes (-10%), lingerie (-11%), t-shirts (-11%), sweaters (-17%), shirts and blouses (-14%), bathing (-9.5%), coats and jackets (-30%), clothes (-14%).

1.4.3 SWOT ANALYSIS

Strengths	Weaknesses
<ul style="list-style-type: none"> • Competitive in “quality for value” items • An emerging class of young entrepreneurs • Skilled and experienced executive and middle management • A still competitive labour cost: 0,73 €/H in 2012 vs.: 9.22 € in France, 0.91 in Romania • Goodwill with major European buyers (brands, private labels). 	<ul style="list-style-type: none"> • Low competitiveness vs. Asian countries for standard products (k factor: price) and for planned deliveries • Dependence on sales agents as well as on big customers in Europe • Poor attitude of SMEs operate in consortia • Difficulties in finding a skilled workforce.
Opportunities	Threats
<ul style="list-style-type: none"> • Large buying segments now require a mix of factors: quality, services (delivery and lots) and price that may be advantageous for Tunisia • Tunisia is still an attractive destination for foreign direct investment • Tunisia’s industrial policy supports the development of value added operations (finishing). 	<ul style="list-style-type: none"> • Orders depending on a limited number of customers • Difficult to fin a “right” market positioning between price, quality and services • Financial problems of the Tunisian state, leading to additional taxes and other burdens, and very high degree of uncertainty • Increased costs of energy • General political instability in the area.

1.4.4 CHARACTERIZATION

Distinctive features

- The T/C cluster heading towards higher value added
- On the way for escaping from the subcontractor trap
- Repositioning throughout the value chain (finishing) and enlarging the extension of the value chain.

K issue

How to become “European” and compete on quality, specialization, and innovation without losing the cost competition advantage?

Central Tunisia needs to

- support the new generation of entrepreneurs
- reinforce the “entrepreneurial basis”: second/third generations
- develop expertise on the added value phases (finishing, printing, dyeing)
- access to new markets/customers
- strengthen the local brands in fashion and home textile (styling and marketing).

Central Tunisia offers

- the usual advantages of “value for money”, proximity and incentives for investments
- a network of modern facilities to support the business (CETTEX, MFCPOLE, private service centres, etc.) including a lower cost of energy
- a class of new entrepreneurs acting
- an emerging number of hybrid companies and co-contractors
- good executive and operational managers and valid young technicians.

1.4.5 PERSPECTIVES

Past development and current position of the Tunisian T/C industry

The Tunisian T/C Industry reached its peak in the early '90s. At that time many European companies had already delocalized their sewing/confection units and/or were putting orders in with local subcontractors (mainly C-MT: Cut, Make and Trim). Proximity to Europe, cheap labour and a very favourable legislation concerning FDI and exports, gave additional advantages to the Tunisian T/C industry.

The subsequent process of market liberalization and globalization (1995-2005) bringing in the European arena new and very aggressive Asian competitors limited the quantitative development. These competitors were (and still are to a certain extent) particularly fit to serve the European buyers that were fast developing in those days. We refer to large retailers (private labels - department stores), large chains “fashion for all” (Zara, H&M, C&A, Benetton, etc.) and even important international prêt à porter/fashion brands (French and Italian).

In the same period, other neighbouring Mediterranean competitors grew fast in the area. They were able (or even “more able”) to take advantage of the same competitive levers of Tunisia (proximity, costs, incentives and manufacturing skills). Turkey, which became a

global T/C powerhouse, and Morocco (in particular for Spanish and French partners) were the “champions” among competitors which included also some Balkan countries or being part of the EU (Romania/Bulgaria) or being associated to it: FYROM, Albania and Serbia.

The financial crisis that has been hitting Europe (in particular: Italy, Spain and, partially, France) caused a significant drop in the final demand additionally reducing quantities for the Tunisian industry.

It is to underline that the European crisis presents some unexpected advantages.

The reduction of the average order (size), the sharp limitations of stocks by the traders, the explosion of product variants and the consequent shrinking of production lots, made less competitive to the Asian suppliers who are better fit for planned and large orders.

Indeed, the Tunisian T/C industry reacted to the new requests of the customers by emphasizing the component “services” of their offer: customization, flexibility, quick response and maintaining the high quality of clothing manufacturing. In terms of mere costs (€/Min) Tunisia is not the cheapest country but, considering the total cost and the overall quality offered (product and service), it still remains a competitive “value for money” location.

To summarize: there are various directions in which the Tunisian T/C industry has evolved (is evolving):

1. development of advanced services for the European T/C industry (from subcontractors to co-contractors)
2. development of own brands
3. development of niche products (in particular: technical textiles)
4. support from the T/C sector with specialized and modern facilities.

Today, a number of Tunisian companies are able to self-define the product specifications and are able to access the market. Some of them are managing the high “complexity” of their business model. Examples of

advanced Co-contractors: T.F.C.E. Group

own Brands: Dixit, Mabrouk, etc.

technical textiles: refer to Technical Textiles (MFCPOLE) report

The Tunisian T/C industry is increasingly independent in terms of entrepreneurship/management however it depends too much on the clothing manufacturing phase and on the South European market.

It would be necessary to lower its overall “commercial” risk.

1. Diversify the final products towards “fashion for specific markets” (Tunisia, Maghreb, etc.) or functions (technical, high performance clothing)
2. Develop businesses other than clothing manufacturing, in particular finishing (yarns, fabrics and garments)
3. Target other European promising markets (i.e.: Russia, Balkans) or even not yet developed areas such as sub-Saharan Africa (in particular francophone countries where Tunisia has an advantage).

The human factor

In the last ten/fifteen years the most brilliant companies made significant efforts to escape

from the “subcontractor trap” in which very low margins prevent capitalizing on know-how and marketing for an independent entrepreneurial development. A number of them have been successful; Tunisia is now endowed with a significant class of experienced and mature entrepreneurs (self-made man) to leverage on. However, sometimes they (first generation) are already “aged” and a generation issue (change from father to son) is in sight.

This issue deserves to be addressed properly and possibly in cooperation or partnership at international level. Fortunately, the “internationalization of the business culture”, especially for the young generations, can be facilitated by the long-standing cooperation with European leading companies. At the lower level of technicians the situation is still fairly good if compared to Europe, especially in the clothing manufacturing. This is a plus for potential partnership with European companies. However, the Tunisian technical expertise is not equally distributed. In particular, it must be developed and strengthened in the finishing phase, a k phase for the enhancement of specialization as well as adding technical performances to the products (technical textiles).

1.5 THE “TECHNICAL TEXTILES (TT) & PROFESSIONAL CLOTHING” CLUSTER - Monastir-EI Fejja

MFCPOLE: Project Partner 4

The identification of a Technical Textile Cluster is rather recent. The statistical system for the collection of data and information is not yet in full operation. Therefore data and information are estimations or even lacking.

The project decided this uncommon criterion for the definition of a cluster since the “segment of the market” is increasingly important in terms of total turnover and innovation and it is better and better identified at international level.

1.5.1 OUTLINE OF THE CLUSTER

a) Size

a1. **Number of enterprises in the Technical Textiles Industry**

Approx. 250 companies

a2. **Employment**

Approx. 28.000 people or 15% of total textile & clothing sector and 5.5% of total employment in the industry.

b) Specialization

b1. **Typical or prevailing products**

- The main products are in Clothtech*, Protech* (protection, functional wear)
- Work wear, Safety and protective clothing, uniforms, etc

b2. **Other relevant products**

Hometech* and Mobiltech* products

b3. **Prevailing technology/production processes**

Clothing industries 80%

b4. **Other relevant technologies/processes present in the cluster**

Weaving and finishing

b5. **Distinctive skills and/or competences of the cluster**

Technical skills, flexibility and responsiveness

b6. **Driving force of the cluster**

Exporting companies.

c) Structure and internal organization of the cluster

- c1. Given that in each cluster there is a “core” production phase (i.e.: weaving or clothing) the size/importance of other phases throughout the cluster value chain (upstream or down stream) are:

* Application sectors are those included in the First Tunisian Technical Textiles Sector Directory published by MFCPOLE. They are the same as identified by the Techtextil Exhibition of the Frankfurth Fair).

1. Agrotech	2. Buildtech	3. Clothtech	4. Geotech
5. Hometech	6. Indutech	7. Medtech	8. Mobiltech
9. Oekotech	10. Packtech	11. Protech	12. Sporttech.

Negligible	
Minor but present	
Minor but with a key supporting role	X
Almost as important as the core activity	
All other phases put together are larger than the core activity	

- c2. Within the same production phase of the value chain, the sector is: fragmented (many micro and small units); specialized (a number of smart competitors); oligopolistic (very few suppliers).

	Fragmented	Specialized	Oligopolistic
Fibre preparation			X
Spinning/yarn treatments			X
Weaving		X	
Knitting		X	
Finishing			X
Final Products	X		
Others			

d) Cluster linkages

- d1. Internal linkages (business relations within companies of the cluster) are assessed as (tick as appropriate):

Very strong	
Strong	
Rather weak	X
Very weak	

- d2. How much the supply chain (inputs/outputs of materials/products) is internal of the cluster?

Almost totally internal	
Significantly internal	
Significantly external	X
Almost totally external (outsourcing)	

- d3. External linkages are related to:

	100%	Largely	Moderate	Negligible
Procurement of raw materials		X		
Procurement of equipment or technology		X		
Procurement of services		X		
Sales of T/C products				X
Sales of non T/C products				X
Sales of services		X		
Others				

e) Cluster champions

- e1. Who are the companies that drive the cluster?
Integrated companies working finished product for export
- e2. For which reason can they be called “champion”?
For their export turnover share
- e3. Ten years ago were they the same companies?
Within technical textile market, there are new emergent companies mainly SME’s.
- e4. Are champions the largest companies of the cluster? No, they are the specialised companies that focus on new markets and most integrated

f) Cluster governance

- f1. Who coordinates/manages the cluster?

A unique managing body	
Representative body that coordinate (MFCPOLE)	X
Several bodies that coordinate/take care of different activities	

- f2. Cluster facilities. Please select and rate:

a. Yes Good - b. Yes Average - c. Yes Poor - d. No Absent

Service centre	b
Quality test lab	b
Technology R&D centre	c
Vocational education/training centre (school, college, etc.)	b
Exhibition centre	c
Export consortia	c
Procurement consortia	c
Others Specify	-

1.5.2 HISTORY/EVOLUTION OF THE CLUSTER

Driving forces of the past

Relatively low cost subcontracting costs, closeness to the EU market, a cultural & business advantages supporting exporting companies.

Subsequent evolution and changes

Increasing of labour costs, emergence of niche markets, emergence of fast fashion, concurrence with Asian companies.

Current situation

Changing towards specialization, production integration and products/market diversification.

1.5.3 SWOT ANALYSIS

Strengths	Weaknesses
<ul style="list-style-type: none"> • State support to TT R&D • Critical mass of the TT sector already existing • R&D& training facilities available (MFCPOLE role) • Presence in almost all manufacturing segments of the chain • Complementary skills • Competitive labour costs in TT (compared to EU). 	<ul style="list-style-type: none"> • A weak integration of the chain of value (upstream/finishing) • Newcomer in technical innovation • Lack of relations between firms • Lack of capacity of designing new products (a business to learn) • Difficulties to access to the local market.
Opportunities	Threats
<ul style="list-style-type: none"> • Growth of Technical Textiles markets (overall) • Innovation Poles as tools for Co-operations between firms • Possibilities of EU/Tunisia co-operation • The optimization of the potential R&D. 	<ul style="list-style-type: none"> • Change of the competitive arena (EU competitors) • A challenging market position between price, innovation and quality • Increasing competition in the TT sector • Technological changes • Entry Barriers (technology, regulation, etc.).

1.5.4 CHARACTERIZATION

Distinctive features

- Technical Innovation at lower costs
- TT in a framework of public supports and facilities
- Upgrade well rooted skills in clothing manufacturing

K issue

How to enter an upscale market, choosing the segment, building up a “right” positioning and catching up with EU competitors.

Tunisian Technical Textiles needs to

- Tunisian TT has to go beyond simple manufacturing of clothing. New product design skills are needed as well as technical and scientific linkages with the EU suppliers of innovative inputs (materials and process) in order to transfer performances of the semi-finished products into the finished items.
- develop expertise and know how on the added value phases mainly on spinning, weaving and finishing processes
- access to new application markets and direct contact with final users customers.

Tunisian Technical Textiles offers

- modern structures and facilities (innovation poles) which can attract both collaborations for innovation and new investments for the business development (provide companies).
- a good class of technicians that can ensure technical competences and skills for the development and implementation of innovation projects.
- facilities to access to the technical textile market of North Africa and to create joint venture export production companies.

1.5.5 PERSPECTIVES

The Tunisian Technical Textiles cluster

The Technical Textiles cluster is made up of companies that manufacture Technical Textiles in Tunisia (entire country). This cluster has no geographical boundaries; it is defined by technical/technological features of the products.

An effort to describe the Technical Textile cluster has been recently conducted by MFCPOLE with the support of Unido.

The final outcome of this exercise is the first “Annuaire Textile Techniques” which lists 160 companies providing also their profiles.

The Tunisian Technical Textiles sector is composed of rather young companies; often operating in the so-called “Clothtech” (work-wear or functional wear) or Protech (Individual protection). In other words, also the Technical Textiles sector confirms clothing manufacturing as the main vocation for Tunisia. Since the technology used is very similar (sewing machines) a clean cut between technical and non-technical textile is difficult to draw.

The cluster is still in search of a proper “personality”; the recently established association is working to this direction.

Technical Textiles within the T/C industry strategy for development

By “nature” Technical textiles target market niches have a well-defined set of requirements; these make the demand rather fragmented and, therefore, fit for specialized SMEs. Additionally, Technical Textiles must be “innovative” and innovation needs support from R&D, laboratories and scientific inputs. Tunisia seems adequately endowed with facilities. In particular, the new facilities or initiatives for innovation which refers to MFCPOLE and Neotex in Monastir Park. However an “internationalization” of its expertise is needed (in Tunisia as in all other clusters). Finishing is the k-operation which provides extra performances to the product; therefore the industry strategy that puts as a core objective “finishing” is consistent with the development of Technical Textiles.

Many of the general considerations about the T/C industry and the external scenario, described above (CETTEX report) are valid also for this report.

The Tunisian Technical Textiles cluster needs to grow in terms of awareness of its possibilities. At a first analysis, the level of entrepreneurship is rather high as well as the facilities and the supporting initiatives. Know-how is good in the final stages of production and must be complemented by expertise in other areas.

Tunisian Technical Textiles needs to develop a partnership for technical and scientific improvement, diversification of products/technologies and market access.

The Technical Textiles cluster is “vital but young”.

Within the project there are several opportunities to grow: Catalonia can be a strong partner for applications/products, Prato in the finishing and Macedonia for specialization in specific performances such as thermo protection, fire protection and other domains.

1.6 ALEXANDRIA - Al Iskandanyah/Egypt

FEDCOC/Alexandria Chamber of Commerce: Project Partner 5

1.6.1 OUTLINE OF THE CLUSTER

The Alexandria region plays a strategic role in the Egyptian T/C sector.

Historically it is the shipping point for exports to Europe and America (together about 75% of all T/C exports). It hosts the Alexandria Cotton Exporters' Association (Alcotexa) and a very large majority of the registered Export Agents.

Furthermore, the Alexandria governorate is geographically encompassed by the largest cotton production area of the Delta, which grows the extra long staple Giza 92.

Alexandria is an important trade/commercial area also for the domestic market as well as a manufacturing area.

The Alexandria University includes the reputed Textile and Weaving Engineering Faculty (est. 1960) and the region (governorate). Recently, a further development stemmed from the establishment of the QIZ in Borj el Arab where about 200 T/C companies, mainly ready made garments (RMG) manufacturers, are located.

To sum up: the Alexandria T/C cluster is fully integrated with the whole Egyptian T/C sector.

1.6.2 CONTEXTUALIZATION

The Egyptian T/C value chain is:

- complete
- important
- heterogeneous
- unbalanced.

Complete because it stretches from cotton production (crop) to RMG (final products) and local trade.

Important under several stand points:

- economic: the T/C sector is one of the largest in the manufacturing industry; it exports about 2,3 billion euros which make the T/C sector the first industrial exporter (top exporters are: tourism, shipping and logistics – Suez canal, and oil&gas)
- social: it employs about 400.000 workers and it encompasses 4300 registered companies (total employment including micro, not registered and informal enterprises is estimated in 700.000 persons)
- cultural: for centuries Egypt holds a leading position in the T/C business; its long staple cotton has a outstanding unmatched reputation despite being below the share of 2% of total production.

Heterogeneous: the current situation of the Egyptian T/C industry is the legacy of different (conflicting) industrial policies of the past characterized by very different approaches (ideologies). Besides the State Owned Enterprises of the Nasser time (mid 50s to 70s)

which are: massive (up to 15.000 employees), integrated (as a soviet style Kombinat), obsolete (often machinery is still the native one of Czechoslovakia/Soviet origin) and still very important (about 50% of the total output of yarns and fabric), there is an active private sector of Egyptian entrepreneurs and the modern segment of export specialized enterprises of the Qualified Industrial Zone where foreign investors play a relevant role. Contrary to other situations where diversity is a positive feature (e.g.: Prato), the Egyptian diversity contains negative features since the business models, the entrepreneurship, the culture, the vitality of the aggregation of enterprises is strikingly incompatible with a shared industrial development policy.

Unbalanced because investments are currently allocated to segments of the value chain where Egypt has not a competitive edge (RMG for export) while segments of Egyptian specialization (cotton production and the upstream operations like ginning/spinning and weaving) have been neglected. This leads to a trivialization of the Egyptian T/C sector and may bring several negative effects such as: a general lower market positioning of Egyptian production, decrease of margins and a further leave of high level workers/technicians. Finally, the T/C industry suffers from the general entropic conditions of the manufacturing sector in Egypt. Actually, the overall economic system, particularly after the revolution of 2011, is characterized by a massive dissipation of energies that generate a systemic poor productivity.

1.6.3 SWOT ANALYSIS

Strengths	Weaknesses
<ul style="list-style-type: none"> • Long staples Cotton • Tradition of entrepreneurship in T/C • Several FTAs easy access to USA/EU and other countries (Arab League Africa) • Favourable business/investment conditions for foreign investors (Free Zones) • Cheap costs (labour, energy, etc.). 	<ul style="list-style-type: none"> • T/C Industry characterized by different situations, attitudes, vitality and “speeds” (too much heterogeneity) • Obsolete technology in large State Owned Enterprises SOE • Low efficiency of the economic and social environment • Proven inability to restructure or privatize inefficient SOEs • Poorly skilled workforce and management.
Opportunities	Threats
<ul style="list-style-type: none"> • Significant room for improvements in any segments of the value chain • The growth of the Islamic fashion • Trading Crossroad between the Western countries and the Gulf, Africa and the Middle East • Strong adjacent sectors as tourism and transport/logistics • Large domestic market. 	<ul style="list-style-type: none"> • Without a modernization, the production is likely to go from richer upstream activities to low value added downstream (CMT) • Lack of funds and resources for defending the competitive edge on cotton • The breaking up of the supply chain in separated segments will continue.

1.6.4 CHARACTERIZATION

Distinctive features

- High value cotton for top segment items.
- An “all encompassing” T/C sector (large/small; SOEs/private; upstream/downstream; local /foreign entrepreneurship; exports to EU and USA; old/new; western/middle-eastern, etc.)

K issue

Modernize the oldest part of the sector or loose value (for Egyptians).

Alexandria/Egypt needs to

- upgrade the overall “quality” of the sector also by recovering the spinning, weaving and dying/finishing phases
- improve the production and marketing of the cotton fiber
- improve skills of management and workforce.

Alexandria/Egypt offers

- high quality of raw materials
- easy access to large international markets (USA, EU, Gulf)
- availability of young people to be trained as managers, technicians and designers.

1.6.5 PERSPECTIVES

The process of internationalization of the Alexandria region, particularly fostered by the special regime for direct foreign investments in Borj el Arab area, did not stop despite the recent political instability of Egypt. Producers of high quality yarns and fabrics are investing along the whole cotton chain starting from the very initial agriculture phase: seeds, field management, harvesting of the cotton fibre, ginning, etc.

Strengthening the cooperation between all players, from peasants to manufacturers, can grasp the advantages of the “natural” high quality of the Egyptian cotton. This effort is not limited to the technical side of the problem but it includes also the development of human resources and the social responsibility of the companies.

A project such as “Cotton4life” envisaged and conducted by Filmar Nile Textile and sponsored by the Government of Egypt, can be considered a best practise for technical, social and economic innovation in the textile sector.

Main perspectives of next development of the cluster are therefore foreseen in two main directions:

1. recover as soon as possible efficiency to regain competitiveness in the usual business areas
2. develop innovative initiatives to strengthen the international positioning of the Egyptian cotton; re-affirm its leadership in quality and build a “top quality chain” from the production of the fibre and throughout the manufacturing chain to the final product and the consumer.

1.7 BETHLEHM - Palestine Authority

UPTI Project Partner 6

1.7.1 OUTLINE OF THE CLUSTER

a) Size

- a1. **Geographical perimeter** (area covered and population)
Area approx. 40 squared km, population 170,000
- a2. **Number of enterprises in the T/C industry**
167 (latest figures)
- a3. **Total turnover of T/C industry**
€ 27.750.000 out of the total Palestinian turnover of about € 220.000.000 (latest figures)
- a4. **Total local employment direct T/C industry**
2.700 (latest figures)
- a5. **Estimation of total indirect employment** (providing material inputs or services to the t/c industry such as: logistics, software, design, chemicals, packaging and hangers, consultants, technicians, etc.)
220
- a6. **Exports**
Total € 18.000.000 (Israel).

b) Specialization

- b1. **Core activity of the cluster** (characterization)
Circular knitting, home textiles (towelling), CM-Light knitwear, CM-T women fashion (Non-lined items). No heavy confection production
- b2. **Other relevant products**
Terry cloth, denim (sewing and washing)
- b3. **Prevailing technology/production processes**
Machinery is generally old due to the lack of the availability of proper maintenance, the industry is hesitant to invest in hi tech.
- b4. **Other relevant technologies/processes present in the cluster**
Not present
- b5. **Distinctive skills and/or competences of the cluster**
Experienced machine operators, over 50 years' experience in circular knitting, weaving and dyeing
- b6. **Driving force of the cluster**
The big producers like Arja Textiles.

c) Structure and internal organization of the cluster

c1. Given that in each cluster there is a “core” production phase (i.e.: weaving or clothing) the size/importance of other phases throughout the cluster value chain (upstream or down stream) are:

Negligible	
Minor but present	
Minor but with a key supporting role	
Almost as important as the core activity	
All other phases put together are larger than the core activity	X

c2. Within the same production phase of the value chain, the sector is: fragmented (many micro and small units); specialized (a number of smart competitors); oligopolistic (very few suppliers).

	Fragmented	Specialized	Oligopolistic
Fibre preparation	n.a.		
Spinning/yarn treatments	n.a.		
Weaving			X
Knitting		X	
Finishing			X
Final Products	X		
Others			

d) Cluster linkages

d1. Internal linkages (business relations within companies of the cluster) are assessed as (tick as appropriate):

Very strong	
Strong	X
Rather weak	
Very weak	

d2. How much the supply chain (inputs/outputs of materials/products) is internal of the cluster?

Almost totally internal	
Significantly internal	X
Significantly external	
Almost totally external (outsourcing)	

d3. External linkages are related to:

	100%	Largely	Moderate	Negligible
Procurement of raw materials				X
Procurement of equipment or technology				
Procurement of services				X
Sales of T/C products			X	
Sales of non T/C products				X
Sales of services				X
Others				

e) Cluster champions

- e1. Who are the companies that drive the cluster?
The big producers like Arja Textiles
- e2. For which reason can they be called “champions”?
Size of production, availability of specialised machinery; size and turnover
- e3. Ten years ago were they the same companies?
Yes
- e4. Are champions the largest companies of the cluster?
Yes.

f) Cluster governance

f1. Who coordinates/manages the cluster?

A unique managing body	
Representative body that coordinate: UPTI	X
Several bodies that coordinate/take care of different activities	

f2. Cluster facilities. Please select and rate:

a. Yes Good - b. Yes Average - c. Yes Poor - d. No Absent

Service centre	d
Quality test lab	d
Technology R&D centre	d
Vocational education/training centre (school, college, etc.)	c
Exhibition centre	d
Export consortia	d
Procurement consortia	d
Others Specify	-

1.7.2 HISTORY/EVOLUTION OF THE CLUSTER

Driving forces of the past

Tubular knitting and terry cloth weaving, a big percentage of CM-T producers

Subsequent evolution and changes

Due to the lack of support, know how, investment and competition from the Far East, the industry has been systematically weakened. The difficult logistics situation created by Israel has further weakened the industry and effectively eliminated many companies. In a weakening economy, the irregular import of left over stocks from China has exasperated the situation creating an absurd market reality, where products were selling in the market for less than the cost of fabric. This situation has been somewhat rectified recently; and a surge of production intended for the local market has been noticed.

Current situation

The textile industry in the Palestine in general and in the Bethlehem cluster in particular has been proving that it refuses to die! Bethlehem has the biggest concentration of producers - see here entrepreneurs (as opposed to CM-T workshops) in Palestine.

- Most production is done for the Israeli market; which decided, a few years ago, that it was cheaper to produce in China. However, after some time, they realised that Israel is too small a market to abide by the big quantities that the Chinese impose on them, and they are now moving back to the Palestine.
- The local market: After the intervention of the Palestinian authority in controlling the goods imported from the Far East – at the insistence of UPTI and the Palestine Federation of Industries, the industry is gaining grounds in the local market. Underwear from the Bethlehem cluster has long enjoyed a good reputation, the same goes for towels. However, it must be noted that a big amount of sportswear, socks, polo shirts, etc. are marketed as “fakes”, using international labels unlawfully. Palestine is not an independent country and has not implemented the intellectual property law. The economy in Palestine has been devastated mainly due to restrictions imposed on both industry and the population in general by Israel. With over 30% unemployment (and no social system to compensate the unemployed) it is a poor man’s economy and the products catering for this economy is cheap, and of relatively low quality.
- CM-T is, by far, the biggest industry activity, much of which is undeclared and falls into the “black economy” sections, this is the reason why figures available on the sector are, in a way, misleading. The majority of CM-T activity is done for the Israeli producers or producers/retailers and is, in general, of a higher quality. However, the production of heavier confection (lined items like jackets, coats etc.) is very limited.
- A small amount of supporting industries like label making, elastic tape and similar products are available locally, while all other accessories are imported (Thread, zippers, buttons, etc.)

1.7.3 SWOT ANALYSIS

Strengths	Weaknesses
<ul style="list-style-type: none"> • Multicultural environment, mix of western and middle east (Levant) values • Still existing technical skills and training institutions • Experienced entrepreneurs with international networks • Great adaptability; ability to do business in very dire and unpredictable conditions • Relatively inexpensive labour (€200 – 300 a month). 	<ul style="list-style-type: none"> • Obsolete technology • Small and old production capacity • Limits to business freedom • Difficult and expensive logistics • Expensive fuel and electric power • Limits to k inputs (i.e.: oxygen, chemicals).
Opportunities	Threats
<ul style="list-style-type: none"> • FTAs signed with USA, Canada, EU and Turkey • Growth of Islamic fashion (market, new designs, new products, etc.) • Positive fall out of tourism on sales (hotel equipment) and publicity of local production. • Support of international agencies for economic and social development • Within the awful conditions, how can Israel be also an economic opportunity? 	<ul style="list-style-type: none"> • Drain of financial and human resources attracted by “easier” sectors (tourism, real estate, etc.) • Aging of competencies and disappearance of skills • Lack of employment opportunities for young and educated persons • Political instability.

1.7.4 CHARACTERIZATION

Distinctive features

- Survive despite all
- Small but international
- Locked but linked.

K issue

Is the T/C sector worth new investments in the Palestine?

Bethlehem/Palestine needs to:

- identify new opportunities for investments (ideas, strategies, etc.)
- develop new sales opportunities to re-launch the turnover even if the search for new sales in the current framework may be very difficult. New sales can only come from new ideas.

Bethlehem/Palestine offers:

- free access to USA, CND, EU, Turkey
- international minded Entrepreneurship
- international links
- technical capabilities (in particular for customization).

1.7.5 PERSPECTIVES

The mission on site confirmed the industry situation described in the data collection document as well as the SWOT analysis therein presented by PP UPTI.

The visits to enterprises and institutions in the areas of Tulkarm and Bethlehem provided significant additional value for figuring out possible cross-border initiatives within the framework of the TEX-MED Clusters project.

When referring to the Palestine we must take into consideration the very special and difficult environment in which firms operate. Restrictions to the local businesses stem from many sources including the prevention of certain inputs (example: Oxygen 48 volumes or other chemicals), strict limitations in, free (or efficient) circulation of goods and persons within the Palestine, the very high costs of energy and fuel.

Actually, in the Palestine the economic sectors which offer better (and good) business opportunities nowadays is tourism which has a multiplier effect on many other related sectors: real estate, hôtellerie, catering, transport, travel agencies, laundry services as well as on: handcrafts (souvenirs), local food, restaurants.

In the last 15/10 years a large amount of capital has been transferred from the industry (and the T/C industry in particular) to this sector.

Investment portfolio choices accelerated the decline of the Palestine T/C sector and, consequently, the further loss of its competitiveness, which was already threatened by globalization.

Today machinery and equipment is largely obsolete, production premises are old, plant layouts are hardly rational and logistics (even internal) is often complicated.

Given the very dire conditions, it is surprising that a significant T/C sector still survives in the Palestine. The main reason of this resilience resides on the high level of entrepreneurship in the region as well as to the deep links (economic, moral and cultural) of entrepreneurs to the T/C industry. However very seldom the second (or the third) generation of entrepreneurs remain in the T/C business.

Often, the Palestine entrepreneurs hold family links at international levels, manage businesses based abroad and are open minded. This is the real strength of the T/C industry Palestine.

In order to survive companies have few strategic options.

According to their business model:

CM-T subcontractors (mainly supplying Israeli customers)

1. provide additional value by ensuring good manufacturing quality for small lots (from sewing to packaging)
2. target "higher market niches" which require a "total consistency" in the product: quality of materials, design, quality of manufacturing, packaging, etc., which are not easily found (examples: product made in organic materials).

"Own production/own brand" enterprises:

1. increase the total margin of the business by adding downstream activities (retail) to the original manufacturing business (for selling own manufactured and traded items). Therefore targeting only the local market (the Palestine) and – possibly - nearby regions (Israel, Jordan, Syria, Egypt, etc.)

2. target specific market segments which are less open to the international competition such as the demand for “Islamic fashion/dressing”
3. exceed the limits in distribution and marketing by considering e-commerce
4. take advantage of tourism as a mean for sales and brand positioning
5. provide customized products for non-T/C clients (example: customized printed t-shirts for brands, companies, events, etc.).

In the current situation there is no entrepreneur willing to renovate facilities or invest in the T/C manufacturing in Palestine. The process of technical obsolescence is most likely to continue till its exhaustion. Some niches will resist longer but without new investments they also shall succumb.

Only significant successes in the aforementioned strategies, in particular the integration with downstream operations in the local market, the catching of market opportunities in the markets of the region, the ability to develop an “a-territorial” business idea (e-commerce and distribution from other places than the Palestine) or the success in specific niches or segments can change the trend.

1.8 AMMAN – Jordan

JGATE: Project Partner 7

1.8.1 OUTLINE OF THE CLUSTER

a) Size

- a1. **Geographical perimeter of the cluster** (area covered and population)
Area: 700km² out of total area of 89,342 km², population 2.200,000 or 40% of total population
- a2. **Number of enterprises in the T/C industry**
142 (small workshops not included, as they are mainly non registered) (latest figures)
- a3. **Total turnover of T/C industry**
\$ 635,000,000 out of the total Jordanian turnover of about \$1.65Billion (latest figures)
- a4. **Total local employment direct T/C industry**
22,000 out of approx. 60,000 (latest figures)
- a5. **Estimation of total indirect employment** (providing material inputs or services to the T/C industry such as: logistics, software, design, chemicals, packaging and hangers, consultants, technicians, etc.)
220
- a6. **Exports**
Total: \$1.3 Billion (US and Canada); EU exports negligible.

b) Specialization

- b1. **Core activity of the cluster** (characterization)
Clothing manufacturing: casual, menswear (as in suits, pants, shirts and flat knits), Womenswear (knit and woven, lined items included). A big portion of work done is in what is called “qualified industrial zones – QIZ”. Production there is mainly done for export to the USA. One of 4 such zones is in the greater Amman municipal boundaries
- b2. **Typical or prevailing products**
Ready made garments
- b3. **Other relevant products**
Underwear done mainly to the American market
- b4. **Prevailing technology/production processes**
Relatively good level of high production machinery, including CAD/CAM and automated, specialised machinery
- b5. **Other relevant technologies/processes present in the cluster**
Washing, Printing embroidery and bounding
- b6. **Distinctive skills and/or competences of the cluster**
Medium/high quality operators, good medium scale management and available logistics infrastructure
- b7. **Driving force of the cluster**
The big independent producers, with either a producer/retailer or big exporters profiles

c) Structure and internal organization of the cluster.

c1. Given that in each cluster there is a “core” production phase (i.e.: weaving or clothing) the size/importance of other phases throughout the cluster value chain (upstream or down stream) are:

Negligible	
Minor but present	
Minor but with a key supporting role	
Almost as important as the core activity	X
All other phases put together are larger than the core activity	

c2. Within the same production phase of the value chain, the sector is: fragmented (many micro and small units); specialized (a number of smart competitors); oligopolistic (very few suppliers).

	Fragmented	Specialized	Oligopolistic
Fibre preparation	n.a.		
Spinning/yarn treatments	n.a.		
Weaving	n.a.		
Knitting		X	
Finishing		X	
Final Products		X	
Others			

d) Cluster linkages

d1. Internal linkages (business relations within companies of the cluster) are assessed as (tick as appropriate):

Very strong	
Strong	X
Rather weak	
Very weak	

d2. How much the supply chain (inputs/outputs of materials/products) is internal of the cluster?

Almost totally internal	
Significantly internal	
Significantly external	X
Almost totally external (outsourcing)	

d3. External linkages are related to:

	100%	Largely	Moderate	Negligible
Procurement of raw materials	X			
Procurement of equipment or technology	X			
Procurement of services	X			
Sales of T/C products			X	
Sales of non T/C products				X
Sales of services			X	
Others				

e) Cluster champions

- e1. Who are the companies that drive the cluster?
The big producers
- e2. For which reason can they be called “champion”?
Turnover, size of production, availability of specialised machinery, political (or economical) strength to pull through changes and improvements
- e3. Ten years ago were they the same companies?
More or less
- e4. Are champions the largest companies of the cluster?
Yes.

f) Cluster governance

f1. Who coordinates/manages the cluster?

A unique managing body	
Representative body that coordinates: JGATE, Jordan Chamber of Industry	X
Several bodies that coordinate/take care of different activities: Institutional support (governmental like JEDCO)	

f2. Cluster facilities. Please select and rate:

a. Yes Good - b. Yes Average - c. Yes Poor - d. No Absent	
Service centre	c
Quality test lab	d
Technology R&D centre	d
Vocational education/training centre (school, college, etc.)	c
Exhibition centre	c
Export consortia	d
Procurement consortia	d
Others Specify	-

1.8.2 HISTORY/EVOLUTION OF THE CLUSTER

Driving forces of the past

Independent producers with products destined for the local and Arab markets

Subsequent evolution and changes

Jordan's textile and apparel industry has benefited from numerous free trade agreements (FTAs) the country has signed as part of efforts to strengthen international cooperation and trade and increase its exports. Jordan has signed FTAs with the United States, the European Union, European Free Trade Association, the Greater Arab Free Trade Area, Morocco, Turkey, Singapore and Canada.

Both the Jordan-United States FTA and the Qualified Industrial Zone (QIZ) agreement have significantly increased Jordan's access to the U.S. market. The Jordan-United States FTA went into force in 2001 and allows Jordanian products to enter the United States duty-free. The QIZ agreement went into force in 1998 and allows Jordanian products made in designated areas and containing Israeli inputs to enter the United States duty-free and quota-free. Together, the agreements have contributed to an increase in Jordan's apparel and textile exports to the United States from US\$50 million annually before 1999 to US\$1 billion in 2010, according to a MENA Knowledge and Learning report published by the World Bank in February 2012. In 2010, the United States constituted 93% of Jordan's total apparel exports, the CBJ reports.

Current situation

According to the U.S. Department of Commerce International Trade Administration's Office of Textiles and Apparel's (OTEXA's) Nov. 5, 2012, Major Shippers Report, Jordan accounted for approximately US\$959.3 million and approximately 179.9 million square-meter equivalents of total textile and apparel imports into the United States in the year ending September 2012. Textiles and apparel produced in Jordan's QIZs accounted for approximately US\$63.1 million of those exports to the United States.

The Jordanian textile and apparel industry's U.S. customers include brands and retailers such as Gap, JCPenney, Levi Strauss & Co., Liz Claiborne, Calvin Klein, Tommy Hilfiger, Walmart, Kmart, Limited, Sears, Columbia, New York Laundry and Victoria's Secret.

Jordan has been faced with numerous issues impacting its textile and apparel industry. A decreasing natural gas supply to the country and increasing oil prices have necessitated the import of more expensive fuel to generate electricity. This energy crisis, combined with regional tensions and the global economic downturn, has contributed to a slowdown in Jordan's economic growth.

Jordan is working to improve labour conditions and human rights in the textile and apparel sector and elsewhere. In 2008, Better Work Jordan — a partnership between the International Labour Organisation and the World Bank's International Finance Corp. — was launched with the goal of improving compliance with labour standards in the apparel-manufacturing sector. The Ministry of Labour has mandated that all apparel-producing and -exporting factories participate in the program, which aims to boost the domestic workforce and to make the sector more competitive internationally by producing higher-end products.

The Jordanian government has set up a comprehensive five-year national program for an economic reform, and is receiving financial support from the International Monetary Fund, which has approved a three-year US\$2.06 billion Stand-By Arrangement to help

implement the program. The IMF recently forecast that Jordan’s gross domestic product will increase by 3% in 2012 and will continue growing for the next five years.

Other than that, Jordan has a relatively weak supporting industry, as almost all trimmings must be imported.

1.8.3 SWOT ANALYSIS

Strengths	Weaknesses
<ul style="list-style-type: none"> • Specialization in large volume productions • Favourable business conditions under certain circumstances QIZ, FTA • Presence of local entrepreneurs able to grasp the growth of Islamic fashion • Production skills for CMT • Local Entrepreneurship, skilled imported management and easy and cheap workforce • Strong industrial infrastructure. 	<ul style="list-style-type: none"> • T/C sector boosted by “artificial” conditions and circumstances • Dependence on imported management and labour • Small lots and top end items • Expensive fuel and electricity • Very little technical institutional support • Poor ability to attract local workforce • Scarcity of water (for wet technologies).
Opportunities	Threats
<ul style="list-style-type: none"> • Worldwide growth of the Islamic dressing (a cultural opportunity) • Concentrated domestic market (Amman) • Only stable country in the region (compared to Syria, Iraq, WBG and Egypt) • Supporting programs for economic and social development (UNIDO, USAid, EUAid, Gulf, etc.). 	<ul style="list-style-type: none"> • High risk as the sector is depending only upon <ul style="list-style-type: none"> - One market (USA) - One kind of production (CMT) - A narrow array of products (cheap casual and sports-wear) • Political Instability of the region • Limited domestic market.

1.8.4 CHARACTERIZATION

Distinctive features

- Volume specialists
- American specialists
- Services provider to American customers

K issue

Develop bio-diversity and become the “Bridge” industry for:

1. Western fashion and Middle-East elegance
2. EU to America

Amman needs

- markets/Products/Processes diversification
- mmpoved efficiency at smaller quantities
- market positioning (collection and brand) and market extension (local brands)
- Islamic clothing: market development and structuring.

Amman offers

- skilled management (operations); organization (HR management), efficiency for large units
- quality in manufacturing, knowledge of the local market and high sensitivity to customer behaviour changes
- presence in a growing, potential market for Islamic elegance.

1.8.5 PERSPECTIVES

On site mission confirmed the industry situation as described in the data collection document and in the SWOT analysis. Nevertheless, visits to the production premises and meetings with entrepreneurs provided significant added value for the overall comprehension of the T/C industry. It also made clear the challenges that the sector has to cope with in the next future.

There is no doubt that QIZs-FTA (USA) are the k factors that shaped the T/C manufacturing in Jordan in the past. However, new and different business models are slowly emerging, such as:

- “Own production” enterprises (local brands) targeting the middle/upper class
- Enterprises of “Islamic wear/fashion”.

These three segments of enterprises:

1. USA Export oriented (large volumes)
2. Local Brands (whose style is close to western taste/fashion)
3. Islamic fashion for ladies

are challenged by different scenarios and perspectives.

Segment 1: Export/Volume oriented

“Quantity” is what they need to express their excellence.

This segment has the features of a “commodity sector” in which the price is the key marketing lever and costs are the source of competitiveness.

Indeed, the T/C industry has been designed to provide massive volumes of low-cost items (mainly casual and sportswear) to the big American retailers and brands. Jordanian contractors (actually, CMT subcontractors) set up plants focusing on high standardization of operations, controlled supply chain flows, lean production, high productivity, and low taxation. The high productivity stems from an imported workforce from very poor countries (Bangladesh, Nepal, Sri Lanka) organized and managed by Jordanian managers or imported skilled managers, mainly from India.

Efficiently managed and organized cheap labour combined with:

1. low costs of utilities (power, fuel, water)
2. affordable shipping costs for large quantities
3. low taxation

have been providing competitiveness to Jordan versus China and other emerging countries. However, things have started to change in recent years. Legislation put more attention to social issues/responsibility (at least towards the Jordanian citizens) and costs of utilities surged to high levels. Currently, the Jordan T/C industry is less cost friendly, and competitiveness may be erased.

Volume contractors are therefore slightly modifying their business models. Now, they

focus on “high duty” (in the USA) items, such as polyester instead of cotton, which has a different taxation

(38% vs. 14%) and/or more expensive or “elaborated items”. Companies improved their level of service in quality, lead-time, etc. Additionally, they became aware that remaining as mere subcontractor is risky.

Specialized USA export companies started to evolve towards forms of co-contracting and/or are accepting smaller (although still big) lots. However, nowadays they still depend on a single market and a restricted array of products. The main strategic goal for them is to lessen their “commercial risk” by adding new markets and new product lines (specialization) to their business. They must learn how to be efficient in the production of smaller lots.

There are only few cases of enterprises supplying the European customers.

Segment 2: Local Brands of western style

Enterprises being part of this segment are (by far) of smaller size, often located outside the QIZs and the share of export, though significant, is balanced by domestic sales. In many cases these Brands add to manufacturing retailing to hold the marketing margin.

Potential demand for this positioning is limited not only because of the total amount of potential customers (urban middle-upper class) but because they are squeezed between well-established and reputed international brands.

Companies need to revise their positioning, define better their market niches and, possibly, find new markets in the region.

Segment 3: Islamic clothing (women)

The potential market is huge (worldwide: 800 million women) and fast growing.

The “rules of the game” are not yet fully established. What are the first inputs about this market of about 800 million potential customers?

The concept of “fashion” (seasonal collection) must be substituted by the concept of “occasion”; the concept of a collection (for the season) is yet to be conceived.

Islamic clothing cannot benefit from the powerful and articulated “marketing machine” which supports the western fashion industry. There is not yet a worldwide “glossy magazine” specialized in Islamic fashion and exhibitions are rare; apparently Asian Muslim countries such as Indonesia and Malaysia are more advanced in this field. The web community is larger.

The style must respect various constraints. The price of an item may vary enormously, however the “average price is much lower than the “average price” of similar items for western styled products. Materials are different (almost entirely synthetic fibres), decorations (embroideries, laces, rhinestones, etc.) are fundamental and colours are more distinct.

Enterprises operating in this segment are re-defining their business model. Management is rapidly improving as the market is improving and developing; e-commerce is widely considered as an important channel. The muslim fashion seems a very “traditional” world (particularly to Western eyes) but it may become quickly a new “Eldorado” for enterprises that are able to seize undiscovered opportunities (see: <http://jelbab.com/>).

Young entrepreneurs and young managers are interested in this business in Jordan as well as in Palestine.

2. AN OUTLINE OF THE “MEDITERRANEAN HYPER-CLUSTER”

The second part of the report focuses on an assessment of the cluster as part of an industrial system. It gives an integrate vision of the eight clusters.

The elements considered are:

- the Value Chains of the clusters
- the prevailing Business Models in the clusters
- the Market Segments, which each cluster is targeting (as priority).

Additionally, clusters have been compared according to various sets of parameters referring to their entrepreneurship:

- diversification/independence
- product specialization/diversification of markets

2.1 THE EIGHT VALUE CHAINS (OVERVIEW)

	Fiber Prep	Yarns	Fabrics	Add Value Wet/Finish	CMT Conf.	Final mkt Retail
PRATO		●	●●	●●●	●●	●
SABADELL		●	●●	●●●	●●	●
THESSALON.	●●	●	●●	●●●	●●	●●
T/C CETTEX		●	●		●●●	●
TECH/MFCPOLE				●	●●●	
ALEXANDRIA	●●	●	●	●	●●●	
BETHLEHEM				●	●●●	●
AMMAN					●●●	●

2.1.1 Cluster core activities

EU clusters are focused on capital intensive/wet and value added activities.

Two clusters, Alexandria and Thessaloniki, include fibre production (cotton). In both cases the fibre production is an important feature of the cluster.

Sabadell is probably the cluster with the most significant presence in the consumer market when including large brands like Mango (despite not being integrated in the chain cluster).

2.1.2 Extension of the value chain

Large extensions are those of Thessaloniki (from fibre to retail) and Alexandria (fibre to RMG). Also Prato and Sabadell are extended in the manufacturing part of the chain. Amman and Bethlehem are focused on CMT/RMG; the Tunisian clusters in RMG. In all clusters there are cases of branded retailers (domestic market). In Catalonia, we can also find large retailers at international level.

2.1.3 Diversification of specializations

Prato extremely diversified/specialized; Amman only slightly diversified, in between all the others.

2.2 BUSINESS MODELS (OVERVIEW)

The “business models” we refer to are those presented in the methodological part of the proposal and during the Project Kick Off Meeting held in Prato¹. They take into consideration “entrepreneurship” as the main parameter for classification (for further details refer to the above mentioned presentation).

Here, six business models are considered that go from an absence (or almost absence) very low entrepreneurship (foreign owned) to a fully expressed entrepreneurship in the case of “Brands and Own Production”.

2.2.1 Business models

	Foreign Owned	Sub-contr. For Outside	Sub-contr. For Inside	Internat. Co-contr.	Hybrids	Brands Own Prod.
PRATO		■	□	■	■	□
SABADELL		■	□	■	■	□
THESSALON.		□	■	□	■	□
T/C CETTEX	□	□		■	■	■
TECH/MFCPOLE	□	□	■	■	■	■
ALEXANDRIA	□	□			■	■
BETHLEHEM		□			■	■
AMMAN		□			■	■

1 - See TAM PPT presentation “Vision, Concept and Methods” – Kick Off Meeting 27th February 2014, also available on “Project know-how” page of www.texmedclusters.eu

2.2.2 Prevailing business models in each cluster

In Prato most of subcontracting is for local SMBrands (internal); in Amman it is totally external; in between the others.

Thessaloniki has a widespread co-contracting sector.

In all clusters there is a presence of “product brands” as well as a “seminal “ presence of domestic retail chains brands.

2.3 SEGMENTS (OVERVIEW)

	Fashion Brands	Standard Wear/priv.	Casual Pr. Labels	Home	Functional Niches	Tech. Tex.
PRATO	■	■	■	■	■	■
SABADELL	■	■	■	■	■	■
THESSALON.	■	■	■	■	■	■
T/C CETTEX	■	■	■	■	■	■
TECH/MFCPOLE	■	■	■	■	■	■
ALEXANDRIA	■	■	■	■	■	■
BETHLEHEM	■	■	■	■	■	■
AMMAN	■	■	■	■	■	■

2.3.1 Product specialization

EU clusters focus on fashion, technical niches.

Tunisians: casual/sport/functional/technical.

Alexandria, Bethlehem, and Amman: casual/sport/functional, Islamic fashion, western “fashion” is an exception.

2.3.2 Markets

EU and Tunisians clusters: Europe

Alexandria: USA and EU

Bethlehem: Israel/USA

Amman: USA.

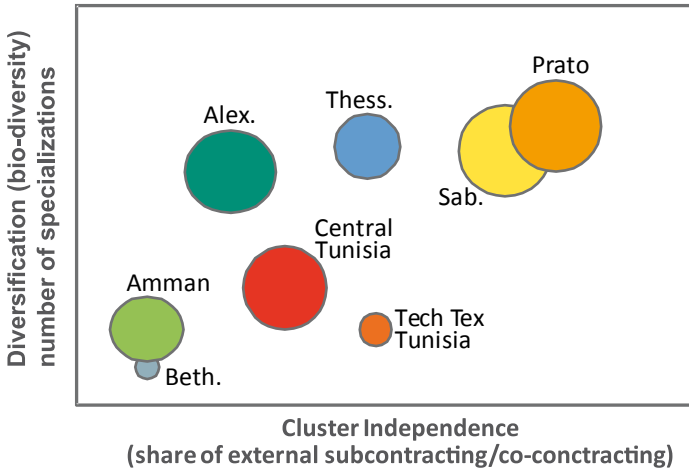
2.3.3 Positioning

Higher positions are held by Prato (fashion), Sabadell (market niches) and Thessaloniki. Amman and Bethlehem at lower levels, Tunisians in between.

2.4 ENTREPRENEURIAL POSITIONING OF THE CLUSTERS

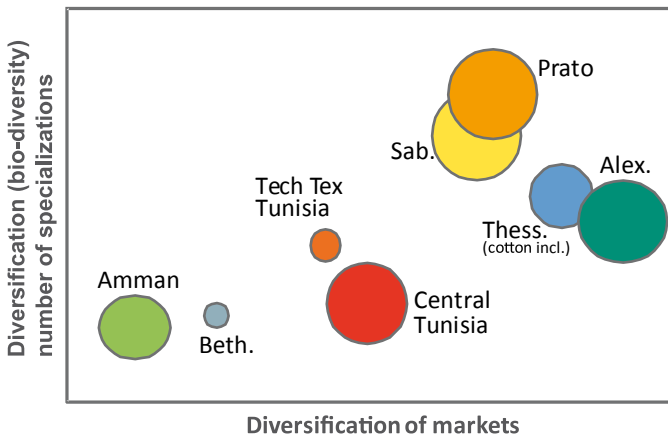
2.4.1 Independence and diversification

Higher independence (low degree of external subcontracting) and high diversification provide high resilience (independence= ability to take decision; diversification = low risk).



2.4.2 Specialization and diversification

Diversification of products, technologies and markets should go together with “specialization” in order to create defensible conditions; diversification without specialization is only mere adaptation to produce commodities.



2.6 SWOT ANALYSIS OF THE “MEDITERRANEAN HYPER-CLUSTER”

Strengths	Weaknesses
<ul style="list-style-type: none"> • Full coverage of the whole T/C value chain. • Many and diversified excellences: <ul style="list-style-type: none"> - Cotton production - Fashion - Manufacturing - Brand Positioning - Retail - Entrepreneurship. 	<ul style="list-style-type: none"> • Conflicting interests • Weak production of MMF • Weaker knowledge (compared to North EU and other advanced countries) on Technical Textile and MMF • Unbalanced and overall “low” effort for R&D in the scientific and technical fields. • Average small size of enterprises (with exceptions which behave independently of the cluster) • Widespread subcontracting.
Opportunities	Threats
<ul style="list-style-type: none"> • A global re-balancing of cost-competitiveness among countries • The economic development of nearby countries (Africa and other Asian countries) • The development of the “Islamic fashion” • The enhancement of cooperation and integration among Mediterranean partners. 	<ul style="list-style-type: none"> • Instability of the Middle East • Political and social changes in the South Mediterranean Rim • The asymmetric position of Turkey • Economic depression and adverse financial constrains in the Med EU countries (austerity, fiscal compact) • Likely inability to keep pace on innovation in comparison with other competitors.



3. CONCLUSIONS AND IDENTIFICATION OF POTENTIAL AREAS OF Cross-border COOPERATION

3.1 CONCLUSIONS

Today a Mediterranean Hyper-cluster does not exist:

- low integration, little cooperation in building up the value chains
- the subcontracting/delocalization model prevails (EU/Tunisia and Egypt)
- different business models
- different target markets
- different strategies.

The attempt to build up a T/C “system” (or Hyper-cluster) in the Mediterranean basin is coherent with the aim of enhancing the competitiveness and the profitability of the local industry which are heavily threatened either by very aggressive “cost” competitors as well as by the ever growing power of large retailers and, finally, by new challenges coming from technical innovation.

In order to foster the building up of a T/C Mediterranean system, at the Wrap Up Seminar held in Thessaloniki on the 27th- 28th of June the representative of the eight clusters chose a strategy based on common operational actions:

1. penetrate new markets
2. set up new (renewed) marketing assets (such as: exhibition, common brands)
3. develop and sell new products
4. implement/share new process (management/organization)
5. implement common assets/operations/methodologies for energy, environment, training, etc.

For the implementation of these actions, the PPs selected a set of areas of partnership (cross-border cooperation), which is the actual outcome of WP4.

3.2 IDENTIFICATION OF POTENTIAL AREAS OF CROSS-BORDER COOPERATION

The assessment of the eight clusters and the general evaluation of the Mediterranean Hyper-cluster were the main inputs for the discussion of the Wrap Up Seminar. The seminar attained the goal of identifying potentially fruitful areas of cross-border cooperation. They are listed in the following table.

Code	Area of partnership	Interest expressed	Coord. partner
A1.	Partnership for EU funded programs In INNOVATION	MFCPOLE CETTEX	MFCPOLE
A2.	Finishing/water treatment and recycling	MFCPOLE Unione Industriale Pratese CETTEX	MFCPOLE CETTEX (not wet finishing and sustainability) Unione Industriale Pratese as best practise
A3.	Technical textiles	MFCPOLE	MFCPOLE
A4.	Cotton improvement technocotton-organic-recycled	CETTEX SEPEE	CETTEX for recycled cotton SEPEE for improvement
B5.	Access the USA/CND markets	JGATE CETTEX	JGATE
B6.	International development (Gulf, Russia, China, Latin America)	TEXFOR SEPEE	TEXFOR
B7.	Buffer warehouse in strategic markets	TEXFOR	TEXFOR
C8.	Islamic fashion	JGATE CETTEX	JGATE
C9.	Style and product performance (fashion for functional textiles)	TEXFOR	TEXFOR
C10.	Development/support of local brands (Including brands of islamic fashion)	UPTI CETTEX SEPEE	UPTI
D11.	(Inform for) Co-contracting	SEPEE	SEPEE
D12.	E-commerce	SEPEE	SEPEE
E14.	Young entrepreneurs	AlexCham CETTEX	AlexCham
E15.	HR Developments (designers, technicians)	AlexCham CETTEX	AlexCham
F16.	Stock (leftovers) management	Unione Industriale Pratese CETTEX	Unione Industriale Pratese

These areas of partnerships are the actual inputs for WP5 and WP6.

Mediterranean Partnership for Global Competitiveness



Partners

Applicant



Partner 1



Partner 2



Partner 3



Partner 4



Partner 5



Partner 6



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Partner 7

