

IN-DEPTH ASSESSMENT OF THE SITUATION OF THE T&C SECTOR IN THE EU AND PROSPECTS

TASK 5: ASSESS WHAT TYPE OF TRAINING HAS BEEN PROVIDED TO TEXTILE AND CLOTHING WORKERS IN 3 EU REGIONS AND HOW THIS TRAINING HAS BEEN ORGANISED AND FUNDED. IDENTIFY BEST PRACTICES THAT COULD BE TRANSFERRED TO OTHER REGIONS.

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LIST OF ABBREVIATIONS

AFPI	Association de formation professionnelle de l'Industrie <i>Association of Professional Training in Industry</i>
BFC	British Fashion Council
BIBB	Bundesinstitut für Berufsbildung
BMBF	Federal Ministry of Education and Research
BTS	Brevet Technicien Supérieur Advanced Technical Degree
CAD	Computer Aided Design
CAM	Computer Aided Design Manufacturing
CAP	Contrat d'Aptitude Professionnelle Professional Ability Degree
CCI	Chambre de Commerce et d'Industrie <i>Regional Chamber of Commerce</i>
CFE	Centre for Fashion Enterprise
CNAM	Conservatoire des Arts et Métiers <i>French Institutions of long-standing and deep scientific tradition</i>
CSM	Central St Martins
CVET	Continuing Vocational Education and Training
CWF	Children Worldwide Fashion
ECTS	European Credit Transfer System
ENSAIT	Ecole Nationale Supérieure des Arts et Industries <i>National School of Arts and Industries</i>
ESF	European Social Fund
ESSCA	Ecole Supérieure de Commerce d'Angers <i>Angers Business School</i>
Euratex	The European Apparel and Textile Business Association
FAD	Fashion Awareness Direct
FSE - THC	Federation of European Workers Unions for Textile and Clothing
GFW	Graduate Fashion Week
HR	Ressources humaines <i>Human Resources</i>
ICT	Information and Communication Technology
IFAI	Advanced Textiles Europe
IFTH	Institut Français du Textile Habillement <i>French Institute of Textile and Clothing</i>
IG Metall	The Labour Union of metal industry

IKV	Institute of Plastics and Processing
ITA	Institute of Technical Textile
ITA of RWTH Aachen	Institute for Technical Textiles
ITMA	International Association of Textile Machinery Manufacturers
IVET	Initial Vocational Education and Training
JMINF	Jakob Müller Institute of Narrow Fabric
KBBE	Knowledge Based Bio Economy
KIA	Kooperative Ingenieurausbildung
KOPF	Textilien and Bekleidung die Zukunft <i>Future Textile and Apparel</i>
LA	Local Authorities
LDA	London Development Agency
LCF	London College of Fashion
NESS	National Employment and Skill Survey
NESTA	National Endowment for Science, Technology and Arts
NRW	Nordrhein-Westfalen <i>North Rhine Westphalia</i>
NVQ	National Vocational Qualifications
OPCA	Organisme Paritaire Collecteur Agréé <i>Approved joint collecting organisation</i>
OWL	Ostwestfalen Lippe
PhD	Docteur en philosophie <i>Philosophiae Doctor</i>
PLM	Product Lifecycle Management
RWTH	Rheinisch - Westfälische Technical University
SFTI	Saxon Textile Research Institute in Chemintz
SME	Small and Medium Enterprise
SSC	Sector Skills Council
TAW	Technical Academy Wuppertal
TC	Textile and Clothing
UK CES	UK Commission for Employment and Skills
UKFT	UK Fashion and Textile Employers' Association
VET	Vocational Education and Training
WWSPI	Women and Work Sector Pathways Initiative
ZiTex	Zukunft Initiative Textil <i>Initiative for the Future of Textiles</i>

The development of Vocational Education and Training (VET) is a crucial condition to the very existence of a textile and clothing industry in the EU. Upgrading skills at all levels allows companies to remain competitive on the global stage despite very high labour costs. In the sector, many factors prevent this necessary upgrading in most Member States. For what concerns continuing VET, major negative factors are limited collaboration between stakeholders, low level of initial education among workers and little interest among employers.

For what regards higher education, critical size is lacking for most institutions, which prevents or limits necessary international cooperation schemes, promotional activities and the development of state-of-the-art programmes with excellence equipment. Also a severe lack of transparency towards entrants and businesses is observed. To analyse the situation and identify best practices that could be disseminated to other parts of the EU, the present report chooses to focus on three regions in Western Europe. In each of them, VET focuses on a specific key areas of EU competitiveness and quite successful.

London has undoubtedly achieved and comforted a leadership in fashion design over the last decade, in correlation with a recognised leadership in fashion design education. Determining elements of this success story can be listed as follows:

- the excellence level reached by universities, merged into one, the largest on the world scene, benefiting from their huge exposure and international reputation,
- the influential promotion and dissemination of the dream to become a fashion designer,
- the fairly low cost of studies,
- the extremely professional counselling and coaching services provided to fashion designers by VET players in connection with many large international retailers and other stakeholders

This largely accounts for the world class success of fashion designers. Another element is to be highlighted to explain the efficient collaboration which is now developing between manufacturing industry and VET: in this area Skillset, the Textile and Clothing (TC) sector skills council (SSC) is a hub that materializes relationships between skill supplies and companies' needs.

Even though London enjoys a unique situation in the EU due to its multi-cultural society and the benefit of the English language, some regional best practices could be disseminated to other areas, in particular the idea of helping VET players achieve a higher level of economies of scale and the concept of SSCs, but also the efficient promotional activities targeted at secondary school pupils, the level of international cooperation between higher VET players, the very large diversification and specialisation of courses taught, and the coaching of designers till their launch.

North Rhine Westphalia (NRW) was selected for technical textile education, which strives to provide adequately skilled students to the strong local industry and to businesses in many parts of EU and further. The elements to be taken into account here are:

- the widely applied use of dual system (high level apprenticeship)
- a direct involvement of industry into schools and universities
- the opening of textile programmes to other disciplines, corresponding to a new focus for engineering, i.e. customers satisfaction,
- the opening to innovation and research via manifold interactions between business, students and researchers,
- the level of excellence achieved by large, efficient universities.

In France Ouest, the third region covered, industry has had to up skill dramatically in two directions; upgrading quality and extending the traditional scope of manufacturing to offer new services to clients - grading, model making, patterning, prototyping, etc. - is the first direction. The second direction followed is accelerating production process to offer a flexible manufacturing base. The challenge has been largely won thanks to several factors:

- the existence of a tax on companies that urges them to spend on training at little incremental costs when they most need it,
- the anticipation and concerted Continuing VET (CVET) management provided by Forthac, the French equivalent of a SSC in the UK, with a trilateral board, including State, employers and workers representatives, and its regional antenna,
- the development of Initial VET (IVET) and CVET programmes in concert with industry requirements thanks to a direct involvement of business executives in the education system,
- the individualised approach to CVET which takes into account each company's strategy and each worker's needs for qualification and training and certifies the level of skills obtained.

All three case studies advocate for converging needs and solutions to boost IVET and CVET in the EU clothing and textile industry. The most influential elements in each case are described above. Other should not be overlooked like the huge increase of transparency needed to promote technological careers and studies, somewhat to the detriment of the dream part attached to fashion design and the necessity to develop excellence teachings via collaborative work between the best institutions.

1. INTRODUCTION

The EU textile and clothing (TC) industry has experienced thorough and painful restructuring since several decades, following the downsizing many other manufacturing sectors have also been experiencing all over the EU. This topic is covered in-depth in Task 4 Restructuring. Efforts have been made by all stakeholders in many directions to help companies fight for survival in harder and harder competitive conditions. In the most mature countries of Europe, a lot of work has been done to develop TC education and training, in line with EU Lisbon's strategy to promote the EU as the leading knowledge-based economy.

Since the Bologna Declaration of 1999 and the start of the Copenhagen Process in 2002, it has been gradually acknowledged in TC sector that EU competitiveness relies on the anticipation and adaptation of workforce and qualifications to needs corresponding to new or reviewed strategies for the European industries. These strategies can be defined by the following parameters:

- less – and eventually no - cost competition on lower price markets
- more flexible and adaptable firms
- more cooperation and networking to help SMEs reach a critical operating mass
- higher value added positioning and production whatever the field
- a strengthened leadership in fashion, aesthetics, luxury and creativity.

To fulfil these objectives present qualifications in the EU have to be enlarged and upgraded along various lines. Cedefop forecasts for 2020 that 50% of EU future jobs would be new and would require whatever the job a higher qualification level¹. In parallel the report anticipates that 12 millions of today's low qualification jobs will be lost by that time. The textile and clothing industry is likely to be an important contributor to this total if current trends are extrapolated.

However the Commission 2012 Roadmaps state “a growing evidence on skills mismatches and labour market imbalances in Europe: increasing unemployment rates, unfulfilled job vacancies, and inadequate use of skills at work. Skill mismatch has negative consequences in terms of less satisfied workers, lower

¹ Skill Needs in Europe Focus on 2020 and Expert Group Report New Skills for New Jobs : Action Now, Cedefop 2010

productivity at the enterprise level and may lead to a loss of competitiveness in general(...).There is the need to provide a coherent narrative, preliminary to a strategic and integrated governance model”.

In the textile and clothing industry skills have to grow in many areas. In this sector European future competitiveness requires a reinforcement of skills in the areas of creativeness, innovativeness, design and fashion, entrepreneurship, but also information and communication techniques, export capabilities, environment and sustainability, new technologies and equipment. Companies and workers have to become more flexible and capable of interacting via networks and clusters integrating public and private partnerships². In parallel with workers’ up skilling, there is also a need for managements of SMEs to acquire better strategic competencies and forward-looking attitudes.

These crucial needs have gradually appeared and become more acute as years have passed since about 2 decades. Industry reacted and the education and training systems have begun to adapt to the new competitive conditions of Europe. VET³ is clearly perceived by most stakeholders as a competitive key to ensure that a high-skilled motivated mobile workforce allows the industry to face global competition challenges and to successfully seize most promising opportunities.

But the TC sector’s transformation is particularly hard to achieve and the present recession tends to worsen the European situation. An ageing workforce with a majority of low qualifications and very little multiskilling, the high risk of losing technical knowhow with retiring cohorts, constitute a major structural difficulty for the sector. Another is geography with specialized areas offering little existing reconversion possibilities for workers and the predominance of a female not mobile workforce. Another factor is that industrial downsizing negatively impacts the education and training local capacities and that in many areas vocational schools or classes have closed or are on the verge of shutting down. In addition to these elements the sector suffers in many Member States of a negative image – with the exception of fashion design and luxury - that deters promising youth from joining it and has to be fought and corrected. Moreover, the motivations for up-skilling are particularly low⁴ be it among workers or employers, which makes it all the harder to upgrade the average qualifications of the workforce. Finally, in many regions with a predominance of small SMEs the industry sees training and education as a public service, which would demand strong collective arrangements that do not exist. The present recession tends to aggravate these weaknesses as the uncertainty and anxiety regarding the future work as a strong deterrent against investing in training, be it for oneself as a worker or for one’s employees.

² A key factor in the very efficient innovation system at work in the USA (L’Innovation au Coeur de la Nouvelle Croissance, JH Lorenzi, A Villemeur, Economica 2009)

³ In the present report TC vocational education and training (VET) is understood as the education that prepares for jobs at various levels in the textile, clothing and fashion industries. Part of this education is offered at university level or equivalent (higher VET).

⁴ Same as 1. Finding corroborated by Cedefop recommendations February 2010

The present report provides an in-depth analysis of what has been done in terms of VET developments over the last decade in three key TC regions in Europe. It investigates industry 's attitudes and practices, education and training changes, and eventually tries to identify how mismatches between skills supply and demand have been addressed there and could possibly be addressed in the future in other regions of Europe.

1.1. METHODOLOGICAL ASPECTS

The methodology followed included an initial desk research at the EU level to analyze VET situation in the TC sector. Then three regions have been selected to reflect determining competitive factors of the EU: Greater London area, North-Rhine Westphalia and France Ouest area. All three can be considered as emblematic of EU challenges for tomorrow's VET strategy, as they have already started to implement future oriented schemes and structures and can be considered as three flagships of European clothing and textile VET.

The selection was based on the logic that there are 3 key areas in which competencies have to be enhanced and cultivated to ensure the future of the EU textile and clothing industry:

- design, and designers capability to turn ideas into successful launches of European-made products onto the international markets (London)
- technology, and the engineering of innovative items for consumers and industries (NRW)
- garment manufacturing, for flexible and/or highly creative apparel and textile productions (Ouest).

This selection was also intended to provide a comprehensive coverage of the different market segments and situations of the EU industry.

- The different branches of the industry: clothing ready-to-wear and household items (London and Ouest), technical textiles and industrial uses (NRW), Couture and luxury industries (Ouest and London).
- The different strategic positions opened for EU competitiveness: fashion and flexibility (London), technological leadership (NRW), brands and exclusivity (Ouest).
- The different education routes within TC sector with a focus on art and fashion education in London, engineering studies in NRW and various levels of undergraduate and higher courses in the Ouest of France.

In each region, interviews have been organised with local stakeholders, business executives, VET providers, local authorities, and organisations which actually serve the TC industry. In total approximately 70 professionals have been interviewed for the present report, and their views consolidated in the following pages.

1.2. EUROPEAN SITUATION AND CURRENT DEVELOPMENTS

Throughout the economic sectors in Europe the objectives set by the European Council in March 2003 have not been met yet. These were measured with several indicators like in particular an EU average rate of no more than 10% early school leavers; at least 85% of 22 year-olds in the EU having completed upper secondary education by 2010; the EU average level of participation in lifelong learning being at least 12.5% of the adult working age population (25 to 64 age group). However much progress has been made along those lines and in many areas and sectors they are on their way to be reached. Even though statistics are not fine enough to measure the TC situation in the 3 regions covered here, it is most likely that they are clearly above average in the EU benchmark.

VET is considered as a key for the future of EU economy, but this key has an insufficient appeal to the vast majority of youth possibly concerned. Cedefop observes, despite significant discrepancies between Member States, a general decrease in the number of vocational students in upper secondary education: roughly by 10 percentage points over the last decade or so, representing a drop from 60 to 50% of all corresponding students. In the conclusion of its Modernising VET 2009 5th report, Cedefop considers VET attractiveness as being one of the major levers to promote VET and lifelong learning in the EU: “Attractiveness in its strong sense can be seen as a cumulative process. People use the VET system if it is attractive but, in turn, using it increases its attractiveness. This results from the fact that the VET system will be of more use to a stakeholder when many other partners also use the system.—Ultimately, VET attractiveness critically depends on the width of the range of stakeholders involved, and on the extent to which they are involved.” The initiation of this virtuous circle depends on a critical size to be reached for VET in general in Europe but also at regional industry levels. This is the condition to break the attractiveness lock-in that prevents VET from developing.

The principles of European VET attractiveness policy were set in the Helsinki and Maastricht communiqués and can be summarised in four words: individualization (taking into account personal preferences and aspirations), opportunities (informing persons about the possibilities that will be open to them thanks to the training done), governance (rational offer with wide range and few overlaps, involvement of business players and local embeddedness) and image. Cedefop reports acknowledge that a lot of progress has been done throughout the EU but observes a lack of achievement in providing VET students with individual guidance and support, increasing their labour-market opportunities, involving social groups, teachers and students in VET governance, and taking actions to improve the image of VET.

The survey conducted for the present report provides evidence among companies that strong efforts have been made in this direction⁵ : over the last decade 42 to 47% of them have increased the proportion of skilled workers, technicians and staff with a university degree. Moreover 80% of them indicate that competence development is the most important issue in their human resource strategies.

⁵ See Figure 13 in Task 1

In the following pages the case studies of the 3 regions selected display that all these challenges have been taken up and largely won.

1.3. DIFFICULTIES WITH CLOTHING AND TEXTILE VET IN EUROPE

Statistical reports and general surveys do not provide any evaluation of VET development in the TC sector, but some works shed light on existing discrepancies between skill needs and skills supply.

- Numerical imbalances

In line with the conclusions elaborated by the Textile High Level Group in 2004 and 2006, the European Technological Platform for the Future of Textile and Clothing and its Education Horizontal Task Group have analysed the sectoral situation and its outlook. Their work is based on several inputs, especially upon research made by Autex⁶. In its Education Strategy Paper⁷, the Task Group reports an existing shortage in the present number of higher education students. Around 10,000 students are currently studying those subjects each year, from undergraduate to doctoral levels. The total number is not sufficient and it also hides a significant deficit in technology fields, be it for textile or clothing. Based on an assessment of 250,000 staff with a higher education presently working in the TC sector in Europe, TC education lies far below the necessary replacement rate evaluated by the Group, which would require approximately four times as many students as there are now. The projected situation is evidently much worse if one takes into account the future needs for more qualified people evidenced in all Cedefop anticipative works. The situation is clearly perceptible to education players, as shown in the survey results⁸ presented in this report.

More than 50% of TC technology students going to Universities or other higher education institutes are currently studying in 3 EU Member States: Germany, the UK and the Netherlands, whereas in Italy, France and the new Member States, cohorts have shrunk and the number of students is now by far below a minimum replacement rate.

With few exceptions, the image of technical careers has not been for long, and still is, not very alluring to promising entrants. It is a known fact that wage levels in the TC industry are generally below those in other industry sectors and that career developments are very often hindered by the family structure of many industrial companies. The Task Group considers that to keep their attraction power to potential entrants, most higher education institutes have had to de-specialise their contents from pure TC technology to address issues like design, culture, and the whole range of management topics. One consequence is an ever increasing proportion of women among the students and hence among the TC

⁶ The Network of higher technical education providers in Europe for textile and clothing, created in 1994 with now 33 members from Europe, the USA, China etc.

⁷ Prepared by authors Wardman and Scheffer

⁸ See Figure 44 in Task 1

workforce. It is now assumed that specific TC subjects only represent 30% of all ECTS⁹ delivered by vocational higher education institutions in the EU, such as universities, engineering or design schools.

In textile technology nominal numbers of students probably have to be corrected and raised as courses and curricula are increasingly interwoven with chemical, fibres, mechanical and other engineering disciplines. However as these also see their recruitment declining the textile enrolment deficit is not likely to be smoothed out thanks to them.

- **Curricula to be revised**

The numerical imbalance described above is also detrimental to fashion design students. Many of them find themselves enrolled in studies which do not lead to the positions dreamt for but to jobs for which they are not adequately equipped.

For example in the UK it is very remarkable that only 29% of fashion design students find work as “fashion designers and related”¹⁰, a description already broader than “fashion designer”. The others start working as assistants in sales, administration, logistics, sourcing, marketing and other departments. Due to the high level of professionalism in fashion design education and training in the UK, one can assume that curricula rather well correspond to the future needs of their students and trainees. In most other areas of Europe, the dream is probably more deceptive as youth find themselves at the end of their studies in a difficult position: neither properly trained for existing jobs, nor good enough in the world class competition for fashion designers.

For what concern technological studies the situation is different: to some extent VET providers are sticking to visions of their activity which are disappearing. Engineers and technicians should be provided with skills enabling them to find solutions to wide-spanning problems and challenges, that involve a lot of creativity and the openness to other fields of knowledge, particularly within the engineering field but not only. For example as everyone in middle or top management positions within a firm, engineers and technicians have to take into account the customer perspective and understand or anticipate the requests from designers, sales staff and finance administration. In the field of technical textiles it is particularly true that technologists need to focus on the needs of the market they serve rather than try to apply state of the art textile technologies like spinning and weaving. Many institutions have integrated these topics and more into their curricula, which has also proved a way to combat students’ unwillingness to enter narrow-focused technical careers.

⁹ European Credit Transfer System

¹⁰ See Figure 1.1 in Appendix

- **Reluctance to Continuing VET**

For which regards workers' training the situation is difficult to assess at European levels due to the huge fragmentation of systems and stakeholders. The greatest handicap of continuing vocational education and training (CVET) in the TC industry probably is the low level of education most workers have at the start of their career. Having learnt their present skills by "sitting with Nelly"¹¹, they have no idea, or at best have an understated idea, of their working value and do not believe they can reach higher levels of skilling. It used to be the common situation observed in the most modern factories in Western Europe 15 years ago. The problem has alleviated in the West but remains crucial in many areas especially the most recent Member States. Training remains frightening, and workers' attitude is not dissimilar to what is mentioned in the France Ouest case, when ten years ago training announcements meant that a downsizing scheme was imminent and that workers had to be sorted out.

Despite undoubted progress in most places passive reluctance remains towards CVET. Employers tend to consider it very often as a waste of time for workers, that it opens the door to higher wage demands, that workers will leave once trained, etc. On the side of employees, fear of not succeeding prevails and of appearing as a low performer, and that anyway it is a waste of time too. Moreover since IFM work in the mid-1990s it has been evidenced that training may have a social cost for workers. Factory workers with repetitive tasks tend to balance their lack of interest with a high involvement in socialisation. As such one of IFM interview in the early 2000s demonstrated that when a sewing machinist is integrated – up-skilling – in a small production group (6 workers or so to make a garment completely) she usually loses her friends who go on working in production lines. Nevertheless the change is usually highly beneficial, often financially, mostly in terms of occupational interest and heightened self-esteem.

¹¹ Learning by doing and watching how experienced workers do

2. LONDON

2.1 RATIONALE OF THE CASE

London area (Inner London and Outer London regions) has been selected for analysis because of the level of excellence and of success of their fashion design education and training practices. London is acknowledged as the leading area in Europe for the education and training of successful designers for textiles, clothing and accessories. Over the last 10 years a number of now well-known designers have emerged or blossomed and irrigated the whole of European fashion and luxury industries with international exposure and renewed desirability.

With a cosmopolitan population, open to the wildest innovations, and an inspiring street fashion, with 8 schools providing fashion education and several thousands of fashion graduates passing their final exams each year, London is the foremost place in the UK, and for many aspects in Europe, where the continuation of European leadership in design is currently prepared.

Over the last decade London has become one of the four leading fashion places in the world and the one most looked after for future talents, be it by top end luxury houses or by mass market fashion retailers. These pages analyse how London players have chosen to educate, train, promote and place in companies the professionals they need for fashion design and all related issues.

2.2 THE INDUSTRY

2.2.1 PRESENT SITUATION OF THE UK AND LONDON TEXTILE AND CLOTHING INDUSTRIES

With little less than 5% of the total EU 27 textile and clothing employment, but almost 9 %¹² of the wages and salaries paid to the workforce in the EU, the UK industry remains a major economy of the sector. At the UK level textile manufacturing accounts for two thirds of TC total and commands much higher wages, but in London the proportions are reversed: two thirds of employment concern the clothing industry and the related wages are similar or even a little higher than the London textile counterparts. Sizes of units are also very similar in London between textile and clothing manufacturers whereas in the UK textile units are 60% larger than clothing ones.

¹² Unless otherwise stated, data used in this chapter are IFM estimates and calculations, based on Euratex and Eurostat data 2009. All data can be found in Appendix, Tables 1.1 and 1.2.

London fashion industry is important to the London economy and its weight on the local manufacturing sector is almost four times the UK average. It is made of small units (5 persons employed) working in several garment districts for the numerous retailers and brands that drive London fashion and promote it throughout the world. Those players, as well as all other clothing wholesalers and agents also offer design and technical jobs whose numbers are not included in the statistics regarding the TC manufacturing industry. According to a UK Commission for Skills (UKCES) labour force survey¹³ the total clothing employment would thus represent approximately 124,000 persons.

The Greater London (London) area represents 17% of the UK clothing industry employment and is the third single TC area in the UK. It comes first for wholesaling positions and outstandingly represents more than half of fashion design employment¹⁴.

2.2.2 DEVELOPMENT OF THE UK CLOTHING AND TEXTILE INDUSTRY OVER THE LAST DECADE

Over the last decade the British clothing and textile industry has lost¹⁵ a large number of manufacturing jobs and units to the benefit of outward processing areas namely in Asia. The clothing industry has been particularly hit with a drop of 78% in job numbers between 1998 and 2007. Manufacturing units have shrunk from 18 employees down to 8, in the same time as their numbers were falling by half.

Despite this fragmentation process, over the same period of time, job qualification average has grown up, as evidenced below, by an observed increase in wage of 37%, i.e. an approximate net growth of 13%¹⁶. This can be explained by the fact that the largest part of the lay-offs concerned factory operatives, while technologists and technicians were made redundant in manufacturing units, but could find opportunities to use their skills in new jobs relating to foreign sourcing management and global production supervision. However this source of skills has gradually dried up as these technical staff were reaching retirement age.

¹³ http://www.skillset.org/uploads/pdf/asset_14617.pdf?2

¹⁴ Source: Skillset and other interviews.

¹⁵ The available series of comparable data (see in Appendix Tables 1.1 and 1.2) is 1988-2007 due to classification changes occurred at the end of the period. 2008 figures should be compared with much care to former data.

¹⁶ Computed by removing the 10% increase the British £ has experienced to the Euro over the same years and the 12.7% inflation rate in the UK for the period.

Over the decade London clothing industry has also terribly shrunk (-66%)¹⁷ though less than the average of the UK: approximately 5,000 persons are now employed in manufacturing units. If retail and other sectors are taken into account, one can estimate that figures would approximately double.

As outward processing was soaring, the decade has been marked, throughout the UK but even more strongly in London, by a focus shift from making to designing. It has also been marked by the extremely powerful rising of the fast fashion market, with a pressure on companies towards shorter and shorter design-production-delivery sequences so that 15 days lead times are no exceptions today. It is worth noting that all price segments are concerned, not at all the lower price tags only.

As a result of these developments the industry is now focused upon two types of activities:

- The pre-industrial and marketing activities related to the garments sourced from Asia and other areas, on the basis of rather long production cycles and rather classical or basic styles
- The whole value-chain for fast fashion items.

However, since the late 2000s the relative competitiveness of the British manufacturing industry has improved as Asian wages were soaring. Even though it is not evidenced yet in industry statistics, there is a common feeling that orders are consistently picking up and that demand for UK-made apparel is on the rise.

It should also be noted that the decrease of TC manufacturing base over the last decades has weakened the power of workers' unions in the sectoral social dialogue. Manufacturing units are smaller, many migrant non-unionised workers from the rest of the EU have replaced local youths in the least paid positions, white collars have become more numerous in the workforce, and a number of positions have been created in the grey economy: as a consequence fewer and fewer workers join the Unions. Representation of workers has gradually moved to trans-sectoral issues covered for example at the level of UKCES. TC questions have correlatively been increasingly delegated to sectoral bodies with a lower Unions' involvement and with Employers being at the forefront of TC negotiations and discussions with most other partners.

2.2.3 SKILLS DEMANDED BY THE INDUSTRY

Industry developments have greatly impacted the fashion design function: since a decade or so, designers have been required to be creative, as well as to understand consumers, be aware and supportive of the commercial and supply-chain functions in the company, and have a good knowledge of

¹⁷ Same as above: the available series of comparable data is 1988-2007 due to classification changes occurred at the end of the period. 2008 figures should be compared with much care to former data. See Tables 1.1 and 1.2 in Appendix.

clothing technology, i.e. be able to change a good design into a quality garment. According to the type of company, and their different business models, two broad types of designers are needed:

- those with a dominant artistic dimension, able to deliver outstanding creative ideas and fashion items onto the world stage;
- and those who are able to fit in companies and bring them a variety of skills ranging from technology to marketing, enabling them to work successfully with local or other manufacturers.

This dichotomy is not easy to grasp within the cohorts of designers at work, and respective numbers are hard to measure. However one can observe that no skill gaps are expressed by the industry for what concerns the former, while it deplores certain damageable mismatches as to the latter.

2.3 THE EDUCATION SYSTEM

2.3.1 VET GENERAL FRAMEWORK

In the UK, initial VET is generally funded through the local authorities (LA) or directly paid to the education institutions themselves. They are supported in developing and delivering their provision for work-related learning by an infrastructure of national, regional and local education business link organisations. These organisations encourage employers in their local areas to work with schools by promoting the business benefits to be gained. Government funding to support education business link activity is provided through consortia of education business link organisations working under contract to the local funding authorities.

The present situation is on the verge of totally changing for which regards VET funding. Overall, there will be a rebalancing of investment from public spending towards greater contributions from individuals and employers.

VET in higher education in England will also be impacted by plans to allow Universities to set fees between £3.000 and £9.000 per annum, backed by Government loans to students which become repayable after graduation once a certain level of earnings has been reached.

Apprenticeship is managed by the National Apprenticeship Service which is charged to finance and ensure quality of national programmes through its network of training providers. Apprenticeships in England are managed through a national programme, currently with a one million pounds government investment.

More detail is provided on this general framework in Appendix 1.

2.3.2 A highly productive area for talented fashion designers

It is relatively recent that London has become a key area in Europe for the education and training of successful designers for textiles, clothing and accessories. Over the last 10 years a number of very successful designers have emerged or blossomed, like Christopher Bailey (Burberry) from the Royal College of Arts and Design, Luella Bartley, the fashion editor and designer, from Central St Martins, Stella McCartney (Chloé), from St Martins too, Matthew Williamson or Gareth Pugh, all leading designers today on the international stage, but also younger ones like Ann-Sofie Back, Jens Laugensen or Jane Carr, who are expected to become tomorrow's stars.

Like no other city in Europe, London provides fashion education with the benefits of a cosmopolitan population, energising and multicultural, and open to the wildest innovations, with an inspiring street fashion.

Until the mid-1990s the image of UK fashion was limited to the very classical collections of traditional firms and to the wild designs of Camden Market fringe designers. More generally, the creative sector was seen as of marginal importance to the UK economy. The perception gradually changed as creative value added started to be recognised throughout Western Europe as a key competitive asset and as creative projects were evidenced as successful social inclusion instruments. Since then the United Kingdom has restructured its national cultural policies to include the creative industries. This shift away from a limited view of culture, encompassing the traditional classical arts, to a larger view of the creative economic sector and to the need of stimulating a thriving creative industries sector was very instrumental in the building of the image of "Creative Britain". As such, fashion design, among other creative skills, was strongly supported and London benefited from this to gradually become today's talent capital.

By the mid-2000s the BBC had launched a series of fashion- and fashion industry-related programmes which helped raise a wide public awareness of the sector and its careers. The London Fashion Week, launched in 1984, had begun to be recognised as one of the Big Four trade shows with its counterparts in Paris, Milan and New York. Since 10 years fashion has been brought to the limelight and has become a key component of UK and London today's culture; thanks to TV or radio contests, documentaries, fictions, a national strong emotional investment in fashion design has permeated the whole British society. Remarkably this popular investment has been enhanced by the cultivated pride in a British style, British quality and British image that has strengthened love for insular fashion and fashion design. Politics of the past decade have also fostered the phenomenon¹⁸: creative skills were valued, promoted

¹⁸ UK Government has been consistently promoting and celebrating British fashion design successes over the last decade. The Department of Culture Media and Sports list Fashion Design as one of the Creative Industries – these industries have been recognised as high-growth sector of UK economy; UK Trade and Investment are supporting British fashion designers to increase their global reach. A key investment in 2007 by the London Development

and supported as major edges in global competition so that a common belief now is that 3 years in design is as good as 3 in any other field of education.

As a consequence the education system has been encouraged to focus more on design and designers and has succeeded, through the iconic images projected by its alumni in becoming the most sought after place in the world to study fashion design. London attracts young students from the whole country and from abroad, and the proportion of non-UK non –EU students is approximately 40 %. Of course the number of designers taught in London is out of proportion with the number of jobs available in the UK. According to datasets supplied by the Higher Education Statistical Authority, at the end of the 2000s London higher VET institutions were training cohorts of 3,200 fashion design students, i.e. 34% of UK 40 institutions. This figure is to be compared with an estimated number of design jobs in the textile clothing and footwear industry of 19,000 today which might represent an annual need of 500 positions to fill¹⁹. Students' demand is so high that many institutions teaching fashion design can thus be extremely selective and a good proportion of them do not hesitate to get rid of or reorient underperformers among their current students, so that London fashion graduates are both very numerous and very well educated.

This situation explains how the local and EU industries can be fed with the very best talents produced each year.

2.3.3 THE FASHION EDUCATION IN LONDON

In the London area the fashion education system has been reorganised over the last two decades and larger units have emerged benefiting from the cross fertilisation one can expect within the different sectors of the creative industries. Those units offer a very broad span of services to students and firms ranging from foundation to post graduate courses intended for students and professionals, but also consultancy provided by senior students to firms in the realm of brand strategies, product development and trend forecasting. One may consider the University of the Arts London²⁰ as being one major example

Agency lead to the launch of London Fashion Week, with many supporting events that engage the Colleges and Higher Education Institutions with high-profile fashion design courses. The Mayor of London remains a keen supporter. Prime Ministers and their wives also take an active interest in promoting British designers over the last few years – activities ranging from receptions at No 10 to events patronage, as for example, Samantha Cameron's current involvement with British Fashion Council.

¹⁹ A gross estimate obtained by dividing the total number of jobs by an approximate duration of 40 years of work life

²⁰ UAL is a collegiate university comprising six internationally recognised art, design, fashion and media colleges in London: Camberwell College of Arts, Central Saint Martins College of Art and Design, Chelsea College of Art and Design, London College of Communication, London College of Fashion and Wimbledon College of Art. The university is Europe's largest provider of education in art, design, fashion, communication and the performing arts.

of it with its six colleges, among which the revered Central St Martin's College of Art, the famous fashion and textile Chelsea College of Arts and Design and the very specialised London College of Fashion. Also in London are other institutions like the Royal College of Art and its highly reputed MAs, and other now emerging on the fashion scene, like the Fashion College of Westminster University, or Kingston University now very much praised for the invigorating creativity of its graduates.

Since two decades all schools –initially Polytechnics and Universities- have been encouraged to become full-fledged Universities with a heightened focus on the artistic and cultural sides of fashion design among all other disciplines taught. In the mid-2000s institutions started to be funded in proportion of the number of the students they could integrate. This considerably further strengthened the trend towards more design and less technology in curricula and degrees, as students 'demand was higher in design than in technology.

The numbers of students in fashion design have thus exploded²¹ in the UK and in London, especially for postgraduate students, while lower levels have developed more slowly, which testifies of the higher qualifications that are delivered today to the industry.

Entering London students are significantly older –by some years- than the average UK fashion design student. The breakdown of classes shows a higher level of study in London: 74% first degree classes and 12% are post-graduates. More than 93% of students follow full-time programmes.

The population of fashion design students in London is largely female (85%) and significantly more ethnic (Black and Minority Ethnic) than the average UK fashion design student: one fourth of the population.

London attracts also twice as many foreign students than the average of the UK: about 40% of London fashion students come from abroad (compared with 18% for the UK), a large proportion of them from China/Hong Kong (21% of the non-UK total) and South Korea (14%).

After their studies, 89% of those looking for a job find one within a very wide spectrum of positions, only less than a third in pure design activities (see Figure 1 in Appendix), while 11% are unemployed 6 months after the end of their studies. As Vanessa Denza²² explains: “it takes 20 other jobs to back up one designer”.

For younger populations, many initiatives in London have helped raise the awareness of early teenagers for fashion and especially fashion design. One can mention here the Saturday Clubs²³ delivered for free by the Sorrell Foundation to youths in the 14-18 age groups. Many Universities also go to secondary

²¹ By 56% between 2005 and 2010 in London and 90% in the UK as shown in Table 1.3 in Appendix

²² The founder and chairwoman of Denza International Limited, a specialist recruitment consultancy for the Fashion Industry worldwide

²³ Fashion and design experimenting and initiation classes delivered usually on Saturdays

schools or directly to pupils on Saturday classes, Easter and Summer Schools: this early catching practice is very efficient in attracting future students. Similarly the Fashion Awareness Direct²⁴ scheme helps attracts young talents to the industry.

Those teenagers are also attracted to the textile and clothing classes during the 2 years before they take A-Level exams as those subjects are considered easier than average and so help achieve better grades at the exams.

2.3.4 CONTENTS AND SKILLS TAUGHT

As a consequence of the accreditation of Polytechnics into full-fledged universities initiated in the early 1990s, over the years the educational contents of fashion design courses have become more academic and lost much of their balance between garment technology aspects and design education to the benefit of the latter.

This move was paralleled with a broad diversification of what fashion design meant in terms of skills to be acquired and more than 800 different degrees are now provided throughout the UK in this very discipline. Over the decade interviews report that contents have strongly de-specialised and at the same time have become more “à la carte” for students to choose. As Rose Crehan²⁵ puts it: present students “master less but they can achieve more”.

One major phenomenon of the past decade has been that the whole fashion design education and training stakeholders have started to work together as a consistent system, as Susanne Tide-Frater²⁶ explains, with an acknowledgement of the need to draw and offer viable roadmaps to entrants, coaching them from their earlier years to their actual launch on the market or in professional life. This could be achieved by an increased collaboration spirit between players which is described in the section 1.4 Good Practices To Be Highlighted.

For what concerns professional training for designers already working, the offer is as diversified. More or less all universities have opened their curricula to offer short courses – from 2 to 5 days on a usual basis

²⁴ FAD is a registered educational charity supporting young people (12 to 25 years of age) to bridge the gap between education and the fashion industry. With the help of industry volunteers, FAD runs professional fashion workshops and contests to give young people a realistic insight of what it means to work in fashion while encouraging them to explore their own creativity. FAD currently works with 85 schools and 46 colleges or universities across the UK but is particularly active in the London area where many design students are educated.

²⁵ Thames Valley University

²⁶ A former creative director with Selfridge’s and Harrod’s, now brand consultant and external examiner for Central St Martins MA programmes.

– to fit the needs and constraints of availability of designers at work, in the areas of product development, marketing, merchandising, sourcing and all other management issues. A significant part of training is also offered by suppliers like Lectra, or specific trainers like W4D, who provide designers with some technical updated skills, ranging from basic imaging or designing software to more sophisticated and state-of-the-art ones, including the well spread Zedonk software, a very intuitive collection management tool, specially tailored to the needs of small design firms. In general one can say that the mounting importance of retailers and the multiplication of collections have brought a surge in product lifecycle management (PLM) training programmes to the detriment of the more focused CAD²⁷ ones. As far as Lectra is concerned the company provides Universities with free systems deliver conferences to students and tries to work in close collaboration with teachers and students. It is currently developing a teaching scheme for teachers all over the UK to update their skills and teaching materials in CAD, PLM and other software.

No training programme really addresses creativity issues for designers, as these aspects are fundamentally taken care of during university years.

Out of the existing London universities one can mention in more detail two iconic institutions, which both belong to the University of the Arts London, and well reflect the two different sides of fashion design that fashion economy needs today. London College of Fashion, on the one hand, trains a large number of students for the whole variety of design and design related positions, and prepares them to fit in a business environment; while Central St Martins educates much fewer students to develop, mature and strengthen their creative identity and be ready to work with the largest brands or to launch their own collections in the short to medium term. In short LCF caters more specifically to the needs of the UK and international industry at large, while CSM focuses on the international market for top art directors.

2.3.5 TWO MAJOR UNIVERSITIES

1. London College of Fashion

The 100 year-old institution located in the centre of London offers a multi-level fashion education, including foundation²⁸ years for the 16 years old, undergraduate courses and postgraduate programmes, research degrees as well as further education short courses. LCF is the only London University with a single focus on fashion, beauty and lifestyle, under their cultural, creative, marketing, technology, and communication aspects.

²⁷ Computer Aided Design

²⁸ A first year in higher education during which several topics are covered so that the students can better choose their future tracks of learning

The largest University within the University of the Arts London, LCF trains approximately 4,500 students – all cohorts included – each year, and more than 5000 professionals in the short courses²⁹.

Out of the very professional ways LCF teaches students some particular initiatives stand out as very good practices for the education and training of designers.

- One is the Fashion Business Resource Studio, a department established as a single point of contact sharing the creative, business and technical expertise of London College of Fashion with the fashion and lifestyle industries. The studio is active in helping companies recruit students for longer or shorter assignments. One of the most effective collaborations they foster is the “Industry based student projects” in which second year fashion students work on projects submitted by fashion business managers or executives. This is a unique way of bridging the gaps between school and career and both students and employers experiment working together and listening to the other’s expectations, constraints, motivations, and creativeness.
- One can also specifically mention the “LCF First Move” website and training programme, initiated by LCF Fashion Resource Studio, which aim to put in touch job offers and demands for students in their last year. They can get coaching and formal collective classes to know how to look for and find the adequate employer to start their career.
- Another interesting practice is the development of Flexible Learning Programmes, in which students are taught in LCF 2 evenings par week during 4 years.
- Promotion: the work of the 25 best students is exhibited in an LCF show, each year, apart from the London Graduate Fashion Show in order to showcase their work more distinctively. The work of all is presented in an attractive way on the University website.

LCF has created the Centre for Fashion Enterprise as an extension of its education and training activities to help young designers achieve a sustainable business development (See below section 1.4 Good Practices To Be Highlighted).

2. Central St Martins

With a wider focus than LCF, CSM offers a very large variety of education and training programmes: foundation, BA, MA, research programmes and short courses classes with similar formats than LCF. The approach here is that of an art college, not a fashion one, and it emphasizes creativity per se to the extent that, for example, the use of modern computer aided techniques is considered a waste of time. The objective of the education is very much about exploring the creative identities of the students with

²⁹ LCF offers more than 200 different short courses, many of them ranging from 3 days to two-week intensive seminars or summer schools, in fashion related topics, fashion design per se, but also culture, retail, garment cutting,etc.

all the psychological hardships it entails to become a strong and weathered creator. With its 5 000 students and 200 000 alumni, Central St Martins holds an outstanding reputation for providing students with a fundamental taste for experimentation, innovation, risk-taking, questioning and discovery. Traditional technical skills are also covered, pattern cutting, drape, sewing skills as parts of design projects. The links with the industry are emphasized through collaboration projects with students presented by companies, as early as the second year in BA programmes. Among the interesting developments within CSM one can mention:

- 90% of BA students now taking the “industrial studies” route, and spend their third education year in industry, a strict assessment being established at the end of the year
- A fundraising initiative started in 2010 to help finance scholarships, particularly for MA students³⁰.

Each year approximately 120 students get their BA and 50 their MA in Fashion and Textile Design from CSM.

2.3.6 VET AND INDUSTRY

The developments of the education and training system over the last decade can be said successful as to its capacity to generate top fashion designers and bring British and London fashion to the forefront of the world’s industry. Evaluations should be more mitigated when considering the match between the skills mastered by the more “generalist” designers and the demands of the manufacturing industry in the stricter sense. One key factor to be stressed is that the process has started much later for the latter : it is around the mid-2000s that Skillfast³¹ and other stakeholders have really begun to sensitize the industry to get involved in the evolution of curricula, schemes and more generally in skills development and anticipation.

In January 2011 a consolidated analysis³² was published stating the present gaps in view of today’s and tomorrow’s competitiveness. One can say that the observed mismatch does not generally lie in the numbers of positions as TC vacancies now are fewer than in other business sectors, which constitutes a first element of success. However there appear skill gaps as to the existing workforce, one of them being the lack of understanding between designers and manufacturers:

³⁰ Fees which currently amount to 3,400 £ par year for EU students will rise to 12,000 in 2012.

³¹ Skillfast was the first Sector Skills Council dedicated to TC industries in the UK.

³² Sector Skills Assessment for the Fashion and Textiles Sector in the UK by Skillset; January 2011. See http://www.skillset.org/uploads/pdf/asset_16302.pdf?2

- Designers do not master the traditional craft skills, such as pattern cutting, and particularly so in the high-end market segments
- They do not know enough about fabrics and raw materials properties
- They are also lacking in IT programming and technology
- They are not sufficiently trained in production management and do not understand manufacturing and manufacturers
- They also lack commercial awareness

In general Skillset reports an increasing need for all individuals in the TC sector to understand the different elements of the industry and to be able to multi-skill³³. However, another indicator of success, in London skill gaps are much more seldom reported by employers as in the rest of the UK as far as fashion design is concerned: 12% in comparison with a 20% for the rest of the UK.

A current reproach expressed by employers³⁴ is that too much focus is put on the design components to the detriment of textiles knowledge and technical expertise. Employers also deplore that most of education and training providers are unable to invest in the equipment required to teach the latest techniques.

As a consequence employers have to provide on the job training to their inexperienced entrants.

It is worth noticing that technological programmes do exist but their enrolment is still declining for many reasons related to the image of the sector – many company closures, hard work, low wages, poor working conditions etc. – even though business demands are on the rise.

Today the UK industry is faced with a heightened demand for local production but is not in a position to fully seize the opportunity. The technical design positions have been lost when the manufacturing base was diminishing and people were made redundant almost half a decade ago. The mind-set of the industry has now changed and companies now realise for the first time in a decade that their workforce is ageing and that they need to recruit and retain young people to replace workers nearing retirement. But students coming out of the Universities are not fully prepared to this challenge.

On average the TC industry is not in front of its peers as to training strategies: Skillset January 2011 survey reports that TC businesses do not often have training plans for the coming year : only 28% in comparison with 43% for all business sectors. Similarly only 44% (in comparison with 57%) formally assess whether their employees have gaps in their skills. A lot of work has still to be done to change attitudes in the sector even though a good deal has already been done thanks to the action of several key players. A lot of work is currently being done to reduce the mismatch. London education and training players like universities and other training organisations have started to tackle the issue a few years ago

³³ Also evidenced by the British Fashion Council, The Value of the UK Fashion Industry 2010

³⁴ As evidenced in the report by the Textile Institute, Fashioning our Future: Education in fashion and textiles in the UK.

and sizeable progress can now be observed. The developing of more “hands on” programmes in institutes like LCF is one example. The development of apprenticeship schemes by Skillset is another.

1. A key asset for the industry, Skillset

Skillset is the Sector Skills Council³⁵ representing the creative media industry³⁶, and since 2010 the clothing and textile sector. One of SSCs 'interesting features is that they are granted licenses to operate by the government through UKCES³⁷. First licenses were issued in 2003 for a 3 year period. In 2009 Skillfast was not re-licensed and stopped its activities as SSC as several others. This working principle ensures that a high level of standard and effectiveness is constantly achieved by SSCs, as judged by the employers in priority. However the system is on the verge of changing dramatically as the government restrains such endowments: Skillset will receive 40% less government funding and have to find more of its own resources, by selling its services and bidding for collective projects.

Formerly Skillfast UK was in charge of the same responsibilities with a single TC industry focus. 5 out of 9 Skillfast staff has been transferred to Skillset clothing and textile department. Skillset now employs approximately 80 people for the 11 business sectors represented. TC came into the footprint on April 2010 and has now been fully integrated into Skillset with a number of staff – equivalent to an 8-10 full time staff – working closely with the sector.

Interestingly this body roughly covers the same range of interests as London Art Universities. In parallel with the transfer, the focus has been somewhat put more strongly on non-manufacturing aspects of the industry and design has become a major topic of Skillset schemes. Skillset benefits from a high level Employers Council chaired by John Wilson (UKFT business association).

Thus, since Sector Skills Councils exist employers have always been more involved than their Union counterparts. However it should be noticed that even though Skillset is clearly “employer led”, Union representatives are always invited to take part in and informed of the projects going on.

Skillset’s mission is to support and enhance the industry competitiveness, by means of strategic guidance, lobbying, organising, and opening up the companies to creative skills. As such it conducts consultation work with industry, publish research and strategic documents, refunding schemes

³⁵ Sector Skills Councils (SSCs) are independent, employer-led, UK-wide organisations. The 22 existing SSCs cover over 90% of the economy. They are government funded and coordinated by the UK Commission for Employment and Skills (UKCES), a non-departmental public body led by Commissioners from large and small employers, trade unions and the voluntary sector. SSCs aim to create the conditions for increased employer investment in skills which will drive enterprise and create jobs and sustainable economic growth by means of an effective sectoral approach. UKCES is accountable to different ministers and secretaries of state : see <http://www.ukces.org.uk/about-us/remit>

³⁶ TV, film, radio, interactive media, animation, computer games, facilities, photo imaging, publishing, advertising and fashion and textiles

³⁷ The UK Commission for Employment and Skills

and project work, and provide information about the challenges that face the industry and what need to be overcome. They also provide e-mail and telephone information to enquirers.

2. An integrated approach to fashion design education and promotion

London stakeholders have come to build a very efficient system which takes care of designers from the beginning of their studies to their successful launch into the market. Several tools and practices must be described here in some detail.

- **First launch: London Graduate Fashion Week**

Each June the Graduate Fashion Week stages in London Earl's Court a static exhibition showcasing the work of some 50 universities across 52 courses, and approximately 22 university fashion shows. The prestigious Gala Show and Awards presentation takes place on the penultimate night. In no other place in Europe such an event is organised to promote emerging designers. Within the governance of the GFW, an Industry Board has been launched in 2008 in order to forge closer links with industry. Members meet annually with the Trustees and Executive Committee of GFW to discuss the following year's plans and provide advice, as well as support for the various initiatives. More than 150 companies are active in the Board from New look, Zara to Aquascutum and Jimmy Choo.

- **The further promotion**

The British Fashion Council has played an important role in building the collaborative spirit that prevails in the industry now. The institution was among the first in the early 2000s to understand the importance of considering fashion with all its trades and has succeeded for example in attracting retailers to provide help and funding to the system. BFC has established in 1993 New Gen, the most internationally recognised talent identification scheme in the UK. Many great British designers including Alexander McQueen, Matthew Williamson, Julien Macdonald, Boudicca, Sara Berman, Giles Deacon, Jonathan Saunders and more recently Christopher Kane have benefited from such world class exposure. Many companies – and other partners like the London Development Agency - provide long term support to this scheme (Topshop for 14 years!). Catwalk designers receive £5000 - £10,000 towards their show costs, sponsored Exhibition space, usage of the BFC Catwalk Show Space and mentoring. This scheme can be awarded to designers for up to four seasons. Designers receive access to sales and marketing support and business advice.

One can say that the BFC thus succeeds in launching on an international scale dozens of promising young designers, most of them educated in the very local universities and schools. It is also worth mentioning that BFC regularly sets up "London designers" showrooms in Paris or New York to boost emerging designers right after their school years, like was the case with Mary Kantrantzou, Peter Pilotto or Meadham Kirchhoff.

- An incubator : the Centre for Fashion Enterprise

Since its creation in 2002, the Centre for Fashion Enterprise (CFE) is London's major business incubator that supports and nurtures emerging fashion design talent. CFE has been very instrumental in the successful development of designers like Erdem, Marios Schwab and Richard Nicoll, some of the most promising talents of world fashion today. The CFE provides an experienced team to help designers get a high level of industry intelligence, master finance and production issues and achieve good marketing expertise. A sequenced training offer is thus available to young designers:

- a) The one-season Pioneer Programme supports fashion labels which have secured a London Fashion Week showcase. They are offered general business advice and introduced to business tools which will boost their confidence when devising a development strategy. The CFE regularly selects its Venture designers from the Pioneer Programme. Approximately 30 designers have received such coaching over the last five years.
- b) The two year Venture Programme is a business support and investment programme. It works as a fashion incubator to help young designers in their first four seasons of business.
- c) The short course Market Entry Programme offers to emerging fashion businesses, a fully subsidised programme at no cost to the business. The programme consists of two confidential 1-hour diagnostics for each individual designer business, plus a 12-hour expert speaker workshop programme, covering key aspects of design business life.
- d) The Bootcamp Programme: a very affordable (250£) 2-day session with experts to define business strategy for tentative entrepreneurs in the fashion industry.

Another mission of CFE is to be the agent of the young designers: the CFE Agency identifies and selects designers from the UK, to provide consultancy and other collaboration to UK and international fashion and lifestyle companies, and negotiates licensing and sponsorship deals on behalf of designers.

The Centre for Fashion Enterprise is partly financed by the European Regional Development Fund and partly by the "Solutions for Business Innovation, Advice and Guidance" package of publicly funded business support products and services designed to help companies start and grow.

The CFE is based at the London College of Fashion and thus benefits from exclusive use of studio accommodation in a neighbourhood where many high-end designers and manufacturers are located. The CFE is able to extend certain university benefits to designers supported on the Venture Programme: The LCF's internationally renowned library and highly trained academic staff, access to the Digital Print Bureau and cutting edge technology such as Rapid Prototyping.

For the 2009-2012 period, £585,000 has been granted by ERDF and the same from LDA³⁸ (no private funding has been added).

³⁸ The London Development Agency (LDA) is the Mayor's agency responsible for driving London's sustainable economic growth. It aims to improve the competitiveness and productivity of business; create opportunities in the labour market; and engage and enable many of the diverse communities who live and work in London.

3. Women & Work Sector Pathways Initiative (WWSPI)

The clothing and textiles workforce is 52% female but with only 35% of senior level managerial positions being filled by women. Women are not gaining enough access to senior roles, an issue which investment in skills training can help resolve. Thus the objective of the Initiative was to provide innovative solutions to remove the barriers women face in getting on in the workplace, whilst at the same time reducing the skills gaps in the workforce, by carrying a certain number of pilot projects. It was created in February 2006 and ran from 2006-08, until 2010-11.

While most interventions in other industries were based on fixed offer training contents, the programme used by Skillfast UK was based on more open and flexible offerings, with employers being provided with considerable control over the nature, supply and delivery of the training funded under WWSPI. Skillfast established initial contact with employers to discuss business issues and the implications of these for the skills of their workforce. The employers were expected to outline their own requirements within the constraints of the WWSPI eligibility criteria. As a result, a range of providers, contents and delivery methodologies were adopted to suit the interests of individual employers.

The programme was carefully marketed by taking into account potential resistance factors and highlighting the benefits to be expected, such as the boosting of company's morale, the skill development itself and the improvement of customer satisfaction often observed. The fact that the training was subsidised and in some instances free made WWSPI an attractive offer for many employers. In general training grants were up to 75% of the cost of training, up to a maximum of £600 per employee.

In parallel employers also had to encourage 'reluctant learners' (e.g. older women who had not undertaken learning since leaving compulsory education, those with caring responsibilities, younger women with latent interest). The programme was run around three major fields, designers skills, textile manufacturing and apparel retailing.

Skillfast UK was one of the 9 SSCs to receive support to carry the Initiative. Since it started the Initiative (March 2006), Skillfast has helped 2,700 women coming from more than 350 companies take part in training courses, develop their skills and upgrade their positions in companies. For instance Debenhams's 95 employees could receive digital and technical training thanks to the scheme. One of the peculiar

Recognising the significant impact that fashion has on London's economy, the LDA supports designer fashion in London, the London Fashion Week and designers' education. Its two major focuses of action are the promotion of London as a leading fashion centre; and business development support to young designer talent. Central to the LDA's support to emerging designers is their partnership with the CFE. The CFE has been supported by the LDA since 2002 when the original CFE concept was conceived. The CFE is one of the current two major projects supported by the LDA (the BFC being the other project).

features of Skillfast's approach was to engage a wide range of partners in the initial design and ongoing review of the WWSPI interventions through several strategic forums co-ordinated by a steering group. Most of the key actors were thus involved at both the strategic and delivery level indicating a high degree of project integration. Employers clearly played a key role as consumers in delivery of all projects, however in several projects they also played a key role in the development of the original intervention, were key members of project steering groups and in several instances actively championed the intervention with their peers.

4. Apprenticeship in London

In London as anywhere in the UK, very few students and employers are aware that apprenticeship still exists and even fewer have a notion of the benefits they could derive from it. As a consequence the number of apprentices has been very low for decades. In the latest NESS survey³⁹, only 3% of TC employers were offering apprenticeships (compared to an all sector figure of 8%) so that apprentices represented only 1% of the existing clothing workforce (in comparison to 3%). In the London area the proportions are even lower than in the rest of the country. In comparison 2/3 of German students follow this apprenticeship route to work.

In line with the national strategy to develop apprenticeship – with a target of 600 apprentices in the clothing industry by 2015, i.e. 6 times today's figure – London employers seem increasingly aware and interested in the programmes that have been set up for them.

In fact the broad lines of TC apprenticeships have been defined jointly by all the major clothing associations including UKFT, BFC, the Textile Institute and the Association of Suppliers to the British Clothing Industry. They have been designed as flexible and affordable means by which clothing and textile companies can provide entrants with the specific skills they need to acquire.

Skillset has developed 2 apprenticeship schemes: Apparel, and Advanced Apparel for Textile and Fashion. Existing employees are allowed to participate. The identification of external candidates and trainers can be supported by the National Apprenticeship Service. Paired with a company mentor, the apprentice receives on the job (80% of time) and off the job (20%) learning for a duration up to 18 or 24 months. The minimum compensation is 2.5£ an hour and off the job training costs are totally funded by the National Apprenticeship Service. At the end of the training the apprentice will attain particular levels of NVQ⁴⁰, granted by qualified industry assessors.

³⁹ National Employment and Skill Survey 2009 issued by UK Commission of Employment and Skills.

⁴⁰ National Vocational Qualifications, the national classification and description of skills and qualifications.

To overcome the fragmentation of the industry, especially in London, smaller companies have to constitute clusters who can share cohorts of apprentices.

In the area of apprenticeships one has to mention the Mulberry experience whose success goes on year after year. In order to cope with the ageing of their local workforce and with the important risk of losing related skills, in 2005 the company initiated an apprenticeship scheme which has been running since year after year. Mulberry staff started by visiting local schools to sensitize pupils and teachers and explain jobs and careers in the fashion area. They thus succeeded in recruiting the sufficient number of youth to start an apprenticeship programme. With a policy of compensating them above industry standards and providing company benefits, Mulberry eventually kept 95% of the apprentices involved. As a consequence the average age of the employees has now fallen much below the industry average.

2.4 Good practices to be highlighted

- **The collaborative spirit between players**

This is certainly one of the first best results of the work done. Besides one can say that to a large extent it is this spirit that has allowed the other best practices analysed here to develop. Ten or fifteen years ago key players like the universities, some large retailers, the British Fashion Council among others have started to focus their attention on the young designers and made converging efforts to help them succeed. This very spirit allows an extremely fluid circulation of information and concerted decision making processes between major stakeholders of the sector. Regular strategic as well as operational meetings are thus organised and well attended by top executives and responsible managers coming from companies, education and training institutions, clothing associations and government bodies, most often, upon calendars and agendas set up by the Sector Skills Council, Skillset. Also integrated are other key players like the Centre for Fashion Enterprise.

It is worth noting that business integration has been started within the universities and schools themselves, by integrating industry members and representatives in their boards and in the definition of their curricula. Many of them, through consultancy and internships, foster the early integration of their students into the world of work and professional life. Relying on dedicated staff they also help students enter companies, raise financing or simply get personal advice from highly experienced professionals. Another determining factor for London designers to be successful is that the education world supports them a long time after they emerge from the education system: the promotion of young designers, right after school, is overwhelmingly important to push them on the international stage.

- **Skillset**

The anticipation work Skillset provides, by means of writing and commissioning research reports, is essential to help all decision makers make better choices as to their HR strategies and the skills they

should invest upon in the future. Skillset has also been very much involved in the Women and Work Initiative till its ending in 2011.

Skillset plays the part of a hub for the TC industry: it is an active member of the major networks and organisations involved in the TC sector in the UK. As such it belongs to the Alliance (also called Manufacturing Alliance) with 4 others including NESTA (The National Endowment for Science, Technology and the Arts), UKFT, the British Fashion Council and the Centre for Fashion Enterprise. Chaired by UKFT and funded by NESTA, the Alliance provides instruments to bridge the skill and communication gap between fashion designers and UK manufacturers, by offering toolkits especially designed for the purpose. In addition to NESTA's funding, Skillset manages a range of training funds contributed to by industry and public sources, that provide bursaries for individuals or alleviate the costs of training for businesses.

Skillset also works to erase the gaps between the reality of companies' expectations from designers and the ideal image that drives too many youth into studying fashion design as an art and ignoring many of the related aspects and requirements of the job. Such gaps may be attributed, in part, to a vast lack of knowledge among young people about fashion careers. In particular, jobs and skills relating to clothing technology are poorly known. Skillset is now addressing this by developing 67 job descriptions for the sector.

Skillset is also a strong promoter of apprenticeship, which can also be considered as a very good practice per se on the London stage.

- **Promotion as the final stage of education**

A very good practice to be highlighted is the comprehensive way fashion design education is handled by VET providers, local authorities and businesses. This is fostered by the involvement of large businesses like Topshop or Zara, regular sponsors of London Week events. Students are actually launched into the market and helped to gain a sufficient level of recognition before they leave the system. Thanks to presentations within or beside the London Fashion Week, the classes tailored to help young designers safely land in business life, the networks opened by the system for their privileged use, designers are fully coached by a highly professional and truly non-profit organisation.

"We are making a positive impact in London. We understand what it takes to deliver sustainable business growth for the London Fashion Designer sector. We know how to work with creative people, how to develop survival strategies for innovative businesses and provide confidence, not only to the designers themselves, but also to buyers, the finance community, manufacturers and the wider fashion industry. People recognise that the Centre for Fashion Enterprise really makes a difference." Wendy Malem, Director, CFE.

- **Women & Work Sector Pathways Initiative (WWSPI)**

In 2009 a final report was issued by the Policy Research Institute (Leeds Metropolitan University) for the UK Commission for Employment and Skills, providing evidence of the benefits of the programme.

Several features of the programme explain why it was successful. One is that the administrative burden for employers and employees was reduced to a minimum. Another was the very low cost to employers. Also the programme was carefully marketed both towards employers and employees. The initiative received government funding, distributed via Sector Skills Councils.

The evaluation report provides evidence of the benefits actually perceived by participants both employees and employers. A number of employers indicated that involvement in WWSPI had impacted positively on their approach to human resource development. By introducing new analysis techniques and new approaches to skills development, qualifications and other accredited learning which was new to the business.

2.5 OUTLOOK FOR THE PRESENT SYSTEM

From 2013 onwards State teaching grants will be removed for subjects considered non-strategic, including fashion design. Teaching grants (£3,500 per student per year) now represent some 40% of universities' total funding. Those will have to charge students what they will not get from the State. Today only foreign students pay the full cost of £9,000 per year⁴¹. Automatic loans will be granted to the students but they will have to repay them as soon as they reach a certain amount of wages. Due to this major change, all universities have started to increase their focus on employability as self-paying students will be increasingly keen on ensuring their education investment will help them find and retain a good position and a fair pay. All universities will thus have to publish employability statistics on their websites. It is expected that internationally known Universities and the small ones with an elitist, high quality position, will not suffer much to the contrary of the others. Quite interestingly most players including universities seem willing to consider the opportunities for improvement offered by these budget cuts rather to complain about them.

Another issue for the future is that Skillset will have to do without 40% or so of their current government funding. Being employer-led and close to the industry one can imagine Skillset may take up and win this challenge with the hope that its anticipation mission will not be dramatically reduced.

2.6 CONCLUSION

London constitutes a very special case and has become even more unique over the decade for what concerns fashion design education and training. Its huge success as a crucible for top creative talents and the significant improvements achieved with multi-skilled better educated fashion designers in general, offer several conclusions and possible lessons to be drawn.

⁴¹ However their numbers might go down as immigration restrictions will be stricter: study visas would be reduced from 15 months to the mere duration of the courses followed.

For what concerns fashion design, the major asset is the excellence level of the institutions and the efficiency of the system in which education and industry are embedded. Some facts and characteristics that are very specific to London do explain, for a significant part, how this level could be reached : an international language, which easily attracts talents from all over the world, a long term national strategy to foster creative industries, consequential huge national and local investments for more than a decade, a unique multi-cultural city full of inspiring trends, are only a few of London's inherent advantages, impossible to emulate in most other places in Europe. However what can be transferred to the areas with a strong fashion design tradition, is the wide-spanning responsibility the education and business world assumes in driving and coaching designers until they have grown their own wings and can successfully be launched on the world market.

For what concerns TC industry in a broader sense, such a body as Skillset, the TC Sector Skills Council in TC is certainly a key asset that would be helpful in many if not all other regions of the EU TC sector. It is made possible by national dedication and funding and by the support of a mature industry, able to share vision and action plans. This is not the case in many places. This very collaboration and ability to act jointly certainly is the basic requirement for designing and implementing forward looking competitive strategies in the TC industry.

3. WEST OF FRANCE

3.1 RATIONALE OF THE CASE

The West of France and its regions (Bretagne, Pays de Loire, Poitou-Charentes and Centre-Limousin) have been selected in the present report for the considerable upgrading of their clothing industry achieved over the last decade. Continuing education investments for workers are fairly low in French apparel industry in comparison with other sectors in France with only 23%⁴² of workers trained each year against 44% in general. In the West of France the effort has been much higher than in other regions, probably representing 40%⁴³ of the total training investments made in France by the apparel industry. In the survey conducted for the purposes of the present report, business associations' respondents observed that a major VET effort has been done in France since 2000 in the TC sector.

The area has been severely hit by a haemorrhage of orders from luxury and Couture clients and corresponding production volumes towards cheaper manufacturing places in Europe and further. The fragmented local industry has been able to cope with it by profoundly changing its working traditions and through a necessary upskilling and diversification of the skills of the workforce.

The system in place has allowed such a dramatic change and it is very enlightening to analyse how it could be achieved.

3.2 THE INDUSTRY

3.2.1 PRESENT SITUATION OF THE FRENCH AND WEST OF FRANCE TEXTILE AND CLOTHING INDUSTRIES

With a share of 8% of clothing EU employment⁴⁴, 16 % of EU units, but as much as 20% of clothing wages and salaries, France remains a major player of the sector in Europe. Wages per employee are 2.6 times

⁴² Annexe au Projet de Loi de Finances 2011. Formation Professionnelle (2009 data)

⁴³ Estimation by Forthac national administration interviewed.

⁴⁴ All data used in this section can be found in Appendix, Tables 2.1 and Tables 2.2. They are based on Euratex and Eurostat statistics computed and analyzed by IFM.

higher than EU TC average which gives a notion of the very particular positioning France's industry has to hold in order to survive in European and world wide competition.

The Ouest area is the leading French area for clothing manufacturing as it represents 20% of France employment. In the area clothing clearly dominates textile, with 44% more employees which is not the case for France as a whole where textile employment is higher by 39%. Units are twice larger in the Ouest (10 employees compared to 4 for France) because manufacturing units are proportionally much more numerous than non-industrial firms –brands- which have no production employment. In the Ouest employees are mostly blue-collar workers. As a consequence wages per employee are lower than France's average, but only by 14%: less tertiary positions than France's average but a highly educated and fairly well-paid production workforce, paid more than twofold the EU average.

The Ouest area of France displays a concentration of economic players like Zannier, CWF, NewMan, Salmon Arc En Ciel Group etc. According to employment statistics, the average company is a very small SME of around 10 workers. In fact there is a concentration of manufacturing units with around 50 workers and no real large group exists in the area.

According to the breakdown of the members of Mode Grand Ouest⁴⁵, the local industry is made of 35% brand companies, 60% high end subcontractors and 5% services (logistics, finishing, packing etc.) to the industry.

3.2.2 DEVELOPMENT OF THE CLOTHING AND TEXTILE INDUSTRY OVER THE LAST DECADE

Since over a decade the area has been strongly impacted by the removal of much manufacturing capacity to lower wage regions of the world, particularly North African contractors and Asian producers. Local companies were in jeopardy like most middle price or mass market manufacturers in many sectors in Europe. In the West of France they have had to review their market positioning and have actually spent a great deal of energy in different strategic directions.

The first one, followed by high quality manufacturers, has been to upgrade their production level and focus on the luxury and Couture clients in France and the rest of Europe. Those clients are less and less interested in the manufacturing phases as they prefer to concentrate their operations on higher value added objectives like maintaining a very desirable image, run expensive and attractive points of sales and hire top designers to elaborate their style. The response of Ouest manufacturers has been to increase their pre-industrial capacities and skills to offer to these extremely demanding clients fast sampling

⁴⁵ Regional business association which covers the regions of Brittany, Pays de Loire, Poitou-Charente, Centre and Limousin and represents the local clothing, textile and leather companies.

services, pattern-making and grading competences and all it takes to convert a mere sketch into a fully industrialised garment.

Another move, for lower grade units, has been to multiply their number of collections from 2 to 6 or more, in order to provide large retailers and middle market brands with a very reactive and constant supply of novelties. This trend has been made possible by a shortening of operating chains and a flexibilization of production equipment and units. Through an extended use of unit cutting practises, and based on a logic of production teams of around 6 operators in each, companies have become able to deliver a finished garment in a few hours at the most, which is a basic requirement for prototypes and express production runs. Mode Grand Ouest, the local clothing association, explains that order sizes and production runs have been divided by 5 over the last years and presumably by more than 10 over the last decade. In parallel production lead times have successfully been squeezed from 8 to 3 weeks over the same period of time.

On the whole all manufacturers have had to acquire a higher level of independence from their traditional clients, top end players or mass merchants, as these were proving a major source of danger for their small suppliers. To do so, they have had to develop selling and negotiating competencies in order to better master and diversify their customer bases. They have thus efficiently improved their bargaining power and fostered customer loyalty. As one manufacturer interviewed puts it “10 years ago the clients were deciding the price, now they accept our prices”.

Around the mid-2000s a new generation of company owners – highly educated second generations, consultants turning to operations, shop foremen investing in a business of their own etc.... - has come to power, a cohort of better educated managers in their forties willing to rejuvenate practises and seize tomorrow’s challenges. They have considerably helped modernising both management attitudes and techniques, in particular in the realm of human resource management, implementing a more participative and less authoritarian management style. These younger decision makers have also been very active and even pro-active in the setting up of training schemes in their companies and in the regions concerned. Knowing better than their elders how to manage their own time and how to delegate, they have taken a larger part in collective actions and invested in commercial relationships. In many of their companies one can observe that the whole workforce or so has taken part in training schemes of one kind or another, which represents an extremely heavy investment for the company in time, capacity and money spent.

3.2.3 2.2.3. SKILLS DEMANDED BY THE INDUSTRY

The initial level of apparel workers’ qualification in the regions concerned was very low with an estimated 75% of all workers without qualification, having been taught in the factories since they had left school at an early age, by simply learning by doing. Training was not in companies’ traditions and was scary to the workforce. 10 or 20 years ago announcements of a training scheme to come was quite often perceived as the company’s willingness to sort out the best employees and get rid of the others in the

next redundancy plan and following downsizing. Such a climate of suspicion and fear is not a good condition to launch training schemes.

However companies had to address their vital challenges. To achieve these thorough strategic evolutions they have had to upgrade their staff' skills in several directions:

- Modernisation of techniques
- Multiskilling
- Luxury specialisation
- Management training.

All these issues have indeed been handled within the regions covered. They are described in the Chapter "Contents and Skills Taught".

A specific point has to be made here regarding skill conservation. From a broad perspective the industry has gradually understood how crucial it was for companies to save the internal skills and specific know-hows each of them holds as a valuable capital or patrimony. Each time an operator leaves the company, it must be avoided that the skills she mastered also vanish. To prevent this companies work on the living transmission of elder to younger entrants and at the same time try to register – by means of videotaping, analysing procedures, taking pictures among other methods – the special gestures, positions, movements and actions accomplished in the making of every task. Passing down one's knowledge is not a natural human phenomenon and elders are seldom willing to give all their keys to younger ones. Registering their practical experience provides a safe means of ensuring a proper transmission is achieved.

3.3 THE EDUCATION AND TRAINING SYSTEM

3.3.1 VET GENERAL FRAMEWORK

In France, initial VET is funded by the state, and in particular the ministry for national education, higher education and research, as well as by the local administrative units. The state is responsible for the remuneration of teachers and other educational and guidance staff. However, it is the local authorities that are now responsible for investment and operations. The regions, with regard to higher secondary education establishments are responsible for practical conditions, facilities and technical staff.

The apprenticeship track is considered as a form of initial vocational training and apprenticeship is considered as a form of employment. Funding for apprenticeship is covered by the apprenticeship tax (0.5 % of the gross annual bill paid by the enterprises), the state as well as by the regions. The apprentice has to sign a contract with an employer, and during 2 to 3 years receives a monthly wage, and follows (at

least for 400 hours per year) courses in an Apprentice Training Centre. Apprentices can thus prepare secondary education technical diplomas or, increasingly, higher education degrees in vocational areas. The apprenticeship route can be started at the age of 16 until 25 or more.

Alternating training programmes, so-called "alternating" work contracts, (professionalization contracts) are financed by the companies, the regions, and the state (exemption from mandatory payroll taxes). These contracts, based on alternating periods of work and study, are considered as a form of continuing vocational training. Their duration is 6 to 12 months and the proportion of school training is lower than for apprentices (15% of total time).

For which concerns continuing VET, the state has set up a grant system for individuals and businesses, to support the objectives related to its employment policy. Such actions are designed, in particular, to develop consulting to clothing branches on the developments in particular jobs and qualifications and to promote training in enterprises with fewer than 250 employees.

Since 1983, the decentralisation process has been shifting general powers over CVET to the regions. As a result, alongside the public grants given for training within enterprises, which can be funded jointly by the state and the region, the regions have sovereign powers over special grants offered to enterprises. Since 2002, the various stages of decentralization have resulted in the transfer of state funding to the regional councils.

In-company CVET funding is covered by the mandatory financial contribution required from enterprises; partial or full collection of this contribution by OPCA; the state and the regions, through the public grants they offer; the employees themselves, as they can be asked to contribute to funding their own training. The amount of the contribution and the calculation methods used vary depending on the type of enterprise involved and its staffing levels.

More detailed information regarding VET framework can be found in Appendix 2.

3.3.2 A LEVY ON COMPANIES TO FUND TRAINING: OPCAS AND FORTHAC

Vocational training in France cannot be understood if one ignores the very particular way it is funded and organised. Since the 1920s the French state collects funds, by a levy on companies, to finance training and further education for the employees of the private sector. This uncommon situation in Europe materializes through a 1.6% tax on the wages and salaries, paid by employers for training actions. Companies with more than 10 employees may design their own training plans and implement them. Smaller ones have to pay in proportion of their wages to a bilateral collecting body called OPCA.⁴⁶

⁴⁶ Organisme Paritaire Collecteur Agréé (Bilateral Certified Collecting Organism)

For the TC sector the OPCA is FORTHAC, a non-profit organism, with the statute of an association covering 7 branches: textile, clothing, couture, textile maintenance, shoes, leather and skins, leather goods. A peculiar feature of Forthac lies in the structure of its board of directors: representatives of employers, workers' unions and State authorities. This very tri-lateralism and in particular the current social dialogue conducted both at national and regional levels are key assets for the development of well thought, designed and convincingly presented training policies for the companies in the sectors covered.

Forthac was created in 1995 and it collects nationally 60 million euros⁴⁷ on average per year to carry its missions, of which approximately 5 million are dedicated to its operating budget. With a staff of 80 and 9 regional delegations, Forthac keeps a daily contact with industry's and workers' needs that allows a great reactivity to address skill gaps as soon as they are detected.

Forthac works as a one-stop single door to answer numerous and very diverse needs from companies and workers. This peculiar feature makes it a very attractive partner for companies who are often rebuffed by the complexity and bureaucratic requirements of most providers of funded services. Forthac consultants are full-fledged advisers to companies on how to analyse their training needs, design, set up and finance their training policies. More than advisers they also manage the whole process, alleviating to a minimum the related burden for the companies.

Forthac's four core missions are:

a) Anticipate

Forthac has created and currently operates an Observatory on jobs (a legal requirement in France since 2005) which helps create an enlightened sound and solid consensus between stakeholders as to training strategies, using various methodologies such as internal studies and studies by external consultants, statistical compilations and analyses, databases and data gained from operational contacts. Forthac thus collects and analyses data on jobs and maps the main positions, described by capacities, activities and knowledge, and likely developments. It also handles statistical data on employment and training and initial training data: mapping of diplomas, per vocational branch, list of establishments that prepare trainees for each diploma.

b) Design certification

- Vocational Qualification Certificate: since 2004, several vocational qualification certificates for key positions in the sectors have been created like textile machine setter, multi-task operator in the clothing industry.

⁴⁷ Out of the 1.6% of their wage bill that companies contribute for training, 0.9% goes to FORTHAC (0.5% for professionalisation and a minimum of 0.4% for the training plan); of the rest, 0.2% are earmarked for the Personal Training Leave and 0.5% can be remitted to FORTHAC among other organizations. Workers follow training programmes during their work hours and are fully paid by their employers.

- Inter-industry Vocational Qualification Certificate: these Certificates have been set up in 2005 on the observed premise that irrespective of the sector, there are similar or related occupational activities, whence the common needs for qualification, but also for the employability and mobility of wage earners. These certificates concern 9 adhering sectors: shoes, trade and distribution (mainly food), clothing, medicine, metallurgy, tanning, textile, distance selling, for jobs like: logistics staff, quality operator, etc.

c) Assess individuals

Forthac assesses and validates the capacities and vocational attainments of wage earners through the conferral of a diploma, a Vocational Qualification Certificate or an Inter-Industry Vocational Qualification Certificate. To attain a higher level of qualification wage earners are offered training routes, the Qualifying Modular Courses⁴⁸.

These are most often constructed upon an initial analysis of the company's strategic needs, consequential training objectives and analysed at individual levels according to workers' positions, wishes and abilities.

d) Promote skill and career management

Forthac consultants help companies get a better knowledge of HR management and career development through sensitization operations, exchanges of practices, diagnosis and implementation of concrete action plans, supervision of implementation. They provide companies with dynamic skills management software, practical guides and tools dedicated to occupational mobility and an original method (based on labour psychology research, developed with the University of Paris X) for analysing the attainments and skills.

3.3.3 2.3.3. APPAREL EDUCATION AND TRAINING IN THE WEST OF FRANCE

As in most places in Europe, the image of the manufacturing TC sector in the area is not very attractive to many potential entrants as company closures, low wages etc. have been the most conspicuous aspects of the industry for several decades. It is therefore quite difficult to attract young valuable entrants to replace an aging workforce. However the area is very dynamic and well-known in France for its achievements which considerably helps improve the industry image. Mode Grand Ouest and local businesses devote much time to communicate in schools and at public events about the TC industry and its attractive aspects.

Local vocational education is mainly concentrated in 2 institutions, further described in Section 2.3.5, the Lycée de la Mode in Cholet and Angers University. Both succeed in attracting promising youth from all

⁴⁸ Parcours Modulaires Qualifiants

over France as they offer programmes which lead to stable, future-looking and rewarding positions in the sector.

For what concerns workers' training the offer is fairly diversified: there is a large number of free-lance experienced teachers and also a number of more or less well-known organisations like AFPI, Alpedia, Informa, GII, IFTH (further described in following chapter) notwithstanding the trainings supplied by the Chambers of Commerce and the sessions around particular software tools like the one provided by Lectra Systèmes. The training offer is both well diversified and both, with the help of Forthac, well known and well conveyed to the public concerned.

3.3.4 2.3.4. CONTENTS AND SKILLS TAUGHT

As far as workers' training is concerned, contents and schemes do vary according to the needs of companies and to the positions of workers concerned. Over the decade, training contents have been designed and improved to provide the skills demanded by the industry as described above.

-Modernisation of techniques

At manufacturing floor level operators have had to acquire modern technologies and in particular the use of computer aided design (CAD), computer aided manufacturing (CAM), and all techniques relating to prototyping.

-Multiskilling

At the same time operators have had to become multi-skilled to allow more flexibility towards clients. Not only had the operators to learn new techniques but they also had to become time efficient in their new tasks, which requires a long time of practise/analysis/optimisation and ergonomics.

-Luxury specialisation

Operators and middle managers have had to learn some traditional techniques demanded by luxury and couture clientele such as bias taping, hand stitched finishings, pocket piping etc. They also had to be made more aware of the level of perfection that is required and that concerns the whole garment manufactured, including ironing, labelling and packaging phases. Quality controllers have had to be trained to ensure the level of total quality demanded.

-Management techniques

Facing major market and strategy developments requires a better ability for executives to handle many issues, be it to elaborate relevant strategies or to implement them successfully within one's company and its workforce. This challenge has driven many new and older managers to invest in their own training.

It is interesting to notice that the level of training has climbed over the years: from basic low-tech training 10 years ago to highly specialised contents today. In parallel training sessions have changed from

a large majority of inter-company trainings to custom-made intra-company training sessions designed for one company at a time.

3.3.5 THREE MAJOR PLAYERS

- **Cholet Lycée de la Mode and the E Mode Platform**

Cholet Lycée de la Mode is the largest Lycée in France for clothing education and the only one to be focused on the sector. It is also the only one to develop both academic and industrial (apprenticeship) routes in France. Due to its specialisation and degree of recognition it attracts youngsters from many areas of France.

It currently educates 320 youths (98% girls) to the trades and crafts of apparel, textile and leather. The number of students has remained stable since the beginning of the 2000s despite the employment losses the sector has incurred over the period. However training levels have significantly risen: in 2000 becoming a multi-skilled machinist required a mere CAP⁴⁹, i.e. leaving school at 14 or 15 years of age. Now the same job has much increased in technical requirements and the level demanded by companies is the Vocational Baccalauréat (17 to 18). Similarly product development positions now require a BTS⁵⁰ or Licence⁵¹ level instead of a Vocational Baccalauréat 10 years ago.

Students normally enter the Lycée at 16 and leave after 3 years with a Vocational Baccalauréat level or diploma. A number of them (90 on average) continue studying to get a BTS degree in 2 more years. A few go on to get a graduation (Licence) level in a further year.

An increasing number of them choose to follow an industrial route by adopting Professionalization Contracts, spending part of their time working in a company, the rest at school. Such apprenticeship schemes have been launched in 2000 by the Lycée and now more than 300 apprentices have been trained this way. Demand now exceeds by far the Lycée capacity: out of 90 applicants only 15 can be accepted each year.

The Licence course has been launched in 2004, aiming to fill positions in product development. Its curriculum and management are much more flexible than traditional BTS and can be better tailored to local industry needs.

⁴⁹ Contrat d'Aptitude Professionnelle

⁵⁰ Brevet de Technicien Supérieur, a diploma preparing for a job, taken 2 years after Baccalauréat.

⁵¹ Licence: Baccalauréat + 3 years of study at a higher education institute

Whatever route is chosen, the 25 Lycée teachers equally split curricula between general academic subjects and vocational technical ones. Those remain up-to-date in their teachings by spending 4 or 5 days each year in local factories. Cholet Lycée provides a response to the objective of keeping parity of esteem between academic and vocational routes, probably one explanation for its wide appeal. In many classes one or two professionals with a particular training need are integrated and follow the curriculum with their younger counterparts; this provides a stimulus to all, a deeper sensitivity to real situations and problems incurred in factory life.

Relationships with companies and their actual needs are ensured by different means: apprenticeship schemes, collections designed and prototyped by students, for example for Decathlon swimsuits collections, or other tutored projects like ethical garments, garments for handicapped consumers, done by students at no cost for the company.

In 2004, a very innovative initiative has come to life: the E-Mode Platform⁵². In 2002 it has been observed by clothing associations and all other stakeholders that subcontractors were asked or urged to integrate a larger scope of responsibilities on the finished garment and should be able to suggest new ways, other fabrics, processes, propose alternatives etc to their clients. The Platform was first launched as the Lycée laboratory. Since more than two years it has become a tool at the disposal of companies also to help them in prototyping matters. This platform is equipped with small volume numerical printing machines that allow economic⁵³ printing of a few meters of fabric at a time. It also presents other numerical equipment like 3D tools or numerical cutting systems. It is used for training purposes and is also used by companies for prototyping and other business needs.

- **The University of Angers**

The University of Angers through its Cholet campus offers several courses in higher education dedicated to the apparel clothing and textile sector. Since 2004 the professional License "Fashion and high technology" tries to bridge the gap between engineering and design studies by focusing around several themes:

- Scientific constantly developing technologies related to design, materials, apparel production and prototyping
- General knowledge, fashion culture, economics and language,

⁵² E Mode is a Regional Technological Platform, which has obtained certification from the Ministry of Education and Research. It is dedicated to TC industry and promotes the use and transfer of digital and other high-tech technologies like digital printing, 3 D pattern-making and design, augmented reality techniques.

⁵³ Average cost of 15 to 20 euros per printed meter , but the unit can be used for printing at a competitive cost quantities up to 5,000 meters;

usually English-Human skills: communication, collaboration, management, occupational adaptability, intercultural communication.

The curriculum is delivered with a strong interaction with the business place: 30% of lessons are given by professionals; long internships are provided; teaching materials include several professional case studies. Most of its 30 students (100% female) already have a foot in business life and in companies as they follow a Professionalization Contract. Thus they can be almost certain that a job will be offered them at the end of their studies. This programme is quite attractive and out of 150 candidates only 30 can be admitted to participate. Students come from the Ouest (30%) but also from all over France.

Since it started this programme has been improved in adequation to industry needs: provide students with a higher viewpoint and the ability to handle abstract concepts on the one hand, and on the other hand, a better ability to master clothing technologies in a practical way.

As industry needs are regularly upgrading so are the University curricula: in September 2011 a Master programme is being launched to educate potential ready-to-perform product managers.

The University has been working for several years with other European institutes within the Erasmus framework, especially London College of Fashion, Epsom University and possibly soon, the University of Iasi in Romania. These partnerships help develop the intercultural spirit and abilities of the students.

- **The Institut Français du Textile Habillement**

IFTH has the status of a Technical Industrial Centre, i.e. a non-profit institution with a dual State-profession governance. IFTH is the major player in France and locally for vocational training and research in the textile and apparel fields. In the Ouest, a staff of 7 trainers carries out 5 to 600 hours of training each year. It represents one fourth to one third of the total amount of training in the area. IFTH estimates that some 80% of the local middle management population have been trained at least once by them.

IFTH training catalogue covers a large variety of themes, from basic levels for entrants to very applied or very sophisticated programmes for production staff and white collar workers.

Over the years IFTH offer has diversified towards more white-collar training issues and an increase of training for executives in market knowledge and HR management essentially.

- Another player can be mentioned in addition to these three major ones: **Dinamic Enterprise.**⁵⁴

In parallel with Forthac's work with executives, this specific ambitious programme has also been very helpful to the area and to the clothing industry. Since 2007 the Programme Dinamic Entreprises has been

⁵⁴ See detail in Appendix 2.

helping local industrial SMEs reach better performance levels through an increased knowledge in key areas: strategy building, action and change management, specific competencies necessary to the development of the company.

Initiated in the Ouest area the programme is now beginning to be implemented in other regions, and is already available to the SMEs of Picardie.

The total cost of €19,000 per company is split up between subsidies from the European Regional Development Fund for 37%, State and Region for 18.5% each, the remaining 26% being paid by the company. The objectives of the overall programme 2007-2013 are to reach 2000 SMEs with a total amount of subsidies of 28 million euros.

This 9 month programme, which mixes information sharing, coaching periods and eventually leads to the development of Parcours Modulaires Qualifiants, has succeeded in effectively enhancing SME's management and strategic skills. It is tailored to their specific features and visions. Details regarding this very successful programme (91% satisfaction) are given in Appendix.

3.3.6 VET practices

As far as students education is concerned, despite coordination efforts made by all protagonists a gap remains between the competence and skill level of the youth coming out of their schools and universities and the skills expected by the companies. Several interviewees mentioned that it may take 3 to 5 years for companies to complement the education and training received. To a large extent this perceived gap can be attributed to a difference between the points of views of educators and those of the companies. In short the education world tries to prepare individuals for long careers that will probably lead them onto unknown territories: an adequate passport can be derived from humanities and conceptual skills. On the contrary companies want to have ready-to-work individuals, quickly efficient at their work station, a shorter term perspective which probably explains part of the disappointment with the education provided by institutions which is judged too academic.

One very relevant initiative, Professionalization Contracts, have been set up locally around 2007: they allow 100 youth per year to follow classes in an institution and work part time in a company until they pass their Professional (Vocational) Baccalauréat.

For what concerns workers training, the Ouest of France has achieved a massive up skilling of its workforce. In order to cope with the lacking in the skills demanded by market evolutions and by companies themselves, a considerable effort has been conducted since a decade and more. Thanks to its anticipation capacity and also its consensual strategy -due to its tripartite decision making body-, Forthac has been in a position to help companies bridge the gaps between their existing capacities and the objectives they had set to reach. This has been made possible within the framework of National Pilot Agreements signed by the State and Workers and Employers Unions since the beginning of the 2000s.

The Ouest area stands out as a particularly dynamic area for apparel training as it represents 40% of national training investment for an approximate proportion of 20% of the national workforce. Consequently local companies have shown a growth in their training investment of approximately 15% per year throughout the period according to Forthac statistics.

Over the decade in the Ouest area, Forthac's staff has thus grown from 2 to 13. Forthac's consultants have managed the training of more than 7,000 workers of all levels of all ranges of positions in the clothing and textile sector. Forthac manages the largest part of local training, probably over 70% of the expenses made and all of the ones covered with collective public fundings.

The typical breakdown observed in 2010 shows that about 90-100 companies are currently involved each year, half of them being SMEs of 10 to 49 workers, another third being larger units with more than 50 employees. Over the 2000s the number of workers trained has reached an estimated average of 1,050 individuals and a number of hours of 85,000 per year corresponding to a total budget of 3.5 million euros per year. 60% of the 1500 Qualifying Certificates awarded in France have been delivered to Ouest textile/apparel/leather workers, with or without a specific training input. Qualifying schemes lead to certificating primarily multiskilled sewing machinists (59%) or sample machinists (22%).

Workers trained can be broken down as follows:

- 77% blue collar, 22% white collar workers and 1% managers
- 95% female
- 60% aged 45 and above.

Financing training

At national level, according to a representative measurement elaborated in 2009 concerning the 2006-2008 work programme, the funding for these training operations has been provided by companies themselves (27%), State/region funds (20%), European Social Fund (14%) and Forthac (39%). The ESF funding has gradually decreased over the years: from 20% in 2003-2005 to 5% in 2010. The basic principle is that Forthac's levies and other fundings represent no more than 75% of total costs, the rest being paid by the company. In these costs are included trainers fees and expenses and the time spent by trainees.

In the Ouest the State/regions have supplied a much larger part of the funding (35% in 2010) and ESF a smaller one which has eventually come down to nothing in 2010, and no ESF funding has been used since 2008. The reasons invoked by the local players during the interviews are manifold:

- applying for ESF funding is extremely time consuming and requires a lot of bureaucratic work.
- the Ouest regions do not consider themselves as priority targets for the EU funds and local players consider their chances of obtaining requested fundings are low, making the whole process of application uneconomic.

- at the beginning of the 2000s ESF fundings were administered by local officials who were true advisers to the applicants as to the best ways to successfully apply for the most suitable training scheme and who were assuming most of the bureaucracy. Now the local administration has changed and processes have become both more rigid and more hazardous as to their success.

- the local Forthac is a multi-regional player (3 regions in this report and Centre-Limousin recently) whereas the funds administration is organised at the level of each region : a very fragmented approach, with no such things as economies of scale for the players is the consequence of this unbalance.

- payments are often made with 24 month delay.

- controls constitute a very heavy burden to companies and stakeholders involved.

As a consequence, local players consider ESF can be useful for large operations concerning many workers in a region such as English training or computer literacy classes. However, over the years, culture and appetite for training have grown among companies decision makers who now want customised approaches to be taken. This is why local training is made to measure for companies and individuals with a real consideration for their specific needs and constraints.

Benefits observed

All companies interviewed for the present report have declared themselves satisfied and often very satisfied with the local training system managed by Forthac. Through the interviews and the evaluations made by Forthac national controllers, the training strategies and policies followed by the Ouest regions over the last decade and still in action have brought many benefits:

- A significant upgrading of the workers 'skills and a reduction of unbalances between qualification levels due to gender and age
- Higher motivations for workers certified based on a heightened self-esteem, more positive vision of their future, more trust in their present employer and reassurance about their employability ; a better work climate is one direct consequence of it
- A much better matching between these qualifications and the needs of local companies, which have, for many of them, succeeded in reaching and keeping luxury brands as current customers
- A development of modern HR practises in companies and the spreading of true anticipative career management plans, with a much more strategic vision of training and up skilling
- A spirit of cooperation between companies that now allows the elaboration of partnerships – including commercial collaborations- and collective actions, for example to organise the setting up of a particular class or curriculum in a local private or public education institute or school
- Also a spirit of more open collaboration among other stakeholders like unions and clothing representatives, officials from the regions and from State and education and training bodies
- Increased value added, profitability and competitiveness of firms due to higher workers' competencies and motivations. Training helps companies sell products with a high wage labour

force content. From a broader perspective, Forthac local officials and interviewees consider that the training done has prevented 50% of local companies from closing over the recent years.

Training process

Very interestingly training practises have started with operators and gradually gone up the organisational flowchart, via middle management, to end with training schemes developed for companies 'executives. Training operatives allows to build a cooperative spirit at the local level, a climate of trust and confidence, on which diverse partnerships may be elaborated. For example workshops to share best practices on training and other issues have been and still are regularly organised for executives and owners of SMEs.

The typical sequence of training operations can be described as follows:

a) diagnosis

The first step of the process is an audit of the strategic needs of the company willing to invest in training. The owner or executive is thus provided with an expert objective analysis of its present situation, competitive position, and potential development areas. This audit is carried out by Forthac or by other specialists like Dinamic (see in Good Practices further) and leads to a training programme concerning a part or all of company's staff. At the individual final level, training routes and certification objectives are elaborated. The training scheme is designed including variety of contents and time frames adapted to the needs and constraints of workers individually. At this step the involved local Forthac consultant looks for suitable financings and sets up a financing plan including Forthac and other funds corresponding to the scheme considered.

b) preparation

Before a training scheme can be successfully started in a company a sometimes long period of time can elapse until a sufficient level of consensus is reached among the whole staff. This work of sensitization, coaxing, explaining, selling is a necessary step to ensure the scheme will give positive results. Companies' shop stewards play an important role in conveying the necessity of training, how it rises from a bilateral consensus and will be beneficial to the individual involved and not only to the company.

c) acquiring new skills

Be it to master luxury techniques, higher quality standards or modernised tools, training often starts with the acquisition of skills the company needs to achieve a successful repositioning. Non production workers may also be concerned with the acquisition of commercial skills.

d) multiskilling

The next step is to improve the flexibility of the workforce and help them master a greater number of tasks according to their capacities.

e) middle management up skilling

This first management level is key to ensure motivation and high achievement from the workforce, together with a day to day brushing up of recently acquired competencies. They are also key to improving manufacturing layout and ensure a higher level of ergonomics and efficiency for the whole unit.

f) executive training

For executives, training focuses on several major objectives: inform them of market developments and train them how to respond and anticipate. Marketing and strategy topics are thus covered by several organisations including the ESSCA business school in Angers. Local training organisms also play an important part in coaching executives about management issues, especially human resources management and the conduct of change.

Difficulties met

Most companies in the Ouest do not have a Human resource manager: the job is commonly shared by the accountant/secretary and the owner or executive. Sensitization to training needs and internal capacity to manage a training process are often both very low.

On the workers' side, even though the former fear of training is gradually disappearing, there remains a reluctance to change and to risk that can only be fought by a convincing description of the benefits to be gained for the individual concerned.

Training schemes are usually quite long to fill workers' needs and meet the Pilot Agreement standards: 100 hours is the average but some firms have gone through a 300 hours training time for almost all of their 55 workers. A few owners are deterred by such durations and would like to get only a few hours training, which is not possible through Forthac : individual solutions thus have to be found by tapping from the network of consultants available in the region but without any public funding.

3.4 BEST PRACTICES TO BE HIGHLIGHTED

3.4.1 A CENTRALISED AND FLEXIBLE SYSTEM

The Ouest of France and especially its historical apparel district around the city of Cholet, enjoys a tradition of real cooperation between all players but especially between firms, in a way close to the functioning of Italian Districts. This situation has strengthened as local clothing associations have gradually merged over the last decade, to cover the whole sector of clothing to get a louder voice in national decisions. Forthac is locally directed by the secretary general of this clothing association. All these elements give an idea of how narrowly stakeholders of all kinds do personally interact and network in the area.

This situation allows a good deal of discussions, sharing of views, debates to take place, so that a common educated vision of the future can be built and action plans collaboratively decided upon. It constitutes a both centralised and flexible structure able to move in concerted directions and following concerted strategies.

3.4.2 A KEY ASSET FOR THE INDUSTRY, FORTHAC

As in the rest of France, but with much more ambition than elsewhere, Forthac is used as a powerful tool to up skill local competencies and successfully meet competitive challenges. Training is not done per se, but in view of a strategic move a company has to make, a move that has to be validated by expert consultants.

The dual perspective of the company and of the individual is taken into account and this attention gives a lot of energy to the training policies implemented: confidence from the workers, willingness to try, courage to risk failure and on the other side in the end an efficient upgrading of company's competitiveness.

Training and evaluation schemes are helpful to workers beyond their present position in companies as they provide them with nationally acknowledged diplomas, very often the only qualification line on their biography. This factor should not be underestimated.

Forthac works as a wheel between industry needs expressed through its antennae and the establishing of qualifications for workers. Through an interactive process new qualifications are thus defined on an on-going basis and quickly lead to the definition of new positions, new labelled training routes and contents.

More than any other institution, Forthac provides companies with an ability to anticipate their Human Resource strategies. Its Observatory helps shed light on market trends, competitiveness issues and the development of new or emerging skill needs.

3.4.3 A STRATEGIC AND INDIVIDUALISED APPROACH TO TRAINING

The customised approach taken by locals to training is undoubtedly an asset to promote training and use it with efficiency. Companies are different, workers too, and no single programme can usefully be applied to all.

Training operations are usually very long as it takes time to learn, become efficient, and eventually completely master a new technique of whatever kind. This very length allows part of trainees to get a Certification of their achievements.

One of the local key success factors also probably lies in the fact that it offers training to owners and executives (through Forthac, IFTH, Dinamic Entreprises and others). In SME and other traditional firms top management often lack many techniques like strategy building, action and change management, specific competencies necessary to the development of the company and HR management. They also

lack information and market vision. The programmes offered by Forthac (like Cap Evolution with specific 15 days training) precisely target these needs. Training or coaching top managers to help them achieve better management and strategic techniques corresponds to a need which maybe the most crucial one in the apparel industry in Europe. As such it is interesting to consider it a very good practice to be promoted.

3.4.4 THE INVOLVEMENT OF UNIONS

A high quality social dialogue is put in practice in the Ouest, and promoted by Forthac's structure and working methods. It is very effective in ensuring shop-stewards 'involvement at company level and also to ensure that workers' development needs are also taken into account. Unions have come to consider training as a key to the future of the industry. As a Union representative puts it "training has become an issue for unions".

Unions do take an active part in Forthac work. Forthac's president is a Union delegate and unions are represented, as employers are, in Forthac's board and in their monthly meetings.

3.5 OUTLOOK FOR THE PRESENT SYSTEM

The national system of OPCA is changing to diminish the numbers of them and establish wider spanning OPCAs, covering more sectors of activity. As such Forthac is merging with OPCALIA, a non sectorized collector, which yearly collects 410 million euros, i.e. 7 times more than Forthac. According to all stakeholders things should not dramatically change in the transfer of responsibilities and sector's interests should be handled with not much alteration. However a certain number of companies worry as they deeply appreciate the present work done by Forthac.

The outlook for training itself is quite buoyant: companies have to and are willing to implement new training plans, in line with an extension of their activities, especially for luxury contractors, in the areas of fabric sourcing and logistics development. Perfecting quality performances and skills is also necessary to them and will be achieved through a continuation of existing plans.

As to executive training Forthac is considering the creation of a Management Certification, which could eventually lead to a labelling of companies, a strong competitive asset in today's global market.

3.6 CONCLUSION

The Ouest area is an example of how a traditional apparel making area has successfully repositioned itself on higher value added markets thanks to various factors, one of the most influential ones being an efficient training policy. It might be considered as an example to follow by other garment districts in Europe, by several of its good practices highlighted above.

However its situation is somewhat peculiar by different sides, and this impacts on the possibilities of transferring local practices to other places.

First of all the quality of its social dialogue is not to be compared with many other areas in Europe especially in the Eastern regions where this tradition is more recent. Moreover the local cooperative tradition existing in the Ouest can be found in a few existing districts but not all, and not in places where the industry is more scattered.

Another major peculiarity is the training tax levied on all companies. It directly pays for 40% of the training done and alleviates the price they have to pay on an individual basis to get training done. This makes training considerably more attractive to all than when no training tax is collected.

Forthac (to be compared with the Sector Skills Council Skillset in the UK) has no real equivalent in other Member States with the exception of the UK. However corresponding training policy bodies do exist in other countries, like Italy, Spain, Belgium, to some extent Greece. In other countries one could set up similar organisms based on a tri-lateral or at least a State-employers governance. They could fulfil missions regarding certification, assessment, anticipation and fund management. Forthac's operating budget amounts to 5 million euros approximately each year, for which funding should also be provided in the absence of a training tax in other regions of Europe.

4. TEXTILE EDUCATION AND TRAINING IN NORTH-RHINE WESTPHALIA

4.1 RATIONALE OF THE CASE

North-Rhine Westphalia was chosen for this case for its leadership in technical textiles and the excellent reputation of technological higher education institutes. In the region technical textiles represent the largest part of textiles, by far. As technical textiles undoubtedly are of the utmost importance for future EU competitiveness on the global scene, NRW constitutes an advanced European region in terms of industrial focus and worth studying as such.

Research for this case has been carried out mostly by means of 22 in-depth interviews with major stakeholders in the region, especially with education and training institutions and local businesses. Desk research has also been made to complement interview data.

4.2 THE INDUSTRY

a. Present situation of the Germany and NRW textile and clothing industries

With 6% of the total EU 27 textile and clothing employment, but almost 15 %⁵⁵ of the wages and salaries paid to the TC workforce in the EU, the German industry is a major economy of the sector in Europe. Average sizes of units are quite large SMEs (94 employees), by Western European standards. This dominance of companies with large revenue and a large number of employees per unit is an important characteristic of the German textile industry as a whole. It provides evidence of the industrial reality of the sector, with an important blue-collar workforce in factories and mills.

Textile and clothing industry has a long tradition in Germany, but has been in a critical phase for several decades. The clothing industry was one of the first branches to react to the internationalization process, and later to significant change of the mid-1990s due to globalization effects. Switching part of their focus from clothing manufacturing helped German industrialists turn to other markets. As such they recognize very early that their textile machinery industry was a major asset. This undoubtedly had a positive impact on the development of technical textiles.

⁵⁵ All data in this chapter, unless otherwise stated, are IFM estimate based on Euratex and Eurostat data 2009. See Tables 3.1 and 3.2 in Appendix.

Today, German textile markets are estimated to be clothing (for 20 %), home textile (20 %), technical textiles (60 %) ⁵⁶. Germany is the European market leader in the technical textiles sector which is projected to have the best growth potential due to manifold applications and high innovation grade. The technical textile industry displays all these characteristics of the German Mittelstand (SMEs).

Leadership upgrading in quality is of primary importance for German businesses. According to evaluations made by the German Industry Association, today, the German textile industry ranks 5th in innovative products rating ⁵⁷, just behind the German machinery industry (4th). The German electronics industry ranks 2nd, whereas the German chemistry industry only ranks 6th.

North Rhine Westphalia is the largest federal state in Germany with more than 17 million inhabitants. In the last decade, NRW economy has seen a steep increase in export orientation. In 2010, NRW earned 543 billion euros, 21.7 % of the total German GDP. Thus North Rhine Westphalia is economically the most important state in Germany, as well as one of the most important economical areas in the world.

The leadership of NRW textile industry is due for a large part to the presence of many machine manufacturers. Today the manufacture of machinery and equipment represents total sales of 41 billion euros and ranks as the second manufacturing industry in NRW, just behind the chemical industry ⁵⁸.

Major NRW textile areas are Münsterland, OWL (Ostwestfalen-Lippe), Wuppertal zone as Niederrhein with Mönchengladbach and Krefeld.

The local industry is largely focused on technical textiles even though the real number of workers in this field is not measured. As a matter of fact, it is difficult to evaluate how many employees really work in the whole NRW textile industry, precisely because of the importance of technical textiles. For example, the chemical industry offers specific materials used in technical textiles and reinforcement textiles are useful in composite industry. So a significant part of the employment of these industries, among others, should be integrated in the number of employees in the textile sector.

Due to the large part of local activity dedicated to technical fields, the employment is evenly distributed between genders, around 50% each. The age structure also appears well balanced, and not as old as in

⁵⁶ According Dr. Dieter Veit, academic director, ITA of RWTH Aachen

⁵⁷ See graph in Appendix

⁵⁸ Location Profile of NRW, NRW.INVEST, June 2011

any other textile areas in Europe, with a proportion of 25% of workers under 35, 30% in the 36 – 45 age group, 30 % 46 – 55 and 15% over 55.⁵⁹

Textile economy in NRW - 2009⁶⁰:

companies of the textile industry	221
companies of the clothing industry	84
companies of the mechanical engineering industry	30
“textile” research institutes	12
employees of the textile industry	35 000
sales of the textile industry	6.6 euros billion

b. Development of the Germany textile and clothing industry over the last decade

Over the years, what had fostered the success of the German textile and apparel industry has almost vanished and the machinery sector can no longer be considered a very determining asset to the sector. The machinery sector is still much oriented towards textiles but its customer base has moved towards the largest markets in Asia in particular. Developments are currently made in Germany for the largest textile and clothing producers in the world, like China or India. Similarly the very powerful chemical industry and its leaders like BASF or Bayer are significantly textile-oriented and most of the chemical companies do a lot of research to develop new fibres. Nevertheless, this textile chain is weakening. The machinery industry does not develop very sophisticated processes because main Asian end-users do not need them. This has created a gap between local industry needs and output of machine producers, as textile industry has gradually moved up market. As such, as in many high labour cost places in Europe, it increasingly focuses on niche markets, even for technical textiles. Firms have implemented major changes in their industrial organization to address the competition in niche market products with European countries and other high tech producing areas. As a consequence they do not represent priority customers to machine manufacturers and chemical firms, to the detriment of the cluster logic that prevailed one or two decades ago.

Over the last decade the German textile and clothing industry has lost a large number of manufacturing jobs and units to the benefit of outward processing areas namely in Asia. The number of units was

⁵⁹ Textilgewerbe (WZ 17), Brancheanalyse 2009, Untersuchungen zur Situation und Entwicklung der Branchen Textilgewerbe, Mai 2009

⁶⁰ Textile & Mode NRW - Structure and Activities, ZiTex, April 2010

almost halved, as total number of textile employees, but there was no significant change in the size of German textile enterprises.

Over the decade in the NRW area, the textile industry has also shrunk in proportion with the rest of Germany: 32% of units have closed, and employment has dropped by 42% between 1997 and 2007⁶¹.

Despite this decimation of the industry, over the same period of time, average wages per employee in textile firms have grown up as evidenced in Eurostat and Euratex statistics in Appendix, by 18 %. This represents a small growth rate in particular in comparison to the other regions covered in this report and to the apparel industry change. As said before, in Germany and NRW, local textiles - technical textiles included - have not become a tertiary industry over the years. A lot of manufacturing employment has remained and this explains much of the slow growth in average wages observed in the area. The increasing orientation towards textile (instead of clothing) and especially technical textiles has strongly helped gender and age structures to improve dramatically over the years.

c. Skills demanded by the industry

According to industry specialists interviewed in the area the proportion of higher education staff has increased over the years. This reflects the gradual change of focus from clothing to textile as higher education workers in clothing factories is estimated to be 6% to be compared to an estimated 10% in textile units.

In former times, most of these graduates were textile engineers, but today only 40 % of the production and development graduates still are. All the others are chemists, physicists, process engineers, machine engineers. Their level of education is often higher than before because they study applied and pure sciences and are able to understand materials behaviour and processing. Many PhDs are recruited from those areas of study. In the technical textile industry, textile engineering competences provide only production tools whereas knowledge about materials, physics, testing and other specialties is much more important. This is of course due to the very numerous and diversified application fields which use textiles and in which strictly textile knowledge is by far insufficient. This is particularly true for the composites industry and its manifold markets.

In fact, traditional textile education and training have become more and more clearly insufficient for modern textile industry in NRW. Especially in technical textiles problem solving lies in the knowledge of material specifications and behaviour. In this sector, it has thus become increasingly important to understand the physical, chemical and technical demands of a given problematic for technical textile products than to use well-known technologies like weaving or knitting.

⁶¹ More recent statistics available cannot be used for analyses over a long period of time, due to change in classification in 2008.

4.3 THE EDUCATION SYSTEM

4.3.1 GENERAL FUNDING FRAMEWORK FOR VET

In Germany, financing of vocational training and continuing training is based on a system of mixed financing with a variety of different backers, both public and private. They include several federal Ministries, the Länder, the Land Ministries of Employment, Economics, Education or Cultural Affairs, the European Union, local authorities, companies, unions, Chambers, associations, private institutions and, lastly, individuals themselves.

Under the Dual System the school-based element is financed by Land and local authority public funds. The Länder bear the costs of internal school affairs (e.g. supervision of schools, implementing curricula, teacher training, teachers' pay), and local authorities are responsible for financing external school affairs (e.g. construction, maintenance and renovation of school buildings, ongoing management, procurement of teaching and learning resources). Training in a full-time vocational school outside the dual system is financed out of Land budgets.

Inter-company vocational training centres, in which supplementary instruction of trainees takes place on behalf of SMEs, are funded by mixed financing - subsidies from the Federal Agency for Employment, central government (capital grants from BMBF resources) and the Länder are added to the resources of the body responsible. In practice SMEs usually finance the training services contracted out to a large enterprise with a training workshop.

Regarding CVET, enterprises, the State, the Federal Agency for Employment and private individuals themselves are involved in financing it. Individuals use mainly direct sources of funding, including loans and tax reliefs. More or less all German continuing education providers received their revenues from five sources of finance: participants/self-funding learners, companies, employment agencies, public bodies (municipalities, Länder, the Federal Government, EU) or the establishment's private-sector sponsors. Provider funding is frequently drawn from several of these sources. The most important source of finance for continuing education providers is from participants.

More detail on this general framework can be found in Appendix 3.

4.3.2 DUAL SYSTEM OF VOCATIONAL EDUCATION AND TRAINING

German youngsters can either go for a university degree, otherwise they will follow vocational training within the dual system where vocational schools teach general education while the young people receive practical training in companies (formerly called apprenticeship). These two official alternatives are highly regulated and most other forms are only makeshift solutions.

Thus anyone learning in Germany is a potential candidate to the dual system of vocational education and training (VET), which is followed by approximately 60 % of students. Companies provide apprentices mostly with practical training. Part-time vocational schools supplement company-based training by theoretical instruction. The system is based on statutory training regulations and on the range of traditional, updated and newly emerging training occupations. The training period is usually two or three years. Under the “Capital for Work programme”, SMEs can apply for low-interest loans whenever they recruit additional apprentices.

Teaching of the knowledge, skills and competences needed for an occupation is based on the typical requirements of work and business processes and prepares the trainees for a specific job. The training is provided in a company and at a part-time vocational school. In the company, the trainees acquire practical skills in a real working environment. On one or two days per week, the trainees attend part-time vocational school, where they are taught general and vocational knowledge related to their training occupation. When only a few young people learn a certain craft, the German states have agreed to teach young people from different regions in centralised locations. As they might need to travel quite far, teaching is organised in blocks of several weeks.

The Dual System is in constant development. According to the Confederation of German Textile and Clothing Industry⁶², the number of branch specific apprenticeships has increased by two thirds since 1994. The apprenticeship quota (ratio of trainees to employees in the branch) has more than doubled. Textile and clothing engineers are one of the most important occupations concerned. But vocational training and university studies in Germany still remain clearly separated, thus young people who have successfully completed a vocational training course are skilled workers, students who have completed a university degree become engineers.

4.3.3 A HIGHLY PRODUCTIVE LOCAL SYSTEM FOR TECHNICIANS AND ENGINEERS

In the NRW region, the number of students is higher than the German average due to the high density of higher education institutions and universities in the region. There are 14 universities and higher education institutions which can award degrees up to doctorate level, and 16 other universities of applied sciences. Many students are registered in technical subjects, such as mechanical engineering or electrical engineering. Education in engineering sciences has a long tradition in NRW, with almost 90,000 students in 2009-2010, 17 % of the total number of students⁶³.

⁶² Gesamtverband Textil+Mode, 2005

⁶³ Location Profile of NRW, NRW.INVEST, June 2011

A flexible and well educated workforce is seen as an important competitive factor for and by companies located in North Rhine Westphalia. Thus the Land parliament is investing large sums in the education system, in order to improve workforce educational level and make NRW region more attractive for companies.

In NRW, industry and education and graduation institutions closely collaborate and interact. Engineers of textile industry deliver teaching at the universities, and textile industry firms provide jobs to prepare bachelor or master theses. Textile companies send well-educated weavers to the university for studies. Usually industry pays the student's education and provides the student's first job in the company after graduation. The efficiency of this system is enhanced by a certain number of players who have taken and are currently taking an active part in the constant improving of this system at regional level.

In NRW, the Association of the North-West German Textile and Clothing Industry (TV Nordwest)⁶⁴ is a well-known local player in the field of training and further education. Among other responsibilities and actions, TV Nordwest supports the elaboration and practical implementation of training schemes, encourages the training of specialists and executives, and advises firms about funding opportunities in education.

The association has launched the virtual education network ViBiNeT (www.vibinet.de) that offers an industry-specific knowledge base to member companies. In recent years TV Nordwest has also developed a comprehensive toolkit of business and management skills.

- Another organisation of the sector worth mentioning is the Fashion.Net project. It is financed with the help of the EU "Leonardo da Vinci" programme, and develops instruments to support continuing vocational training in the textile sector. Working through 16 intermediary organizations in eight countries, Fashion Net promotes innovation and technology transfer to SMEs. The project uses a wide range of tools to encourage SME participation, including two major conferences, and workshops and training sessions in each participating country, and a database for technical resources.

- Finally ZiTex is another key part of the well-oiled NRW system. Since 2004 ZiTex⁶⁵ is an independent organisation with several sponsors including:
 - Association of the North-West German Textile and Clothing Industry (Münster)
 - Association of the Rhineland Textile Industry (Wuppertal)
 - IG Metall trade union's regional office for North Rhine-Westphalia (Düsseldorf)
 - North-Rhine Association of the Clothing Industry (Krefeld)and in close cooperation with the State Government of North-Rhine Westphalia (NRW).

⁶⁴ TV Nordwest is the largest regional association of German textile and clothing industry

⁶⁵ Future initiative textile NRW, based in Düsseldorf

ZiTex provides services to the textile and clothing industry to improve the general framework, efficiency and competitiveness of companies, employees and research institutions, in the fields of training (training institutions, reform of study-courses, support of regional training management, elaboration of teaching material for schools ...). ZiTex 's objective is to support cooperation of employers, employees and R&D institutes in order to improve the quantitative and qualitative match between skill supply and demand.

4.3.4 VOCATIONAL EDUCATION AND TRAINING

Education efforts are embedded in a system which strives to ensure access, quality, mobility and innovative ability to every potential entrant. The system is regulated according to the amended Vocational Training Act (BBiG- Berufsbildungsgesetz). Vocational training has been repositioned by Vocational academies (Berufsakademie) to the tertiary education level. The Berufsakademie offers an alternative to traditional universities and colleges of higher education. This concept was established as a new way of practice-oriented education on university level, fostering the integration of companies as active partners.

Before the last decade, standard criticisms of the local textile education and training system were a lack of vocational maturity, an insufficient awareness-building about careers in textiles at school, a deficit of social competences and motivation due to low employment attractiveness of the textile industry for young people. At the beginning of the 2000s the German Federal Institute for Vocational Education and Training (BiBB⁶⁶) carried a research project entitled "Basic principles for a restructuring of the vocational training for textile and clothing professions", in cooperation with the Confederation of the German Textile and Clothing Industry and IG Metall⁶⁷. The project aimed to develop an apprenticeship structure suitable to the current needs of the textile sector. Due to increasing internationalisation, and finally full globalisation, changing working and apprenticeship practices in the textile and clothing industry appeared as a clear necessity. In this context it was decided that VET should provide students with a maximum degree of flexibility for their future occupational careers. It is along those lines that the education and training system have been developing over the last decade.

NRW has 4 universities which offer study programmes in the field of fashion and textiles:

- University of Applied Sciences Bielefeld (fashion),

⁶⁶ Bundesinstitut für Berufsbildung

⁶⁷ Since 1998 the former members of the GTB are part of the IG Metall, the labour union of metal industry

- University Niederrhein-Mönchengladbach (textile and clothing engineering, textile and clothing management),
- University of Applied Sciences Niederrhein (textile chemistry, engineering, design),
- Rheinisch-Westfälische Technische Universität (RWTH) Aachen (textile engineering, textile technology).

The Federal Ministry of Education and Research (BMBF) supports training structure development through its Jobstarter programme, supplying funding for 200 innovative projects in vocational training. These projects are making an important contribution to structural development, for example by establishing cross-border training cooperation or launching collaborative training schemes.

The European Social Fund (ESF) is a key element of EU's strategy for growth and jobs targeted at improving skills and job prospects. The North-Rhine Westphalia region has been granted funding from the European Social Fund for further education⁶⁸ for a total of about 684 million euros from 2007 until 2013. One of the measures implemented since 2010 is the system of “training checks”⁶⁹ provided by the German Labour Ministry and supported by European Social Fund. These checks are available to workers who live in NRW and are employed in small or medium enterprises. This tool has made vocational training costs become 50 % cheaper (maximum 500 euros).

4.3.5 TWO MAJOR UNIVERSITIES IN THE FIELD OF TEXTILE EDUCATION

- **University of Applied Sciences Niederrhein - (Campus Mönchengladbach), Faculty of Textile and Clothing Technology**

Textile education has a long tradition in Mönchengladbach. Since 1971, all the applied sciences are concentrated in the Faculty of Textile and Clothing Technology. The Niederrhein University of Applied Sciences provides wider scope of competences. In addition to gaining expertise in the area of textile and clothing technology, students are educated in the fields of management, quality, environment, cross-cultural competencies and languages.

Today, all the textile chain is taught at the University Niederrhein - Mönchengladbach, from the fibre to the final product, concerning clothing, interior textiles and technical textiles. The motto is “creativity 50%, engineering 50%”.

Faculty of textile and clothing technology - Statistics and Facts in 2011

⁶⁸ http://www.arbeit.nrw.de/esf/in_menschen_investieren/index.php

⁶⁹ See <http://www.nordrheinwestfalendirekt.de>

Students in total (from 52 countries)	around 1650
male students	17 %
female students	83 %
foreign students	20 %
graduates per year	329
graduates in total	around 8 500

Students have to pay modest contributions for their education, approximately 1,000 € to 2,000 €. The best students get an education prize and they are sponsored by companies. In addition, companies help students with limited financial means (for instance, students from Bangladesh).

Degrees offered are Bachelor (B.Sc.) and Master (M.Sc.) within the Dual Study Programme (apprenticeship degree plus university degree). Master courses are totally English-taught. There is a great demand from the local industry for many textile applications, and textile and clothing education is very close to industry. Thus 80 % of projects done by students come from the industry. The employability of those students is very high.

Most of the graduates could get an employment before doing the graduation. TeXellence (Kompetenznetz Textiler Niederrhein) is a workplace-oriented network and help students with their integration in the host environment. Last year 95 % of new graduates have found a work position in Germany or abroad, within six months after the date of their graduation.

Learning contents

There are 3 focuses or specificities in Master: design, clothing and textile. The Bachelor program of "Textile and clothing management" is the most generalist and very welcome to industry.

Some core programmes can be described in some detail.

- The core study area in Textile Management delivers fundamental knowledge and insights extending from design theory via spinning, coating and finishing technologies through to quality management and quality assessment of textile materials.
- Students in the core study area of Textile Technologies acquire a particular knowledge of the relevant technologies used in spinning, weaving, knitting, narrow fabrics, finishing and technical textiles. The curriculum further includes studies in forward-looking technologies, and quality management.
- The field of Textiles in the Master of Textile Products programme provides graduates with an understanding of how intelligent and innovative processes and textile products are created along the whole production chain and through to industrial manufacturing.
- Technology KIA⁷⁰ Bachelor Study Course refers to different jobs like Textile machine operator, equipment operator, apparel sewers, apparel tailors, upholsterer, textile laboratory technician, textile product finisher, industrial clerk.

⁷⁰ KIA (Kooperative Ingenieurausbildung) - Cooperative Engineer Training: Textile and Clothing

Networking practices

The role of networks is considered strategic by the University authorities to improve textile education through collaboration. Thus TeXcellence (Kompetenznetz Textiler Niederrhein) connects the clothing and machinery industry and textile education to marketing textile. This network involves 45 very successful companies in the Niederrhein region, and organizes a lot of workshops to define current topics on problems of industry. TeXcellence - Textile innovation network - helps safeguard and increase employment in the textile business by promoting the new generation of textile and clothing specialists. Firmly interwoven with each other, enterprise representatives, academy and experts from the University work together, in order to develop textile solutions for tomorrow in innovative fields.

On the international stage, the Faculty of Textile and Clothing Technology cooperates with foreign universities for teaching and research, and exchange of lecturers and students (European countries and Russia, Poland, Turkey, China ...). Double-degree doctorates are available in collaboration with other universities of applied sciences (Université de Haute Alsace, Mulhouse, France; North Carolina State University, Raleigh, USA ...).

Other initiatives

The Faculty pays a lot of attention to building an attractive image. Many marketing events are set up: television programmes on textiles, job recruitment fairs, public speeches, graduation ceremonies. Lively presentations (talk shows, TV coverage) are broadcasted (Youtube.com, vimeo.com, spiegel.de, ...) within the framework of the nationwide Go Textile Operation. TV programmes concern varied subjects (experience in the fields of textile, garment, industrial awareness, modelling and simulation in the textile industry, catwalk reports, ...). Special events are intended for future female students, like "Girls' Day" in order to acquaint them with TC techniques. Seminars are also organized to inform the public and promote the image of technical textiles. Topics can be nanotechnology, future personal protective equipment, development of new fibres, 3D clothing etc.

The Faculty acts in concert with the Jakob Müller Institute of Narrow Fabric (JMINF), to promote fabric machinery and collaboration with research. Among other benefits, students of the Faculty of textile can thus create and experiment on Jakob Müller machines.

KOPF - Future textile and clothing (Textilien und Bekleidung der Zukunft) is a competences centre created ten years ago. An example of KOPF projects is clothing for kindergartens where textile is a tool to learn colours and grasp.

- **RWTH Aachen University, Institute for Technical Textiles (ITA)**

RWTH Aachen University was founded in 1870 by industrial initiative. It is now considered as a world leader in production technology, automotive technology, polymer research and development.

The Institute for Technical Textiles was founded as early as 1934. The Institute of Textile Technology (ITA) at the Faculty of Mechanical Engineering is now one of the largest institutes at RWTH Aachen. Its

core competencies include the development of textile production technology, new textile structures and applications, as well as innovative products such as fibre-reinforced composites and medical textiles. ITA employs more than 75 scientific staff, 40 service personnel and 130 graduate research assistants. Approximately 75% of courses concern technical textiles (fibres essentially) the rest being oriented towards professional sectors like textile machinery. ITA currently trains 40 textile engineers per year. General mechanical engineering is taught with a major in textiles or automotive.

Financing education

	share funding	
RWTH Aachen	10 %	state funding
Industrial funding (3T)	30 %	strictly private
Industry-Related Public Funding	30 %	partially public
Fundamental Funding	30 %	public

The grant from ITA for research and development (half a million euros from state government) subsidizes publicly funded research as well as academic and industrial education.

The grant from 3T (Textil Technologie Transfer GmbH) for development and transfer subsidizes R&D projects and further education.

More than 80 % of education funding comes from industry and this share increases every year. The ITA conducts research projects for industry and offers continuing education seminars and creativity workshops. Companies provide also machines for learning.

Learning contents

The Bachelor of Science (BSc) course offers a strong focus on mechanical engineering (mathematics, mechanics, thermodynamics, heat and mass transfer, hydrodynamics, electrical engineering) in addition to basics in textile technology. The Master of Science (MSc) course also offers a strong focus on advanced mechanical engineering (advanced heat and mass transfer and hydrodynamics, control engineering) and advanced courses in textile technology on a high level (e.g. composites, simulation).

BA and master students all have to carry out projects in addition to their thesis. The latter must have a direct industry impact. 10 weeks of industrial internships are required to complete both diplomas. ITA teaches students how to manage a project and they spend 80 to 90 hours on machines to do small processes tests. During the Master project, they have to lead a research project.

The practical dimension is highly developed throughout the education programmes and the word Applied, often used is really relevant. The Dual System is not in practice, but all students work during 26 weeks in industry, in a company, a laboratory, with a compulsory international experience. During the last semester, students are expected to organize themselves, to study quickly, because "It costs time not

to work quickly". This is a different approach from other universities. The international training periods or exchanges required from students allow them to collect extensive and surprising information in many countries, and to experiment best practices by international standards.

Relationships between the University and the industry sectors are narrow and interwoven with the work of researchers on the campus. At ITA, researchers present what they do to students who see thereby state-of-the-art products. There is a specific Master on composites (aircraft, wind turbine) where lectures are organized about textile, resin part, design and simulation. Regarding medical textiles, ITA cooperates with a private hospital (Artz Klinik) where a professor explains implants or tissue engineering. There is a research group and a real bridge between the clinic and the engineers. With regards to textile protection, like adding resin on textile, ITA acts in concert with the Institute of Plastics Processing at RWTH Aachen University (IKV). Concerning overlapping between NRW chemical industry, textile machine manufactory (components) and textile industry (kind of yarn), it seems that a cross-industry dialogue is created at ITA. ITA has a good collaboration with the chemical factories which produce materials for spinning made-man fibre yarns.

Through many types of collaboration ITA can determine what qualifications industry needs for graduates. Education contents are designed to correspond to these needs and students never have to look long for jobs.

ITA also offers specific vocational training with 10 courses in technical textile, textile machinery (weaving spinning), and apprenticeships to operate for the machine technical design. There is special training for niche market products, with 2-day seminars on particular subjects close to customers' needs. ITA has also established 2-week courses in September, for instance on composites in September 2011 (simulation part).

Local promotion of textile

ITA contributes to upgrade the image of the textile sector with different courses of actions.

University professors visit the local secondary schools to inform and sensitize pupils and teachers to the present realities of textile technology. They explain what kind of qualification is appropriate for the existing careers. School teachers relay information including aspects on technical textiles.

ITA opens two days for families to visit and receive information or short lectures for instance showing smart textiles.

ITA also organizes "Science track" at schools where they showcase what they do. The number of textile students is increasing and 60 to 70 % of students come from the NRW region due to this local textile promotion. Pupils often choose to go for a 2-week internship in the textile industry where one gives them an idea about technical textiles. So textile has locally gradually become an attractive sector.

Networking and cooperation

Globalisation and internationalisation in the textile industry have impact on textile education and training. ITA has students from all over the world, about 20 students per year from other countries, except China, which is perceived as a source of potential IP problems. There is a very specific contract for exchanges, to protect intellectual property rights. Currently, 10 % of the ITA board is foreign and the number of nationalities represented is increasing as a result of textile globalization.

ITA does not actively participate in Innovation Alliance of NRW universities. RWTH Aachen includes many institutes and has its own well-organized network. There is also a network to connect graduates to find a job quickly. A new cluster project focused on composites is emerging to bring together all sorts of facilities.

On the international scene, ITA presented an important exhibition at ITMA 2011 in Barcelona to promote textile machinery. At IFAI Advanced Textiles Europe 2011 in Barcelona, the Director of the Institute ITA, Professor Thomas Gries provided a presentation entitled "Latest Developments in Fabric Production".

4.3.6 INDUSTRY BASED VET

In Germany and in NRW a significant part of workers' training is directly held by the industry and organised on a regional basis. In some cases a permanent training centre has been set up to cope with local companies' needs. In other cases companies join efforts to set up training programmes in synergy. Both ways qualifications obtained may be certified for participants. An example of each system is presented here.

- **Technical Academy Wuppertal (TAW)**

After World War Two, the chemical and textile industries in Wuppertal were very traditional and needed modernisation. The TAW was created to rejuvenate the sectors but there were not many people who had skills to use technical equipment. Bayer had to help to found the academy and still is a predominant member of the TAW.

There are 10 similar training centres in existence in NRW, and elsewhere in Germany that deliver a technical education depending on each special local industry⁷¹. The largest one is "House of techniques" near Hessen.

Even though the traditional textile industry is weakening in Germany, employees still need to have a knowledge of textiles to understand how the textile is made and the specifications of textile products. TAW cooperates with Niederrhein University of Applied Sciences for special courses like safety textile or smart textiles. TAW collaborates also closely with STFI (Saxon Textile Research Institute in Chemnitz).

⁷¹ Like the regional centers of CNAM (Conservatoire des Arts et Métiers), the French institution of long-standing and deep scientific tradition

Local companies decide the types of courses the centre delivers, in collaboration with the TAW director who has to know the industry well to adapt the courses perfectly. 99 % of expenditure for training is paid for by companies. For companies it is very important that the centre offers state of the art knowledge and skills.

Today, TAW offers 40 % technical training (textile process, quality, civil engineering ...) and 60 % general training (management, leading capabilities, law, finance, production logistics).

Most often, the education plan is decided by companies' human resources directors. But it is important to note that, concerning technical skills, the training choice is rather made by the technical department

TAW does not yet use e-learning tools because these are not easy to develop. However 3 weeks after courses, TAW offers a special web access to course materials for students to make courses easier to understand.

TAW Cert GmbH has been set up as a certifying company for quality management systems and staff, and is a subsidiary of the TAW Technical Academy Wuppertal e.V. TAW Cert GmbH provides certification of further education and company employees. There are 3 kinds of certificates:

- First, certificate courses with block phases and correspondence lessons. For focused training, they have to define precisely the subject to be allowed to deliver a certificate.
- Second, for seminars or conferences, TAW delivers only a certificate of attendance.
- Third, accredited certificates are delivered when there are international standards with special accredited persons allowed to teach these courses.

- **Schmitz-Werke GmbH & Co. KG, Emsdetten**

Schmitz-Werke manufactures innovative mass textile products: ready-made awnings to protect from the sun, technical textiles which one finds a little everywhere (protection, small aircraft, filtration ...), curtains made with fire retardant fabrics, or with treatment for air (cleaning air inside room). Schmitz-Werke already applies nano-finishing techniques as the best form of protection.

With a traditionally modest proportion of graduates in the workforce, the company has used workers' vocational training for a long time and currently recruits a significant number of apprentices. Textile training is predominant while only 2 % focuses on ICT and software for machines. Schmitz-Werke spends an average of 10 000 euros monthly on vocational training. Employees take a "formation block" at vocational school (Berufsschule) with a final evaluation test. For special knowledge, an apprenticeship is organized in another company. At first glance, vocational training costs a lot of money, but it greatly help each employee to make the most appropriate choice for his or her career. Schmitz-Werke thus introduced Stufen (or Stufen) Model⁷² which is "an encouragement for the people who have the right motivation, to take part in a constant innovation process".

⁷² Lean Management and Turnaround Management

Every year, Schmitz-Werke GmbH & Co, and two other local firms, EMSA GmbH and Wedi GmbH organize their Week of Vocational training on the premises of Schmitz-Werke. Different programmes aim to improve textile and technical know-how. Trainees can obtain certificates after final examination in nationally recognised recognized qualification. Such programmes focus on a range of positions like industrial business management assistant, management assistant in IT, digital media designer, mechatronic technician, product designer, machine and plant operator, textile production mechanic, product refiner for textiles, garment manufacturer, industrial mechanic, and electronic technician for administration...

Certificates are delivered by the NRW Chamber of Industry and Commerce⁷³ but have a broader geographic value on the basis of bilateral agreements concluded between Germany and France and between Germany and Austria.

4.4 BEST PRACTICES TO BE HIGHLIGHTED

Over the last decade many efforts have been made by the education system to follow industry developments and consequent needs for competences and skills. This was the continuation of a dialogue and collaborative spirit existing since long in the area and note a radical change in the relationships between stakeholders.

In NRW textile world innovation and quality are consistent objectives pursued by textile businesses, education and training providers, research organisms. All these players have succeeded in building bridges between companies, researchers, engineers, students and trainees.

Education contents are close to needs, so graduates have little difficulties to find jobs in the sector they like most. In contrast with many other countries textile students are given strong textile technology knowledge base but they are also provided with necessary competences and skills in mechanical engineering and design for new machines. The latter is particularly important as technical textiles industries need special machinery, even customised equipment which is no longer directly supplied by the German textile machine.

In NRW region, there is a strong overlap between the chemical industry, textile machine manufacturers and the textile industry that helps the region to hold a real technical textile leadership. Innovations involve cross-sector technologies as technical textiles are often combined with other materials. Tomorrow, textiles will be integrated in a lot of new flexible materials with remarkable functionalities, and involving new scientific and business partnerships. As such collaborations that have become

⁷³ Level of the certificate (national or international): ISCED 3B

traditional with chemical and mechanical engineering have to be extended to other fields of knowledge and education, and a wider cross-disciplinary approach be built as an asset for the future of textile education.

The sector benefits from an image which has been considerably enhanced over the decade in order to increase the recruitment of promising youth into the sector. In the NRW textile industry, there are rarely very large companies. Most textile factories are located in small cities, so there is no problem to hire the right people, to attract them locally, and textile promotion is largely a local question, which is carefully addressed by VET stakeholders as a key issue for the future of the industry.

- **High quality large size education players**

In NRW several universities, not all of them described here in detail, have achieved an internationally recognised level of excellence. Their interaction with industry is certainly a key to explain their adequation to industry needs and high placement rates for graduates and masters. Opened to international collaborations through students and academic staff they benefit from an input of foreign competences, information and knowledge that help them keep their advance. Universities are embedded in an active open innovation system which helps them connect with industry, foreign counterparts and students.

Their levels of funding allow them to enrol promising students whatever their financial means. They also allow them to deliver such a high quality of education and training. With several hundreds or even thousands of students in education institutions, a good level of economies of scale is reached : back up functions, common courses and investment in equipment can be ensured economically.

- **Industry involvement**

A special point must be made regarding the level of involvement displayed by the companies who deeply interact with the education and training system. Involved in the validation of curricula, in the definition of educational objectives, in the actual lecturing and teaching of students and trainees, in the financing of courses and equipment, in hosting secondary pupils on their work experience tour, and in recruiting apprentices, NRW textile industry pays a large tribute to the education and training of its youth.

- **The Dual System**

The generalisation of this system is an extremely positive asset for all technological studies provided by universities. Students can benefit from an early experience with company life, management practices and practical objectives. These early connections students may have in their apprenticeship years with company life may explain, at least in part, why public and private sectors collaborate so successfully in the development of innovations, as has been evidenced in recent innovation research⁷⁴.

⁷⁴ L'Innovation Dans les Entreprises, moteurs, moyens et enjeux Ateliers de la Compétitivité DGCIS-IGPDE 19 May 2011

However, vocational training and university studies in Germany still remain clearly separated despite the efforts by Universities of Applied Sciences to make their programmes more attractive to students by including substantial practical experience.

- **Promotion and early sensitisation**

The image of the textile sector has certainly improved over the years in NRW, thanks to the work done by universities and industry to address the young population and inform them about the jobs, competences, studies and qualifications available to them in the textile industry. It is very useful as textile suffers from a poor knowledge among the general public of the reality of its careers. Reaching out to families and pupils at schools probably helps, in an unknown number of cases, to switch naïve dreams of studying fashion design towards more realistic expectations in clothing technology or marketing.

Communication skills have to be used when one tries to increase the attractiveness of a sector. Words are important. For example the NRW authorities have renamed in 2007 the two-year training programme called “textile darners” to “product examiners”, which better values the job concerned and is much clearer to understand.

4.5 OUTLOOK FOR THE PRESENT SYSTEM

In the last years, demographic change has emerged as one of the main future challenges for the NRW region. Since 1995, the population development is nil with a total of less than 17 million people in 2010 and 25 % over sixty years old⁷⁵. The process of an aging workforce is obvious, whereas human resources directions tend to concentrate on younger members of the workforce. Adequate measures are essential to keep innovation capability high, and to avoid negative consequence of a mismatch of workforce supply and demand. The aging textile workforce should be suitable to specific vocations like consultancy or teaching due to its large experience.

According to ZiTex some changes in education of textile industry are to be expected in the near future. A certain number of challenges remain to be met for the industry to remain very competitive on the international scene. To identify them with most accuracy, ZiTex has recently started a new project to analyse the situation of education and training in NRW textile and clothing industry. First results are expected in 2012.

However one can consider some points as relevant directions for work.

One is an increasing need for competences in the area of fibres. Till recently the biggest fibre and monofilament producers had specialists who could explain what type of material one has to use to fulfil specific demands. Nowadays this is no longer the case, as service provision in Europe has been limited

⁷⁵ Location Profile of NRW, NRW.INVEST, June 2011

for cost reasons, and as many of today's producers are located in Asia. The fibre and monofilament industry used to be an advisor, today it is a mere supplier to the textile industry. So the textile industry has to have its own specialists who know the relation between material specifications and product demands. Textile industry needs specific skills suitable to these new textile vocations.

The EU economic strategy 2020 is the new major strategic guideline for Europe since the Lisbon strategy of 2000. Concerning Knowledge-Based Bio-Economy (KBBE), five key topics emerge in North-Rhine-Westphalia including biopolymers and biofunctional materials and surfaces⁷⁶. Two examples in which NRW shows potential are biofunctional implants and biofunctional textiles. Various disciplines come together with biotechnology depending on the application like material science and textile technology. Among other similar new fields of education and research, applied biotechnology should be integrated in the curriculum of skilled professions like textile engineer to create an accurate future-oriented knowledge base.

4.6 CONCLUSION

The situation of the textile industry in NRW is typical of a high labour cost country: a highly educated workforce, living in a multi-technological environment, and benefiting from the cross fertilising of numerous education, research and business activities. Such a pattern is not within the reach of many EU Member States in its complete form, but some of the best practices observed in NRW can certainly be transposed to a number of other regions.

Efforts to reach a critical size in technological studies should be made everywhere as markets are not very local and students would go to universities somewhat distant from their home places provided they had the right level of equipment and quality of teaching and training.

Another very attainable factor is the openness to foreign cooperation, which eventually helps upgrade the whole knowledge level of the area concerned.

Promotion activities can also be carried out without significant financial investment, but some dedication of the academic staff. In particular the practice of visiting secondary schools seems very easy to emulate and capable of enhancing the attractiveness of the sector.

The best practices in education developed by NRW institutes could be transferred to other universities or regions by means of bilateral cooperation or multi-lateral ones like through Autex joint programme developments.

⁷⁶ Nordrhein Westfalen auf dem Weg in eine wissensbasierte Bioökonomie", Ministerium für Innovation, Wissenschaft und Forschung des Landes Nordrhein-Westfalen, 6. June 2011

5. CONCLUSIONS

The analyses done in the three regions covered in the present report shed light on the different causes of VET difficulties of successful implementation in Europe. They also suggest a number of good practices that could possibly be disseminated to other regions.

5.1 VET DEVELOPMENT: 4 FUNDAMENTAL LOCK-INS

- **A lack of shared vision and anticipation strategy**

The initial situation of each region was one of modest synergy between players in the realm of education and training. Even though France Ouest and North Rhine Westphalia are both regions with a collaborative tradition due to the major restructuring each has weathered, no common vision regarding competitive outlook and the principles of viable strategies for local firms was elaborated 10 or 15 years ago. The progress made in all three regions has involved a more fluid circulation of information, more open discussions, the destruction of political barriers between players and the implementation of collaborative decision-making processes.

At all geographic levels sectoral adaptations demand better anticipation, more focused and better directed public action. Recent research on the European observatories for employment and qualifications⁷⁷ revealed a poor level of knowledge and anticipation in most Member States regarding these issues, largely attributable to a lacking in social dialogue and cooperation between social partners within firms, regions, and Member States especially new ones.

- **A lack of transparency in careers and studies**

The observed lacking in technological recruitments in Europe is due to a lower attractiveness in technological careers and in training, which is, in turn, largely due to the opacity of the TC VET systems. Students choose universities and schools on the basis of their reputation more than with a clear knowledge of the competences they aim to provide and the actual level of consideration the institutions enjoy among professionals, especially business employers. This phenomenon has consequences in two

⁷⁷ European Network of Textile and Clothing Observatories for Textile and Clothing (IFM research report commissioned by FSE-THC and Euratex, 2009)

correlated directions: it works as a deterrent from technical fields and as an emotional stimulus in favour of fashion design.

- **Lack in critical size**

In the field of specialised higher education there is an increasing lack of economies of scale as cohorts tend to decrease particularly, again, in technological fields. In many regions, classes shut down and specialities disappear. Cooperation between institutes is developing but a lot of work remains to be done. This lack in critical size has many negative consequences : promotion and back-up functions are not properly handled, market position and relative importance to employers is below optimum, international cooperation practices are underdeveloped and the equipment for technical labs or clothing workshops is far below the industry current standards. In general it can be said that this fragmentation tends to lower the grade of quality of clothing and textile VET in the EU and its chances of further successful developments.

To try and reach an improved critical size higher education institutes are encouraged to and enrol more students, as their funding is most often uniquely based on the number of students they enrol, whatever their chances of finding adequate employment, financially in line with what they expected within a reasonably short time. However in some universities like in North Portugal, fundings are for a very significant part correlated to the number of students actually placed in industry after graduation.

- **A point has also to be made regarding the well-known lack of attractiveness of technological studies** and careers. This issue is particularly concerning for EU students. Foreign students can be and actually many are attracted by the financial level of PhD grants, quite high in comparison with the wages or subsidies they could receive in their home countries. Moreover many contents are too traditional (spinning, weaving etc) to attract youth from highly developed industrial countries. One may deplore that many of those foreign students leave the EU after graduation and that their competences are not directly used by the European industry.

5.2 GOOD PRACTICES OBSERVED AND RECOMMENDED FOR DISSEMINATION

Some initiatives analysed in the three regional reports above should be highlighted as they successfully address major problems and lock-ins which negatively impact on textile and clothing VET and on industry competitiveness.

- **Foster the elaboration and implementation of sector specific strategies**

The existence of sector councils for employment and skills, in some Member States and for specific industries, is very instrumental in helping industry build efficient strategies in vocational education and training. These councils are exemplified in the present report by two extremely efficient and structured bodies: Skillset in the UK and Forthac in France. Their core missions are somewhat different as Forthac plays a larger role in the implementation of strategies at local and company levels while Skillset is

focused on strategic thinking and the elaboration of wide spanning cooperation with initial and continuing VET players. Both provide industry with vision, based on reliable research and studies, and help build consensus between stakeholders, thus directly fighting against the first lock-in mentioned above. Skillset works as a hub, organising discussion sessions with businesses, universities, training bodies and local authorities. Skillset is “employer-led”, while Forthac’s boards consist of representatives of employers, workers’ unions and State both at national and local levels. Forthac is chaired by a worker’s unions delegate and its secretary general belongs to the textile employers association. Skillset is chaired by the employers association chairman. Skillset’s operating budget is around 2 million pounds per year, Forthac’s is approximately double (5 million euros).

Such bodies exist however with less responsibilities and budgets in other parts of the EU: Obiettivo Bilaterale Nazionale Tessile Abbigliamento Moda in Italy, Cobot-Cefret and Ivoc-Irec in Belgium, Tripartite Foundation for Job Training in Spain among others including Hungary.

These bodies allow a true forward-looking integration of business and VET stakeholders in one common dialogue, intended to enhance the mutual benefit of students, workers and industry.

- **Stimulate the investment on continuing training**

Where sector councils – such as described above, with the exception of the UK - exist, they are generally funded by a tax on companies based on the amount of wages and salaries they pay. This levy is used as an incentive to CVET. As evidenced in the France Ouest case, the stimulus is efficient as companies may use funds when they work below capacity and can take workers off production to up skill them, without jeopardising the delivery of orders in production. Such taxes dedicated to stimulate CVET already exist in several EU Member States, like Germany for certain industries, but not clothing and textile, Hungary, Poland and France. The European employers and workers associations (Euratex and FSE-THC) have started in 2007 to develop a European network of employment and skills observatories in the textile and clothing industries. The process is still continuing and it raises a lot of interest among existing and developing observatories in the EU and in Turkey. In line with this development the project of setting up sector skills council in the EU launched by the EU Commission certainly appears extremely positive. Such initiatives would help national existing councils learn from each other good practices and difficulties met, and cooperate to generate state of the art schemes together. Again, the lack of vision and anticipation which is the first sectoral lock-in mentioned in the above paragraphs would find very efficient remedies by the development of such actions.

- **Foster apprenticeship**

In all three regions apprenticeship schemes of one kind or another have generated, or are now generating, much interest among industry and VET players. In NRW as in the rest of Germany, the Dual System is very well established: the situation of apprenticeship is mature and the outlook does not present large expansion perspectives, but rather a stability of the practice.

On the opposite, the UK situation is that of a rebirth of apprenticeship which had lost interest for youth and employers since several decades. The present emerging relocation of a part of clothing industry is waking up many stakeholders to the benefits of such schemes to replace retiring blue-collar workforce.

In France, these practices are developing and reaching top levels of education, as is the case in Germany. This upgrading of students' levels certainly has a beneficial impact on the image attached to apprenticeship and gradually installs this parity of esteem between academic and vocational courses that is a key condition to increase the attractiveness of VET.

Through modern and attractive apprenticeship schemes the lack of appeal of technological and technical careers (second lock-in described above) can be fought. Developing apprenticeship is a good practice that could be disseminated to many other countries, even in case of very fragmented business structure. As has been observed in the London case, the fragmentation of the apparel industry makes it often difficult for small SMEs to recruit one or more apprentices. The development of a collaborative dialogue between players may help elaborate collective schemes, where one apprentice's time would be split between several businesses.

- **Foster mobility among students and cooperation between institutes**

It is acknowledged that Erasmus, Leonardo and Socrates programmes have allowed to considerably enhance student's mobility and the networking between higher education institutions throughout Europe and further. Many students in the three regions have used these programmes for their individual development.

In NRW several institutions are member of the Autex network which represents a good practice per se in industry VET. Autex network was set up in 1994 to facilitate co-operation amongst members in high level education in textile education and research. Its mission has already materialised by the E-Team Course Initiative. It is a high level programme, in textile manufacturing delivered by the most highly qualified academics in Europe. The programme is built on a total duration of 4 semesters each delivered in Universities located in a different EU country. Funding for the staff travel and accommodation is obtained through the EU Erasmus Exchange programme. The course is focused on textile technology and manufacturing. However E-Team only involves some 20-50 students a year hence it has little quantitative effect. It helps students, in particular from the Eastern regions of EU, get a top level education but may also lead, if they do not get back to their countries after studying to an eventual loss of competences for their home industries.

International cooperation with institutes in the EU, but also in other countries, allows to bypass the lock-in of critical size in education institutes. It appears in all regions studied as an important element to upgrade the quality of teaching and training delivered, bring innovative ideas into national systems, and considerably foster the mobility of students and consolidation of Europe.

- **Inform candidates and stakeholders : transparency and promotion**

Lack of transparency is a powerful TC industry lock-in and an obstacle to the development of efficient VET systems. In all three regions covered, business and institutions pay a lot of attention to informing candidate students, by visiting schools, holding open seminars, setting up Saturday classes for children etc. Future entrants need to know better about jobs and employability granted by the studies they have in mind. This area is one where all institutes may certainly improve. The prestigious London fashion universities will have to do so as teaching grants will be diminished in 2012 and as students' personal investment will be much higher than now.

In this area, the efforts currently made at EU and national levels to establish European and National Qualification Frameworks should undoubtedly lead to a better transparency, visibility and educated choices.

- **Provide an understanding of business issues**

In all three regions and also in a number of other places throughout Europe, education providers have expanded their curricula to include business subjects. Teaching a future designer or a future engineer, or a future sample machinist, some key elements of TC business management and marketing is a necessity for them to be able to assume more responsibilities throughout their career and ensure a greater mobility in their positions. As such it is an efficient tool against the lack of attractiveness of technological studies (see lock-ins above) as it suggests and opens new and attractive perspectives to students for their careers to come. The intensity of these teachings varies, according to levels and specialties, from some hours sensitisation to whole semesters with practical assignments. This is currently being implemented in design and engineering schools in two major ways : either institutions recruit teachers and invite speakers in managerial positions to interact with their students or they set up partnerships with management schools and universities to do so.

In the regions covered here, it is worth noting that almost all education and providers have done so: in London the London College of Fashion has been a herald of this move but many have followed, in North Rhine Westphalia, all institutes have come to cover these subjects. In London fashion designers education also includes entrepreneurship issues, to help young professionals manage a fashion business of their own. This topic is particularly relevant to fashion designers as they are most concerned with such career launches.

As far as technological studies are involved, this trend is fairly well implemented in Northern European Member States where trade tradition is pregnant. Those countries represent a very large part of higher technological education. In Southern Member States for what concerns clothing and textile design, students are much focused on artistic topics and less sensitised to those issues.

In higher education, this has bridged a gap between companies' needs for today and tomorrow and students first areas of interest. As far as training is concerned, the situation is more difficult to evaluate, but it seems that this sensitisation is more exceptional than common. In the Ouest of France area where

the manufacturing workforce can be deemed one of the most educated in Europe, some work has been done in this direction through training contents but also significantly through an evolution of the traditional boss-operator relationship: a more participative management relies on better understanding by all of the companies' survival issues and competitive conditions.

- **Foster the development of larger VET institutions**

Especially in the area of higher education universities and other players should be urged or helped reach a critical size – one of the major lock-ins described above - that would allow them to aim at specific leaderships on the global scene. Examples are here given : University of the Arts London has started to integrate – and seems on the way to success - 9 high ranking universities, largely in competition with each other, without depriving them of their emblematic identities; NRW universities have decades ago joined forces and efforts to achieve better specialisation. Significant economies of scale can be derived from such cooperation and be reinvested in value added activities like promotion, and a general pursuit of excellence.

The best practices observed and highlighted here quite closely match the recommendations made by the European Technological Platform, which focus on higher education issues. Their view is that institutions should network more efficiently and collaborate with other institutes in other countries and with the industry itself. Exchange of students, in company-training, internships, regular up-skilling of teachers, deeper involvement by industry executives and managers in the definition and delivery of vocational curricula should become natural practices. Their detailed recommendations for higher education programmes can be summarised as follows.

Within the European Technological Platform, the Education Horizontal Task Group advocates and works for the implementation of measures, some of them transversal, others that would consider differently the issues regarding Bachelors and Masters.

- For all levels of education e learning practices should be promoted and developed. The first step would be to elaborate on-line teaching materials in textiles and clothing in different languages with an on-line tutor support
- Increase management and marketing competences is another key factor to help students better fill EU companies' present and above all future needs
- Technical curricula would also be handled somewhat more efficiently and with more visibility if curricula were designed in clearer correspondence to their respective markets
- A practical way of handling the unbalance between design and technology respective attractiveness, which is at least partly due to a lack of knowledge of the actual job contents involved, would be to target information campaigns at fashion design undergraduates to try and transfer them to adapted technical programmes.

For other types of measures one has to distinguish between levels. For Bachelors, the objective should be to enhance the mobility of teachers and the use of major/minor distinction in regional student exchange.

- Promote the development of intense short thematic courses in the form of one week clinics with internationally mobile lecturers. (eco scale + quality)
- Foster more intensive alliances between higher education providers to offer a coherent set of major and minor degrees and so to offer a wider range of specializations to students. In doing so alliances can be regional (such as done in the Cirrus Network (Denmark, Norway, Sweden), the Cité Euroméditerranéenne de la Mode (France, Spain, Italy) or the Lowlands Textile Alliance (Belgium⁷⁸, the Netherlands⁷⁹, Germany⁸⁰). These types of initiatives provide the opportunity for students to study in a partner institution for a meaningful period of time, such as one or two semesters
- Promote awareness of the European industry amongst students by arranging industrial excursions, preferably in countries other than their own
- Facilitate international work experience placements in industry, based on expressed needs of TC companies.

A good example of a collaborative course is the E-Team course described above. Another is the joint masters of the Institut Français de la Mode with the Fashion Institute of Technology (New York) and Hong Kong Polytechnic.

In the three areas covered by the present analysis, but also in many other regions, one finds evidence that there is room in the EU for a modern textile and clothing industry with profitable and strong businesses emerging and developing on a variety of market segments. Europe definitely holds powerful assets to make this happen in many more places and for many more people.

In those regions competitive conditions and public support to TC industry are not very different from the rest of the EU territory. The singularity of these regions lies elsewhere. A significant part of it can probably be related to one common feature, which is constant in these areas. It appears there, that key players like SME owners, the local education staff and many other professionals in relation with TC industry, do devote a significant part of their time to communicate, network and share their passion for the industry. They have got accustomed to meeting frequently, discussing visions of the future and elaborating together anticipation strategies.

A lot of their energy is dedicated to change VET practices, adapt them to today's competitive conditions and to the pursuit of sustainable strategies for Europe. Their involvement strongly helps individuals and businesses take full advantage of the possibilities offered by existing resources, and among them, by national and EU funding. In the areas under analysis, these local economic players, institutions and associations have thus succeeded in supporting relevant business and VET strategies in their regions. They have also succeeded in contaminating numerous youths from

⁷⁸ Hogeschool Gent

⁷⁹ Saxion Universities

⁸⁰ Hochschule Niederrhein

neighbouring or remote places and urged them to join the TC industry in the light of this more opened attitude and enlarged environment.

All these people teach a valuable lesson to the whole industry. They show to all that VET can be the most adequate passport for Europe's TC industry to reach the status of a forward-looking highly competitive industry able to offer attractive careers to the coming generations.

5.2.1.1 TABLES 1: LONDON

Tables 1.1: Situation of Employment 2008

Situation 2008	Units		Employees		Employees/unit		Empl.as % tot MFG	
	UK	LONDON	UK	LONDON	UK	LONDON	UK	LONDON
TEXTILE	4 540	479	59 050	2 667	13,0	5,6	2,2	2,1
CLOTHING	4 058	1 138	32 863	5 548	8,1	4,9	1,2	4,4
TOTAL TC	8 598	1 617	91 913	8 215	10,7	5,1	3,4	6,5

Source Eurostat NACE rev 2

Situation 2008	Units		Employees		Wages per employee	
	UK	LONDON	UK	LONDON	UK	LONDON
TEXTILE	59 050	2 667	1387	41	23 489	15 373
CLOTHING	32 863	5 548	572	90	17 406	16 222
TOTAL TC	91 913	8 215	1959	131	21 314	15 946

Source Eurostat NACE rev 2

Tables 1.2: Evolution of Employment 1997/2007

UK MANUFG SECTOR	Number of units			Number of employees			Wages per employee		
	1 998	2 007	% Change	1 998	2 007	% change	1 998	2 007	% Change
TEXTILE	6 942	4 966	-28%	171 755	69 846	-59%	4,1	2,3	-1,8
CLOTHING	8 301	3 855	-54%	147 955	32 002	-78%	3,6	1,1	-2,5
TOTAL TC	15 243	8 821	-42%	319 710	101 848	-68%	7,7	3,4	-4,3

Source Eurostat NACE rev 1

UK MANUFG SECTOR	Number of units			Number of employees			Wages per employee		
	1 998	2 007	% change	1 998	2 007	% change	1 998	2 007	% change
TEXTILE	6 942	4 966	-28%	171 755	69 846	-59%	24,7	14,1	-43%
CLOTHING	8 301	3 855	-54%	147 955	32 002	-78%	17,8	8,3	-53%
TOTAL TC	15 243	8 821	-42%	319 710	101 848	-68%	21,0	11,5	-45%

Source Eurostat NACE rev 1

UK MANUFG SECTOR	Number Of units			Number of employees			Wages per employee		
	1 998	2 007	% Change	1 998	2 007	% Change	1 998	2 007	% Change
TEXTILE	171 755	69 846	-59%	3 565	1 924	-1 641,0	20 756	27 546	33%
CLOTHING	147 955	32 002	-78%	2 666	791	-1 875,0	18 019	24 717	37%
TOTAL TC	319 710	101 848	-68%	6 231	2 715	-3 516,0	19 490	26 657	37%

Source Eurostat NACE rev 1

LONDON MANUFG SECTOR	Number of units			Number of employees			Empl. as % of Total Manufg		
	1 998	2 007	% Change	1 998	2 007	% Change	1 998	2 007	% Change
TEXTILE	660	486	-26%	4 629	2 251	-51%	1,6	1,2	-0,4
CLOTHING	2 879	1 153	-60%	17 236	5 858	-66%	6,0	3,0	-3,0
TOTAL TC	3 539	1 639	-54%	21 865	8 109	-63%	7,6	4,2	-3,4

Source Eurostat NACE rev 1

LONDON MANUFG SECTOR	Number of units			Number of employees			Empl. as % of total manufg		
	1 998	2 007	% Change	1 998	2 007	% Change	1 998	2 007	% Change
TEXTILE	4 629	2 251	-51%	118	78	-34%	25 491	34 651	36%
CLOTHING	17 236	5 858	-66%	433	194	-55%	25 122	33 117	32%
TOTAL TC	21 865	8 109	-63%	551	272	-51%	25 200	33 543	33%

Source Eurostat NACE rev 1

Tables 1.3: The Fashion Education in London

NUMBER OF FASHION DESIGN STUDENTS GRADUATING IN LONDON MAJOR INSTITUTIONS	LEVEL OF STUDY											
	POSTGRADUATES			FIRST DEGREE			OTHER UNDERGRADTES			TOTAL		
	2010	2005	% CHANGE	2010	2005	% CHANGE	2010	2005	% CHANGE	2010	2005	% CHANGE
The University of East London				260	195	33%	20			280	195	44%
Kingston University	25			190	145	31%				215	145	48%
University of the Arts, London	425	200	113%	590	1070	49%	330	340	-3%	2 345	1 610	46%
Middlesex University				250	110	127%	45	55	-18%	295	165	79%
Ravensbourne				255	160	59%	15			270	160	69%
Thames Valley University				95			20	5	300%	115	5	2200%
Other Universities		10	-100%	60	10	500%	40	10	300%	100	30	233%
London Total	450	210	114%	2 680	1690	59%	470	410	15%	3 600	2 310	56%
Clothing/fashion design UK Total	810	315	157%	8 585	4435	94%	745	575	30%	10 140	5 325	90%
% London / UK	56%	67%		31%	38%		63%	71%		36%	43%	

Source: HESA Student Record 2009/10 (latest years available for comparison)

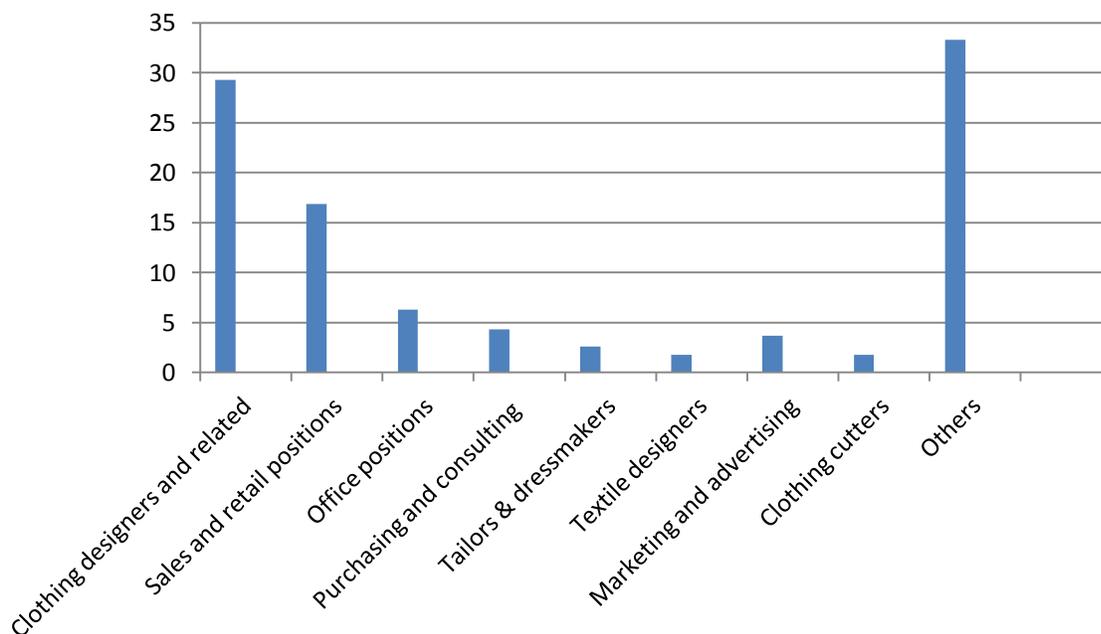
Tables 1.4 Students 'ages in Fashion Education in London

AGE GROUPS	% OF STUDENTS
18-20	36%
21-24	43%
25 and +	21%

Source: Higher Education Statistics Authority and Skillset 2011 (special research for present report)

5.2.1.2 FIGURE 1: LONDON

Positions taken upon leaving Fashion Design Education in the UK



Source: Higher Education Statistics Authority and Skillset 2011 (special research for present report)

This diversity reflects the diversity of the education contents themselves. Over the years institutions have opened their curricula to new fields of knowledge to broaden their audience, as the de-industrialisation of the UK fashion scene was taking place.

Funding For Initial Vocational Education and Training

Even though IVET and CVET certainly cross paths in terms of vocational provision, IVET funding is generally ensured through the local authorities (LA) or, following the development of new 'liberated' schools, directly to the school itself.

In terms of Information A and Guidance (IAG) Government funding to support the purchase of careers, IAG in schools will be allocated, at the school's discretion, as part of the entire individual school budget and not ring-fenced. Local authorities will no longer be expected to provide a universal careers IAG service but will retain a statutory duty to encourage, enable and assist participation in young people's education or training.

Schools are supported in developing and delivering their provision for work-related learning by an infrastructure of national, regional and local education business link organisations. These organisations encourage employers in their local areas to work with schools by promoting the business benefits. Government funding to support education business link activity is provided through consortia of education business link organisations working under contract to the Local funding authorities. The National Education Business Partnership Network (NEBPN), which operates across England, Wales and Northern Ireland, is an umbrella organisation for these organisations. In Scotland 'Targeted Pathways' programme was introduced in order to focus on school leavers who want to enter employment and link with sectors where sustainable job opportunities exist.

Funding for continuing vocational education and training, and adult learning

In England, current priorities for skills are set out in detail in Skills for Sustainable Growth. Up to 2014/15 the resource budget will be reduced by 25% leading to changes in the previous statutory entitlements, e.g., to free training for anyone who has not yet achieved a first full UK Level 2 qualification. Overall, there will be a rebalancing of investment from public spending towards greater contributions from individuals and employers. In Scotland Flexible Training Opportunities (FTO) support Scottish businesses with 150 employees or less by providing 50% of their training cost up to a maximum of £500 per employee, paid retrospectively to the employer upon receipt of evidence of the training occurring. They are delivered on a 'first come first served' basis rather than sectoral quotas to maintain a flexible and responsive approach. In 2010/11 over 5,700 FTOs were delivered with an expectation that in 2011/12 this will increase to 7,000.

In 2009, the National Apprenticeship Service was charged to finance and quality assure the national programme through its network of training providers. Apprenticeships in England are managed through a national programme, currently with a one billion pounds Government investment. In 2010 there were over 400,000 apprentices on 200 programmes. In Scotland ILAs are a demand-led source of Government funding which provides up to £200 towards the cost of learning and is available to all Scottish residents

with an annual income of £22,000 or less, or who are on benefits, which means that almost half of the adult Scottish workforce is now eligible for ILA support. The operational delivery of this programme is by SDS who currently provides around 22,000 eligible learning courses provided by over 400 providers. Learner uptake has increased over the last five years from 32,000 (2008/9) to 60,512 (2010/11) learners.

VET in HE in England will also be impacted by plans to allow Universities to set fees between £3.000 and £9.000 per annum, backed by Government loans which become repayable after graduation once a certain level of earnings has been reached.

Source: Cedefop Refernet report VET in Europe 2011

(See http://libserver.cedefop.europa.eu/vetelib/2011/2011_CR_UK.pdf)

5.2.1.4 TABLES 2: WEST OF FRANCE

Tables 2.1: Situation of Employment in 2008

Situation 2 008	Units	
	France	Ouest
Textile	5 485	615
Clothing	14 910	1 258
Total TC	20 395	1 873

Source Eurostat NACE rev 2

Tables 2.2: Evolution of Employment 1997/2007

Ouest manufg sector	Number of units			Number of employees			Empl. as % of total manufg		
	1 997	2 007	% change	1 997	2 007	% change	1 997	2 007	% change
Textile	595	671	13%	10 038	7 252	-28%	6	4	-2
Clothing	1 382	1 050	-24%	27 861	10 489	-62%	15	5,9	-9,1
Total TC	1 977	1 721	-13%	37 899	17 741	-53%	21	9,9	-11,1

Source Eurostat NACE rev 1

France manufg sector	Number of units			Number of employees			Empl. as % of total manufg		
	1 997	2 007	% change	1 997	2 007	% change	1 998	2 007	% change
Textile	6 666	5 378	-19%	131 785	74 389	-44%	3,3	2,1	-1,2
Clothing	15 589	12 183	-22%	117 971	53 461	-55%	3	1,5	-1,5
Total TC	22 255	17 561	-21%	249 756	127 850	-49%	6,3	3,6	-2,7

Source Eurostat NACE rev 1

Ouest manufg sector	Number of employees			Wages			Wages per employee		
	1 997	2 007	% change	1 997	2 007	% change	1 997	2 007	% change
Textile	10 038	7 252	-28%	182	183	1%	18 131	25 234	39%
Clothing	27 861	10 489	-62%	405	221	-45%	14 536	21 070	45%
Total TC	37 899	17 741	-53%	587	404	-31%	15 489	22 772	47%

Source Eurostat NACE rev 1

France manufg sector	Number of employees			Wages			Wages per employee		
	1 997	2 007	% change	1 997	2 007	% change	1 997	2 007	% change
Textile	131 785	74 389	-44%	2 502	1 930	-23%	18 985	25 945	37%
Clothing	117 971	53 461	-55%	1 961	1 308	-33%	16 623	24 466	47%
Total TC	249 756	127 850	-49%	4 463	3 238	-27%	17 869	25 327	42%

Source Eurostat NACE rev 1

France manufg sector	Number of units			Number of employees			Employees per unit		
	1 997	2 007	% change	1 997	2 007	% change	1 997	2 007	% change
Textile	6 666	5 378	-19%	131 785	74 389	-44%	20	14	-30%
Clothing	15 589	12 183	-22%	117 971	53 461	-55%	8	4	-42%
Total TC	22 255	17 561	-21%	249 756	127 850	-49%	11	7	-35%

Source Eurostat NACE rev 1

Ouest manufg sector	Number of units			Number of employees			Employees per unit		
	1 997	2 007	% change	1 997	2 007	% change	1 997	2 007	% change
Textile	595	671	13%	10 038	7 252	-28%	17	11	-36%
Clothing	1 382	1 050	-24%	27 861	10 489	-62%	20	10	-50%
Total TC	1 977	1 721	-13%	37 899	17 741	-53%	19	10	-46%

Source Eurostat NACE rev 1

Appendix 2.1: France VET funding policy

- **Funding For Initial Vocational Education and Training**

This type of training is funded by the State, and in particular the Ministry for national education, higher education and research, as well as by the local administrative units, as part of the decentralisation process. The State remains responsible for:

- determining the various training tracks, establishing national programmes, and the organisation and content of what is taught;
- establishing and granting national diplomas and granting university-level degrees and titles;
- recruiting and managing teaching staff;
- allocating resources earmarked for education depending on the numbers of pupils;
- monitoring and evaluating educational policies with a view to ensuring that the educational system is consistent.

The State is responsible for the remuneration of teachers and other educational and guidance staff. However, it is the local authorities that are now responsible for investment and operations.

The Regions, with regard to higher secondary education establishments are responsible for practical conditions, facilities and technical staff.

The apprenticeship track is considered as a form of initial vocational training and apprenticeship is considered as a form of employment. Funding for apprenticeship is covered by the apprenticeship tax (0.5 % of the gross annual bill paid by the enterprises), the State (through exemptions from labour charges), as well as by the Regions (through grants for hiring the apprentices, and for operational expenses of the CFA - Centre de formation d'apprentis - apprentice's training centres).

Alternating training programmes, so-called "alternating" work contract, (professionalization contracts) are financed by the companies, the regions, and the State (exemption from mandatory payroll taxes). These contracts, based on alternating periods of work and study, are considered as a form of continuing vocational training.

- **Funding For Continuing Vocational Education and Training, and Adult Learning**

- **State-funded grants**

The State has set up a grant system to support the objectives related to its employment policy. Such actions are designed, in particular, to develop consulting to clothing branches on the developments in particular jobs and qualifications and to promote training in enterprises with fewer than 250 employees (*Engagement de Développement de l'Emploi et des Compétences, EDEC* - Commitment to expand

employment and skills, and furthermore, council and training). In that case, it defines specific criteria or priority actions to that purpose.

- **Region-funded grants**

Since 1983, the decentralisation process has been shifting general powers over CVET to the Regions. As a result, alongside the public grants given for training within enterprises, which can be funded jointly by the State and the region (EDEC), the Regions have sovereign powers over special grants offered to enterprises (e.g., specific measures to fight illiteracy, grants for job-seekers in training programmes through language vouchers, partial coverage of training costs, scholarships, loans at zero interest rates, etc.).

Since 2002, the various stages of decentralization have resulted in the transfer of state funding to the regional councils.

- **Funding for CVET in enterprises**

Corporate funding for training is covered by the mandatory financial contribution required from enterprises; partial or full collection of this contribution by OPCA; the State and the Regions, through the public grants they offer; the employees themselves, as they can be asked to contribute to funding their own training.

Where private-sector enterprises are concerned, the amount of the contribution and the calculation methods used vary depending on the type of enterprise involved and its staffing levels. The law requires that companies:

- with less than 10 employees have to pay 0.55 % of the gross annual wage bill (MSAB);
- with 10 to 19 employees 1.05%,
- and with a minimum of 20 employees, 1.60%.

It should be noticed that certain business sectors have set mandatory contribution levels at a rate higher than the legal minimum, through a joint agreement. The enterprise may decide to fulfil its obligation by paying all or part of its mandatory contribution to a special body: an approved joint collecting organisation (organisme paritaire collecteur agréé - OPCA), which has authority at the clothing or professional segment level. There also exist OPCAs with interprofessional powers.

Source : Cedefop 2011

(See http://www.centre-inffo.fr/refernet/IMG/pdf/VET_in_Europ.pdf)

Appendix 2.2: West of France Report

DINAMIC ENTREPRISE EXECUTIVE PROGRAMME

Between 2007 and 2010 more than 640 SMEs have taken part in the programme, and among them 35 clothing manufacturers, representing some 1500 workers. Most (76%) of the SMEs concerned are small or very small (less than 50 employees). Participants declare that 91% of the objectives defined at the start have been or are in the process of being reached. 37% of action plans aimed to increase sales or VA and 22 % to better manage costs, while others focused on reducing time to market, improving quality, managing risks etc.

The methods and tools provided by Dinamic Consultants are effectively used and capitalised within the SMEs as they do transfer them to new action plans of their own. A clear change in companies' practices and employees' behaviour is recognized. Actual benefits may vary a lot : “ - 56,000€ in financial costs for a 16 worker company, - 200,000 in working capital requirement for another with 28 workers, a weekly production increase by 20%, in a larger SME, an additional 28% in sales through better definition of company's expertise...”.

The key features of the programme can be listed as follows:

- A simplified access through the Regional Chamber of Commerce and Industry (CCI) : one administrative contact and one single contract to sign
- A project manager from CCI who ensures an on-going control of the process : methodology, motivations, involvement of all
- A team of senior consultants with specific competencies individually accredited by the CCI
- For each SME, a package of 10.5 mandays of consultancy and 30 mandays of actual training
- An action-oriented approach with an early definition of measurable objectives and follow-up indicators
- A thorough guiding of the company with a step by step procedure : strategic diagnosis, selection of priority objectives, elaboration of action plans (on average, 2 per company), implementation , the whole sequence being coached and followed-up by the dedicated consultants for a contractual duration of 9 months
- An in-depth coaching process with a required participation of 20% of the total workforce and of the General Manager
- The selection within the company of a person who will be in charge of the efficient development of the programme, as a deputy of the General Manager of the company

- A collective process : 6 to 10 companies are accompanied at the same time, in order that group dynamics may be used : interaction between participants, exchange of good practices in the implementation of the programme and strengthening of individual motivations (e.g. not to lose face in front of peers)
- If needs be, a facilitated access for the company to Parcours Modulaires Qualifiants for workers to have more staff trained.

5.2.1.6 TABLES 3: NORTH RHINE WESTPHALIA

Tables 3.1: Situation of Employment in 2008

Situation 2 008	Units		Employees		Employees/unit		Empl.as % tot mfg	
	Germany	NRW	Germany	NRW	Germany	NRW	Germany	NRW
Textile	794	228	72 568	21 255	91	93	1	2
Clothing	381	80	37 882	6 642	99	83	1	1
Total TC	1 175	308	110 450	27 897	94	91	2	2

Source Eurostat NACE
rev 1

Situation 2 008	Employees		Wages		Wages per employee	
	Germany	NRW	Germany	NRW	Germany	NRW
Textile	72 568	21 255	2 093	665	28 842	31 287
Clothing	37 882	6 642	1 096	224	28 932	33 725
Total TC	110 450	27 897	3 189	889	28 873	31 867

Source Eurostat NACE
rev 1

Tables 3.2: Evolution of Employment 1997/2007

NRW manufg sector	Number of units			Number of employees			Empl. as % of total manufg		
	1 997	2 007	% change	1 997	2 007	% change	1 997	2 007	% change
Textile	356	241	-32%	40 653	23 494	-42%	2,8	1,9	-0,9
Clothing	167	89	-47%	17 842	8 050	-55%	1,2	0,6	-0,6
Total TC	523	330	-37%	58 495	31 544	-46%	4	2,5	-1,5

Source Eurostat NACE
rev 1

Germany sector	Number of units			Number of employees			Empl. as % of total manufg		
	1 997	2 007	% change	1 997	2 007	% change	1 997	2 007	% change
Textile	1 295	875	-32%	131 626	81 362	-38%	2,1	1,4	-0,7
Clothing	936	389	-58%	84 275	39 487	-53%	1,4	0,7	-0,7
Total TC	2 231	1 264	-43%	215 901	120 849	-44%	3,5	2,1	-1,4

Source Eurostat NACE
rev 1

NRW manufg sector	Number of employees			Wages			Wages per employee		
	1 997	2 007	% change	1 997	2 007	% change	1 997	2 007	% change
Textile	40 653	23 494	-42%	1 075	732	-32%	26 443	31 157	18%
Clothing	17 842	8 050	-55%	439	264	-40%	24 605	32 795	33%
Total TC	58 495	31 544	-46%	1 514	996	-34%	25 883	31 575	22%

Source Eurostat NACE
rev 1

Germany mfg sector	Number of employees			Wages			Wages per employee		
	1 997	2 007	% change	1 997	2 007	% change	1 997	2 007	% change
Textile	131 626	81 362	-38%	3 201	2 341	-27%	24 319	28 773	18%
Clothing	84 275	39 487	-53%	1 789	1 139	-36%	21 228	28 845	36%
Total TC	215 901	120 849	-44%	4 990	3 480	-30%	23 112	28 796	25%

Source Eurostat NACE
rev 1

Germany mfg sector	Number of units			Number of employees			Employees per unit		
	1 997	2 007	% change	1 997	2 007	% change	1 997	2 007	% change
Textile	1 295	875	-32%	131 626	81 362	-38%	102	93	-9%
Clothing	936	389	-58%	84 275	39 487	-53%	90	102	13%
Total TC	2 231	1 264	-43%	215 901	120 849	-44%	97	96	-1%

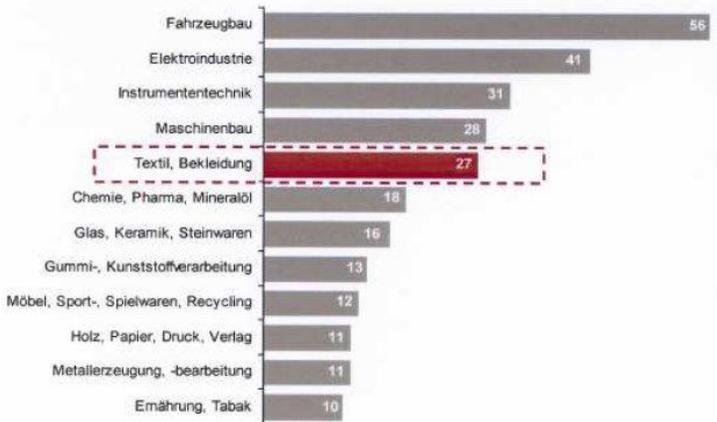
Source Eurostat NACE
rev 1

NRW manufg sector	Number of units			Number of employees			Employees per unit		
	1 997	2 007	% change	1 997	2 007	% change	1 997	2 007	% change
Textile	356	241	-32%	40 653	23 494	-42%	114	97	-15%
Clothing	167	89	-47%	17 842	8 050	-55%	107	90	-15%
Total TC	523	330	-37%	58 495	31 544	-46%	112	96	-15%

Source Eurostat NACE
rev 1

5.2.1.7 FIGURE 3: NORTH RHINE WESTPHALIA

Innovative products ratings in German industry, revenue generated by new products (%)



Umsatz durch Produktneuheiten in % (2007)

Source: Gesamtverband textil + mode, 2007

5.2.1.8 APPENDIX 3: GERMANY VET FUNDING POLICY

In Germany, financing of vocational training and continuing training is based on a system of mixed financing with a variety of different backers, both public and private. They include the Federal Ministry of Education and Research (BMBF), the Federal Ministry of Economics and Technology (BMWV), Federal Ministry of Labour and Social Affairs (BMAS), the Federal Employment Agency (BA), the Länder, the Land Ministries of Employment, Economics, Education or Cultural Affairs, the European Union, local authorities, companies, unions, Chambers, associations, private institutions and, lastly, individuals themselves. In this respect, the financing system of IVET and continuing general and vocational education differs quite substantially from that of the schools and universities sector, which benefits from relatively comprehensive public funding.

Training bonus

The global financial and economic crisis has had repercussions on the apprenticeship market. Under the Employment Opportunities Act of 24 October 2010, the scheme to help apprentices from insolvent companies by means of the "training bonus" was therefore extended by three years until the end of 2013. By the end of November 2010, training bonus assistance had been approved in 5,900 of these cases. The training bonus is a financial subsidy aimed at reducing the costs of initial vocational training. It is intended for employers who offer additional in-company training places for young people, particularly those who may have been seeking a training place for some time without success. Support of up to 6,000 euros per training place can be applied for.

Continuing education grant

The continuing training of skilled workers is a further essential component of lifelong learning. To raise participation in lifelong learning, the German Federal Government approved a model for continuing training savings, the "Continuing education grant" (Bildungsprämie), in April 2008. The continuing education grant is particularly intended to mobilise participation in CVET by low and middle income groups. The model is scheduled for introduction in October 2008 and will run for an initial three-year period without regional limitation.

Funding for initial vocational education and training

The school-based element of dual vocational training is financed by Land and local authority public funds. The Länder bear the costs of internal school affairs (e.g. supervision of schools, implementing curricula, teacher training, teachers' pay), and local authorities are responsible for financing external school affairs (e.g. construction, maintenance and renovation of school buildings, ongoing management, procurement of teaching and learning resources). Training in a full-time vocational school outside the dual system and special measures to promote VET, such as Land programmes to create additional training places, are financed out of Land budgets. Expenditure on public schools per pupil in 2008 was 5,100 euros (2007: 5,000) on average. As the Federal Statistical Office (Destatis) also found, spending on pupils in general educational schools was around 5,600 euros per head compared with 3,500 euros in

vocational schools; for the (part-time) vocational schools in the dual system, the average was 2,200 euros.

The way in which Tertiary Education and Research Programmes is funded means that the highest pro-capita spend of the federal states is in the tertiary sector.

Inter-company vocational training centres (überbetriebliche Berufsbildungsstätten – ÜBS) in which supplementary instruction of trainees takes place on behalf of SMEs, are funded by mixed financing - subsidies from the Federal Agency for Employment, central government (capital grants from *BMBF* resources) and the Länder are added to the resources of the body responsible. The financing of coherent training structures (Ausbildungsverbände) depends on their organisational form. In the "lead enterprise with partner enterprises" model, the lead enterprise normally finances remuneration of training, while the partner enterprises bear the personnel, plant and equipment costs that arise in their area of responsibility. In the "training to order" model, in principle each party to the contract can provide training services against reimbursement of costs, but in practice SMEs usually finance the training services contracted out to a large enterprise with a training workshop. The Federal Employment Agency (BA) is also involved in financing training. In certain cases it gives young people a grant for vocational training or for pre-vocational training measures.

The contribution from public funding is complemented by the contribution of training firms in the private sector and public services. Their expenditures are traditionally estimated by the Federal Institute for Vocational Education and Training (BIBB). According to the newest calculations, which are based on a representative study for the year 2007 (the next it is planned for 2012), the gross costs, i.e. the cost of initial vocational training without regard to the returns from training, amounted to around 23.8 billion euros. Companies' net costs of IVET in the dual system were around 5.6 billion euros, which means that net costs have fallen drastically since the last study. This can be attributed to the more productive deployment of apprentices in companies.

Funding for continuing vocational education and training, and adult learning

Enterprises, the State, the Federal Agency for Employment and private individuals themselves are involved in financing continuing vocational education and training (CVET). Individuals use mainly direct sources of funding for continuing vocational training such as recourse to current income, advances on future income (credit, loans) and transfer of capital (savings or inheritances). Furthermore, individuals can claim tax relief when they are liable to pay tax on income and are acquiring qualifications for a new occupation (special expenses) or are undergoing further training in their present occupation (incomerelated expenses).

Public funding schemes and mechanisms to finance CVET

According to international comparisons, the rate of participation in continuing education measures in Germany is relatively low. To increase the continuing education participation rate, particularly in occupation-related measures, not only have existing funding instruments been extended in the recent

past - for instance the Career Advancement Training Promotion Act (Aufstiegsfortbildungsförderungsgesetz, AFBG, also referred to as the "Meister-Bafög") - but new forms of assistance have been introduced. Examples at Federal Government level are the "Continuing education grant" (Bildungsprämie) of the BMBF and the "Social partners guideline" (Sozialpartnerrichtlinie) of the Federal Ministry of Labour and Social Affairs (BMAS) and, at Land level, North Rhine Westphalia's "Education cheque NRW". With the "Continuing vocational education and training for low-qualified and older workers in companies" (WeGebAU) initiative, the Federal Employment Agency has also expanded its support for people in employment.

In a few cases, the funds made available at national level are co-financed by the European Social Fund (ESF). Depending on the relevant objective area, the rate of co-financing is between 50% and 75%.

Public-private cost-sharing

In 2009 more or less all German continuing education providers received their revenues from five sources of finance: participants/self-funding learners, companies, employment agencies, public bodies (municipalities, Länder, the Federal Government, EU) or the establishment's private-sector sponsors. Provider funding is frequently drawn from several of these sources.

The most important source of finance for continuing education providers is from participants, or self-funding learners, themselves. 28% of continuing education providers receive over 50% of their revenue from this group, 22% from companies, 18% from employment agencies, 15% from public bodies and 5% from private institutions. The provider structure has remained stable over the last few years.

Collective (employer, employee) investment to finance VET

Enterprises are responsible for financing the in-company training element – the individual enterprises decide independently whether and in what training occupations they will provide training, how many trainees they will take within the framework of the statutory provisions, and how much they will spend. In some sectors (e.g. the construction industry, the roofing clothing), financing regulations have been collectively agreed whereby all enterprises pay into a joint fund (e.g. through giving a percentage of the total wage bill). The fund is used to reimburse enterprise expenditure on training. They finance CVET from sales revenues, interest income, income from leasing and direct State subsidies, from credits and loans in anticipation of future income and from transfer of retained earnings from previous periods. Tax relief in the form of tax reductions or mitigation of tax liabilities for enterprises showing a profit may subsidise in-company continuing training indirectly. In 2005, 54% of companies in Germany offered their employees continuing education courses, and as many as 66% offered other forms of continuing education.

Source: VET in Europe 2011 Report Refernet Cedefop

(See [http://www.refernet.de/images_content/VET in Europe 2011-Country_Report.pdf](http://www.refernet.de/images_content/VET_in_Europe_2011-Country_Report.pdf))