



**SECTORAL SKILLS STRATEGY FOR THE
EU TCLF INDUSTRIES**

FINAL REPORT

Skills Smart

TCLF 2030



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ABBREVIATIONS

AGEC	<i>Anti-Gaspillage Economie Circulaire</i>
B2B	Business to Business
B2C	Business to Consumer
CAPM	Computer-aided production management
CETI	European Centre for Innovative Textiles
CSF	Comité stratégique de filière
CTC	<i>Centre Technique du Cuir</i>
DGE	<i>Direction Générale des Entreprises - Ministry of Economy, Government</i>
DREAL	<i>Direction régionale de l'environnement, de l'aménagement et du logement</i>
EPR	Extended Producer Responsibility
EQF	European Qualifications Framework
ERASMUS+	European Programme in Support of Education, Training, Youth and Sport
ERDF	European Regional Development Fund
ERP	Enterprise Resource Planning
EURATEX	European Apparel and Textile Confederation
GPEC	<i>Gestion Prévisionnelle des Emplois et des Compétences</i>
HEI	<i>Hautes Etudes d'Ingénieurs</i>
IFM	<i>Institut français de la Mode</i>
IFTH	<i>Institut Français du Textile et de l'Habillement</i>
ISCO	International standard classification of occupations
R&D	Research and Development
R3iLab	<i>Réseau Innovation Immatérielle pour l'Industrie</i>
S4TCLF	Skills4Smart TCLF Industries 2030
SME	Small and Medium-sized Enterprises
SURE	Support Unemployment Risks in an Emergency
TCLF	Textile, Clothing, Leather and Footwear
UIT	<i>Union des Industries textiles</i>
UNITEX	<i>Union Inter-entreprises Textiles Auvergne-Rhône-Alpes</i>
VET	Vocational Education and Training

1 BRIEF INTRODUCTION TO THE TCLF INDUSTRIES IN FRANCE

The **French textile industry is one of the oldest industries in France** and remains an important national business sector.

It covers a dozen market applications and a very broad range of activities: the manufacturing of yarns and fabrics for fashion/clothing, the manufacturing of household items (household linen, furnishing fabrics, carpets etc.), as well as textiles for technical use (for the automotive, medical, aeronautics, construction, security, agriculture sectors etc.). As such, France is the second largest European producer of technical textiles and this activity is growing by 4% year on year.

At national level, with nearly 2,200 companies, the French textile sector employs more than 62,000 people, and generates turnover of 13.9 billion euros. Its activities cover all stages of textile manufacturing: spinning, milling, weaving, knitting, finishing.¹

The **fashion clothing market** is dominant in France and represents about 50% of the textile industry's output. The Quadrat study for the *Institut Français de la Mode* in 2018 defined the perimeter of the fashion ecosystem in a broader way, from upstream (manufacturing) to downstream (retail) for the following products: Textiles and Clothing, Leather, Shoes and Leather Goods, Watches, Jewellery, Optics, and Beauty Perfumes. This sector as a whole generated 154 billion euros in sales in 2018, including 35.7 billion euros of exports, and employed 616,552 people.² A total of 56% of this turnover corresponded to textiles, clothing, leather, footwear and leather goods.

The **leather sector in France** is not only active in the field of clothing, footwear or leather goods, but also in the furniture, interior decoration, automotive, yachting and transport sectors. Leather is also used in high-tech or medical applications. There are 60 tanning companies in France, mostly owned by the major fashion and luxury brands, which employ 1,800 people.³

The **footwear sector** includes 120 companies – industrial firms and creators of shoes and footwear items - spread across the national territory, operating about 200 brands. This sector generated turnover of 745 million euros in 2018, including 3.53 million euros of exports, corresponding to production of 20.6 million pairs.⁴

Characterized by a great diversity of actors and professions across the country the TCLF sector in France is composed of large groups, SMEs, designers, brands and manufacturers, the majority of which are micro-companies.

¹ Union des Industries Textiles – UIT (2019)

² INSEE, ESANE (2016)

³ Fédération Française de la Tannerie Mégisserie (2020)

⁴ Fédération Française de la Chaussure (2020)

More than ever before, its competitiveness is based on **strong collaborations within the value chain** in a context where it will need to meet several major challenges relating to skills and professions: new economic models, safeguarding and passing on know-how, attractiveness, and recruitment needs (see details in chapter 3). The signing of the Strategic Contract for the Fashion and Luxury Goods Sector (CSF) in January 2019 confirms the commitment of companies in the TCLF sector and of the French government to finding solutions and new forms of collaboration.

In addition, since 2020, the **COVID-19 health crisis** has starkly revealed the French TCLF sector's dependency in terms of supply, particularly for masks and gowns. This has highlighted the strategic importance of this sector, beyond its international and economic influence. TCLF companies rapidly mobilized at national level to respond to the emergency, with the collaborative platform "Savoir Faire Ensemble"⁵, for example, which brought together fabric manufacturers and garment manufacturers to rapidly produce masks for non-sanitary use and gowns.

Several processes initiated at the highest level of the French State are underway to work on the subjects of **repatriation**, job consolidation, and sustainably increasing competitiveness. Indeed, after a period of sustained offshoring, particularly in the textile and clothing industries, repatriation could be a political answer to restore national sovereignty, as well as a response to the climate challenge and a way to support job creation.

Another major strategic development in the TCLF sector in France relates to the **circular economy**. An increasing number of initiatives have been launched to meet consumer expectations regarding the conditions in which the textile products they purchase are manufactured. For example, 66 fashion giants have signed the "Fashion Pact" launched in 2019, while other concrete actions are emerging, such as that of the Drôme-based brand 1083, which sells recycled jeans with a 20 Euro deposit paid back to the buyer if the jeans are returned.

In this context, training, employment and skills have become a priority issue in France to be able to preserve know-how, product quality and market share, and also to meet the new needs generated by these developments.

The **main objective of the Sectoral Skills Strategy is to identify priority actions to match the future skills supply/demand balance**, increase the attractiveness of the four sectors, and establish the foundations that allow future operational activities, such as involvement strategies for different categories of stakeholders at regional, national, and European level.

The resources presented in this work were collected through primary, as well as secondary research. The primary research involved outcomes from partner initiatives implemented under the Skills 4 Smart TCLF Industries 2030 project including field research among companies and VET providers, as well as workshops with stakeholders representing the

⁵ <https://savoirfaireensemble.fr/lassociation/>

textile, clothing, leather, and footwear sectors. Secondary research involved the analysis of data obtained from EUROSTAT, CEDEFOP, international and national organizations and companies, as well as more national-focused sources of information from educational facilities, provided by project partners.

The second chapter of this document – Situation and trends in the French TCLF industries – focuses on the production and trading position of the TCLF industries. It includes the analysis of manufacturers based on their geographical distribution and specialization.

The main focus of the third chapter is the analysis of the employment and skills situation in the French TCLF industries, based on data from Eurostat. This chapter highlights the increasing number of employees approaching retirement, gender disparities, and the education level of occupations in TCLF sectors in France.

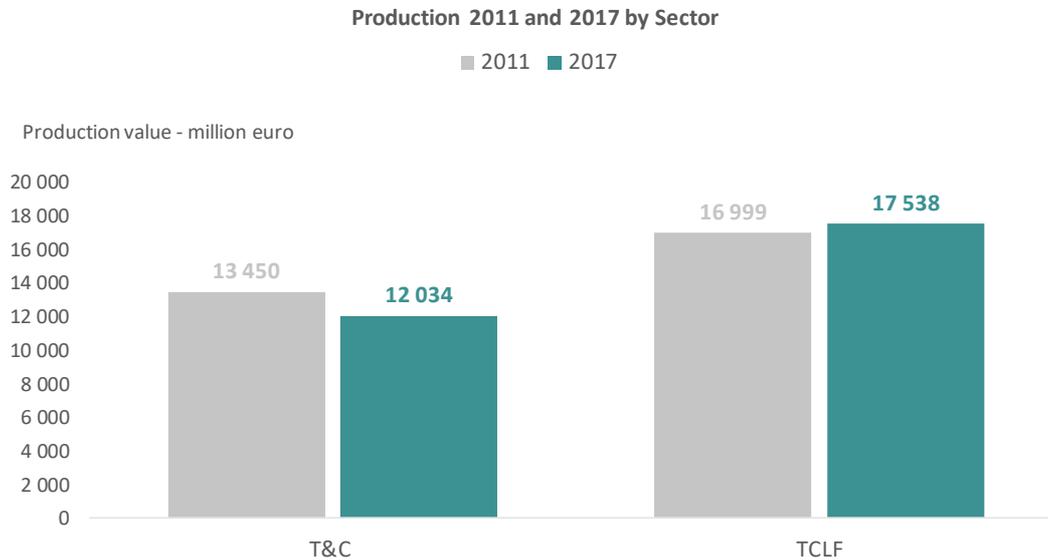
The chapter regarding the drivers of change presents the results of the analysis of external forces influencing the textile, clothing, leather, and footwear industries. It includes a total of almost one hundred trends, including those created by the COVID-19 pandemic, that are shaping the direction of the industry and its products, and consequently the types of occupations and skills required.

The fifth chapter of the Sectoral Skills Strategy for the French TCLF industries report focuses on the future of the four sectors, by presenting five distinct scenarios for 2030: Renaissance of the Craft, A Brave New World, Selective Leadership, Walled Gardens, Industrial Sunset. These scenarios were originally developed prior to the COVID-19 pandemic and remain relevant, any unforeseen *force majeure* notwithstanding.

The final chapter focuses on the recommendations for stakeholders at European and national level (industry representatives, education providers and policymakers) for each of the five scenarios presented in the previous chapter.

2 SITUATION & TRENDS IN THE FRENCH TCLF INDUSTRIES

2.1 TYPE OF GOODS PRODUCED



Source: Eurostat (SBS)

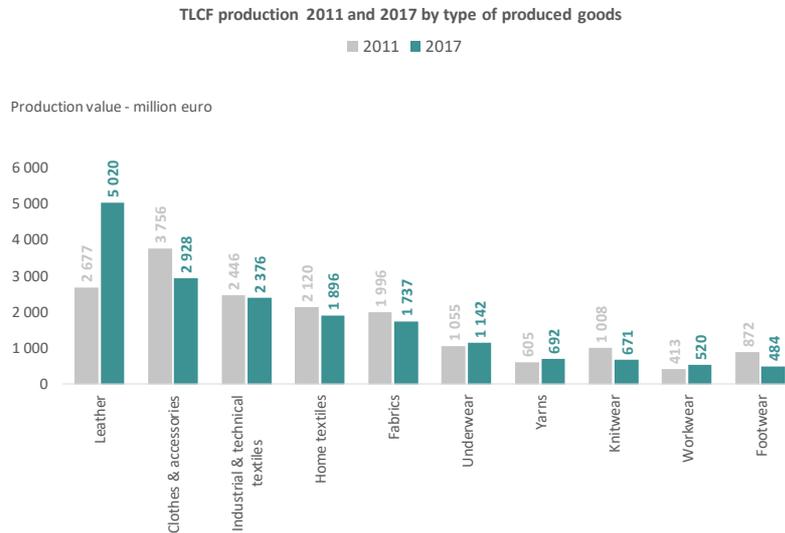
Production in the TCLF sector in France increased slightly between 2011 (16.9 billion EUR) and 2017 (17.5 billion EUR), mainly thanks to the leather sector. Indeed, the leather sector is driven by the investment dynamic led by the major luxury brands (LVMH, Chanel, Hermès Maroquinerie), which, with a view to securing supply, have opened several new production sites in France, notably in Auvergne Rhône-Alpes and Pays de la Loire.

Conversely, there was a downward trend in production in the clothing and accessories sector. The economic model based on large import flows and the relocation of manufacturing to low labour cost countries remained dominant over this period. The upward trend in the workwear and underwear sectors, illustrates that there are niches within the clothing sector that have been able to play a winning hand.

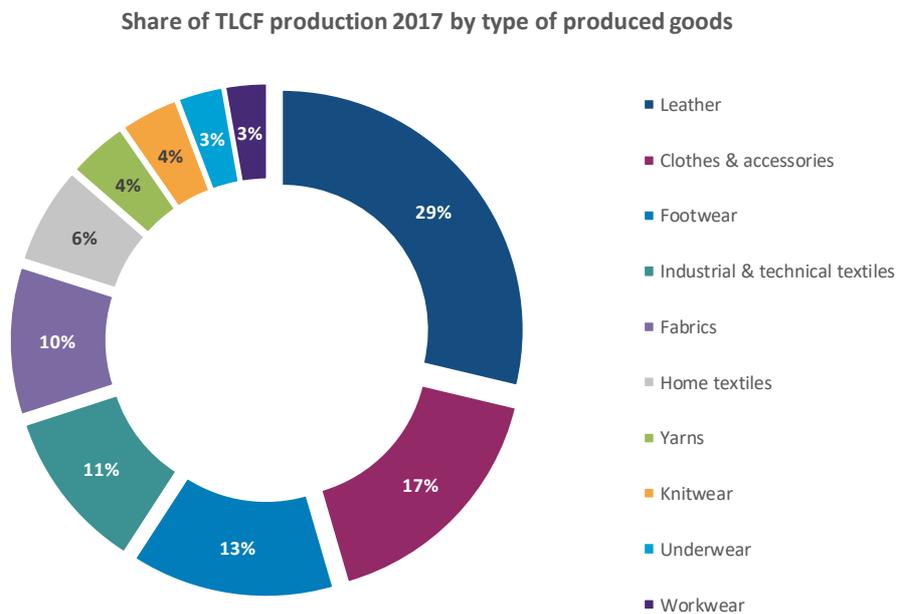
Technical textiles manufactured in France accounted for 11% of production in 2017. They have earned their place and increased their presence over the last 30 years in almost all industrial sectors, from automotive to medical, from civil engineering to construction, and from electronics to aeronautics and agriculture. Auvergne Rhône-Alpes has become the leading textile region in France, ahead of the Hauts-de-France, thanks to the volume of technical textiles production.

It is important when interpreting the graphs below, to remember that the distinction between textiles for clothing and technical textiles can be blurry. For example, the material used to make work clothing for firefighters for personnel handling toxic chemicals, or the military and police forces who need to be protected from projectiles and sharp weapons, obviously comes under the category of technical textiles, but is sometimes classified under clothing. Technical textiles also include clothing for elite athletes, as well as functional fabrics and clothing (bacteriostatic, temperature regulating smart clothing etc.).

The footwear sector, which faces strong competition from countries with low labour costs, saw a significant drop in production in France between 2011 and 2017. The jobs still located in France are mainly head office support functions, although there are a few areas attempting to preserve historical know-how, such as Romans sur Isère in the Auvergne Rhône-Alpes region.



Source: Eurostat (SBS)



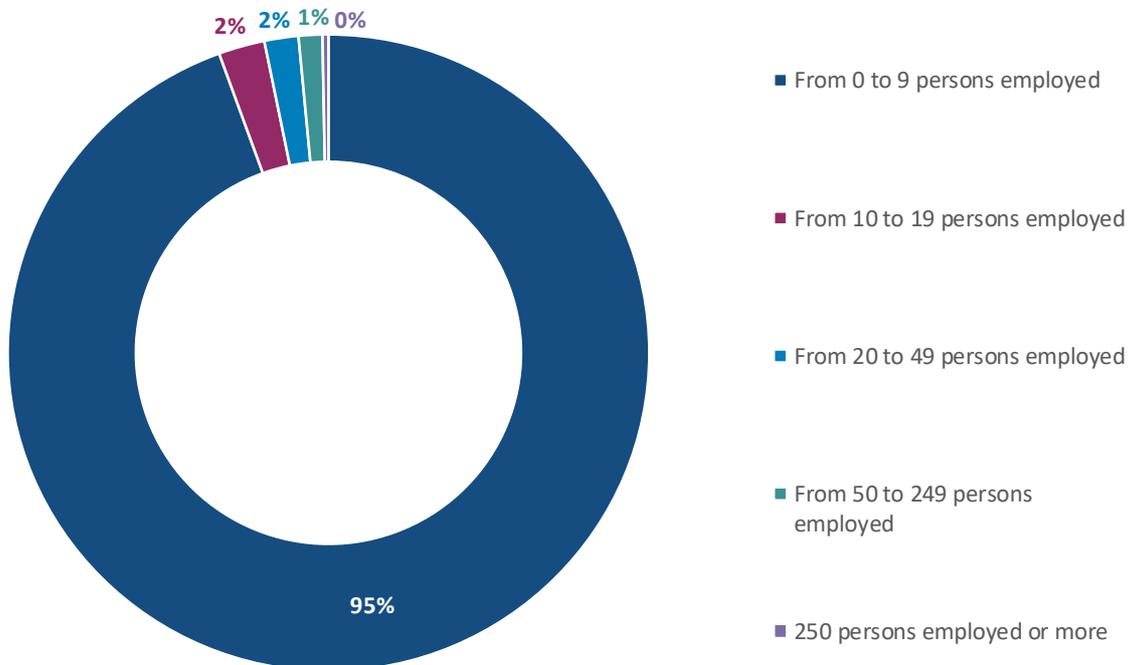
Source: Eurostat (SBS)

2.2 COMPANIES

A total of 95% of TLCF companies in France have fewer than nine employees. This is one of the characteristics of the French economic ecosystem, dominated by VSEs (very small companies). The number of SMEs (small and medium-sized enterprises), ETIs (mid-sized enterprises) and large companies does not exceed 5% of the total. This is a weakness

for the French TCLF industry, as VSEs, despite their agility, are often less well equipped than more structured companies to face the challenges of investment, innovation and skills development.

Companies by size in 2017



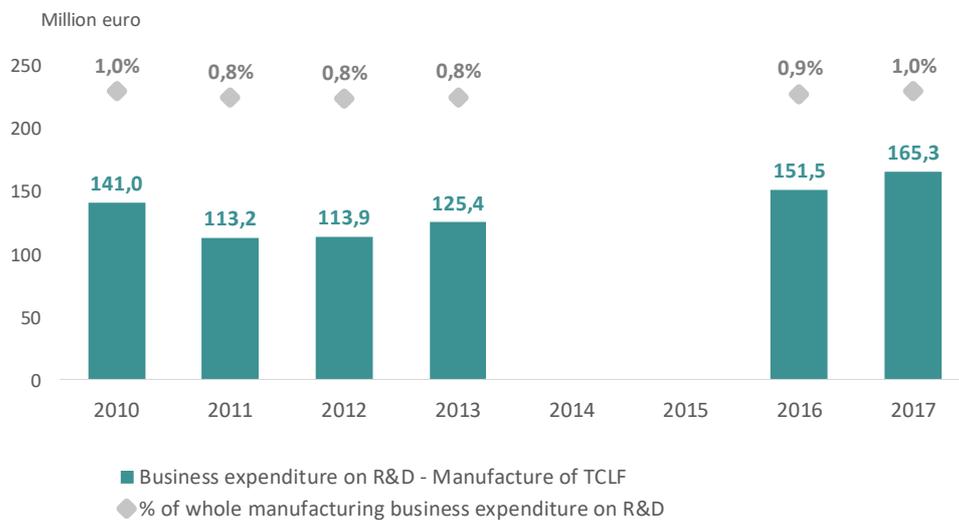
Source: Eurostat (SBS)

2.3 ANALYSIS OF INVESTMENT

Research and Development expenditure in the TCLF industry in France increased significantly between 2016 (151.5 million EUR in R&D expenditure) and 2017 (165.3 million EUR in R&D expenditure). However, the percentage of total expenditure allocated to R&D in the TCLF industry (1% in 2017), is low compared to the industry’s weighting in French manufacturing as a whole (2% of manufacturing in 2017). Even if there was a catch-up effect between 2010 and 2017 (in 2010, the TCLF industry represented 1% of total R&D spending while its weight in the total French manufacturing industry was 2.5%), this is a further weakness, along with company size as mentioned above.

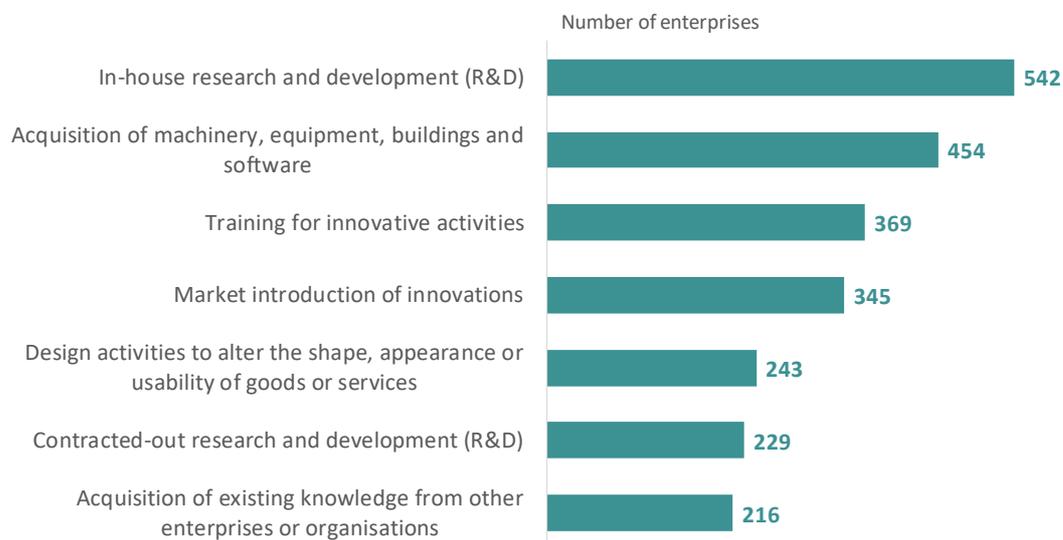
Most of the companies in the TCLF sector have not yet entered the industry 4.0 era, even if some there are some promising recent examples in the textile and footwear industries (Chamatex’s –Advanced Shoes Factory (ASF) in the Ardèche, or the robotized textile manufacturing plant producing recycled and decarbonized textile packaging at Les Tissages de Charlieu in the Loire).

Business expenditure on R&D



Source: Eurostat (SBS)

Product and/or process innovative enterprises by type of innovation activity in 2016 - Manufacture of TCLF



Source: Eurostat (SBS)

2.4 SUSTAINABILITY

When it comes to sustainable development issues, France is often considered as a forerunner among its European partners. For example, on the theme of the circular economy, the notion of Extended Producer Responsibility (EPR), was implemented as early

as 2010 with the *Grenelle Environnement* (environment forum) and reinforced with the *Anti-Gaspillage Economie Circulaire (AGEC)* Law No. 2020-105 dated 10 February 2020. This notion designates approaches and mechanisms that make the producer of manufactured products responsible for managing final or intermediate waste generated by the products they have manufactured or put on the market. It aims to accelerate changes in production and consumption patterns in order to limit waste and preserve natural resources, biodiversity and the climate.

On the subject of social and environmental responsibility, the law n°2017-399 on the duty of vigilance of parent companies and ordering companies, promulgated on 27 March 2017, obliges large French companies to develop, publish and implement appropriate measures to identify risks and prevent violations of human rights and fundamental freedoms, the health and safety of persons and the environment etc. As far as water is concerned, French regulations, aligned with the European Water Framework Directive, are subject to very strict monitoring by the administration (DREAL) with regard to TCLF finishers, sometimes with more stringent requirements than those imposed by Europe.

The debate, in particular for the textile industry, has been moved forward by the health crisis, which in March 2020 revealed the loss of French sovereignty in the manufacturing of masks and gowns, and demonstrated the possible benefits of repatriating certain production whilst simultaneously reducing the industry's carbon footprint.

At the end of 2020, the *Union des Industries Textiles* commissioned a comparative study of the carbon footprint of 17 pieces of clothing and household linen, published in January 2021,⁶ by analysing the entire life cycle of the product (from the raw material to its use by the end consumer) and whether these products were manufactured in France or abroad. This raised the question of how to reduce the textile carbon footprint in practice. The *Union des Industries Textiles* proposed simple and necessary actions to help achieve the objectives set by the Paris Agreement by 2050.

The Fashion and Luxury Sector Strategic Committee (*CSF Mode et Luxe*) also submitted a study to the French government in January 2021 on the prospects for repatriation and support for sustainable fashion,⁷ which also makes concrete recommendations.

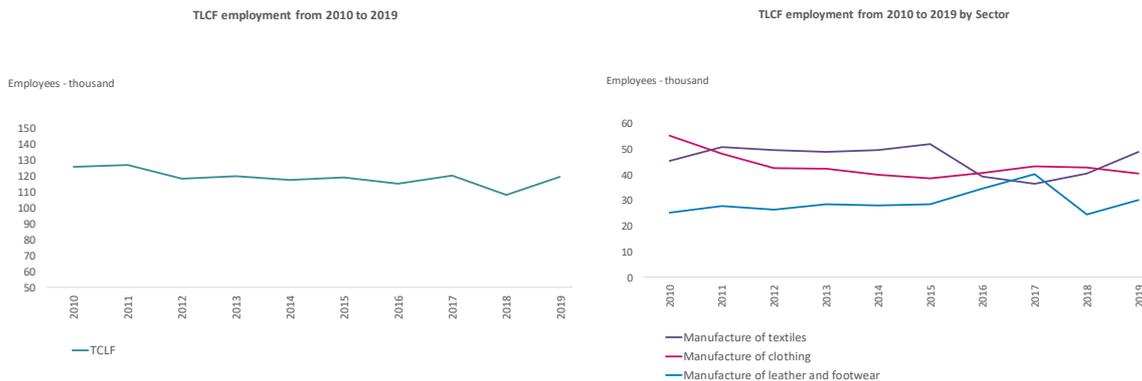
3 SITUATION AND TRENDS IN EMPLOYMENT AND SKILLS IN THE FRENCH TCLF INDUSTRIES

The competitiveness of the French TCLF industries is more than ever based on strong collaborations within the value chain, in a context where it will need to meet several major challenges in terms of employment and skills: attractiveness, new business models, recruitment needs, safeguarding and transmission of know-how.

⁶ <https://www.textile.fr/fabriquer-en-france-pour-reduire-l-empreinte-carbone-textile>

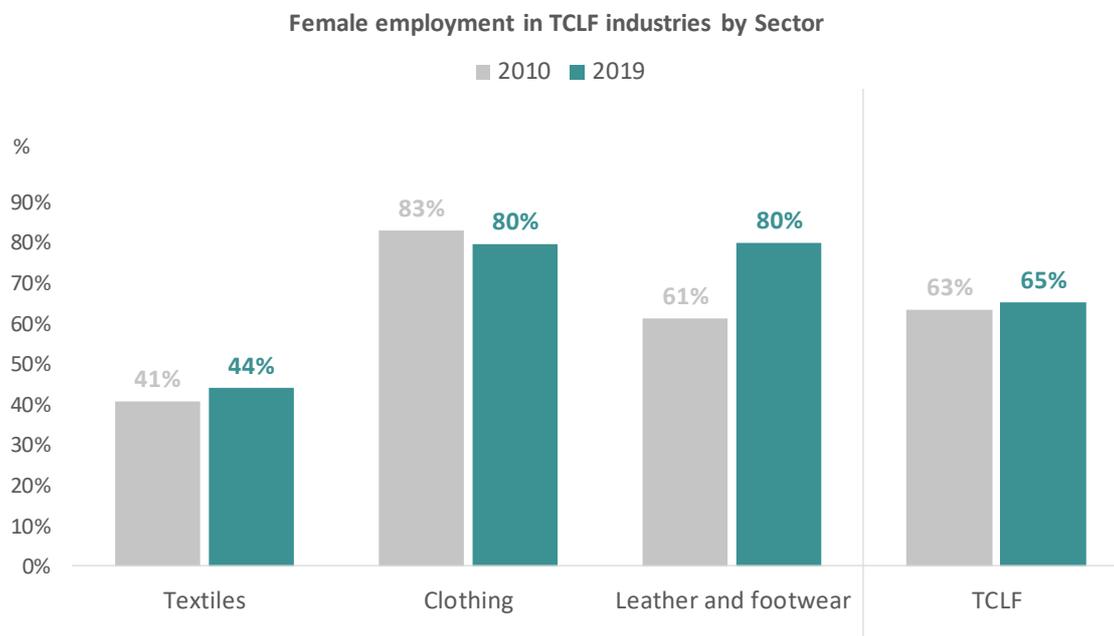
⁷ <https://www.economie.gouv.fr/remise-rapport-relocalisation-mode-durable>

3.1 TCLF LABOUR FORCE



Source: Eurostat (SBS)

There was little variation in the number of employees in the TCLF sectors in France between 2011 and 2017, compared to the previous period (1990 to 2010), which saw a drastic drop (100,000 jobs in the textile sector) in employment. However, the trend continued downwards between 2010 and 2019, after the sector took a severe hit in the 2008 crisis, although this was almost entirely offset in the 10 years that followed. The leather industry has suffered the largest variations.

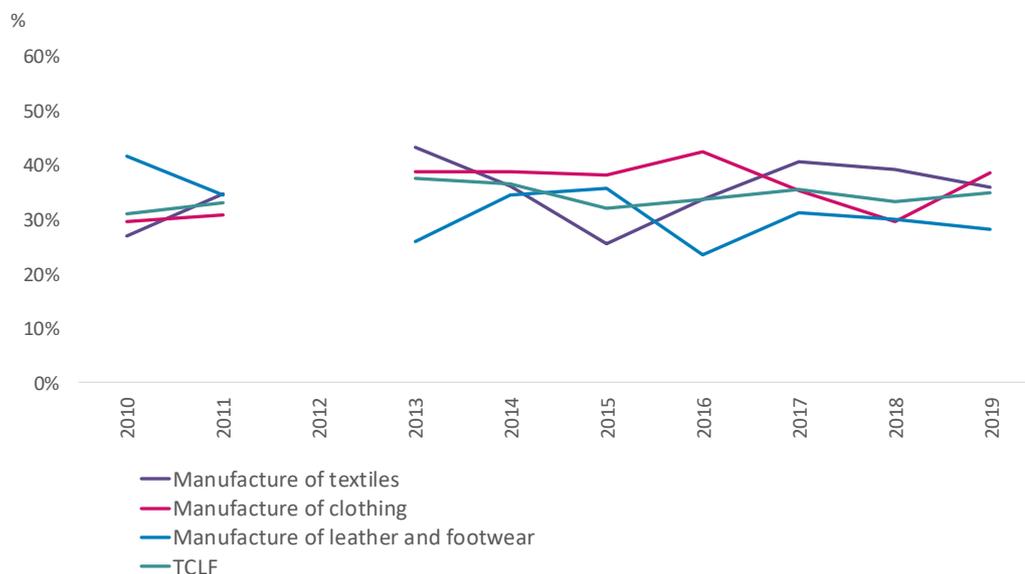


Source: Eurostat (SBS)

The employment distribution by sex shows that the TCLF industry in France is strongly dominated by women as 65% of the industry's total workforce in 2019 was female. This is mainly due to the clothing and the leather and footwear subsectors in which the proportion of women is even higher, reaching 80%. However, there are disparities between sectors. In the textile subsector, women are a minority (41% in 2010, 44% in 2019). This can be

explained in particular by the fact that jobs in this sector require load-bearing capacity and therefore physical aptitude.

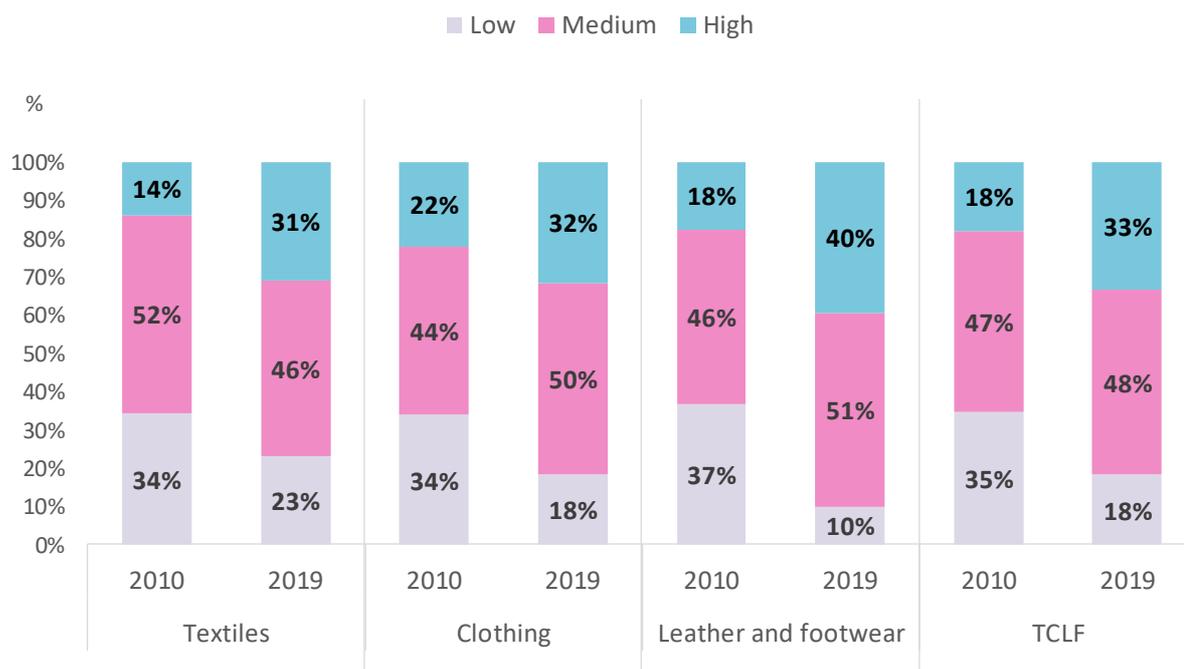
Percentage of employees over 50 years old



Source: Eurostat (SBS)

The age distribution in the TCLF sector in France aligns with the general trend across the EU, as more than 1/3 (35%) of the employees in 2019 were aged over 50. This negative trend worsened for the clothing sector during the period analysed, with the number of employees over the age of 50 rising from 31% to 39% between 2018 and 2019.

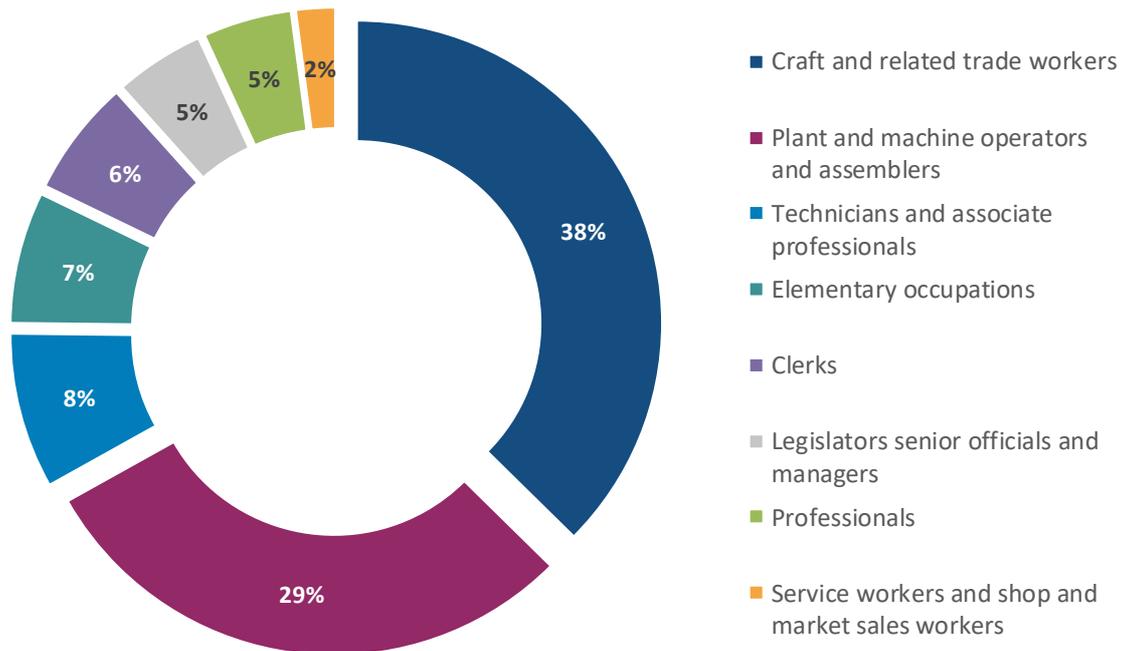
Level of qualification in TCLF industries by Sector



Source: Eurostat (SBS)

In terms of the level of qualification, the TCLF industries in France are dominated by workers with medium-level skills who represented 48% of the workforce in 2019, followed by 18% with low-level and 33% with high-level qualifications. In the period from 2010 to 2019, there was a significant shift in proportions towards the high-level qualification group, in all the subsectors.

Share of TCLF employment 2019 by type of occupation
(based on economic activity)



Source: Eurostat (SBS)

The dominance of craft and related trade workers, as well as the plant and machine operators and assemblers, is still visible in the TCLF industry in France (they represented 67% of workers in 2019).

3.2 TRENDS IN SKILLS-RELATED ASPECTS IN TCLF INDUSTRIES

The TCLF sector in France is facing a **major challenge in attracting talent** both to its training centres (initial and apprenticeships) and companies, which face a real shortage of manpower.

For example, although the leather industry has a strong, positive image amongst consumers because leather is a noble material that is increasingly used by creators in fashion and design, the sector suffers from a lack of notoriety. It has a mixed image because of the many difficulties it faces (respect for the environment, use of chemicals, etc.).

Given the need to promote the skills required for these professions, the TCLF sector and the French State have organized themselves to attract talent, particularly in production roles.

Th professions are also promoted through the employer brand French TEX, developed by the Union of Textile Industries and Savoir pour Faire dynamic, instigated by the *CSF Mode et Luxe*.⁸

Stakeholders have also undertaken work to **adapt the nomenclature of jobs and crafts**. For example, in 2018 the OPCALIA redesigned the Observatory of TCLF professions website,⁹ accompanied by thinking on sector-related occupations, which has led to the simplification and modernization of content. In particular, it contains 70 skills-based job descriptions constituting a very useful database.

OPCO2i, the new skills operator created by the law of 5 September 2018, “for the freedom to choose one’s professional future”, is also working to create a common inter-industry observation database, with the aim of generating rapidly accessible information and encouraging the sharing of methods and data between branches.

New business models are emerging in the TCLF sectors. Indeed, like the French manufacturing industry as a whole, the TCLF sector is seeing new ways of producing and selling emerge due to the radical transformation in consumer behaviour, the importance of the customer experience, the challenges of sustainable development, environment and ethics, and the particular attention that needs to be paid to resources. This requires adapting skills and occupations in the sector.

Before the COVID-19 crisis, surveys of textile companies conducted by OPCALIA TMC showed that all clothing and textile companies had recruitment needs (half of these needs came from companies with more than 300 employees). Moreover, for a third of the responding companies, these needs were urgent (jobs to be filled immediately or within 3 months).

In the footwear sector, all of the surveys carried out found that companies had ageing workforces. A total of 45% of planned hires between 2016 and 2018 were to replace employees who were retiring, and 30% were for business development roles. Most of these needs involved production roles: cutters, stitchers, fitters (manufacturing operators).

With the COVID-19 crisis, it seems that **these recruitment needs are still high** despite the potential disappearance of some companies.

Whilst the large luxury groups and fashion brands attract large numbers of candidates for roles in marketing, creation or distribution, most of the managers of SMEs/ETIs in the TCLF sector in France confirm that they have difficulty recruiting. Like many other industrial sectors, this is one of the main obstacles to growth.

The situation is paradoxical because, whilst on the one hand, the fashion and luxury goods sector is particularly attractive to the younger generations and candidates flock to creative training courses, on the other hand, technical training courses have difficulties attracting pupils and students. The sector thus crystallises a duality found throughout the French

⁸ <https://www.frenchtex.org> and <https://www.savoirpourfaire.fr>).

⁹ <https://www.observatoiremodetextilescuir.com>

economic and industrial apparatus: immaterial and non-technical training and activities attract more than material and technical training and activities.

There are exceptions to this, with the younger generations recently showing a keen interest in Fashion Tech (digital tools, industry 4.0, robotics, etc.) and traditional know-how.

The *French Tex Compétences* tool, developed by UNITEX as part of the PIA PERFECT programme aims to "match" the skills of job seekers on the one hand, and those expected by employers and under certification reference systems on the other, in order to facilitate the return to employment. This digital tool is intended for professionals in the textile industry (training organizations, employment, integration and guidance operators) and is complementary to the job portal www.frenchtex.org, which has been online since May 2019. Initially developed for the textile sector alone (14 certifications, 7 professions with labour shortages), it has been extended to the clothing sector.

Finally, the **question of safeguarding and passing on know-how is a major issue in France**. Several GPEC (*Gestion Prévisionnelle des Emplois et des Compétences*) studies carried out in recent years show that the age pyramid is inverted in the main French TCLF territories. There is a shortage of labour in TCLF companies in production occupations (such as yarn transformation, weaving, knitting, finishing clothing), due to the impact of future retirements. There is an imbalance between the two extremities of the age groups with a risk of a loss of skills. In 5 years' time, the phenomenon will be accentuated, as the over 55 age group will represent more than 50% of the total workforce.

4 ANALYSIS OF THE EXTERNAL FORCES SHAPING THE FRENCH TCLF INDUSTRIES

4.1 DRIVERS OF CHANGE – INTRODUCTION

The types of influences companies or industries may face are divided between two groups – internal and external forces – depending on their distance from the object of analysis.

- **Internal forces** are those that directly relate to the company (coming from suppliers, customers, and competitors);
- **External forces** are focused on geographical, economic, political, technological, and social factors, with an indirect influence on production and trends.

The following analysis focuses on the external forces that can influence the textile, clothing, leather and footwear sector.

These external forces are divided within the project into seven categories: *Regulation and governance, Demographic change, Environmental change, Economic and globalisation, Technological change, Values and identities, A new customer*. These were first identified at European level in 2014 and summarised in the European Skills Council TCLF Report. The list of drivers and their sub-drivers presented below is the result of desk and field research, in the form of a series of workshops with EURATEX, CEC and COTANCE, as well as at national level with leaders of the national strategies (for France – UNITEX).

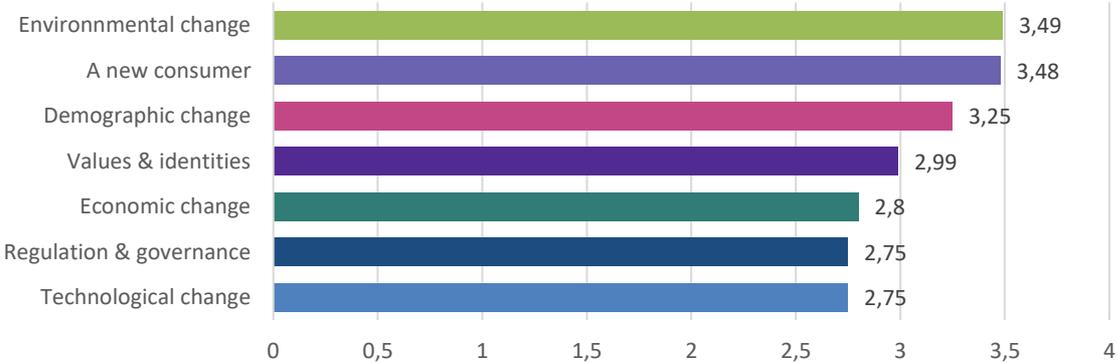
The COVID-19 pandemic and its repercussions on the TCLF industries in France are analysed separately and not with existing drivers of change.

4.2 RESULTS OF THE SURVEY OF S4TCLF COMPANIES

The drivers of change were first evaluated in France in a survey entitled "Research methodology to identify job roles and skills needs and field research - Focus Groups & Interviews with Companies" conducted in 2018, as part of the S4TCLF project.

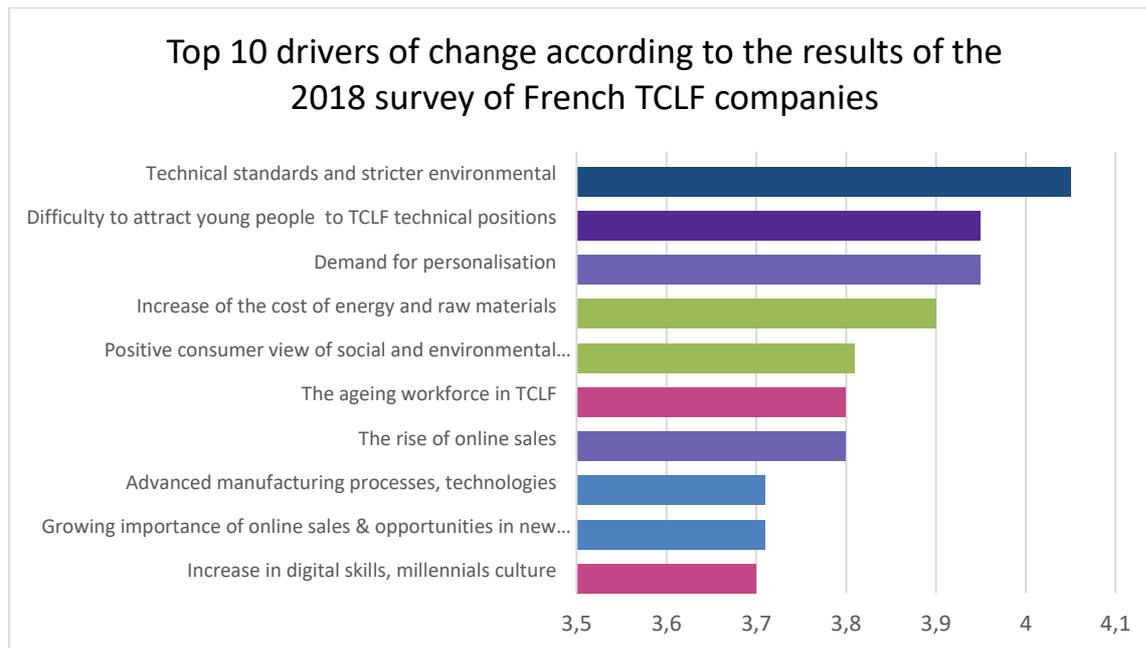
In total, representatives from 22 French companies selected the most important drivers of change as well as main sub-drivers, that influence their business and employment needs.

Importance of the drivers of change for French TCLF companies



Source: Eurostat (SBS)

The three most important drivers of change according to the 22 French companies were *Environmental change* and *A New Consumer*, followed by *Demographic change*. The least impactful were drivers relating to *Regulations and governance*, followed by *Technological change*.



Source: Eurostat (SBS)

In the same survey, the 22 French companies indicated that the five most important sub-drivers influencing the production processes were: *technical standards, difficulty to attract young people, demand for personalisation, the increase in the cost of energy and raw materials and the increasing awareness of sustainability.*

4.3 CURRENT DRIVERS OF CHANGE – THEIR CHARACTERISTICS, MAIN SUB-DRIVERS AND LEVEL OF INFLUENCE

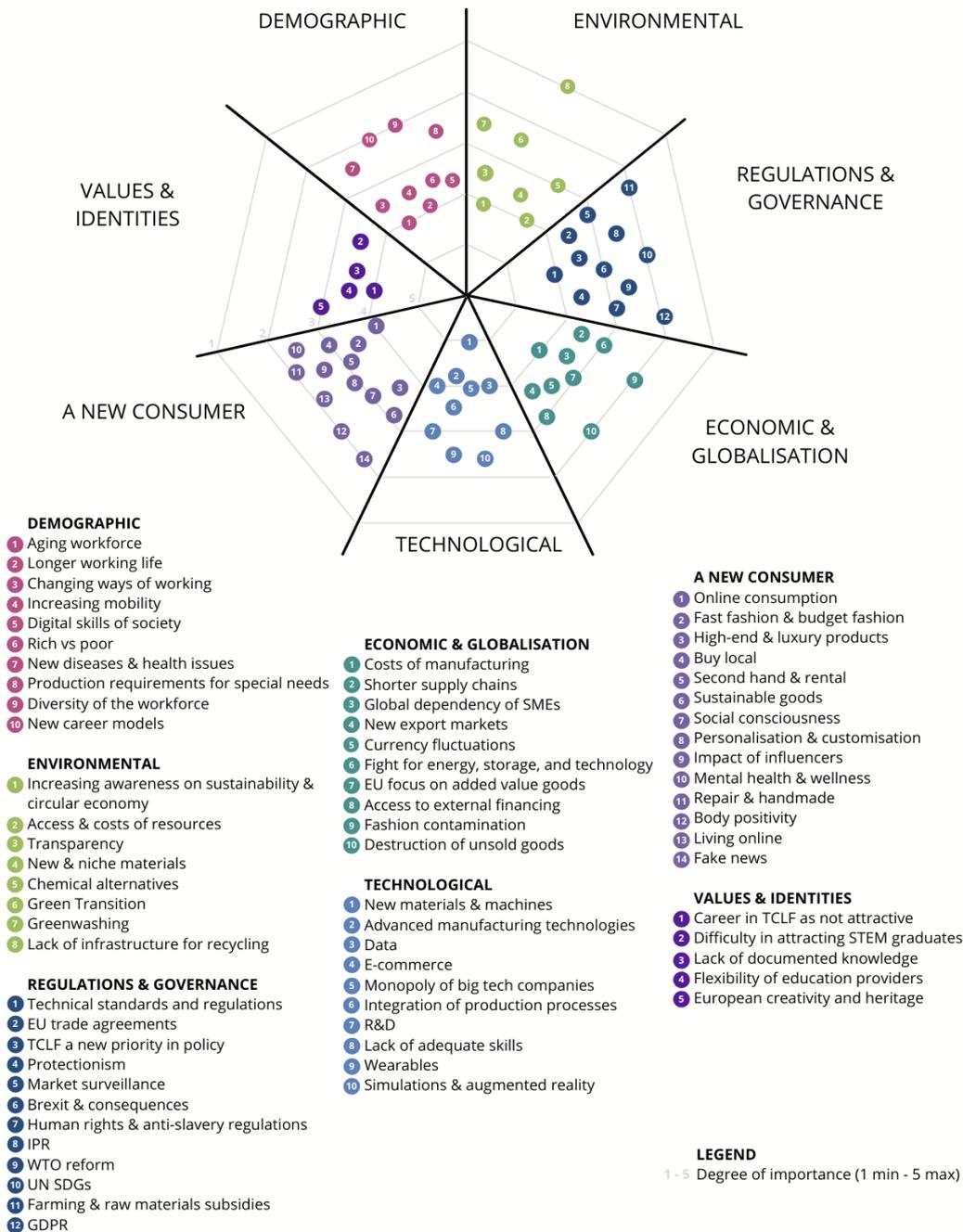
Each of the seven drivers presented briefly in the previous sub-chapters consists out of several sub-drivers, which in turn are also ranked by their level of influence on the French TCLF industries.

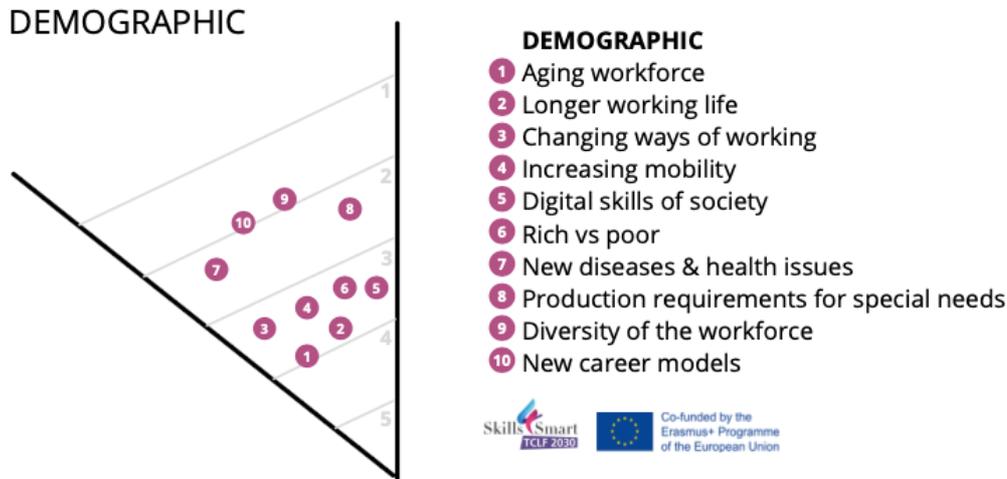
In total, at the European strategy level, 70 trends and influences were identified and were further expanded to the total number of 91, thanks to additional examples established in the context of COVID-19 (these are further analysed in the following sub-chapter).

The following pages present the drivers and sub-drivers based on their overall impact on the French TCLF sectors.

Drivers of change of the French TCLF industries

Based on the results of survey with 225 companies & series of workshops with stakeholders

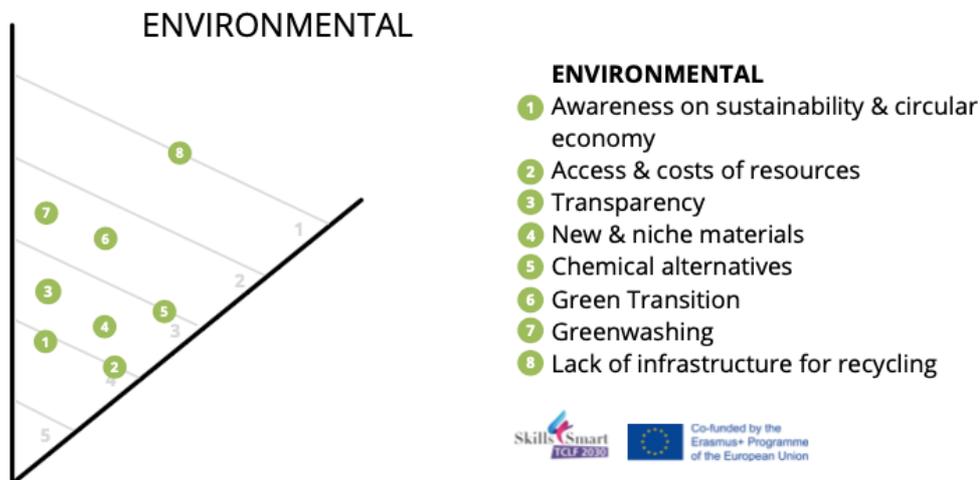




The demographic factor is not an important driver of change for French companies in the TCLF sectors.

Among the sub-drivers, the *aging of the workforce* is the most important. Many companies have to plan for employees retiring, due to an unbalanced age pyramid.

Environmental change



The *Environmental change* driver has become increasingly important in recent years in France.

The sub-driver *Green Transition* is very important, and is illustrated by an initiative from the UIT (*Union des Industries textiles*) which in 2020 commissioned a comparative study of the carbon footprint of 17 pieces of clothing and household linen,¹⁰ in order to measure the impact of local manufacturing on the products’ carbon footprint. This study, published in the journal *Sustainability*,¹¹ was conducted by Cycléco, a firm specialized in environmental

¹⁰ <https://www.textile.fr/fabriquer-en-france-pour-reduire-l-empreinte-carbone-textile>

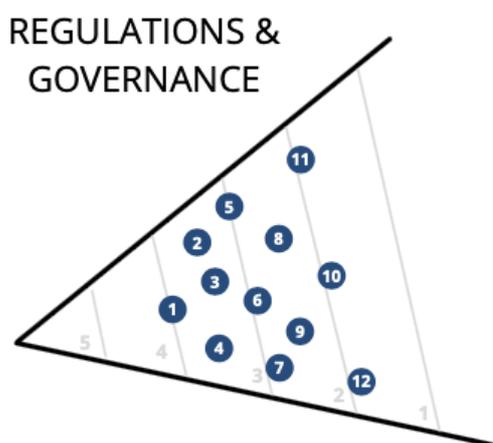
¹¹ <https://www.mdpi.com/2071-1050/13/5/2422>

impact studies, based on the analysis of the complete life cycle of the product, from the raw material to its use by the final consumer, and according to whether these products were manufactured in France or abroad. This study has been widely disseminated to publicize its findings and change practices.

A cost demonstrator has also been developed by the European Centre for Innovative Textiles (CETI), using direct and indirect cost calculation matrices to determine the full cost of production/collection and thus objectively measure the level of price competitiveness of production in France.

The *Increasing awareness of sustainability & circular economy* sub-driver is leading to new services, such as the pre-industrialisation and industrial repatriation support service offered by BPI France. Its purpose is to help company managers map their value chains and define strategies for repatriating all or part of their production to France and to implement them.

Regulation and governance



- REGULATIONS & GOVERNANCE**
- 1 Technical standards and regulations
 - 2 EU trade agreements
 - 3 TCLF a new priority in policy
 - 4 Protectionism
 - 5 Market surveillance
 - 6 Brexit & consequences
 - 7 Human rights & anti-slavery regulations
 - 8 IPR
 - 9 WTO reform
 - 10 UN SDGs
 - 11 Farming & raw materials subsidies
 - 12 GDPR



The *Regulations & Governance* driver might be more influential in France than at European level.

Firstly, there is the historic political support for industry deployed by the French authorities (Ministry of Finance and Industry / DGE, Ministry of Labour, Government) over the last five years, for example through the “*Investissement d’avenir*” or “*Plan de relance*” programmes, for example.

Furthermore, the special situation of France as the European and international leader in the fashion and luxury sector, focuses attention from leaders on TCLF industries.

Ensuring exemplary public procurement, by developing local sourcing by public purchasers and systematizing responsible purchasing clauses that favour French and European producers, is one example of specific French regulations in the sector.

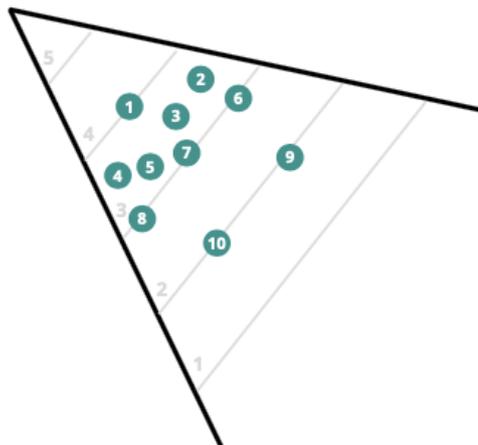
Another example is the development of innovative projects for industrializing the sorting and recycling of textile waste from clothing, household linen and shoes. Based on the implementation of the Extended Producer Responsibility (EPR) principle, introduced in

2007, all entities who professionally market new household products in are obliged to contribute to or provide for the recycling and treatment of waste from these products. The Refashion / Eco TLC eco-organization, set up to manage this activity and approved by the French State, promotes the integration of people with employment difficulties and regularly report on its activity to the public authorities, which monitor the system in place, with support from the ADEME.

The CSF *Mode et Luxe*, in its report “*Relocalisation et Mode Durable*” highlights to other regulatory changes which will have a major impact: the law of the 10February 2020 on the fight against waste and the circular economy,¹² which may encourage producers and distributors to adapt their production methods in order to limit unsold goods and to develop product re-use and recycling channels; and the current work on social and environmental labelling, which will lead to a strengthening of the obligations of actors in the sector in terms of the traceability of materials, production processes and information for end consumers.

Economics and globalisation

ECONOMIC & GLOBALISATION



ECONOMIC & GLOBALISATION

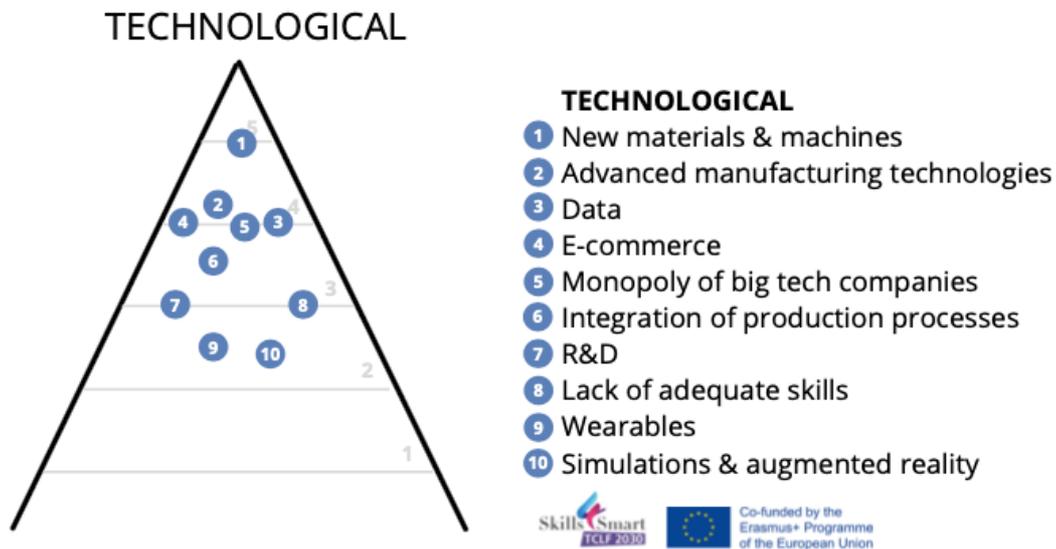
- 1 Costs of manufacturing
- 2 Shorter supply chains
- 3 Global dependency of SMEs
- 4 New (export) markets
- 5 Currency fluctuations
- 6 Fight for energy, storage, and technology
- 7 EU focus on added value goods
- 8 Access to external financing
- 9 Fashion contamination
- 10 Destruction of unsold goods



The Made in France branding is an important sub-driver related to the *Economic and globalisation* driver of change. Indeed, numerous initiatives like Vosges Terre Textile, France Terre Textile, or the Made in France label, are attempting to respond to new behaviours in consumes who are looking for high quality goods from guaranteed sources.

Technological change

¹² LOI AGEC n° 2020-105 du 10 février 2020 relative à la lutte contre le gaspillage et à l'économie circulaire - <https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000041553759/>



The *Technological change* driver is particularly important in France and there are already numerous illustrations of its tangible impact.

New 4.0 TCLF factories have been built from scratch, implementing important technological advances, particularly in terms of robotization and automation.

For example, in the footwear industry, the advanced shoes factory (ASF), in Ardoix, has been designed to repatriate shoe production for Salomon, Babolat and Millet to France. In the textile industry, Les tissages de Charlieu are creating an automated packaging workshop (6 production lines, 70 people) which will produce 18 million bags each year intended to replace the plastic bags sold at the cash registers of Auchan stores as of autumn 2021.¹³

Another initiative is the Texia programme,¹⁴ which brings together fashion and textile companies and Artificial Intelligence experts to develop concrete applications with a view to optimizing production, improving logistics or detecting new markets. For example, the Garnier-Thiebaut weaving company, founded in 1833 in Gérardmer (Vosges), works with Braincube to optimise machine productivity.

Technological change also encompasses e-commerce, with a high increase in digitalisation in the luxury goods market in France. This porosity between digital innovation and development in the fashion and beauty sector has been named Fashion Tech. The start-up incubator Station F, based in Paris and specialised in e-commerce solutions, illustrates the

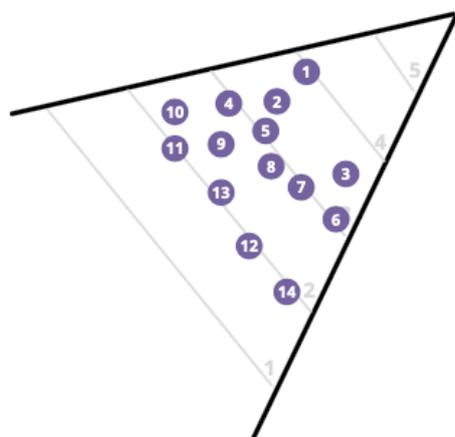
¹³ <https://france3-regions.francetvinfo.fr/auvergne-rhone-alpes/loire/cabas-recycles-les-tissages-de-charlieu-empaquent-pour-assurer-un-important-contrat-avec-l-enseigne-auchan-2109478.html>

¹⁴ <https://r3ilab.fr/wp-content/uploads/2020/02/2020-02-18-TEXIA-JDT.pdf>

dynamism of Fashion Tech, i.e. all the satellite companies in the luxury sector that innovate to make its digitalisation a reality.^{15,16}

A new consumer

A NEW CONSUMER



A NEW CONSUMER

- 1 Online consumption
- 2 Fast fashion & budget fashion
- 3 High-end & luxury products
- 4 Buy local
- 5 Second hand & rental
- 6 Sustainable goods
- 7 Social consciousness
- 8 Personalisation & customisation
- 9 Impact of influencers
- 10 Mental health & wellness
- 11 Repair & handmade
- 12 Body positivity
- 13 Living online
- 14 Fake news

The *A new Consumer* driver of change is of special interest in France as its prominent fashion and luxury sector is highly dependent on trends. Key actors, such as the IFM (*Institut français de la Mode*) or R3iLab (Network of business leaders in the textile, fashion and creative industries, whose objective is to promote intangible innovation in the industry), do foresight work to anticipate consumer trends and behaviour, and give companies the means to adapt to them.

In “Scenarii 2030”, published in December 2011,¹⁷ R3iLab presented its prospective scenarios for fashion and textiles up to 2030. The focus was on drawing the portrait of an impatient, creative, human and civic-minded consumer.

In its report “*Relocalisation et mode durable*” the *CSF Mode et Luxe* describes the French consumer as looking for sustainable consumption and transparency.

The same report mentions that the second-hand market is growing strongly in France. In 2019, 39% of French people bought a second-hand garment, compared to 15% in 2009. Brands therefore have a direct interest in promoting the sustainability of their products, as their resale potential is increasingly important for some consumers.

¹⁵ <https://stationf.co/companies>

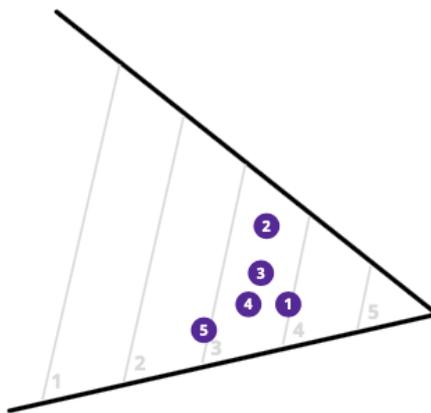
¹⁶ <https://www.lafashiontech.fr/>

¹⁷ <https://r3ilab.fr/scenarii-2030-quels-consommateurs-et-quels-modeles-industriels/>

Many consumers profess to prefer local and sustainable production, but this does not systematically translate into actual consumption and only justifies a price increase for a minority of the population.¹⁸

Values and identities

VALUES & IDENTITIES



VALUES & IDENTITIES

- 1 Career in TCLF as not attractive
- 2 Difficulty in attracting STEM graduates
- 3 Lack of documented knowledge
- 4 Flexibility of education providers
- 5 European creativity and heritage



Values and Identities is not mentioned as an important driver of change for the French TCLF companies. However, it has a huge impact on firms’ capacity to attract workers in the sector.

From 1970 to 1990, the widespread relocation of French TCLF activities to Asia and the high rate of unemployment tarnished the image of the TCLF sector, which remains unattractive to young people embarking on their careers.

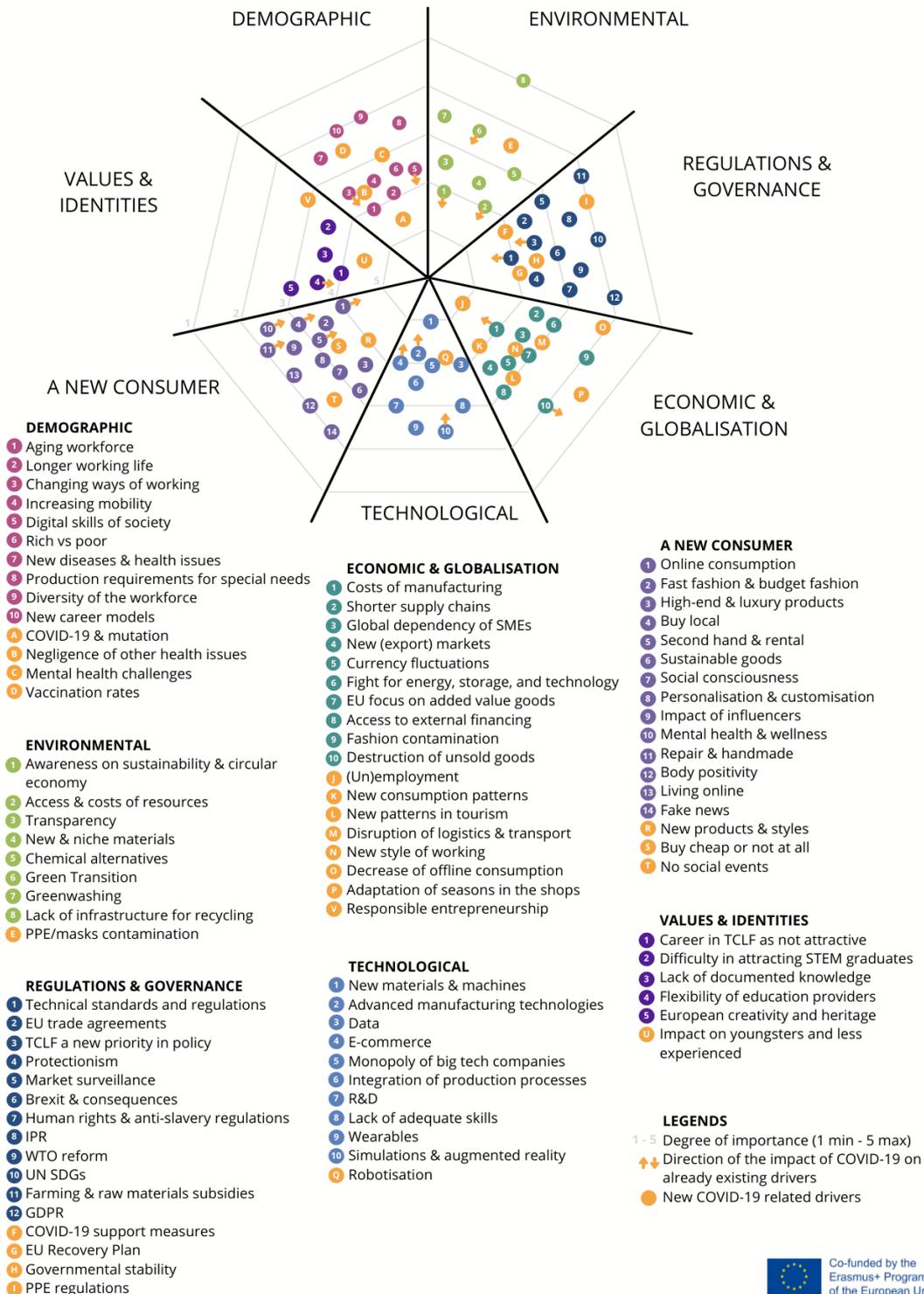
The rapid aging of the workforce in the TCLF sectors in France combined with the difficulty in attracting young people to the industry are the biggest problems in the present day.

¹⁸ Report "Relocalisation et mode durable", Comité Stratégique de filière, section 1.1.1



Drivers of change of the French TCLF industries

Based on the results of survey with 225 companies & series of workshops with stakeholders



Demographic change

The COVID-19 crisis has led to profound changes in the way people work in France. Many companies seem to have understood the importance of soft skills thanks to this health crisis and are now seeking profiles that can easily adapt to any situation. The ability to adapt has thus become a key skill sought by recruiters, particularly TCLF companies.

The crisis has also accelerated the use of digital solutions. For example, artificial intelligence tools that can be used in recruitment to initially screen candidates, are developing rapidly. Similarly, platforms are revolutionising recruitment with pre-recorded video interviews, for example the Digital Visiotalent Forum.

Environmental change

COVID-19 has given new impetus to environmental change in France. Indeed, increasing the proportion of locally manufactured products has become a key objective, with a view to reducing France's dependency on global value chains (to secure both local manufacturers and the supply of items such as masks or professional clothing for the medical sector / PPE, that have become strategic post-COVID-19). The environmental impact of production by using low-carbon energy sources and complying with the world's strictest environmental standards.

The *Awareness of sustainability & circular economy* driver of change increased significantly in France during this period. Innovation linked to recycling is becoming a strategic field for the sector and is part of global thinking on the circular economy and the end-of-life-cycle capacity to reuse the fibres from textile or footwear production.

In the world of textile finishing (dyeing and finishing), manufacturers are striving to reduce the negative impacts of this activity (significant use of water and chemicals), which is nonetheless essential to the perceived value of products (touch, shine, etc.).

This has led, for example, to the "Programme 0 reject" initiative launched in October 2020, related to the *Chemical alternatives* sub-driver. This programme aims to better understand the challenges of diffuse pollution in the water discharged by finishers and make recommendations for improvements (reduction of micro pollution, etc.). This programme, led by UNITEX and supported by the Rhône-Mediterranean and Loire-Bretagne Water Agencies, involved 10 firms. It has three objectives: support firms with regulatory compliance and addressing environmental concerns; identify difficulties and find solutions; and promote responsible production methods.

Access to, and the cost of, resources has become increasingly problematic for French TCLF firms. For example, France is experiencing an increase in electricity tariffs due to a surge in gas prices, which is having a major impact on the textile industry, particularly dyeing plants, which are major consumers.

Regulations and governance

The COVID-19 pandemic has increased the importance of the *Regulations & Governance* driver in France.

The French Recovery Plan for the economic, social and ecological reconstruction of the country, known as *France Relance*, was launched in September 2020 and is the result of a wide-ranging national consultation process set up to learn lessons from the crisis.¹⁹

This plan has three components: ecology, competitiveness and cohesion.

For example, as part of the competitiveness component, the government has mobilised exceptional levels of resources to support investment and modernisation in the industry in 2020, 2021 and 2022.²⁰

One example of investment took place in the flax sector. Flax is a sector of excellence in which France is well positioned, but it does not currently have spinning processing capacities adapted to its production, 80% of which is exported to Asia and 15% to the EU, and then reimported in the form of fabric or made-up products.

The French government, via the recovery plan, is supporting several industrial flax spinning projects. For example, the project to set up a flax spinning unit in Béthune, which will create around fifty jobs by 2024 and produce 350 tonnes of yarn each year from 2022, has received €800,000 in state aid for a total cost of €5m.²¹

Economic and globalisation

The TCLF industry was heavily impacted by the COVID-19 crisis, not only did consumption fall sharply due to the economic crisis and the closure of clothing shops but some sub-contracting markets for textiles were also particularly badly hit (aeronautics, hotel and catering, events, etc.).

The COVID-19 also had an impact on the *New style of working* sub-driver.

Set up in March 2020, the *Savoir Faire Ensemble* group coordinated up to 1,500 textile, clothing and leather workshops. Some companies in the sector responded very rapidly, adapting their production tools to manufacture millions of fabric masks that compensated for the shortage during the first lockdown. More than 200 million masks and 15 million gowns were produced during this period.

Renamed “*Façon de Faire*” in July 2021, this association now connects clients with textile and fashion companies. A matchmaking service for all types of textile/fashion products, which allows companies to offer clothing/linen/technical products 100% Made in France, locally and sustainably manufactured. It also connects clients with material manufacturers in order to source materials that meet these same criteria.

The collective “*Linpossible*” was created by two leaders who are seeking to develop a complete flax and hemp industry in France.

¹⁹ <https://www.gouvernement.fr/france-relance>

²⁰ <https://www.economie.gouv.fr/plan-de-relance/profils/entreprises/soutien-investissement-modernisation-industrie>

²¹ Journal « Les Echos » page 13 - 23 juin 2021

The COVID-19 crisis also introduced the notion of “responsible entrepreneurship”. New forms of entrepreneurship are emerging in France, based on shared resources and multidisciplinary teams. For example, startup studio (also named startup factory, company builder or venture builder) are involved in the creation of start-ups from the outset ("from scratch") and in a very operational way.

Business incubators specialising in specific sectors, such as leather, are being set up to accompany, accelerate and support the creation of responsible businesses.²² LVMH has even gone further by launching its own incubator: La Maison des start-ups.²³

Technological change

The COVID-19 crisis has accelerated development in pre-existing fields of innovation in France, with regard to sector-specific technologies that impact both the TCLF sector and transverse technologies (blockchain, radio frequency identification, artificial intelligence etc.).

Biotechnology is an example of a textile sector-specific technology with a promising future. This approach consists of genetically modifying organisms (bacteria, product waste) to create new materials with interesting functionalities. Biotechnologies appear to be good for both human health and the environment.

In March 2021, the luxury French brand Hermes confirmed its commitment to the use of alternative materials and announced its first bag model made primarily from mushroom fibres as an alternative to animal leather.

Sofinnova, a leading European life sciences venture capital firm, specializing in healthcare and sustainability, has raised €1 billion in the last 12 months through its expanding life science investment platform PARIS. The objective is to finance French start-ups that use biotechnologies to develop sustainable solutions in particular relating to materials. The challenge in this sector, which includes green chemistry, is to design raw materials and products from nature that take into account the depletion of our resources and climate change.

²² <https://www.audeladucuir.com/>

²³ <https://lamaisondesstartups.lvmh.com/>

A new consumer

The *A new consumer* driver of change has been affected by the changes in the second-hand market brought about by the COVID-19 crisis. This links to the decline in consumer purchasing power. In its study “*Les nouveaux modèles économiques de la mode*”, the consulting firm Kea Partner asserts that the second-hand sector is driven by a dual trend: ever-increasing consumption of clothing, and ever-decreasing use. Today, people consume four times more clothes than 30 years ago but at the same time the average use of clothes has decreased by 36% over the last 15 years worldwide. It is estimated that most clothes are thrown away after 7-10 uses.

The second-hand market affects all product categories as evidenced by the growth of marketplaces such as The Real Real, Vinted or Vestiaire Collective. According to a study by ThredUp, millennials (25 - 37 years old) represent 33% of second-hand buyers.

In France, the IFM estimates that this second-hand market represents 1 billion Euros, 56% of which is generated by Vinted alone. This dazzling success now places it in the top 5 e-commerce firms. Following the trend, Zalando announced that as of autumn 2020 its application would include a second-hand clothing offer.

Conversely, the rental market remains a low driver of change, as in France there are still strong barriers to make leasing a sustainable business model. An emerging business model in France is the marketplace model which has been adopted by Les Cachotières, for example, an online platform offering the private hire of mid-range and affordable luxury items.

Values and identities

The *Flexibility of education providers* driver of change has been enhanced in France by the urgency of the continuing education situation caused by the various lockdowns.

TCLF training providers in France, e.g. Maya Campus or Informa, have implemented new digital training courses, based on virtual reality, MOOCs or virtual classrooms (online simulation of a real classroom where several learners and trainers are brought together through a video-conference system).

5 SECTORAL SKILLS STRATEGY FOR THE TCLF INDUSTRIES IN 2030

5.1 BUILDING BLOCKS FOR SKILLS STRATEGY DEVELOPMENT

The analysis of the skills and employment trends of the TCLF industries was the subject of numerous European and national projects in the last decade. The main objectives of these activities were to increase the understanding and effectiveness of the activities implemented in response to the challenges and opportunities in the four sectors. Consequently, the main focus of the recommendations was how to close the gap between the manufacturers' demands and the qualifications and skills of the EU labour force, retain

skills within the industry, and increase innovation and sustainability. Another important component was the analysis of future needs.

At EU level, it is worth mentioning the previous initiatives which have inspired the Sectoral Skills Strategy under the S4TCLF project. In 2008, the *Skills scenarios for the textiles, wearing apparel and leather products sector in the European Union* report which analysed drivers of change and potential future scenarios was published under the guidance of the European Commission, Directorate General on Employment, Social Affairs, and Inclusion.

This document was followed by an industry-driven initiative that established the European Textile, Clothing, Leather, and Footwear Skills Council (TCLF Skills Council) in the 2010.²⁴ The main purpose was to improve the level of education, skills, and employment in the TCLF industries. The core objective was pursued by networking Industry Skills Partnerships and EU Social partners in the TCLF sectors, as well as by facilitating decision-making on education and training issues in the sectors at European, national, regional, and company levels. One of the most important outcomes of this cooperation was the 2014 Skills Council Report, the main reference point for analysing the drivers of change and highlighting best training practice.

In 2012, an in-depth assessment of the T&C sector in the EU and prospects was published on request of the European Commission, with input provided by EURATEX. As the title indicates, the analysis was dedicated solely to the textile and clothing industries, and discussed the main challenges in the sectors and potential tools to overcome threats to the manufacturers.

The S4TCLF project follows on from these initiatives. Following industry-level research and in collaboration with education and training providers, the consortium has defined eight job profiles which will be in high demand by 2030 and developed the Sectoral Skills Strategy. This strategy, along with the analysis of the drivers of change, establishes five scenarios for the four sectors (presented in detail in this chapter) and develops key recommendations for industry, education, and policy stakeholders.

In France, the government's interest of in the TCLF sector over the last ten years has mainly focused on VSE/SMEs, most of which do not have an HR function. In other words, the French State does not aim to support all companies and all groups, but rather vulnerable groups, VSE/SMEs, in order to support the structuring of tomorrow's skills needs, companies in difficulty and economic change. The EDDF and EDEC programmes²⁵ represent the main support scheme for the sector at national level. In particular, the textile sector has been supported almost continuously by the State, EDEC after EDEC, for 30 years, due to the mass redundancies in the sector that required support for reconversion. Since 2020, the French government has further mobilised exceptional resources to support investment in, and modernisation of, the industry through the *France Relance* programme, which the TCLF sector has particularly benefited from.

²⁴ <http://europeanskillscouncil.t-c-l.eu/en/mission.aspx>

²⁵ Engagement de développement de la Formation – Engagement de développement des compétences

5.2 FIVE SCENARIOS FOR THE TCLF INDUSTRIES IN 2030

5.2.1 Introduction

During the preparation process for establishing the Sectoral Skills Strategy for the TCLF industries, the S4TCLF project partners took numerous significant decisions. The first decision was to not create one skills master plan for all EU TCLF industries, but rather a framework that facilitates the development of sectoral, national, or regional strategies.

This approach was driven by the differences between the four sectors and between countries, given that each sector has its own unique production processes, know-how, level of development and presence in different countries, as well as the macroenvironmental conditions, which could make a one-size-fits-all strategy ineffective. Along with the development of five distinctive scenarios for 2030, this approach allows for nuanced adaptation to force majeure, rather than having to rewrite the scenarios and recommendations from scratch.

The corresponding national strategy for France was developed by UNITEX, in relation with French TCLF sector stakeholders with education, policy and industry backgrounds. These resources and their unique knowledge of the industries and challenges, as well as access to important stakeholders helped to translate the strategy into a set of tangible actions.

A strategy is understood as a set of actions developed based on a needs analysis, that aims to achieve a long-term objective. The main focus of the S4TCLF project is to prepare the TCLF industries for the skills-related challenges that the sectors will face up to 2030. The final version of the Sectoral Skills Strategy also takes into consideration the impact of the COVID-19 pandemic on the industry and future needs for skills.

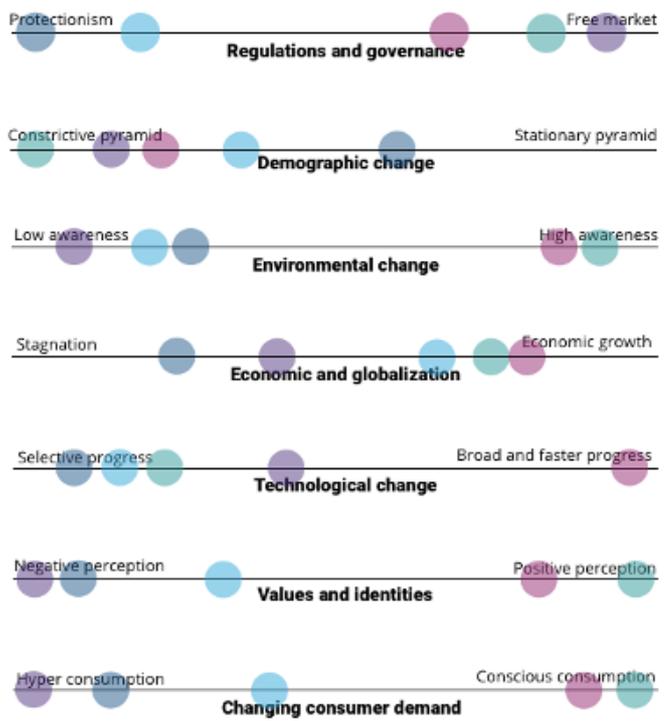
As a first step, the project partners analysed data on the economic and social aspects of the TCLF industries paying particular attention to trends and challenges within the four sectors, results of which have been set out in the previous chapters of this document. Based on the data collected the key challenges were identified as the upcoming retirement of a significant proportion of experienced workers in the field, the lack of young people seeking a career in the TCLF industries, the difficulties in attracting talent to the French TCLF training centres (initial and apprenticeship), the issue of safeguarding and passing on know-how, and the gap between the skills offer and demand.

The next step in strategy development included developing scenarios – snapshots of plausible, alternative futures that are expanded in a process that involves analysing trends and critical uncertainties. The S4TCLF project partners involved in this task decided to develop five distinctive scenarios. However, the differences between the four sectors could lead to different, even contrasting, outcomes for each of the industries under the same conditions. Although all the proposed scenarios are different, each of them has a number of aspects in common, meaning the transition between alternatives is gradual. The approach used allowed the project partners involved in developing national strategies, as well as external stakeholders, to create specific recommendations and adapt the tools to their individual needs, increasing the granularity of the exercise.

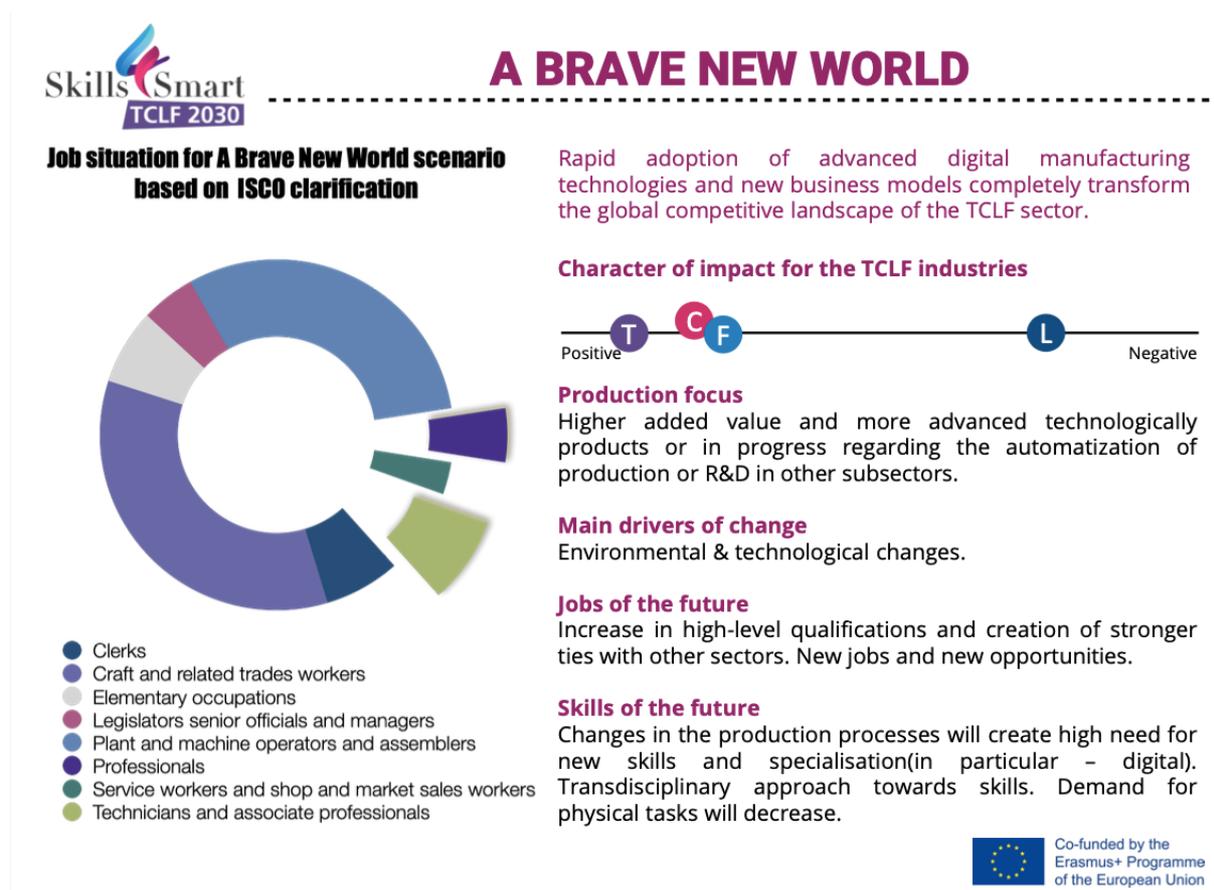
Based on developed scenarios, the French partners **UNITEX** were able to establish a set of recommendations and strategies for different types of stakeholders (education, industry and policymakers), appropriate to each of the plausible futures. These results are presented in the next chapter.

EU TCLF INDUSTRIES IN 2030- 5 SCENARIOS

<p>A BRAVE NEW WORLD Rapid adoption of advanced digital manufacturing technologies and new business models completely transform the global competitive landscape of the TCLF sector.</p>
<p>SELECTIVE LEADERSHIP Selective high value-added subsections or product types achieve global leadership, while other subsections are struggling to remain competitive on the global market.</p>
<p>RENAISSANCE OF THE CRAFT Wide-spread sustainable, conscious consumer behavior gives rise to local production/consumption/recycling models based on traditional, but technology-enhanced maker concepts.</p>
<p>WALLED GARDENS Rise of regionalism and protectionism stifles global trade flows and enables existing regional production clusters in Europe to survive and thrive.</p>
<p>INDUSTRIAL SUNSET The global race to the bottom fueled by cheap, fast fashion continues unabated and drives most TCLF production to lowest labour cost locations outside Europe.</p>



Summary



A Brave New World represents a scenario in which rapid adoption of advanced digital manufacturing technologies and new business models completely transforms the global competitive landscape of the TCLF sectors in 2030, simultaneously increasing their global competitiveness.

The changes in production will focus primarily on ensuring higher added-value, particularly in the domain of technologically advanced products and components (such as implementing technical or smart textiles, scientifically-led comfort and sustainable footwear) or in progress in automatising the production and development of new systems. Moreover, this scenario foresees progress in R&D both in terms of technological development and sustainability.

In France, this scenario is already a reality in the clothing and textile sector, as some companies have already pushed automation. There are many examples of this dynamic. In the footwear industry, the advanced shoes factory (ASF) in Ardoix, has been designed to repatriate the production of shoes for Salomon, Babolat and Millet to France. In the clothing industry, Les tissages de Charlieu are creating an automated packaging workshop (6 production lines, 70 people) which will produce 18 million bags each year

intended to replace the plastic bags sold at the cash registers of Auchan stores from autumn 2021.

In the textile industry, 3D-TEX, a young French start-up specialising in the manufacture of 3D knitted items located in Saint-Malo, is the first fully 3D knitting factory in France. Fully automated, 3D-TEX relies on the latest existing technologies.

1083 and Atelier Tuffery are acquiring robots made to assemble jeans. The firms 2B Broderie and Filature, based in the Auvergne-Rhône Alpes Region, use 12-head computer-assisted embroidery machines in their activities. The company Tair Securotec uses automatic flat bed sewing robots for its productions. MLF (la Manufacture des Layette et Tricot), which makes hats, jumpers, cardigans and other baby clothes for mass retail, has been developing its automation process for 10 years. Henitex is developing a seamless production tool in Riorges, with machines dedicated to seamless circular knitting. Petit bateau launched its regional on-demand production platform at its site in Troyes in October 2021.

This scenario is therefore realistic for certain activities in France, as automation is already underway.

A Brave New World is a positive scenario for the textile, clothing, and footwear industries. However, it presents more challenges for leather manufacturers and tanning operations. Indeed, although these sectors are actively working on environmental issues (notably through strong regulation of chemical products, in particular bisphenol and chromium 3) and implementing new technologies (in particular in relation to colorimetry, the increasingly stringent requirement of respecting colours, etc.), their craft requires manual operations and know-how, in contradiction with the Brave New World scenario which involves high levels of automation.

The most important drivers of change for this scenario in France are environmental and technological change, which have a ripple-effect impact on the industries. The most important example in terms of environmental change is *challenges related to recycling infrastructure*. Historic political support from the French authorities through the “*Investissement d’avenir*” and “*Plan de relance*” schemes, as well as regulatory changes (the AGEC law for example), are encouraging producers and distributors to adapt their production methods in order to limit the amount of unsold goods and develop product re-use and recycling channels. Beyond these two drivers of change, the exceptional resources deployed to support investment in and modernisation of industry through the *France Relance* programme launched in 2020 will play a key role in the French TCLF industry in the future.

The of the European TCLF industries will improve among citizens thanks to these changes. This will influence not only the perception of the industries in terms of consumption, but also in relation to career opportunities. In France, this change in image is reflected in recruitment practices. Whereas the “headhunting” approach (which consists of identifying and seducing potential candidates on the basis of a prior selection of targets and a direct proactive approach) was formerly reserved for “senior management” profiles, it is now applied to all jobs in short supply.

These changes in the production process will influence the upgrading of current skills and competences and create stronger ties with other sectors such as healthcare, lifestyle, automotive, construction, or defence. Consequently, this may lead to cross-sector exchanges of labour and skills. However, in parallel, it will create a threat for production processes unable to adapt, leading to the potential disappearance of certain traditional

skills and knowledge. Risks also exist if proper measures such as the digitisation of knowledge are not implemented. The automatization of the production constitutes an additional threat as it will force low and some medium-qualified workers to upskill or change jobs.

Jobs and skills in the Brave New World

The changes in the TCLF industries will focus on gradual transformation rather than drastic modification of the industry status quo. The developments in the textile industry and, to some extent, the clothing and footwear sectors will spearhead those changes. In terms of the scenario's impact on the workforce, there will be positive outcomes in the textile industry and a neutral impact in the clothing and footwear sectors. The *Brave New World* scenario may have a negative influence on certain segments of the leather and tanning industry, in particular in those with old-fashioned production processes or where technological change cannot be implemented due to the lack of alternative chemical processes. In the tanning industry in particular, there is a risk of a gap developing between small companies (less than 20 employees) and tanneries belonging to groups such as Hermes or LVMH. The large groups will have the means to invest and modernise their production facilities, whereas small companies will find it difficult to move away from non-automated traditional processes.

While positive developments will be seen in all sizes of companies (in small companies these will particularly be focused on software), the winners from the most advanced technological developments will be medium and large companies able to incorporate new machinery and R&D outputs. At the other end of the scale, this scenario also creates an opportunity for small start-ups from the fashion-tech community.

Using the ISCO²⁶ classification as a reference point, the changes in the production processes will generate positive reinforcement, especially among the *professionals or technicians and associated professional occupations*. This means that growth will be most visible in the high-level skilled workforce category. Amongst the occupations for which the S4TCLF project partners have developed MOOCs those with the highest career potential are Clothing CAD Pattern Maker, 3D CAD Footwear Developer, and Process and Production Timeline Analyst.

At the same time, due to production automatization and the disappearance of certain products in Europe due to outsourcing or the discovery of better alternatives, the number of low-skilled workers will decrease. This significantly impacts employees working physically on the early stages of production processes or logistics, clerks, plant and machine operators, and craft and related trade workers.

In terms of newcomers, the focus will be on responding to the new needs of the TCLF industries rather than replacing the retiring workforce. The positive perception of the sector and its technological development will create new opportunities to attract

²⁶ ISCO - International standard classification of occupations

youngsters, STEM graduates, and workers from different, non-TCLF backgrounds. This will further contribute to cross-sector mobility and sharing of knowledge. Therefore, the entry requirements will focus on transversal and digital skills, rather than prioritising process and production skills, which creates an opportunity for the TCLF industries to reach out to a broader pool of labour.

As this scenario relies on technological development, digital skills in information processing, problem-solving, service orientation and skills relating to machines operations will play a crucial role. Despite the general assumption that technological changes will take jobs away from employees, this situation may actually create new skills needs and opportunities for growth. This positive trend will focus mostly on higher-level qualifications, but in some cases, it may include the lower-level skills. New skills have already been identified in France as requiring specific training in connection with automation in the textile and clothing industry. Level 4 Computer-aided production management (CAPM) skills will be required. In the garment industry, overlocking robots, cutting robots and automatic bartacking machines are becoming the norm and require operators trained in handling (positioning parts, programming a robot/cutting machine, selecting a program etc.).

Manual and conventional skills will remain important, especially in SMEs, as the cost and ability to automatize production will be beyond the means of many companies, especially in a context where conventional skills are essential to production. For example, 3D-tex, which specialises in 3-D knitting, is both looking for programmers via LinkedIn, and for mechanics for knitting machines and garment operators. There will be fewer of latter but they will remain essential to ensure production from a basic knowledge base of textile materials, fabrics, weaves, etc. The training organisation Maya Campus will open a new knitting training course in September 2022 in Roanne in the Auvergne Rhône Alpes region to meet the growing need for operators and production technicians in knitwear with "conventional" skills.

However, this optimistic scenario requires a higher level of commitment from workers at all levels of qualification to upskill and an up-to-date education and training offer. Employees with medium or low levels of qualification who do not actively upskill may face the biggest challenges as production becomes more specialised. This is a threat not only for the workforce but also for employers who do not invest in upskilling and adapting the product to the new needs and trends. Consequently, the sharing of know-how, openness towards new solutions, and transdisciplinary staff will play a crucial role in the future.

COVID-19 impact on the Brave New World

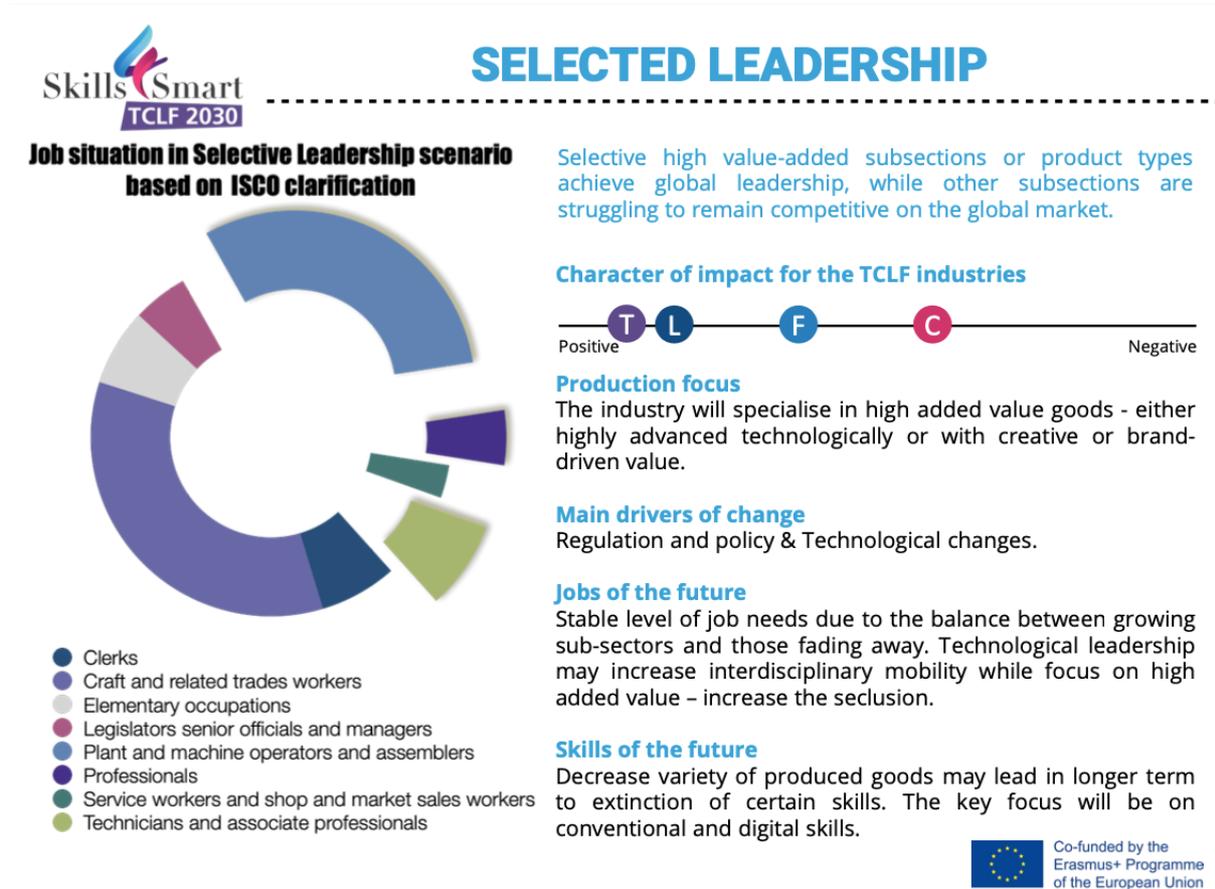
The COVID-19 pandemic had an impact on the *Brave New World* scenario through the changes connected with the digitalisation of production processes, as well as the increase in digital skills and expertise in the workforce, some of whom were forced them to work online to adapt to the new circumstances.

The key factor influencing this scenario as far as France is concerned is “*awareness of sustainability & circular economy*”, which increased significantly in France during the COVID-19 period. Innovation linked to recycling is becoming a strategic field for the sector

and is part of overall thinking on the circular economy and on the capacity at the end of the life cycle to reuse the fibres used in the creation of a textile or footwear product.

The firm Renaissance Textile collects clothes and textiles at the end of their life cycle, in order to recycle them and produce a new fibre, which can be used to manufacture new textiles. It uses Andritz Laroche automatic machines capable of automatically processing the clothes to be recycled.

5.2.3 Selective Leadership



Summary

This scenario foresees that by 2030 the EU TCLF industries maintain or further increase their international market position in selected sub-sectors, leaving less profitable or lower value-added production struggling to compete. This means that both production and R&D will mainly focus on the most profitable branches. The selection of products will result both from the economic returns, as well as the support received from national and regional governments, and may involve further specialisation of premium and luxury high added-value goods or the incorporation of advanced technologies and solutions. *Selective leadership* is a positive scenario for the leather and textile industries, medium-positive for footwear, and neutral on average for clothing.

The key drivers of change defining the direction taken by the TCLF industries under this scenario are *Technological change* and *Regulation & governance*. Similarly to *Brave New World*, the influence of *new materials and machines*, *R&D*, and *integrations of production*

processes are of equal importance as it allows European TCLF manufacturers to further specialise in the areas of design, product development, and production capabilities, which will in turn lead to an increase in the competitiveness of products globally.

The aforementioned examples are crucial for developing technically advanced products. For premium and luxury goods the key example is the impact of *European creativity and heritage*. The positive perception of the industry and trades will allow production to continue with a steady supply of labour. Technological change in this scenario also affects e-commerce, with a large increase in the digitalisation of the luxury goods sector in France. In France, this porosity between digital innovation and development in the fashion and beauty sector is called Fashion Tech.

The driver of change focused on politics will determine the competitiveness of selected branches through the implementation of *technical standards & regulations* (though IPR protection, standardisation, certification, and market surveillance), *EU trade agreements* (that will facilitate favourable access to new markets, removing tariffs and non-tariff barriers) and the inclusion of TCLF-related topics in policy priorities for the coming years. Consequently, the prioritisation of the branches of production will depend on the regulations in the producer's country and the nature of government support.

In France, the government support provided tends to favour this scenario. Indeed, the fashion and luxury sectors receive significant government support across the four TCLF sectors. Characterised by a broad diversity of actors and trades spread over the territory, the sector is made up of large groups (LVMH, Kering, Hermès, etc.), designer and ready-to-wear brands, craftsmen and manufacturing companies, the vast majority of which are SMEs, or even VSEs, sometimes working together within small family groups.

This support is reflected, for example, in the Fashion & Luxury accelerator, created in partnership with Bpifrance and the sector's professional economic development committees (DEFI, CTC and Francéclat). This action aims to contribute to luxury subcontractors' modernisation, their transition to the factory of the future, the strengthening of their equity, and the development of growing brands.

In terms of company size, this scenario would be beneficial both to big companies (focused on technological specialisation) and SMEs (focused on craft and high value-added and premium goods).

The skills of the TCLF workforce would focus either on transversal digital or technological skills or on process and production skills for TCLF production. The entry requirements for the workforce will depend on the type of products and the company's position in the supply chain. Overall, job needs will be stable as employment growth in leading sub-sectors will be balanced out by job losses in struggling sub-sectors. However, only prioritising selected branches may lead to the loss of knowledge and skills, as well as an increase in unemployment, especially among low-skilled workers.

Job and skills in the Selective Leadership situation

For TCLF industries in labour-sensitive sectors, any change in terms of production will influence demand. In this scenario, the number of employees will depend on the type of goods produced and may polarise job qualifications. The impact on the TCLF workforce is perceived as positive or neutral for all four sectors, with textile employees being the main beneficiaries.

While technologically more advanced products may fall under the automatization of production, which will lead to a decrease in jobs, even smart textiles and products using this type of solution require manual interventions to ensure high quality and adequate functioning. Consequently, while the type of occupations will change, there will always be a need for manual skills regardless of the type of production.

Based on the ISCO classification, the key types of occupations for this scenario will be *craft and related trade workers, plant and machine operators and assemblers, technicians and associate professionals and professionals*. All of them belong to the high-level qualification group due to the nature of the final products and the fact that machine automation will replace outsourcing at certain stages of the supply chain. As well as eliminating certain occupations, automatized production also creates new job opportunities. Amongst the different occupations for which the S4TCLF project partners have developed MOOCs, all four sectoral profiles have high career potential in the near future.

Production focused more on the technologically advanced processes and products may attract young talent with a background in STEM. It opens up opportunities for greater occupational mobility within other sectors, which may lead to more development and openness in the TCLF industries. Consequently, the percentage of young people in the workforce may increase as the older generation may prefer retirement to reskilling.

Selective leadership focusing on higher added value, and premium goods would create a difficult situation in terms of the flow of employees, unless society's perception jobs in the TCLF industries changes. If this does not transpire, the average age of TCLF workers will continue to increase, and new employees will either have to have experience in the industry or start in low qualified jobs. The newcomers in this scenario are likely to be highly dedicated to the industry as their decision to enter it will be dictated by interest and skills.

In terms of skills, the priority will be on conventional skills over digital and green skills. Employers will focus on acquiring workers with a high level of experience and knowledge. As physical tasks steadily disappear, intellectual and social tasks will gain importance. Ability to communicate, openness towards learning and change, the flexibility of workers, and literacy and numeracy skills will become important capabilities used by employees on all levels. In addition, the ability to use new types of tools and machines will be a key advantage in the job market. Skills focused on intellectual tasks are especially important in technical textiles production, but may also be applicable in some of the higher added value products that involve the use of technology, rather than craftsmanship, such as sportswear or high-tech fashion goods, for example.

While analysing the threats to employees in this scenario, it is crucial to take into consideration the type of production. With high-tech-oriented specialisation, the threat lies in the need for employees to upskill and incorporate various transversal and digital skills. This may lead to the loss of some manual skills and knowledge in the sector.

On the other hand, focusing on premium and luxury goods can decrease the pace at which digital and transversal skills are incorporated, increasing the gap between the TCLF industries and other sectors. At the same time, initiatives for upskilling the workforce will be marginal. In a longer-term scenario, this may lead to a lack of satisfaction and an increase in the percentage of people in “dead-end” jobs with a low level of motivation for further upskilling.

In the *Selective Leadership* scenario, it is important to create systems and programmes for the continuous training and upskilling of workers, to share knowledge and skills in mixed teams of workers with different abilities, as well as favouring job elasticity. This scenario focuses on branches with the biggest potential for global competitiveness. However, it is important in the process to maintain the balance between skills and knowledge to avoid limiting further development pathways.

COVID-19 impact on Selective Leadership

The COVID-19 pandemic had an impact on the *Selective Leadership* scenario through three types of changes. Firstly, changes in the level of digitalisation of production processes and the increase in digital skills, similarly to the *Brave New World* scenario. Consumer awareness of the natural environment and their footprint has contributed to the increased awareness of sustainability. However, the biggest impact was the TCLF industries' contribution to the fight against the virus, when they started providing face masks for daily use or professional PPE. It helped to not only improve the sectors' image in European society, but also opened up a new avenue for reaching global competitiveness.

In terms of COVID-19 influence, the key factors from the list of drivers of change influencing the industries would be *EU Recovery Plan* and their inclusion as recipients at national level, followed by *New consumption patterns* and *PPE regulations*. In France, two complementary factors come into play: firstly, the fact that TCLF is considered as a new political priority, after its strong mobilisation during the crisis, and secondly, the increasing technical standards and regulations which, make the chances of success narrower and agility more important.

The *ad-hoc* manufacturing PPE shifted the focus of production in certain companies and opened up new opportunities for their employees to acquire new skills. While the sudden circumstances meant formal training was not available, they allowed the workforce to approach their tasks with more openness and readiness to upskill.

The impact the pandemic could actually bring about some positive developments both in terms of production and skills needs, in particular for those operating in the PPE segment. However, similarly to the first scenario, specialising in selected branches of production can

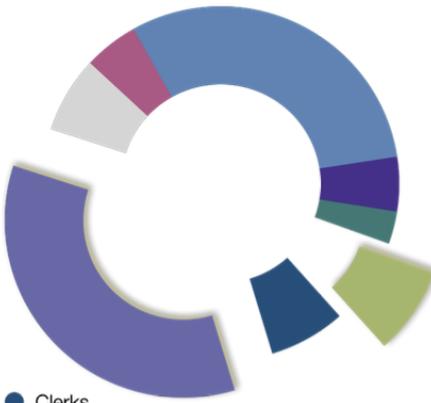
leave the companies and employees who bet on different products and skills struggling in the coming years if they are not able to quickly adjust their responses

5.2.4 Renaissance of the Craft



RENAISSANCE OF THE CRAFT

Job situation in Renaissance of the Craft scenario based on ISCO clarification



- Clerks
- Craft and related trades workers
- Elementary occupations
- Legislators senior officials and managers
- Plant and machine operators and assemblers
- Professionals
- Service workers and shop and market sales workers
- Technicians and associate professionals

Wide-spread sustainable, conscious consumer behaviour gives rise to local production/consumption/recycling models based on traditional, but technology-enhanced concepts.

Character of impact for the TCLF industries

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C

T

F

Positive
Negative

Production focus
The TCLF sectors by combining heritage with technological developments will offer new range of goods from different price levels that are produced locally.

Main drivers of change
Economy, environment & changing consumer demand.

Jobs of the future
The job demand will be on high level, especially for occupations with manual skills and replacement of retiring workforce. Cross-industrial workforce exchange will be limited.

Skills of the future
Crucial advantage in this scenario is the use of skills and knowledge that we already have and that are part of European TCLF heritage. Green and conventional skills will play crucial role in the industry.



Co-funded by the Erasmus+ Programme of the European Union

Summary

By combining heritage and technological developments in production and consumption certain companies will distance themselves from the negative perception of the traditional industries, creating a more attractive image thanks to the higher added-value their products. Widespread sustainable, environmentally-aware consumer behaviour gives rise to local production, consumption, and recycling models based on both traditional and technology-enhanced maker concepts. The *Renaissance of the Craft* presents a positive scenario for all four sectors.

The *Renaissance of the Craft* future is an outcome of drivers of change that focus on environmental as well as economic trends, and is also highly connected to the *New Consumer* driver of change, that primarily creates a positive impact in terms of production and workforce.

From an environmental point of view, the key drivers are the increase in *awareness of sustainability and circular economy*, and *new and niche materials*.

In France in particular, innovation linked to recycling is becoming a strategic field for the TCLF sector and is part of general thinking on the circular economy and on the capacity to reuse the fibres used in the creation of a textile or footwear product at the end of their life cycle.

An important trend in this scenario is the challenge of recycling, and lack of adequate infrastructure. Based on these trends, the TCLF offer will be oriented to meet the new needs of consumers who are looking for goods produced in a more sustainable way using new materials or techniques. While this will open up a market for new materials and goods, it will also challenge for more traditional manufacturers, especially in the textile and leather industries. The increased awareness of recycling needs will push companies to consider the afterlife of products as part of the design process. The company Renaissance Textile, a French textile recycling platform created by three traditional manufacturers in the textile sector (TDV Industries, Les Tissages de Charlieu and Mulliez Flory), whose production activity is due to start in early 2022, is a good example of this increased awareness. The technological drivers which will play a key role in establishing the new reality are *new materials and machines, advanced manufacturing technologies, and R&D*. These drivers are closely connected to the first driver of change as concern for the environment will be the main motivation for technological developments.

The *New Consumer* driver will have a similar impact on the TCLF industry as technological and environmental drivers of change and will focus mainly on actively shaping demand. Trends which will play a key role in this area are *high-end and luxury products, buying local, sustainable goods, social consciousness*, as well as those relating to *repair and hand-made*, that have an increased impact due to changes in customer behaviours and the European right-to-repair initiative. In 2030, the TCLF industries will have on the one hand, customers who are looking for products to highlight their social status, and on the other hand, customers who are looking for products with a lower environmental impact. However, the products which meet both types of needs will be mainly at the medium to high price point. The price will be justified in the eyes of consumers, especially if materials come with transparency and traceability.

In France, numerous labels have been created such as Vosges Terre Textile, France Terre Textile, and the Made in France label. These constitute attempts to respond to the behaviour of new consumers, who are looking for high quality goods with secure origins.

In terms of company size, this scenario is particularly positive for SMEs producing for the local or national market, for big manufacturers producing with the “Made in EU” label and also for micro-enterprises focusing on production or services such as cleaning, repairing, or repurposing. Consequently, the barriers to entry will be low.

In terms of the number of employees, this scenario presents a positive outlook, due to the importance of manual skills in the production process. A high priority will be given to conventional skills as well as green skills. However, at the same time, this may have negative consequences for the workforce. While the barrier to entry for companies will be relatively low, this will not be the case for employees who will have to have the right skills and experience to move between different positions within the supply chain. This may lead to low numbers of employees entering the workforce from other sectors unless green skills are prioritised.

Job and skills in the Renaissance of the Craft situation

In the *Renaissance of the Craft* scenario, know-how related to heritage and manual skills plays the most important role and consumers have a positive attitude towards the TCLF industries. In France, the "*Entreprise du Patrimoine Vivant*" (EPV) label, which is a mark of recognition by the French government introduced in 2005 to distinguish French companies with excellent industrial skills and craftsmanship, could support this scenario in order to help companies improve and enhance their know-how.

In terms of the number of employees working in the sectors and perceptions regarding career opportunities, this is the most positive scenario. It is also the most reassuring in terms of maintaining skills and know-how, bringing back forgotten techniques, and replacing the retiring workforce.

From the perspective of employment in each sector, this will be the most positive scenario for the leather industry and certain branches of textile and clothing production. For footwear it is a medium-positive scenario. However, that does not mean that all branches of production will be equally attractive. There will be a negative impact in the production focused on economies of scale or low added-value goods, due to the limitations in terms of career development. However, it may be used as starting point for youngsters entering the industry, before moving on to more specialised occupations or setting up their own businesses.

Based on the ISCO classification, *craft and related trade workers*, as well as *technicians and associate professionals*, will be the key categories of occupations, both requiring medium and high levels of qualifications. The reason for this is the maintenance of typical industrial production techniques, updated according to the new needs and systems. The number of new types of job occupations appearing in this scenario will be lower than those focused on replacing the retiring workforce. From the list of occupations for which the S4TCLF project partners have developed MOOCs, the ones with the greatest career potential are Textile Technologist, Leather Technologist, and Sustainability Technician.

Renaissance of the Craft will increase the proportion of young people in the total labour force as working in the TCLF industries becomes a more attractive career opportunity. Their main driver will be an interest in manual and highly specialised work, as well as a need for a creative outlet. However, the older generations will remain in the industry as the pressure for their re- and upskilling will be minimal, and their experience will be in demand. Due to the focus on heritage and conventional skills, the inflow from other sectors will be marginal. The same applies to the share of STEM graduates in the TCFL labour force, whose interest will be focused on highly specialised occupations, mainly in the area of R&D and digital skills.

In terms of skills needs the key focus will be on conventional and sectoral skills, but also on green skills. The focus on green skills will result from adapting production processes to the needs of new, more sustainability-aware consumers, and will affect every stage of the supply chain. Moreover, this type of skills will emerge naturally from the process of incorporating traditional production techniques into modern processes. Interpersonal skills

will be equally important to physical skills, mainly due to the need to transfer knowledge between employees and the organisation of work. Transversal skills will play a key role in cross-sectoral occupations linked to marketing and business management but also for technicians, to ensure the sustainability of the goods produced.

Upskilling will play a crucial role, especially among young people and newcomers, and will focus on increasing their competence in selected specialisations. As mentioned above, the older generation will focus on transferring skills to new employees rather than up- or re-skilling themselves. To maximize the potential of this scenario in terms of skills, it is important to focus on the transfer of knowledge using digital tools and specialised software.

While this scenario presents the best future in terms of respecting TCLF heritage and skills, it creates a threat as the four sectors will increase their focus on tradition, increasing the gap between them and other sectors. The attachment to old techniques may slow down progress and adaptation to new needs, as well as decreasing competitiveness in technical and protective textiles and PPE. An additional threat under this scenario is the difficulty of moving between sectors, due to the high level of specialisation.

The opportunity in this scenario lies in existing knowledge and techniques, that can be adapted to the new needs, in particular those oriented towards sustainability. Moreover, this scenario could bring about a renewed interest in, and appreciation of, manual skills and improve the image of the industries, which in the long-term will have a positive influence on the employment figures and skills.

COVID-19 impact on Renaissance of the Craft

The biggest impact of the COVID-19 pandemic the *Renaissance of the Craft* scenario concerns consumer needs, which influence the market offer and production characteristics. The pandemic and increased uncertainty in recent years have guided customers towards an appreciation of craftsmanship, an interest in manual skills and comfort, as well as in local products. This appreciation of the past will influence the future.

In France, numerous companies in the sector were very responsive, adapting their production tools to manufacture millions of fabric masks that made it possible to cope with the shortage of PPE during the first lockdown. Within a few weeks they had to recruit large numbers of new employees with manual skills and an interest in craft activities.

In the context of the impact of COVID-19 on the TCLF industries, the pandemic reinforced trends in this scenario focused on *new products and styles* and *new consumption patterns*, as well as new career models.

The increased appreciation of skills and heritage will provide a market for produced goods. On the negative side, the COVID-19 pandemic significantly impacted production as businesses explored potentially more profitable business models, and the workforce as a number of employees sadly died due to virus without being able to pass on their knowledge. The opportunity in this scenario also lies with customers who started DIY

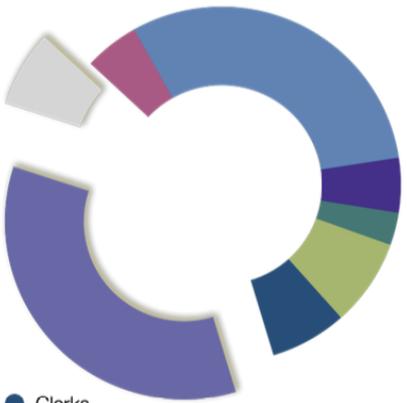
projects during the pandemic and found themselves with new vocations, side jobs or interests in changing their occupation, for one in which they could use their newly acquired, manual skills.

5.2.5 Walled Gardens



WALLED GARDENS

Job situation in Walled Gardens scenario based on ISCO clarification



- Clerks
- Craft and related trades workers
- Elementary occupations
- Legislators senior officials and managers
- Plant and machine operators and assemblers
- Professionals
- Service workers and shop and market sales workers
- Technicians and associate professionals

Rise of regionalism and protectionism stifles global trade flows and enables existing regional production clusters in Europe to survive and thrive.

Character of impact for the TCLF industries

Positive
C
T
L
F
Negative

Production focus
The industry will focus on manufacturing of goods that are globally competitive, especially in the context of costs of production. The importance of clusters will increase.

Main drivers of change
Regulation and policy & Economic and globalisation.

Jobs of the future
This future scenario may deepen the differentiation among the location of the workforce, creating gaps between regions and gathering more skilled employees only in certain areas of Europe.

Skills of the future
Demand for physical and conventional skills will dominate over green and digital skills. The retirement of the workforce may lead to disappearance of certain knowledge.



Co-funded by the Erasmus+ Programme of the European Union

Summary

The rise of regionalism and protectionism stifles global trade flows, enabling existing regional production clusters in Europe to survive and thrive. There is a potential connection with the *Selective leadership* scenario, but here the outcome is more pessimistic. The location of production will not be based on the level of development of the industry and the know-how, but on access to cheaper labour. Consequently, future production within the TCLF industries may focus on cheaper areas that already have manufacturing facilities developed. This scenario presents a less rosy future for the footwear and leather industries and a neutral one for clothing and textiles with exceptions in just a few TCLF branches.

The key drivers of change in the *Walled Gardens* scenario are *Economic and Globalisation* and *Regulations and Governance*. From the economic group, the key trends that will shape the future will be *costs of manufacturing, new (export) markets, currency fluctuations, and access to external financing*. This indicates that production will focus on the most cost-efficient techniques. For producers outside of the Eurozone, currency fluctuations will have a crucial impact on competitiveness in the internal market, dictating salaries and the materials used in the production.

Due to its dependency on the geographical location of production, the *Walled Garden* scenario is highly dependent on the impact of national and regional administrations, the government and their recognition of the TCLF industries, as well modern and efficient education systems. Consequently, the most important trends are those related to *technical standard and regulations, farming and raw materials subsidies, and position of the TCLF in policy*. A favourable approach from policymakers may increase the competitiveness of the sectors at European and international level, introducing new manufacturers, which consequently may further increase innovativeness and job opportunities. Ignorance or discredit may lead to the outsourcing of production, reduced innovativeness and competitiveness, which in a longer-term perspective may lead even to the disappearance of branches or even whole industries in certain countries, with the consequent increase in unemployment and negative perception of the industry. Moreover, national protectionism can lead to reduced market competitiveness, as companies may fall into a trap of support that does not lead to further development.

This scenario is particularly positive for medium and large companies, already part of the supply chain because the entry requirements are relatively high if the geographical allocation is not taken into consideration. The level of innovation implemented in the production processes will remain low, using the same manufacturing techniques and producing the same type of goods similar at the beginning of the second decade of the 21st century.

In terms of employment, *Walled Gardens* will not significantly influence the total number of jobs required, although it may deepen the differentiation in terms of the locations of the workforce. This will create gaps between regions attracting more skilled employees, whilst others are left behind. In terms of skills, the needs of the producers will be similar to the current situation, with the dominance of conventional skills for TCLF manufacturing. The driving force for new jobs will be the retirement of the current workforce.

Job and skills in the Walled Gardens scenario

In the *Walled Gardens* scenario, the pattern and needs from the workforce perspective are likely to remain the same. The biggest difference is in terms of the location of manufacturing, rather than changes in the type of goods produced or technological development of the materials and machines. Consequently, the most competitive manufacturers will continue their operations with no significant changes.

The type of occupations of most importance will be *elementary occupations and craft and related trades workers*, representing both medium and low-level skills. This will be partially due to the lack of competitiveness in markets that focus on economies of scale and lower added-value products. This will also adversely affect employees working with premium goods, as their specialization is limited to a small range of tasks and skills that leave little room for progression. Amongst the occupations for which the S4TCLF project partners have developed MOOCs, the ones with the greatest career potential are all sectoral profiles and Process and Production Timeline Analyst.

The lack of new job opportunities and limited growth in the TCLF industries will influence the employment figures and see a decrease in the number of young people - especially

those with higher qualifications and more specialized education and experience - willing to start a career in the TCLF sectors. The young people who do decide to join the industries despite the negative forecasts, will be mostly connected with migration flows from non-European countries and poorer areas of Europe. Consequently, the inflow of labour to TCLF from other industries will be marginal, as other sectors will be more popular. As a result, the average age of employees will be relatively high compared to other scenarios, and some companies will struggle to fill long-term contracts.

Due to the type of production, employees will focus primarily on conventional skills. Priority will be given to the use of machines rather than information and communication technologies as tools of work, followed closely by the use of manual skills. The application of green and digital skills will be limited to certain occupations. Consequently, the focus will be on a low and medium-skilled workforce. Skills sharing and upskilling will be mainly conducted internally, within company structures, as the schools and training providers will continue to reduce their offer and focus on short-term education. Moreover, due to the presence of clusters and low mobility in the workforce, the sharing of skills and knowledge will be limited.

This situation will force some workers to prolong their positions and their knowledge will stagnate, as there will be a lack of opportunities to transfer knowledge from the wave of employees who will gradually take their retirement to the newcomers. To prevent the loss of certain skills, it is crucial to avoid focusing solely on the most profitable ones but also those that may not be currently required but that still bring added-value to the industries.

Despite a relatively pessimistic outlook, this scenario provides an opportunity to preserve sectoral skills by applying new tools through digitisation and ensure the ongoing employment of the older generations who will not risk being fired due to the lack of updated skills. This will facilitate workers who have a gap in their employment or who have worked in other sectors returning to the industry. Furthermore, this scenario could have a positive impact on the regions where the TCLF industries are located, providing workplaces and competitive advantages for companies looking for nearshoring opportunities.

COVID-19 impact on Walled Gardens

The COVID-19 pandemic had a mostly negative impact on the *Walled Gardens* scenario as it isolated producers and decreased the sharing of knowledge and innovation. This can be partially blamed on the new priorities of producers who focused their efforts on keeping their businesses afloat, although the most significant impact resulted from restricted travel and opportunities for collaboration and learning.

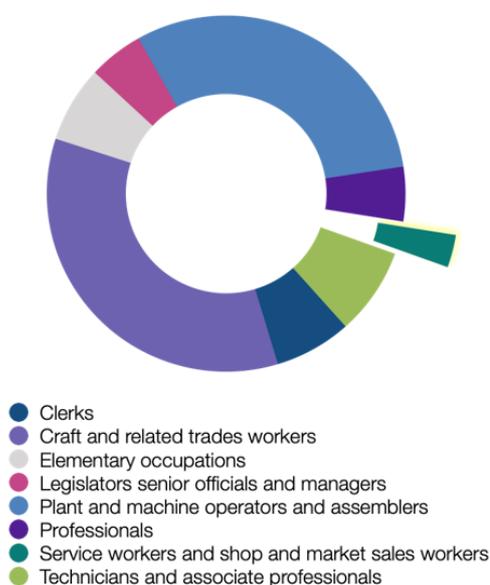
The COVID-19 pandemic had a significant impact on drivers of change such as the *EU Recovery Plan*, *Governmental stability or Disruption of logistics and transport*, which further increased the disparities between regions. The EU Recovery Plan will determine in the coming years which countries supported their national production by including the TCLF sectors on the list of priorities, facilitating their recovery from the pandemic and their growth.

Their inclusion or their absence as beneficiaries of the EU Recovery Plan can be both an opportunity and a threat depending on the decisions made at national and regional level. Although it will not determine the future, it will have a significant impact.

5.2.6 Industrial Sunset

INDUSTRIAL SUNSET

Job situation in Industrial Sunset scenario based on ISCO clarification



The global race to the bottom fuelled by cheap, fast fashion continues unabated and drives most TCLF production to lowest labour cost locations outside Europe.

Character of impact for the TCLF industries

Positive T L F C Negative

Production focus

The industry will face a significant decline in terms of the volume of the production. The types of production that will remain in the market will be focused mostly on component of the final items or on a premium goods (*Made in EU* label).

Main drivers of change

Regulation and policy & Changing consumer demand.

Jobs & skills of the future

In the context of job and skills, this is the most pessimistic scenario for TCLF industry. Due to the outsourcing the job demand will be limited and focused mainly on the replacement.

Lack of evolution of the industry will suppress development and exchange of skills. Digital skills will focus mainly on interaction with customers.

Summary

The global race to the bottom fuelled by cheap, fast fashion continues unabated and drives most TCLF production to the lowest labour cost locations outside Europe. The result of this scenario is a decline in the volume of production as some producers will be forced to stop their activity and contribute to the negative trade balance. Only the most competitive branches will continue to operate, mainly due to their high added value, whether due to implementation of technical developments or association with premium goods. Consequently, all four sectors will face a negative scenario, but clothing and footwear manufacturers are likely to suffer the most from low added value segments.

The drivers of change with the biggest influence on the nature of the TCLF industries in 2030 will be *Regulations and Governance* and *A New Consumer*, which will both have a negative impact on production and employment figures, as they lead to prioritising consumption over production. *EU trade agreements*, *Technical standards and regulations*, and *WTO reform* are the most important trends as they will increase the

vulnerability of European industries to global competition. A lack of national protectionism may further increase the challenges facing manufacturers who cannot compete in categories other than price.

The proverbial nail in the coffin of the industries will be consumers who prioritise consumption over quality and craftsmanship and the impact of goods on the environment and society. The most important trends will be *online consumption, fast fashion and budget fashion, and impact of influencers*. Consumers' interest in *living online*, via social media platforms and opportunities for self-expression in the metaverse will further decrease local consumption.

While manufacturing will slowly disappear from Europe, TCLF brands will remain, especially the B2C brands with a loyal customer base. Due to the economies of scale, the biggest producers will remain in the market, while the burden of the changes will fall on medium-size companies, leaving small, highly specialised companies to continue operating. Entry barriers will remain low but remaining in the market will be a challenge

In the context of employment and skills, this is the most pessimistic scenario for the TCLF industries. The lack of progress in the industries will suppress the development and sharing of know-how and experience, which will further reduce the sectors' abilities to survive global competition. While the impact will be felt at the beginning in the lower value-added and less competitive production processes, this trend may trickle up and also affect higher value-added and premium goods producers.

Job and skills in the Industrial Sunset

The inability to remain competitive from a global perspective may severely impact the employment figures, which will have a knock-on effect on the skills pool and technology used in production.

Manufacturers forced to downsize or even stop production will start dismissing the youngest and least-experienced employees, which will lead to an increase in the negative perception of the sectors, as an unstable career path. The most experienced staff may also be fired in order to cut costs. This will affect the whole supply chain, in all four sectors. The exception to the rule will be producers with highly specialised production and an established position in the global market (including those exporting goods outside the EU-27) or focused on premium goods and their components. The only growth sector in the TCLF industries will be sales (including e-commerce), marketing, and logistics.

The only occupation category that will remain stable will be *service workers and shop and market sales workers*. While production will decrease, consumption will keep up with global trends, leading to the creation of new sales channels, both online and offline, and the need for staff to provide services. Other occupations that will remain, possibly with a slight increase in the workforce, will be those related to logistics and marketing. Job openings in manufacturing will focus on replacing the retiring workforce, rather than new occupations. Amongst the occupations for which the S4TCLF project partners have developed MOOCs, those with the greatest career potential are Digital Marketing Professional and Supply Chain Analyst.

This scenario will further strengthen the negative image of the TCLF industries and deter young people, STEM graduates, and people looking for a career change. The proportion of young people in the industry will decrease, remaining high only in the of service workers category, due to young people looking for side jobs to support their living costs.

Consequently, while the demand for all levels of qualifications will decrease, it will most impact low-skilled workers. Employees with the highest level of skills will be the safest group. There is a risk that TCLF employees will lose their knowledge of sectoral and conventional skills associated mainly with manual skills and craftsmanship. Producers will not be concerned about green skills, but will prioritise digital skills to meet the needs of customers or facilitate production processes outside of Europe.

The threat to the TCLF industries under the *Industrial Sunset* scenario is clear – by participating in the race to the bottom, the industries may jeopardise their future and past, their knowledge and skills will be lost, along with any workers who are not properly digitised and digitalised. Moreover, the gap between the TCLF industries and other manufacturing sectors will increase, reducing potential for innovation and cross-sectoral cooperation, and exchanges of employees.

In terms of opportunities, this scenario is extremely limited. The only hope is in further exploitation of European heritage and the “Made In” label, as well as the fact that the most passionate employees with a true vocation will remain in the industries.

COVID-19 impact on Industrial Sunset

Industrial Sunset is the most pessimistic scenario for the TCLF industries both with and without the COVID-19 impact, as it will negatively influence manufacturers’ competitiveness and innovation opportunities, which in turn will impact on career opportunities.

In terms of the impact of the pandemic on the drivers of change, *EU Recovery Plan*, *Governmental stability* and *Buy cheap or not at all* will all accelerate the disappearance of the TCLF manufacturing from Europe. As in the *Walled Gardens* scenario, the decision whether or not to include TCLF on the list of priorities in the EU Recovery Plan will influence their future. Here, however, the assumption is that these industries will be disregarded and left to fend for themselves.

Despite the negative outlook, the p COVID-19 crisis can be seen to have had a positive impact in terms of the increase in digital skills and expertise in the area of e-commerce or digital marketing, which will be in high demand in the coming years.

5.3 SUMMARY: ANALYSIS OF THE PROBABILITY OF THE 5 SCENARIOS IN FRANCE

Based on the results of the survey conducted in France among several policy, education and industry stakeholders and the results presented in this analysis chapter, the scenario most likely to occur is *Selective Leadership*, followed closely by *A Brave New World* and *Renaissance of the Craft*. The *Industrial Sunset* scenario was ruled out by the stakeholders

and the authors of this document due to implementation of the *Plan de Relance* and the clear repatriation and reindustrialisation trends observed in France.

This perspective is also completed by the French national study currently being carried out by the consulting firm BIPE BDO, under the direction of the OPCO2i, the definite results of which will be communicated mid-2022. The study consists of carrying out a prospective study of trades and skills in the TCLF sectors, based on three phases of work:

- On the basis of an identification of the a) economic, b) technological and digital, c) regulatory and environmental, d) demographic & social, and e) societal changes that will affect these sectors between now and 2025, building scenarios to provide a vision of the future of each of the sectors concerned
- Translation of the consequences of the prospective scenarios previously constructed into impacts on the trades and skills in each sector
- With regard to the HR issues (trades/skills) highlighted, formulating recommendations to facilitate the matching of skills and training to future needs within an action plan for each sector.

We asked the consulting firm BIPE BDO about the likelihood of the scenarios. The *A Brave New World* scenario corresponds to the blue scenario in the BIPE BDO OPCO2i study (a world where technological acceleration goes hand in hand with an intensifying innovation race).

The summary of the reactions of the experts interviewed are presented below. A group of about fifty experts was involved in this process in France, including sector organisations, policymakers and experts from the training field.

- **The scenario most likely to occur is *Selective Leadership***: this scenario is realistic in France, as the country is the world's leading player in the fashion and luxury sector and is rapidly developing on the international market with sustained growth and real potential. As such the sector is of vital importance to the French economy, and therefore benefits from support from the French state through the "*Contrat de filière Mode et Luxe*". To preserve its brand image, luxury sector may accelerate its repatriation of certain activities to France. One example of this is the relocation by Holding Textile Hermes, of part of its garment assembly process which used to take place in Madagascar to in the Auvergne-Rhone-Alpes region (about 200 new employments will be created in 2022).
- **The second most likely scenario in France is *A Brave New World***. This scenario is already a reality in the clothing and textile sector in France as some companies have already started to implement automation. It is an interesting scenario because it generates high-quality jobs and leads to flexible production facilities. It is destined to develop thanks to the *France Relance* programme. If this scenario develops, even countries with low labour costs such as China could suffer from this competition, as automation takes market share away from them. The new regulation on sustainable production in France has a favourable impact on this scenario. At the same time, global value chains with extreme specialization are starting to be challenged. However, the probability that the scenario will play out in its entirety is low as conventional skills remain essential to ensuring production even when automated.

- Due to the size of the clothing and footwear industries in France, **the Renaissance of the Craft scenario has a notable impact.** New young artisans are currently settling in France, as well as dynamic creators and craftsmen. This is mainly focused on crafts and leather fashion goods. Luxury brands such as Hermès and Vuitton have chosen to open small workshops (150 to 250 people) locally in France, carrying out manual and artisanal work, as close as possible to the areas where the required skills can be found. This is an interesting approach in terms of revitalising territories and developing sustainable and qualified jobs. This scenario preserves ancestral know-how, whilst simultaneously introducing innovation. However, the stakeholders observe that it will not create thousands of jobs and will not compensate for past losses.
- **Walled Gardens is not a likely scenario in France.** It is based on the assumption that the *Selective Leadership* scenario could not come about due to the increased rigidity of the international trade environment.
- **Industrial Sunset is the scenario that is least likely to occur.** France has lost a huge number of industrial jobs in the TCLF sectors over the last 30 years but the lowest point has been reached. This trend has reversed in recent years, due to the growth of technical textile manufacturing and the importance of the luxury industry in France, which tends to repatriate industrial jobs. The current industrial fabric in France is made up of companies with excellent know-how, which are no longer in head-on competition and will continue to exist. There are quality issues at stake.

At the time of writing this report, the authors agree with the analyses of the experts: there is room for a European company that is hyper-creative, automated and of excellence.

6 DEVELOPMENT AND IMPLEMENTATION OF THE SECTORAL SKILLS STRATEGY AT EUROPEAN, NATIONAL AND REGIONAL LEVEL

6.1 DEVELOPMENT OF THE SECTORAL SKILLS STRATEGY FOR THE TCLF INDUSTRIES – PROCESS

The main objective of the Sectoral Skills Strategy is to analyse the potential future of the TCLF industries, identify influential groups of stakeholders, and develop a set of recommendations and activities. Implemented adequately, it is capable of successfully addressing the challenges in terms of skills and enhancing the attractiveness and competitiveness of the sectors in the coming decade.

The development and implementation of a skills strategy for the TCLF industries is a complex process, combined with the steps that precede the establishment of the strategy itself. In general, it consists of the following steps: (1) establishing the scope and the aim of the strategy;(2) exploring and analysing the micro and macro environment;(3) developing scenarios based on critical drivers of change; (4) developing strategic options

and recommendations.²⁷ This chapter is dedicated to the last stage of the process – the strategy.

Due to the nature of the TCLF industries, the creation of a “one-size-fits-all” strategy that would cover all four sectors or all Member States was identified as ineffective and potentially harmful. The first reason for this is the differences between the labour- and capital-intensive sub-sectors required for production resources, the links to other sectors outside the textile ecosystem, and whether we are considering operations with a B2B or B2C focus. Secondly, it is important to highlight that not all Member States have companies in all TCLF sectors nor the same parts of the supply chain operating in their national territory. Moreover, a single strategy developed as an extension of the current situation into the future is a standard status quo bias and slows down adaptation to actual changes.

In order to address this challenge, the document transforms collected research into five future scenarios for the TCLF industries. The differences between the Member States’ TCLF industries were addressed by developing nine national strategies based on the European level document and additional primary and secondary research. Similarly to the European level strategy, these strategies analyse the national reality in terms of production, employment and trends, and adapt the five scenarios and recommendations accordingly. The primary research includes a series of interviews conducted with key stakeholders in nine partner countries,²⁸ as well as outcomes from other interactions that took place over the duration of the project. This approach minimises any misdirection of effort and facilitates sectoral, national or regional level customization of the actions based on a holistic, European overview.

The scenarios presented in the previous chapter are the starting point for recommendations targeting three types of stakeholders: Policy-makers, Industry representatives, and Education providers (PIE). As the recommendations are focused on production-oriented action rather than the consumption side of the ecosystem, and due to the nature of this document society stakeholders are not concerned. The first group of stakeholders includes representatives of national and regional governments as well as European-level policymakers. Industry representatives include sectoral associations, clusters, and companies (both large firms and SMEs) as well as start-ups. The last group prioritises entities connected to secondary education, initial and continuous vocational education and training (VET), and higher education institutes (HEI). This division means a more customized set of actions incorporating the specific interests and capabilities of the actors can be put forward, whilst leaving more flexibility and decision-making power in the hands of individual entities.

The Sectoral Skills Strategy for the TCLF industries is a complex tool both from the horizontal as well as the vertical perspective, and its success relies heavily on joint collaboration between all groups of stakeholders, consistent commitment over time, and the establishment of links with external initiatives that contribute to successful strategy implementation.

²⁷ Based on Copenhagen Institute for Future Studies methodology

²⁸ Fabio Croci & Alessandro De Rosa (September 2020), In Depth Analysis Of Results Of The Survey Map Of Funding Opportunities And National Surveys. TASK V.3 INTERVIEWS & MEETINGS WITH RELEVANT STAKEHOLDERS.

This chapter refers to the European consolidated sector strategy report for an overview of European initiatives to support French industry and explaining how these initiatives can support the implementation of the French national strategy.

While the number of European Commission initiatives dedicated to the textile ecosystem is limited, it can be nevertheless perceived as an improvement compared to the previous decade. This was already noted in the chapter dedicated to the drivers of change, where policymakers' interest in the TCLF industries was ranked in 3rd place.

One example of these developments is the establishment of the Pact for Skills for the TCLF industries in December 2021. This initiative led by EURATEX with support from CEC and COTANCE aims to address five challenges of upskilling in the TCLF sectors via combined collaboration and projects that involve policymakers from national and regional governments, industry stakeholders (companies and associations) as well as education providers representing VET and HEI. Entities that endorse the initiative will receive financial, administrative, and networking support from the European Commission.²⁹ While it focuses primarily on expertise and skills targeting education stakeholders, it aims to involve all types of stakeholders on an equal basis. From the perspective of the Sectoral Skills Strategy, developments in the Pact for Skills should be considered as crucial for the successful implementation of the recommendations listed below.

The European Strategy for Sustainable Textiles to be published in 2022 after rounds of public consultation focuses primarily on sustainability and the impact of the TCLF industries on the environment and society. Linked to the European Green Deal, the Circular Economy Action Plan, and the Industrial Strategy, it aims to support industrial competitiveness, sustainability, and at the same time boost innovation in the EU market for sustainable and circular textiles.³⁰ It should be closely observed, especially by industry stakeholders. For education providers, it will provide an understanding of new trends rather than funding for new, modernised curricula, for example.

Still in the area of sustainability and the circular economy, special attention should be paid to developments in Product Environmental Footprint, Due Diligence, EU Ecolabel, Extended Product Responsibility, Green Public Procurement, Traceability, End-of-waste criteria, or continued modifications to REACH. These regulations may bring about changes, particularly for industry stakeholders, while policymakers will have to adapt to the new reality, and education providers will need to adjust their curricula. This will be in particular important in implementing recommendations from the *Renaissance of the Craft* and *Selective Leadership* scenarios presented in the following chapter. In France, companies have been mobilised to participate in the European Product Environmental Footprint experiment, which echoes a French experiment in environmental labelling. Work has been undertaken

²⁹ [https://euratex.eu/news/launch-of-the-tclf-pact-for-skills-putting-people-at-the-heart-of-the-industrys-competitiveness/#:~:text=The%20Pact%20for%20Skills%20is,in%20new%20skills%20\(reskilling\).](https://euratex.eu/news/launch-of-the-tclf-pact-for-skills-putting-people-at-the-heart-of-the-industrys-competitiveness/#:~:text=The%20Pact%20for%20Skills%20is,in%20new%20skills%20(reskilling).)

³⁰ P 174

in France since 2010 on the ADEME reference system. France is particularly attentive to the fact that this standard is adapted to SMEs. Moreover, in terms of the environmental label itself, France goes further than the PEF standard by defining a framework for implementing the label itself. This is established in the AGEC and Climate and resilience laws.

The EIT's call for proposals for new Knowledge and Innovation Community (KIC) for Culture and Creativity merges both dedicated and general initiatives. While it treats the TCLF industries as creative sectors, it is a part of the EIT initiative that started in 2010 and counts in total eight KICs. The Culture and Creativity community will begin operating by the end of 2022 to deliver innovative solutions to train entrepreneurs, power cutting-edge ventures, deliver innovative solutions to the challenges faced, and bridge regional innovation gaps.³¹ It has potential primarily for industry and policy stakeholders as it can support the implementation of new strategies and activities to increase TCLF competitiveness and improve skills and expertise in the workforce.

Various programmes and initiatives launched by the European Commission can be implemented to support changes in the TCLF industries without being specifically dedicated to those sectors. These include Interregional Innovation Investments (I3), European Regional Development Fund (ERDF), European Innovation Council, as well as European programmes and funding opportunities, such as Erasmus +, Horizon Europe, Digital Education Programme, European Social Funds Plus (ESF +), European Globalisation Adjustment Fund (EGF), European instrument for temporary Support to mitigate Unemployment Risks in an Emergency (SURE), Just Transition Fund (JFT), and InvestEU. The listed initiatives operate as grants or loans, the majority have already established their programming period and budget for the years 2021 – 2027. Due to the diversity of priorities and calls, all these initiatives can support the implementation of selected strategies, regardless of the scenario, and most of them focus on upskilling and reskilling opportunities and the competitiveness of the European workforce.

6.3 STRATEGY RECOMMENDATIONS FOR STAKEHOLDERS

6.3.1 *General recommendations*

The five scenarios for what the TCLF industries will look like in 2030 lay the ground for developing a series of recommendations for policymakers, industry representatives, and education providers. The end goal of improving the competitiveness as well as the image of the sectors, and responding to the skills gap no matter what the future looks like, has led to the formation of universal recommendations applicable to all scenarios and all stakeholders. These include **participation in joint activities** that covers both analysis of the situation and implementation of required measures via projects, advisory committees, expert panels, networks, and hubs. The key to success is to ensure long-term collaboration and an equal level of commitment. In France, this recommendation is implemented by the National Industry Council. Since its relaunch in 2017, it has helped consolidate a strong dynamic between public authorities and industrialists and proved vital to French industrial

³¹ <https://eit.europa.eu/our-activities/call-for-eit-communities/2021>

policy in the context of the economic recovery and resilience required following the 2020 health crisis, particularly in the fashion and luxury sector. Indeed, this sector is of vital importance to the French economy (France is the world's leading player in the sector). The “Fashion & Luxury sector contract” brings together working groups on targeted themes (e.g. CSR or training) and carries out collective projects. For example, the new French Fashion Institute (union of the *Ecole de la Chambre Syndicale de la Couture Parisienne* and the IFM) or the “*Savoir pour faire*” campaign are achievements coordinated by the *CSF Mode et Luxe*. It could be interesting to extend this dynamic to other industrial sub-sectors of the TCLF industries, for example technical textiles.

The second universal area of collaboration for all stakeholders is focusing on **minimising the skills gap**. This can be achieved by providing support and incentives (policymakers), modernising the curricula (education providers), and sharing both knowledge and innovations as well as further needs (which can only be achieved through industry representatives). While in this case, each entity brings something different to the table, they are all of equal importance and key to reaching the goal. In France, mention may be made in this context of the process to update National Education diplomas, implemented every five years, which aims at adjusting the skills reference base for diplomas to companies’ expectations in terms of professional work. For example, the diploma “*BAC professionnel métiers de la mode vêtement*” is being revised in 2021/2022 to integrate the skills needed in the production of technical textiles.

The last, but by no mean the least, of the universal recommendations is the **development of a campaign promoting the TCLF industries** with support from policymakers, incorporating best practices and heritage compiled by industry representatives and education providers. The target group should be European customers to increase awareness of the craftsmanship and presence of the textile ecosystem in their daily lives. However, it must first and foremost focus on young people, who are both underrepresented in the TCLF employment statistics and crucial means to preserving the skills and craftsmanship of the retiring workforce. While such a campaign will play a key role in the *Renaissance of the Craft* scenario it has also an impact on *Industrial Sunset*, as the TCLF industries will still need employees, although not to the same extent as in production. This effort is already underway in France, notably with the *Savoir pour Faire* and French TEX campaigns. The notion of “desirability” is now emerging, which is different to the employer brand. Companies need to make employees feel good at work.

6.3.2 *Specific recommendations linked to the five TCLF industry scenarios*

BRAVE NEW WORLD

A Brave New World represents a scenario in which the rapid adoption of advanced digital manufacturing technologies and new business models completely transforms the TCLF sector landscape in 2030, whilst simultaneously increasing their global competitiveness.

TCLF production focused on ensuring higher value-added and technologically advanced products and components, along with advances in production processes will have a significant impact on the workforce, highlighting the need to up- and re-skill, with a particular focus on digital skills, transdisciplinary knowledge, and new technologies.

The testing of this scenario among French stakeholders shows that it is perceived differently depending on the stakeholders.

VET experts formulated a condition of success and some important concerns. This scenario is considered the most ambitious as it requires high levels of coordination at European scale. One of the key success factors is the ability to set up a complete information technology link, i.e. an Enterprise Resource Planning (ERP) system that is pushed to the extreme and not used at 10% of its capacity as is often currently the case, including for managing material availability. This scenario also raises several questions: What happens to the production tools and the pollutants generated? What kind of recycling channels are being set up? What are the impacts of these new technologies? The stakeholders need to think about handling this environmental impact in the same way as the implementation of processes. Moreover, it is a major paradigm shift to think about automating tasks that have been relocated outside of France for the last 30 years. The TCLF industry has lost know-how and current engineering training does not cover some specific points of knowledge. This raises the question of how we can automate what we no longer control.

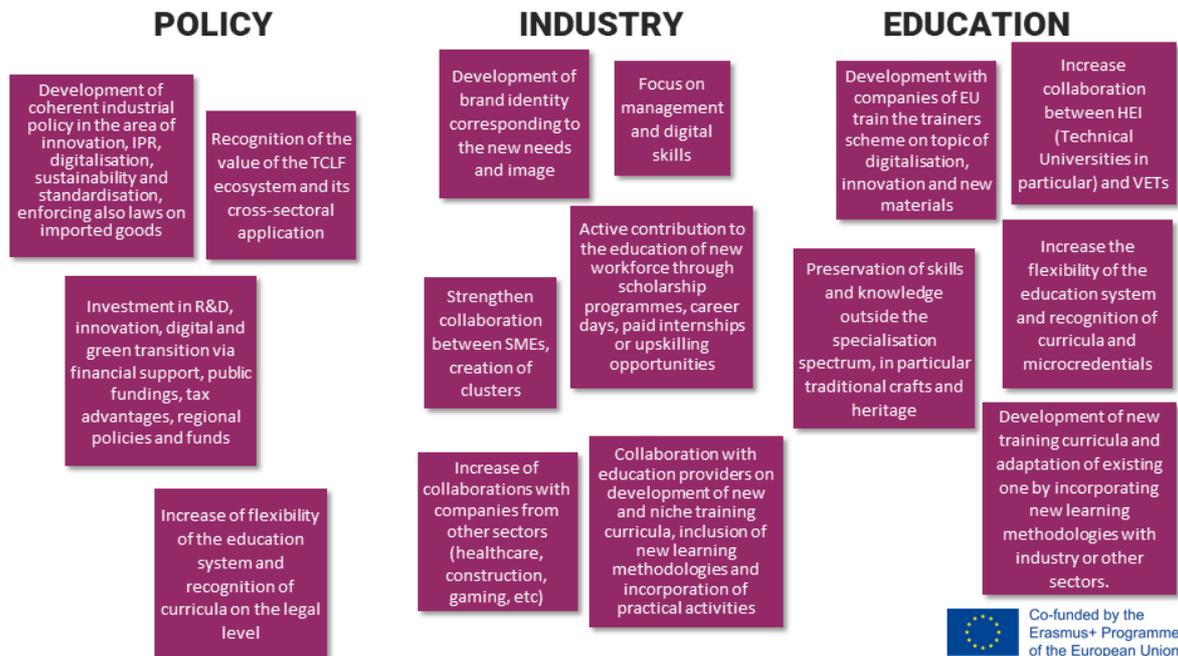
The industry points to the fact that some companies are on the way to achieving this level of automation, but that this scenario cannot be implemented uniformly. For example, the sneaker/sports shoe market lends itself well to this scenario. This scenario is conditioned by significant financial resources. The renewal linked to this scenario is interesting for the leather sector; it looks forward a new world that corresponds to the footwear federation's current work.

One specific recommendation concerns the challenge "More upskilling of management and digital skills". Experts agree that this subject that has been neglected. A lot of work has been done on skills in terms of content, but there has been too little investment in change management. Companies must learn to move towards project-based organisations with decentralised decision-making and day-to-day problem-solving rather than a pyramidal organisation.

Policymakers agree that this scenario is desirable, in a context where the digitalization of TCLF companies has been one of the objectives of the French state for the past two years. However, one important obstacle is the fact that TCLF is an extremely globalised industry with little residual French industry and that the entire value chain, especially the upstream industrial fabric, is not sufficiently taken into account in the efforts that need to be made.

A BRAVE NEW WORLD

- EU PERSPECTIVE



SELECTIVE LEADERSHIP

This scenario foresees that by 2030 the EU TCLF industries will maintain or further increase their international market position in selected sub-sectors, leaving less profitable or lower value-added production struggling to compete. This means that production, as well as R&D, will focus mainly on the most profitable branches, either high added value goods or incorporation of advanced technologies and solutions.

According to the VET Expert, this is the most realistic scenario for 2030. A specific recommendation is made in relation to the challenge “Partnerships with other EU education providers of the same specialisation with exchanges of students and trainers”: This partnership can only be organised by taking into account the strategic components (e.g. dyes for finishing) necessary at European level /the principle of European sovereignty. It is also necessary to take into account the financial markets, and adapt this model to them accordingly which will require close collaboration between countries.

Opinion from the industry perspective varies widely. The footwear sector considers this is a frightening scenario, which is difficult to grasp because margins and the capacity for innovation are very low, regardless of the market (sports shoes, protective footwear, etc.). Financial aid would be needed to make this scenario plausible. On the contrary, this

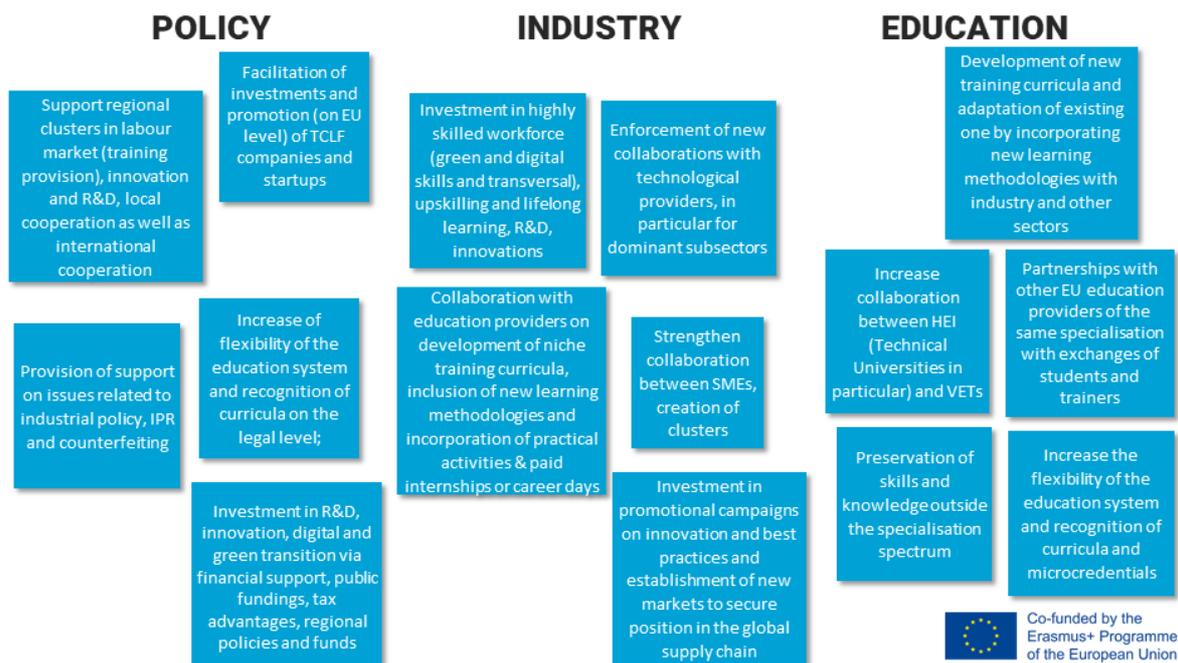
scenario has already been observed in the fashion clothing sector. One common recommendation is to avoid a significant gap between large companies and independent companies (which do not have the same financial means), which could lead to a "distortion in competition" with regard to employment (salary, job developments, etc.).

One specific recommendation concerns principals in relation to the challenge "Strengthen collaboration between SMEs, creation of clusters". Indeed, in this scenario, the relationship is between upstream and downstream rather than in the form of a cluster, the challenge is therefore to strengthen links in the value chain between the principals and their subcontractors.

Policymakers recommend focusing the financial effort on the actors who need it most. This is already the case in France (for example, help is provided to LVMH's suppliers and not LVMH itself).

SELECTED LEADERSHIP

- EU PERSPECTIVE



RENAISSANCE OF THE CRAFT

A combination of heritage and technological development in terms of production and consumption can distance TCLF entities from the negative perception of the traditional and non-progressive industries and create a more attractive image with a higher added value product range. Widespread sustainable, environmentally-aware consumer behaviour gives rise to local production, consumption, and recycling models based on both traditional and technology-enhanced maker concepts.

According to the industry experts, this scenario is in the air in France. It is one of the current models in progress. For example, in the footwear industry, the company LE SOULOR, a craft workshop with 15 employees based in Nay in the Béarn region and specialising in walking shoes, promotes a local product, with the label EPV, know-how and authenticity. BOSABO, a manufacturer of clogs and shoes with wooden soles, is another example aligned with this scenario. The Weston and Paraboot brands also defend these heritage values and perform well internationally as a result. Some products do not lend themselves to automation; each product is unique and is promoted as such.

In order to engage in mass production in Europe whilst pursuing an approach to revive the craft industry, a balance has to be struck between producing at an acceptable cost and paying the employees enough. If we want to produce more in France and in Europe, we need more recruitment and therefore attractive HR/salary policies.

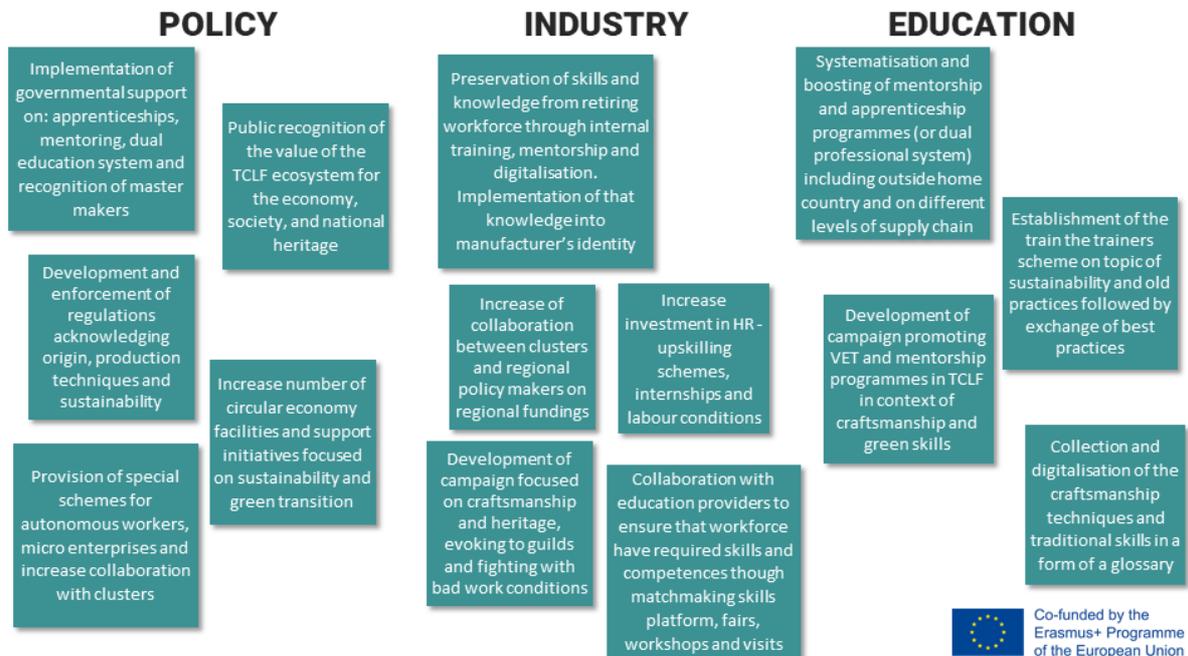
The experts recommend that the industrialists themselves become the providers of the training needed to upgrade skills, as many training courses are no longer provided by the national education system.

This scenario raises several questions according to the education experts. On the one hand, developing local eco-systems is not necessarily synonymous ecologically virtuous (contrary to what is indicated in the scenario). Manufacturing only one product is often more polluting. Furthermore, how can professional mobility between this myriad of specialised companies be guaranteed?

On the other hand, it has not been demonstrated that reproducing traditional methods produces innovation. On the contrary, cross-fertilisation is needed to innovate. They recommend that in tomorrow's society, it will be necessary to train employees to adapt to several sectors of activity rather than to train them in a single sector.

RENAISSANCE OF THE CRAFT

- EU PERSPECTIVE



Source :

WALLED GARDENS

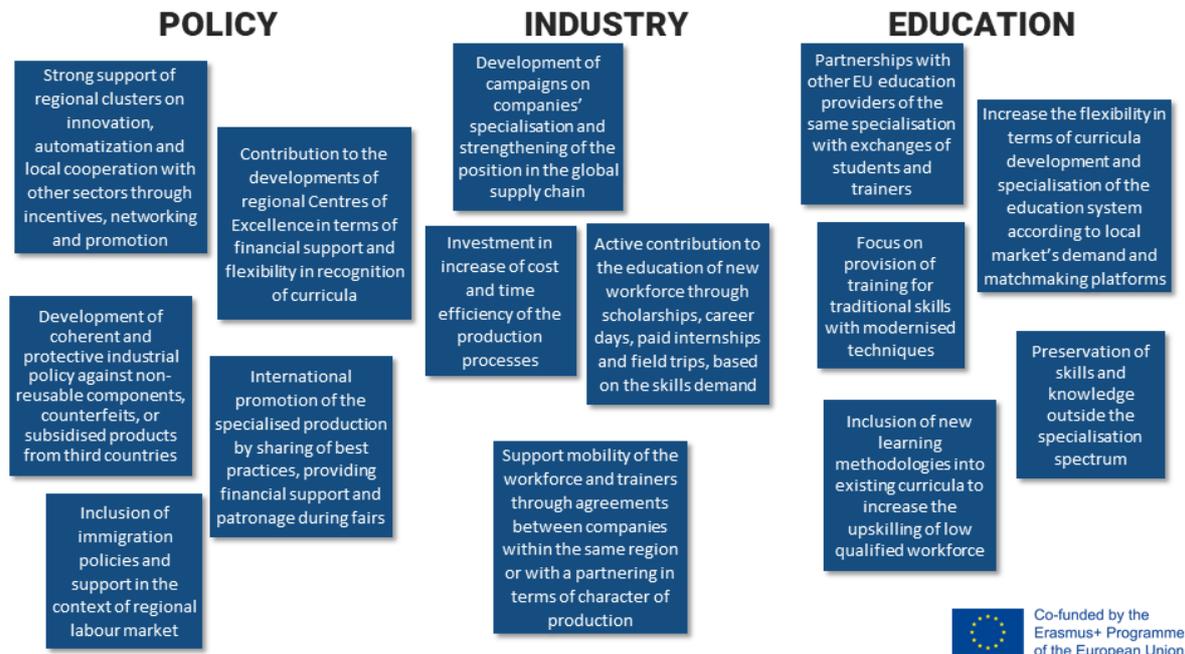
The rise of regionalism and protectionism stifles global trade flows, enabling existing regional production clusters in Europe to survive and thrive. The location of production will be based not on the level of development of the industry and the know-how, but on access to cheaper labour forces. It is impossible to determine on the European level the nature of the job and skills needed, as it will all depend on the regional specialisation of the production, however, a good reference point for the future is the existing division of the production across European countries.

This scenario is not plausible in France. There is an awareness of the strength of the fashion and clothing sector and a desire to develop business "beyond borders" following the COVID-19 crisis which go against this scenario. Years of severe downsizing have contributed to developing a culture of resilience that has focused the market on high-level expertise.

According to the education stakeholders, this scenario could not easily come about in France given the French character (high expected salary). Nor is it plausible at European level as it would generate severe tensions. This distribution is simply not viable.

WALLED GARDENS

- EU PERSPECTIVE



INDUSTRIAL SUNSET

The global race to the bottom fuelled by cheap, fast fashion continues and drives most TCLF production to the lowest labour cost locations outside of Europe. The result of this scenario is a decline in the volume of production as some of the producers will be forced to stop their activity, contributing to the negative trade balance. Only the most competitive branches will continue to operate, mainly thanks to their high added value, whether due to the implementation of technical developments or their association with premium goods.

Most of the experts interviewed found it difficult to react to this scenario, which seems very far from reality.

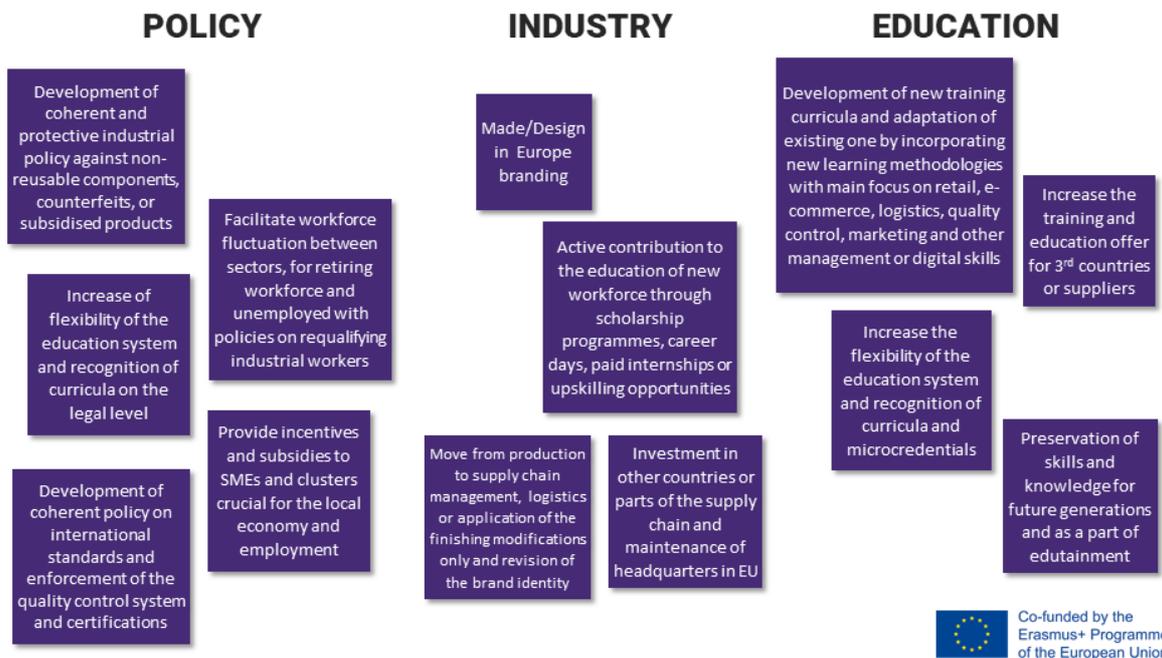
According to the education stakeholders, this scenario would result in the collapse of the social model in France; it corresponds to the Alcatel "fables" France of the 2000s. This model is not compatible with the French social model.

According to one industry expert, this last scenario is not plausible because in France we have reached a very low point where there are very few jobs (120,000) but those that do exist are highly qualified. When it comes to competing on price, complementary organisations in Europe and the Euromed (e.g. companies with one foot in France and one

in the Euromed) have learned to work together. The problem of working to a low price has been resolved in France thanks to the building of Euromed partnerships.

INDUSTRIAL SUNSET

- EU PERSPECTIVE



6.4 CONCLUSION

In this chapter, we have attempted to further refine the various strategic scenarios for French companies. Together with French experts from industry, education and government, we have examined the perspectives associated with each of the scenarios. These can be read as recommendations or points of attention. Several conclusions can be drawn from this review.

Firstly, the first hypotheses mentioned in section 5.3 are confirmed by the second round of interviews with the experts. The first two scenarios are equally relevant in the French context, and the third in certain conditions only.

On the contrary, *Walled Garden* is seen as running counter to the trends that have emerged from the COVID-19 crisis and *Industrial Sunset* is experienced as an improbable repetition of the sector's decline in the previous century.

Secondly, whatever the scenario and beyond upskilling, all the experts note a more basic need to recruit employees to produce. The shortage of skilled labour, of people "who can do the job" needs to be addressed and training operators in these sectors is essential. For certain sectors that are very cost sensitive, automation is key to making Made in France production possible. Automation as a lever for price competitiveness applies to the mid-range rather than the luxury segments.

7 CONCLUSIONS

As per Maslow's pyramid, textile, clothing, leather, and footwear goods fulfil physiological as well as esteem needs. They are present not only in what we wear but also our surroundings, whether home and office interiors, furniture, modes of transport, or products used to achieve our work tasks or life goals. The TCLF industries are interwoven into our daily reality and bring much more to the table than simply how we look. They employ 2.1 million workers in TCLF manufacturing alone, with a turnover of around 205 billion EUR.

Over the years, many have predicted the end of TCLF manufacturing in Europe because of the higher production costs, mainly salaries, compared to Asia. However, the industries have remained resilient in the face of this and many other challenges over the years, and European TCLF companies have managed to build on new business models, materials and processes thanks to technology innovation and digitalisation. China's inclusion in the WTO led to an increase in competition. The 2008 financial crisis, and most recently the COVID-19 pandemic took an additional toll on the manufacturers and brands, but also helped verify existing business models and products. Russia's recent military action against Ukraine is yet another example of an unforeseen challenge that will affect TCLF manufacturers' production capabilities. As the crisis is still ongoing, we still do not have a full understanding of its impact. The digitalisation revolution since the COVID-19 crisis and climate change have attracted the interest of consumers and policymakers over the last few years, and although this was expected, it has compelled TCLF industries, stakeholders and consumers to take a new approach towards topics such as sustainability, the circular economy and digitalisation. While environmental awareness still does not determine purchases, it influences how the industries are perceived and causes policymakers pay close attention to manufacturers and brands.

In the last decade, the number of employees in the TCLF sectors in France has seen only slight variations in employment, compared to the previous period which saw a drastic drop (100,000 jobs in the textile sector between 1990 and 2020). However, the trend has continued downwards. The 2008 crisis had a significant impact on the sector, but this was almost entirely offset in the 10 years that followed. We have shown that the dominance of craft and related trade workers, as well as plant and machine operators and assemblers, is still present in the TCLF industry in France (it represents 67% of the workers in 2019).

As explored in the fourth chapter, there are external factors influencing the textile, clothing, leather and footwear sector. In particular, seven drivers of change have been identified (demographic change, environmental change, technological change, regulation & governance, economics & globalisation, new values & identity, a new consumer), encompassing other sub-drivers, which have an impact on production, consumption and job models in the TCLF sector. In France, the most important drivers are environmental and regulation & governance, followed by economics & globalisation and technological changes.

The research and data compiled in the first four chapters reveals a new skills gap in the TCLF industry, mainly due to the emergence of sustainable issues but also to the digital revolution and Industry 4.0, which have introduced new technologies into the production process. Many TCLF companies in France are already fully engaged with these issues.

According to the different impacts that each driver of change can have in the sector, five scenarios were developed (see chapter 5).

The scenarios *Selective Leadership* and *A Brave New World* are equally relevant in the French context. On the contrary, *Walled Garden* is seen as counter to the trends that have emerged from the COVID-19 crisis and *Industrial Sunset* is experienced as an improbable repetition of the sector's decline in the previous century.

Beyond the scenarios, some general and specific recommendations for the French TCLF industry emerge. In particular, the important work undertaken to make the French TCLF sector more attractive must continue by emphasising career opportunities and communicating a new image, as well as strengthening collaboration between SMEs, specifically the links in the value chain between the principals and their subcontractors.

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