EUROPEAN
COMMISSION

Brussels, 30.3.2022
SWD(2022) 105 final

COMMISSION STAFF WORKING DOCUMENT

Scenarios towards co-creation of a transition pathway for a more resilient, sustainable and digital textiles ecosystem

Contents

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1. INTRODUCTION

On 10 March 2020, the Commission adopted a new Industrial Strategy[1] to help Europe's industry lead the green and digital transformations and to drive Europe's competitiveness and open strategic autonomy. Following the experience of the COVID-19 pandemic, the update of the EU Industrial Strategy[2] highlights the need to further accelerate the green and digital transitions and increase resilience of EU industrial ecosystems.

The European Green Deal[3] identified textiles as a resource-intensive sector requiring focused action. The Industrial Strategy and the Circular Economy Action Plan[4] announced that the Commission will adopt an EU Strategy for Sustainable and Circular Textiles to create conditions and incentives to reach a sustainable and circular ecosystem by 2030. The 2021 update of the EU Industrial Strategy[5] identified textiles as a key product value chain with an urgent need and a strong potential for the transition to sustainable and circular production, consumption and business models.

The unprovoked and unjustified Russian military aggression of Ukraine with its consequences in terms of increased energy and gas prices, and impacts on the exporting segments of the textiles ecosystem, is yet another stark reminder of the vulnerabilities of certain global supply chains.

To recover from the sequence of sudden drops in demand, disruptions of value chains and price hikes of the last two years, that have created significant challenges for companies both in their daily operations and for their long-term survival, and to withstand not only fierce global competition but also future shocks while accelerating the green and digital transformations, the Commission proposes the co-creation of a transition pathway for the textiles ecosystem.

This Staff Working Document accompanies the EU Strategy for Sustainable and Circular Textiles[6] which aims to create a coherent framework and a vision for increasing the sustainability of the ecosystem whereby:

By 2030 textile products placed on the EU market are long-lived and recyclable, to a great extent made of recycled fibres, free of hazardous substances and produced in respect of social rights and the environment. Consumers benefit longer from high quality affordable textiles, fast fashion is out of fashion, and economically profitable re-use and repair services are widely available. In a competitive, resilient and innovative textiles sector, producers take responsibility for their products along the value chain, including when they become waste.

[1] COM(2020) 102 final
[2] COM(2021) 350 final
[3] COM(2019) 640 final
[4] COM(2020) 98 final
[5] COM(2021) 350 final
[6] COM (2022) 141 final

The circular textiles ecosystem is thriving, driven by sufficient capacities for innovative fibre-to-fibre recycling, while the incineration and landfilling of textiles is reduced to the minimum.

The transition pathway aims to identify with stakeholders what the digital and green transitions and increasing resilience mean for the textiles ecosystem and what measures and commitments are needed to accompany this transition. This Staff Working Document invites the whole industrial ecosystem and other stakeholders to take active part in co-creating a way forward.

The scenarios presented below consist of non-exhaustive lists for the purposes of the co-creation. Discussions will be launched with stakeholders across the textiles ecosystem, which will result in matching commitments, concrete pledges and an agreed pathway in the course of 2022.

1.1. Sectors included in the textiles ecosystem

The updated Industrial Strategy revolves around European industrial ecosystems. The textiles ecosystem is one of fourteen industrial ecosystems that have been identified by the Commission as strategic in the recovery of the COVID-19 outbreak.

The textiles ecosystem includes transformation of natural and synthetic fibres into yarns and fabrics, production of yarns, home textiles, industrial filters, technical textiles, carpets and clothing. The ecosystem also includes production of footwear and leather. The EU textiles ecosystem is particularly performing in high-end products and technical textiles for automotive applications, medical textile, agro textile and protective equipment.

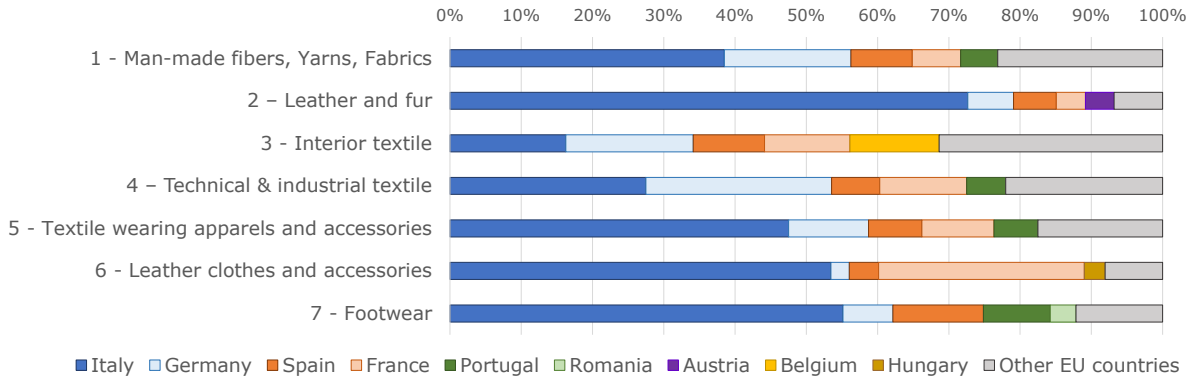
1.2.Numbers for the ecosystem

The EU textiles ecosystem in 2019 represented 3.1% of manufacturing value added and 6.2% of manufacturing employment.[7]

The textiles ecosystem is amongst the most globalised value chains that exist today.[8] The part of the ecosystem located in the EU is mainly composed of small and medium sized enterprises,[9] which represent 99.5% of the companies. Women represent more than 70% of all employees. Companies with less than 50 employees account for more than 90% of the workforce. The main EU producers of **textile and clothing** are concentrated in Italy, France, Germany, Portugal and Spain. Over 40% of EU apparel is produced in Italy.

[7] CSIL report on Data on the EU Textiles Ecosystem and its Competitiveness.
[8] CSIL report on Data on the EU Textiles Ecosystem and its Competitiveness.
[9] Eurostat 'Structural Business Statistics' and National accounts aggregates by industry.

Figure 1: Top EU producers by subsector



Source: Based on data from Eurostat Structural Business Statistics. CSIL report on Data on the EU Textiles Ecosystem and its Competitiveness, (shares of total EU production, average 2015-18).

Two thirds of **EU footwear production** is concentrated in three countries: Italy, Spain and Portugal with Italy accounting for over 50% of EU production. The European footwear industry consists of a large number of small enterprises, employing on average 10-15 employees. The number of companies and employment in the footwear sector has been declining in the past decades due to manufacturing moving to economies with lower labour costs in South East Asia. Many European companies have focused on high-quality and high-added value segments and niche markets. These include high-end footwear, children's shoes, and footwear for specific applications (protective, golf and skiing boots).

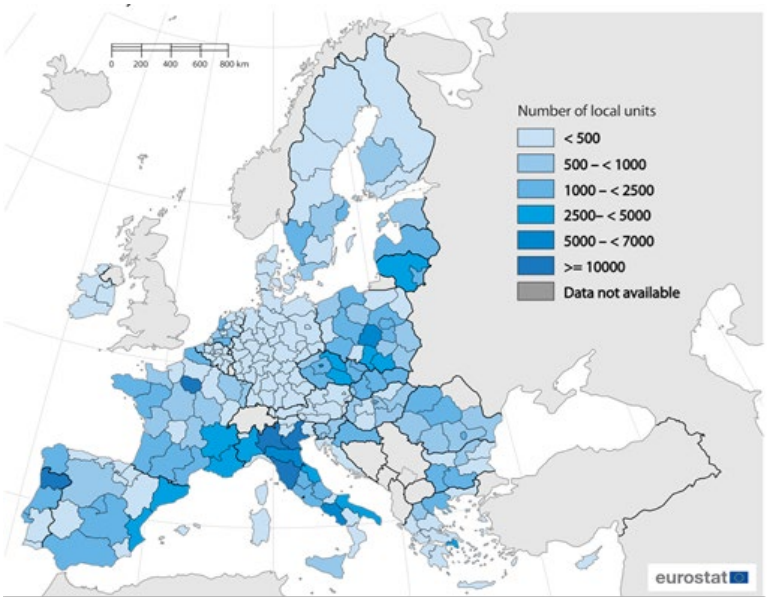
The **leather industry** includes diverse products and industrial processes. Leather tanning covers the treatment of raw materials, i.e. the conversion of raw hides or skins into leather to be used in the manufacture of a wide range of products. The footwear, garment, furniture, automotive and leather goods industries are the most important outlets for EU tanners' production. The EU maintains its position as a leading world exporter of semi-processed leather and fur. European tanners have become the preferred suppliers for high-end luxury brands in fashion, interior design and the automotive sector worldwide,[10] setting the world standards in terms of quality and brand value[11] (including environmental and social considerations).

SMEs are essential to the competitiveness and the technological development of the ecosystem. To unleash the power of SMEs to lead the twin transitions, operators in the ecosystem must adapt sustainable business practices and digital technologies.

The industries that compose this ecosystem have a strong territorial component, being organised around clusters and industrial districts and contributing to regional development.

[10] CSIL report on Data on the EU Textile Ecosystem and its Competitiveness.
[11] CSIL report on Data on the EU Textile Ecosystem and its Competitiveness

Figure 2: Number of companies active in the textiles ecosystem (all subsectors) by EU NUTS2 regions



Source: Number of companies in the ecosystem, based on data from Eurostat Structural Business Statistics. CSIL report on Data on the EU Textile Ecosystem and its Competitiveness

1.3.Links to other industrial ecosystems

Due to its complex value chains, the textiles ecosystem is linked to and dependent on other industrial ecosystems. The textiles ecosystem is very much linked to other ecosystems as a supplier of input materials for e.g. the healthcare, construction and automotive sectors. The manufacturing of some essential materials is not included within the ecosystem such as manufacturing of chemical products for e.g. coating, dyestuff, colourings and impregnating chemicals for textiles. The textiles ecosystem obviously also has close links with the retail ecosystem.

1.4. Impact of the COVID-19 crisis and already noticeable negative consequences following the Russian invasion of Ukraine

The textiles ecosystem has contracted as a result of the economic crisis brought about by the COVID-19 pandemic. At the same time, it has also made a fundamental contribution to the pandemic's management, supplying personal protective equipment and equipment for medical use (face masks, medical gowns and nonwoven raw materials for medical use products).

Most companies operate in complex value chains, often relying both on external supplies to sustain supply and significantly on export markets to sustain demand and competitiveness. This integration of value chains has to be well managed to avoid any supply chain risks. The ecosystem has been hard hit by the shutdown of retail outlets and disruptions in the logistics sector. In 2020 textile & clothing, footwear and leather goods retail sales decreased by 24%. EU

turnover for textiles decreased by 9.2% and the decline in the clothing industry was 18.1%.[12] Demand for leather was weak and only very special market segments were doing better (luxury sector, automotive and furniture). Turnover in the tanning sector declined by close to 25%.[13] The footwear sector has seen a further decrease in sales as a result of the second lockdown in many EU Member States. The manufacture of nonwovens, which is a key raw material for face masks and medical gowns, has been more resilient. In particular, demand for materials used to fight the pandemic had strong growth rates. The most significant growth rate for nonwovens in 2020 was observed in nonwovens for medical use (+118.0%). In contrast, major declines were recorded in the sales of nonwoven materials to the construction and automotive markets[14].

The EU textile & clothing industry has seen a recovery in 2021, with a rebound in exports, turnover and retail sales. However, the recovery is hampered by higher shipping costs and increases in the price of raw materials and energy. Provisional data for January to November 2021[15] show a recovery in turnover for textiles +13% and for clothing +9.8%.

Since the very start of the COVID-19 outbreak, and in coordination with the European Commission, European companies have acted quickly to respond to the extraordinary increase in demand for essential equipment, like protective masks and nonwoven raw materials for face masks and medical gowns, to contain the spread of the virus. Despite the unprecedented impact of the outbreak, many companies have increased their production or reconverted their capacities for essential medical supplies to ensure sufficient supply of such equipment. All over Europe, businesses have found new ways to redesign their supply chains, diversify their supplier base or launch new manufacturing lines. Many of these companies are part of the textiles ecosystem, such as medical supply producers and nonwoven manufacturers.

While the economic actors are trying to recover, the unprovoked and unjustified Russian military aggression of Ukraine has consequences in terms of increased energy and gas prices and impacts on the exporting segments of the textiles ecosystem.

1.5.Strengths and challenges

The EU textiles ecosystem is characterised by high quality products producing value added and creating opportunities for investments and innovation. A key challenge for the green transformation is to boost investments to accelerate sustainability and circularity.

During the coronavirus pandemic, e-commerce has been expanding fast. 63% of EU consumers purchase clothes, shoes, or accessories online.[16] However, many SMEs struggle to market their products online. In this context, companies need to diversify their sales channels, access online marketplaces and present their collections digitally.

[12] Eurostat
[13] The Confederation of National Associations of Tanners and Dressers of the European Community (COTANCE)
[14] https://www.edana.org/about-us/news/2020-nonwovens-market-insights
[15] Eurostat
[16] CSIL report on Data on the EU Textile Ecosystem and its Competitiveness

Recent trends in terms of skills and occupational profile developments have led to the baseline assumption of a gradual shift from lower towards medium and higher skilled employees.

Competitiveness strengths:

- High quality of production, especially in technical textile and high-end products
- Rapid integration of new and innovative materials
- Front runner position in terms of uptake of sustainability practices
- Design, creativity, strong brand names, especially in the high-end industries
- Strong leadership in high-value added segments where drivers of competitiveness are difficult to replicate
- Specialised firms taking advantage of new tech and consumer trends
- Increasing experience with business models based on re-use, recycling and circularity

Competitiveness challenges:

- Increased competition from third countries, as well as companies in other sectors (e.g. e-commerce)
- Low profit margins, especially for SMEs
- Integration of sustainable and circular practices in the value chain to reduce the environmental footprint of the sector
- Risk of decent work deficits in global supply chains
- Skills gaps and shortages
- High labour costs
- Ageing workforce
- Innovative capacities concentrated in few Member States.

2. A RESILIENT TEXTILES ECOSYSTEM

The pandemic has shown how vulnerable the textiles ecosystem can be towards external shocks, impacting both supply and demand. As the COVID-19 crisis deepened, demand dropped significantly in most segments, but dramatically increased in e.g. the medical sector. Global supply chains could not cope with the increased demand in specific segments of the textiles ecosystem (notably for medical uses) and disruptions of production of some specific products in the most affected locations occurred.

The textiles ecosystem has seen a sharp drop in the confidence indicator in the European Commission's Business and Consumer Surveys. Although, the indicator is the lowest of all the industrial ecosystems, it has significantly increased since the beginning of 2021 and is now above pre-COVID-19 levels.

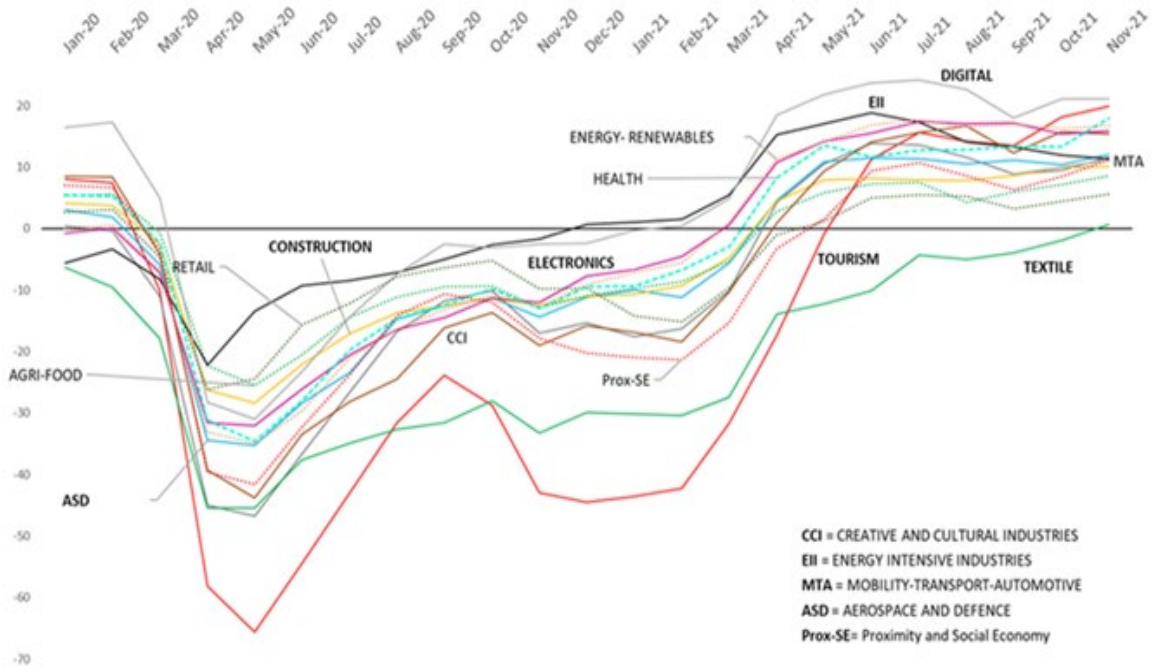


Figure 3: confidence indicator of industrial ecosystems, European Commission analysis based on the Joint Harmonised EU Programme of Business and Consumer Surveys.

Although manufacturing of low added-value products will not be economically viable in the EU, due to high production costs, there is potential through innovation and digitalisation, to further strengthen specific segments, such as protective equipment, high-end products and innovative technical textiles.[17] Investments in design and innovation can further enhance the resilience and competitiveness of EU production. Given that 38% of EU production[18] is sold on global markets there is potential through trade agreements and export promotion to increase the market share with our trading partners of high quality and innovative EU products. In addition, there is potential to develop new business models based on re-use, recycling and circularity.

A modernisation effort is required to ensure that the ecosystem stays competitive in global markets. Hence, it is necessary to embrace technological change; develop technologies that use less energy, reduce waste and invest in a workforce with the right skills. Investments in material and product innovation are needed to sustain Europe's leadership in technical textile and to ensure a pole position in future markets such as smart textile[19] and advanced sustainable bio-based textiles. In this context, support could be provided to boost specific innovative segments of the ecosystem, such as research and innovation for e.g. sustainable and bio-based textiles and smart and high-performance materials.

[17] Non-aesthetic product where function is the main criterion
[18] Euratex; based on Eurostat data
[19] Smart textiles are textiles that are able to sense and respond to changes in their environment. Smart Textiles are also fabrics that enable digital components to be embedded. The fabrics can communicate and transform e.g. change colour for athletic and military applications.

EU/national research and innovation funding is important to respond to future market demands such as material innovation, safe and sustainable product design, new business models, as well as circularity. This is relevant for the competitiveness and resilience of all segments of the ecosystem.

To support the ecosystem, it is essential to have reliable data and indicators. The Commission has recently concluded a study to collect and analyse data describing the evolution and competitiveness of the textiles ecosystem.[20] Relevant economic data covering a number of indicators is presented and will be regularly updated.

Stakeholders in the ecosystem are invited to reflect on the proposed scenarios for their sector. Key questions concern:

- Based on your experience and data available to you, which changes could represent opportunities for the textiles ecosystem to "bounce forward" in the twin green and digital transitions, and how can they be best explored?
- Based on your experience and data available to you, what other actions need to be taken by the Commission, national competent authorities and/or stakeholders to increase the resilience of the textiles ecosystem in the areas mentioned above and beyond?
- What kind of issues have you witnessed, and when, with regards to the resilience of value chains that contribute to the functioning of the textiles ecosystem?
- Which value chains' bottlenecks are the most critical for the ecosystem? Can you provide data/evidence? What actions should be taken, and by whom, to address the issues you have witnessed?
- Based on your experience and data available to you, what other issues in relation to resilience would you propose to be considered for this pathway?
- Based on data available to you, what intermediary milestones need to be set for the different actions towards 2030?
- Can you provide any data or analysis on systemic and/or strategic dependencies or vulnerabilities you face, including as a result of the COVID-19 pandemic and the unprovoked and unjustified Russian military aggression of Ukraine?

The Transition Pathway will be created jointly with stakeholders to identify possible actions needed to achieve the twin transitions. The table below provides for scenarios for a more resilient ecosystem to be developed with stakeholders in the co-creation process:

[20] https://ec.europa.eu/growth/sectors/fashion/textiles-and-clothing-industries/publications_en

2.1. Actions and scenarios for a more resilient ecosystem[21]

Issues	Possible actions and division of roles	Possible scenarios for 2030
SMEs in the textiles ecosystem are being held back by a lack of skilled employees. The skills shortage is particularly significant in terms of digitalisation and new technologies. The sector struggles to attract qualified young talents. 55% of European companies reported difficulties in filling ICT vacancies[22] **and 40% of companies have a green skills gap[23]. Women compose 70% of the workforce in the textiles ecosystem. However, the presence of women in managerial positions is low.**	**Commission**: Support the development of the Pact for Skills by working with the industry to forge skills partnerships under the Pact for Skills, helping achieve the overall targets set by the EU skills agenda, the Porto Summit and the Digital Compass. Support the implementation of the proposed Council Recommendation on ensuring a fair transition towards climate neutrality by addressing the relevant employment and social aspects linked to the transition.[24] **MS:** Ensure active coordination and implementation of skills development for the ecosystem. **Industry:** Engage actively in the reskilling and upskilling of the workforce.	Based on the key performance indicators established by the Pact for Skills in textiles[25]: ➢ Increase diversification (gender, age) in company management by up to 5% each year, in particular access to higher positions by women. ➢ Increase the offer of apprenticeships in industry by 20%. ➢ Establish the Skills Observatory for the textiles ecosystem with industry, policy and education stakeholders as members. ➢ Increase enrolment of students and workers from other sectors in textiles VET/HE programmes by 5% each year. ➢ By 2025: Ensure that operators contribute effectively to the EU headline target of 47% of adults aged 25-64 participating in learning during 12 months.
Most companies operate in complex and global value chains, making	**Commission and MS**: Support research and innovation of key input materials but also substitution of hazardous chemicals for e.g. colouring,	➢ Increased diversification and back-up capacities. ➢ EU industry has access to sufficient amounts of input

[21] This section identifies possible actions and scenarios which have been identified by the Commission services and some stakeholders that will participate in the co-creation of the pathway. They do not reflect the views and the position of the Commission.
[22] https://ec.europa.eu/eurostat/statistics-explained/index.php?title=ICT_specialists_-_statistics_on_hard-to-fill_vacancies_in_enterprises
[23] https://euratex.eu/news/which-skills-companies-need-from-their-workforce/
[24] COM (2021) 801 final.
[25] https://ec.europa.eu/social/main.jsp?catId=1534&langId=en

Issues	Possible actions and division of roles	Possible scenarios for 2030
them reliant on external supplies, to sustain supply and competitiveness, which has to be well managed to avoid any supply chain risks. In addition, raw material and energy prices have a big impact on the competitiveness of the ecosystem.	dye stuff and coatings. Support for increasing the collection and recycling of textile waste and for the production and uptake of recycled fibres in the manufacturing of new textiles through research and innovation targeting new processing technologies and market uptake of recycled fibres. Enhance the use of industrial technologies, through investments in research and innovation, directed at development and uptake technologies to reduce the use of new raw materials and prolong materials' lifecycles. **Industry:** Diversify sourcing and build relationships with multiple suppliers. Invest in the uptake of recycled fibres.	materials to satisfy the demand. ➢ Increased use of recycled raw materials.
Compliance with international environmental and social standards in some third countries.	**Commission:** Negotiate trade and sustainable development chapters in trade agreements. Reinforce cooperation with partners by using Free Trade Agreements as platforms to engage on climate and the circular economy. Exploit opportunities offered by the Global Alliance for Circular Economy and Resource Efficiency[26] and pursue progress in international fora (including G7, G20) to green the textile value chain. Engage at global, regional, bilateral levels to promote sustainable textile value chains. Use EU development cooperation instruments to promote the sustainability of value chains in partner countries. Enforce the Corporate Sustainability Due Diligence Directive in the textile sector. **Industry:** Address negative social and environmental impacts of their operations and value chains in some third countries.	➢ Cooperate with third countries to improve their compliance with international environmental and labour standards

[26] Circular Economy Global - International Issues - Environment - European Commission (europa.eu)

Issues	Possible actions and division of roles	Possible scenarios for 2030
SMEs in the ecosystem are struggling to access EU funds. The textiles ecosystem is underrepresented in EU research and innovation programmes.	**Commission**: Informing about funding opportunities focusing on the most relevant European Partnerships for the textiles ecosystem, i.e. *Made in Europe*, Circular Bio-Based Europe, Digital Europe, LIFE, Invest EU, Innovation Fund, Modernisation Fund and cohesion policy funds). Business support: start-up and incubation activities (e.g. Single Market Programme), cluster programmes and strengthened business networking through e.g. the Enterprise Europe Network sector group for textile & fashion; provision of best practice (i.e. setting up demonstration plants for new technologies, obtaining authorisations and permits, sector coupling etc.) for companies, building on existing good examples, such as the Hubs 4 Circularity. **MS:** Informing about national and local funding, effective allocation and absorption of funds available under RRF[27] and Multiannual Financial Framework programmes. **Industry:** Participation in collaborations and open calls. Engage actively in building innovative partnerships and participation in clusters.	➢ Broader take up by businesses of support aiming to strengthen the resilience of enterprises. ➢ Large-scale partnerships and clusters for transnational cooperation, peer learning, networking and innovation uptake between businesses.

3. A SUSTAINABLE AND CIRCULAR ECOSYSTEM

The EU Strategy for Sustainable and Circular Textiles announces actions along the textiles value chain to increase circularity and sustainability, promote sustainable lifestyles, reduce waste generation and promote efficient material use.

Under the Ecodesign Regulation for Sustainable Products, the Commission intends to develop binding product-specific ecodesign requirements to increase textiles' performance in terms of durability, reusability, reparability, fibre-to-fibre recyclability and mandatory recycled fibre

[27] Recovery and Resilience Facility

content, to minimise and track the presence of substances of concern and to reduce the adverse impacts on climate and the environment.

While the green transition represents a substantial opportunity, SMEs in the ecosystem will need support to transform and comply with sustainability requirements. Priority is for investments for sustainable product design, production processes, investments to develop recycled fibres and higher performing sustainable textiles, as well as business models focused on resource efficiency and circularity. In this context, there are opportunities to boost the market for sustainable and circular textiles, foster reuse activities and new business models as product as a service and drive innovation in technical textiles, smart textiles and high-end fashion. The digital product passport will improve business and consumer access to information on product characteristics.

To comply with the requirement to separately collect textile waste by 2025, some Member States have indicated in their national recovery plans that they are considering to establish Recycling Hubs to collect, sort and process textile waste into secondary raw materials. Support will be necessary for investments in sustainable management, collection, sorting and recycling of textiles.

The transition to a circular economy approach in the sector goes hand-in-hand with increasing awareness of consumers about the social and environmental impacts of their choices, thus contributing to the shift towards responsible consumption of sustainable textiles.

People working in labour-intensive supply chains, such as textiles, are in particular affected by decent work deficits.[28] Responsible business conduct in this sector requires the protection of human rights, including labour rights, promoting company due diligence and the strengthening of disclosure of information on sustainability aspects. In its recently adopted Communication on decent work worldwide, the EU promotes decent work across all sectors and policy areas in line with a comprehensive approach that addresses workers in domestic markets, in third countries and in global supply chains. A number of EU-funded projects exist which strengthen responsible textile supply chains, including Better Work[29] which aims to improve working conditions in the garment industry, the Vision Zero Fund[30] which improves occupational health and safety in the garment sector and the Clear Cotton project to eliminate child labour and forced labour in the supply chain.[31] The EU further supports decent work in the textile supply chain linked to Madagascar by the EU-funded project "Sustainable Supply Chains to Build Forward Better".[32]

The New European Bauhaus expresses the EU's ambition to create beautiful, sustainable, and inclusive places, products and ways of living. The policy actions and funding opportunities under the Bauhaus initiative can provide support to accelerate the transformation of the textiles ecosystem. To this end, and as put forward in the EU Strategy for Sustainable and Circular

[28] Communication on decent work worldwide, COM(2022) 66
[29] https://betterwork.org/
[30] Vision Zero Fund – Every worker, everywhere, deserves a safe & healthy workplace. (ilo.org)
[31] CLEAR Cotton: Eliminating child labour and forced labour in the cotton, textile and garment supply chains: an integrated approach (IPEC) (ilo.org)
[32] https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---ector/documents/genericdocument/wcms_791245.pdf

Textiles, the Commission will support projects that increase sustainability while meeting demands related to aesthetics and inclusivity, to support the shift in consumption patterns.

Stakeholders in the ecosystem are invited to reflect on the proposed scenarios for their sector. Key questions concern:

- What specific issues or barriers in relation to the implementation of the EU Strategy for Sustainable and Circular textiles would you propose to be considered for this pathway?
- Based on your experience and data available to you, what actions are needed to boost demand for recycled fibres?
- Based on your experience and data available to you, what support is needed to scale up the production of recycled fibres?
- Based on your experience and data available to you, how can the digital product passport, as proposed by the Ecodesign for Sustainable Products Regulation, contribute to sustainable consumption and production patterns and facilitate recycling? How should this information be made available to consumers?
- In addressing the challenges outlined here, how do you see the respective roles of the Commission, Member States, industry, social partners and other stakeholders?
- Would waste streams information (i.e. availability of textile waste, location, etc.), potentially provided through the new Recycling Hubs, be an enabling conditions for boosting recycling of textiles in the EU?
- What actions are needed to improve the sustainability of production process, including the use of raw materials and hazardous chemicals?
- Is your organisation on track to transition successfully towards a more sustainable business model? Have you set specific targets and milestones? Based on your data, how far are you from achieving your goals? What are the challenges you foresee, based on data available to you?
- Based on data available to you, what intermediary milestones need to be set for the different actions below towards 2030?
- Based on information and data available to you, what are the investment needs and gaps of the ecosystem on sustainability?

The Transition Pathway will be created jointly with stakeholders to identify actions needed to achieve the twin transitions.

The table below provides for scenarios for a more sustainable ecosystem to be developed with stakeholders in the co-creation process:

3.1.Actions and scenarios for a more sustainable ecosystem[33]

Issues	Possible actions and division of roles	Possible scenarios for 2030
SMEs in the ecosystem will need to design and produce sustainable textiles. 80% of products' environmental impacts are determined at the design phase. Prolonged life and reuse options and fibre-to-fibre recycling present opportunities for more sustainable products and consumption. As announced in the Textiles Strategy, Ecodesign for Sustainable Products Regulation will establish requirements for designing of products, applicable in the future to textiles, to increase their durability. It also proposes the development of a digital product passport. In addition, an issue for many sectors relates to the lack of	**Commission:** Launch discussions with stakeholders to facilitate the scaling up of resource efficient manufacturing processes, fibre-to-fibre recycling, reuse, repair and other new circular business models and the uptake of recycled content. Launch discussions to define preparatory and supporting actions in anticipation of the actions under the Ecodesign Regulation for Sustainable Products and the Digital Product Passport. Review the Textile Labelling Regulation in the light of new policy priorities on sustainable and circular products (in particular the Ecodesign for Sustainable Products Regulation). Continue and finalise the ongoing discussions with industry in the development of the Product Environmental Footprint Category Rules on apparel and footwear. Support initiatives to embed circularity in the network of suppliers.[34] Review the EU Ecolabel criteria for textiles and footwear to support its uptake among producers and offer consumers an easy recognisable and reliable way to choose eco-friendly textile products. Ensure the accuracy of green claims and the relevance of information provided to businesses and consumers. While further promoting the recycling of plastic polymers and their markets, the Commission will pay specific attention to this issue in the context of upcoming initiatives, such as the Green Claims Initiative, the review of the EU Ecolabel criteria for textiles and footwear, and in the development of binding product-specific ecodesign requirements. **MS:** Support industry to design and produce more sustainably.	➢ The textile products placed on the EU market are long- lived and recyclable, to a great extent made of recycled fibres, free of hazardous substances and produced respecting labour rights. ➢ Establish commitments with industry to boost new circular business models and to boost the EU production and consumption of sustainable and circular textiles, as defined in the strategy. ➢ Revision of the Textile Labelling Regulation with a view to enhance sustainability labelling and recycling of textiles.

[33] This section identifies possible actions and scenarios which have been identified by the Commission services and some stakeholders that will participate in the co-creation of the pathway. They do not reflect the views and the position of the Commission.
[34] EU SWITCH to Circular Economy Value Chains project

Issues	Possible actions and division of roles	Possible scenarios for 2030
harmonised data on the environmental impacts along the lifecycle and environmental claims, which can often not be substantiated.	**Industry:** Integrating principles and criteria specific for the ecosystem established in the Ecodesign for Sustainable Products Regulation; Actively invest and commit to design and manufacture sustainably; Contribute to the development and implementation of Product Environmental Footprint Category Rules on apparel and footwear. Ensure accuracy of the green claims made and prioritise efforts on fibre-to-fibre recycling.	
Creating the shift to sustainability: addressing overproduction and overconsumption of fashion. Unsustainable consumption and production of textile products is responsible for increased textile waste generation and for more complex management of the end of life stage. It also further adds to the release of microplastics into the environment due to the high share of synthetic fibres. The aim is to stimulate re-use and other waste prevention activities as well as adjust the business models	**Commission:** Inform about opportunities under the New European Bauhaus initiative, including cooperation and funding opportunities. Promote new circular business models, such as product-as-service models, take-back services, second-hand and repair services as cost effective and affordable alternatives to fast fashion. Support social enterprises active in the sector Launch awareness raising campaigns. Support the shift to sustainability under the motto #ReFashionNow, with quality, durability, longer use, repair and reuse at the core. **MS:** Support the shift to other consuming models which enhance durability, re-use and circularity. **Industry:** Be engaged in embracing new circular business models, promoting durability and reuse. Champion the paradigm shift and take responsibility to reduce the carbon and environmental footprint and offer consumers cost effective sustainable alternatives.	➢ New circular business models accommodating how we consume, making longer use, reuse and make second hand fashionable and prolonging the lifespan of products. ➢ Consumers benefit from high quality textiles and economically profitable re-use and repair services are widely available.

Issues	Possible actions and division of roles	Possible scenarios for 2030
to decreased number of fashion lines and micro collections.		
Member States will need to separately collect textile waste as set by the revised EU Waste Framework Directive as of 2025.[35] In light of future requirements on the uptake of recycled fibres, beyond those coming from PET recycling, the current textile-to-textile recycling capacity in the EU needs to be supported.	**Commission:** Support innovative sorting and recycling technologies for textile waste to facilitate preparing for reuse, the uptake of fibre to fibre recycling for the production of high quality recycled fibres (e.g. via Horizon Europe); Propose harmonised EU extended producer responsibility (EPR) rules for textiles with eco-modulation of fees, as part of the forthcoming revision of the Waste Framework Directive in 2023. Support the establishment and update of value chain analysis at EU level, assessing textile waste streams and recycling capabilities across Member States (potentially through the announced Recycling Hubs, if possible) to encourage cross-border cooperation on the single market; **MS:** Introduce separate collection systems by 1st January 2025, and give incentives to companies to achieve the sustainable waste management of textile waste. **Industry:** Take up waste prevention practices Implement EPR schemes Invest in use of recycled fibres. Invest in efforts to build viable value chains based on textile waste management and production of circular textiles.	➢ Producers take responsibility for their products along the value chain, including when they become waste. ➢ Establishment of sufficient capacities for innovative fibre-to-fibre recycling, while the incineration and landfilling of textiles is reduced to the minimum. ➢ Textile recycling hubs flourish across Europe. ➢ Increased production capacity for textile products with recycled materials. ➢ Job creation potential for waste management of textiles.
Investments are needed in research, innovation and digitalisation to lead innovation in new materials and for the sustainable	**Commission:** Launch calls on research and innovation focusing on improved more sustainable manufacturing processes and the development of new materials under e.g. the work programmes of Horizon Europe and LIFE; Support the development of innovative	➢ The EU industry has access to sufficient funding to strengthen the circularity in the value chain and develop sustainable innovative and advanced materials.

[35] Similar to paper, plastic and glass.

Issues	Possible actions and division of roles	Possible scenarios for 2030
development of the ecosystem.	technologies and sustainable bio-based innovations; **MS:** Invest in R&D through available funding schemes and make use of available support services. Use available funding under ERDF to support textile research and innovation investments in SMEs, especially in those regions that have identified textile and clothing industry as a priority area in their smart specialisation strategies. **Industry**: Take advantage of the available support schemes and invest in R&I, cooperate with industry players to support the development of textile research and innovation.	

4. DIGITALISATION OF THE TEXTILES ECOSYSTEM

Achieving the Digital Single Market in Europe is a prerequisite for attracting investments in digital innovations and for faster business growth in the digital economy. A key success factor for reaping the full benefits of a Digital Single Market is a highly competitive digital industry in Europe and the integration of digital innovations in all sectors. Embracing digital technologies will help companies in the ecosystem to grow and to implement more competitive manufacturing processes.

EU wide collaboration and strategy development has been effectively coordinated by the European Textile Technology Platform for more than 10 years. One aim is for digital technologies to cut costs, to make sustainable textile businesses profitable, and to drive innovation and competitiveness. Horizon Europe[36] work programmes envisage projects which include the support to innovative and sustainable textiles. Textile-related projects with digital aspects included System Circularity and Innovative Recycling of Textiles, two sustainable textile projects concerning garments (product traceability) and household products. Other projects relate to increasing the circularity in the textiles value chains.

The *Made in Europe* Partnership under Horizon Europe aims at transforming the manufacturing sectors, including the textile sector, towards circular and digital manufacturing. A key challenge in the ecosystem remains the digitisation of companies that do not yet take full advantage of the opportunities offered by digitalisation, as well as more generally the integration of digital

[36] Horizon Europe | European Commission (europa.eu)

technologies. Improving the digitalisation of companies, in particular SMEs, will allow to increase productivity, performance and competitiveness (e.g. by digital design, producing digital virtual textile, clothing and footwear collections and establishing digital supply chains), to find new customers (e.g. by e-commerce and social media) and to improve resilience. Digitalisation of the complex textile value chain can change how textile and clothing are designed, made and serviced around the world and hence strengthen the efficiency and competitiveness of the ecosystem.

Textile, clothing and footwear collections used to be presented at trade fairs but with the COVID-19 epidemic, such fairs have often been cancelled or held with smaller number of participants. Hence, in this new context, support could be provided to SMEs to create digitally virtual collections, which would be presented to wholesale and retail buyers.

As announced in the European Strategy for Data[37], the Commission will work on the wider accessibility of data and enabling data flows between businesses and governments by establishing common European data spaces for trusted and secure sharing of data. Furthermore, cloud computing uptake by SMEs will be addressed, for example through a dedicated marketplace for cloud services. Through the data space companies can share data with suppliers and customers.

Digitalisation and new technologies, notably disruptive digital technologies such as Big Data and Artificial Intelligence, are major vehicles in transforming business models and provide opportunities for SMEs in the textiles ecosystem to compete in a sustainable way. Big data can provide intelligence on consumer needs to which new manufacturing technologies must react. For example, data collection with regards to seasonal purchases of certain items, coupled with online searches, could be used to create a predictive tool.

To create the necessary digital infrastructure, companies in the ecosystem could take part in the manufacturing data space, which will be launched in the framework of the Digital Europe Programme. Through the data space companies can share data with suppliers and customers.

Digitalisation provides the operational tools to make textile manufacturing more competitive and sustainable. Efficient textile production requires well-planned production flows. Challenges operators face are to adapt to fashion trends, stock planning and product lifecycle management. Digitalisation can give operators the tools to adapt to flexible production cycles and hence become more efficient.

An important challenge for companies, and notably SMEs, in the ecosystem is the uptake of digital technologies and the value creation out of industrial data. The uptake of digital technologies at industrial level is enabled by the network of Digital Innovation Hubs under the Digital Europe Programme. Under this programme, the Commission is also supporting the reskilling and upskilling of workers through short-term courses in advanced digital skills. In line

[37] COM(2020)66 final, 19.02.2020

with the commitments announced at the Porto Social Summit, the Pact for skills for the textiles ecosystem will establish commitments through specific Key Performance Indicators and will create partnerships between industry, public authorities and educational providers, including Vocational Education and Training (VET).

The Enterprise Europe Network[38] will work closely with the Digital Innovation Hubs to ensure a seamless support and advice service, including with national, regional and local authorities. The Enterprise Europe Network may be a first contact point for local SMEs that could be referred to Digital Innovation Hubs. Due to its large outreach, the Enterprise Europe Network can be very helpful in raising awareness to a large number of SMEs.

Stakeholders in the ecosystem are invited to reflect on the proposed scenarios for their sector. Key questions concern:

- Based on your experience and data available to you, which digital technologies are the most relevant for the ecosystem?
- Which ones are you already applying today and which ones do you estimate will require more time, funding and coordination?
- Based on your experience and data available to you, what are the main barriers to the uptake of digital technologies in the ecosystem?
- Based on your experience and data available to you, how can data collection, use and sharing (within and across sectors) be increased to improve resilience, sustainability and competitiveness of the ecosystem?
- Based on your experience and data available to you, what aspects of digitalisation of the administration are required to improve efficiency and transparency?
- What other issues related to the digital transition would you propose to be considered for this pathway?
- What are the implications of digital technologies for the ecosystem and for the main skills requirements and training needs?
- What are the investment needs and gaps of the ecosystem?
- How can the exchange of data among different stakeholders be fostered? What interoperability framework (common standards, open formats, licenses) is needed to secure the exchange of data?
- Based on your data, what intermediary milestones need to be set for the different actions towards 2030?

The Transition Pathway will be created jointly with stakeholders to identify actions needed to achieve the twin transitions. The table below provides for scenarios for a more digital ecosystem to be developed with stakeholders in the co-creation process:

[38] Enterprise Europe Network (europa.eu)

4.1.Actions and scenarios for a more digital ecosystem[39]

Issues	Possible actions and division of roles	Possible scenarios for 2030
Need for Digital transformation and industrial uptake of innovation in the textiles ecosystem.	**Commission:** Pool and accelerate research and innovation. Inform about funding opportunities for the textiles ecosystem. Provide opportunities in Horizon Europe and Digital Europe for collaborative research to use novel digital technologies. Support the digitalisation of the textiles ecosystem and the uptake of digital technologies at industrial level, enabled by e.g. the network of Digital Innovation Hubs under Digital Europe, Cohesion Policy Funds and Horizon Europe. Support the reskilling and upskilling of workers through courses in advanced digital skills. Define together with Member States and industry future supporting research and innovation actions and engagements. **MS:** Active implementation of digitalisation strategies and projects, implementation of National Recovery and Resilience Plans. Use the possibilities for funding under ERDF to support the ICT uptake of SMEs in the textiles ecosystem. **Industry:** Uptake of innovations and digital technologies, collaboration with Digital Innovation Hubs, integrating digital in textiles (smart textiles) and design.	➢ By 2030 more than 90% of SMEs reach at least a basic level of digital intensity.[40] ➢ Operators make use of digital technologies to enhance the efficiency and sustainability of their operations as well as the security of the value chains. ➢ Increased access to the latest knowledge, expertise and technology to support and implement innovations across the value chain.

[39] This section identifies possible actions and scenarios which have been identified by the Commission services and some stakeholders that will participate in the co-creation of the pathway. They do not reflect the views and the position of the Commission.
[40] Europe's digital decade targets

Issues	Possible actions and division of roles	Possible scenarios for 2030
Supporting digital reskilling and upskilling of the ecosystem.	**Commission**: Pact for skills, which builds on the European Alliance for Apprenticeships and the expanded blueprint for sectoral cooperation on skills for the ecosystem. Support projects on digital skills through the Digital Europe Programme. **MS:** Implementation of Digital Skills through the Pact for skills in order to reach the EUs Digital Decade targets. **Industry:** Active re/upskilling programs of workers. Identify and communicate present and potential digital skills shortages compromising the digital transition.	Based on the key performance indicators established by the Pact for Skills: ➢ Support 10 000 SMEs in their digitalisation efforts; ➢ Design 20 new educational processes and tools responding to green and digital skills; ➢ Becoming a more appealing sector for employees by raising awareness of its attractiveness.
Supporting the data economy Lack of data sharing to transform and support data enabled business models.	**Commission**: Support for the value creation of industrial data through the Digital Europe Programme. Encourage and facilitate data sharing, promote data sharing, wider accessibility of data and enabling of data flows to improve the entire value chain through the development of Data Spaces. **MS**: Active implementation of data digitalisation strategies and projects, implementation of National Recovery and Resilience Plans. **Industry**: Uptake of the data economy. Get involved in the European Alliance on Industrial Data and Cloud to create the necessary infrastructure.	➢ Uptake of digital technologies at industrial level, enabled by the network of Digital Innovation Hubs under Digital Europe. ➢ By 2030 75% of companies in the ecosystem have taken up Cloud computing, Big Data and Artificial Intelligence. ➢ Ecosystem stakeholders are connected to the relevant European data spaces.
During the coronavirus pandemic, **e-**	**Commission**: Support to companies in the ecosystem to access online	➢ Increased use of on-line market places. ➢ Improved market

Issues	Possible actions and division of roles	Possible scenarios for 2030
commerce sales have grown even further. However, many SMEs struggle to market their products online. Further enhanced by online sales, apparel, footwear and accessory products containing restricted substances that exceed required limits are among the product categories most frequently reported by market surveillance authorities. The e-commerce industry has become the target of counterfeit sales on online marketplaces. Counterfeit goods are increasingly being sold on e-commerce platforms.	marketplaces. Inspectors in Member States will check textile products for compliance with restrictions for hazardous substances.[41] The Intellectual Property Action Plan[42] - launch a new approach to improve customs control by reinforcing customs risk management. The Commission will enhance EU anti-counterfeiting to promote and facilitate effective cooperation between Intellectual Property Rights holders, intermediaries and law enforcement authorities and mainstream the use of adequate tools and new technologies. **MS**: Efficient absorption of funding for online sales platforms. Reinforced customs risk management. Customs controls to be performed within a common risk management framework, based upon the exchange of risk related information and risk analysis.[43] Customs and other competent authorities will cooperate and exchange with each other and with the Commission data in order to minimise risk and combat fraud.[44] **Industry**: Diversification of the sales channels.	surveillance for online sales.

5. SUPPORTING THE ECOSYSTEM

The textiles ecosystem needs a supportive framework at European and national level as well as shared commitments from stakeholders for its sustainable recovery and long-term resilience. The specific support foreseen currently includes enabling the regulatory framework, financing of projects and activities, trade and internationalisation and the Pact for skills. These are all

[41] https://echa.europa.eu/-/eu-inspectors-to-check-consumer-products-for-hazardous-substances
[42] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0760&from=EN
[43] Reg. (EU) NO 952/2013 art. 46.
[44] Reg. (EU) No 952/2013 art. 47.

necessary enablers for the successful transformation of the ecosystem. The issues put forward in this chapter will be further developed with stakeholders in the co-creation process.

5.1.Regulatory framework

The EU legislative framework requires compulsory labelling only for textile fibres composition and for non-textile parts of animal origin, **EU Regulation 1007/2011 on Textile Fibre Names**. All other labelling requirements are voluntary at EU level. With regard to footwear, **Directive 94/11/EC lays down rules on labelling materials used in footwea**r sold in the EU.

As regards product safety, any item sold in the EU must comply with the EU's **General Product Safety Directive**, 2001/95/EC. Additionally, there are European standards that apply specifically to specific products such as children's clothing. In particular, the harmonised standard 14682 contains requirements to ensure that cords and drawstrings are placed safely on apparel for babies and children up to 14 years. This is to avoid strangulation and choking hazards.

REACH[45] is a horizontal EU legislation ensuring a high level of protection of human health and the environment from dangerous substances. As such it covers chemicals covered by the textile ecosystem. Via a number of restrictions, REACH is addressing hazardous substances in textiles, footwear and leather products. Several chemicals commonly used in apparel production are restricted or subject to authorisation under REACH. This applies to chemicals found in e.g. fabric dyes and finishing products.

In addition, the legislative proposal on **empowering consumers in the green transition** enables consumers to make more sustainable consumption choices by providing them with better information on the durability and reparability of products, and by protecting them against certain practices harmful to the green transition, such as greenwashing and early obsolescence practices. It does this by amending Directive 2011/83/EU on consumer rights and Directive 2005/29/EC on unfair commercial practices.

Moreover, the Textiles Strategy refers to the legislative proposal on **corporate sustainability due diligence**[46]. This proposal introduces a horizontal due diligence obligation for companies to address and account for actual and potential adverse impacts on human rights (including labour rights) and the environment in companies' own operations and in their global value chains. The Textiles Strategy also refers to the ongoing work of the Commission to prepare a new legislative instrument to effectively ban products made by forced labour from entering the EU market.

Concerning **free movement of goods**, industry has not raised any specific concerns recently and since 2018 the Commission has received only 7 notifications on textiles in the framework of Directive (EU) 2015/1535, laying down a procedure for the provision of information in the field

[45] Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
[46] COM (2022) 51

of technical regulations and of rules on Information Society services. Hence, there seems to be, as such, few specific barriers today that could have an impact on the textiles ecosystem.

As regards market surveillance, generally, apparel, footwear and accessory products containing restricted substances that exceed maximum allowed limits are among the product categories most frequently reported by market surveillance authorities. In this context, the European Chemicals Agency has announced that inspectors will check textile products for compliance with restrictions for hazardous substances. Under the new **Market Surveillance Regulation (EU) 2019/1020**, economic operators in the EU are obliged to share information and cooperate with market surveillance authorities. The Regulation provides for improved cooperation between EU Member States, market surveillance and customs authorities. The newly created **EU Product Compliance Network**[47] will coordinate and support cross-border market surveillance actions in the EU in priority areas to be proposed by the competent authorities and ensure cross-cutting collaborations between different Administrative Cooperation Groups, such as the Group on Chemicals and Textile Labelling.

A key concern for the sector is Intellectual Property Rights (IPR) infringements due to the presence on the market of counterfeit clothing and footwear. The **IPR Action Plan**[48] includes many elements of importance for the ecosystem, e.g. Intellectual Property assistance to SMEs and fight against counterfeiting. The Action Plan will enable the European creative and innovative industry to remain a global leader and at speeding up Europe's green and digital transitions. In particular, the Action Plan sets out key steps to improve the protection of IP; to boost the uptake of IP by SMEs; to facilitate the sharing of IP to increase the technological uptake in the industry; to fight counterfeiting and improve the enforcement of IP rights. In addition, the Intellectual Property Action Plan will launch support to improve customs control by reinforcing customs risk management.

Together with the EU Strategy for Sustainable and Circular Textiles, the Commission is adopting the proposal for a Regulation on ecodesign for sustainable products**,** which will set ecodesign requirements via delegated acts, to reduce the negative life-cycle environmental impacts of products placed on the EU market. Under this framework, policy measures may be introduced to extend product and material lifetime by increasing durability, reusability, reparability and recyclability of textiles and support the uptake of recycled content.

Questions to stakeholders

- Which elements are missing or are insufficient in the current regulatory framework, including initiatives in the process of being proposed?
- How important is public procurement for the ecosystem and how could green public procurement help create lead markets for sustainable and circular products?

[47] Established under the Regulation (EU) n. 2019/1020
[48] COM/2020/760 final

- Based on information and data available to you, which economic and/or regulatory instruments could support the development of new business models as well as support to the competitiveness of the ecosystem?

5.2.Financing of projects

Public support has a role to play in addressing market failures, focusing on areas such as research and innovation. The Commission supports the transition towards more green and digital ecosystems through various funding mechanisms. The Recovery and Resilience Facility (RRF) provides loans and grants to support reforms and investments undertaken by EU Member States. The aim is to mitigate the economic and social impact of the coronavirus pandemic and make European economies and societies more sustainable, resilient and better prepared for the challenges and opportunities of the green and digital transitions. RRF specifically requires that 37% of expenditure is for the climate objective and 20% for the digital objective. Member States may target specific actions towards supporting the textiles ecosystem. As an example, the Portuguese recovery and resilience plan has a component for investments aimed at modernising and developing a national circular bio-industry to increase the development and incorporation of bio-based materials in the production of high value added products and to increase resource efficiency. Three sectors will be targeted: (a) the textile and clothing industry; (b) the footwear industry and (c) the natural resin industry. France plans to develop innovation in different areas including "recycling and reincorporation of recycled materials". Five materials are identified as priorities, textiles is one of them. Italy has indicated in the national recovery plan that it is considering to establish a Recycling Hub to collect, sort and process textile waste. In addition, many components on innovation and digitalisation in the National Plans can provide support to the ecosystem, such as purchases of digital equipment.

Horizon Europe supports research and innovation activities to promote the emergence and scale-up of innovation. In the period 2021-2027, Horizon Europe will fund several partnerships relevant to the textiles ecosystem, such as *Made in Europe* and Circular Bio-based Europe. European Partnerships bring the European Commission and private and/or public partners together to address some of Europe's most pressing challenges through concerted research and innovation initiatives. In particular Pillar II is directly relevant for the textiles ecosystem with funding opportunities for greening of the industry, digitalisation and health. In addition, Cluster 6 provides for funding opportunities for Circular Bio-based Europe. Innovation funding is also available under Pillar III with direct support to Innovation Ecosystems. Research and innovation funding is vital to respond to future market demands such as material innovation, safe and sustainable product design, new business models as well as circularity. Funding can support the adaptation of skills and innovation by enhancing research for innovative materials, the uptake of advanced technologies and industrial transition.

Cohesion policy funds such as ERDF and ESF can support the adaptation of the ecosystem by enhancing research for innovation, digitalization and innovation management in SMEs. The

Interreg programme within the ERDF supports multi-region innovation projects and hubs that could be explored in the textiles ecosystem. Additionally, cohesion policy supports interregional innovation through relevant smart specialisation thematic platforms and partnerships, such as the thematic platform on Smart Regional Investments in Textile Innovation. Furthermore, for the 2021–2027 programming period, cohesion policy is financing interregional innovation investments under the ERDF. The Interregional Innovation Investments Instrument[49] provides funding for mature joint innovation projects and supports stakeholders involved in smart specialisation to develop and set up such projects in value-chain investment portfolios.

The Digital Europe Programme will support the set-up of the European Data Spaces and fund specialised programmes in areas like data and artificial intelligence, cybersecurity as well as supporting the reskilling and upskilling of workers through courses in advanced digital skills. To support the digitalisation of SMEs, the Commission is providing EUR 750 million for the setup of a network of over 200 European Digital Innovation Hubs. The network will provide businesses with expert digitalisation support.

EU funding for clusters[50] offers a favourable eco-system, which encourages competition and cooperation among firms with different industrial backgrounds, technological and business expertise. This, in turn, helps to reconfigure industrial value chains, leading to the development of emerging industries. European clusters are registered in the Textile Manufacturing sector, 20 European clusters are registered in the Apparel sector and 17 European clusters are registered in for Advanced Textile material. In addition, 7 textile clusters from 5 Member States are members of European Cluster Partnerships going international. These Textile Cluster Internationalisation projects support European clusters to develop joint international strategies and common actions strengthening European SMEs' access to third country markets.

Moreover, the SWITCH regional programmes in Asia[51], Africa[52] and the Mediterranean[53] offer the textiles ecosystem actors and their partners in the respective regions opportunities to increase the uptake of sustainable consumption and production (notably circular economy) practices by SMEs as part of European and global value chains. The SWITCH-Asia STeP EcoLab project[54], for example, builds on EU know-how and experience to support Mongolia's textile industry and supply chain in adopting more sustainable sourcing and production practices, improve the branding for sustainable products, optimise cost-saving measures, reach out to climate finance, and diversify the portfolio of customers. The SWITCH-Asia Kolkata Leather project[55], supports the adoption by local tanneries of green technologies and tanning processes and improved waste management practices in India enabling them to meet the higher international quality and

[49] https://ec.europa.eu/regional_policy/en/policy/themes/research-innovation/i3/
[50] Cluster policy (europa.eu)
[51] http://www.switch-asia.eu/
[52] https://www.switchafricagreen.org
[53] https://www.switchmed.eu
[54] https://www.switch-asia.eu/project/step-ecolab/
[55] Effective waste management and sustainable development of the MSME tanning companies in the Kolkata Leather Cluster › Grants Programme | SWITCH-Asia

environmental standards. Finally, by engaging with companies, members of the Garment Manufacturing Association of Cambodia (GMAC), the SWITCH-Asia Garment[56] project supports the local industry in adopting more sustainable energy practices thus reducing the environmental impact of their production processes.

The Single Market Program is also relevant to the textiles ecosystem as it aims to strengthen the governance of the EU single market and to:

- make the internal market work better with measures including improved market surveillance
- boost the competitiveness of businesses, in particular small and medium-sized enterprises
- develop effective European standards
- produce and disseminate high-quality statistics

Questions to stakeholders:

- How can investments be better geared to the necessary green and digital transitions?
- Where do you see gaps in the current funding landscape which put at a disadvantage the textiles ecosystem?
- Is there any incoherence between the funding streams which affects the transition in the ecosystem and how could this be addressed?
- Based on information and data available to you, what is the role for the private and public sector in providing support for the transition of the ecosystem?

5.3.Trade and internationalisation

The textile and clothing industry is one of the most globalised sectors.

- 38% of EU turnover are sold on the global market and sustained demand and competitiveness hence fundamentally depend on the ecosystem's continued integration in the global economy. Free trade agreements offer market opportunities for the ecosystem. Textile and clothing has seen strong export performance; exports increased by 58% during the period 2010-2019, whilst imports increased by 43%.[57]
- EU imports around EUR 80 billion of clothes per year. China, Bangladesh, Turkey, India and Cambodia are the main exporters of clothes to the EU.

As regards footwear, EU exports of footwear have increased by 51% in quantity and 147% in value from 2009 until 2019. Italy, France and Portugal accounted for 21% of global leather footwear exports in 2019.[58]

[56] www.switch-asia.eu/project/promotion-of-sustainable-energy-practices-in-the-garment-sector-in-cambodia/
[57] Euratex
[58] Key Facts and Figures - European Footwear Confederation (cec-footwearindustry.eu)

A renewed trade policy paths the way for open, sustainable and assertive trade - reaping the benefits that international opportunities provide, while protecting the EU's economy from unfair trade practices.

The changing climate can negatively affect the production capacity in third countries, notably where textile manufacturing is dependent on water resources. Trade policies can encourage countries to respect environmental, human and labour rights, including through the negotiation and implementation of relevant provisions in FTAs, particularly those contained in the Trade and Sustainable Development (TSD) Chapters. As an example, the Free Trade Agreement with Vietnam goes beyond trade and investment. It is based on a strong commitment from both sides to respect fundamental human and labour rights and environmental and climate protection. This is included both as an overarching principle and more specifically in the dedicated TSD chapter. To improve TSD provisions and ensure their enforcement, the Commission is currently conducting a review of the 15-Point Action Plan[59], for which an open public consultation has already been carried out. As announced in the Trade Policy Review Communication: "The review will cover all relevant aspects of TSD implementation and enforcement, including the scope of commitments, monitoring mechanisms, the possibility of sanctions for non-compliance as well as the institutional set-up and resources required."[60]

A key aspect in trade negotiations for textile and clothing are the rules of origin. Rules of origin determine whether operators can benefit from reduced or zero-rate customs duties, which are set for imports of clothes to the EU of up to 12%.

The EU's approach on rules of origin in textiles and clothing in trade agreements is coherent across Free Trade Agreements (FTA) and based on 'double transformation' (e.g. weaving + making up) for clothing. These rules aim to ensure that a significant part of the production processes takes place in the EU and/or our trading partner, and, to promote synergies with our trading partners. In recent trade agreements, including the EU-UK Trade and Cooperation Agreement and the modernisation of the rules applicable in trade with neighbouring countries in the Pan-Euro-Mediterranean (PEM) region, the rules for fabrics have been relaxed to reflect the new economic reality of the EU weaving industry. The Commission has given presentations to EU operators to explain the modernised rules of origin and will give further support to the ecosystem for companies to take advantage of the opportunities within the PEM zone.

To help European small and medium-sized enterprises export and invest beyond the EU and grow internationally, support and advice is given to SMEs by the Enterprise Europe Network. The Enterprise Europe Network is also organising events to connect SMEs with the right international partners. In addition, the Enterprise Europe Network textile and fashion sector group has close contacts with the industry and can be used as a tool to transmit information about EU programmes.

[59] Open public consultation on the Trade and Sustainable Development (TSD) Review - Trade - European Commission (europa.eu)
[60] resource.html (europa.eu)

Moreover, the Commission has created an Access2Markets portal[61], available in all official EU languages, providing relevant information on export, import and intra-EU trade. Trading conditions for 135 export markets are displayed for each single product. The rules of origin self-assessment tool (ROSA) allows to assess if textile products comply with the rules of origin and can be exported to the FTA partner country with zero or reduced duty.

Questions to stakeholders:

- Based on information and data available to you, would further policy action be necessary to ensure that the ecosystem can continue to benefit from its integration in the global economy to sustain both supplies and demand?
- How can operators in the ecosystem be supported in internationalisation?
- Based on information and data available to you, which are the export markets with potential for the ecosystem and for which products?
- How can the competitiveness gap be reduced?
- Based on your data, what is needed to be successful on the global markets?

5.4.Skills

The European Skills Agenda for sustainable competitiveness, social fairness and resilience sets ambitious, quantitative objectives for upskilling (improving existing skills) and reskilling (training in new skills) to be achieved within the next 5 years. Its 12 actions focus on skills for jobs by partnering up with Member States, companies and social partners to work together for change, by empowering people to embark on lifelong learning, and by using the EU budget as a catalyst to unlock public and private investments in people's skills. The aim is to ensure that the right to training and lifelong learning, enshrined in the European Pillar of Social rights, becomes a reality across Europe.

SMEs in the textiles ecosystem are being held back by a lack of skilled employees. Skills availability is the most frequently cited obstacle to investments across the EU. The skills shortage is particularly significant in terms of digitalisation and new technologies. The sector struggles to attract qualified young talents.

The ecosystem is suffering from an ageing workforce. In 2020, 36% of the textile, clothing, leather and footwear workforce was over 50 years old (an increase by 2% compared to 2019).

In terms of the level of qualifications, the textile, clothing, leather and footwear industries are dominated by medium level skills (secondary education) reached by 55% of the workers, followed by 32% of low level (primary education) and 13% of high-level qualifications.[62] As per sectors, the highest number of workers with high-level education (16%) are employed within the textile industry, whilst the sectors with the biggest group of low-level educated workers are

[61] https://trade.ec.europa.eu/access-to-markets/en/home
[62] Eurostat (2019) Labour Force Survey

employed in the leather and footwear industries (41%). Recent trends in terms of skills and occupational profile developments have led to the baseline assumption of a gradual shift from lower towards medium and higher skilled employees.

With regard to digital and green skills in the ecosystem, 55% of European companies reported difficulties in filling ICT vacancies, and 40% of companies have a green skills gap. Hence, initiatives such as the Pact for skills play an important role for the ecosystem.

Women compose most of the workforce in the textiles ecosystem. However, the presence of women in managerial positions is low. Women hold less than 25% of leadership positions in top fashion companies; only 14% of major brands are run by female executives. Women also hold a disproportionately low percentage of senior positions on the factory floor. Therefore, actions and programmes to boost women's entrepreneurship skills could be considered to facilitate access to managerial and senior positions.

The establishment of the Pact for skills promotes the upskilling, reskilling and creation of new green and digital skills in the textiles ecosystem, as well as the transfer of skills. The Pact for skills for the ecosystem encourages commitments through specific Key Performance Indicators in view to create local skills partnerships between industry, public authorities and educational providers.

Questions to stakeholders:

- Based on your data, what are your projections of the employment and reskilling needs for your enterprise, segment and product group? To what extent will up/reskilling be achieved in your sector?
- What actions have you taken to attract new workforce? What are the main difficulties you encounter? What is the impact on your enterprise? What remedy measures have you put in place?
- Based on information and data available to you, what is needed in order to develop skills for the green and digital transitions from the Commission, Member States, industry and other stakeholders in the ecosystem?
- Which digital skills and/or workers profiles are needed to enable the digital transition in the ecosystem?

6. KEY PERFORMANCE INDICATORS

The indicators in the staff working document will be further developed with stakeholders in the co-creation process and progress will be monitored as regards the twin transitions, industrial competitiveness and bridging the investment and innovation gaps, following the adoption of the EU Strategy for Sustainable and Circular Textiles.

To monitor progress of the ecosystem towards the goal of becoming resilient, sustainable and more digital, the following key performance indicators are relevant:

- Value added
- Turnover
- Number of jobs
- Textiles waste collection rates
- Recycling rates
- Textile products made of recycled fibres
- Textile products free of hazardous substances
- Share of procurement contracts that make use of green public procurement
- Innovation performance
- Share of SMEs that reach at least a basic level of digital intensity
- Share of workers with basic digital skills
- Share of companies that have taken up Cloud computing, Big Data and Artificial Intelligence
- Share of ecosystem stakeholders that are connected to the relevant European data spaces
- Share of gender and age diversification in company management
- Number of apprenticeships in the industry
- Number of enrolment of students and workers from other sectors in textiles VET/HE programmes

Questions to stakeholders:

- Considering all elements presented in the staff working document, what specific key indicators should be used to track the successful transition in the ecosystem?
- What indicators / data are currently collected and used by actors in the ecosystem to measure their performance with regards to the twin transitions and their resilience?

7. INDUSTRIAL FORUM'S BLUEPRINT FOR THE DEVELOPMENT OF TRANSITION PATHWAYS

The Industrial Forum – set up by the Industrial Strategy – consists of a wide array of stakeholders. The Industrial Forum takes an important role in the development of the Transition Pathways. In this context, a Task Force has been created to support the Commission in the co-creation process with stakeholders. The Task Force has developed a Blueprint, which serves as a reference point, and will be used in the co-creation process for the development of the textiles ecosystem Transition Pathway.

8. CONCLUSIONS AND AN INVITATION TO STAKEHOLDERS

This paper explores how the textiles ecosystem can contribute to and benefit from the green and digital transitions. A swift and sustainable recovery will require new technologies, with investments and innovations to match. The twin green and digital transitions will affect every part of our economy, society and industry. Textiles is not an exception.

However, these objectives can only be reached if the different sectors and their diverse actors work together. Hence, stakeholders are invited to propose specific actions, commitments and investments to work towards common objectives for the ecosystem.

Key for the recovery and transformation is cooperation and a forward-looking, responsible and transparent approach. We need to be ambitious to achieve resilience, sustainability and digitalisation of the ecosystem.

All stakeholders in the ecosystem are invited to reflect on the proposed scenarios for their sector. Key questions concern:

- How can these ambitions be addressed in a most effective way with specific actions, and
- How to best support collaboration between the private and public sector in advancing towards these common objectives

This invitation is the first step to kick-start the co-creation process with stakeholders, which will result in a finalised transition pathway by the end of 2022.