European Partnerships under Horizon Europe

Guidance document and proposal for the co-programmed European Partnership Textiles of the Future

Contents

1 General information

1.1 Draft title of the European Partnerships

Textiles of the Future

1.2 Lead entity (main contact)

The proposed lead entity for the partnership is the European Technology Platform for the Future of Textiles and Clothing (Textile ETP). Textile ETP is a non-profit organisation established in 2013 with the objective of promoting the competitiveness of the European textile and clothing sector and its research community through collaborative research and innovation at EU level. It counts about 200 member organisations broadly representing the entire European textile research and innovation ecosystem including industry, applied research, higher education and other stakeholders. The organisation and its members possess significant technical expertise and capabilities relevant to the objectives and implementation of the partnership.

The organisation is based in rue Belliard 40, 1040 Brussels and can be reached through info@textile-platform.eu.

More detailed information is available at www.textile-platform.eu

The main contact person is Lutz Walter, Secretary General.

1.3 Commission services (main contact)

Directorate General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW), Unit F3"Textiles, Food and Retail."

1.4 Summary (max 500 characters)

The partnership will drive sustainable innovation and support research, development and production scale up, foster novel business models and stimulate public and private investment to create economic, technological and societal value for businesses in the textile sector but also citizens and the environment. The partnership will focus on the development and demonstration of new technologies and innovative business models for competitive manufacturing. The partnership is an important building block for the circular and digital transformation of the industry and society and for a green and healthy future in Europe. The partnership will support the sector to implement the requirements on textiles stemming from the new EU legislation on sustainability and circularity.

2 Context, objectives, expected impacts

2.1 Context and problem definition

2.1.1 Context

Textiles are fundamental to our society. They include transformation of natural and manmade fibres into yarns and fabrics, production of clothing, home textiles and carpets, medical and protective textiles, and many other textile fibre-based products for a broad range of end applications. The sector also embraces textiles related to professional and public services such as hospitality, hygiene, defence, first response, transport and other municipal services. Due to its complex value chains, the textiles sector is linked to and dependent on other industrial ecosystems. It is an important supplier to other industries, including healthcare, agriculture, construction, and automotive and is closely connected to the recycling industry as well as to

the retail ecosystem, creative industries, in particular design, and others, and proximity and social economy.

Textiles and clothing are an important pillar of the EU economy. The textiles sector had a turnover of EUR 170 billion in 2023. Around 40% of that turnover is exported to third countries. 197.000 companies provide for 1.3 million jobs in the sector. Over 99% of the companies in the sector are SMEs.[1]

The EU textile and clothing industry stands out on the global market with its design, quality and heritage, know-how, but also its creativity and innovation. In 2023, the EU exported EUR 64 billion of textiles and clothing[2]. Europe is also highly recognised for its innovative brands and high-end goods.

Quality and innovation are the main drivers for the EU textiles and clothing competitiveness, as confirmed by the number of patents (1303, compared to 869 for China or 692 for the US) or industrial designs (over 200,000 for the EU; less than 50,000 for the US and 20,000 for China).

The industry is on a trajectory of growth, but addressing challenges and building on opportunities is crucial for its long-term success.

The EU is shifting to a climate-neutral and circular economy where products are designed not only to be more energy-efficient, but more durable, reusable, repairable, and recyclable. This transition is much needed in the textile industry given its significant environmental impact.

The European Green Deal[3] identified the textiles sector as a resource-intensive sector requiring specific action. Whilst essential, textiles manufacturing has an important environmental and CO2 footprint. Textiles are the fourth highest-pressure category for the use of primary raw materials and water, after food, housing and transport, and fifth for GHG emissions. Moreover, the EU textile and clothing industry has strong competition from third countries and a very high share of imports (around 73% of the clothing and household textiles consumed in Europe are produced in and imported from countries outside the EU)[4].

In this context, the focus of the EU Strategy for Sustainable and Circular Textiles[5] is the promotion of circularity, sustainability, and support for the competitiveness and innovation of the ecosystem. A whole set of new regulations foreseen in the EU Strategy for Sustainable and Circular Textiles is expected to come into force in the next years (such as Ecodesign for Sustainable Products Regulation[6], amendment of the Waste Framework Directive[7], revision of the EU Textile Labelling Regulation[8]). They will fundamentally change the way textiles are designed, manufactured, used, and disposed of at the end of their life cycle.

A European Partnership on textiles under the Horizon Europe will increase the impact of existing and on-going investments and initiatives on textiles, at different levels, and fully leverage current and future opportunities.

[1] Source: EURATEX, 2024
[2] *Idem*
[3] COM/2019/640 final
[4] https://ec.europa.eu/commission/presscorner/detail/en/qanda_22_2015
[5] COM(2022) 141 final
[6] Regulation (EU) 2024/1781 of the European Parliament and of the Council of 13 June 2024 establishing a framework for the setting of ecodesign requirements for sustainable products, amending Directive (EU) 2020/1828 and Regulation (EU) 2023/1542 and repealing Directive 2009/125/EC
[7] COM(2023) 420 final
[8] Textile labelling rules (revision) (europa.eu)

Action is needed now

There is a strong political momentum at EU level for progressing on textiles in terms of environmental, societal, and business needs. The rapidly evolving legislative framework for the European textile sector creates opportunities, but also challenges for the industry and other stakeholders who need to adopt new technologies or other sustainable practices and business models in their operations.

The European Green Deal[9] and the Circular Economy Action Plan[10], the 2021 update of the EU Industrial Strategy[11] and the EU Strategy for Sustainable and Circular Textiles[12] stress the urgency of accelerating the European clothing and textiles sector towards sustainability and circularity.

The EU Strategy for Sustainable and Circular Textiles aims to ensure that by 2030, textile products have a longer life, are recyclable, made as much as possible from recyclable material, are free of hazardous substances and are produced respecting social rights.

The Transition Pathway for the Textiles Ecosystem[13] recognises the need to build a resilient sector, based on innovation and global competitiveness, noting that the industry faces tough global competition, and that measures are needed to encourage sustainable production and consumption in Europe's internal market.

Moreover, the New European Bauhaus has identified textiles as an area of huge potential for the transformation of our economy and supports the creatives of the sector to drive change towards a sustainable, beautiful, and inclusive future.

It is expected that the whole set of new regulations linked to the EU Strategy for Sustainable and Circular Textiles to come into force in the next years will fundamentally change the way textiles are designed, manufactured, used and disposed of at the end of their life cycle. Key aspects are ecodesign requirements for sustainable and circular products, separate collection and fibre-to-fibre recycling of postconsumer waste, removal of hazardous substances from textile processes and products, reduction of emissions during textile production, requirements for transparency and traceability of textile products throughout their manufacturing value chain.

The core of the new legislative framework is the Ecodesign for Sustainable Products Regulation (ESPR) aiming to broaden the scope of the Ecodesign Directive so that it applies not only to energy-related products but to the widest possible range of products, thus promoting circularity. Textiles are one of the priority product groups for the elaboration of a sustainable policy framework that could consider durability, recyclability, repairability and recycled content the most important product aspects. In addition to product performance requirements, setting a minimum threshold below which products shall not be placed on the market, ESPR will put an increased focus on product information (e.g. Digital Product Passport, labels, information at the point of sale) which will enhance transparency and traceability of textile products throughout their manufacturing value chain all the way to the end consumer.

From 1 January 2025, it will become a legal obligation under the Waste Framework Directive[14] to separately collect municipal textile waste leading to far greater waste feedstock for which major efforts and investments will be required to maximise its value. The Commission shall

[9] COM/2019/640 final
[10] COM/2020/98 final
[11] COM/2021/350 final
[12] COM(2022) 141 final
[13] Transition pathway for the textiles ecosystem - Publications Office of the EU (europa.eu)
[14] Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives

also consider, by the end 2024, the setting of mandatory targets for preparing for re-use and recycling of textile waste.

In addition, the Safe and Sustainable by Design (SSbD) framework[15] adopted by the Commission aims to minimise substances of concern in textile processes and products and reduce emissions during textile production.

The main objective of this partnership is to join forces at all levels of the private and the public sectors together with the European Commission. In creating this partnership, the Commission expects to boost support in order to leverage important private investment in the next decade. Acting now to create this partnership will build on current strengths and opportunities and a regulatory environment that can stimulate both uptake, innovation, and growth. Without a functioning collaborative innovation ecosystem, these rapid changes may lead to further fragmentation of the research landscape. The aim is to connect the communities, guide investments towards EU policy and strategy, and stimulate a focused approach to innovation and industrial development that connects and builds on strengths and current opportunities for the sector.

2.1.2 Problems, systematic bottlenecks and/or market failures

Green and digital transition

Textile production and consumption cause significant environmental, climate and social impacts by using resources, such as water, land, and chemicals, and emitting greenhouse gases (GHG) and pollutants.

Fast fashion impacts the environment considerably. European consumption of textiles has the fourth highest impact on the environment and fifth highest on climate change (after food, housing, and mobility). The EU produces approximately 24 kg of post-consumer textile waste per capita[16]. Data on textiles recycling at global level estimates that less than 1% of materials used to produce clothing is recycled into new clothing. [17]

Furthermore, a set of challenges stem from the industry's deep integration in the global value chain, as one of the most globalised value chains overall. The strong exposure to international trade and the long and complex global value chain of textiles inevitably increases the industry's dependence on imports for domestic production and consumption. The very high share of imports makes it important to ensure fair competition and compliance in a well-functioning internal market.

The industry has also undergone a significant digital transformation in recent years, driven by increasing consumer demand for personalised products, integrating Internet of Things applications in textile manufacturing, automated production and logistic processes that are significant for the textile production where human workforce will remain crucial.

Policy and regulatory complexity

The European textile industry must implement sustainability and circularity rules in response to ambitious market and regulatory requirements. Furthermore, the industry must make significant technological, financial, and human efforts to align business operations with sustainable practices to meet the increasing end-market demand while operating within sustainable, environmental limits.

[15] C(2022) 8854 final

[16] JRC (2023) Techno-scientific assessment of the management options for used and waste textiles in the European Union

[17] The impact of textile production and waste on the environment (infographics) | Topics | European Parliament (europa.eu)

Fragmentation of the Europe's research landscape

The textile and clothing industry needs a more coordinated approach to join forces between research, development, and innovation (R&D&I) and the industrial ecosystem, to avoid fragmentation. By working together, industry can develop more innovative and sustainable products and improve the value chain to enhance its competitiveness and growth.

Innovation capacities limited by a lack of financial resources and strategic direction

Most companies in the sector are SMEs, and as a result, research and development (R&D) and innovation activities are often limited by scarce resources and a lack of strategic direction. The partnership will provide dedicated EU funding on textiles under Horizon Europe and facilitate the design of a common research framework that is agreed and committed to by the respective actors. It will give more strategic and targeted orientation in terms of R&D&I to companies in the sector.

Lack of skills and know-how

Maintaining the industry's success also requires a qualified and skilled workforce, which is a vital asset for the competitiveness and growth of companies at the regional, national, and European levels. Therefore, the industry must provide the necessary training and qualifications to attract younger workers and adapt education schemes to the sector's needs.

Under the EU Pact for skills for the Textile ecosystem[18], the Commission together with the lead organisation on textiles, the European Apparel and Textile Confederation (EURATEX)[19], supported the establishment of a large-scale skills partnership to promote the up-skilling and the transfer of green and digital skills.

2.1.3 Previous and related Framework Programme intervention

There is to date no dedicated European Partnership in the area of textiles. The partnership will not directly build on other already active partnerships but will have links and create close synergies with other partnerships (*see section 2.2.4*).

Moreover, the partnership will build on previous and currently planned textile-related investments under Horizon Europe.

The Horizon Europe work programme 2023-2024 will partly support design for recyclability in textiles and garments[20]. However, this will continue to be an area which will need further scientific investigation and innovative technology, as the industry is currently lacking scalable and efficient circular solutions.

Improving the quality of recycled fibres has been partly addressed under the work programme 2021-2022[21] and further support is planned under the work programmes 2023-2024[22]. Nevertheless, the development of scalable innovative processes remains relevant particularly in light of recent legislative initiatives, as the EU will aim at increasing the use of recycled fibres. This requires specific investments in innovative textile manufacturing and industrial practices. Moreover, support for the development and set up of partnerships and collaboration of relevant actors in the value chains (e.g. between collectors, sorters, and processors of textile

[18] https://pact-for-skills.ec.europa.eu/about/industrial-ecosystems-and-partnerships/textiles_en
[19] https://euratex.eu/
[20] HORIZON-CL6-2024-CIRCBIOo-02-1-two-stage: Circular solutions for textile value chains through innovative sorting, recycling, and design for recycling (RIA)
[21] HORIZON-CL6-2021-CIRCBIO-01-04: Increasing the circularity in textiles, plastics and/or electronics value chain
[22] HORIZON-CL6-2024-CIRCBIO-01-2: Circular solutions for textile value chains based on extended producer responsibility (IA)

waste into secondary raw materials, advanced technology providers, textile manufacturing companies and end-market facing companies such as retailers) remains highly relevant.

In addition, pursuing breakthrough innovations and completely new approaches in the use phase and end of life of textiles focused on boosting capacities for reuse and repair are further needed.

Where relevant, the partnership will seek links with and capitalize on the results of EU funded projects under Cluster 6 of Horizon Europe 'Food, Bioeconomy, Natural Resources, Agriculture and Environment'.[23] The Circular Biobased Europe Joint Undertaking will continue to support investment in bioeconomy of textiles in the next 2-3 years, particularly in relation to textile fibres and bio-based solutions to replace hazardous conventional chemicals for textiles production.

2.1.4 Key R&I gaps and needs

The sustainability and digital transition of the European textile industry is a multifaceted, multidecade systemic transformation that needs to be built on a sound scientific knowledge base and that requires significant advances in scientific and practical knowledge and enhanced technological capacities across a broad spectrum of sciences, processes, manufacturing practices, information technology, social and behavioural sciences. As of today, many elements of this knowledge and technology base start to emerge, but they are not yet firmly established, not systemically connected and often not yet ready for industry practice or broad market adoption. The years until 2030 will be decisive to build the necessary knowledge base and technology infrastructure to be able to fully implement sustainable and circular business practices in textiles at large scale and to reap the benefits in the years thereafter to ensure the textile sector's contribution to the broader goals of the EU Green Deal.[24]

Technology can actively support the transition towards a more circular model. The assessment of digital, circular technologies and solutions in the sector shows different level of maturity. Many of the technologies (such as complex post-consumer waste sorting, separation and chemical recycling, next generation fibres from bio-based feedstock, technologies for data management for digital authentication/passport for textile products/materials) are at medium Technology Readiness Level (TRL). Various digital and circular technologies (such as mechanical recycling technologies and replacement of raw materials with recycled content, digital manufacturing technologies such as digital printing or finishing) demonstrate higher TRLs. Some other key technologies (such as robotics and automated textile material handling, plastic micro-fibre release reduction, technologies for detection and tracing of hazardous chemicals in textile articles) are at relatively low TRL and need further experimentation. Artificial intelligence (AI) technologies are at the lowest level (TRL1-3) of readiness.[25]

The challenge is to speed up innovation projects to reach the market in the upcoming years. Dissemination and replication can be a key lever for this acceleration. Funding of infrastructure investment is also important and should complement R&I investments in innovative technologies for the industry.

The partnership aims to address the knowledge gaps and research needs for the green transition of the sector defined by ECOSYSTEX[26] an expert community composed of EU funded

[23] HORIZON-CL6-2021-ZEROPOLLUTION-01-06: Increasing the environmental performance of industrial processes in bio-based sectors: construction, woodworking, textiles, pulp and paper and bio-chemicals

[24] Textile ETP - Identifying Research Gaps and Needs for the Green Transition of the European Textile Ecosystem: Insights from the ECOSYSTEX Community (textile-platform.eu)

[25] ERA industrial technology roadmap for circular technologies and business models in the textile, construction and energy-intensive industries - Publications Office of the EU (europa.eu)

[26] Textile ETP - ECOSYSTEX (textile-platform.eu)

research and innovation projects related to textile sustainability. Priority will be given to addressing R&I areas that are key to support the EU legislative requirements on sustainability and circularity in textiles. To this aim, complementarity will be ensured with other relevant initiatives under Horizon Europe.

The key R&I gaps and needs that could be addressed by the partnership can be grouped across the following four domains:

1. Ecodesign and sustainable manufacturing technologies

A very significant part (up to 80%) of a product's environmental impact is determined at the design phase[27]. It is of utmost importance that textiles are intentionally designed for durability, material recovery, value retention, and meaningful next use. It is also vital to limit chemicals, dyes, and finishes that are potentially hazardous for human health or the environment or are not compatible with recycling.

Textile and fashion designers and product developers often lack a deeper understanding of materials, production processes, and the realities of the manufacturing supply chain. Accessible material data, relevant knowledge, and adequate tools could massively improve decision making at the design stage and lower the cost and impact of poor design choices. Better design strategies that optimise for desirable product characteristics such as longevity, repairability, recyclability, or biodegradability and tools that help implement these strategies in the daily practice of the designer and product developer must be developed, user-tested, widely disseminated, and trained.

Another important aspect is the digitisation of the design process that must be further established. The ERA Industrial technology roadmap for circular technologies and business models (ERA roadmap) indicates that for textiles technologies for supporting design for sustainability demonstrates higher TRL and hence need actions to increase their maturity and test them, as well as market pull.

According to the ERA roadmap, design for durability, but also design for disassembly, are seen as currently presenting many opportunities.

Since a significant impact of a textile product in terms of its CO2 emissions or water footprint is related to the production phase, more energy and water-efficient manufacturing technologies must be developed and demonstrated in industrial practice. Process electrification, intensification, and integration such as closed-loop systems, energy recovery, smart resource measurement, and optimisation technologies hold great potential for impact reduction of textile production. Online quality control systems for fabric inspection, error detection, machine self-correction, or predictive maintenance can significantly reduce production waste generation which remains a problem across all manufacturing stages.

2. Circular, biobased textiles

Today less than 1% of post-consumer textile waste is fibre-to-fibre recycled globally, with most waste volumes being downcycled into materials of lower value, incinerated for energy recovery, or landfilled. For establishing circular textiles, fibre-to-fibre recycling technologies need to be optimised (but also the related supporting activities like collection, sorting and separation, and cleaning and pretreatment), and even before that, efforts are needed during the actual lifetime to better understand how textile product and material use can be intensified and extended.

[27] A new Circular Economy Action Plan For a cleaner and more competitive Europe COM/2020/98 final

According to the ERA roadmap, technologies that separate fibre blends as part of the recycling process are overall still at the lowest TRL 1-3, and technologies for chemical recycling are at medium TRL and need more innovative actions as technology validation.

Enzymatic recycling methods appear to be an area needing additional research. For most materials, enzymatic recycling is only available at low TRL, fundamental ways are needed to make the process more efficient and to speed it up.

Technical (technological developments via e.g. automatization or design for repair), organisational (via e.g. innovative business models to prevent overproduction) and behavioural (consumer behaviour) research into life-intensifying and life-extending strategies for textile products to combat overconsumption (such as second and/or shared use, care and maintenance, repairing, or refurbishing) need further development.

In addition, there are important remaining challenges in view of the switch to biobased textiles particularly in relation to feedstock, fibres, additives, finishing and coating, and functional and economic performance. The partnership will seek links with and capitalize on the results of EU funded projects under Cluster 6 of Horizon Europe 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' that will continue to support investment in bioeconomy of textiles, particularly in relation to textile fibres and bio-based solutions to replace hazardous conventional chemicals for textiles production.

3. Textile digitalisation and sustainable supply chain

Digital transformation is a large topic in itself. The main angle to assess it from in the context of the partnership is how digitalisation can help the sector to become more circular and resource efficient. Research needs exist at various levels and at the various steps in the value chain.

Traceability is very important and further efforts are needed to set up schemes and systems for materials and products transparency. Conventional electronic labels/tags connected with traceability IT platforms are implemented to a certain extent, but other technologies such as chemical or biological material/product markers should be better studied. These innovative technologies are particularly important in the context of establishing the Digital Product Passport. According to the ERA roadmap, the maturity level of a digital authentication/passport for textile products/materials is claimed to be at TRL 4-6 with still important development needs.

Digitalisation and smart automation of garment manufacture, finishing, repair, and refurbish operations in micro factories can enable greater on-demand production and lower the cost of repair and refurbishing to extend product lifetimes and boost reuse models.

In addition, more efforts are needed to scale up AI, particularly promising for recycling and design. AI applications used for optimization and analysis are only at TRL 1-3.

4. Smart and high-tech performance textiles

The fabrics of smart textiles enable digital components to be embedded. The fabrics can communicate, conduct energy and transform e.g. change color for athletic and military applications.

Developing smart high-performance materials, such as textiles with micro-and nano-electronic components and systems, hybrid materials, and textile-based implants offers significant potential for growth in new markets. Fibre and textile material solutions for energy-efficient buildings, lighter-weight vehicles, energy generation and storage systems, sustainable agriculture and fishing, etc. can lower the carbon footprint of many other industries and sectors of consumption. Strengthening R&I through public support should be seen as a high priority

to maintain Europe's lead in the advanced and technical fibre and textile industry. The industry must continue to adapt and innovate to meet the evolving needs of its high added-value end uses.[28]

2.2 Common vision, objectives and expected impacts

2.2.1 General objectives

1. **Advancing Europe's open strategic autonomy in digital technologies (technological dimension)**

The recent advances in technologies, particularly digital, circular technologies, pave the way for further economic, environmental, and societal value. Europe has a unique chance to become global pioneer in textile upcycling and recycling processes and innovative circular and sustainable production technologies, and ultimately become the exporter of the know-how and of sorting and recycling machinery. Digitally connected production networks and microfactories close to the point of consumption can enable on-demand production which reduces overproduction and makes Europe less dependent on imports. It also facilitates tracking and tracing of materials, products and their resource consumption and impacts through a more regional supply chain.

2. **Strengthening the resilience and competitiveness of the sector globally (market dimension)**

Europe has always been home of the textiles and clothing industry. Today it is associated with many strong brands and high-quality fashion and technical products. However, as most of the industrial ecosystems, the textiles ecosystem needs to transform to become more resilient.

The partnership presents an opportunity to improve the operation of the European textile industry and to translate Europe's core strength into a global market advantage. The partnership will focus on strengthening the transfer of research into the European market and developing and extending Europe's skill base and know-how. Overall, the partnership will work towards ensuring non-dependence from other international players and a European-focused approach to the development and industrial scale-up of textiles.

2.2.2 Specific objectives

To achieve the general objectives, 5 specific objectives and 9 operational objectives have been identified, in line with the 2017 JRC foresight report on textiles and clothing industries. They correspond to the problems and challenges, as well as the R&I gaps and needs discussed in Sections 2.1.3. and 2.1.5.

[28] STEP2030-Manifesto_final_evaluated-10.07.23.pdf (euratex.eu)

General Objectives	Specific Objectives	Operational Objectives
		Technological dimension
GO1 Advancing Europe's open strategic autonomy in digital technologies	**SO1** Enable digital and technological transformation of the textile ecosystem as a move towards circular, sustainable and resource-efficient production methods and processes	**OO1** Accelerate adoption of digital solutions for implementation of textile value chains which are fully traceable, human-centric and enable creativity **OO2** Accelerate adoption of technologies and business models for effective circularity in regional textile value chains including repair, remanufacturing and recycling operations **OO3** Accelerate adoption of processes and technologies for resource-efficient, net-zero textile production
	SO2 Strengthen scientific knowledge and technological capabilities in the sector	**OO4** Support initiatives that foster digital and smart specialization skills building in the sector **OO5** Foster new type of jobs in the sector
		Market dimension
GO2 Strengthen the resilience and competitiveness of the sector globally	**SO3** Build a strong and effective European innovation textiles ecosystem	**OO6** Facilitate collaborative innovations among actors across the full product life cycle (from creation, production, distribution, use and end-of-life) **OO7** Promote collaborative working with other R&I communities at European level and relevant European Partnerships or initiatives under Horizon Europe
	SO4 Foster market enabler actions	**OO8** Support initiatives that engage and stimulate sector SMEs and Start-ups
	SO5 Foster regional development	**OO9** Support initiatives that engage and stimulate regions

2.2.3 Expected impacts

The partnership will work towards achieving the following impacts:

- **Knowledge & innovation capacity**: development of innovative, sustainable, and techno-economically feasible production processes; development of textile sorting and recycling technologies at commercial scale; development of resource efficient textile processing technologies, development of new business models; establishment of more sustainable manufacturing processes with lower CO2 and water footprint as well as minimized pollution and waste generation.
- **Digital transformation**: development and industry adoption of innovative sector specific digital solutions for greater manufacturing and supply chain efficiency and competitiveness; enabling SMEs in using digital technologies to respond with more agility to regulatory and market requirements related to sustainability and circularity, including mapping of consumers' needs to prevent overproduction (e.g. Digital Product Passport, use

of digital technologies for stocks monitoring, opening up access to new business/revenue models, reaching consumers and raising their awareness about more sustainable textile consumption etc.).

- **Education and human capital**: job creation potential for sorting and recycling of textiles waste as well as digitally enabled design and manufacturing; new educational processes and tools responding to digital/green skills; digital/green reskilling and upskilling of the ecosystem; more attractive sector to skilled and young entrepreneurs and employees, new business models, trainings on eco-design, consumer engagement on slow fashion, modular more sustainable home furniture, and overproduction reduction.
- **Networking and collaboration**: increased social innovation in the sector by creating new capabilities, connections or relations between relevant actors along the textile value chain (manufacturers, retailers, designers, sorters, collectors, reuse actors, recyclers but also research institutions, innovators, social economy actors, and government or local government organizations) and facilitating collaborative projects/collaborative innovations; promote collaborative working with other horizontal and vertical communities/networks/clusters and partnerships.

These impacts are in line and will contribute to the impact of Cluster 4 'Achieving global leadership in climate-neutral, circular and digitised industrial and digital value chains' to which the partnership is primarily expected to contribute, as per the Horizon Europe Strategic Plan 2025-2027[29].

2.2.4 Collaborative opportunities

The partnership will explore and develop strategic collaboration and synergies with other European partnerships and other parts of Horizon Europe beyond Cluster 4 to share knowledge and resources for greater impact. The list below is an indicative list of potential Horizon Europe clusters, related European partnerships and European research initiatives with which the Textile Partnership will explore collaboration and synergy opportunities.

Horizon Europe Cluster 2 "Culture, Creativity and Inclusive Societies": exploiting design-based and other creative approaches to sustainability with a special focus on fashion and interior textiles, also focused on traditional and artisanal approaches to local and regional textile material valorisation, product creation, responsible consumption, circularity and cultural heritage preservation.

The New European Bauhaus initiative: exploring the application of textile material science and engineering, design and aesthetics to multidisciplinary challenges of our daily lives and living spaces to create sustainable, beautiful and inclusive societal solutions.

Horizon Europe Cluster 4 "Digital, Industry & Space"

- **Made in Europe Partnership:** exploring multisectoral approaches to advanced, digitised and networked manufacturing and innovative end-of-life concepts such as repair, disassembly or remanufacturing**.**
- **Processes4Planet Partnership:** exploring multidisciplinary and multisectoral approaches to material circularity and process efficiency as well as the application of the SSbD principle across different material sectors**.**
- **Innovative Materials for Europe Partnership (under preparation):** exploring multimaterial combinations and multisectoral application potential for smart and

[29] European Commission, Directorate-General for Research and Innovation, *Horizon Europe strategic plan 2025-2027*, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2777/092911

highly engineered fibre and textile-based materials and their advanced processing, manufacturing, system integration and circularity challenges.

- **AI-Data-Robotics Partnership:** exploiting artificial intelligence, machine learning and big data processing capabilities for sustainable optimisation or radical innovation of complex textile material, product design, manufacturing or supply chain challenges. Exploring application of robotic and smart automation advances in complex textile material handling, assembly, repair, disassembly and recycling processes.
- **Virtual Worlds**: There are some ways the textiles industry could use the metaverse, such as digital fashion, virtual showrooms or innovative marketing and promotion.

Horizon Europe Cluster 6 "Food, Bioeconomy, Natural Resources, Agriculture and Environment": exploring contributions of more sustainable fibre production and textile processing and greater circularity to a more responsible use of natural resources and lower impact on soils, fresh and marine water. Focus areas are natural and biobased fibres and feedstocks, GHG emission and water pollution prevention and reduction, textile-to-textile recycling and mitigation of microfibre release from textile products.

Circular and Bio-based Europe Joint Undertaking: exploring opportunities for utilising sustainable biobased resources for textile fibres or processing and functionalisation chemicals as well as circular economy approaches favoring biocatalytic processes or safe biodegradation**.**

The European Institute of Innovation and Technology (EIT):

- **EIT Climate-KIC**: exploring innovative sustainable textile production and consumption approaches at local and regional community level to prevent, reduce and mitigate the textile and clothing sector's contribution to anthropogenic global warming and other global resource challenges.
- **EIT Digital**: mobilisation of digital technologies and entrepreneurial approaches to solving textile innovation and sustainability challenges, establishing new business models and rapidly diffusing and scaling digitally enabled sustainable textile products and services.
- **EIT Manufacturing**: exploring innovative approaches to advanced, digitised and networked manufacturing and rapid diffusion of new manufacturing technologies with a focus on local and regional networks and supply chains enabling ondemand production and closed-loop material flows.
- **EIT Cultural and Creative Sectors and Industries KIC**: exploring design-based and other creative approaches to sustainability with a special focus on fashion and interior textiles.[30]

The partnership would benefit from existing fora in the textile stakeholder ecosystem like the **ECOSYSTEX Community of Practice,** the **ReHubs initiative** and the **EU Pact for Skills for the Textiles ecosystem (TCLF Skills Alliance)**.

The partnership will not directly build but is closely linked to previous calls launched under Horizon Europe in the domain of textiles, which were funded through Clusters 4 and Cluster 6, as discussed in Section 2.1.4.

The envisaged collaboration will take many forms such as common meetings and conferences, joint dissemination of results, scoping of joint topics of interest and possibly joint calls, research and innovation policy papers, contributions to standards etc. Moreover, a close thematic coordination will be ensured during the Horizon Europe work programmes design phase.

[30] Textile ETP - Textile ETP unveils the Strategic Research and Innovation Agenda for "Textiles of the Future" European Partnership (textile-platform.eu)

2.2.5 Necessary investments

To stay competitive in the global market, the textile industry's efforts regarding innovative circular and digital technologies need to be supported by substantive investments in the coming years, as pointed out by the ERA Roadmap.

As described throughout the proposal, the partnership is instrumental in providing dedicated funding under Horizon Europe's Cluster 4 'Digital, Industry and Space' to support the sector to implement the requirements on textiles stemming from the new EU legislation on sustainability and circularity. The ecosystem is mainly composed of SMEs, which represent 99.8% of the companies active in the industry, hence, unlike other partnerships, main outcomes and impact are expected on SMEs. The partnership can thus be seen as a 'test case' under Horizon Europe whereby high EU regulatory ambitions are matched with meaningful EU support to investment. This approach highlights the key role that publicly supported collaborative R&I can play in an industry sector dominated by SMEs with limited means and even less in-house capacities to drive systemic change.

More specifically, the partnership's ambition is to target actions focused on a realistic number of thematic priorities that will have a clear added value in terms of supporting the sector to comply with the new EU legislation changing the way textile products are designed, manufactured, used, and disposed of at the end of their life cycle, in synergy with other possible Horizon Europe actions (as described throughout the proposal).

The ambition of the partnership should also be seen in relation to its implementation period and the launch of the calls for proposals that will implement it (from 2025 until end of 2027). A possible continuation of a partnership on textiles under the next multiannual financial framework may be envisaged, depending also on the implementation and the results of the currently proposed partnership, budget availability and future reforms of the partnerships instrument and landscape.

In addition to the funding related to contributions and activities of the private partners, it is expected that the partnership will leverage private funding outside the Strategic Research and Innovation Agenda (SRIA), including other investments that could be mobilised to exploit or scale-up the partnership's results.

2.2.6 Phasing-out strategy

The partnership will design and implement a regular project portfolio monitoring process. The main objective of this process will be to track the progress made towards the overall objectives of the partnership. This process will be detailed in the Memorandum of Understanding (MoU).

After the end of funding under Horizon Europe and the completion of the projects from the last calls, the partnership will in principle cease to exist, unless by that time some form of continuation has been agreed.

The partners of the partnership are committed to its success. The partnership is instrumental in supporting the sector to implement the requirements on textiles stemming from the new EU legislation on sustainability and circularity. Therefore, a phasing-out or an exit strategy should normally be considered when the transition to a more sustainable and digital industry is well in progress and can be sustained in time through market uptake. Even if, currently, the partners of the partnership believe that it is the right vehicle, they remain fully available to examine possible other instruments at a later stage and the related transfer of knowledge and information towards other potential future instruments. As of today, the partners insist on the added value of the partnership and on the importance of a long-term commitment of all organisations towards the defined common strategic objectives.

In the absence of renewal, appropriate measures ensuring the orderly phasing-out of Horizon Europe funding will be agreed between the partners ex-ante, without prejudice to private investment and on-going projects.

2.2.7 Process for developing a SRIA/Roadmap

In a collaborative exercise involving several hundred experts representing the entire European textile ecosystem, Textile ETP has developed a SRIA[31] validated by their members. The specific scope, objectives and expected impacts of the call topics to be launched under the partnership will be inspired by the priorities identified in the SRIA.

Textile ETP and their members have delivered over the last 10 years two strategic research and innovation agenda for the sector in 2016 and 2022[32], the latter of which forms the basis for key research and innovation themes of the partnership. Other important inputs include the report 'Research Gaps and Needs for a Sustainable European Textile Ecosystem'[33] published by the ECOSYSTEX Community in July 2023.

An initial scoping document, based on the Manifesto[34] adopted by the promoters of the partnership in September 2023, has been shared with all Textile ETP members for a first input round during April 2024. A first comprehensive draft of the SRIA was presented at the public annual conference of the Textile ETP on 14 May 2024 and discussed by stakeholders in interactive workshop sessions. Based on inputs provided by stakeholders the final SRIA has been delivered in July 2024.

2.3 Necessity for a European Partnership

The collaborations built with stakeholders, made possible by the partnership, will go beyond that needed to address the calls for proposals and funded actions developed through the SRIA. The partnership should create wider cooperation between researchers and innovators and engages with external stakeholders around the broader impact of textiles in the economy, societally and environmentally.

2.3.1 Achieving directionality and additionality

A partnership approach on textiles at EU level is more effective in achieving the aforementioned objectives than traditional Framework Programme calls primarily due to the following arguments:

- The specificity and complexity of the challenges that need to be addressed require knowledge sharing and long-term, concerted actions from a range of stakeholders across the textiles value chain. The partnership engages with industry (manufacturers, producers), including creatives and designers, actors along the recycling value chain (sorters, collectors, reuse actors, recyclers), and research (including relevant horizontal innovators, such as technology innovators) to gain investment in the strategy and its collective actions in order to meet well-defined mutually beneficial objectives.
- A dedicated European Partnership at EU level for the sector facilitates the design of a more targeted research framework that is agreed and committed to by the respective actors. It will give more strategic orientation in terms of R&D&I to companies in the sector (majority SMEs). The central vision of the partnership is the development and demonstration of new technologies and innovative business models for the sector. The resulting co-financed

[31] Textile ETP - Textile ETP unveils the Strategic Research and Innovation Agenda for "Textiles of the Future" European Partnership (textile-platform.eu)
[32] https://textile-platform.eu/what-we-do
[33] https://textile-platform.eu/ecosystex
[34] https://euratex.eu/wp-content/uploads/STEP2030-Manifesto_final_evaluated-10.07.23.pdf

collaborative projects will involve industry, with a focus on SMEs, research and technology organisations, universities and other ecosystem stakeholders. Research and innovation activities will primarily focus on higher Technology Readiness Levels to ensure rapid deployment of the developed solutions at industrial scale by European companies of the sector and thus supporting the sector to implement the requirements on textiles stemming from the new EU legislation on sustainability and circularity.

- The partnership ensures that industry both drives and invests in an R&I agenda that delivers identifiable added value from R&I. The Partnership will identify the state of the art while identifying gaps and opportunities to advance textiles in Europe and will use this ongoing analysis to inform and direct strategy and policy.
- It sets up a more strategic, coherent, and impact-oriented approach, contributing to the delivery of EU priorities on sustainability and circularity in textiles, in line with the new legislative provisions impacting textiles, and, where relevant, creating synergies with other European Partnerships and allowing the possibility for spillovers.
- It strengthens ownership by industry, achieves scale by aggregating demand by researchers, designers, and other users, and pools existing capacities and expertise at all levels. Private partners will be committed to support the partnership's objectives with their own resources as specified in the MoU to be agreed.
- It can incentivise the commitment of innovation actors for a longer time, which may facilitate the continuation of activities once the EU earmarked financial support is phased out.
- It allows planning and synchronising the different calls and activities towards the achievement of the overall goals of the partnership.

The necessity to set up a European Partnership on textiles under Horizon Europe for the sustainable, circular, and digital transition of the sector has been underlined by stakeholders during the co-creation of the Transition Pathway for the Textiles Ecosystem. Aligning the EU R&I agenda on textiles is particularly important in view of the requirements stemming from the new EU legislation changing the way textiles are designed, manufactured, used, and disposed of at the end of their life cycle. These requirements will have an impact on industry but also on Member States. In that respect the timeline is very important.

The partnership addresses the key operational objectives of Horizon Europe Cluster 4 through its proposed actions. It will engage with SMEs and start-ups, reinforce the links between R&I and between European and national or regional actions, it will strengthen basic research and promote cooperation at regional level or between regions/communities.

2.3.2 Member States collaboration

The partnership will seek engagement with the Member States and Associated Countries to Horizon Europe (Associated Countries) on two levels, representing a strategic and operational approach.

At a strategic level, the calls that will implement the partnership will be co-created with and approved by Member States and Associated Countries represented in the competent Strategic Programme Committee in charge of implementing Cluster "Digital, Industry and Space" under Horizon Europe (Programme Committee). Moreover, progress and achievements of the partnership may be discussed in regular and possibly dedicated workshops organised with the Programme Committee.

At a more operational level, the partnership could create local "grassroots" engagement with relevant Member States through appointed Ambassadors mainly taken from Textile ETP

membership. These local “experts” would be expected to build and nurture contact with national and regional bodies, network with them and bring into the partnership contacts and information around national/regional strategy, programmes and activities.

2.4 Partner composition and target group

The SME-driven textile sector needs a more coordinated approach to join forces between R&D&I and the supply chain, to avoid fragmentation. By working together, industry can develop more innovative and sustainable products and improve the value chain to enhance its competitiveness and growth. The partnership will involve various target groups and stakeholders, each playing a crucial role in advancing the objectives of the partnership.

Industry stakeholders: This group includes textile manufacturers, apparel companies, retailers, and other businesses involved in providing technologies, materials and services to the textile value chain including those involved in the end-of-life stages of textiles such as waste collectors, sorters, and recyclers. These stakeholders are crucial for driving innovation, implementing new technologies, and adopting sustainable practices within the industry. They would benefit from the partnership by accessing funding, expertise, and collaborative opportunities to enhance their competitiveness and sustainability.

Research organisations and academia: Due to the industry structure dominated by SMEs with often very limited internal human and financial resources to invest significantly into research or higher-risk innovation activities, public funding in collaborative programmes involving Research and Technology Organisations (RTOs) and academia is crucial. Universities, research institutions, and academic researchers are therefore important partners in the partnership. They contribute expertise in chemicals, biotechnology and textile materials science, advanced processing, manufacturing and recycling technologies, circular economy principles, and other relevant fields. Their research outputs can help drive innovation and provide solutions to industry challenges, benefiting both businesses and society.

Public authorities and policymakers: Government agencies, regulatory bodies, and policymakers play a vital role in shaping the regulatory environment and providing support for R&I in the textile sector. They are key stakeholders in the partnership, as they can provide funding, policy guidance, and regulatory frameworks to support the development and implementation of innovative solutions in areas such as sustainability, circularity, and competitiveness. Building contacts with national and regional bodies may be particularly important in terms of information and synergies around national/regional strategies, programmes, and activities.

Civil society and NGOs: Non-governmental organisations (NGOs), consumer groups, and civil society organizations are important stakeholders in promoting sustainability, ethical practices, and consumer awareness in the textile industry. They can contribute valuable insights, advocacy efforts, and consumer engagement initiatives to the partnership, ensuring that social and environmental considerations are integrated into the R&I agenda.

International partners and collaborators: Collaboration with international partners, including industry associations, research networks, and international organisations, can enhance the impact and reach of the partnership. By leveraging global expertise, best practices, and market insights, the partnership can address global challenges such as climate change, resource scarcity, and supply chain resilience more effectively.

End-users and consumers: Ultimately, the target group of the partnership includes end-users and consumers of textile products. Their preferences, behaviors, and demands drive market trends and influence industry practices. Engaging with consumers through market research, awareness campaigns, and education initiatives can help ensure that the innovations developed

through the partnership meet their needs and expectations while contributing to sustainability and societal well-being.

Overall, the partnership aims to engage a diverse range of target groups and stakeholders to foster collaboration, drive innovation, and address the complex challenges facing the textile industry in Europe. By working together, these stakeholders can create a more sustainable, competitive, and resilient textile sector that benefits businesses, society, and the environment.

At the time of submitting this proposal document, Textile ETP has received expressions of support for the partnership from over 250 organisations from industry, applied research, higher education and civil society organisations from across Europe, including their members and other non-affiliated stakeholder organisations.

3 Planned Implementation

3.1 Activities

The objectives of the partnership and the expected impacts will be achieved through a combination of activities and instruments.

3.1.1 Co-programming for R&I implementation

The SRIA will support the achievement of the strategic objectives of the partnership as defined in the proposal. SRIA priority areas are aligned with the major challenges of the ongoing green and digital transition of the textile sector as defined in section 2.1.4, addressing the needs arising from upcoming EU regulation and global market trends while making use of key enabling technologies.

The following three main priority areas and 13 strategic topics were identified and validated in the recently developed SRIA:

- Priority area I: Sustainable Materials & Clean Processes
    - Strategic Topic 1: Sustainable bio-based feedstock
    - Strategic Topic 2: Sustainable fibres
    - Strategic Topic 3: Sustainable textile chemistry
    - Strategic Topic 4: Resource efficient processes
    - Strategic Topic 5: Efficient end-of-life sorting, separation & recycling
- Priority area II: Digital Supply Chains & New Business Models
    - Strategic Topic 6: Digitalisation of the textile value chain
    - Strategic Topic 7: Sustainability & Circular Data Management
    - Strategic Topic 8: Design for sustainability & circularity
    - Strategic Topic 9: Circular business models & value - added customer and end - user services
- Priority area III: Advanced Manufacturing & High - performance Textiles .
    - Strategic Topic 10: Automated and AI -supported smart manufacturing
    - Strategic Topic 11: On demand digital and networked manufacturing
    - Strategic Topic 12: Safe & sustainable materials for technical applications
    - Strategic Topic 13: (Multi)functional materials for technical applications.

Specific call topics under the partnership are expected to be included in the Horizon Europe work programmes of 2025 and 2026- 2027. These call topics will address several of the identified strategic topics described in this SRIA and will be endorsed by the Partnership

Board. They will focus on applied research above TRL 5, demonstration of innovative technologies in industrial environments and active dissemination of results in view of rapid adoption by innovative SMEs and start-ups from the European textile ecosystem.

Cascade funding instruments

It is envisaged to use cascade funding instruments (in the form of third-party financial support) to directly engage a large number of textile SMEs in rapid small-scale innovations and pilot testing actions or experimentation and diffusion of novel and emerging technologies. This could be designed to complement existing funding opportunities for demonstration, technology transfer, education and training currently available to textiles actors particularly under Made in Europe Partnership, but also LIFE, Digital Europe, and ERASMUS programmes. Cascade funding projects offer reduced administrative burdens, shorter time-to-grant, and facilitated lump-sum mechanisms, that are particularly beneficial for companies in the textile industry (majority SMEs), as they are tailored towards the needs of small businesses.

As circular operations require collaboration with new value chain partners, the funding will also support larger scale collaborative R&I actions (between fashion and textile supply chain including designers, manufacturers, technology providers, retailers, reuse actors, collectors, sorters, recyclers but also research institutions, social economy actors, and government or local government organisations). The funded projects could focus, for example, on holistic approaches to minimising textile waste and maximising the reuse and recycling potential of all pre- and post-consumer waste streams from multiple companies/organisations across several market segment of the supply chain, sector or region, including public and professional services.

3.1.2 Transversal activities supporting impact

Engagement and collaboration

Activities are also envisaged to develop the community and ecosystem of the partnership. Such actions may be partly or completely independent of the work programme.

The partnership will engage with a wide and vibrant community that teams up industry, RTOs, academia, research centres, public authorities (EU, national, regional), NGOs, other partnerships and initiatives, including industry expert networks or communities of practice (e.g. ECOSYSTEX) as well as funding and financing bodies. Dissemination activities, workshops, dialogue tables, forums and other types of interactive events could be regularly organised in order to share and build knowledge, trigger discussions, get feedback, build collaborations and facilitate cross-fertilisation of results that can boost the delivery of expected impacts. Interactive activities such as project pitches, demo activities, or even an innovation award could be planned, as well as side events organized in collaboration with the European Commission (e.g. during R&I days, or Industry Days), events back-to-back with larger industrial fairs or encounters with local/national representatives in different EU countries using existing local networks or industry national associations.

In addition, industrial members might provide sponsorship for larger scale public events or provide access to testing facilities from their own assets. These actions will be mainly member-led and use the partnership as a launch pad. They will depend on support from members and will align to their needs and scale. These actions will be built up over the lifetime of the partnership with the aim of widening the reach of the partnership.

Social innovation: skills, new job profiles and gender balance

The lack of skilled workers is among the most critical issues for the green and digital transition of the sector. The impact of the developments to take place in the industry following the

proposed legislative initiatives announced in the EU Textiles Strategy is enlarging the abilities needed to master new equipment and techniques to drive innovation in the sector.

The partnership's calls will consider skills and jobs as a transversal aspect to be worked by all the projects, in alignment with the EU Skills Agenda and the EU Pact for Skills for the Textiles ecosystem. The focus will be on skills and jobs for the future, including digital and gender aspects. The partnership will pursue the transfer of the projects' findings into actionable input that policy makers (EU, national and regional), academia, and other stakeholders can use. To this end, the partnership will ensure close collaborations with the current projects on skills in textiles funded through ERASMUS+ and the Single Market Programme – SME Pillar.

Dissemination and communication

In the context of the upcoming Transition Pathways Stakeholders' Support Platform[35], and the textiles ecosystem part thereof, an online space could be foreseen where members and non-members can present their expertise, search for partners, and build consortia.

3.2 Resources

The private partners will provide input and advice to the European Commission in order to contribute to the identification of priorities of R&I activities and the definition of call topics to be included in the Horizon Europe work programmes within the scope of the partnership's activities.

Furthermore, the private partners will contribute to the partnership with formal contributions and commitments (in kind and/or financial contributions, and co-funding of the R&I activities) in line with the general financing rules of Horizon Europe.

The following general principles apply to Partnerships:

"The resources contributed by the private side will be mainly of three types:

1. In-kind contributions to the funded projects (on the basis of non-reimbursed eligible costs), with lower funding rates for higher TRL actions;
2. In-kind contribution for additional activities foreseen in the SRIA not covered by Union funding;
3. Investments in operational activities that are spent beyond the work that is foreseen in the SRIA."

The specificities of how these principles will be implemented in this partnership will be further elaborated in the MoU. Those are to be made explicit at the latest by the time the MoU with the European Commission is signed.

In addition to the funding related to contributions and activities of the private partners, it is expected that the partnership will leverage private funding outside the SRIA, including other investments that could be mobilised to exploit or scale-up the partnership's results.

3.3 Governance

To oversee the successful implementation of the partnership, a Partnership Board will be established. The Partnership Board will be the mechanism for dialog between the public and private side to reach the objectives of the formal agreement of the partnership (MoU). The Partnership Board will consist of a balanced representation from the partnership's private side and the European Commission. When nominating its Partnership Board members, selected among its constituent entities, the lead entity endeavours to ensure an adequate representation of SMEs, an adequate geographical balance as well as an adequate gender balance among its nominated Partnership Board Members. The Partnership Board is responsible for taking

[35] https://eismea.ec.europa.eu/funding-opportunities/calls-tenders/transition-pathways-stakeholders-support-platform-implementation-textiles-ecosystem-eismea2024op0001_en

decisions for the European Partnership such as the definition of the strategic orientation of the Partnership or the endorsement of call topics to be proposed for funding. The Partnership Board will lay down Rules for Procedure, based on a harmonised proposal provided by the European Commission, covering inter alia rules on members' nomination, running of the meetings and specific tasks of the Partnership Board, but also rules on confidentiality, transparency, and avoidance of conflicts of interest.

Partnership Panels may be set up. They can have different responsibilities, for instance to develop a strategic roadmap document or to take care of specific technical or non-technical challenges. The constituted Panels will have a mandate describing scope and objectives. Any individual who belongs to a member organisation of the lead entity can belong to a Panel. The European Commission will be represented in all established Panels by nominated services. Panels will be setup, agreed and monitored by the Partnership Board.

The Commission will engage with the Partnership in a timely and effective manner to establish an orientation and prioritization for the work programme (for more information see section 3.4.3), provide guidance and discuss direction on strategy, and discuss and explore operational issues relating to the operation of the partnership, as appropriate. This will be done via the Partnership Board. The Partnership Board will monitor actions from the private side to take into account the input from the Commission. The work programme and the funded actions resulting from the Partnership will be managed by the Commission. The Commission will also steer the interaction between Member States and the Partnership.

3.4 Openness and transparency

The partnership will prioritize openness and transparency in its operations, decision-making processes, and communication with stakeholders.

3.4.1 Assuring transparency

Transparent establishment and governance structure: The partnership will have clearly defined objectives which are openly communicated to stakeholders. It would also have a transparent governance structure that delineates roles, responsibilities, and decision-making processes, ensuring accountability and clarity for all involved.

The proposed lead entity, representing the private side of the partnership – Textiles ETP, already today represents a broad stakeholder community of the European textile industry and research ecosystem. It possesses significant technical expertise and capabilities relevant to the objectives of the partnership. This expertise includes knowledge in areas such as textile materials science, advanced manufacturing technologies, sustainable production methods, circular economy principles, and other relevant fields. Textile ETP, as the lead entity, will be responsible for fostering collaboration and networking among the partnership members and stakeholders. Therefore, it will act as the partnership's support office which is in charge of the promotion of the partnership and possible identification of new members, the identification of synergies with related programmes and existing Horizon Europe partnerships and initiatives, and the daily liaison with the Commission services.

The partnership will actively engage a diverse range of stakeholders, including industry representatives, research organisations, government agencies, civil society groups, and end-users, throughout its activities. Stakeholder engagement will be inclusive, transparent, and participatory, allowing for diverse perspectives to be considered in decision-making processes.

As mentioned in the previous section, the partnership will be governed by a Partnership Board as the main forum for dialogue. The Partnership Board will steer the partnership towards achieving its objectives, supervise the process of interaction with stakeholders and agree on the

specific topics to be addressed in calls. The call topics will be subject to Horizon Europe comitology procedures.

From the industry side, the Partnership Board would be represented by leading industry representatives such as EURATEX to provide advice at policy and strategy level as well as guarantee the link to the textile sector. The research community could be represented by TEXTRANET (applied research) and NETFAS (universities). Observers (such as other industry associations), European Clusters on Textiles, European Digital Innovation Hubs, trade unions, vocational education and training providers, technology developers as well as other civil society organisations of interest or specific experts) could be identified and agreed by the Partnership Board.

Accessible data and knowledge sharing: Assuring easy and non-discriminatory access to the information about the calls, funded actions, and the outcomes of calls will be guaranteed by the European Commission as a part of their running and management of the call process. The partnership will provide open access to information through its web-based resources and through events and fora. This could involve establishing repositories or using online platforms, such as the upcoming Transition Pathways Stakeholders' Support Platform, where stakeholders can access relevant information, reports, publications, and best practices. Knowledge sharing could be facilitated through workshops, seminars, webinars, and other dissemination activities to maximize the impact and uptake of research outcomes as mentioned in section 3.1.

Ethical and responsible conduct: The partnership will uphold high standards of ethical conduct, integrity, and responsible behaviour in all its activities. This includes adhering to ethical guidelines for research involving human subjects or sensitive data, respecting intellectual property rights, and promoting diversity, equity, and inclusion in research teams and collaborations.

Transparent communication and reporting: The partnership will maintain open and transparent communication channels with stakeholders, providing regular updates on progress and evaluations of its activities and outcomes. This could include publishing reports, newsletters, press releases, and social media updates to keep stakeholders informed and engaged. The activities of the partnership will be subject to continuous monitoring and periodic reporting in accordance with Article 50, Annex III and Annex V of Horizon Europe. The outcomes of monitoring and reporting will feed into the evaluations of the Co-Programmed European Partnerships as part of Horizon Europe evaluations. It will also feed into the biennial monitoring of the European Partnerships in the context of the Strategic Coordinating Process.

3.4.2 Openness and access to the partnership

The partnership will have the ambition to remain inclusive and to recruit new members, particularly with a view to expand its R&I expertise, that meet the membership criteria set out in the Statutes of Textile ETP (the lead entity)[36]. As per the Statues, associate members are any organisation in the textile or clothing sector or a related sector, or any other private or public organization involved in textile research or innovation activities, with its head office in a Member State or candidate country of the European Union or a country of the European Free Trade Association (EFTA) or in the United Kingdom.

All calls issued under the work programme will be open to all entities that are eligible to receive Horizon Europe funding. The partnership will operate a proactive recruitment policy consisting

[36] https://cms.extranet.textile-platform.eu/uploads/Textile_ETP_statuts_final_clean_20231116_ENG_355010bba5.pdf

of a portfolio of activities, including presence in relevant events to present the partnership and to inform and invite new participants to join.

3.4.3 Work programme development methodology

For the annual work programmes, a robust process for priority setting will be implemented.

At each round of development, the partnership will convene a Panel of Partnership members to set the high-level strategy for the call. This Panel will consider the strategic alignment with Commission EU policy objectives, including the textile-related legislative provisions, the SRIA and, where available, the outcomes of partnership previous work programmes. From these considerations, it will set out high level priorities for funding, including rationale for choosing them. This may be tested with a consensus process in the wider community. Based on the final priorities, the input to the Commission will be formulated that will contain suggested text, rationale for the topics chosen, and a relative budget.

Typically, consensus building around the range of topics will take place through meetings/workshops. Member States and Associated Countries will be indirectly involved early in the process through the co-creation process (via the Horizon Europe Cluster 4 Programme Committee).

Moreover, to ensure and strengthen the collaboration and interaction with a broad range of adjacent partnerships, a series of discussions with other partnerships may be foreseen.

Overall, openness and transparency are essential principles that underpin the effectiveness, credibility, and sustainability of the partnership. By fostering an environment of trust, collaboration, and shared responsibility, the partnership can maximise its contribution to advancing research, innovation, and sustainability in the textile sector.