

# CIRFS



EUROPEAN MAN-MADE  
FIBRES ASSOCIATION

## Sustainability and other developments in the European man-made fibres industry

ACFIF Meeting

May 15, 2026

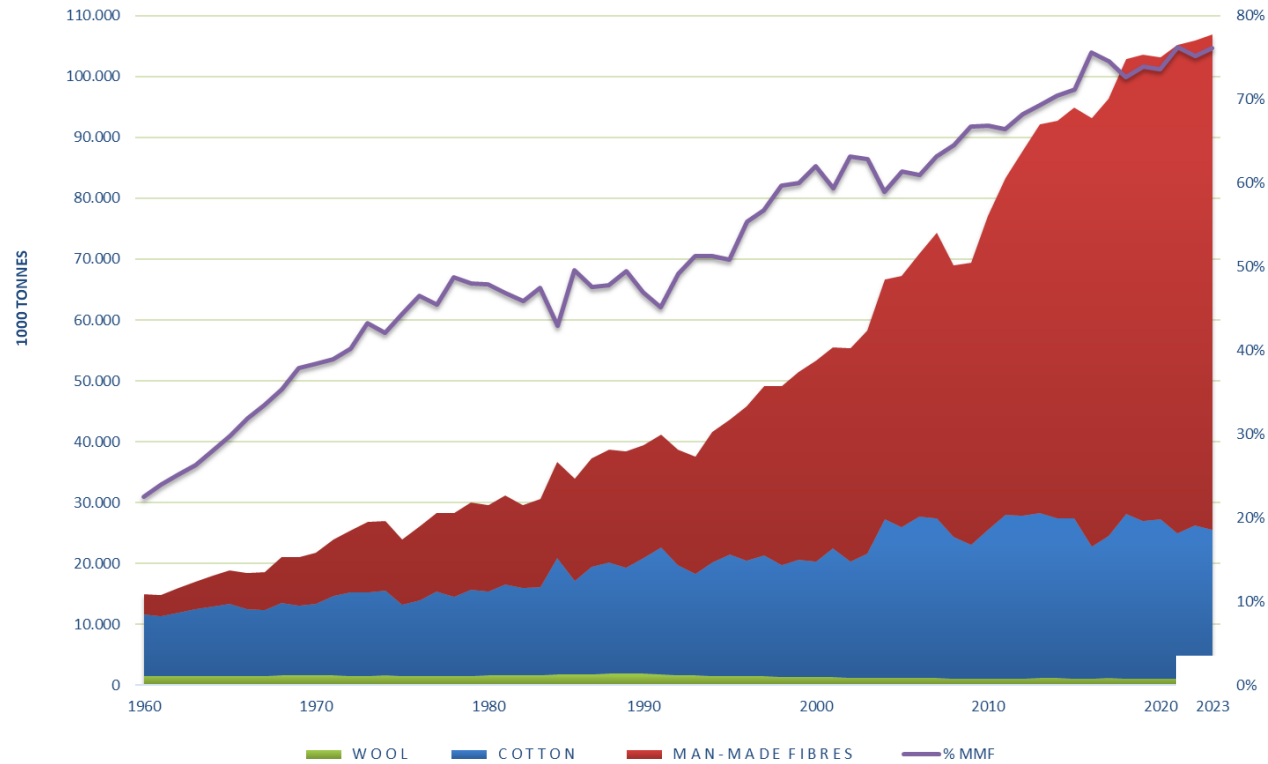
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# Status MMF Industry

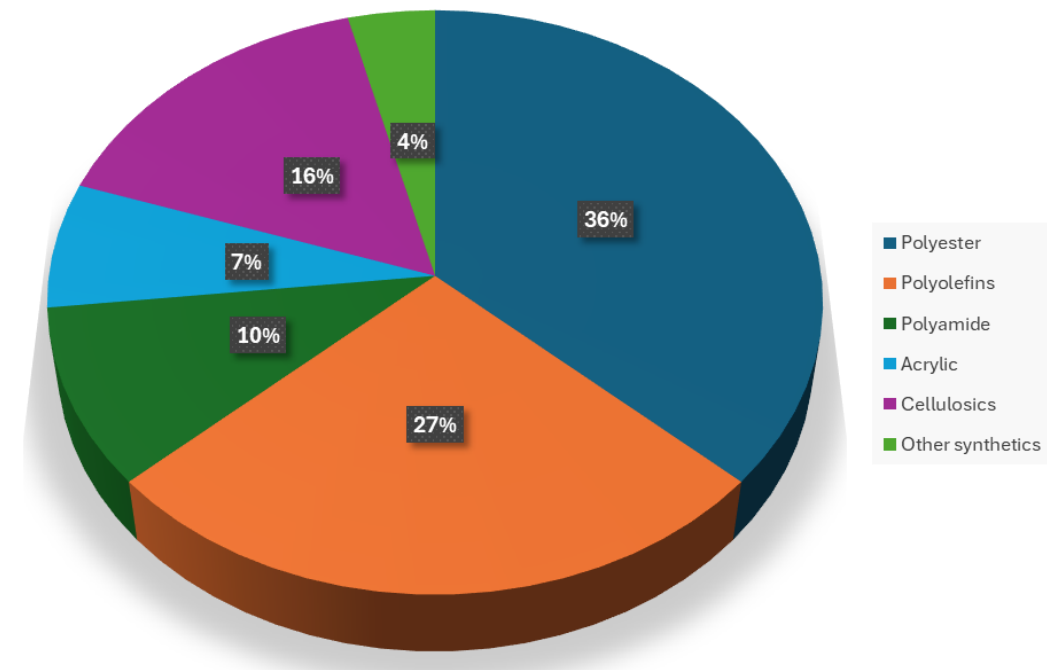
- Status MMF Industry
- General Developments
- Sustainability
- Digitalization
- Technical Applications, Smart Textiles
- Collaboration, Autonomy
- Industrial Policy
- Conclusions

# Man-made Fibres: Indispensable for Textiles



Source :  
CIRFS – Preliminary Estimates

## Europe: European MMF Production



# General Developments 2025

- European **textile demand** remained weak through 2025, with only a modest recovery expected in 2026, reflecting sluggish consumer spending on apparel despite easing inflation.
- **Industrial textile production** continued to underperform, especially in energy-intensive segments, while growth pockets emerged in technical textiles and higher-value applications.
- **Inflation pressures** eased overall, but cost structures remain elevated, particularly due to energy, labour, and compliance costs, weighing on competitiveness versus global producers.
- **Import pressure intensified** significantly, especially from low-cost Asian producers and ultra-fast fashion platforms, benefiting from structural cost advantages and trade dynamics.
- **Global supply chains** continued to rebalance, with diversification and nearshoring strategies emerging, but Europe remains structurally dependent on external sourcing.
- Stricter **EU sustainability and circular economy regulations** became a defining factor, requiring investment in traceability, recycling, and eco-design, increasing short-term costs but driving long-term transformation. Smart textiles, and digitalized production supported by EU industrial policy initiatives.
- **Overall sector growth** remained moderate but positive, with the European textile market expected to expand gradually in the coming years despite structural challenges.

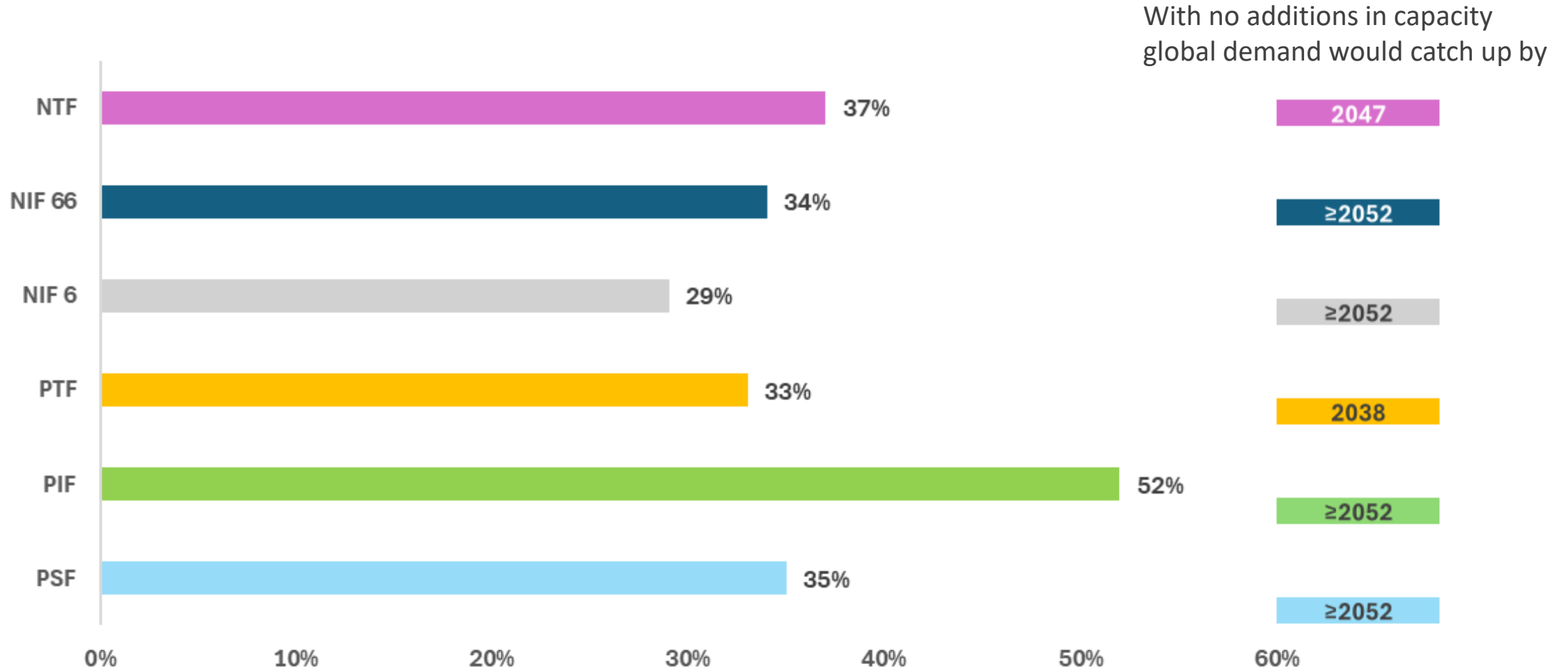


# General Developments 2025/26



- **Protectionist measures** continued to intensify in 2025–2026, with a rise in both tariffs and non-tariff barriers (e.g. local content rules, sustainability requirements), increasingly constraining market access for European MMF producers.
- The more assertive **U.S. trade stance** (tariffs, industrial policy, “friend-shoring”) is reshaping global fibre and textile value chains, creating uncertainty and diverting trade flows—some redirected toward the EU market, heightening competitive pressure.
- **Structural overcapacity** in global MMF production persists, combined with state support, subsidized exports, and recurrent dumping practices, continuing to distort global pricing and margins.
- **Free Trade Agreements** are expanding but remain uneven in impact, often driven by geopolitical considerations; asymmetries in market access, standards, and enforcement continue to create imbalances.
- **Currency volatility** remains elevated, with periodic misalignments (notably USD/CNY and emerging market currencies) affecting competitiveness and pricing dynamics in international fibre trade.
- The **recent war in Iran** is creating additional instability, disruptions, supply chain issues and rising costs, generating inflation. These will negatively affect the whole year 2026.

# Overcapacity in synthetic fibre production chains



# Sustainability: Emission Reduction

- With the Industrial Emissions Directive (IED), Europe is continuing to cut emissions of production processes, including for fibres and textiles.
- The updated IED is stricter and wider. It covers industrial emissions to air, soil and water and introduces binding limits.
- It includes better enforcement rules and a right of compensation in case of breach.
- Certain waste items (e.g. microplastics leaching) are now investigated as well. Waste water technologies to capture micro- and nanofibres during textile production and garment washing, though complete removal remains a challenge.
- Even before the review of this legislation, the industry started to voluntarily reduce its emission and improve its ecofootprint.
- It makes the European MMF industry one of the cleanest worldwide.



# Chemical Policy – CO<sub>2</sub> Emissions



- The Commission continues to classify as hazardous, and restrict/ban a wide number of substances, e.g. aprotic solvents, formaldehyde, PFAS, heavy metals etc.
- The EU Chemicals Strategy for Sustainability promotes safe-and-sustainable-by-design chemicals, essential use concepts, and addresses the risks of chemical mixtures.
- The EU's climate change strategy aims for climate neutrality in 2050, with a legally binding target of at least a 55% reduction in net greenhouse gas emissions by 2030 compared to 1990 levels.
- ETS (EU Emissions Trading System) is a tool that prices carbon and drives CO<sub>2</sub> emissions reductions by setting a cap on emissions from major industrial sectors. MMF need to reduce their carbon footprint.
- The carbon border adjustment mechanism (CBAM) aims to prevent "carbon leakage" by placing a carbon price on certain imported goods to the EU, to make them equivalent to domestically produced goods under the ETS.

# Sustainability: Energy Use

- As an energy-intensive industry, the European man-made fibres industry is constantly seeking to reduce its energy use (and its CO2 emissions).
- On the one hand, energy prices in Europe have soared because of the Ukraine and again the Iran war, market factors and public policies.
- On the other hand, Europe decided to reduce its energy use and to focus on green energies in line with its objective to become carbon neutral in 2050 (and -90% vs. 1990 in 2040).
- Industry has been investing in equipment & technology upgrades, behavioural changes such as heat recovery, electrification and alternative energies (heat pumps) - thanks also to government support.
- Further efforts are being made to become independent from fossil energies and to reduce the energy footprint such as the greater use of recycled materials.



# Sustainability: Waste/Recycling

- The 5 Rs of Waste Management are growingly being implemented: Refuse, Reduce, Reuse, Repurpose, and Recycle are at every stage of the waste lifecycle. Waste audits are being carried out.
- Indeed, with the European Textile Strategy, Circular Economy is becoming a must: It means moving from "take-make-dispose" (linear) to a circular model that prioritizes the use of recycled materials to keep them in use.
- It is a fundamental change in the way we produce and consume that extends to other parts of the world.
- ESPR (Eco-design for Sustainable Products Regulation) will introduce mandatory eco-design requirements for textiles (Delegated Act: ca. 2027, in force 2029/2030), and for other products.



# Green Developments: Waste/Recycling

- Extended Producer Responsibility is being put in place including eco-modulation
- Closed-loop systems allow for the collection, recycling, and reuse within a single supply chain.
- Post industrial recycling is increasingly used. Post-consumer waste recycling is growing, mechanical and chemical (breaking fibres down to monomers and repolymerizing them to virgin quality) in particular. Mandatory recycled content provisions.
- Exports of textile waste outside OECD will be restricted.
- Microplastic release from synthetic fibres during washing is to be reduced, thanks to new fibres that shed fewer material, surface treatments, tighter yarn structures, and the use of blended fabrics can help to reduce shedding.
- Addition legal requirements are being implemented (e.g. pellet loss) or planned, to fight microplastic pollution.



# The Textile Strategy: Additional Measures

- Mandatory requirements concerning Green Public Procurement.
- Green Claims Directive to empower consumers in the green transition and ensure the reliability of claims.
- Review of the Ecolabel scheme and the new Product Environmental Footprint for categories of Apparel as key instruments to green the value chain.
- Review of the Textile Labelling Regulation with amended provisions for generic fibre names (e.g. “cellulose” as a generic fibre name) and the introduction of a digital label.
- Sustainable Value Chains: New measures on Corporate Sustainability Reporting for companies, on Corporate Sustainability Due Diligence, Taxonomy ("green" finance), Deforestation and Force Labour introduced.
- Measure on discarded products, banning the destruction of unsold goods and on curtailing fast fashion,
- ... and many more.



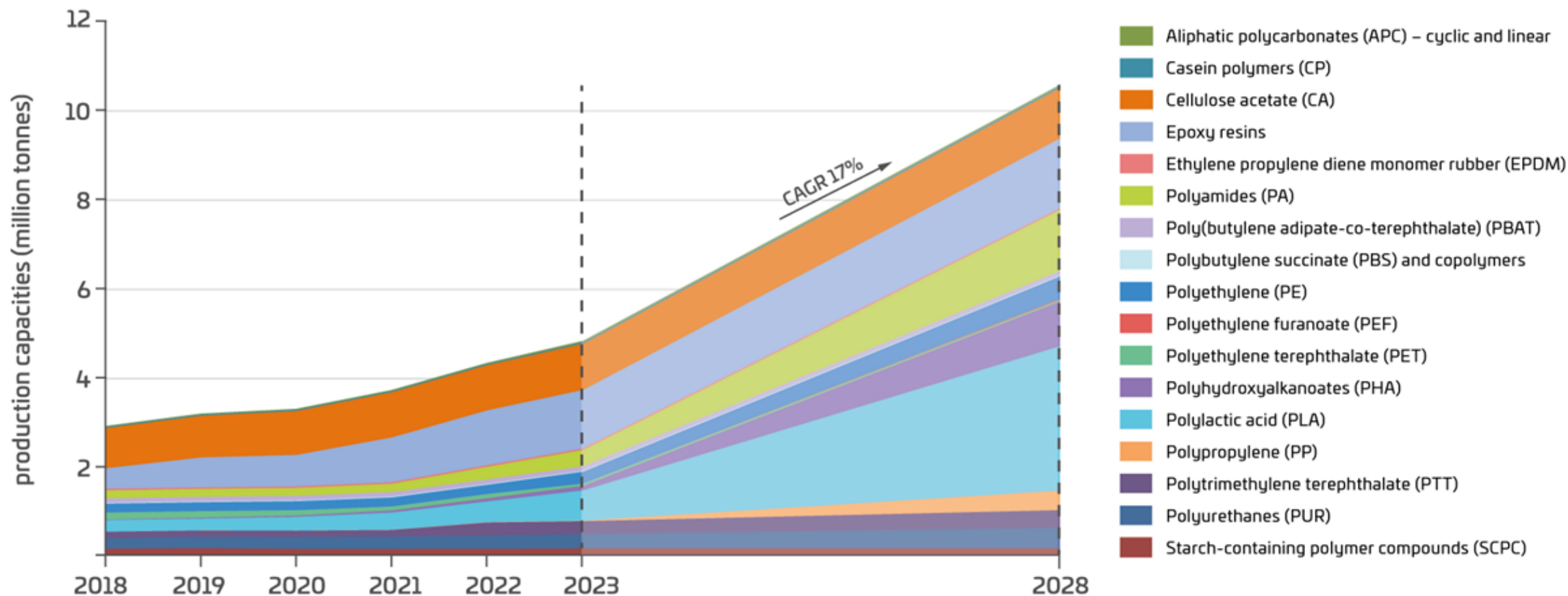
# Green Developments: Momentum towards Bio-based Fibres

- There is a momentum to increasingly use bio-based and renewable feedstocks in fibre production.
- Shifting from fossil-based to biomass-derived materials (wood, starches, sugars etc.) for producing fibres like viscose, lyocell, other cellulosics and new bio-based synthetics to reduce dependency on fossil fuels.
- Existing regenerated cellulosic fibres gain acceptance because of their versatility, availability and biodegradability.
- Bio-based synthetics are developing as well, such as partly or 100% bio-based polymers and their conversion into fibres, with ongoing research to improve their performance and expand their use (e.g. PLA).
- Innovations like microbial fermentation-derived proteins are making early commercial traction. Biotech & plant-waste fibres are also emerging (banana, mushroom etc.) are entering experimental and niche markets.
- The EU is actively supporting this transition through its industrial and bioeconomy strategies.



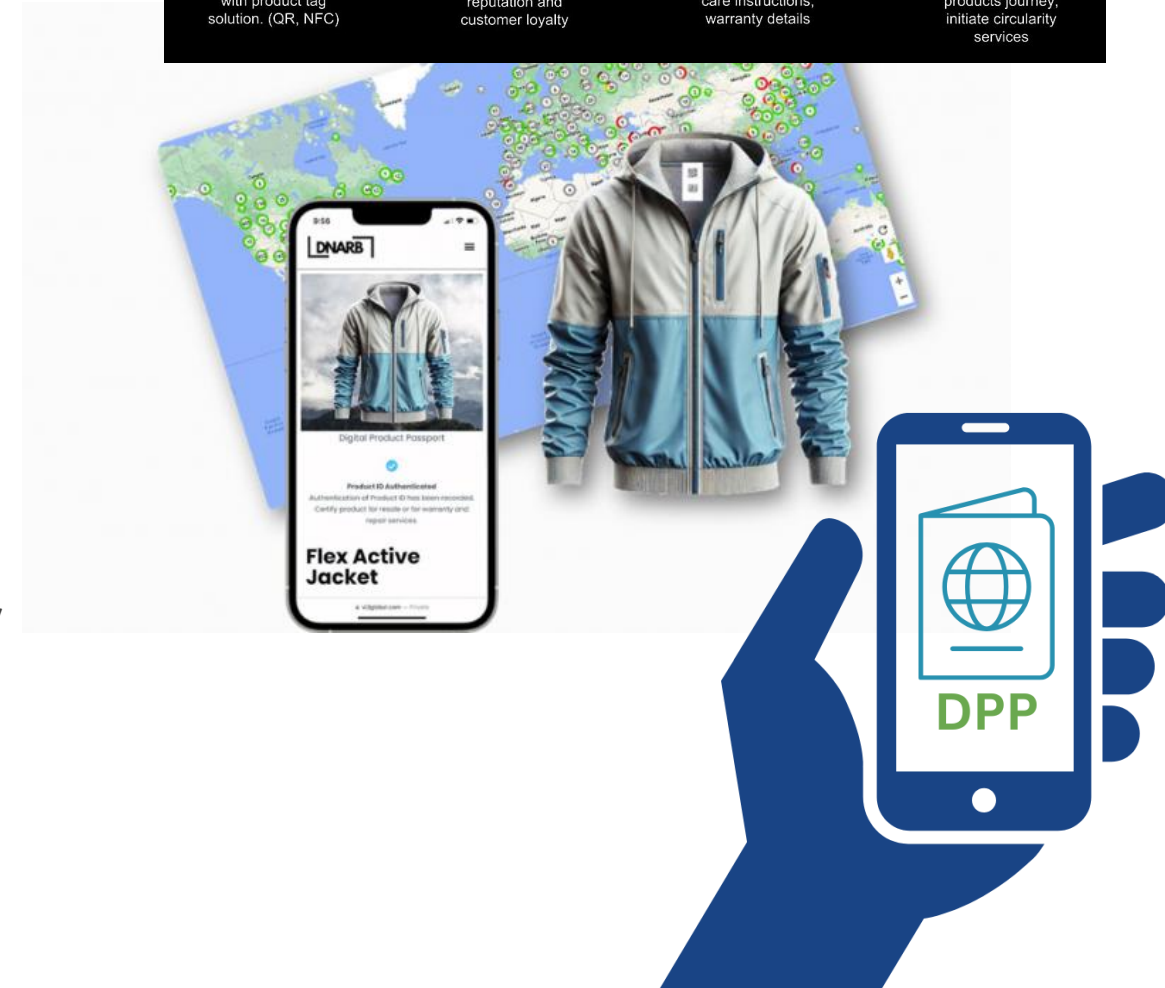
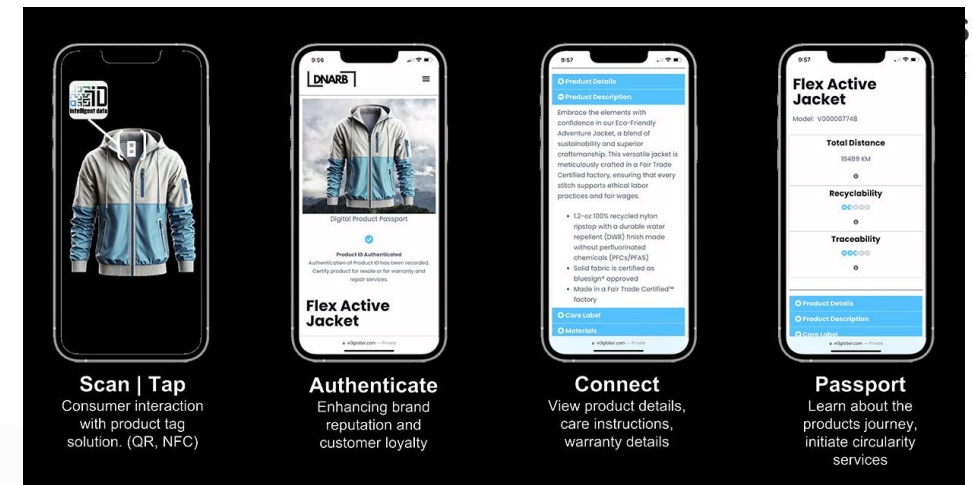
# Bio-based Polymers

## Evolution of Worldwide Production Capacities from 2018 to 2028



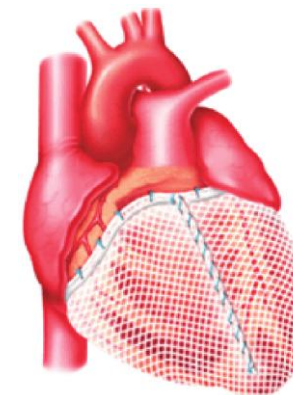
# Traceability, Digitalization

- Integration of blockchain, AI, digital product passports is emerging, to ensure fibre traceability, better tracking carbon footprints, supply chains and lifecycle data.
- Transparency in fibre origin and production processes is becoming a competitive advantage and will be a must in future.
- A Digital Product Passport (DPP) is to be introduced for textiles, with information requirements on environmental sustainability. It will bring more transparency.
- Cooperation between enforcement authorities and the launch of EU Toolbox against counterfeiting should increase market surveillance.
- But automation and digitalization are modernizing manufacturing processes too, boosting efficiency and quality control throughout the supply chain.
- Artificial intelligence and the Internet of Things (IoT) are being integrated into fibre design and manufacturing for predictive maintenance, real-time quality control, and the creation of intelligent fabrics.



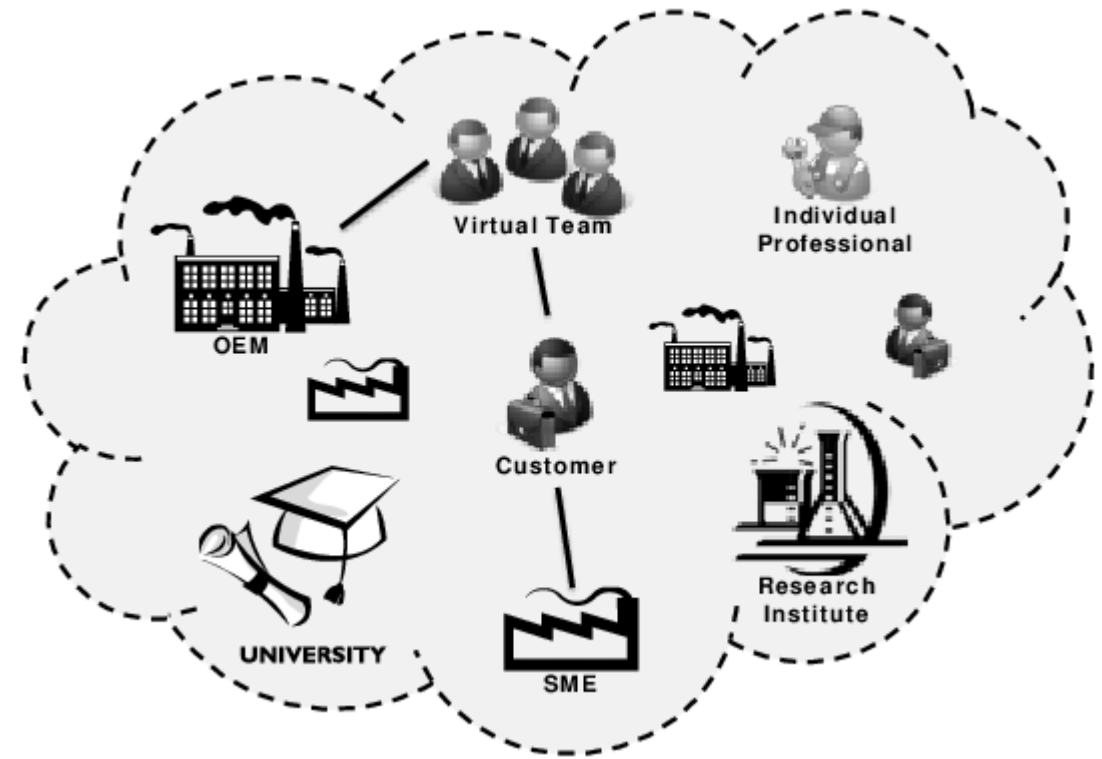
# Innovation in Technical Applications, Smart Textiles

- Customization: Manufacturers are increasingly focusing on creating specialized, customized fibres tailored for specific high-performance applications, from advanced automotive parts to medical-grade materials.
- Advanced Techniques: Innovations like electrospinning for producing nanofibers and 3D printing for creating complex fiber structures are enabling new applications. Multi-axis weaves, knitting, or braiding enable superior mechanical properties (especially out-of-plane strength). Widely used in technical textiles and aerospace.
- Tailored Fiber Placement (TFP): Precisely aligns and orients fibres (carbon, aramid, thermoplastics) within composites to minimize waste, maximize strength, and allow design versatility and rapid retooling.
- Nanomaterials: Incorporating materials like graphene and other nanomaterials into fibres enhances their performance and functionality. Coatings with nanoparticles impart antibacterial, superhydrophobic, and stain-resistant properties.
- Smart Textiles: Focus is on embedding sensors into fibres for health monitoring, safety, and convenience, expanding the use of wearable technology.



# Collaborative Ecosystems, Strategic Autonomy

- Strategic partnerships between resin formulators, fibre producers, textile producers and downstream companies are accelerating innovation in areas like low-temperature curing and out-of-autoclave composite manufacturing (aerospace),
- Collaborations with brands and recyclers are to build sustainable value chains. European consumers are increasingly favouring eco-conscious brands, creating a niche for premium, sustainable fibres.
- The EU is prioritizing strategic autonomy in key sectors given the risks of overdependence of supply chains.
- This could lead to increased onshoring of production facilities in Europe and its vicinity.
- Public-private partnerships will invest in EU-based green plants.
- Industry alliances and associations like CIRFS are pivotal in setting standards and driving joint action.



# A New Industrial Deal: Antwerp Declaration

- Joint statement launched by EU business leaders in 02/2024, for a **full European Industrial Deal to restore competitiveness and foster sustainable growth for European industry**. More than 25 industries, 1350 organizations.
- Objectives:
  - ✓ Put the Industrial Deal at the core of the new European Strategic Agenda for 2024-2029.
  - ✓ Include a strong public funding chapter with a Clean Tech Deployment Fund.
  - ✓ Make Europe a globally competitive provider of energy.
  - ✓ Focus on the infrastructure Europe needs.
  - ✓ Increase the EU's raw materials security.
  - ✓ Boost demand for net zero, low carbon and circular products.
  - ✓ Leverage, enforce, revive and improve the Single Market.
  - ✓ Make the innovation framework smarter.
  - ✓ A new spirit of law-making.
  - ✓ Ensure the structure allows to achieve results.
  - ✓ Clean Industrial Deal, Industry Accelerator Act: "made in EU".
- 2 follow up meetings in 2025 and 2026. CIRFS fully supports and is actively involved in the roll-out.



# Conclusions

The man-made fibres industry's success story remains, despite increasing trade distortions, globally.

Europe is a speciality producer and increasingly focuses on the green development of its industry and its consumption.

This covers the impact of the production process, waste/recycling, chemicals, energy and green feedstock.

Similarly, traceability is being further pushed, helped by rising digitalization.

Innovation remains a key factor of success, be it in technical or speciality application like smart or high-performance textiles.

Collaboration in the ecosystem and the push for strategic autonomy will support the industry in future.

The Clean Industrial Deal, the Industry Accelerator Act and other instruments will drive the re-industrialization of Europe, benefiting the EU man-made fibres industry as well.

Associations like CIRFS are pivotal in setting standards and driving joint action.

# Thank You

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