Decarbonising Fashion

Milestones Document
June 2021

Overview of the milestones document

The milestones document is a representation of known decarbonisation targets, implementation initiatives and report analysis, compiled to support the Fashion industry's transition to net zero carbon emissions.

The purpose of the document is to generate alignment on short, medium and long-term actions and milestones, to provide a holistic overview of decarbonisation action and milestone tracking and to facilitate collaboration and solutioning between actors towards addressing gaps.

This work has been delivered by the High-level Climate Champions' Fashion sector team in collaboration with UNFCCC Fashion Industry Charter for Climate Action and the UNFCCC Marrakech Partnership for Global Climate Action, in preparation for COP26. It has been devised in consultation with a wide set of industry stakeholders with significant input from Fashion Charter's decarbonisation working group.

This document is not an additional initiative, new commitment or set of proposed new milestones. It merely reflects existing milestones and programmes, collected through extensive desk research from the public domain and consultation with stakeholders. It is intended that this document provide a mechanism for promoting and amplifying existing initiatives on the road to COP26 and beyond, without obstructing any existing implementation efforts. It is also hoped that this document should inform stakeholders around current milestone and implementation gaps, inspiring fresh action to deliver against them where actions are considered priority.

Overview of contributing partners

	Fashion Industry Charter for Climate Action	**Global Climate Action Pathways (MPGCA), a.k.a. 'Milestones Document'**	**High-level Climate Champions for COP26 (appointed by UNFCCC)**	**Race to Zero campaign**
Actors	*For more information: link*	*For more information: link*	*For more information: link*	*For more information: link*
Role in scaling net zero	*Recognising that the Fashion Charter has already coalesced a critical mass of engagement within the sector around **high level targets (30% by 2030, net zero by 2050)** and set up working groups to support delivery of topics across the value chain...*	*... efforts have been underway, in consultation with Charter networks, to **produce a shared milestones document** reflecting existing goals and ongoing work. The document also captures how progress will be monitored by key organisations, and help identify gaps where industry action is not yet at scale.*	*In addition, in order to deliver a **10x increase in net zero commitments** from non-state actors ahead of COP26...*	*...we are trying to drive breakthrough industrial **systems transformation across >20 sectors**, including Fashion. The Race to Zero Breakthroughs set out an ambition and tipping point for actors in the sector to reach in the transition to net zero.*
Re: milestones document	*Houses the milestones document and hosted consultation process via Working Group 1 (decarbonisation and reducing GHG emissions)*	*Published within the UNFCCC Global Climate Action pathway for Industry, with key actions and milestones from the milestones document reflected, to a lesser degree of detail*	*Neutral convener on behalf of the Fashion Charter, bringing together industry inputs to inform the milestones document*	*Strategic communications and campaign banner under which we are amplifying the pathways*

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Industry alignment process toward COP26

Literature review
Sep-Oct 2020

Latest industry reports and research e.g. by FfG, GFA, WRI & AII, TE, and Quantis

Workshop
Nov 2020

Pre-alignment session with key industry stakeholders active in the decarbonisation space

RtZ dialogues
Nov 2020

Convened by the High-level Climate Champions and Fashion Charter, charting ongoing decarbonisation efforts and challenges

1-1 engagement
Jan 2021

Follow-ups with additional key industry bodies; continued engagement with workshop participants

OECD event
Feb 2021

Milestones document and updates shared with industry players through the OECD Garment & Footwear conference, seeking further inputs on the document

Endorsement
Feb 2021

Findings brought back to the decarbonisation working group for final inputs, ensuring all consultees have the opportunity to endorse the representation of their current work and milestones

Launch
Apr 2021

Launch of the milestones document – anchored in the Charter and hosted under the Marrakech Partnership – where further iterations will be managed

Partners

Reports include (summaries here):
- *Roadmap to Net Zero: Delivering SBTs in the Apparel Sector (World Resources Institute & Apparel Impact Institute)*
- *Fashion on Climate (Global Fashion Agenda + McKinsey)*
- *Preferred Fibre & Materials: Market Report 2020 (Textile Exchange)*
- *Financing the Transformation in the Fashion Industry (Fashion for Good and Boston Consulting Group)*
- *Measuring Fashion: Insights from the Environmental Impact of the Global Apparel and Footwear Industries study (Quantis)*

Continued engagement with workshop participants, plus:

Summary of key initiatives

Industry levers
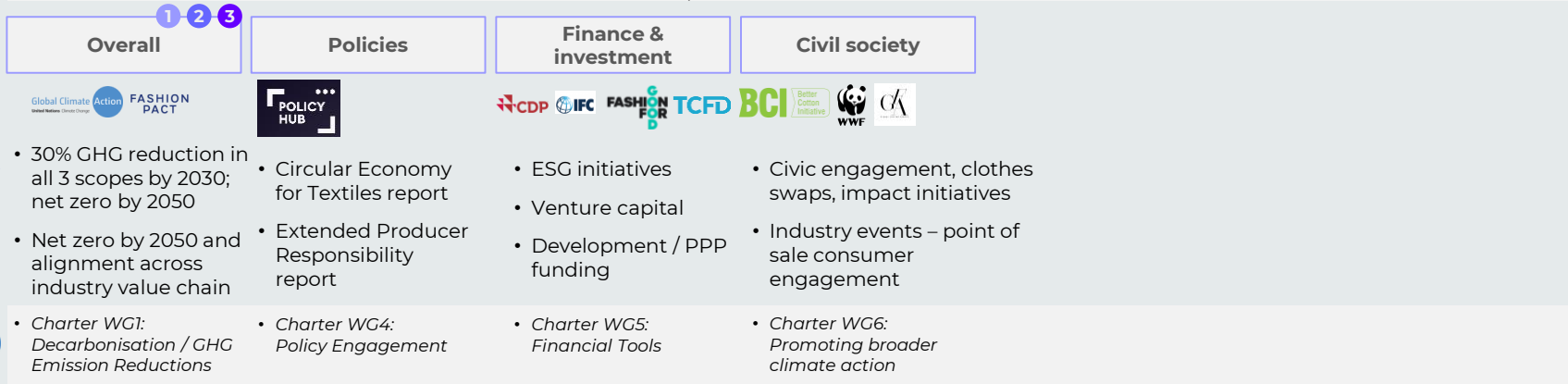*Representing actions for manufacturers and brands across the value chain*

Raw materials ③	Tier 1 – 3 ③	Packaging ③	Brand Scope 1 – 2 ① ②	Logistics ③	Use phase ③	Bus. model & circularity ③
TextileExchange, FASHION PACT	Sustainable Apparel Coalition, CDP, apparel impact institute, FASHION MAKES CHANGE.	UNEP, ELLEN MACARTHUR FOUNDATION, FASHION PACT	FASHION PACT	BSR, Clean Cargo	clevercare.info, RBC	UNEP, ELLEN MACARTHUR FOUNDATION, BRITISH FASHION COUNCIL
• Sustainable Cotton Challenge • Corporate Fibre and Material Benchmark	• Higg Index • CDP Questionnaire • CP12 Initiative	• New Plastics Economy Global Commitment	• Monitoring of 100% renewable energy across owned operations by 2030	• Smart Freight Procurement Guidelines	• Garment labelling via Responsible Business Coalition • Textiles 2030 (WRAP)	• 'Make Fashion Circular' blueprint • British Fashion Council Circular Fashion Ecosystem (CFE) Project

Global Climate Action — United Nations Climate Change

• *Charter WG2: Raw Materials*	• *Charter WG3: Manufacturing / Energy*		• *Charter WG8: Brand / retailer owned or operated emissions*			

Non-Industry levers
Representing actions of enabling actors and overall milestones

Overall ① ② ③	Policies	Finance & investment	Civil society
Global Climate Action, FASHION PACT	POLICY HUB	CDP, IFC, FASHION FOR GOOD, TCFD	BCI, Better Cotton Initiative, WWF, CA
• 30% GHG reduction in all 3 scopes by 2030; net zero by 2050 • Net zero by 2050 and alignment across industry value chain	• Circular Economy for Textiles report • Extended Producer Responsibility report	• ESG initiatives • Venture capital • Development / PPP funding	• Civic engagement, clothes swaps, impact initiatives • Industry events – point of sale consumer engagement

Global Climate Action — United Nations Climate Change

• *Charter WG1: Decarbonisation / GHG Emission Reductions*	• *Charter WG4: Policy Engagement*	• *Charter WG5: Financial Tools*	• *Charter WG6: Promoting broader climate action*

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Summary of key actions: Industry

	③	③	③	①②	③	③	③
#	**1. Raw materials**	**2. Tier 1 – 3**	**3. Packaging**	**4. Brand Scope 1 – 2**	**5. Logistics**	**6. Use phase**	**7. Bus. model & circularity**
a.	Reduce GHG emissions in the value chain (Tier 4 and material production) by scaling the use of existing preferred materials and improved practices (incl. regenerative practices)	Reduce GHG emissions in the supply chain (Tiers 1-3)	Improve packaging material mix and reduce unnecessary plastics	Source 100% renewable energy (brand / retailer scope 2)	Reduce GHG emissions in freight	Address consumer use phase GHG emissions impacts	Increase innovation in development of mechanical and chemical recycling technologies
b.		Maximise material efficiency and reduce waste in the supply chain (Tiers 1-3)		Reduce GHG emissions in owned operations (scopes 1 and 2)	Innovate to increase sustainable transport solutions	Redirect products from landfill and increase optimal recycling	Reduce overproduction through investment in new technologies and improved forecasting
c.		Shift to 100% renewable energy in manufacturing (Tiers 1-3)					Switch to lower GHG business models and consumer offers (e.g. rental)
d.		Eliminate coal in textile mills and manufacturing facilities (Tiers 1-2)					

Summary of key actions: Non-Industry

① ② ③

#	0. Overall	8. Policies	9. Finance & Investment	10. Civil society
a.	Commit to reducing GHG emissions and to a net zero target. Quantify, track and publicly report emissions to best standards of measurement and transparency	Standardize definitions for measurement of GHG emissions, circular design impacts and waste taxonomies, with reference to existing industry data sources, standards and practices	Support development of new investment vehicles like public-private partnerships to invest in R&D projects on innovation priorities and supply chain transformation	Increase number of apparel producer and brand/retail companies actively engaged in industry sustainability initiatives
b.		Support global transition to low-carbon transport, renewable energy and energy efficiency through incentives	Shift investment portfolios towards brands with robust environmental credentials, and support accurate and effective ESG assessments	Expand capacity-building efforts in producer countries in collaboration with other stakeholders
c.		Improve low carbon materials sourcing by incentivising recyclability in design and implementing recycled content requirements through improved farmer regulations and capacity building		Signal demand for new technical and financial innovations to investor community
d.		Ensure a national level transition to a decarbonised energy grid and mix		Convene coalitions, networks, forums and events to champion climate action throughout the industry
e.		Create incentives for improved performance and innovation from fashion companies, through interventions such as start-up and technological investment, market access requirements and extended-producer responsibility measures		
f.		Increase scope and regularity of environmental audits (incl. energy performance requirements) in the sector		

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Overall milestones

#	Action	By 2021	By 2025	By 2030	By 2040	By 2050
0a.	**Commit to reducing GHG emissions and to a net zero target. Quantify, track and publicly report emissions to best standards of measurement and transparency**		By 2023, 20% of major apparel companies by revenue committed to net zero through membership in the Fashion Charter (Race to Zero Breakthrough Ambition, Fashion Charter)	30% aggregate GHG emission reductions across Scopes 1, 2, and 3 of the GHG Protocol Corporate Standard by 2030 against a baseline of 2015 latest (Fashion Charter, Race to Zero Breakthrough)		Net zero GHG emissions across scope 1, 2 and 3 by 2050 (Fashion Charter, G7 Fashion Pact, Race to Zero Outcome)
	Organisations working on refining milestones	Align interim 2030 target to 1.5 degree pathway (Fashion Charter)	Explore 2025 whole industry targets through scientific review (UNFCCC)	40-50% aggregate GHG reduction in product footprint on a 1.5C trajectory, in line with Paris agreement (WRAP UK)		
	Programmes to support implementation	• *Charter WG1 with support from other WGs & orgs* • *Guidance for apparel sector (World Resources Institute WRI and Science Based Targets initiative SBTi)* • *Establish GHG emissions baseline (Charter, Fashion Pact, WRI, Sustainable Apparel Coalition based on Higg Index tools)*		• *Charter WG1 with support from other WGs & orgs* • *Textiles 2030 (WRAP UK)*		• *Climate Neutral Now and UN certified emission reductions (CERs) carbon credits by UNFCCC* • *Charter WG1 with support from other WGs & orgs*
	Responsibility for tracking milestones	• *UNFCCC Fashion Charter*	• *UNFCCC Fashion Charter*	• *UNFCCC Fashion Charter* • *WRAP UK*	• *UNFCCC Fashion Charter*	• *UNFCCC Fashion Charter* • *Fashion Pact*

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Industry | Raw materials

Cultivation and extraction of raw materials from the earth, plants, or animals

#	Action	By 2021	By 2025	By 2030	By 2040	By 2050
1.a.	**Reduce GHG emissions in the value chain (Tier 4 and material production) by scaling the use of existing preferred materials and improved practices (incl. regenerative practices)**	10% cotton taken up by retailers and brands to be more sustainably-produced (Better Cotton Initiative)	15-20% reduction in GHG emissions from core materials by 2025 (Textile Exchange) 50% global cotton produced to be sustainable (Textile Exchange) Expand Materials Sustainability Index (MSI) adoption to include 80% of global apparel and footwear materials and processes by 2025 to refine GHG measurement accuracy (Sustainable Apparel Coalition) 25% of key raw materials are from lower climate impact sources (Fashion Pact)	45% reduction in GHG emissions across all materials by 2030 (Textile Exchange) Move to mix of 20-30% recycled polyester (rPET) usage and an 11% adoption of alternatives such as organic, recycled or bio-based materials. 10% organic cotton usage, 10% improved man-made cellulose fibre (MMCF) usage (McKinsey & GFA) 20% energy efficiency improvements for polyester production through switch from coal to electric boilers (McKinsey & GFA) 40% reduction in use of pesticides and fertilisers in cotton cultivation through targeted spreading (McKinsey & GFA)		
	Organisations working on refining milestones	Ambitious preferred material targets are being set up for cotton (organic, recycled) and Polyester (recycled) (Charter WG2)		GHG emissions reduction targets on Better Cotton is in progress (Better Cotton Initiative)		
	Programmes to support implementation	• Climate+ reduction roadmap *(Textile Exchange)* • Preferred Fiber and Material Mix (PFMM) *report (TE)* • Soil health module of Cotton Impact Initiative *(TE)* • Better Cotton production emissions study with Results Indicator Data *(BCI)* • Fashion Sustainability Platform *increasing accuracy of raw materials assessments (WWF and Google Cloud)* • Future Fabric Expo's online sustainable fabrics sourcing tool *(The Sustainable Angle)* • *Understand data gaps to better measure and track GHG emissions of raw materials (Charter WG2)*	• Corporate Fibre and Materials Benchmark (CFMP) *programme for brand tracking (TE)* • Sustainable Cotton Challenge *(TE)*		• Cotton 2040 *(Forum for the Future)*	
	Responsibility for tracking milestones	• *Textile Exchange* • *Better Cotton Initiative*	• *Textile Exchange* • *Sustainable Apparel Coalition*	• *Textile Exchange* • *Fashion Pact*		

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Industry | Tier 1 – 3 (1 of 3)

Raw material processing, material production and finishing, and manufacturing and assembly of final products

#	Action	By 2021	By 2025	By 2030	By 2040	By 2050
2a.	**Reduce GHG emissions in the supply chain (Tiers 1-3)**		By 2023, 50% of SAC brand, retail and manufacturer members have set an approved SBT or within 2 years of joining the SAC (Sustainable Apparel Coalition)	45% GHG emissions reduction in Tier 1-3 (SAC) 80% of SAC brand, retailer and manufacturer members have set an approved SBT by 2030 or within 2 years of joining (SAC) 100 million tons of CO2 equivalent across Scope 1, 2, and 3 (approx. 40% reduction) for 22 companies in Climate Stewardship Initiative (China National Textile & Apparel Council CNTAC)		
	Organisations working on refining milestones					
	Programmes to support implementation	• *CDP Climate Change questionnaire tracking emissions data and breakdown across all 3 scopes and reporting guidance (CDP)* • *Higg Index (Sustainable Apparel Coalition)* • *Plan to kick off a rapid action programme to:* ○ *Roll out Energy Efficiency Programs for strategic suppliers* ○ *Pilot coal fired boiler replacements (Charter WG3)*				
	Responsibility for tracking milestones		• *Sustainable Apparel Coalition*	• *Sustainable Apparel Coalition* • *China National Textile & Apparel Council CNTAC*		

Key: Existing milestones and programmes / Milestones that have been published but not currently owned or tracked by any organisation / Milestones and programmes in development

Industry | Tier 1 – 3 (2 of 3)

Raw material processing, material production and finishing, and manufacturing and assembly of final products

#	Action	By 2021	By 2025	By 2030	By 2040	By 2050
2b.	**Maximise material efficiency and reduce waste in the supply chain (Tiers 1-3)**			1-2% improvement in the waste generated in the transition from fibre to textiles and in cutting waste in the garment manufacturing stage through better design and modern cutting techniques, reducing scrap production in fabric manufacturing from 12% to 1% (McKinsey & GFA) 5-10% efficiency gain in the spinning, weaving and knitting stages, through motor and air pressure modifications in machinery, shift from wet to dry processing, adoption of technologies that consume less energy (McKinsey & GFA) 80% energy efficiency improvement in wet processing (McKinsey & GFA) 30% efficiency gain across heating, ventilation and air conditioning-related equipment and 20% efficiency gain in sewing machines and new technologies equipment upgrades (McKinsey & GFA) 60% improvement in energy efficiency (Quantis)		
	Organisations working on refining milestones					
	Programmes to support implementation	• *Energy productivity coalition (EP100)* • *Mill Impact Initiative (Apparel Impact Institute) building on Clean by Design (CbD) methodology* • *Partnership for Cleaner Textiles (PaCT) for Bangladesh textile sector (International Finance Corp.)* • *Working with suppliers, brands, and governments on waste water management and policies (Swedish Textile Water Initiative STWI, WWF)* • *Manufacturing / Energy (Charter WG3)*				
	Responsibility for tracking milestones					

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Key: Existing milestones and programmes / Milestones that have been published but not currently owned or tracked by any organisation / Milestones and programmes in development

Industry | Tier 1 – 3 (3 of 3)

Raw material processing, material production and finishing, and manufacturing and assembly of final products

#	Action	By 2021	By 2025	By 2030	By 2040	By 2050
2c.	**Shift to 100% renewable energy in manufacturing (Tiers 1-3)**			Ideally reach 100% renewable energy across the value chain (McKinsey and GFA) 60% renewable energy across the value chain (Quantis)		
	Organisations working on refining milestones			Encourage 100% use of renewable energy in all high impact manufacturing processes along the entire supply chains by 2030 (Fashion Pact)		
	Programmes to support implementation	• *100% renewable energy coalition (RE100)* • *Higg Index (Sustainable Apparel Coalition)* • *Asia-focused manufacturing and raw materials solutions (Reset Carbon)* • *Renewable Energy Buyers Alliance (REBA)* • *Active in key Asian markets around renewable energy (GIZ, IFC, and World Bank)* • *Plan to scale supplier rooftop solar PV installations in key sourcing markets, e.g. Vietnam (Charter WG3)*				
	Responsibility for tracking milestones					
2d.	**Eliminate coal in textile mills and manufacturing facilities (Tiers 1-2)**		No new coal fired boilers in Tier 2 suppliers (Charter WG3)			
	Organisations working on refining milestones			Phase out of X% of coal fired boilers (TBC, Charter WG3)		
	Programmes to support implementation	• *Piloting coal fired boiler replacements (Charter WG3)*	• *Manufacturing / Energy (Charter WG3)*			
	Responsibility for tracking milestones					

Key: Existing milestones and programmes / Milestones that have been published but not currently owned or tracked by any organisation / Milestones and programmes in development

Industry | Packaging

Finished production preparation and storage for shipping or retail

#	Action	By 2021	By 2025	By 2030	By 2040	By 2050
3a.	**Improve packaging material mix and reduce unnecessary plastics**		Elimination of problematic and unnecessary plastics in B2C packaging (Fashion Pact) Ensure at least half of all plastic packaging is 100% recycled content for B2C (Fashion Pact) 100% of plastic packaging to be reusable, recyclable, or compostable (United Nations Environment Programme UNEP, WRAP UK) 70% of plastic packaging to be effectively recycled or composted (WRAP UK) 30% average content to be recycled across all plastic packaging (WRAP UK)	Ensure at least half of all plastic packaging is 100% recycled content for B2B (Fashion Pact) Elimination of problematic and unnecessary plastics in B2B packaging (Fashion Pact) Increase in recycled content usage in corrugated boxes to 20% and default to 3ply. Halve use of polybags and use 80% recycled low-density polyethylene content (McKinsey & GFA)		
	Organisations working on refining milestones		• *Responsible Business Coalition via CEO convenings*			
	Programmes to support implementation	• *The Circular Polybag Pilot (Fashion for Good)*	• *The New Plastics Economy Global Commitment (Ellen MacArthur Foundation and UNEP)* • *The UK Plastics Pact (WRAP UK)* • *Responsible Business Coalition on-product labelling initiative*			
	Responsibility for tracking milestones		• *Fashion Pact* • *UN Environment Programme* • *Waste and Resources Action Programme (WRAP UK)*	• *Fashion Pact* • *Fashion Conveners* • *Responsible Business Coalition*		

Industry | Brand Scope 1 and 2

Corporate real estate and owned operations (not involved in production process)

#	Action	By 2021	By 2025	By 2030	By 2040	By 2050
4a.	**Source 100% renewable energy (brand / retailer scope 2)**		50% renewable energy across own operations (Fashion Pact)	100% renewable energy across own operations (Fashion Pact)		
	Organisations working on refining milestones	In the process of developing a scope 2 target for signatories (Fashion Charter)				
	Programmes to support implementation	• *Brand / retailer owned or operated emissions WG (Charter WG8)* • *100% renewable energy coalition (RE100)*	• *100% renewable energy coalition (RE100)*	• *100% renewable energy coalition (RE100)*		
	Responsibility for tracking milestones	• *Fashion Charter*	• *Fashion Pact*	• *Fashion Pact*		
4b.	**Reduce GHG emissions in owned operations (scopes 1 and 2)**			100 million tons of CO2 equivalent across Scopes 1, 2, and 3 (approx. 40% reduction) for 22 Chinese companies in Climate Stewardship Initiative (China National Textile & Apparel Council CNTAC) 80% efficiency gain in retail operations through switch to LED lighting. Reduce energy consumption across heating, ventilation and air conditioning equipment in retail operations (McKinsey & GFA)		
	Organisations working on refining milestones					
	Programmes to support implementation	• *CDP Climate Change questionnaire tracking emissions data and breakdown across all 3 scopes and reporting guidance (CDP)*				
	Responsibility for tracking milestones			• *China National Textile & Apparel Council CNTAC*		

Key: Existing milestones and programmes / Milestones that have been published but not currently owned or tracked by any organisation / Milestones and programmes in development

Industry | Logistics

Shipping of materials and products across the value chain

#	Action	By 2021	By 2025	By 2030	By 2040	By 2050
5a.	**Reduce GHG emissions in freight**			30% reduction in freight emissions relative to a 2015 baseline (Smart Freight Centre) Recalibrate to 90% sea transport and 10% air transport across the industry. Baseline: transport mix is 83% sea transport and 17% air transport (McKinsey & GFA)		Net Zero freight emissions (SFC)
	Organisations working on refining milestones					
	Programmes to support implementation	• *Global Logistics Emissions Council voluntary partnership developing guidelines for reporting and reducing logistics emissions, and the GLEC Framework methodology for calculation (GLEC)* • *Transport guidance (Science Based Targets initiative)* • *SmartWay for land freight in USA (Environmental Protection Agency)* • *Clean Cargo for marine shipping (Business for Social Responsibility)* • *Sustainable Air Freight Alliance for air freight (BSR)*				• *Roadmap towards Zero Emission Logistics by 2050 by the Alliance for Logistics Innovation through Collaboration Europe*
	Responsibility for tracking milestones			• *Smart Freight Centre*		• *Smart Freight Centre*
5b.	**Innovate to increase sustainable transport solutions**			90% electrification of B2C light vehicles transport fleet, improve battery technology and enable rapid digitization (McKinsey and GFA)		
	Organisations working on refining milestones					
	Programmes to support implementation	• *Smart Freight Procurement Guidelines (World Business Council, WBCSD and Smart Freight Centre, SFC)* • *Sustainable Freight Procurement Framework (Clean Cargo and Sustainable Air Freight Alliance)* • *Low Emissions Fuels and Vehicles for Road Freight guide (SFC)* • *Coalition to accelerate transition to electric vehicles (EV100)*	• *Carbon insetting white paper (SFC)*			
	Responsibility for tracking milestones					

Key: Existing milestones and programmes / Milestones that have been published but not currently owned or tracked by any organisation / Milestones and programmes in development

Industry | Use phase

Consumer care (washing, drying, dry cleaning, etc.) and end of life (reuse, recycle, landfill)

#	Action	By 2021	By 2025	By 2030	By 2040	By 2050
6a.	**Address consumer use phase GHG emissions impacts**			Consumers to skip 1 in 6 washing loads, wash half of loads at below 30 degrees and substitute every sixth dryer use with open air drying (McKinsey & GFA)		
	Organisations working on refining milestones					
	Programmes to support implementation	• *Consumer communications playbook being developed (UNEP, Charter WG6; to be published in September 2021)* • *RealReal consignment platform, ThredUP (consignment) and The Renewal workshop (refurbishment) calculating GHG emissions from repair, rental, and subscription*				
	Responsibility for tracking milestones					
6b.	**Redirect products from landfill and increase optimal recycling**			Increasing recycling from 17% to 30% and increase closed loop recycling rate from 1% to 5% (McKinsey and GFA) 40% of fibres in clothing to be recycled (Quantis)		
	Organisations working on refining milestones					
	Programmes to support implementation	• *Ellen MacArthur Foundation Fashion circular investment opportunities study: Goal 8 on clothing collection, sorting and recycling infrastructure* • *Circular Materials Guidelines (Fashion Positive and Textile Exchange)* • *Swapchain initiative combining Blockchain + clothes swapping (Global Fashion Exchange)* • *Circular Clothing Action Plan (Platform for Accelerating the Circular Economy and WRAP)* • *Circularity roadmap and Anatomy of Action (UN Environment Programme)*				
	Responsibility for tracking milestones					

Industry | Business model & circularity (1 of 2)

Designing out waste and pollution, keeping products and materials in use, and regenerating natural systems

#	Action	By 2021	By 2025	By 2030	By 2040	By 2050
7a.	**Increase innovation in development of mechanical and chemical recycling technologies**					
	Organisations working on refining milestones					
	Programmes to support implementation	• *Future Fashion Now circular design competition (WeDesign, Ellen MacArthur Foundation, UN)* • *Good Fashion Fund, Accelerator and Scaling Programme (Fashion for Good)* • *Waste collection research incl. post-industrial and post-consumer activities in the US (Accelerating Circularity)* • *Fabric of Change accelerator for social innovation in apparel industry (Ashoka and Laudes Foundation)*				
	Responsibility for tracking milestones					
7b.	**Reduce overproduction through investment in new technologies and improved forecasting**			Reduction of overproduction from 20% to 10% through improvement in demand forecasting technology and stock management (McKinsey and GFA) Reduce ecommerce return rates from 35% to 15% (McKinsey and GFA)		
	Organisations working on refining milestones					
	Programmes to support implementation	• *Material Change Index and circularity partnership (Textile Exchange and EMF)* • *Circular Fashion Ecosystem Project research providing guidance on COVID resilient, cohesive, and circular value chains; Phase 1 publication due Sep 2021 (Institute of Positive Fashion, British Fashion Council)*				
	Responsibility for tracking milestones					

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Key: Existing milestones and programmes / Milestones that have been published but not currently owned or tracked by any organisation / Milestones and programmes in development

Industry | Business model & circularity (2 of 2)

Designing out waste and pollution, keeping products and materials in use, and regenerating natural systems

#	Action	By 2021	By 2025	By 2030	By 2040	By 2050
7c.	Switch to lower GHG business models and consumer offers (e.g. rental)			1 in 5 garments traded through circular business models (McKinsey and GFA) Grow rental market share to 3% from 1%, refurbishment model market share to 2% from 1% and re-commerce model market share to 12% from 7%. Ensure repairs increase product life by 25% (McKinsey and GFA)		
	Organisations working on refining milestones					
	Programmes to support implementation	• *'Make Fashion Circular' blueprint (Ellen MacArthur Foundation)* • *Guidance for startups on green business and sourcing practices (Institute of Positive Fashion)*		• *Textiles 2030 Circular Textiles UK-wide Roadmap (WRAP & SCAP)* • *Country by country rollout of the Circular Clothing Action Plan (CCAP) (WRAP and Global Fashion Agenda)*		
	Responsibility for tracking milestones					

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Non-Industry | Policies (1 of 3)

#	Action	By 2021	By 2025	By 2030	By 2040	By 2050
8a.	**Standardize definitions for measurement of GHG emissions, circular design impacts and waste taxonomies, with reference to existing industry data sources, standards and practices**					
	Organisations working on refining milestones					
	Programmes to support implementation	• _Circular Economy for Textiles_ report (Policy Hub) • *Efforts to standardise impact data in Tier 4, incl. raw materials (Charter WG2, Textile Exchange, and the EU)*				
	Responsibility for tracking milestones					
8b.	**Support global transition to low-carbon transport, renewable energy and energy efficiency through incentives**			Provide right regulatory incentives to enable 90% electrification of B2C light transport fleet (McKinsey & GFA)		
	Organisations working on refining milestones					
	Programmes to support implementation	• *Working with suppliers, brands, and governments on _waste water management and policies_ (Swedish Textile Water Initiative STWI, WWF)* • *Engaging 6 producer markets to progress policies on renewable energy (Charter WG4)*				
	Responsibility for tracking milestones					

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Key: Existing milestones and programmes / Milestones that have been published but not currently owned or tracked by any organisation / Milestones and programmes in development

Non-Industry | Policies (2 of 3)

#	Action	By 2021	By 2025	By 2030	By 2040	By 2050
8c.	**Improve low carbon materials sourcing by incentivising recyclability in design and implementing recycled content requirements through improved farmer regulations and capacity building**		EU Member States required to set up separate collection of textiles by 2025 in support of recycling target of 55% of municipal waste by 2025 (Policy Hub)			
	Organisations working on refining milestones			*Public targets being set by major cotton brands for more sustainable cotton sourcing (not later than 2030), incl. increased percentage use of Better Cotton, organic, Fairtrade, CmiA and recycled cotton (WWF, Solidaridad, PAN UK)*		
	Programmes to support implementation	• *The Sustainable Cotton Ranking (WWF, Solidaridad, Pesticide Action Network UK)*				
	Responsibility for tracking milestones					
8d.	**Ensure a national level transition to a decarbonised energy grid and mix**			China to generate 50% of total electricity in 2030 from non-fossil fuels incl. renewables plus nuclear (WRI & AII)	100% zero carbon electricity grids (RE100)	
	Organisations working on refining milestones					
	Programmes to support implementation	• *Engaging 6 producer markets to progress policies on renewable energy (Charter WG4)* • *Active in key Asian markets around renewable energy (GIZ, IFC, and World Bank)*			• *Policy engagement around renewable grids (RE100)*	
	Responsibility for tracking milestones				• *RE100*	

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Non-Industry | Policies (3 of 3)

#	Action	By 2021	By 2025	By 2030	By 2040	By 2050
8e.	Create incentives for improved performance and innovation from fashion companies, through interventions such as start-up and technological investment, market access requirements and extended-producer responsibility measures					
	Organisations working on refining milestones					
	Programmes to support implementation	• *EU Green Recovery Plan in the Textile, Apparel and Footwear Industry 7 principles (Policy Hub)* • *Extended Producer Responsibility workshops (Policy Hub, OECD)*				
	Responsibility for tracking milestones					
8f.	Increase scope and regularity of environmental audits (incl. energy performance requirements) in the sector					
	Organisations working on refining milestones		• *UK Government reviewing whether proposed tax on virgin plastics by 2022 should be applied to textile products containing less than 50% recycled PET (Environmental Audit Committee)*			
	Programmes to support implementation	• *De-duplicate audits within the textile and footwear value chain through the Zero Discharge of Hazardous Chemicals (ZDHC) programme (ZDHC and Sustainable Apparel Coalition)* • *Higg Facility Environmental Module (Higg FEM) (Sustainable Apparel Coalition)* • *Garment & Footwear Responsible Supply Chains Due Diligence Guidance (OECD)*				
	Responsibility for tracking milestones					

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Key: Existing milestones and programmes / Milestones that have been published but not currently owned or tracked by any organisation / Milestones and programmes in development

Non-Industry | Finance & Investment

#	Action	By 2021	By 2025	By 2030	By 2040	By 2050
9a.	**Support development of new investment vehicles like public-private partnerships to invest in R&D projects on innovation priorities and supply chain transformation**			$20-30 billion required in financing per year by 2030 (BCG, Fashion for Good)		
	Organisations working on refining milestones					
	Programmes to support implementation	• *Good Fashion Fund, Accelerator and Scaling Programme and VC funding (Fashion for Good)* • *Partnership for Cleaner Textiles (PaCT, International Finance Corp.)* • *Philanthropic funding (Aii)* • *Public funding (GIZ, STWI)* • *Global Supplier Finance (GTSF) programme (IFC, World Bank)* • *Financial tools (Charter WG5)*				
	Responsibility for tracking milestones					
9b.	**Shift investment portfolios towards brands with robust environmental credentials, and support accurate and effective ESG assessments**					
	Organisations working on refining milestones					
	Programmes to support implementation	• *ESG initiatives (CDP, CERES, TCFD, GRI, UN Global Compact, MSCI, EcoVadis, Sustainanalytics, DJSI / Trucost / S&P, FTSE4Good)* • *Gold Standard certification body assessing its value chain intervention guidance for Fashion*				
	Responsibility for tracking milestones					

Key: Existing milestones and programmes / Milestones that have been published but not currently owned or tracked by any organisation / Milestones and programmes in development

Non-Industry | Civil Society (1 of 2)

#	Action	By 2021	By 2025	By 2030	By 2040	By 2050
10a.	**Increase number of apparel producer and brand/retail companies actively engaged in industry sustainability initiatives**					
	Organisations working on refining milestones	Grow Fashion Charter signatory base at double digits each year; baseline 100 company signatories in 2020 (Fashion Charter)				
	Programmes to support implementation	• _UN Alliance for Sustainable Fashion_ (UN agencies & allies) • _Fashion Transparency Index_ (Fashion Revolution) • _Global Initiatives Map_ (British Fashion Council & Institute of Positive Fashion) • _Detox my Fashion_ civic action (Greenpeace) • Broader climate action promotion (Charter WG6)				
	Responsibility for tracking milestones	• Textile Exchange				
10b.	**Expand capacity-building efforts in producer countries in collaboration with other stakeholders**	By 2020, support 5 million cotton farmers to improve their livelihoods by adopting sustainable agricultural practices (Better Cotton Initiative)		Reduce fertilizer and pesticide usage in cotton cultivation by 40% through improved practices such as targeted spreading (McKinsey & GFA)		
	Organisations working on refining milestones		• Organic Cotton Standard (OCS) (Textile Coalition)			
	Programmes to support implementation	• _Impact Incentives_ to support farmers in zero deforestation and regenerative practices (TE) • _Cool Farm Tool_ and method for quantifying and measuring GHG for farmers (Anthesis) • _Cotton Made in Africa initiative_ (Aid by Trade Foundation)				
	Responsibility for tracking milestones	• Better Cotton Initiative	• Textile Exchange			

Key: Existing milestones and programmes / Milestones that have been published but not currently owned or tracked by any organisation / Milestones and programmes in development

Non-Industry | Civil Society (2 of 2)

#	Action	By 2021	By 2025	By 2030	By 2040	By 2050
10c.	**Signal demand for new technical and financial innovations to investor community**					
	Organisations working on refining milestones					
	Programmes to support implementation	• _Fashion Transparency Index_ *(Fashion Revolution)* • _Sustainable Fashion Glossary_ *(Conde Nast, Centre for Sustainable Fashion)* • _Sustainability journalism_ *(Vogue Business)* • _Good Fashion Fund_ *(Fashion for Good)*				
	Responsibility for tracking milestones					
10d.	**Convene coalitions, networks, forums and events to champion climate action throughout the industry**					
	Organisations working on refining milestones		Gain support of industry federations and conduct Climate Action conferences in top 7 sourcing countries (Charter WG6)			
	Programmes to support implementation	• _2020 Circular Fashion System Commitment_ *against 4 action points with individual targets (Global Fashion Agenda GFA)* • _Copenhagen Fashion Summit_ *(Global Fashion Agenda)* • _Textile Sustainability Conference_ *(Textile Exchange)* • _Count Us In_ *– 1 billion citizen climate change pledge initiative (TED)* • _Fashion Act Now_ • *Fashion Slow Down (UNEP)* • *The Green Carpet Initiative (Eco-Age)*				
	Responsibility for tracking milestones					

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Key: Existing milestones and programmes / Milestones that have been published but not currently owned or tracked by any organisation / Milestones and programmes in development

Literature review summary (1 of 2)

#	Report name	Author	Date	Key findings
1	Roadmap to Net Zero: Delivering Science-Based Targets in the Apparel Sector	World Resources Institute + Apparel Impact Institute	September 2020	• Identified and analysed six most impactful interventions to enable the apparel sector to deliver emissions reductions needed to stay within a 1.5C° pathway • Developed an estimate of apparel sector emissions - 1.39 Gigatonnes of CO_2 for 2019 - and then contrasted that number with those of three other studies (EMF: 1.2, Quantis: 3.29, GFA: 2.1)

2	Fashion on Climate	Global Fashion Agenda + McKinsey & Company	August 2020	• To align with the 1.5-degree pathway over the next 10 years, the fashion industry needs to reduce annual emissions to around 1.1 billion tonnes (nearly a 50% reduction). The report outlines three parts to this reduction:
				  i. Upstream operations (where around 60% of emissions savings are possible)
				  ii. Actions relating to brands' own operations (another 20%)
				  iii. Consumer behaviour (the final 20%)
				• Around 90% of this accelerated abatement can be delivered below a cost of around $50 per tonne of GHG emissions, and around 55% of the actions required will lead to net cost savings on an industry wide basis.

3	Preferred Fiber & Materials: Market Report 2020	Textile Exchange	June 2020	• The report reveals that global fiber production has doubled in the last 20 years, reaching an all-time high of 111 million metric tons in 2019. Pre-COVID-19 trends indicated potential growth to 146 million metric tons by 2030. • Analysis of various trends in different fibers reveals that the market for preferred fiber and materials is growing, but not at the speed and scale required

Literature review summary (2 of 2)

#	Report name	Author	Date	Key findings

4	Financing the Transformation in the Fashion Industry	Fashion for Good & Boston Consulting Group	January 2020	• Concluded that achieving a step change in sustainability by 2030 requires deploying $20 billion to $30 billion in financing per year to develop and scale disruptive innovations and business models, and outlined how this investment could be distributed (60% on energy, water and waste).
				• Identified and then analysed six barriers to financial innovation:
				  i. Misaligned incentives
				  ii. Limited awareness of the opportunity
				  iii. Absence of a structured innovation process
				  iv. Lack of experience and technical expertise
				  v. Incorrect perceptions regarding pricing and externalities
				  vi. Inadequately structured exclusivity

5	Measuring Fashion: Insights from the Environmental Impact of the Global Apparel and Footwear Industries study	Quantis	February 2018	• This report found the apparel industry to be putting out significantly more GHG emissions than other studies - 3.3 billion tonnes each year.
				• It also found that, on average, a global citizen consumes 11.4kg of apparel annually, thereby producing 442kg CO_2-eq emissions per capita
				• The report emphasised that in a business-as-usual scenario, the apparel industry's climate impact is expected to increase 49% by 2030.
				• Highlighted three levers for action:
				  i. Rethink energy: Maximise efficiency and shift to renewables
				  ii. Disrupt to reduce: digitalisation + new consumption models
				  iii. Design for the future: Preferred and recycled fibers

Extended report list

#	Report name	Author	Date	Description
1	Science Based Targets Guidance for the Apparel and Footwear Sector	World Resources Institute and Science Based Targets initiative	Jun 2017	Outlines a vision for a new textiles economy based on the principles of a circular economy that delivers long-term benefits
2	A New Textile Economy: Redesigning Fashion's Future	Ellen MacArthur Foundation	May 2017	Outlines a vision for a new textiles economy based on the principles of a circular economy that delivers long-term benefits
3	Vision of a circular economy for fashion	Ellen MacArthur Foundation	May 2017	Blueprint for the fashion industry to help redesign the way we create clothes and help tackle the root causes of global challenges
4	First Steps to Transform our Industry	The Fashion Pact	Oct 2020	Summary of progress in year one and outlines plans to bring pillars of climate, biodiversity, and oceans
5	Building blocks for a sustainable circular economy for textiles and footwear	Policy Hub	Dec 2019	Studies and consultations to see how circular economy principles could be best applied to the textile and footwear value chain
6	A common framework for EPR in the apparel and footwear industry	Policy Hub	Dec 2019	Open a dialogue with policymakers to jointly shape a common framework for an EPR system for the textile, apparel, footwear industry
7	Textiles and the environment in a circular economy	European Environment Agency	Nov 2019	Provides an EU perspective of the climate pressures from textile production and consumption, and discusses how circular business models and regulation can help
8	Climate Action Playbook	UNFCCC Fashion Industry Charter for Climate Action	Sep 2020	A living document that will seeks to help fashion stakeholders identify what actions to take and which initiatives and programmes could support them
9	Sustainable Fashion Glossary	Conde Nast, Centre for Sustainable Fashion	Jun 2020	Aims to strengthen and develop sustainability literacy in fashion media by providing guidance on pertinent terms surrounding sustainability in fashion
10	Fixing fashion: clothing consumption and sustainability	Environmental Audit Committee, UK Parliament	Feb 2019	Recommendations to UK government on policy shifts required to incentivise fashion retailers and producers to redress the environmental cost of clothes
11	Resilient management in the age of responsible retail	Accenture Responsible Business Coalition WWD	Sep 2020	A guide to managing with an environmental, social and governance (ESG) focus to achieve a sustainable, profitable, and more resilient future

Consulted individuals

#	Name	Organisation
1	Laila Petrie	2050
2	Lindita Xhaferi-Salihu	UNFCCC Fashion Charter
3	Stefan Seidel	PUMA and Charter WG1 co-chair
4	Jeremy Lardeau	Sustainable Apparel Coalition and Charter WG1 co-chair
5	Amina Razvi	Sustainable Apparel Coalition
6	Andrew Martin	Sustainable Apparel Coalition
7	Eva Von Alvensleben	The Fashion Pact
8	Kristen Nuttall	The Fashion Pact
9	Michael Sadowski	World Resources Institute
10	Cynthia Cummis	World Resources Institute
11	Lewis Perkins	Apparel Impact Institute
12	Emily McGarvey	Apparel Impact Institute
13	La Rhea Pepper	Textile Exchange
14	Siena Shepard	Textile Exchange
15	Claire Bergkamp	Textile Exchange and Charter WG2 co-chair
16	Morten Lehmann	Global Fashion Agenda
17	Eva Kruse	Global Fashion Agenda
18	Kehua Hu	China National Textile and Apparel Council
19	Hoang Ngoc Anh	Vietnam Textile and Garment Association
20	Vu Duc Giang	Vietnam Textile and Garment Association
21	Rubana Huq	Bangladesh Garment Manufacturers and Exporters Association

Consulted individuals

#	Name	Organisation
22	Pernilla Halldin	H&M Group and Charter WG4 co-chair
23	Kim Hellstrom	H&M Group
24	Keith James	Waste & Resources Action Programme
25	Sarah Grey	Waste & Resources Action Programme
26	Sam Gillick-Daniels	Waste & Resources Action Programme
27	Abishek Bansal	Arvind Ltd
28	Stephanie Venuti	OECD
29	Dorothy Lovell	OECD
30	Michael Costello	Stahl
31	Eszter Toth-Weedon	Smart Freight Centre
32	Giulio Berruti	Business for Social Responsibility
33	Matthew Guenther	Tal Apparel and Charter WG3 co-chair
34	Tracy Nilsson	Adidas Group and Charter WG3 co-chair
35	Brittany Burns	Fashion for Good
36	Katrin Ley	Fashion for Good
37	Karla Magruder	Accelerating Circularity
38	Shari Friedman	International Finance Corporation and Charter WG5 co-chair
39	Christopher Marshall	UNFCCC
40	Michelle Lai	Conde Nast and Charter WG6 co-chair
41	Hannah Phang	Futerra and Charter WG6 co-chair
42	Shailja Dube	British Fashion Council
43	Cara Smyth	Accenture, Fashion Makes Change, Responsible Business Coalition