

INQUIRY INTO AUSTRALIA'S WASTE MANAGEMENT AND RECYCLING INDUSTRIES  
SUBMISSION 1

# THE FUTURE— OF INDUSTRY ADVOCATING ON BEHALF OF THE TEXTILE & APPAREL SECTOR

SUBMISSION PAPER BY ACTA, JAN 2020

## WHILST THE SURGE OF RECENT MEDIA HAS FOCUSED ON THE CHALLENGES FROM TEXTILE WASTE –

the *real* opportunity has been largely overlooked. The textile sector has the chance to blueprint circular design, leading the way to a circular economy.

This position paper outlines the textile waste crisis and outlines ACTA's 2030 Roadmap to coordinate policy making and industry leadership over the coming decade.

### EXECUTIVE SUMMARY

**TEXTILE RECOVERY must be a focus for state bodies, governments, private industry and consumers over the coming decade. We know that:**

- #1 Clothing and apparel waste isn't going away-not only are we purchasing more clothes than ever before, we're wearing them fewer times.
- #2 Non-apparel textile waste from industry is poorly documented, and represents a significant source of high value recyclable materials.
- #3 Second-hand clothing and apparel markets already offer reliable channels for reuse.
- #4 Delivering textile recovery systems is a genuine option for carbon abatement.
- #5 International markets for apparel reuse have an uncertain future, making high value recovery services increasingly important.
- #6 Transparency and supply chain impact now sit at the forefront of consumer expectations.
- #7 Australian Governments are taking notice.
- #7 Technological barriers that have traditionally hindered textile recycling are being overcome.

**ACTA'S ROADMAP to 2030 outlines a considered response on behalf of industry, with a clear direction for members to support. This covers three main areas:**

#### RESEARCH AND ADVOCACY

Specifically long-term projects with a view on circularity:

- Investigate and quantify precise textiles waste sources, quantities and compositions.
- Endorse and communicate active innovative leadership toward entrepreneurial textile advancements.
- Propose legislative resource recovery reviews for textiles, to align with circular reprocessing systems and qualified data.
- Assess the urgency to address lack of certifications, guidelines and industry standards.

#### CAPACITY BUILDING

**Where can we improve! Through analysing existing solutions we'll develop programs and working groups assisting with:**

- Supporting prosumer markets for textile or circularity through procurement
- Support joint ventures to scale technological advancements through academia or start-ups.
- Designing with end-of-life in mind.
- Scaling efficient textile reuse by partnering with private industry, government bodies and charities-Collective Impact.
- Scaling the reuse of textiles through greater corporate, government and charity collaboration.

#### SCALING SOLUTIONS

**Reinforcing the plan for research, advocacy and expediting scalable textile recovery technologies, ACTA provides a cohesive framework aligning all verticals in the supply chain; including consumers; with a clear outlook toward nationwide textile recycling.**



## WE ARE ACTA. The Australasian Circular Textile Association [ACTA] is the not-for-profit industry association driving resource efficiency for textiles within Australia.

Collective action is needed to create change, and it is our charter to align the individual interests and efforts of textile users and producers, consumers and recyclers to a shared set of objectives in order to lead the transition to a circular economy.

### THIS IS BIGGER THAN FASHION

In 2018, sixty-eight percent (68%) of all textile waste sent to landfill in Victoria was from post-industrial sources; carpets, hotel linens, event banners, furniture and upholstery, corporate uniforms, agricultural netting and geotechnical fabrics.

**Whilst post-consumer clothing remains a key focus, this is far bigger than fashion.**

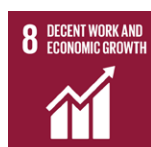
Our membership and stakeholders reflect this broader view of textiles, and make up the most complete network of knowledge and intention in Australia. ACTA is supported by a steering committee of industry experts, and our founding members. Find out more at [www.acta.global](http://www.acta.global).

### A VISION FOR TEXTILES IN 2030

Our work is focused on driving inclusive, collaborative and strategic projects across the broader textiles industry and this position paper presents the practical steps to a nation-wide recovery program by 2030. Built on the principles of the circular economy, this system will focus on preserving value in textiles, directing them to the highest order of recovery, reuse or recycling. ACTA recommends the following four initiatives to the Government in respect of the Inquiry on Innovative Solutions in Australia's Waste and Recycling Industries.

| 2030 TARGETS  | ACTIONS  |
|---|--|
| Ninety-five percent (95%) recovery and reprocessing of all textiles | <ul style="list-style-type: none"> <li>Establish a landfill rebate on textile diversion</li> <li>Establish a tax rebate for textile products complying with stewardship policies</li> <li>Support the development of recycling capacity in New South Wales and Victoria that meets the total spectrum of fabrics disposed nationally</li> </ul>  |
| An operational national Textile Stewardship Scheme                  | Support and direct AU\$4 billion of investment from government, industry and individuals to support textile circularity in Australia   |
| Carbon Foot-printing  | <ul style="list-style-type: none"> <li>Develop an estimated 10,000 new jobs nationally, focusing on second-hand trade and material recovery</li> <li>Establish national standards for the procurement and import of textiles with a view to supporting end-of-life recovery</li> <li>Mandate the use of seventy percent (&gt;70%) or greater recycled content in new synthetic textile products</li> </ul> |

ACTA's work acknowledges the greater challenges of sustainable development in a changing climate and aligns to the United Nations Sustainable Development Goals 8, 9, 12 and 13.



## **THE LONG AND THE SHORT OF TEXTILE WASTE.**

**TEXTILES ARE EVER-PRESENT. NOT ONLY ARE THEY OUR CLOTHING, BUT ALSO OUR CARPETS, FURNITURE AND BEDDING; THEY ARE IN THE CARS WE DRIVE, AT THE EVENTS WE ATTEND, IN THE HOTELS WE STAY IN AND UNIFORMS WE WEAR.**

### ***CURRENTLY, THERE IS NO SCALED CAPABILITY TO RECYCLE TEXTILES ON-SHORE IN AUSTRALIA.***

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#### **#1 CLOTHING AND APPAREL WASTE ISN'T GOING AWAY - NOT ONLY ARE WE PURCHASING MORE CLOTHES THAN EVER BEFORE, WE'RE WEARING THEM FEWER TIMES.**

Clothing production has more than doubled in the past 15 years and the average number of wears per garment has decreased by thirty-six percent (36%).<sup>1</sup> With eighty-five percent (85%) of the apparel we buy each year ending up in landfill,<sup>2</sup> this is clearly not a sustainable model.

To keep pace with trends fashion companies are cycling stock faster, and expired stock is increasing. H&M alone is estimated to have destroyed US\$4 billion dead-stock in 2018.<sup>3</sup> Today, the Australian apparel sector is worth AU\$22 billion annually, while the global apparel industry will surpass US\$1.65 trillion by 2020 – a massive sixty percent (60%) growth since 2011.<sup>4</sup>

However, some commentators predict that within the next decade, the second-hand clothing trade will be larger than fast fashion retail.<sup>5</sup> Through technology, consumers are finding it easier than ever to embrace second-hand rented clothing.

#### **#2 NON-APPAREL TEXTILE WASTE FROM INDUSTRY IS POORLY DOCUMENTED, AND REPRESENTS A SIGNIFICANT SOURCE OF HIGH-VALUE RECYCLABLE MATERIALS.**

In Victoria, post-industrial sources account for sixty-eight percent (68%) of all textile waste in the state.<sup>6</sup> Due to the ubiquity of textiles, textile waste is broadly under reported. In NSW, the quantity of carpet alone disposed of in landfill was equivalent to all clothing and apparel (2% respectively of total material landfilled).<sup>7</sup> When considering the broader extent of textiles from cars, furniture, mattresses and agriculture there are huge components of textile waste not captured in current reporting.

Industry consumes high volumes of relatively homogeneous non-apparel textiles (e.g. linens, towels, mattresses, furniture, carpets), and due to landfill levies incur significant costs for disposal. Businesses disposing of non-apparel textiles have a strong financial incentive to seek alternatives to landfill, and will likely be early supporters of textile recycling.

#### **#3 SECOND-HAND CLOTHING AND APPAREL MARKETS ALREADY OFFER RELIABLE CHANNELS FOR REUSE**

Reuse is a stumbling block for many other industries, yet it is the most broadly used means of recovery for clothing and apparel. The charity sector oversees 40 million customer transactions each year, of which, approximately 45.6 million units of clothing and apparel are given a second life.<sup>8</sup> Charities represent an already viable avenue to higher order recovery, extending the life-time of garments and supporting reuse.

In industry, clothing rental models gaining popularity for higher value items, whilst several brands now support their customers with instore resale and online communities for trading and selling unwanted garments. Internationally, the value of the clothing rental market is expected to quadruple over the next decade as 'pay as you go' models for clothing become increasingly accepted.<sup>9</sup>

In comparison to most other material categories the established consumer behaviours, services and systems for reuse mean that in the transition to a circular economy, textiles are already ahead of the curve.

## ***IN THE TRANSITION TO A CIRCULAR ECONOMY, TEXTILES ARE ALREADY AHEAD OF THE CURVE.***

### **#4 DELIVERING TEXTILE RECOVERY SYSTEMS IS A GENUINE OPTION FOR CARBON ABATEMENT**

Annual greenhouse gas emissions from textile production is 1.2 billion tonnes (or eight percent (8%)) of global emissions; greater than that of all international flights and maritime shipping combined. Based on current rates of growth, the textile industry would account for twenty-six percent (26%) of the global carbon budget by 2050.<sup>10</sup>

The embedded impacts of textile production in land use, energy, water and resources, make the delivery of true fibre-to-fibre recycling (to displace raw fibre manufacture) a huge opportunity to reduce carbon emissions, not just a means of reducing waste to landfill.

**2,700L of water** is used to produce one cotton t-shirt, enough for one person to drink for 2.5 years.

**Only 30% of clothing** are made from natural fibers, 70% of now comes from synthetic sources.

**706 billion kgCO<sub>2</sub>** is generated each year from polyester production for textiles.

Fabric Dying **pollutes up to 200 Tonnes** of water per every 1 Tonne of fabric produced.

### **#5 INTERNATIONAL MARKETS FOR APPAREL REUSE HAVE AN UNCERTAIN FUTURE, MAKING HIGH VALUE RECOVERY SERVICES INCREASINGLY IMPORTANT**

The charity sector provides a well-established peer-to-peer reuse network, demonstrating the effectiveness of community drop-off networks, physical sorting, reuse/resale and job creation. However only a small portion of clothing donated to charity in Australia is suitable for resale in the country, the remainder is transported offshore for sale in international markets.

Oxfam suggests that as much of seventy percent (70%) of clothing donated to charities globally will end up in Africa,<sup>11</sup> and an oversupply in these countries has prompted discussions in these countries around banning the import of clothing due to its competitive impact on domestic clothing manufacturing.<sup>12</sup> High-value recycling processes will ease pressure on reuse networks, and allow them to focus on delivering volume and quality to second-hand markets in Australia.

### **#6 TRANSPARENCY AND SUPPLY CHAIN IMPACT NOW SITS AT THE FOREFRONT OF CONSUMER EXPECTATION**

As a global conversation, sustainable best practice has become hotly contended, studies showing that eight out of ten customers consider a companies corporate values before purchasing,<sup>13</sup> and eighty-eight percent (88%) of customers will become more loyal to brands who show an affinity to corporate social responsibility.<sup>15</sup>

Due to the rise in online shopping, Australia Post recorded, in 2018, forty-nine percent (49%) of online shoppers would choose to buy products from businesses taking action to reduce impact on the environment.<sup>14</sup> To build on the momentum of these trends, the real value of utilising recycled content in clothing and garments needs to become a better understood aspect of clothing sustainability to drive markets and value in a textile recovery system.

With close to 700 attendees at The Australian Circular Fashion Conference (in 2018 and 2019), it is evident that designers, manufacturers and consumers are eager to take action on textile recovery across Australia.

## WITH SUSTAINABLE APPAREL AT THE FOREFRONT OF THE CONSUMER CONSCIOUSNESS, NOW IS THE TIME TO ESTABLISH EXTENDED PRODUCER RESPONSIBILITY AND BEST PRACTICE.

### #7 AUSTRALIAN GOVERNMENTS ARE TAKING NOTICE

Estimates vary, but between 500,000 and 800,000 tonnes of textiles are disposed of in landfills annually,<sup>15</sup> whilst in Victoria and New South Wales clothing and apparel make up six percent (6%) of curbside domestic waste.<sup>18</sup> Textiles are becoming an area of intense interest across all levels of government.

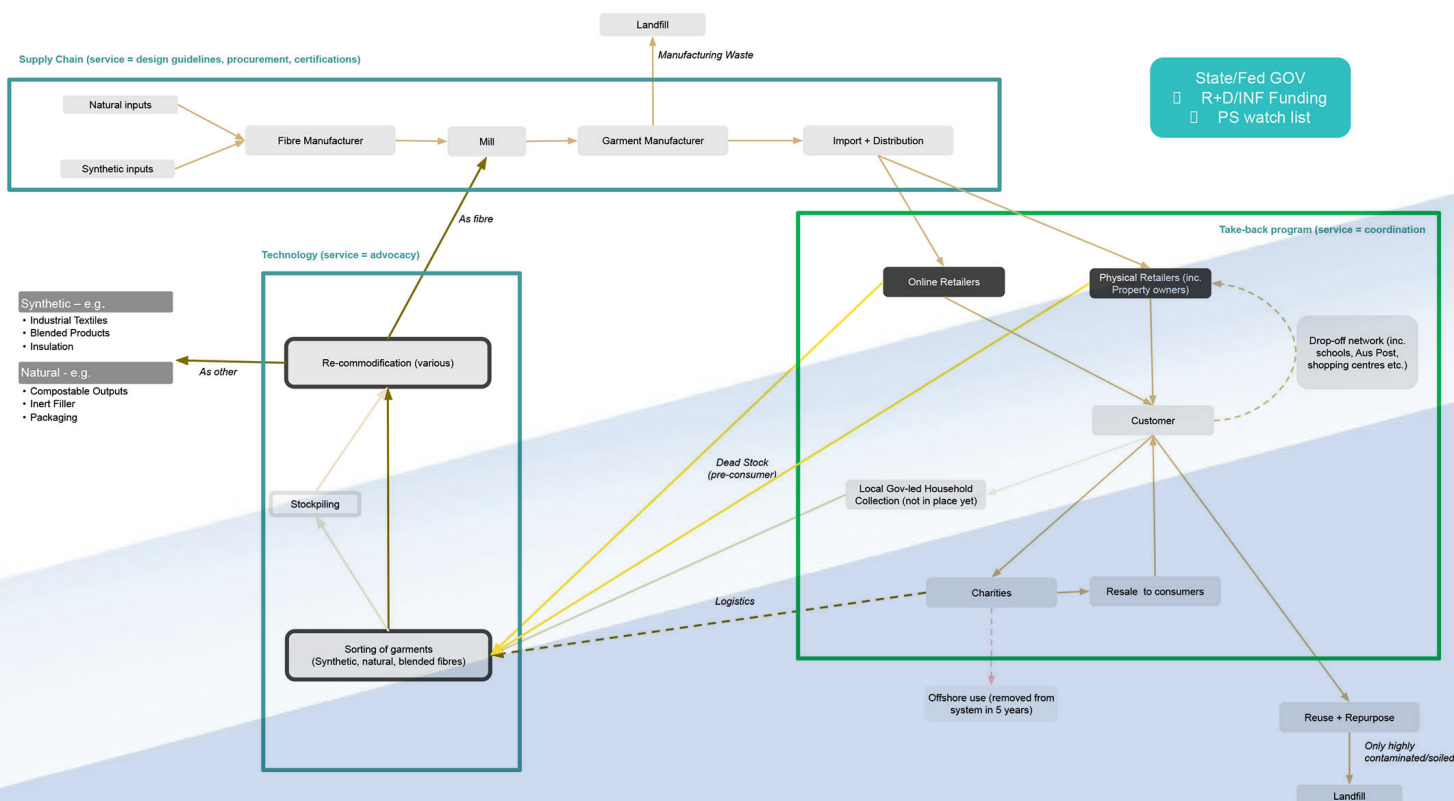
Due to changes in international markets for recycling, 2019 and 2020 have seen an unprecedented focus on waste management. Increasingly, textiles are being recognised as a significant and problematic waste stream, with grant programs supporting projects reducing, reusing or recycling textiles waste. On a local level, 'providing all residents within the City of Sydney with regular clothing and textile collections for recycling' is a stated goal for 2030.<sup>16</sup>

To give some sense of the economic and social opportunity in this space, textile sorting, reuse and recovery in the US processes 1.1 billion kilograms of post-consumer textiles each year has created more than 17,000 jobs.<sup>17</sup>

### #8 TECHNOLOGICAL BARRIERS THAT HAVE TRADITIONALLY HINDERED TEXTILE RECYCLING ARE BEING OVERCOME

Textile waste is poorly recovered internationally and in Australia due to a lack of scaled recycling capacity, as a result, reuse remains the dominant recovery process. In Victoria, textile waste has the lowest recycling rate of any measured waste stream, with less than one percent (1%) being recycled into new products.<sup>18</sup> Of this one percent (1%), recovery processes are typically mechanical, transforming old garments into rags or stuffing.

However, change is coming. In 2018, the H&M Foundation and HKRITA opened two first-of-a-kind textile recycling facilities in Hong Kong using hydrothermal methods for recycling cotton and polyester into new fibres. A myriad other technological solutions for fibre-to-fibre recycling are emerging, which will fill the current technology gap in a circular economy for textiles.



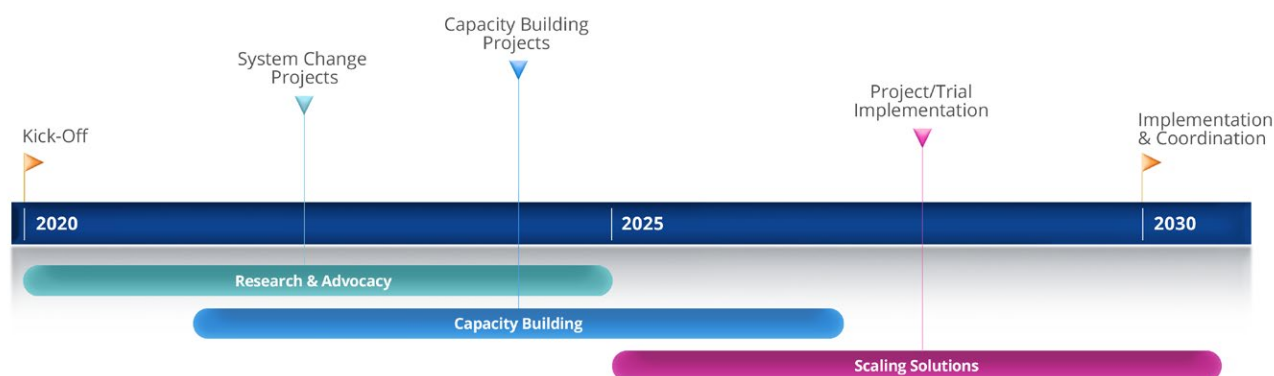


## ACTA ROADMAP 2030– FINDING THE COMMON THREAD

To drive progressive and informed change across the textile supply chain, ACTA clusters its activities under three streams; Research and Advocacy, Capacity Building and Designing for the Future. Under each of these streams sit specific projects informed by the current and future needs of members and the broader interest of avoiding textile waste to landfill. The following pages categorise and describe projects currently progressing, and those planned to 2030.

ACTA is committed to supporting and partnering with the Government in accelerating innovative solutions, with specific emphasis on our area of influence and authority.

### 2020–2025 PROJECTS



#### ► RESEARCH & ADVOCACY.

These projects take a long-term view on textile circularity by:

- Building knowledge of textiles waste sources, quantities and composition.
- Supporting and publishing research to inform entrepreneurship in this space.
- Creating supportive policy environments for textile recovery nationally.
- Educating consumers on the impacts of consumption decisions.

#### ► CAPACITY BUILDING.

These projects work with existing solutions to do what we can do, better.

- Projects will assist industry and ACTA members with:
- Supporting markets for textile recovery through procurement.
  - Designing products with end-of-life in mind.
  - Scaling the reuse of textiles through greater corporate, government and charity collaboration.

#### ► SCALING SOLUTIONS.

Building on research, advocacy and emerging technologies, these projects will provide alignment amongst manufacturers, consumers and re-manufacturers with a view to nationwide textile recovery.

The focus of this work will be on:

- A collaborative approach to extended producer responsibility.
- Avoiding excessive textiles waste by addressing over consumption.
- Aligning the actions of individual companies.

## ► RESEARCH & ADVOCACY

### ► WHAT WE MEASURE, HOW WE MEASURE.

By developing greater clarity around the volumes, types and condition of textile waste in Australia this project will establish a common process of measurement and tracking for textile waste for local/state government kerbside waste audits, the charity sector and businesses. Aligning a process for data collection will make the occurrence and fate of textiles much clearer and inform the focus of policy setting and future ACTA projects.

In addition to clothing this project will focus on post-industrial textiles wastes (such as carpets, coverings, signage and corporate uniforms) which provide typically large volume, homogeneous streams.

Project outputs will supplement existing auditing schedules to help build accurate data of the types of textiles being disposed and their scope for reuse or repurposing (before recycling).

### ► FINDING THE TRUE COST.

The majority of textiles' environmental impact sits in their manufacture rather than their physical disposal. Understanding the embodied impacts of these supply chains, and the potential points of intervention is essential.

In a circular economy, energy and material needs to be preserved. Ensuring that supply chain improvement focuses on environmental impact hotspots, and that recycling processes create substitutable inputs to existing processes will help understand the potential of textile recovery as a low-cost abatement pathway.

Understanding the real cost of textiles on an emissions basis will allow greater alignment between textile waste and corporate or government emissions reduction targets.

### ► ADVOCATING FOR RECOVERY.

Textile-to-textile recovery offers a huge scope for carbon reduction, job creation and regional employment. Ensuring that governments are aware of technological developments, consumer interest, and, are playing an active role in support is essential to success.

ACTA remains the central point of contact for government and the textiles sector and will continue to advocate for:

- The recognition of improved practice through tax offsets, grant funding, and
- Supportive policy for the sector (i.e. landfill bans, inclusion on the national product stewardship list).

**KEY PARTNERS:** SSROC, NACRO; including charitable partners, State waste authorities.

**TIMELINE:** Underway & completion in mid-2020

**KEY PARTNERS:** Ellen MacArthur Foundation, ACTA members, National Carbon Accounts.

**TIMELINE:** Commencing 2020

**KEY PARTNERS:** Local/State/Federal Governments.

**TIMELINE:** Ongoing, 2020 - 2025



## ► CAPACITY BUILDING

### ► CIRCULAR THREADS.

A takeback system will require a logistically efficient system of aggregating textiles from consumers and businesses. This project will work closely with the charity sector, local councils, social enterprise and leading brands already offering garment take-back programs to establish and test systems for front-end recovery prior to the delivery of a broader takeback program.

The low density of textiles makes transportation at large distances difficult – informing and activating consumer behaviour will be critical to collection at scale through the existing charity network and potential new brand or corporate partners.

This project will explore the use of an expanded drop-off network for consumers to increase the volumes of textiles passing through the donation network.

### ► TECHNOLOGY FOR TEXTILES.

The delivery of a textile takeback program will require new technologies to sort and recycle textiles unable to be reused. This project will have two pillars, supporting the location of:

- Sorting technologies
- Recycling/recovery technologies

Partnerships are already in place with leading Australian and international research organisations to address this gap and ACTA will continue to monitor and support these organisations to progress their respective technologies with access to the most up to date data and business model inputs.

Ensuring technologies address the breadth of the textile waste stream and align to existing and planned sorting/collection processes will be essential.

### ► REUSE AND REPAIR.

The reuse economy is forecast to grow and promoting this to consumers is an immediate and effective focus area for textile waste reduction.

ACTA will work with its members and the charity sector to develop grass roots and social enterprise to capture post-industrial overstock, and extend the life of clothing. These projects will focus on linking the textile recovery sector to jobs and employment objectives of state and federal governments.

Educating and engaging consumers on opportunities for reuse and repair of clothing in the home and with peers will provide an opportunity for members to test new business models for clothing and apparel.

**KEY PARTNERS:** SSROC, NACRO; including charitable partners, corporate/brand supporters.

**TIMELINE:** Completion 2022

**KEY PARTNERS:** NACRO, Holland Circular Hotspot, Local/State and Federal Governments.

**TIMELINE:** Commencing 2020

**KEY PARTNERS:** ACTA members, charity and social enterprise sectors.

**TIMELINE:** Ongoing, 2023 - 2027

## ► SCALING SOLUTIONS

### ► PROMOTING RESPONSIBLE CONSUMPTION.

A circular economy starts with avoidance, and this project will focus on educating consumers to make responsible decisions in the purchase and consumption of textiles.

This will focus on adapting existing work in this space internationally, drawing project such as WRAP UK's Longevity Protocol, and France's Extended Producer Responsibility program providing minimum standards for recycled fibre content and incentives for sustainably designed garments. Adapting these approaches to Australian markets will ensure alignment in global supply chains and reduce market differences for textile producers.

Establishing common metrics for communicating sustainability in textiles and clear instructions for end-of-life recovery will be essential to levelling an approach for industry.

### ► REFINING SECTOR APPROACHES.

As technologies for sorting and recovery evolve, ACTA will amplify it's impact by jointly leading projects within sectors with significant textile use. This could include, linens, aprons and towels from hospitality, linen sheets and drapery from the medical sector, or carpet in the built environment.

By keeping an open dialogue with these large and textile users (many of whom are already searching for opportunities to improve) ACTA will support other industry bodies to target and enforce improvements in textile procurement and disposal.

The scale and homogeneity of post-industrial textiles waste will support emerging textile recyclers by providing a surety of supply, or, demand for recycled content.

### ► A NEW WAY OF DOING BUSINESS.

To support a circular economy for textiles, new models for doing business are required. ACTA will work with internationally contemporaries to showcase innovative brands and services from Australia, whilst also providing a channel for international suppliers to work in the Australian market.

Key focus areas will include leasing, product as a service and take-back offerings for consumers; developing these ideas within the context of the Australian market whilst also familiarising consumers with these alternate approaches.

ACTA will support and build awareness of alternate business models with consumers and brands with the objective of reducing textiles waste to landfill.

**KEY PARTNERS:** International initiatives.

**TIMELINE:** 2025–2030

**KEY PARTNERS:** Industry bodies.

**TIMELINE:** 2025–2030

**KEY PARTNERS:** ACTA members.

**TIMELINE:** 2025–2030

## MOVING WITH THE TIMES.

ACTA is delighted to speak on behalf of this sector, which prides itself on collective impact, to support the Government with the following specific feedback in respect of the Inquiry.

Since 2016, the Australian Circular Fashion Conference (ACFC) led the national discourse around textile sustainability and waste recovery. However, in 2020 we will not be hosting the ACFC as our effort and energy move toward supporting practical action through ACTA, founded at the 2019 conference.

ACTA is led by the needs of our members with a forward focused view on filling the gaps in a circular textile system. Our scope covers the breadth of commercial, consumer and industrial textiles, with an emphasis on post-consumer clothing.

An ongoing theme of the ACFC (and now ACTA) is the continued effort to build awareness and support outside of industry. We advocate across federal, state and local governments and will continue to explore the most efficient technologies to separate and recover textiles from commercial and residential waste streams.

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## BE A PART OF THE CHANGE

Our growing membership receives access to Australia's largest textiles sustainability network and the benefits of it's collective knowledge. We advocate on behalf of your organisation to ensure that textiles waste is addressed in a coordinated way, under a supportive political and economic environment.

Membership is open to all companies manufacturing, retailing, consuming, or recycling textiles and we are seeking your involvement.

We are the voice of industry - and we need you to be heard.

Find out more at <http://acta.global/membership/>

ACTA also encourages the Government to engage and consult the charitable reuse and recycling sector, and to invite us back to the table for further discussions.



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### Endnotes:

1. Ellen MacArthur Foundation
  2. Omnibus YouGov
  3. CB Insights 2019
  4. MarketResearch.com
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  9. Bloomberg.com
  10. Ellen MacArthur Foundation 2017
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  16. City of Sydney, 2017
  17. The Balance
  18. Sustainability Victoria 2018
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