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# A Better T-Shirt

FOR TODAY AND  
TOMORROW

**Circular Stories**  
Volume 1





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## CONTRIBUTORS

### Circular Stories Working Group

Julie Boulton, *MSDI*

Aleasha McCallion, *MSDI*

Courtney Holm, *A.BCH*

Samantha Seljak, *Seljak Brand*

Kirri-Mae Sampson, *Now + Future*

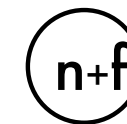
Genevieve Moody, *APG & CO*

Amy Gallagher, *Kloke*



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A.BCH



KLOKE

Graphic design and illustration //  
Ivy Hajduk, *MSDI*

### Origins

The Circular Stories Working Group, and the idea for this guide, originated from a research trial, conducted in partnership with BehaviourWorks Australia, Circular Strategies and the Australian Fashion Council. The research trial focused on gaining a better understanding of the characteristics of businesses and business actors, their barriers to innovation and what may help them shift towards adopting circular economy behaviours and business models.



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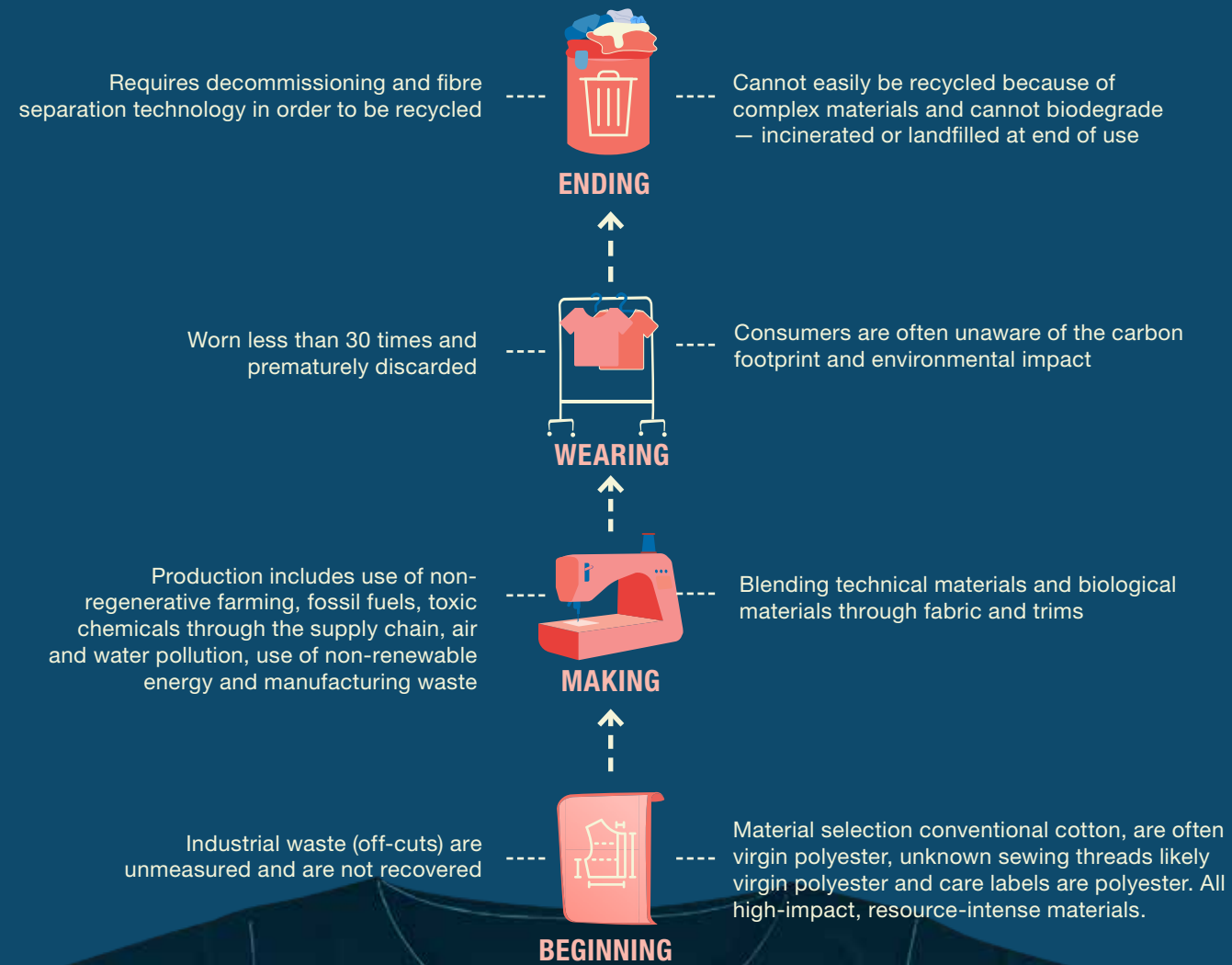
BehaviourWorks  
AUSTRALIA



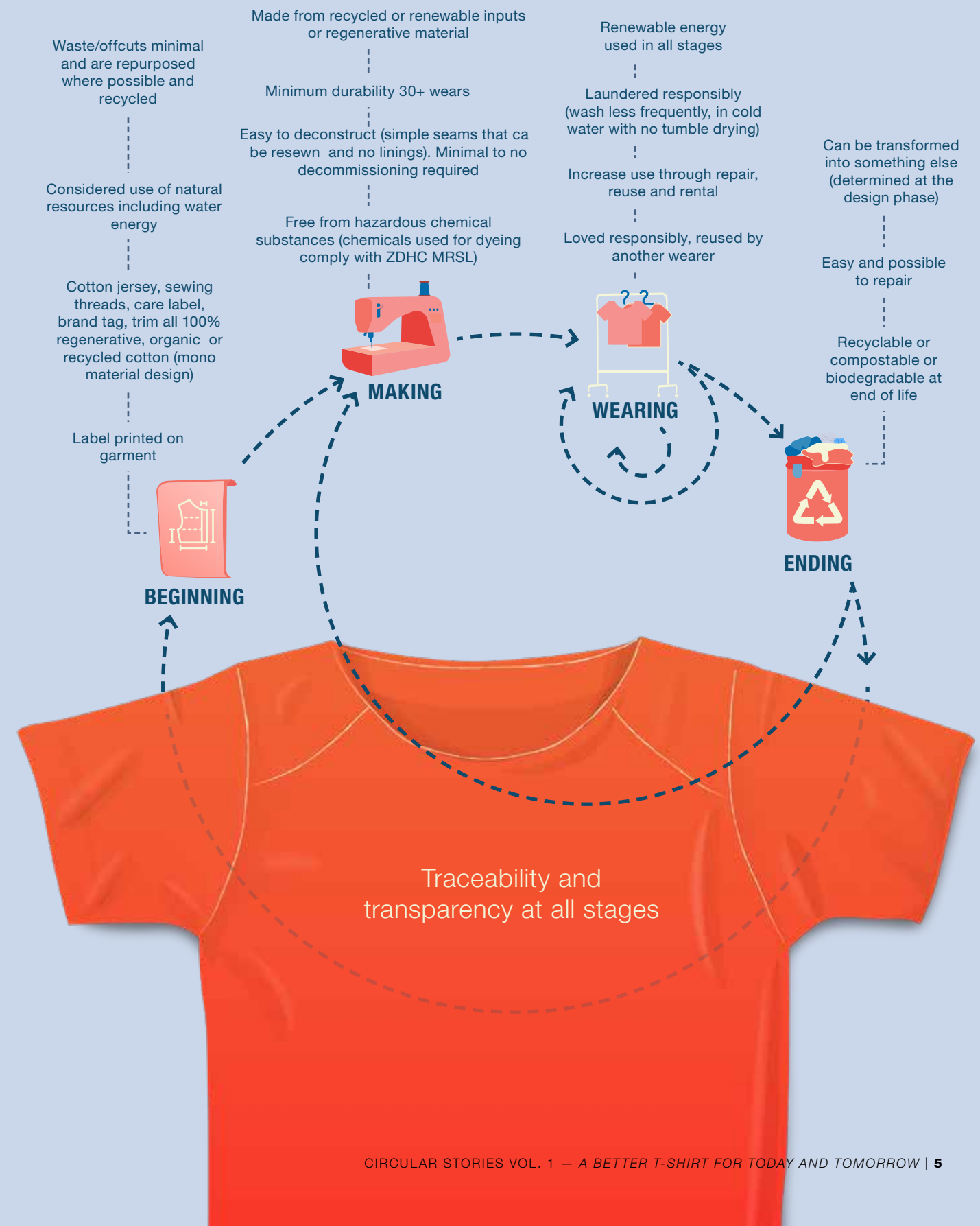
*In the spirit of reconciliation the Circular Stories Working Group acknowledge the Traditional Custodians of country throughout Australia and their connections to land, sea and community. We pay our respect to their elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples today.*



# Not Circular



# Circular





# Decoding circular fashion for the Australian context



This is a guide for designing, making, using, reusing and disposing of t-shirts in Australia, for the wellbeing of people and planet.

We are the Circular Stories Working Group, a collective of designers, distributors, re-users, recyclers and researchers committed to raising awareness of what a circular textiles economy means in the Australian context.

We believe that many producers, retailers, marketers, regulators and consumers in Australia are faced with a knowledge gap about how to take up an alternate, better way to make, shop and use clothing and textiles. By better, we mean a way that is kinder for people and planet. By kinder, we mean an approach that is circular by design.

While this guide is situated in the Australian experience and context, we hope that anyone, anywhere in the world, will find this guide useful and, ultimately, make some changes — big or small as a result.

We are grateful for your attention. Together, we can make, sell, buy, use and reuse clothing and textiles that is better today and better for tomorrow.

## Together, let's start thinking circular today...



### ...TO MAKERS/PRODUCERS

The end is your starting point: what you decide to do at the very beginning impacts what can happen during and at the end of life.



### ...TO DISTRIBUTORS/RETAILERS

By sourcing and selling t-shirts in a circular way you can make a huge difference to our world, put people and planet at the centre of all decisions, inspire others and advocate for changes along the way.



### ...TO PURCHASERS

Choosing circular means you commit to being a custodian of the t-shirt at this particular stage of its life. You look after it well, you use and re-use it, you may regift it, you may return, donate or recycle it and, above all, you respect it!



### ...TO EVERYONE

Everyone is needed if circularity is to be achieved. We can all look after what we already have. We can choose to make and buy in a manner that places people and planet at the centre, and we can dispose thoughtfully and considerately. Together, let's start thinking circular today.



# Hi...



I'm your average t-shirt. I have a front and back, two sleeves, and a neck hole. But, while I may look simple, there are multiple steps involved to make, sell and dispose of me. This means there are many choices to be made about me that — directly and indirectly — impact people and planet.

It's estimated that more than 15 billion t-shirts exactly like me are produced every year. This production is taking place against a backdrop of multiple and increasing stresses placed on the health of our planet. Water shortages, biodiversity loss, soil degradation and changes to our climate are some examples of the pressures our planet is facing.

Not every one of me that is produced is used in a responsible and respectful way. Worldwide, the average number of times a garment is worn before it ceases to be used has decreased by 36% in the last 15 years and it is estimated that more than half of fast fashion produced is disposed of in under a year.<sup>1</sup>

Given the pressures on our planet noted above, this is absolutely unsustainable.

Yet I still want to exist (don't we all?). I also want the fashion industry — the Textile, Clothing and Footwear sector that I am an integral part of — to thrive, now and in the future. This means that I need to become a better version of me — a circular version. You can call me CIRC-T!

For this to happen, I need you — whether you are **a maker, distributor/retailer or purchaser** — to make decisions today that significantly reduce the impact that I have on our planet.

I know this can be done and there are plenty of great examples out in the world already that we can learn from. But I also know that it can be daunting to begin. What exactly does circular mean? How significant are the changes that have to be made? Where is the relevant information?

To help you begin, let me tell you my story by taking you through each significant stage of my lifecycle: **the beginning, the making, the wearing and the ending**. For each of these stages I have decoded the decisions you need to make, separating them into four categories — called principles — that I believe make up a circular approach: **Reduce, Revalue, Regenerate and Respect**. Only when each of these principles at each stage of my life have been addressed can I be called circular.

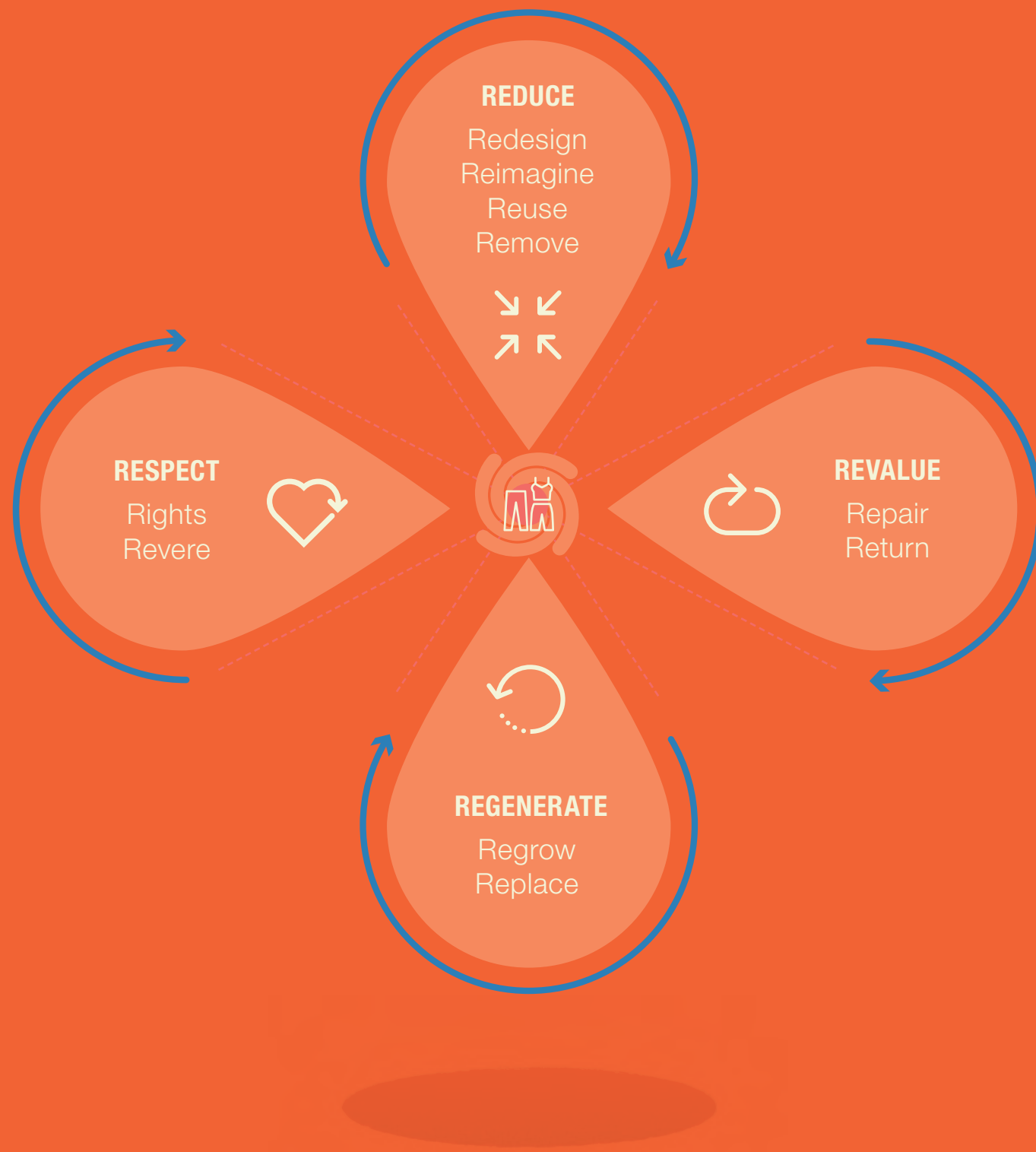
I'm super excited by this. Becoming a CIRC-T is a good thing. Actually, no. It is a *great* thing for all of us — people and planet — for today and for tomorrow. So what are you waiting for? Let's begin the journey.

## My typical lifecycle





# Circular Principles for Fashion



## Kind for the Planet

Our principles focus on kindness for the planet by:



Reducing waste — by eliminating waste by design and reimaging what waste really is;



Revaluing our resources — by repairing, returning and renewing what already exists; and



Regenerating our earth — by making every effort to regrow and replace what has been removed.

## Kind for the People

Our principles focus on kindness for people by respecting those who make the clothing — from growers to makers to retailers — and by revering the product that is produced as a result of their processes.



# The negative impacts of clothing (globally)



The European Union classifies **165** chemicals commonly used in clothing production as hazardous to human health or the environment



## (FAIL TO) REDUCE

- Globally, it is estimated that we collectively throw away USD **460 billion** worth of apparel each year.
- Only **12%** of textile waste is downcycled and less than **1%** is recycled.
- Of the **100 billion** garments produced globally annually, an estimated **30%** go to landfill within the first year of purchase.
- Up to **85%** of textiles are sent to landfill each year.
- **73%** of textile waste is incinerated or ends up in landfills which releases pollutants into the surroundings and contributes to habitat loss.
- In Australia, **6000kg** of clothing and textiles are dumped in landfill **every 10 minutes**.

 **21B tonnes**

Up to 21 billion tonnes of textiles are sent to landfill each year



## (FAIL TO) REVALUE

- The fashion industry is the **third highest** emitter of carbon by industry type.
- It is estimated that **4%** of the world's total emissions were created by the fashion industry in 2018.
- Producing petroleum-based textiles uses an estimated **342 million barrels of oil** every year.
- It is estimated that **43 million tonnes** of chemicals are used in production processes such as dyeing or finishing treatments.
- The fashion industry is responsible for **20%** of global water waste annually.
- The textiles industry consumes **215 trillion liters of water** per year.
- More than **150 million trees** are logged annually for the production of man-made cellulose fibres (MMCF) — up to 30% of MMCFs come from endangered and primary forests.



## (FAIL TO) REGENERATE

- Virgin materials make up **94%** of clothing and textile production content.
- **Less than 1%** of the materials used to produce clothing are currently being recycled into new clothing.
- An average of **700,000 fibers** from clothing are released in a standard laundry load. Half a million tonnes end up in the world's oceans each year (an estimated **35% of primary microplastics** in the world's oceans originate from the washing of synthetic textiles).
- Approximately **25%** of industrial water pollution comes from textile dyeing and treatment. These processes contaminate waterways through chemical runoff and nonbiodegradable liquid waste.
- Dumping clothing in landfills impacts biodiversity: growth in landfills impact on habitat loss, textiles emit methane gases as they decomposes and harmful chemicals from dyed garments can leach into soils, degrading soil health.



## (FAIL TO) RESPECT

- The European Union classifies **165 chemicals** commonly used in clothing production as hazardous to human health or the environment.
- Workers in production and manufacturing are typically **paid below a living wage**, work unregulated long hours and can be blocked from organising or unionising.
- The chemical component of textile production **impacts all of the people** involved in the supply chain, including warehouse and retail staff, the end consumer and those processing 'waste' during the end of life stage.
- The mismanagement of pesticides in the production of textiles on land or use and untreated release of hazardous chemicals from manufacturing will end up in waterways or seep into the soils directly impacting the safety of all communities who rely on the water and soil for their **eating, drinking, cooking and cleaning needs**.



## — Beginning

# Why am I being made?

The very first thing to talk about is whether I need to be made at all. We know that we are producing more yet using items for less<sup>1,2</sup> but are we making the link between what this means both for our planet and the people involved?

Making anything, including making me, involves resources. Water, land, soil, trees, oil, chemicals, are all ingredients that might be in me and we are using these at an alarming rate. Global material resource extraction has grown exponentially (27 billion tons in 1970 to 92 billion tons in 2017). WWF's Living Planet Report (2020) says that we need 1.5 Earths to support our current resource use. We only have one, just in case you need reminding.

This unsustainable use of resources directly impacts our environment. Biodiversity (meaning the diversity of life in all its forms) is declining at a faster rate than ever before in human history. We know our world's climate is changing. Our land degradation, including soil degradation and land clearing, continues at pace and water pollution, both in freshwater and in our oceans, is a significant concern.

*We need to think carefully about what we make our clothes out of now, for our future.*

Now think of the people that are involved in making me and the people who live near the areas I am being produced. Their health and wellbeing is connected intimately to their environment and if they are working in the field or in the factory that has unsafe and unfriendly environmental practices (ie chemicals use, wastewater discharge) there are direct consequences — air pollution, water contamination, soil degradation.

What does all of this mean for the making of me? If we want to keep making me then we need to change how I am produced and how I am consumed. I need to be kinder for people and planet. Here are the things to do.

*"In 2019, global fibre production was around 111 million mt. Fiber production has more than doubled in the last 20 years and is expected to increase by another 30 percent to 146 million mt in 2030 if business as usual continues."<sup>3</sup>*



### ➔ ➔ ➔ REDUCE

Start by reimagining how I am made: redesign me with a focus on limiting waste, ease of disassembly and durability. Ensure minimal to no pollution occurs in the process also, thereby protecting our people and our planet.

### ↻ REVALUE

**Repair**, replace, return and renew are the key descriptors here. Recyclability needs to be at the forefront of all decisions and every effort must be made to ensure that the most is made out of me at all stages of my life.

### ↻ REGENERATE

Make me using **renewable** resources only and do so in a way that is **regenerative** — in a way that regrows, restores and revitalises the ecosystem that I come from.

### ♥ RESPECT

Respect the process, and the rights of the people who made me at every step of the journey, and revere the clothes — reduce the overall consumption of me by loving me and looking after me for a long time.

<sup>1</sup>Worldwide, clothing utilisation – the average number of times a garment is worn before it ceases to be used – has decreased by 36% compared to 15 years ago.<sup>7</sup> EMF A new textiles economy, citing Circular Fibres Initiative analysis based on Euromonitor International Apparel & Footwear 2016 Edition (volume sales trends 2005–2015). All numbers include all uses until the garment is discarded, including reuse after collection and resale.

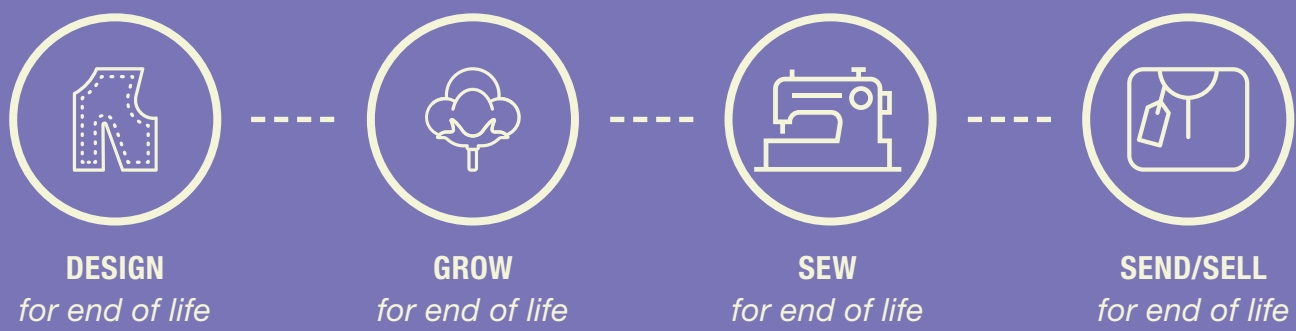
<sup>2</sup>McKinsey and Co, in their 2020 report, "Biodiversity: The next frontier in sustainable fashion", estimate that overproduction on the apparel sector is, on average, around 20%. 25% of that ends up being landfilled or incinerated without having ever been worn.

<sup>3</sup><https://www.resourcepanel.org/reports/global-material-flows-and-resource-productivity-database-link> Global Material Flows and Resource Productivity (with database link)



# How am I being made?

The decision has been taken and I am going to be made. Yay. But now we need to focus on the how. Let's revisit the principles of circularity and think about the end, in the beginning.



For EACH stage the most critical thing — and the very first thing you have to do is this: **think of what can happen to me at the end of each life stage.** Think of this when you design me, when you grow and sew me, and when you send and sell me.

Why is this so critical? Well, if I am designed, grown, sewn, sent and sold without thinking of my end of life then there is a high probability that the four principles of circularity for fashion will not be met. We can't have that because we know we cannot keep making me in a linear way. It has to change.

| *The end has to be the beginning.*



## Design: creating me

### REDUCE

- Am I designed in such a way that I can last for a very long time (durability, repair and reuse)?
- Will I be able to be repaired?
- Will I be able to be reused?
- Can I be easily disassembled so that parts of me (including threads and trims) can be reused and/or recycled?
- Am I being made from a material that will be able to be remanufactured?
- How much pattern wastage will there be (can you digitise my pattern making to ensure limited fabric wastage)?
- What will happen to my offcuts (can something else be made from them)?

### REVALUE

- Have you checked that any chemicals or substances of concern that could contaminate me (and prevent me from being recycled) are not being used?
- Have you chosen materials that can be made to be made again (mono materials, designed for disassembly)?
- Will I be able to be recycled at end of life?

### REGENERATE

- Can I be made into something else?
- Can you ensure I am not over-produced (can you ask for customer pre-orders and/or use data to ensure correct supply)?
- When my life as a t-shirt is over will I be able to be:
  - be kept in stock for a long time (assuming I am not made-to-order); or
  - be repaired (will repair kits or instructions on how to repair be provided with me)?
  - Will you offer a take back program to rescue me at the end of life?
  - When all the above options have been exhausted, could I be remanufactured (could you use my materials to make something new - either new fabrics or into a brand new me)?

### RESPECT

- Have you considered where I will be made, under what conditions and by whom?
- Have you chosen manufacturing partners who are transparent about their practices and offer open access to their partners?
- Are the all the workers involved being paid a living wage, allowed to organise and working in safe conditions?



# Grow: sourcing me

## REDUCE

- Will I be made from renewable resources (see preferred list of materials, Box A)?
- Am I made from just one material (mono material) like 100% organic cotton or from only one category of material, like 100% cellulose?

## REVALUE

- Will I be made from a material that is regenerative in nature, meaning the material can be biodegradable and therefore be reused?
- Will I be able to enter life cycle again, (can I be composted and feed the soil so as to make new material)?

## REGENERATE

- Has my material been grown using regenerative practices?
- Is there transparency regarding any chemicals used in fibre production and how those chemicals are disposed of?

## RESPECT

- Have my materials been grown in conditions that are healthy and safe for the growers/workers?
- Are the working conditions up to relevant standards (and are those standards audited and enforced)?

## BOX A: PREFERRED LIST OF MATERIALS



### The preferred list of materials includes:

- Renewable resource grown using regenerative or organic farming practices
  - Certified organic cotton (Global Organic Textile Standard [GOTS]/ Organic Cotton Standard [OCS] preferred)
  - Wool (R.W.S certified)
  - Silk (organic and/or peace silk)
  - Linen
  - Hemp
- Regenerated Cellulosics
- Single fibre (mono material)
- 100% recycled polyester (preferably certified recycled in accordance with Global Recycled Standard)
- Recycled cotton
- Lyocell fibers produced via REFIBRA technology in different blend.

Mono material is the best option for the whole t-shirt. This means that we should be striving to match what we use as fabric for the main t-shirt with what we use for the threads, and trim.

### The preferred list of material for threads and trims include:

- GOTS organic cotton sewing threads (for organic cotton)
- Tencel Lyocell threads
- Cellulosic fibre based fabrics
- Recycled PET threads (for recycled polyester).

### For labels and brand tags, we recommend sourcing:

- GOTS organic cotton labels printed with vegetable inks; or
- OCS Organic woven cotton labels and size pips
- As a minimum, chemicals used for dyeing should comply with ZDHC MRSL. Ideally, natural pigments, or non-toxic pigments.

## BOX B: CLARIFICATION OF TERMS



Regenerative and renewable are intimately linked concepts. As the Ellen MacArthur Foundation and others note, we need to aim to use renewable materials using regenerative production practices.

### Renew/Renewable

Renewable materials are materials derived from living matter that are extracted in a sustainable manner, meaning they are sourced using regenerative and restorative methods means that in the production of the material there is no negative impact on the environment and the source is renewed at a rate equal to, or greater than, the rate of depletion.

Types of renewable material include material sourced from crops (i.e. cotton and linen), trees (i.e. bamboo, viscose and Lyocell from closed-loop systems), animals (i.e. wool) along with some more experimental material that is currently being developed (ie algae, mushrooms and pineapple). Waste and by-products sourced from living matter are also included, along with recycled fibres (including recycled synthetic).

### Regenerate/Regenerative/Restorative

To regenerate means to regrow, restore and revitalise. Regenerative and restorative practices improve, increase and rebuild soil organic matter. In so doing, we improve the health of our ecosystems and protect our biodiversity.

Agro-forestry, sustainable forest management, permaculture, organic farming practices are all example of regenerative process.

*“It includes techniques such as cover cropping, no-till, and crop rotation. These practices tend to generate multiple benefits including improving soil health, increasing soil water holding capacity, reducing pest pressure, and sequestering carbon.”*  
– Textile Exchange

*“Regenerative production practices build soil health and carbon content, increase water quality and biodiversity, and improve the resilience of ecosystems.”* – EMF



## Sew: manufacturing me

### REDUCE

- Could I be made on demand?
- Has thought been put into pattern creation to ensure limited pattern wastage?
- Can something be made from the offcuts (ie Seljak blankets)
- Can waterless dyeing techniques be used so as to minimise water usage?
- Can digital printing be used so as to reduce water and chemical use?

### REVALUE

- What is the water usage involved to make me (including dyeing and pre-washing)?
- Will the factory be required to pre- wash or can the shrinkage be calculated in the pattern making?
- Is the water used for the production of me recycled?
- Is the water used for the production of me treated (and compliant with either the local standard or GOTS standard) and reused before being released (waste water)?
- Has the production facility where I am made implemented the Zero Discharge of Hazardous Chemicals, Manufacturing Restricted Substances List (ZDHC MRSL), and Wastewater Guidelines?

### REGENERATE

- Is industrial and manufacturing waste captured and treated before being released?
- Are “greener” chemicals (such as plant-based instead of mineral oil-based lubricants) or natural dyes, which generate less effluent, being used?
- Is the energy source powering the factory renewable?
- Are non-toxic dyes and finishing agents being used?

### RESPECT

- Do the people making me work in safe and healthy places that are fair and respectful? Has adequate attention been made of the following:
  - equality/gender rights
  - living wage
  - health and safety
  - legal protections

#### CASE STUDY 1

##### Seljak

Factory floor offcuts from Australia's oldest wool weaving are used to make Seljak Brand's closed loop, recycled wool blankets. After the blankets live a long life, Seljak Brand collects them free of charge, using a carbon neutral courier service. The collected blankets are remanufactured into more blankets.



## Send and sell: handling me

### REDUCE

- How much packaging - from factory to store and from store to buyer - is being used?
- What type of packaging is being used (single use, plastic, reusable, recyclable or compostable material?)
- Are efforts underway to minimise packaging?
  - Do I need packaging of any description at all?
  - Could my packaging be part of my product?
  - Could my packaging be used to share knowledge, ie, by including care instructions?
  - Could my packaging become another product in its own right?
- Can alternatives to single use plastic be used to wrap me in? Options include:
  - packed in boxes
  - shipped straight to store.
  - using one large poly bag instead of multiple poly bags
- Can packaging be saved and reused? And, if so, is this being done?
- Can packaging be returned?

**The Australian Packaging Covenant** ('the Covenant') is a national regulatory framework under the National Environment Protection (Used Packaging Materials) Measure 2011 (NEPM) that sets out how governments and businesses across Australia share the responsibility for managing the environmental impacts of packaging.

### REVALUE

- How far am I traveling between all points along the supply chain? Can this be reduced in some way?
- Has the carbon calculation of my travel been assessed? Is work underway to reduce the amount (ie product should be sea freighted not air to reduce carbon)
- Can all deliveries between manufacturing suppliers be carbon offset?
- Can electric vehicles be used?

### REGENERATE

- Is all packaging for delivery from manufacturer to consumer made from reusable, recyclable or compostable material?
- What type of packaging is being offered to customers in store?

### RESPECT

- Is there education provided at the selling point on how to care for me and what to do with me at the end of my life?
- Are the workers in store being treated fairly? safe working environment? living wage?



## — Wearing

# How am I being used and reused?

Congratulations on buying me. Now comes the slightly mushy part. I really, really want you to love me. Like forever!

To show me (and the world) just how much you care, please consider the following:

1. While we are together, use me well. This means taking good care of me. Wash me only when necessary and according to my instructions and repair me (or even re-dye me) if and when I require it. I'll last much longer!
2. If we do have a falling out, don't throw me out. Pass me onto someone else. Consider on-selling me, gifting me or donating me.
3. When the time comes that I can no longer be used as a t-shirt, use your imagination to up-cycle me. I'm quite a versatile material and can be used for a variety of other things, like bags, scrunchies and plant holders. Alternatively, find out where I can be regenerated into something new."



### CASE STUDY 2



#### Citizen Wolf x Dempstah Zero Waste Yarn

Dempstah an Australian textile company, is turning Citizen Wolf's offcut scrap jersey textile waste into new yarn. The yarn that is created has consumed no water, no bleach and no dye and produces no chemical discharge.

### CASE STUDY 3



#### A.BCH

A.BCH is passionate about the "use" phase of their clothes. Every time a garment is sold, a post purchase care program is activated for the customer, starting with a digital care guide and additional follow-up to help pieces stay in great condition. They'll also repair any A.BCH garment for free, for life and encourage garments to be sent back to them at the end of each use phase to be assessed for re-use or recycling. It's all part of extending the life of garments, and keeping clothes loved for longer.

[Find out more here.](#)



## REDUCE

- Have I been chosen carefully — am I something that you really need and that you will really love?
- Could I be rented (especially if I am just needed for one occasion only)
- Can you lend me to a friend or borrow me from a friend?
- Is it clear what to do with me once I am no longer wanted?
- Can you wear another one just like me for a little longer?
- Is there one like me that someone else no longer needs that you can use instead?



## REVALUE

- Has a process been established by the seller for taking me back, assessing me, processing me for re-use, re-make or recycle?
- Is it clear how I can be remade/turned into something else, (upcycling)?
- Did you ask if I can be repaired easily?
- Has a repair kit for me been provided at point of sale or are there instructions on repair or mending tips offered online?
- Will the seller offer a repair service or is there an after purchase service?

*Using a piece of clothing nine months longer can reduce its associated CO2 emissions by 27 percent, its water use by 33 percent, and its waste by 22 percent.*

— McKinsey



## REGENERATE

- Can I be renewed into either a new garment or remade into something new entirely?
- Can I be taken to an op shop, charity store or social enterprise?
- Can I be resold online or via a consignment store?
- Is the seller providing a back to point of sale service (a take back scheme) for when I am no longer wanted?
- Can I be used for rags (rags are handy and necessary, and all the better if they're made from a pre-loved t-shirt rather than bought new).



## RESPECT

- Do you respect the process that has gone into the making of me?
- Will you respect me once you have bought me? Will you treat me with care, wash me according to the instructions and understand what to do with me at the end of life?
- Will you wash me only when or where I'm dirty?
- Will you wash me in a water efficient washing machine using a full load (I like to be washed with lots of other things otherwise I get lonely)
- Will you capture any microfibres I might have (use fiber collection bags that can catch some of microfibers before they enter water systems or fit a microfibre filter to the washing machine).
- Will you use phosphate free washing detergent (or other low impact detergents)?
- Will you wash below 30 degrees?
- Will you line dry me over machine drying?



# How am I being disposed of?

The time has come that I can no longer be used, either as a t-shirt or for anything else. Don't be sad about this though. I've had a great life and been used in a multitude of ways AND because I am circular my next life is about to begin!

What's super exciting at this point is that I am not going into the bin, destined for landfill or incineration.

Because I am CIRC-T and I have been made thoughtfully in the first place, I can become a brand new t-shirt straight away OR I can biodegrade, becoming rich, organic matter that will feed the growth of "new" renewable materials used to make a new t-shirt. That's amazing!

Increasingly, producers and retailers are taking responsibility for items just like me and are offering take-back schemes so that I can be returned to the point of purchase and disposed of responsibly, whether it's composting or remanufacturing me.



*As technology and innovation develop, remanufacturing will continue to improve.*



## REDUCE

- Do I really need to be disposed or is there any way to get a bit more life out of me?
- Are you following the instructions about what to do with me at end of life?
- Can I be returned to where I was bought from (take back scheme)?



## REGENERATE

- If I have been designed for disassembly then my zips and buttons will be able to be removed easily, non-toxic dyes can be washed off and threads can be dissolved. All of this enables me to be mechanically shredded and ready for regenerating into new yarn.



## REVALUE

- If I am organic cotton then I will biodegrade so please consider finding appropriate composters (this is super exciting for me because it means I get to return to the soil where I originally came from).
- Respect what else I can become by composting me (100% organic cotton or a natural mono material will biodegrade completely, therefore regenerating and renewing the soil from where it came from).



## RESPECT

- Are those working in the recycling sector treated fairly?
  - Paid a living wage?
  - Working in safe conditions?
  - Allowed to organise?



# Recommendations

You're convinced aren't you! CIRC-T's are what we should all aim to make, sell and buy. Why then are linear T's still being made? Well, it's complicated...

## ...THE PRACTICALITIES

**Right now, there are challenges to implementing a completely circular approach to clothing.**

For the making of me, access to recyclable and renewable materials is challenging. For example organic cotton is difficult given the market share of organic cotton is just 1% of the total cotton market.

At the end of me, the infrastructure for recycling t-shirts — no matter what they are made from — is limited. The establishment of and investment in (clean) infrastructure for recycling of textiles at scale is needed. Remember, we have to recycle what we currently have plus what we are continuing to make. This includes mechanisms for textile collection (household collection or drop off points), improvements in sorting technology (to identify and separate different fibres) and decommissioning technology (removal of zips, buttons, threads). Establishing biodegradable facilities for clothing is also needed.

## ...THE SOLUTION

**But...there are some changes that, we think, will speed up the transition to circularity. Let's start by applying our four principles. Together, let's reduce, revalue, regenerate and respect all t-shirts.**

✂ **REDUCE // Redesign, reuse, reimagine and remove**

Textiles are a valuable resource that do not belong in landfill or in an incinerator. We need to keep textiles at their highest value so they can be re-used and made into new products.

🔄 **REVALUE // Repair and return**

We need to ensure product design accounts for durability and ease of disassembly and we need to build market demand for recycled textiles.

🌱 **REGENERATE // Regrow and replace**

Make every effort to regrow and replace in a regenerative manner the resources used. Focus on eliminating or drastically reducing hazardous chemicals in textiles, eliminate or significantly reduce pollution and establish transparent and traceable supply chains.

💚 **RESPECT // Rights and revere**

Educate everyone as to where our clothes come from, how they are made, who made them, how to use them respectfully and how to dispose of them responsibly.

Finally, a really important part of respect is acknowledging the significant role that the TCF industry makes to Australia, and the Australian economy. As such, the TCF sector should be included in all circular economic policy and action plans going forward.



# I Pledge...

I pledge to do my part to help create a CIRC-T and a more sustainable fashion industry.



# Australian TCF sector

The immense contribution the Australian Textile Clothing & Footwear (TCF) sector makes to Australia must be acknowledged. We believe there is an expansive opportunity for the industry to grow, innovate, transition and continue to play an important role in Australia going forward, in a way that places people and planet first.

 **\$6B+**

Australia exports more than \$6 billion in TCF products annually

 **\$16B+**


The TCF Industry is a \$16 billion plus market

 **220,000+**

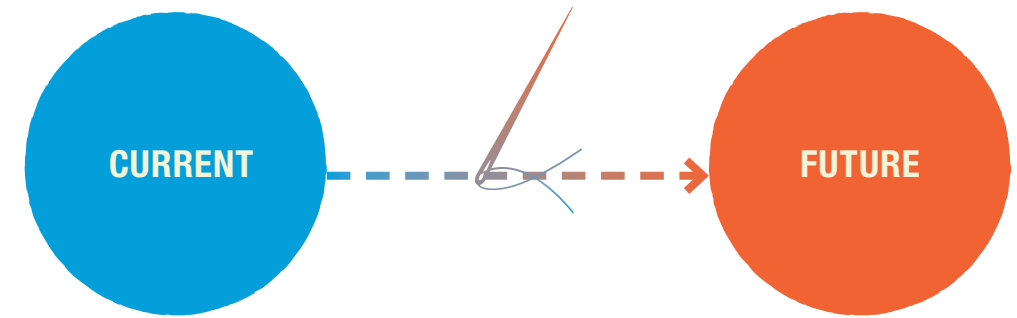
More than 220,000 people are employed in the fashion industry in Australia

 **24,333+**

There are more than 24,333 clothing retail businesses across Australia

 **315,000+**

315,000 plus tonnes of textile waste per year in Australia (some estimates are much higher and place the textile waste volume as high as 1 million tonnes per year)



The Australian Textile Clothing and Footwear sector already makes an immense contribution to Australia and the Australian economy

We believe there is an expansive opportunity for the TCF sector to grow, innovate, transform and transition to an industry that continues to play a significant role in Australia, in a way that places people and planet first.

“

*“It [circularity] transforms our linear economy mindset – take, use and throw away – and fosters innovation and productivity that invigorates existing businesses and creates new ones, delivering more jobs, more growth and more social inclusion to the local, regional, state and global economies.”*

– Sustainability Victoria

*“A circular economy will create new jobs and new business opportunities in Victoria – achieving prosperity for people and the planet.”*

– [Sustainability Victoria CEO, Claire Ferres Miles](#)

*“Moving to a circular economy will provide long-term economic, social, and environmental benefits for NSW. This transition will generate jobs, increase the robustness of the economy, increase the accessibility of goods, maximise the value of resources, and reduce waste.”*

– [NSW Circular Economy Policy](#)

*“Transitioning to a circular economy also offers Australia significant economic benefits. These benefits are comprised of three main elements: i) the market value of the materials being reused or recycled, ii) cost savings from the reduced burden from waste disposal, and iii) the reduced burden on natural resources from resource extraction for raw material (Andersen, 2007). Additionally, circularity provides opportunities to boost jobs.”*

– CSIRO. Circular economy roadmap for plastics, glass, paper and tyres. Pathways for unlocking future growth opportunities for Australia. January 2021

*“A hypothetical five per cent improvement in efficient use of materials across the Australian economy could benefit Australia’s GDP by as much as \$24 billion.”*

– National Waste Policy. Less Waste More Resources, 2018

*“Moving to a more circular economy has the potential to create new jobs and benefit the economy overall.”*

– National Waste Policy. Less Waste More Resources, 2018

”



# Application of the SDGs

There are 17 SDGs that cover the multitude of issues that know to be important for now and for our future. Clean water, health, zero food, no poverty, gender equality, quality education, renewable energy, decent work, biodiversity, safe and clean cities and communities and peace and justice good are examples of the expansive range of issues covered by the SDGs.

While the SDGs were agreed to by all countries in 2015, implementation of the goals are not for governments alone. Everyone — countries, businesses, non government organisations, research institutions and individuals — have a role to play in achieving them. This includes the textile, clothing and fashion (TCF) industry.

For the TCF industry, all 17 SDGs are incredibly relevant. For the purposes of this guide, however, we will draw your attention to eight SDGs which we think the TCF industry has a significant role to play in efforts to achieve them. By working to achieve these eight SDGs, we believe the TCF industry will be better able to future proof itself, becoming a more resilient industry for whatever lies ahead.

*“The 17 Sustainable Development Goals are our shared vision of humanity and a social contract between the world’s leaders and the people. They are a to-do list for people and planet, and a blueprint for success.”*

– Former UN Secretary-General Ban Ki-moon at the official launch of the SDGs, 31 December 2015



To achieve SDG 6, we must properly treat wastewater before releasing it, make our clothes responsibly and launder our clothes responsibly (to halt water pollution). We must also focus on improving water efficiency, reducing water usage per garment and protect and restore water related ecosystems we are affecting.



Responsible consumption and production means we do not exploit our planet's resources in the process of making or buying textiles, clothing or footwear and finding new ways to keep resources in use for as long as possible.



By substantially reducing (with the aim to eliminate) the use of hazardous chemicals used in our clothing we will prevent air, water and soil pollution and this will protect the health and wellbeing of all which, in turn, achieves the SDG 3 target of preventing the number of deaths and illnesses caused by use of chemicals).



By providing for decent and fulfilling jobs while not damaging the environment we will assist with achieving SDG 8. Labour rights are to be protected and modern slavery and child labour must be abolished.

*The CEO AGENDA 2019, produced by The Global Fashion Agenda, lists respectful and secure work environments as one of its four core priorities for immediate implementation. It calls for CEOs to uphold standards for the respect of universal human rights for all people employed along the value chain.*



By integrating climate change measures into company policies, strategies and planning we can all take climate action.

*The FASHION FOR GLOBAL ACTION CHARTER calls on the fashion industry to acknowledge the contribution of the sector to climate change and its responsibility to strive towards climate neutrality for the planet.*



Achieving SDG 5 includes ending discrimination against women and girls, ensuring full participation in leadership and decision making, ending violence and exploitation and advocating for gender equality legislation. This applies to the workers on the farms, in the factories, on the shop floor and at home.



SDG 9's focus is on building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation. These aspects are all critical to shifting our patterns of consumption and production to one that is circular, not linear.



Alignment with SDG 15 means we ensure our clothing sustainably and responsibly uses our ecosystems by preventing deforestation and soil degradation and preserving our biodiversity.



# Reading

Alongside EMF’s 2017 paper, *A new textiles economy: Redesigning fashion’s future*, and practical experience from within the industry, the following resources have been our key resources for developing this guide.

- UN Environment Program, Meaning Peace with Nature
- The Economics of Biodiversity: The Dasgupta Review
- McKinsey and Company, Biodiversity, the Next Frontier in Sustainable Fashion
- WWF Living Planet Report
- Pulse of the Fashion Industry Report, Boston Consulting Group
- The True Cost
- Wardrobe Crisis
- Detox My Fashion, Greenpeace

## RESOURCES

### REDUCE ---➔

- Raw Assembly
- Textile Exchange
- Global Organic Textile Standard (GOTS)
- ChemSec Textile Guide
- OekoTex
- Greenpeace Detox Fashion campaign
- Zero Discharge of Hazardous Chemicals
- DyeCoo
- EMF Design Tools
- Circular Economy design toolkit

### REVALUE ---➔

- Blocktexx
- Upparel Recycling Initiative
- Moving the Needle

### RESPECT ---➔

- Fashion Revolution
- Textile Beat
- Swop
- Depop
- Patagonia’s Worn Wear

### REGENERATE ---➔

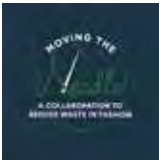
- Forest Stewardship Council (MMCF)
- Program for the Endorsement of Forest Certification
- Canopy
- APCO
- Australia’s 2025 National Packaging Targets
- Sandle
- Repack
- Red R

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.RAWASSEMBLY.





## **CONTACT US FOR MORE INFORMATION**

8 Scenic Boulevard, Clayton campus  
Monash University, Victoria 3800  
Australia

T: +61 438 722 405

E: [MSDI-enquiries@monash.edu](mailto:MSDI-enquiries@monash.edu)

**[www.monash.edu/msdi](http://www.monash.edu/msdi)**