# THREADS OF TOMORROW

Crafting the Future of Aotearoa New Zealand's Fashion, Clothing and Textiles Landscape

Produced by

EY Building a better working world

MINDFUL FASHION NZ
Our clothing & textiles collective

# Release notice

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# Foreword

Aotearoa New Zealand's fashion, clothing and textile industry has significant value. It is an important part of our economy, our culture and our communities. However, the industry is facing challenges that must be addressed to ensure it not only continues to survive, but thrives.

With this report we set out to demonstrate the value of the industry today, and into the future, on behalf of the industry. We measured its contribution to GDP and employment, and captured its social, environmental, creative and cultural contributions. We sought to understand our shared challenges and opportunities, and chart a course for a better future.

The industry in Aotearoa New Zealand employs skilled, innovative and passionate people, and women are an integral part, comprising 78% of our workforce. We have some of the world's leading sustainable brands. We produce some of the best fibre in the world. We manufacture high value knitwear that's in demand globally. We dress New Zealanders for school and work, for leisure, for outdoor pursuits.

However, the industry in Aotearoa is at a critical turning point. While it makes a significant contribution to Aotearoa New Zealand and to New Zealanders, it is also part of a global industry that is contributing to some of the planet's biggest challenges, including climate change, rising consumption, waste and pollution, and inequality. We all share a responsibility to address the impacts of our industry if we are to safeguard our planet for the future.

It is imperative we chart a course to evolve the industry in Aotearoa New Zealand so we can enjoy a future where our businesses, our people and our natural environment can all thrive. This requires a fundamental reimagining of the way our fashion, clothing and textiles system works in Aotearoa New Zealand.

While the industry is a large employer and makes a significant contribution to our economy, it's essential we look to the future and start to grow business value opportunities outside of the old industry model.

The report lays out a pathway for the industry to collaborate on solutions in four action areas. These include: building a skilled workforce to take the industry into the future; growing high value pathways for materials and manufacturing; creating local circular systems and addressing textile waste at a national level; and promoting Aotearoa New Zealand fashion, clothing and textiles. Taken together these actions are designed to boost the industry's contribution to Aotearoa New Zealand. Across these action areas 15 recommendations have been identified to guide the industry and stakeholders over the next few years.

What is clear is that to successfully transform the industry, we all need to work together. No one organisation alone can change the system, but by working together we can create an industry that's future focussed and that we're all proud to be part of.

At Mindful Fashion New Zealand our mission is to build an innovative, full-circle and thriving future for the industry. We believe that working together, we can make an immense impact on our industry's future and transform it to one that adds enormous value to the people of Aotearoa New Zealand.

While this report makes a strong case for collaboration, it is also a call for more support and investment. We call on the support and influence of leading businesses in the Aotearoa New Zealand fashion, clothing and textile industry, who believe in a more sustainable future and are excited by an opportunity to show industry leadership. We urge investors, philanthropists and industry stakeholders who see the potential of our vision to connect with us and get involved. We ask the government to work with us to incentivise and scale the recommendation of this report.

We want to thank EY New Zealand without whom this important piece of work would not have been possible. We also want to acknowledge each of the Mindful Fashion members and the industry stakeholders who have contributed to the development of this report. Thank you for getting involved, your participation has been crucial to ensure this report truly reflects the voice of the industry.

The recommendations in this report present a starting point, and we recognise there is more to do over the coming months and years. We are excited about the future and look forward to getting to work to make change happen.

**Jacinta FitzGerald**
Chief Executive

**Juliette Hogan**
Board Chair


# Contents

# EXECUTIVE SUMMARY

# Executive Summary

**What we do in Aotearoa New Zealand can have an impact both within New Zealand's fashion, clothing and textile industry and throughout the global clothing and textile industry. The choices we make matter.**

Aotearoa New Zealand's fashion, clothing and textiles industry ("NZFCTI") makes a sizeable economic and cultural contribution to Aotearoa New Zealand. The NZFCTI can shape the attitudes and behaviours of consumers, business owners, manufacturers and primary producers amongst others.

Clothing and textiles are integral to how we see ourselves and interact with the world. The industry that produces clothing and textiles provides livelihoods to millions of people around the world. In Aotearoa New Zealand the NZFCTI may be comparatively small on an international scale, but it is part of a complex and far-reaching global clothing and textile ecosystem.

The NZFCTI is highly reliant on global supply chains for materials and manufacturing, and global products are present in every retail centre and every wardrobe. What we do in Aotearoa New Zealand can have an impact both within the NZFCTI and throughout the global clothing and textile industry ("Global Industry"). The choices we make matter.

## The need for change

The production, distribution and disposal of clothing and textiles has a significant impact on our planet.[1] It pollutes our water and land, and impacts water scarcity. It is responsible for up to 8% of global greenhouse gas emissions[2], and contributes 52 thousand tonnes of waste to Aotearoa New Zealand.[3] The production and distribution of clothing and textiles also has significant modern slavery and worker exploitation risk.[4] To address these impacts and realise a future where business considers people and nature alongside profit, the NZFCTI needs to evolve and move towards a new way of working. This should be supported by aligning with international practice, regulation and law that ensures Aotearoa New Zealand can remain credible within the international market.

## Challenges and opportunities

The NZFCTI faces significant challenges which include increasing business costs, difficulty accessing capital, lack of skilled workers, competition from global brands, limited local textile manufacturing capabilities and meeting legal obligations. Concurrently, exciting opportunities have been identified by the NZFCTI associated with transitioning towards the desired future, which include revenue and cost benefits, upholding the values of Aotearoa New Zealand and investing in innovation.

## Desired future

This report presents a case for ambitious action. It proposes a bold vision for the future of the NZFCTI, and provides the recommendations needed to achieve this desired future:

***A thriving and circular clothing and textile industry for Aotearoa New Zealand that meets the needs of people, nature and business.***

### The Direct Impact Of New Zealand's Fashion, Clothing And Textile Industry

**$7.8 billion**
Added to the economy in 2023

**1.9%**
Contributed to GDP

**$4.4 billion**
Paid in wages

**76,011**
Workers employed in 2023

**78%**
of employees within the NZFCTI are female

SOURCE: EY Analysis 2024

## Action Areas

There is an opportunity to demonstrate that a circular and thriving NZFCTI is possible, driven by purpose-led businesses and united behind a common agenda. To create a thriving and circular NZFCTI, four areas have been identified where the NZFCTI along with its relevant stakeholders must prioritise action:

### 1 Growing a skilled workforce:

Develop a skilled workforce to support a thriving NZFCTI and cultivate new talent to fill existing and future gaps.

1. Plan for future skills needs
2. Promote career pathways
3. Develop skills training and build new career pathways
4. Build wool knowledge and skills

### 2 Advancing local materials and manufacturing:

Enhance local manufacturing capability to boost GDP, and show leadership in development and use of low-impact materials.

5. Develop a NZFCTI manufacturing strategy
6. Connect Innovation to funding
7. Increase accessibility of responsible materials & technologies
8. Build connections between wool sector & brands

### 3 Enabling a circular economy:

Increase the use of clothing and create value through circular and recycling systems, resulting in minimal textile waste.

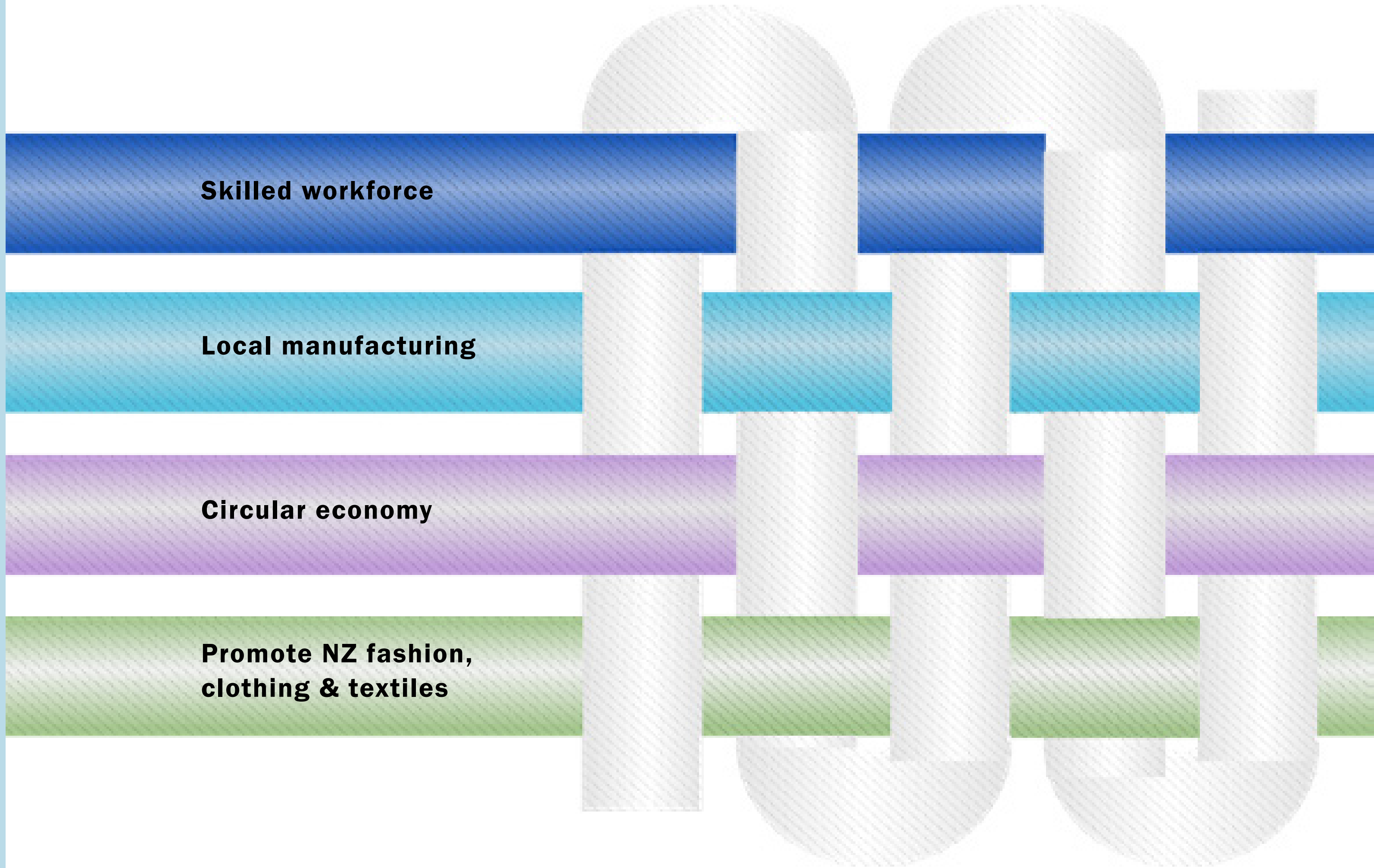
9. Demonstrate circular solutions and proactively minimise waste
10. Develop a product stewardship solution
11. Invest in collecting, sorting and recycling textiles
12. Address textile plastic pollution

### 4 Promoting New Zealand fashion, clothing and textiles:

Engage with consumers to promote the benefits of local business and sustainability, and embed circular and responsbile practices into business models to stimulate economic activity.

13. Engage with local consumers
14. Build access to international markets
15. Develop tools to support sustainability action

### Action Areas for the NZFCTI



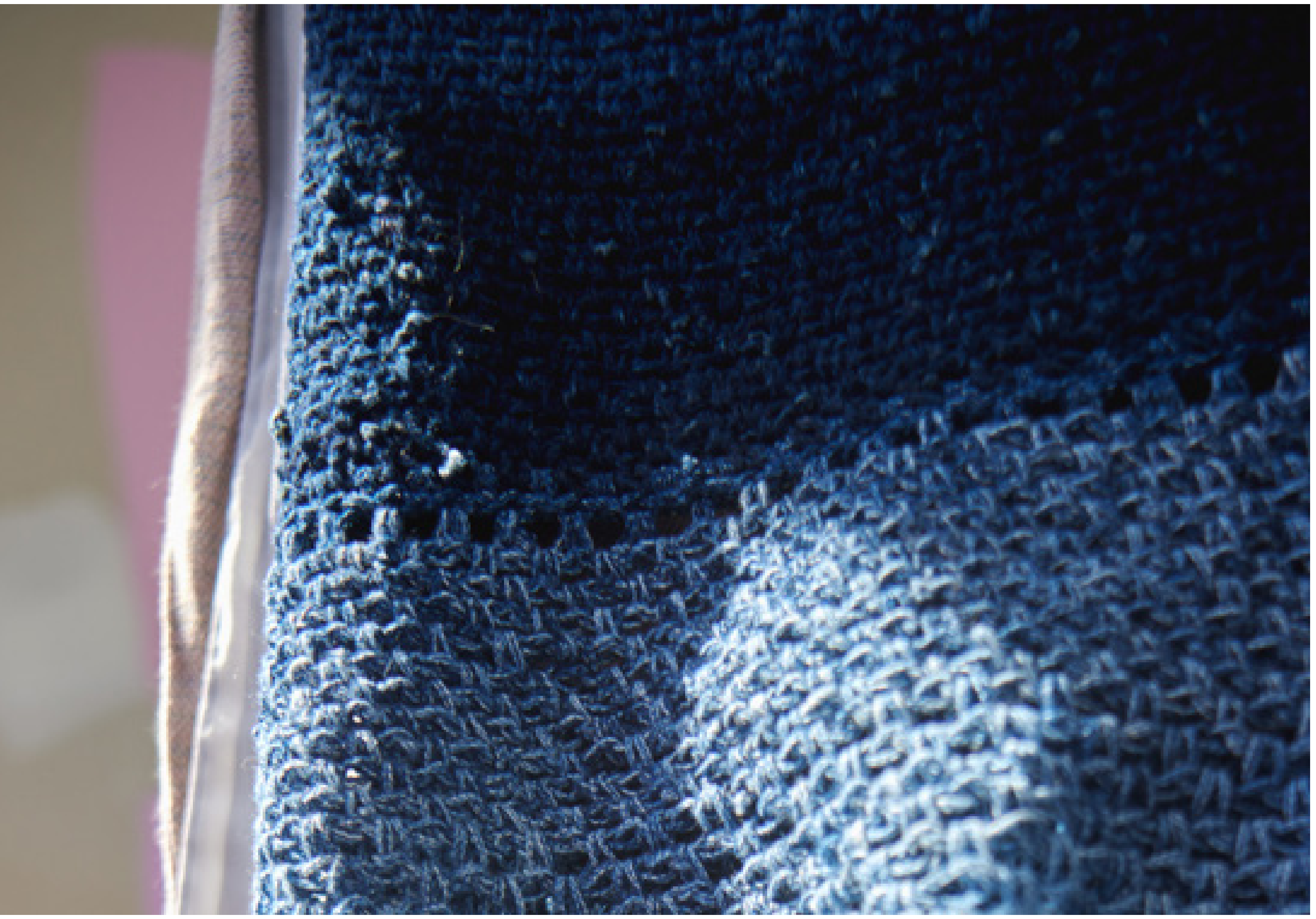

Through the recommended actions outlined in this report, there is potential to stimulate economic activity, boost the NZFCTI's contribution to Aotearoa New Zealand, and demonstrate the social, environmental and economic benefits that a circular and thriving NZFCTI can bring.

# Actions table for the NZFCTI 2024 - 2026

| Growing a skilled workforce | | Actions 0-6 months | Actions 6-12 months | Actions 12-24 months |
|---|---|---|---|---|
| **Outcome** We have a workforce with the required skills to support a thriving and circular NZFCTI and a pipeline of new talent that can fill any emerging or existing workforce gaps. | **Opportunity** Upskilling and training workers to fill current and future gaps will increase the NZFCTI's contribution to GDP, grow employment, build our identity as a creative and innovative nation, and benefit female financial security. | 1. Plan for future skills needs. | | |
| | | 2. Promote career pathways. | | |
| | | 3. Develop skills training and build new career pathways. | | |
| | | 4. Build wool knowledge and skills. | | |
| **Advancing local materials and manufacturing** | | Actions 0-6 months | Actions 6-12 months | Actions 12-24 months |
| **Outcome** We have innovative, high value and accessible local manufacturing that increases the NZFCTI's contribution to GDP and allows SMEs to continue making onshore. We are leaders in researching, producing and using regenerative and circular materials and practices that work in harmony with nature. | **Opportunity** Investment in local materials and manufacturing can stimulate growth across the value chain while supporting the NZFCTI's transition to a low carbon circular economy. Increasing productivity will allow more companies to produce locally, be more responsive, and contribute to the local economy and job growth. | 5. Develop a NZFCTI manufacturing strategy. | | |
| | | | 6. Connect Innovation to funding. | |
| | | | 7. Increase accessibility of responsible materials & technologies. | |
| | | 8. Build connections between wool sector & brands. | | |
| **Enabling a circular economy** | | Actions 0-6 months | Actions 6-12 months | Actions 12-24 months |
| **Outcome** The NZFCTI has a circular textiles economy where clothing utilisation is maximised, and value is created through circular and recycling models. In these new approaches resource consumption is limited, materials are reused, and we have developed an integrated and cost-effective post-use ecosystem. | **Opportunity** In a circular economy economic value is maximised through circular models that enable multiple revenue streams, and through a post-use ecosystem where markets are created that derive from end of life textiles. | 9. Demonstrate circular solutions and proactively minimise waste. | | |
| | | 10. Develop a product stewardship solution. | | |
| | | | 11. Invest in collecting, sorting and recycling textiles. | |
| | | 12. Address textile plastic pollution. | | |
| **Promoting New Zealand fashion, clothing and textiles** | | Actions 0-6 months | Actions 6-12 months | Actions 12-24 months |
| **Outcome** We have a thriving and responsible NZFCTI, that is valued by consumers in Aotearoa New Zealand and abroad. | **Opportunity** By transforming the NZFCTI to meet the demands of today's and tomorrow's consumers, the NZFCTI can secure a competitive position in the local and global marketplace. | | 13. Engage with local consumers. | |
| | | 14. Build access to international markets. | | |
| | | 15. Develop tools to support sustainability ambition | | |

Taken together these actions are designed to stimulate economic activity, boost the NZFCTI's contribution to Aotearoa New Zealand, and demonstrate the social, environmental and economic benefits that a circular and thriving NZFCTI can bring.

# Introduction



The purpose of this report is to present a collective vision for action to reach a thriving and circular clothing and textile industry for Aotearoa New Zealand. The report will explain:

- The current state
- The desired future state
- The actions needed to progress towards the desired future state

Mindful Fashion New Zealand engaged EY to develop this report. EY's Climate Change and Sustainability Services team, with support from EY's Valuations and Economic Modelling team, used a mixed-methods approach to assess the current state of the NZFCTI and develop the recommended actions for realising a sustainable future.

Four areas of research and analysis were used to write this report. These, along with further information about the methodology, are included in Appendix A.

Between November 2023 and January 2024, EY:

- Consulted with the NZFCTI via a detailed survey and a key stakeholder workshop
- Performed economic modelling based on survey outputs and census data
- Conducted extensive desktop-based research
- Mindful Fashion New Zealand conducted further stakeholder engagement.

Refer to Appendix E for details of stakeholders engaged.

## Project scope

Reaching a future where the NZFCTI can meet the needs of people, nature and business, while operating within the bounds of the planet, presents a significant challenge. Globally, many initiatives are already seeking to address this challenge. However, within Aotearoa New Zealand, action has been stalled through a lack of both industry data and a common agenda to support industry-wide collaboration across the value chain.

This project is focused on how a thriving and circular clothing and textile industry can be achieved in Aotearoa New Zealand, within the control of Aotearoa New Zealand's businesses and Government.

It also promotes cohesion between initiatives. As the NZFCTI is small, collaborative action that avoids duplication of initiatives is the best approach. Practical solutions are put forward that will accelerate the transition to a clothing and textiles industry where people, nature and business all thrive.

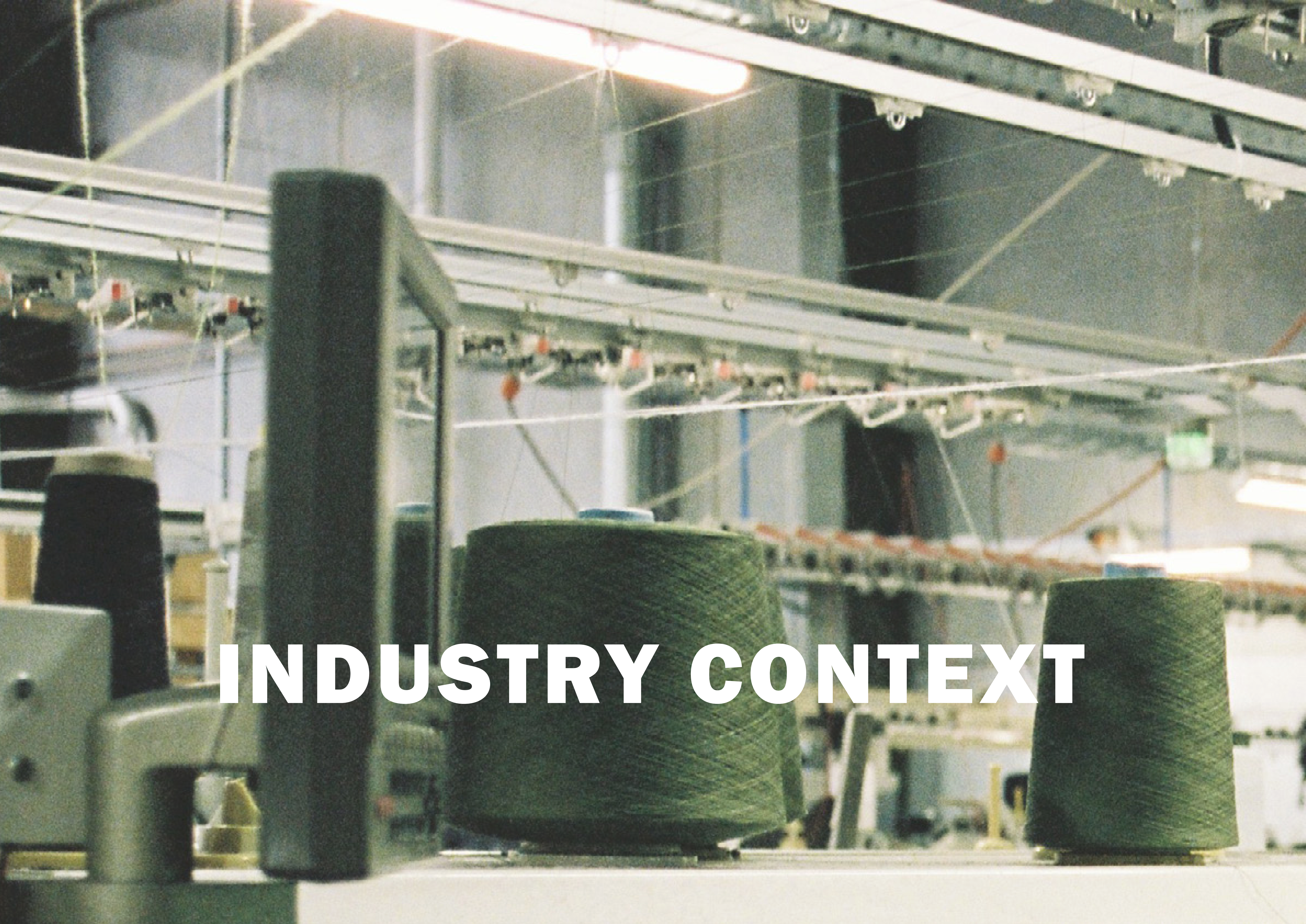
The scope of this project is Aotearoa New Zealand's clothing and textiles industry, referred to throughout as the "NZFCTI". Appendix C explains what is included within 'clothing and textiles'. Sectors such as film and television, hospitality and home furnishings that could be considered adjacent to how this report defines the clothing and textiles industry, are out of scope. Their connection to clothing and textiles could be explored in future projects.

Due to the complex challenges facing the NZFCTI, there are topics that this report was not able to capture comprehensively but do require further attention and research. Throughout this report, areas where further work is required have been outlined.

Additionally, time constraints and stakeholder access limitations resulted in some NZFCTI stakeholders being unable to participate in the stakeholder engagement process.

This report should be read as the phase 1 in a multi-phased strategy.

# INDUSTRY CONTEXT



# Current state of the NZFCTI

The NZFCTI has a strong presence in Aotearoa New Zealand's economy and job market. Despite deregulation causing the closure of many manufacturers over the last 40 years, the NZFCTI has adapted and remains a cornerstone of Aotearoa New Zealand's economy.

Annual turnover of survey respondents

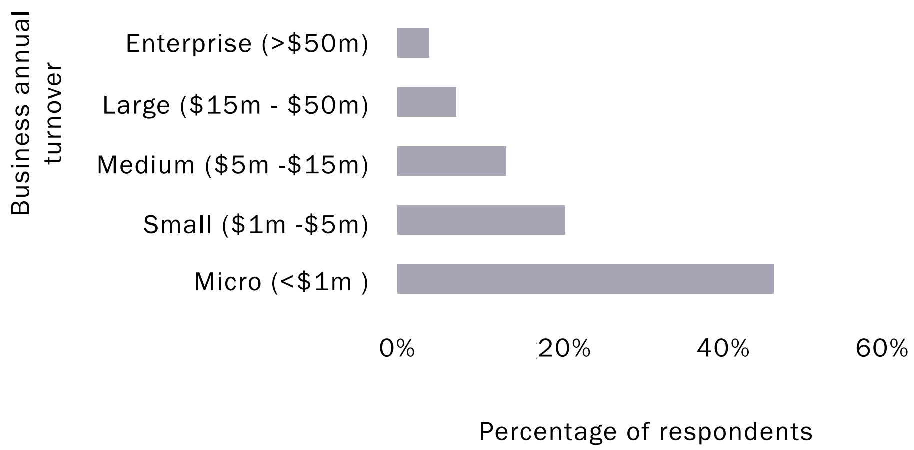



Figure 2: Survey respondents annual turnover

## Sizeable contributor to the economy

The NZFCTI added $7.8 billion to the economy in 2023, contributing 1.9% to GDP.[5] This is significant, given the majority of businesses within the NZFCTI are micro businesses (figure 2).

The NZFCTI plays a vital role in Aotearoa New Zealand's economic stimulation, contributing more to GDP in 2023 than supermarket and specialised food retailing, building construction, or mining industries.[6]

Additionally, a significant amount of value (in the form of gross value added "GVA") is added to Aotearoa New Zealand's economy through the downstream activities in the clothing and textiles supply chain.[7]

GVA by industry, direct and indirect

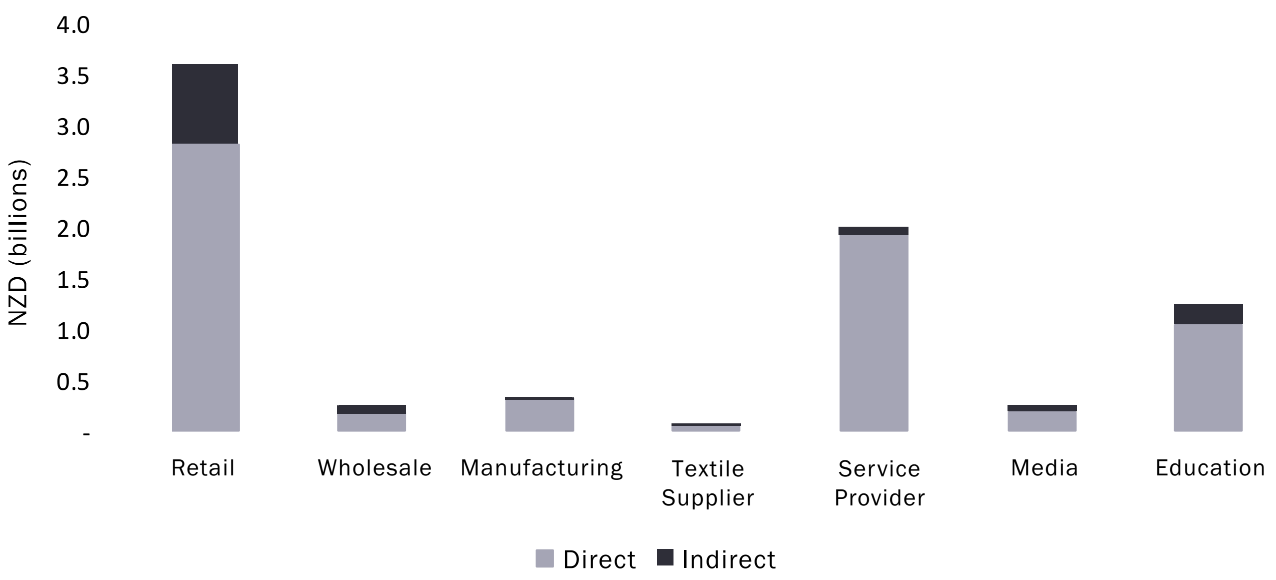



Figure 1: Gross Value Added by sector within the NZFCTI

## Significant employer

In 2023 the NZFCTI paid over $4.4 billion in wages and supported 76,011 workers across the country.

The number of workers made up approximately 2.6% of Aotearoa New Zealand's labour force. The number of workers is comparative to the building construction industry which employs 3% of Aotearoa New Zealand's labour force and far exceeds the finance, dairy cattle farming, and horticulture and fruit growing industries.[8]

The NZFCTI's substantial workforce is partly due to the high amount of part-time and casual employment available, 31% of NZFCTI respondents said their business has part-time and casual employees. The flexibility available in these jobs is an attractive incentive to enter the workforce, especially for women and young people. In 2023 the NZFCTI paid over $4.4 billion in wages and supported 76,011 workers across the country.

Employment by industry, direct and indirect

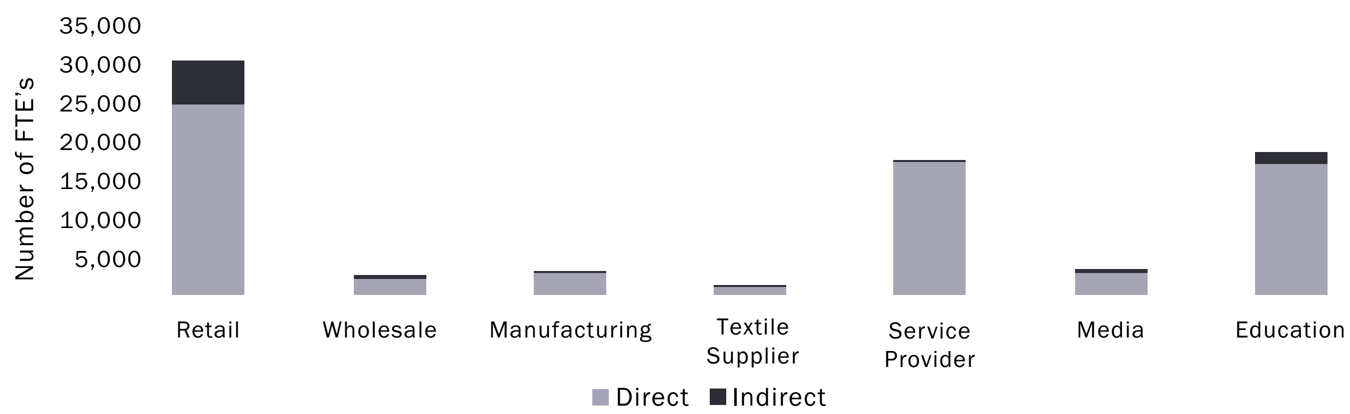



Figure 3: Employment by sector within the NZFCTI

# Globally connected

### Dependent on the global industry, but SMEs use local services

The NZFCTI is heavily dependent on the international clothing and textiles market for imports. Due to the cost of manufacturing onshore, the limited capacity to meet large scale production requirements, and the lack of textile manufacturing capability, Aotearoa-based businesses largely use offshore manufacturers and materials.[9] These manufacturers and suppliers span the upstream supply chain from yarn spinning, to textile production, to Cut-Make-Trim factories ("CMTs").[10]

Local clothing and textiles production volumes are difficult to quantify due to the lack of robust data. Initial estimates from Auckland Council waste data estimates that 21% of clothing consumption is manufactured locally. However, stakeholders in the NZFCTI indicate that this number is likely to be significantly lower. In comparison, 3% of Australian clothing consumption is produced locally.

The EY industry survey found that small to medium enterprises ("SMEs") are more likely to use Aotearoa New Zealand based manufacturing.

- On average, 60% of the manufacturers used by micro, small and medium businesses are based in Aotearoa New Zealand, compared to only 10% of the manufacturers used by large and enterprise businesses.[11]
- 36% of micro, small and medium sized businesses (under $15m annual turnover) use entirely NZ based manufacturers to create their finished products (figure 4).[12]
- This is a stark comparison to the 0% of enterprise businesses (annual turnover upwards of $50m) that use 100% NZ based manufacturers within their supply chain (figure 4).[13]

Within the micro, small and medium sized business group, it is micro and small businesses who are more likely to have all finished goods made in Aotearoa New Zealand.

Aotearoa New Zealand based-businesses are selling the majority (81%) of their finished goods locally, according to respondents to the EY survey (figure 5). Survey respondents stated that 18% of finished goods sold by Aotearoa New Zealand based-businesses are sold/ exported overseas (figure 5). This is consistent with the Auckland Council's consumption research, which states that only 15% of finished clothing goods manufactured in Aotearoa New Zealand are exported for sale each year. [14]

EY's survey found that there is a strong relationship between Aotearoa New Zealand businesses and the Australian market, in comparison to the broader overseas market. The average percentage of sales made by Aotearoa New Zealand-based businesses to Australian businesses and direct to consumers in Australia is 10%, while sales made to other overseas locations make up 8% of sales (figure 5).

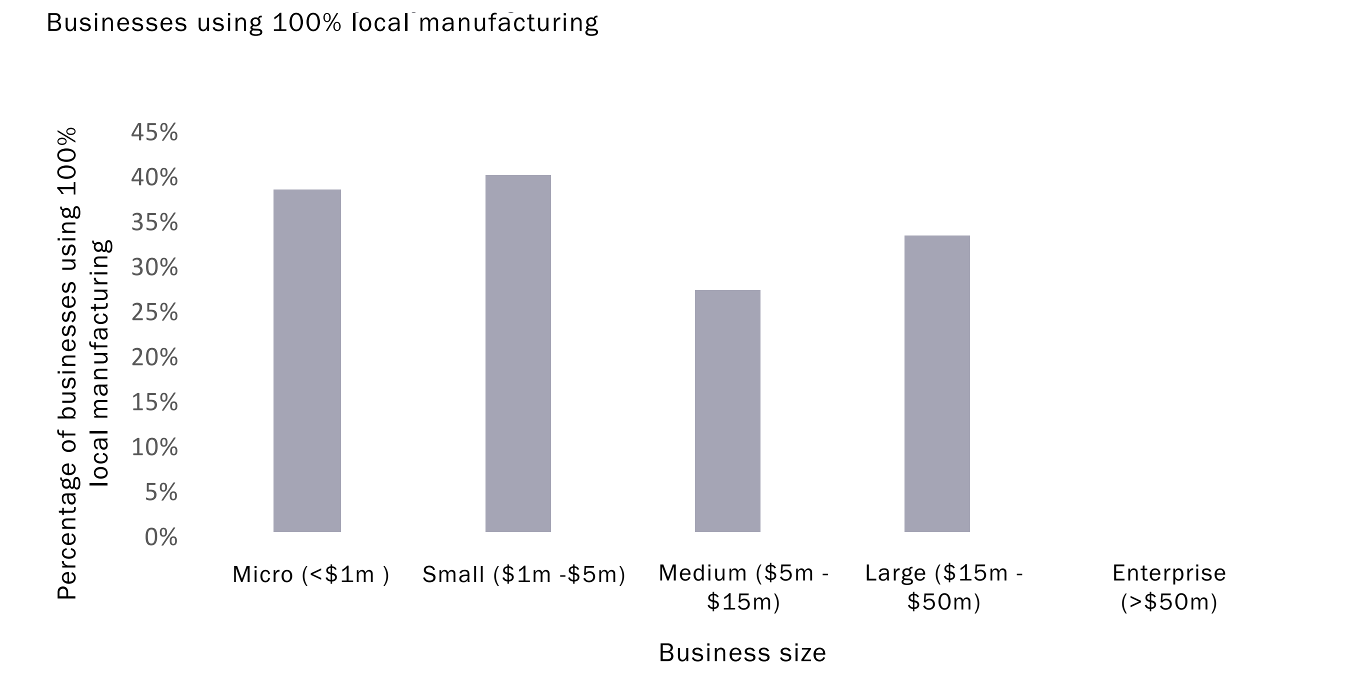



Figure 4: The percentage of businesses using 100% local manufacturing by business size

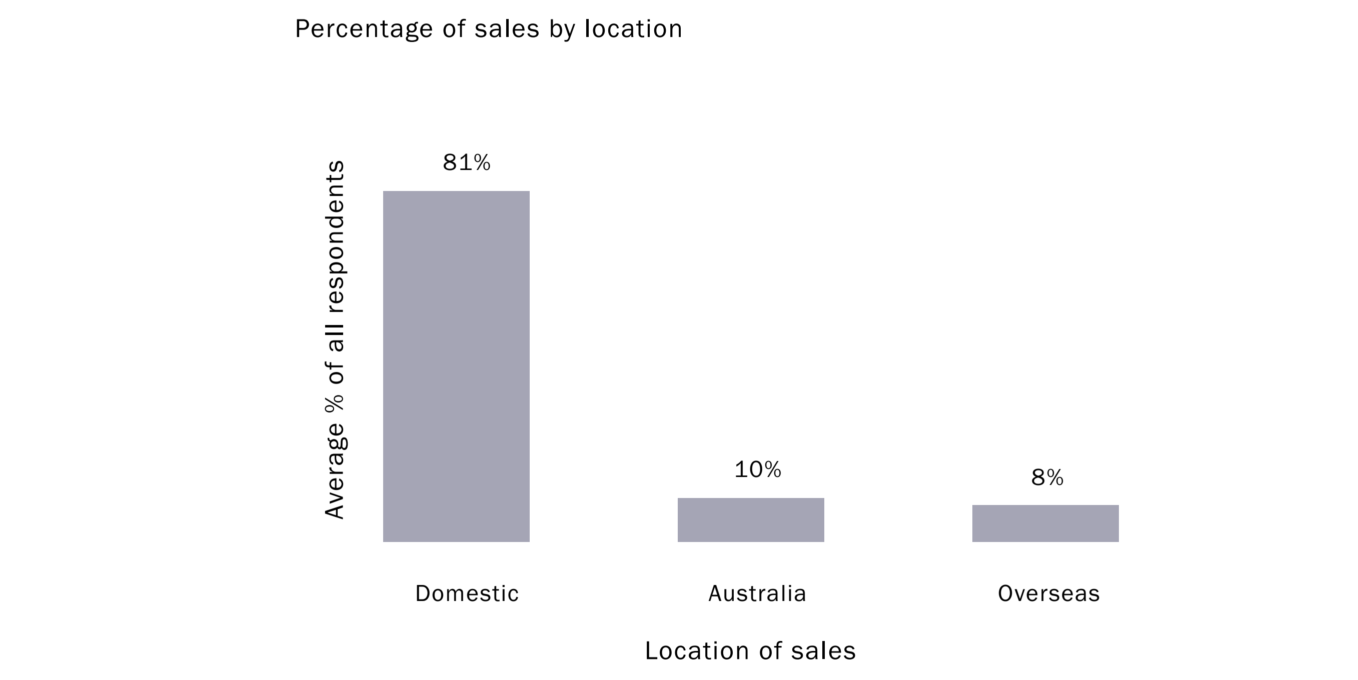



Figure 5: Average percentage of sales by location

# People at the heart of the NZFCTI

## Creative and cultural contribution

Aotearoa New Zealand's creativity is enriched through the NZFCTI's design and technical talent. The EY industry survey found that 91% of businesses design their entire product range in Aotearoa New Zealand. Garment and textile manufacturing will never grow to accommodate 100% of local production demands; but developing the creative and technical talent of those within the NZFCTI can continue creating economic value for Aotearoa New Zealand.

Additionally, clothing and textiles have immense cultural value. From knitting woollen jumpers to weaving kākahu, the NZFCTI has helped shape the formation of Aotearoa New Zealand's cultural identify. Clothing and textiles are the visual representation of our values, unique history and connection to the land. This interplay between culture, creativity and clothing demonstrates that the NZFCTI is a key thread in the fabric of Aotearoa New Zealand's society.

## Māori fashion and clothing

Māori play a unique role in the NZFCTI as business leaders, creatives, technicians, and cultural custodians. Māori designers and brands showcase the values of Aotearoa's indigenous culture locally and globally. Māori businesses are a significant part of what makes the NZFCTI unique and reflective of who we are.

There is a growing recognition of Māori designers. In 2023, Kiri Nathan became the first Māori designer to open NZ Fashion Week: Kahuria. Kiri collaborated with ten different Māori weavers to create the collection.

## Women are integral to the NZFCTI

Females represent 78% of all employees within the NZFCTI, employed in approximately 60,000 jobs. These female employee numbers are higher than the education and training industry (73%) and similar to the health care and social assistance industry (79%),[15] and has the rate of female employment within the NZFCTI sitting at 13.5% above the national average of 64.5%.[16] The proportion of female employment is high across the value chain, but particularly in the retail, media and design sectors (figure 6). Due to the high proportion of females working in clothing and textiles, the prosperity of the NZFCTI is significantly connected with the economic wellbeing of women.

It is beneficial to Aotearoa New Zealand's economy for female workers to be employed because women's economic empowerment increases overall productivity, economic diversification and income equality.[17] Therefore, the success and growth of the NZFCTI not only has a direct impact on a substantial portion of Aotearoa New Zealand's female workforce, but also significantly contributes to the overall economic development of Aotearoa New Zealand.

## Skilled workers are needed

The NZFCTI needs skilled workers to fill gaps and meet future needs. Currently, the NZFCTI is experiencing a serious shortage in skilled technical workers,[18] resulting in offshoring of processes that we have the capability to do in Aotearoa New Zealand. For manufacturers, an ageing workforce and a limited pipeline of new talent is severely impacting the NZFCTI's ability to stay operational.[19] To retain existing local manufacturing capabilities, this issue must be addressed.

There is also an opportunity to upskill and reskill workers to meet the future skills needs of the NZFCTI. These jobs will require technical skills in areas such as technology enabled manufacturing, digital, repair, resale and recycling.[20]

Percentage of female people in the NZFCTI

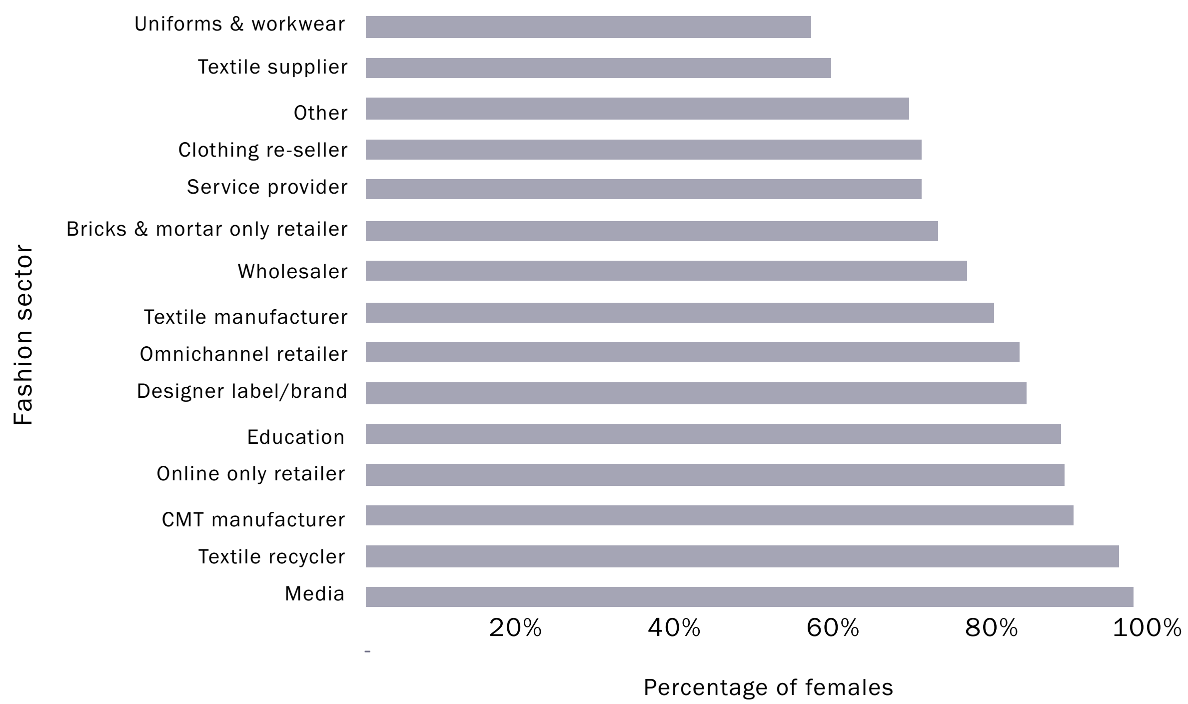



Figure 6: Percentage of female-identifying people in the NZFCTI by fashion sector

# The need for change

Our findings make it clear that action is needed. Globally, clothing and textiles are responsible for up to 8% of annual GHG emissions,[21] as well as water scarcity, [22] water pollution, [23] significant waste, and human rights violations.[24] By 2030, there is the risk that extreme weather events could not only place the lives and livelihoods of workers in danger, but also restrict access to raw materials and jeopardise $65 billion worth of apparel exports internationally.[25]

### Extensive environmental impacts

Each stage of a garment's life from fibre-to-landfill creates an impact. Increased volume and speed of production and consumption are putting significant pressure on the planet's finite resources and causing negative environmental impacts.

### Textile dumping ground

Landfills are filled with a significant amount of discarded clothing.[26] Rapidly increasing volume and speed of production and demand for new, low-cost (therefore inherently low-quality) clothing is creating unprecedented amounts of textile waste.

Global consumers are now buying 60% more clothes compared to 20 years ago and keeping that clothing for half as long.[27] Annually, approximately 30% of clothing produced remains unsold, with another 30% being sold at discount.[28] Understanding and influencing consumer behaviour towards sustainable garments and circular systems is key to creating lasting, positive change. [29]

Traditionally, the Global Industry has largely operated with a linear production model where the assumed end-of-life option for used clothing and textiles is landfill or incineration. Approximately 74 thousand tonnes of clothing are consumed in Aotearoa New Zealand each year, and every year 52 thousand tonnes are sent to landfill.[30] For businesses and consumers looking to keep their clothing and textiles out of landfill, textile recycling options are limited due to the small number of recyclers/reprocesses and their current operational capacity. Mindful Fashion NZ have identified six onshore textile recyclers within Aotearoa New Zealand. [31] The current landscape presents a rich opportunity to invest in circular solutions for clothing and textiles.[32] This may range from repair, re-use and recycling initiatives to large scale infrastructure. This could create value from the large volume of textile waste in the country, reduce landfill emissions and decouple industry growth from finite resource use.

### Significant emissions contribution

The Global Industry is responsible for up

International regulations are changing, and Aotearoa New Zealand is at risk of losing credibility within the international market.

to 8% of global greenhouse gas ("GHG") emissions.[33] A lack of data means that the NZFCTI's scope 1, 2 and 3 emissions impact cannot currently be calculated, however it is estimated that scope 3 emissions are the largest emissions category for the NZFCTI, specifically emissions from purchased goods and services, upstream transportation and distribution, and capital goods.[34] To achieve Aotearoa New Zealand's GHG reduction targets and commitments,[35] it's critical to address the substantial environmental impact of production, consumption, use and disposal of clothing, and textiles.

Moving towards circular systems in the NZFCTI has the potential to reduce emissions by one-third[32], and will have the additional benefit of reducing emissions for the sectors that intersect with clothing and textiles, for example decreasing transport emissions.[36] That is why targeting the NZFCTI will be a crucial part of Aotearoa New Zealand's broader climate action efforts.

## Laws are changing

International regulations are changing, and Aotearoa New Zealand is at risk of losing credibility within the international market. The European Union, United Kingdom and United States are introducing laws and regulations that will inevitably affect how the NZFCTI needs to approach production,[37] waste management[38] and consumer marketing and communications.[39] These rules are designed to push the global Industry towards "a climate-neutral, circular economy, with growth decoupled from the consumption of finite resources."[40] If the NZFCTI fails to align with international practice, there is a risk that businesses will be barred from entering those markets and a reputational risk of brands losing their social license to operate.

## Worker exploitation

Modern slavery and worker exploitation are serious risks in the global Industry's supply chain. In 2013, the Rana Plaza building in Dhaka, Bangladesh collapsed, killing 1,132 people and injuring more than 2,500.[41] The Rana Plaza disaster provided a reckoning for the Global Industry and international accords and commitments were created.[42]

Despite international commitments, safety standards and workers' rights across the global supply chain consistently fall below international standards.[43] Alongside poor labour conditions, allegations of wage theft, employment rights violations and modern slavery are consistently levelled against the global Industry's international supply chain.[44]

Human and labour rights are important issues, and have been considered in recommendation 15. There are growing calls from consumers and businesses for Aotearoa New Zealand to introduce a modern slavery law. The NZFCTI should proactively evaluate it's supply chain to avoid potentially significant consequences in the future.


FASHIONING THE FUTURE

# Desired Future

The desired future state for the NZFCTI is:

**A thriving and circular clothing and textile industry for Aotearoa New Zealand that meets the needs of people, nature and business.**[45]

This bold and aspirational vision for the future was developed through input from expert stakeholders and tested with NZFCTI stakeholders at the workshop and in subsequent stakeholder engagement (see Appendix E). The actions recommended in this report are the building blocks designed to guide the NZFCTI and all stakeholders on the path towards reaching this desired future state.

In a circular economy, economic value is maximised through circular models that enable multiple revenue flows, and through a post-use ecosystem where markets are created and value is derived from end of life textiles.

The Ministry for the Environment states:

"Moving to a circular economy … is essential to meeting our emissions budgets and our 2050 targets. In addition to helping us reduce emissions, it will create new opportunities (including new jobs such as in resource recovery, bioproducts and design), drive innovation, reduce the amount of waste we produce, and can result in cost savings for households and businesses."[46]

## Challenges and opportunities in reaching the desired future

The NZFCTI faces challenges that must be considered as it transitions towards the desired future state. These challenges require the NZFCTI to work together on interconnected issues, and can be overcome if decision makers are committed to change. The opportunities that will come from shifting to responsible and circular practices are rich in potential for the NZFCTI and for Aotearoa New Zealand.[47]

The challenges and opportunities presented below were identified through the responses to the NZFCTI survey, stakeholder engagement and desktop research.

# Challenges

## The NZFCTI identified a range of challenges associated with transitioning towards the desired future.

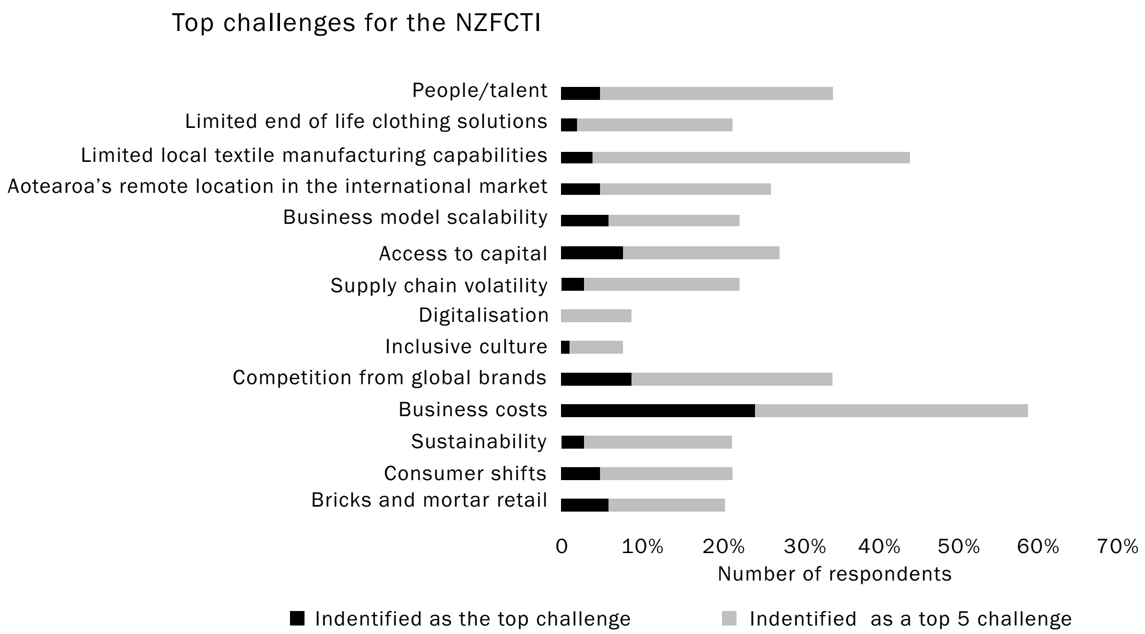



Figure 7: Top challenges for the NZFCTI, identified by the NZFCTI Survey

### Increasing business costs

Shifting to sustainable and circular business models can cost businesses more, especially while efficiencies are being built in the short term. For example, investment may be required to purchase machinery and infrastructure, establish traceable supply chains, switch to low carbon and circular fibres and materials, pay living wages, or introduce circular business models such as repair and takeback.

Businesses are already concerned about cost.[48] While there is a clear social and environmental need for change, getting businesses on board will require the actions to have economic benefits.

### Accessing capital is difficult

Accessing capital for new opportunities is a challenge for the NZFCTI.[49] Investment is required to grow efficiencies and smart technology in local businesses, develop innovations that add value to materials in Aotearoa New Zealand and build a fit-for-purpose circular clothing and textiles system in Aotearoa New Zealand.

Partnership models between government and industry could be explored as a source for investment, along with other avenues, for example, sustainable financing from banks, or investment from sustainable equity providers such as the New Zealand Investment Fund or impact investors.

**Reaching a thriving and circular future requires transformation across all facets of the NZFCTI**

### Skilled workers needed

Reaching a thriving and circular future requires transformation across all facets of the NZFCTI, and people are central to enabling this change.

The NZFCTI needs a skilled workforce to continue to grow, carry out existing streams of work, additional personnel to begin facilitating the recommended actions, and new skills to grow a thriving, circular economy. Ensuring the NZFCTI has the skills and capacity it needs over the short, medium and long term is a serious challenge with the NZFCTI already experiencing a skills gap.

It is not feasible to expect the current NZFCTI players, predominantly SMEs, to deliver all the actions alongside business as usual. The upskilling and capacity building required to introduce initiatives can be a barrier for many SMEs who have limited time and people resources available.[50] To overcome this challenge there needs to be collaboration between the NZFCTI, Government and educators, to facilitate the training and hiring of new talent.

### Competition from global brands

Global brands, particularly fast fashion companies, can operate at a scale and offer a price point and volume that the NZFCTI is unable to compete with. As the NZFCTI transitions towards a thriving and circular ecosystem, it runs the risk of alienating customers through products that have a higher price than their global brand counterparts. The transition needs to be supported by a campaign showcasing the economic and employment value, and social and environmental benefits of purchasing from New Zealand brands. Connecting consumers to the NZFCTI through storytelling will help the sector break through a saturated international market.

Additionally, managing the textile waste from global brands is a challenge that needs to be addressed. The fast fashion business model is described as “make, use, dispose.”[51] This model is typified by a high use of synthetic fabrics, where low-cost products are made in high volumes in a rapid cycle of production and consumption. These attributes are all key to creating a consumer ‘throw-away’ culture that is contributing to the high volume of textile waste in New Zealand’s landfills. Ensuring all brands, including global brands selling products in Aotearoa New Zealand, are responsible for the products they create including their end of life is a challenge that is starting to be addressed globally through voluntary and mandatory schemes. The NZFCTI and the Government must work together to find a local solution to this challenge.

## Limited local manufacturing in Aotearoa New Zealand

Since the 1980s when the tariffs on imported clothing started to be removed Aotearoa New Zealand has seen a steep decline in demand to produce clothing and textiles onshore, resulting in a loss of capacity and infrastructure. Losing local manufacturing means that almost 100% of the garments sold by large and enterprise businesses in Aotearoa New Zealand are manufactured overseas.[52] Higher wages in Aotearoa New Zealand means it is generally cheaper to produce clothing and textiles overseas and globalisation has made international supply chains efficient and easily accessible for NZFCTI businesses. However, producing offshore comes with increased risk of social and environmental impacts, for example, the potential for workers to be exploited and the environment polluted. These risks could be minimised by establishing long term relationships with suppliers, and increasing transparency, traceability and due diligence in supply chains.

Aotearoa New Zealand's manufacturing base is a critical enabler for the NZFCTI and creates valuable products for local and global markets. Aotearoa New Zealand manufacturing enables emerging designers, encourages creativity and allows established brands to produce bespoke products and smaller production runs to meet customer needs.

The NZFCTI needs to identify opportunities to grow local textile and garment manufacturing capabilities. Local manufacturing, in particular technology-based capabilities, ensures Aotearoa New Zealand can benefit from the value-add to our raw materials and increases responsiveness to market fluctuations, while providing greater transparency and control in how garments are made. This can protect local businesses from supply chain disruptions and create new jobs.

## Meeting legal obligations

Fulfilling Aotearoa New Zealand's global obligations under the Paris Agreement and Sustainable Development Goals ("SDGs") necessitates the involvement of the NZFCTI.[53]

Aotearoa New Zealand has committed to reducing greenhouse gas emissions by 50% below 2005 levels by 2030 under the Paris Agreement, which aims to maintain global temperature rise under 2°C. [54] The 2030 Agenda for Sustainable Development, adopted by all United Nations member states in 2015, outlines the SDGs.[55] Through this agenda, countries are committed to addressing poverty, inequality and climate change by 2030. The Paris Agreement and the SDG's have been ratified by Aotearoa New Zealand and incorporated them into domestic policy. This means that we must take action towards reaching these goals. [56]

Domestically, the Climate Change Response Act 2002 directs climate commitments, and the 2019 amendment act creates a framework for implementing climate change policies. [57, 58] These include plans such as the Emissions Reduction Plan[59] and National Adaptation Plan[60] that contribute to the global effort under the Paris Agreement.

Transition to a low-carbon economy will impact the NZFCTI. Future climate policy could affect transportation, domestic garment and textile manufacturing, agricultural practices, and waste disposal. Changing consumer preferences and potential reputational risks and legal consequences make transition essential. By incorporating sustainable and circular actions for the NZFCTI into policy, the sector's environmental impact can be mitigated, supporting compliance with the country's binding international climate commitments.

Any introduction of regulations for the NZFCTI, such as a mandatory due diligence reporting, or a Product Stewardship Scheme ("PSS"), will place an additional burden on businesses. However, regulations can be necessary to create a level playing field, and to incentivise businesses to change. The Government shouldn't shy away from introducing laws if they will shift behaviours and create positive environmental and social impacts. In some cases, these types of new regulations may provide a competitive advantage for the NZFCTI, where they already undertake sustainable practices at a higher cost to global fast-fashion peers. If regulations are to be introduced, they should be done so with the NZFCTI consultation, and support should be offered to businesses, especially SME's, to help them navigate the regulatory landscape and minimise any legislative burdens.

# Opportunities

## The NZFCTI also identified a range of opportunities associated with transitioning towards the desired future.

### Revenue and cost benefits

Circular business models provide businesses with new economic opportunities. Auckland could generate an additional $8.8 billion in economic activity in 2030 if businesses realise the circular economy opportunity.[61] Businesses can create multiple revenue streams by offering new services, such as rental, resale and repair. Consumers can also be offered customisation and tailoring services to enable products to be used more and for longer.

Revenue benefits include increasing consumer loyalty, gaining access to consumer and product use data, and growing the customer base through a greater offering of services. Simultaneously, costs can be reduced due to savings from better resource productivity and reducing risks in areas such as inventory management.[62]

### Showcasing the strengths of Aotearoa's NZFCTI

Brands aligned with the NZFCTI have a unique opportunity in the international market. Aotearoa New Zealand is already positioned as 'clean' and 'green' on the international stage. The NZFCTI must transform into a sector that uses business for good. Whether it be moving towards best practices in responsible business, tracing regenerative wool from sheep-to-shirt, transitioning to renewable energy in its manufacturing, or using innovative circular schemes to keep products and materials in circulation, the NZFCTI can use this opportunity to develop a unique selling point for global consumers.

Knitwear is an example of a product intrinsically linked to New Zealand's lifestyle and landscape that the NZFCTI can produce competitively using efficient technologies and specialised skills. The NZFCTI has access to millions of sheep in our backyard producing world class wool, like merino. Utilising this resource innovatively and creating farm-to-fibre to finished garment connections is key to the NZCFTI becoming leaders in the knitwear market. Growing the strength of local knitwear production will also benefit 'brand New Zealand.' Investing in the wool industry will not only introduce new market opportunities for the NZFCTI and farmers, but also improve the country's positioning on the world stage as a leader in the primary sector.

**The transition presents an opportunity for investment into innovations that can create long-lasting, positive impacts and build value for the NZFCTI**

The NZFCTI's connection to te ao Māori has created a unique cultural landscape for the NZCFTI within the international market. For Māori business leaders and creatives, mātauranga Māori (Māori knowledge) is embedded into business and creative practices. Mātauranga Māori draws on many knowledge systems including te reo Māori, tikanga Māori and manaakitanga. This knowledge is unique to Aotearoa New Zealand and is an important element of the NZFCTI's identity.

Businesses in Aotearoa New Zealand can also tell an authentic and unique story about their brand. A story that resonates with local culture, values and landscapes. This is a story that global brands can't replicate. This 'brand New Zealand' story not only strengthens their appeal to local customers but also to global consumers looking for unique, responsibly produced products.

### Investing in innovation

Reaching the desired future requires ambitious action. The transition presents an opportunity for investment into innovations that can create long-lasting, positive impacts and build value for the NZFCTI and for Aotearoa New Zealand. For innovation to succeed, it must be commercially viable and meet specific needs within the local and global Industry.

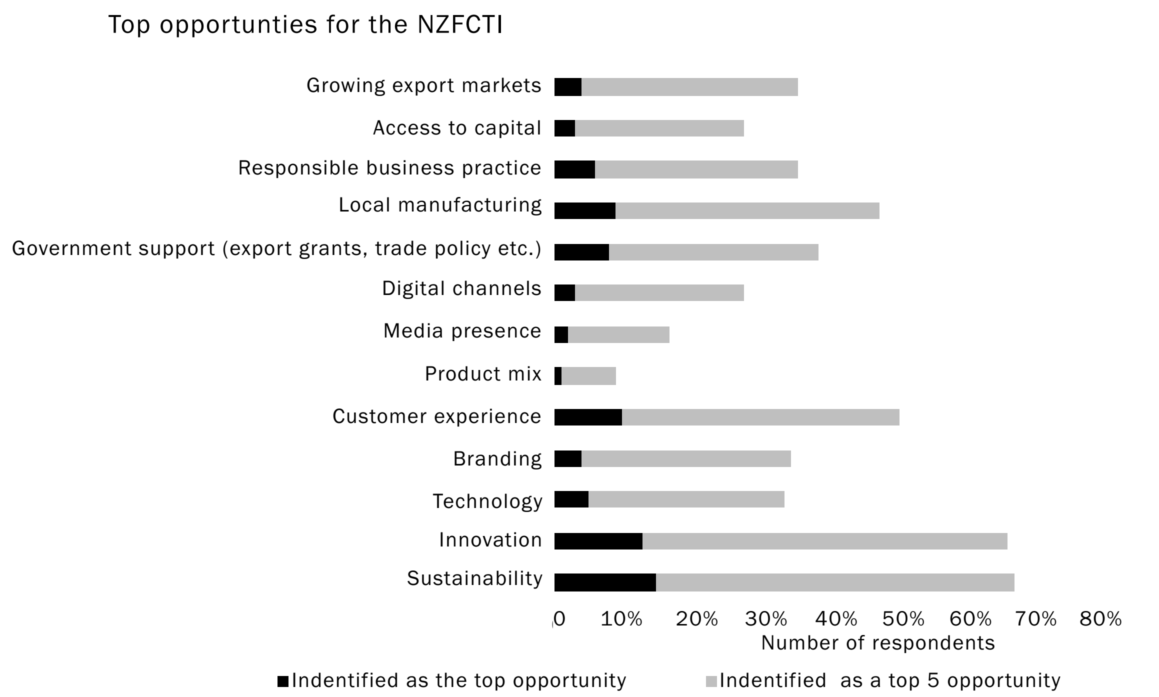



Figure 8: Top opportunities for the development of the NZFCTI, identified by the NZFCTI Survey

Opportunities for innovation include:

- **Circular business models:** De-coupling revenue generation from resource use by introducing models that keep garments and materials in use for longer, for example through repair, re-sale or recycling. Some brands are achieving this by integrating re-sale platforms within their existing online presence and others are offering repair services. To facilitate optimal recycling, AI can be utilised to detect fibre composition so that garments can be sorted for specific recycling technologies. Circular models can reduce waste and climate impacts as well as increase efficiencies within businesses.

- **New materials technology:** Investing in innovative, scalable solutions for the development and use of new materials technology that can be produced onshore, for example bio materials, novel dyeing techniques and textile recycling solutions.

- **Enabling digital technologies:** Investing in uptake of digital and AI technology. AI can be used to more accurately predict demand, to reduce overproduction and waste. Digital IDs can enable traceability, circular systems and consumer engagement. Embedded into products, digital IDs allow businesses to track their products from farm to fibre to finished product and beyond. This can enable businesses to have true visibility of their supply chain and can facilitate takeback schemes, sorting and recycling. Some companies are also offering real-time environmental impact reports on products with digital IDs.

- **Capture consumer demands:** There is growing evidence that consumers are losing trust with brands, due to concerns over greenwashing.[63] To access the evolving consumer market, brands will need to invest in authentic responsible action. Businesses who develop innovative solutions to effectively capture evolving consumer demands could out-pace their competitors who ignore the changing consumer desires and consumption patterns.

By investing in innovation, the NZFCTI can secure a competitive position in the global marketplace as a leader in responsible business.

## Building towards the future state

The transition to a thriving, circular NZFCTI requires a significant transition for the NZFCTI. This transition must occur in a fair and inclusive way. “A just transition” means greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind.[64] Achieving a just transition within the NZFCTI demands special consideration for vulnerable groups that may be impacted within Aotearoa New Zealand and in the offshore ecosystem. These people could include workers who perform manual tasks that technology could replace, people who are in low-wage positions in off-shore supply chains such as garment workers, those with minimal skills or education, or communities in regions that are heavily reliant on the NZFCTI.[65]

It is important to recognise that a just transition may entail certain trade-offs. For instance, increasing local manufacturing may have implications for overseas manufacturers who may lose contracts with Aotearoa New Zealand brands. This transition may be necessary as the desired future state is aimed at delivering actions that will benefit Aotearoa New Zealand’s citizens and the NZFCTI.

The NZFCTI will build towards the desired future by consulting with a diverse range of stakeholders. This includes sufficient consultation with Māori businesses and people to ensure the NZFCTI becomes a stronger Te Tiriti partner that is well-equipped to live the values of Te Tiriti. It is also important that the NZFCTI supports and protects workers’ rights and prioritises collaboration to ensure no-one is left behind.

Balancing this transition in a way that minimises negative impacts on vulnerable groups while shifting the NZFCTI toward a thriving and circular model will involve strategic planning and a commitment to open dialogue with any affected parties.

## CASE STUDY: DIGITAL INNOVATION CAN ENABLE CIRCULAR SYSTEMS TO FLOW

Kathmandu is using digital ID's to provide more transparent information to its customers, and facilitate circular services such as repair, resale and recycling. There's a rich story behind every garment; from the sheep that provided the wool, to the mills that produced the fabric, to the team that stewarded its evolution.

Kathmandu wanted to tell customers this story, and then at the end of each product's useful life, let the customer know what to do with it. Through EON digital IDs, customers can scan their products to discover the unique story behind the specific item they buy, and access repair information and resell recommendations thereby helping to fulfil the circular design intention of the products Kathmandu designs.

## CASE STUDY: MATERIALS INVESTMENT CAN GROW ECONOMIC OPPORTUNITIES FOR NEW ZEALAND AND BRING ENVIRONMENTAL BENEFITS

Sapro-Tech is a materials innovation company, on a mission to create a series of next generation, new materials with mycelium (fungi) as their base. Their initial focus is on developing an alternative to traditional animal-based leathers for the fashion, interiors & automotive coverings industries. Developing new materials takes investment, and time, but the team have already developed both a proprietary growing technique and a unique approach to improving the performance metrics of the materials. Sapro-Tech is working to release prototype materials late in 2024 for its partners to test, prior to commercial release of limited quantities during 2025 and full-scale production later in 2026.

## CASE STUDY: INVESTMENT IN INNOVATION CAN CREATE NEW MARKET OPPORTUNITIES FOR NEW ZEALAND MATERIALS

Strong wool is an untapped resource, and designer Liz Mitchell is on a mission to transform this once valuable product, and see it realise economic and environmental benefits for everyone across the supply chain. Liz has established a wool innovation hub in Auckland and is using the process of felting to create contemporary bespoke designs, art pieces, and homewares that bring the benefits of the natural fibre into homes and wardrobes. Naturally biodegradable, antimicrobial, breathable and durable, growing the use of New Zealand wool can provide both economic and environmental benefits for New Zealand. Liz Mitchell's design-led approach highlights New Zealand's strong wool as a regenerative resource and puts wool design back on the world stage.

## CASE STUDY: SUSTAINABLE BUSINESS BRINGS COMMERCIAL OPPORTUNITIES IN EXPORT MARKETS

Kowtow produces certified Fairtrade organic cotton clothing, working with ethical production partners and a circular design process. The brand recently achieved its goal of 100% plastic free clothing. Kowtow's connection to New Zealand and its sustainability values are intrinsic to how it operates. These values have long resonated with local and global customers providing strong export growth opportunities for the brand. Building on its local success the brand invested in understanding global market opportunities and in 2023 expanded its physical presence to Australia opening its first retail store in Melbourne. The brand has seen sustained growth with existing and new international customers seeking Kowtow out for its authentic sustainability values and unique design aesthetic.

# ACTION AREAS

# Interconnected Actions

### Interconnected Actions support NZFCTI priorities

Four action areas have been developed to guide the transition from the current state to the desired future state. Within each action area are priority recommendations, stakeholders and time frames which have been defined based on research, stakeholder surveys and direct stakeholder engagement.

The action areas are interconnected. Each action area complements the others and requires an equal need for attention and investment. The interplay between the action areas means that progress in one area could increase the impact of the other actions. Implementation of the actions should be coordinated to achieve the maximum potential.

The NZFCTI significantly contributes to Aotearoa New Zealand's economy and has a unique cultural footprint on the world stage. Taken together, these actions and recommendations will boost the NZFCTI's contribution to Aotearoa New Zealand's cultural, economic and environmental landscape, and support the transition to a thriving and circular future.

### Guiding Principles

Collaboration between people, businesses and sectors, science-based decision making and respecting Te Tiriti should underpin all recommended actions. These principles are crucial to advancing this work and avoiding greenwashing in the delivery of the outcomes. Māori NZFCTI participants will have a unique perspective on each of these recommendations, their significance and how they can be implemented to provide the best outcomes for Māori and Māori businesses. Engagement with Māori is critical to ensure success of these recommendations and support the growth and development requirements of Māori NZFCTI participants.

### Responsibility

For each recommendation, a leader has been identified based on what is currently known to be in existing plans or programmes. The stakeholders tagged to each recommendation are the necessary actors identified to participate in implementation of the action.

The Government has an important role to play to work with the NZFCTI and its key stakeholders to implement the recommendations in this report. For the Government to fulfil its role, it is essential for the NZFCTI to first identify Ministers and/or government agencies who are best placed to champion the recommended actions.

Cross sector support will be required for the actions to have long lasting impact and collaboration will be critical to success.

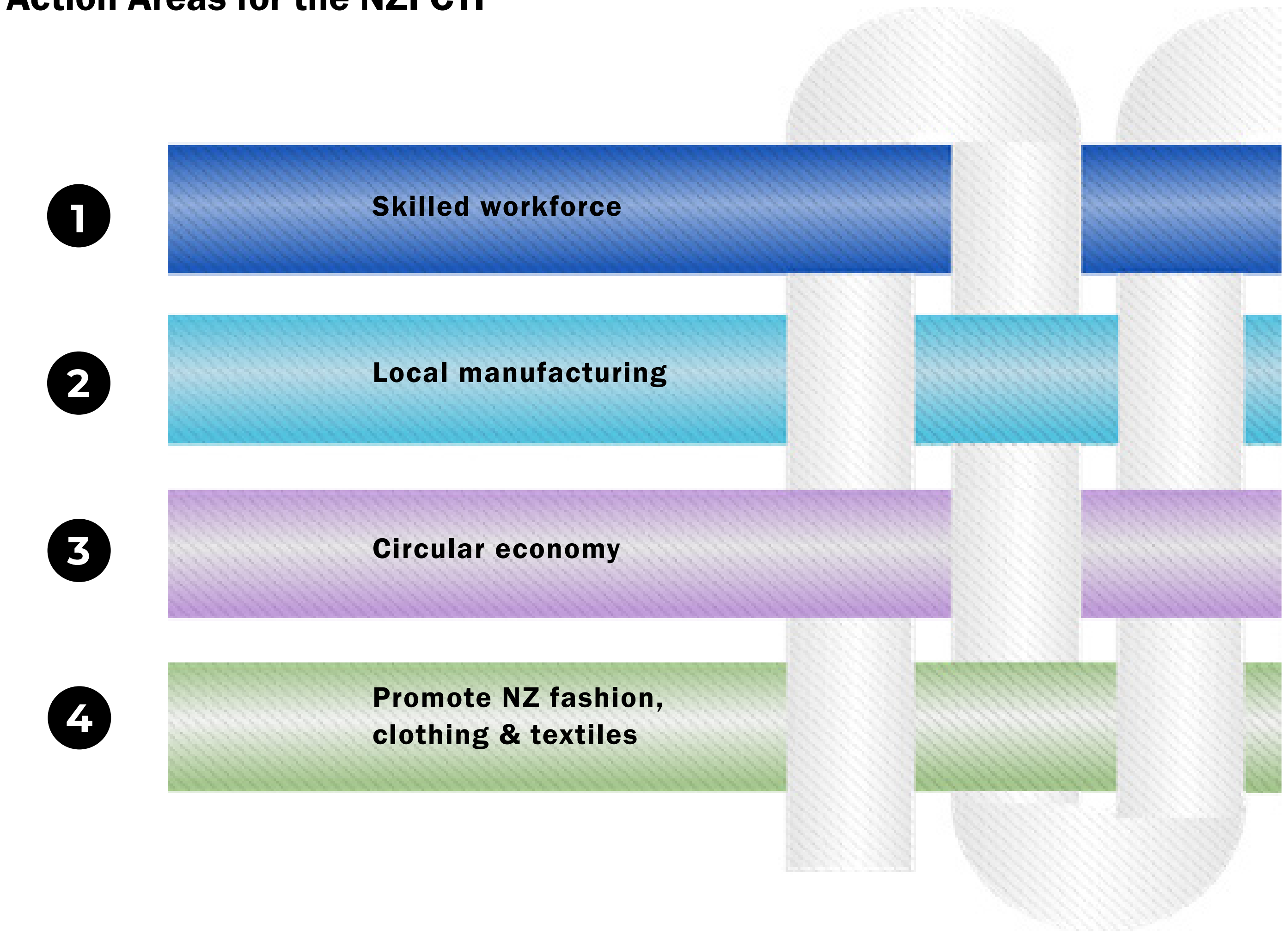
### Implementation

For these actions and recommendations to succeed, all the identified stakeholders will need to participate. Funding to implement the actions will need to be secured where not already identified.

### Timeframes

The timeframes are dated from the launch of this report. For example, if a timeframe states 0-6 months, it is recommended that the action is implemented within 6 months from April 2024, being the launch date of the report.

### Action Areas for the NZFCTI



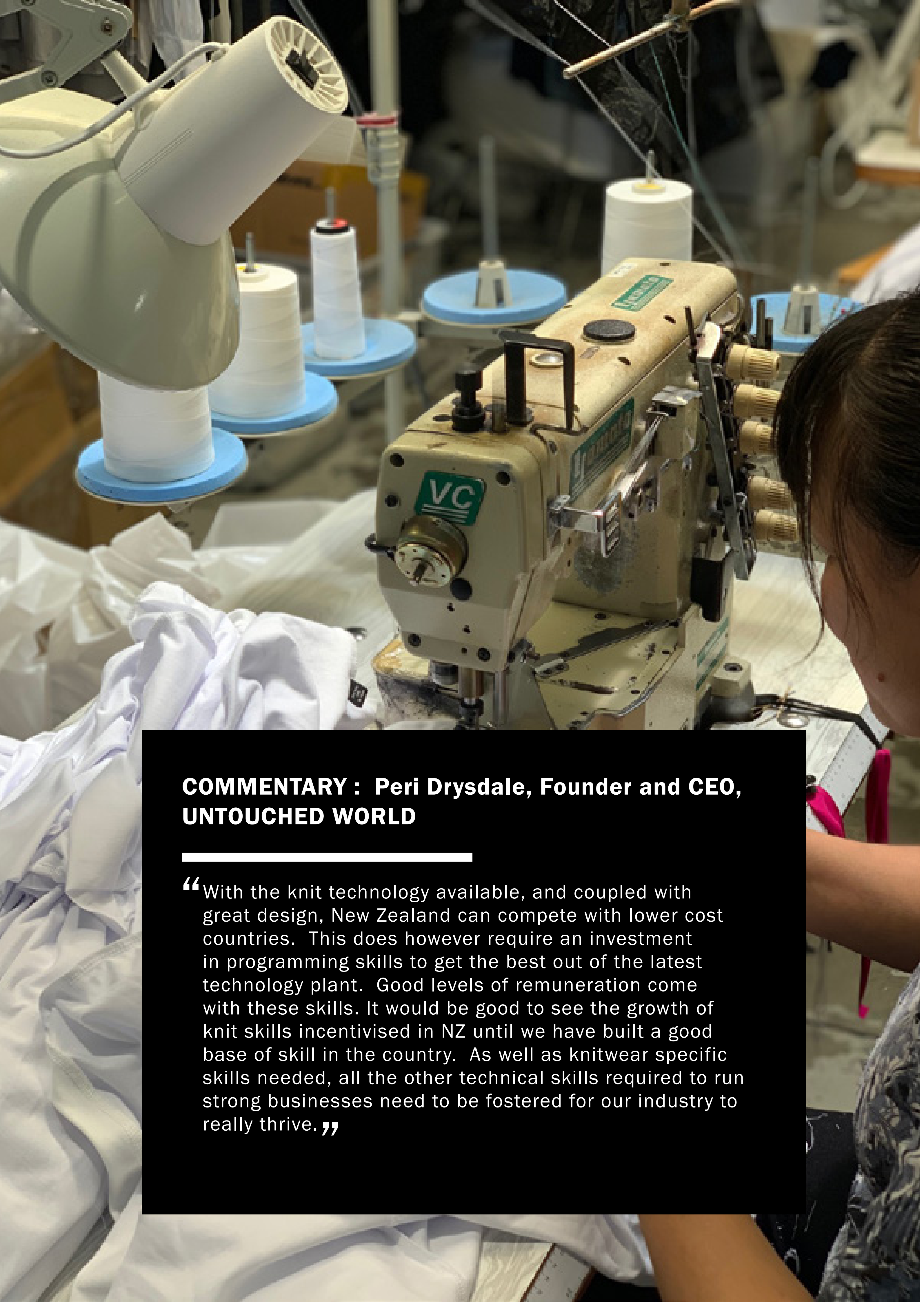
# Stakeholders

## Notes on Lead Stakeholder:

| | | |
|---|---|---|
| MF | Mindful Fashion New Zealand | For Mindful Fashion New Zealand to take forward (per existing/budgeted plans). |
| PL | Planned | In existing plans, led by consortiums or other organisations. |
| BU | Business | For businesses to take forward. |
| IN | Industry | For industry to take forward. |

## Stakeholder definitions:

| | | |
|---|---|---|
| | Industry bodies, NGOs | Organisations or systems that steer the functioning of the NZFCTI. Includes trade associations, advocacy groups, and non-profit organizations. |
| | Government | The state authorities including local, regional, or central authorities that regulate, legislate, and support the NZFCTI. |
| | Academia | Universities, research institutions, and scholars dedicated to studying and exploring the NZFCTI. |
| | Media | Various platforms like newspapers, television, radio, and online channels that report, publicise, or critique aspects of the NZFCTI. |
| | Investors | Individuals, banks, and other investors that financially support businesses within the NZFCTI with the hope of monetary return. |
| | Consumers | Individuals or groups who purchase and make use of the clothing or textile goods produced within the NZFCTI. |
| | Brands | The particular identities under which clothing and textiles are produced and sold in Aotearoa New Zealand. |
| | Innovators | People or enterprises introducing new techniques, ideas, or products in the NZFCTI. |
| | Manufacturers | Individuals or entities that engage in the process of making fibres, fabrics, clothing or textile products in Aotearoa New Zealand. |
| | Wholesalers | Businesses that purchase and sell (trade) textile, trim, clothing and footwear products to other businesses in Aotearoa New Zealand. |
| | Reprocessors | Organisations or entitites that transform waste textile materials into reusable substances or products. |
| | Primary sector | The industry segment including farming that provides raw material (e.g., hemp or wool) for textile manufacturing in Aotearoa New Zealand. |
| | Retailers | Businesses that sell clothing and textile goods to the consumer in the form of stores, e-commerce sites, etc. within the NZFCTI. |



**COMMENTARY : Peri Drysdale, Founder and CEO, UNTOUCHED WORLD**

"With the knit technology available, and coupled with great design, New Zealand can compete with lower cost countries. This does however require an investment in programming skills to get the best out of the latest technology plant. Good levels of remuneration come with these skills. It would be good to see the growth of knit skills incentivised in NZ until we have built a good base of skill in the country. As well as knitwear specific skills needed, all the other technical skills required to run strong businesses need to be fostered for our industry to really thrive."

# 01. Growing a skilled workforce

### Outcome

The NZFCTI has a workforce with the required skills to support a thriving and circular industry, and a pipeline of new talent that can fill any emerging or existing workforce gaps.

### Opportunity

Creating a thriving and circular future requires enough people to meet the NZFCTI's existing and emerging demands. However, the NZFCTI is currently experiencing a skilled worker shortage. Additional pressures are emerging as the transition to a circular economy creates new jobs that also require skilled workers. For example, increasing the capacity for responsible, productive and low carbon onshore manufacturing, growing local textile recycling and transitioning to circular business practices will require workers to become skilled in new technology, design techniques and manufacturing processes.

Bringing new people into the NZFCTI and upskilling the existing workforce has economic and social benefits. It will:

- Increase the NZFCTI's contribution to NZ's GDP. This increase will be achieved by stimulating job creation and providing opportunities for economic advancement.
- Create a pipeline of highly skilled and talented people who actively contribute to a thriving NZFCTI. This will continue to build our identity in Aotearoa New Zealand as a creative and innovative nation where care for people, and connection to place, drives our ingenuity.
- Benefit female financial security. Women are at the centre of the NZFCTI, making up

78% of the workforce. Upskilling and training women gives women access to existing higher paid jobs, and jobs of the future such as in science, technology, engineering and mathematics (STEM), the post-use ecosystem or advanced manufacturing. When considering potential pathways for women, it is important to think about the barriers women might experience. Factors that could limit female participation in the workforce include access to childcare, parental leave or language barriers. Overcoming these barriers should be an ongoing consideration for the NZFCTI.

## Recommendations

### *1. Identify and plan for the skills needs of the future.*

**Timeframe | 0 - 12 months**
**Lead** **Stakeholders**

IN

Convene a working group to identify the skills required by the NZFCTI over the next 2, 5 and 10 years. The skills mapping should inform the development of a skills strategy aimed at preparing the NZFCTI to meet the skills demands of a circular economy.

The skills strategy should coordinate public and private initiatives to upskill the NZFCTI. The skills strategy should result in the creation of new, or the leveraging of existing micro-credentials, industry training and degree courses to equip workers with the necessary future skills.

The future skills are likely to include:

- Technology and digital skills
- Technical skills
- Textiles skills
- Circular economy and sustainability knowledge and skills
- Responsible business knowledge and skills

### *2. Promote career pathways.*

**Timeframe | 0- 24 months**
**Lead** **Stakeholders**

BU

Develop a promotional campaign to showcase career pathways and avenues into the NZFCTI. This promotional campaign should particularly focus on connecting young people and those re-entering the workforce with potential career opportunities. The purpose of this campaign is to attract new and diverse talent to careers in areas such as manufacturing, operations and retailing. This will fill skills gaps and create economic opportunities for people entering the workforce.

### *3. Develop skills training and build new career pathways.*

**Timeframe | 0 - 24 months**
**Lead** **Stakeholders**

MF

Based on the skills identified in recommendation 1, create and promote training for existing and emerging skilled roles. This training is intended to build capability in the current and future workforce by introducing opportunities for specific skills development. This action should be focused on developing and promoting a) micro credentials for technical skills and b) training to future-proof the NZFCTI.

**i. Technical skills.**
Continue developing training support such as micro credentials for technical skills. Already identified technical skills include machinist and machine mechanic skills, manufacturing technology skills and digital skills. This training will provide a hands-on learning experience, facilitating the transfer of valuable industry knowledge and skills. Opening the opportunity for people to access highly skilled technical roles within the NZFCTI.

Once developed, pilot the micro credentials for machinists and mechanics training. The pilot programme should be designed with appropriate reflection mechanisms to inform the wider NZFCTI about the outcome of the pilot. Reflecting on the outcome will help the NZFCTI identify the best next steps to support a skills base for garment construction in Aotearoa New Zealand.

**ii. Future skills.**
Develop new, and identify existing, micro-credentials and training programs that can be used to upskill people to meet future NZFCTI demands. Micro-credentials are already offered by several educational institutions. It is important that the relevant stakeholders collaborate with academia to promote or adjust existing courses to help grow the skilled workforce.

### *4. Build wool knowledge and skills.*

**Timeframe | 0 - 24 months**
**Lead** **Stakeholders**

PL

Build skills and knowledge about New Zealand wool with young people and within the NZFCTI. This can be achieved by:

i. Introducing a programme to educate tertiary students about New Zealand wool from farm to finished product; and

ii. Building professional development programmes for the NZFCTI to increase knowledge about how wool is produced and turned into a textile, its properties and how brands can utilise it as a textile.

02.

# Advancing local materials and manufacturing

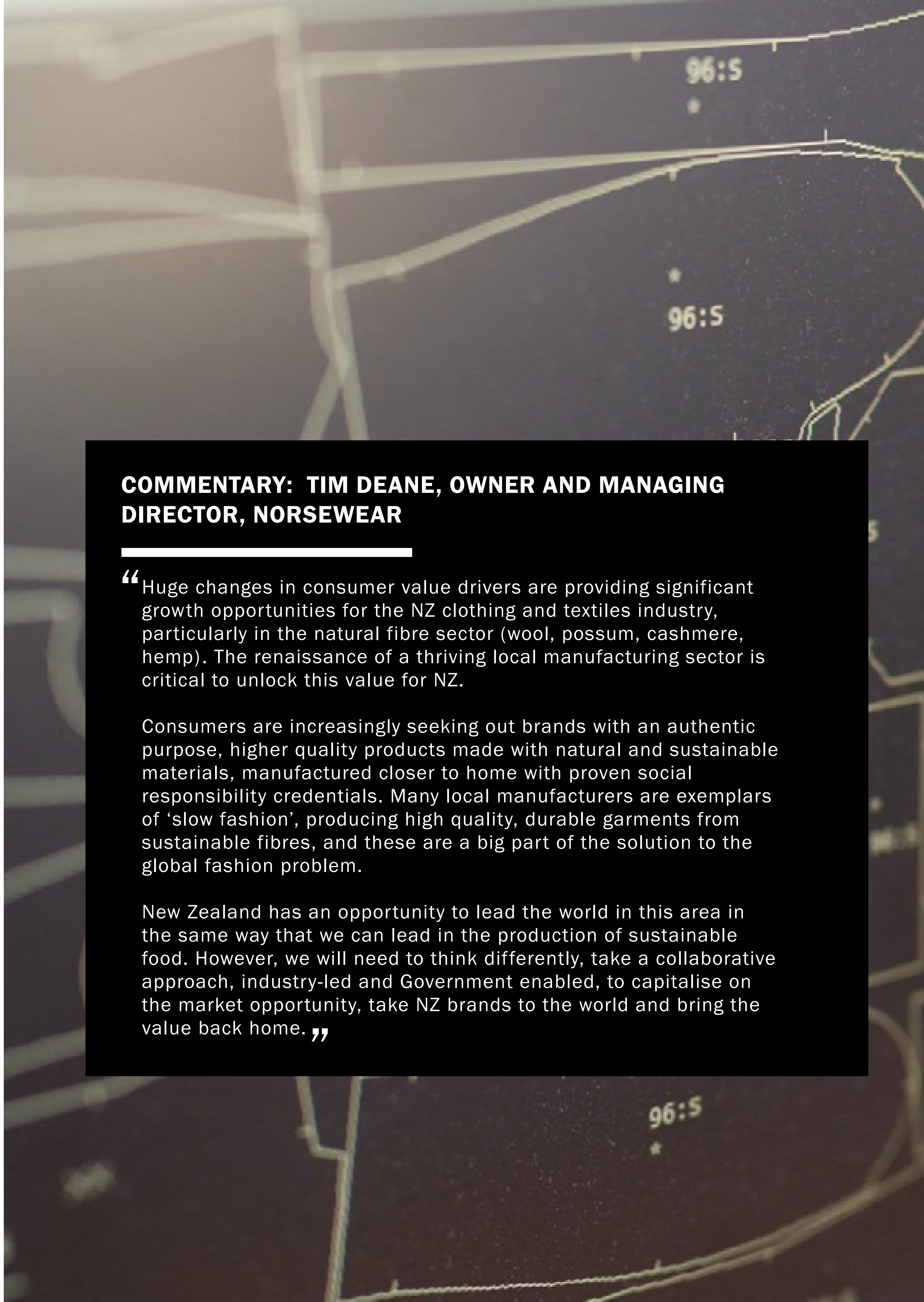
## Outcome

The NZFCTI has innovative, high value and accessible local manufacturing that increases the NZFCTI's contribution to GDP and allows SMEs to continue making onshore. We are leaders in researching, producing and using regenerative and circular materials and practices that work in harmony with nature.

## Opportunity

For the entire NZFCTI to thrive, the industry needs to continue producing some of its clothing and high value materials onshore. Local manufacturing benefits small brands and emerging designers who are reliant on onshore options to produce their garments, and established businesses looking to respond quickly to market fluctuations. Additionally, Aotearoa New Zealand's wool industry offers many opportunities for development. Investing in existing local materials and manufacturing can stimulate growth across the supply chain, while supporting the NZFCTI's transition to a low carbon circular economy. This will benefit brands within Aotearoa New Zealand and increase the NZCFTI's opportunity for exports.

Further investment into local production should focus on clean and smart new technologies that create the potential for the NZFCTI to compete with international materials and manufacturers by maximising local productivity without compromising the environment. Utilising these technologies allows for efficient local production that contributes to the circular economy while releasing less GHG emissions than standard technologies.



**COMMENTARY: TIM DEANE, OWNER AND MANAGING DIRECTOR, NORSEWEAR**

"Huge changes in consumer value drivers are providing significant growth opportunities for the NZ clothing and textiles industry, particularly in the natural fibre sector (wool, possum, cashmere, hemp). The renaissance of a thriving local manufacturing sector is critical to unlock this value for NZ.

Consumers are increasingly seeking out brands with an authentic purpose, higher quality products made with natural and sustainable materials, manufactured closer to home with proven social responsibility credentials. Many local manufacturers are exemplars of 'slow fashion', producing high quality, durable garments from sustainable fibres, and these are a big part of the solution to the global fashion problem.

New Zealand has an opportunity to lead the world in this area in the same way that we can lead in the production of sustainable food. However, we will need to think differently, take a collaborative approach, industry-led and Government enabled, to capitalise on the market opportunity, take NZ brands to the world and bring the value back home."

The benefits of advancing Aotearoa New Zealand's local materials and manufacturing are multi-faceted. Some of these benefits include reducing Aotearoa New Zealand's consumption based GHG emissions profile due to smaller transportation and production emissions, enabling emerging designers and brands to get established, providing career pathways for those entering the NZFCTI and protecting supply chain resilience.

## Recommendations

### *5. Develop NZFCTI manufacturing strategy.*

**Timeframe | 0 - 24 months**
**Lead** IN
**Stakeholders**

Creating a thriving NZFCTI requires the NZFCTI to (a) understand what role local manufacturing will play in the desired future, and (b) present the case for investment into local manufacturing.

Convene a multi-stakeholder working group to:

i. **Conduct research** to understand the NZFCTI's manufacturing landscape and identify areas for financial investment. The research should also explore policy levers for increasing local manufacturing such as requiring Government agencies to procure a percentage of clothing and textiles from local businesses and/or local products. The viability of other policy options could be investigated such as increasing the tax added to imports, subsidies for local development and making repairs GST free. Modelling should also be conducted to consider the economic, social and environmental impacts of investing in local manufacturing.

ii. **Establish prioritie**s for investment using the local manufacturing research findings, establish what manufacturing areas should be prioritised for resource and financial investment and explain how that investment will grow local manufacturing. The strategy will also set out the capabilities, technology, partnership opportunities and skills that Aotearoa New Zealand needs to develop within its infrastructure and workforce to achieve the strategy outcomes.

iii. **Advance the manufacturing strategy outcomes** through policy advocacy, connecting businesses to public and private investment and gathering cross-sectoral support for this action.

There are many aspects to manufacturing in the NZFCTI, including textile processing, knit and knitwear manufacturing, Cut-Make-Trim, repair and recycling. This action is crucial to build confidence in the vision for the future of local manufacturing. It will also allow stakeholders to identify how they will contribute to building a thriving local manufacturing sector.

### *6. Connect innovation to funding.*

**Timeframe | 6 - 12 months**
**Lead** IN
**Stakeholders**

Educate and support businesses in the NZFCTI to obtain existing innovation-centred funding. This will be achieved by developing a toolkit for innovative businesses to connect to opportunities like the Callaghan Innovation grants and the MBIE R&D tax incentives. This investment will help local businesses research and develop innovative circular products and services, allowing them to successfully compete within their niche in the international market. As well as providing businesses and innovators with the resources to develop textile innovations like biomaterials, regenerative fibres and recycled materials that create value for Aotearoa New Zealand.

### *7. Increase the accessibility of responsible materials and technologies.*

**Timeframe | 6 - 24 months**
**Lead** IN
**Stakeholders**

Facilitate access to low impact materials and technology by developing a:

i. **Cross-sector innovation hub**. The purpose of this hub is to provide ongoing support to showcase, develop and make accessible solutions to the NZFCTI's current and emerging issues. This could be achieved through initiatives like:
   - Showcasing tech start-ups tackling issues throughout the fashion supply chain.
   - Communicating global research and materials and manufacturing developments with Aotearoa New Zealand based stakeholders.
   - Sharing international and local textile innovations. For example, through a New Zealand materials showcase.

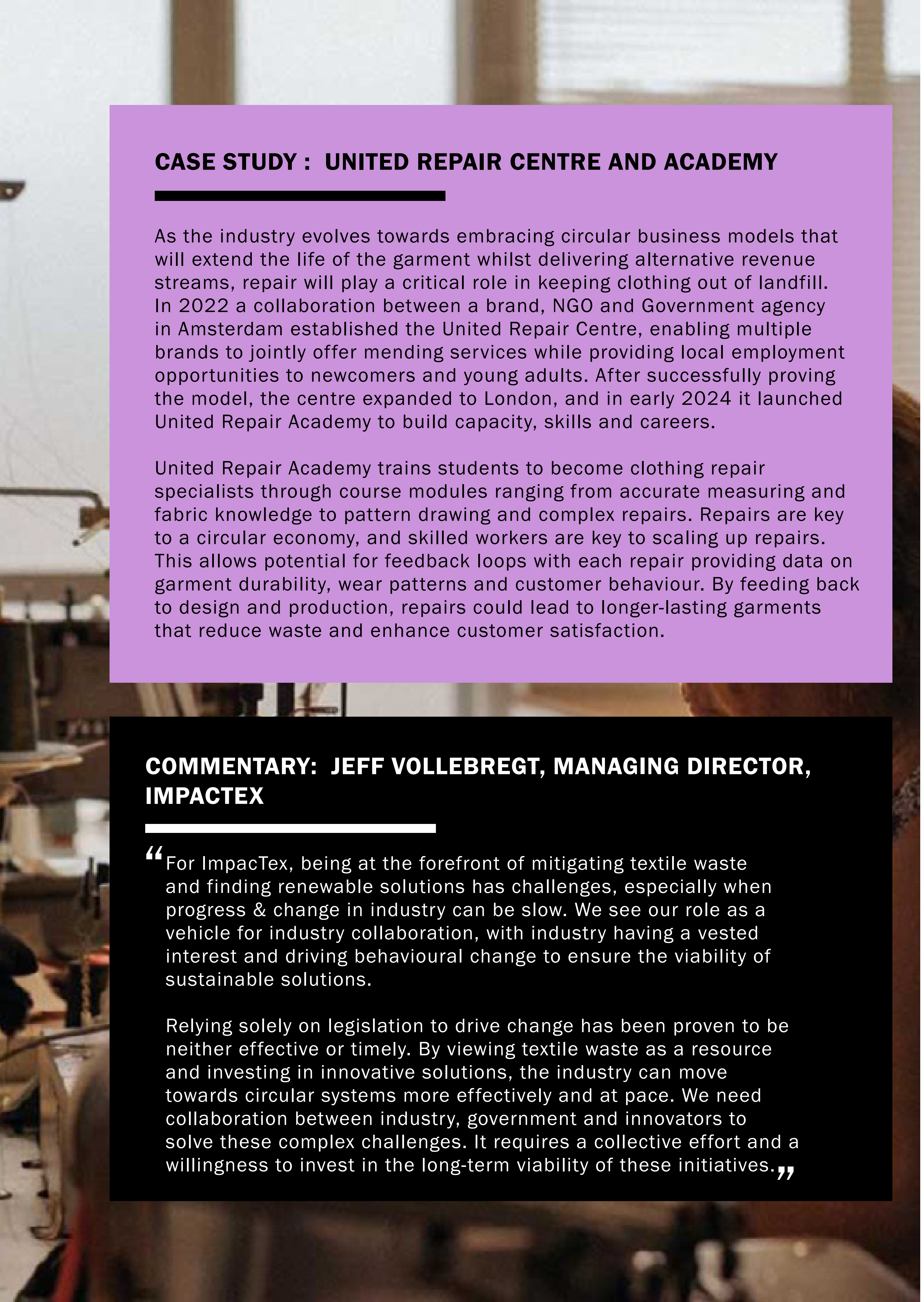
ii. **Industry trade show.** This would be a one-off event to share innovations and create cross-industry connections, foster collaboration and grow markets. This event offers opportunities like gathering leaders in responsible materials and connecting them to investors or purchasers, and experience leading sustainable practices that will help drive businesses forward.

iii. **Connect with fabric importers** to increase the accessibility of low carbon and responsible materials.

### *8. Build connections between the wool sector and brands.*

**Timeframe | 0 - 12 months**
**Lead** MF IN
**Stakeholders**

Connect the wool sector and brands through a cross-sector forum, NZFCTI events and workshops. The purpose of this work is to create opportunities for collaboration and conversation between the sectors to bridge the gap between the two sections of the same industry.



### CASE STUDY : UNITED REPAIR CENTRE AND ACADEMY

As the industry evolves towards embracing circular business models that will extend the life of the garment whilst delivering alternative revenue streams, repair will play a critical role in keeping clothing out of landfill. In 2022 a collaboration between a brand, NGO and Government agency in Amsterdam established the United Repair Centre, enabling multiple brands to jointly offer mending services while providing local employment opportunities to newcomers and young adults. After successfully proving the model, the centre expanded to London, and in early 2024 it launched United Repair Academy to build capacity, skills and careers.

United Repair Academy trains students to become clothing repair specialists through course modules ranging from accurate measuring and fabric knowledge to pattern drawing and complex repairs. Repairs are key to a circular economy, and skilled workers are key to scaling up repairs. This allows potential for feedback loops with each repair providing data on garment durability, wear patterns and customer behaviour. By feeding back to design and production, repairs could lead to longer-lasting garments that reduce waste and enhance customer satisfaction.

### COMMENTARY: JEFF VOLLEBREGT, MANAGING DIRECTOR, IMPACTEX

“For ImpacTex, being at the forefront of mitigating textile waste and finding renewable solutions has challenges, especially when progress & change in industry can be slow. We see our role as a vehicle for industry collaboration, with industry having a vested interest and driving behavioural change to ensure the viability of sustainable solutions.

Relying solely on legislation to drive change has been proven to be neither effective or timely. By viewing textile waste as a resource and investing in innovative solutions, the industry can move towards circular systems more effectively and at pace. We need collaboration between industry, government and innovators to solve these complex challenges. It requires a collective effort and a willingness to invest in the long-term viability of these initiatives.”

# 03.
# Enabling a circular economy

## Outcome

The NZFCTI has a circular textiles economy where clothing utilisation is maximised, and value is created through circular and recycling models. In these new approaches resource consumption is limited, materials are reused, and we have developed an integrated and cost-effective post-use ecosystem.

## Opportunity

In a circular economy, economic value is maximised through circular business models. These models enable businesses to access multiple revenue flows including repair, re-sale or the post-use ecosystem where products are recycled or repurposed at end of life.

To maximise both the use and financial value of garments within the NZFCTI, there needs to be a wholesale transition to circular business models. This means designing ways to keep garments and materials in use for as long as possible, and once that is not possible, recycling them so the products can re-enter the market. Shifting to a circular economy will significantly impact the entire NZFCTI value chain. For example, repairing clothes instead of promoting new purchases provides brands with an opportunity to create lasting connections with consumers. Additionally, designers considering disassembly when designing garments, and brands supporting take-back recycling schemes will enhance the commercial viability of textile recycling – allowing for greater capacity and technological advancements.

A significant mindset change will need to occur within the NZFCTI to shift from a linear to circular economy. However, this shift will be worth the effort as it creates lasting economic and environmental benefits.

## Recommendations

### *9. Demonstrate circular solutions and proactively minimise waste.*

**Timeframe | 0 - 24 months**
**Lead** BU MF **Stakeholders**

The NZFCTI proactively and collaboratively minimises the waste produced in the creation, use and disposal of clothing. This will require a cultural change within the NZFCTI towards businesses taking full responsibility for their waste. Initiatives could include:

- Piloting a collaborative repair hub, reverse logistics systems, take-back/resale business models and alternative utilisations of textile waste.
- Establishing a voluntary code of practice for producing garments, to improve garment circulation and textile recovery at end of life.
- Facilitating digital sampling, on demand clothing manufacturing and distribution.
- Developing a campaign to educate citizens about responsible acquisition, use, care and disposal of clothes.
- Showcasing circular solutions through:
    - Pilot programmes for example a circular hanger initiative or reusable packaging scheme.
    - Textile recycling pathways such as Textile Reuse programme and Impactex.
    - The Mindful Fashion Circular Design Awards

A consequential benefit of this action is that it will support the NZFCTI's position regarding product stewardship. Successful, proactive action will demonstrate that the NZFCTI supports a PSS and that a PSS can successfully manage textile waste.
Building business confidence in the transition to circular business models will be necessary and can be done by providing existing and emerging real-life examples of circular solutions and strategies, demonstrating how potential circular solutions can address existing NZFCTI challenges. An important aspect to this action is identifying successful national and international circular models or processes and sharing those stories with the NZFCTI.

### *10. Develop a product stewardship solution.*

**Timeframe | 0 - 24 months**
**Lead** PL IN **Stakeholders**

Build on current NZFCTI efforts, such as the Textiles Action Group, to develop a workable product stewardship solution for Aotearoa New Zealand, ensuring cross-sector representation. This work should include identifying the best product stewardship approach for Aotearoa New Zealand.

If a PSS is identified as a top product stewardship approach, the NZFCTI should advocate to the Ministry for the Environment that textiles become a priority waste stream. This advocacy work needs to begin by articulating the economic benefits of a PSS and identifying a viable funding mechanism to cultivate it. The applicability of Australia's Seamless scheme should be investigated to potentially serve as a framework for an Aotearoa New Zealand model.
In Aotearoa New Zealand, the Waste Minimisation Act 2008 legislated for PSS to be created for priority products.[66] Priority products are those that cause significant environmental harm when it becomes waste, there are significant benefits from managing the product at end-of-life and the product can be effectively managed under a PSS.[67] Textiles meet the priority product criteria:

- Aotearoa New Zealand's landfills are overflowing with clothing that release significant amounts of emissions during landfill decomposition. Additionally, when clothing degrades, the dyes, chemicals and microplastics present in fabric contaminates nearby soil and water.
- Recycling textiles can recover fibres from garments and repurpose them into new clothing or turn textile waste into a new product.
- International textile PSS, such as that of France, demonstrate that clothing and textiles can be managed effectively through these schemes.[68]

### *11. Invest in collecting, sorting and recycling textiles.*

**Timeframe | 6 - 12 months**
**Lead** PL IN **Stakeholders**

Achieving a thriving and circular system relies on textiles remaining in circulation for as long as possible. This requires investment into efficient textile sorting facilities and phased scaling of open-loop, closed-loop, and regenerative recycling.

i. Model the economic benefits of a post-use ecosystem through an industry working group and conduct a feasibility assessment for phased scaling of recycling infrastructure and technologies. This work will unlock investment from Government and private investors for circular solutions and sustainable end markets.

ii. Government to provide direct financial support for businesses developing recycling technology and infrastructure. This support could come through grants, fast-track consent processes and be facilitated by green financing mechanisms, such as The Treasury's Green Bond Programme. Government support could be co-financed by impact investors and private sector sustainable debt solutions.

### *12. Address textile plastic pollution.*

**Timeframe | 0 - 24 months**
**Lead** MF IN **Stakeholders**

Engage with Government on international plastic treaty negotiations and convene a multi-stakeholder group to provide insight about the role that the NZFCTI can play in combatting plastic pollution. Engaging with the Ministry for the Environment to create a dedicated working group and work programme for synthetic textiles. This working group can help the Government design policy measures appropriate to the NZFCTI. These policies should include initiatives and targets to address microplastic shedding, including investment in and promotion of technology to prevent microfibre release.

# 04. Promoting New Zealand fashion, clothing and textiles

### Outcome

We have a thriving and responsible NZFCTI, that is valued by consumers in Aotearoa New Zealand and abroad.

### Opportunity

By transforming the NZFCTI to meet the demands of today's and tomorrow's consumers, the NZFCTI can secure a competitive position in the local and global marketplace.

Promoting the benefits of local business and sustainability to consumers, and embedding circular and responsible practices into the NZFCTI's business models can help stimulate economic activity both here and abroad. Responsible practices are those that consider and create positive environmental, social and economic impacts.

Adopting responsible business practices will benefit businesses by creating future efficiencies and cost savings and increase a brand's positive reputation. It will also benefit the planet by reducing the strain on our natural resources. Consumers are becoming increasingly aware of the environmental and ethical impacts of the global fashion, clothing and textile industry. By transforming the NZFCTI into a sector that uses business for good, and moving towards best practice, the NZFCTI can secure a competitive position in the local and global marketplace.

### CASE STUDY : MFNZ CLIMATE ACTION TOOLKIT

After identifying that an action-oriented approach was needed to kickstart emissions reductions within the industry in Aotearoa New Zealand, in 2022 Mindful Fashion developed a Climate Action programme. Through the programme a cohort of businesses were supported to measure their carbon footprints and develop reduction strategies, and provided with tools and education that built capability and capacity. The programme highlighted that there is enormous appetite within SMEs to implement emissions reductions activities, but that time and resources required to upskill and build capacity is a barrier. Through the programme Mindful Fashion found that when participants gained an understanding of their businesses emissions profile it helped them identify and embed company-wide environmental and sustainability activities, empowering them to share their knowledge and take wider action.

### COMMENTARY : YASMIN FARRY, GENERAL MANAGER, NZ FASHION WEEK

“New Zealand Fashion Week is Aotearoa's only internationally recognised fashion event. Our event connects emerging and established fashion designers with local and international media, buyers and consumers.

We are a small nation, but our fashion industry punches above its weight and is highly regarded and recognised internationally for its unique blend of creativity, innovation and cultural diversity. There is a growing interest in authentic brands that have a commitment to sustainable business practices and who value diversity; and consumers are increasingly seeking out brands that are authentically telling these stories.

NZFW is a part of telling these stories via our event platform, to emphasise the strengths and values that position NZ designers as leaders in the industry while also helping them drive growth and strengthening their presence within a conscious global market.”

## Recommendations

### *13. Engage with local consumers*

**Timeframe | 6 – 24 months**

**Lead** BU

**Stakeholders**

Develop an educational campaign to provide consumers with the knowledge to make empowered and informed purchasing decisions. The objective of such a campaign is to enable consumers to understand the value of supporting local businesses and make responsible purchasing decisions, extending the longevity of clothing and textile use and catalysing a shift in business practices towards more circular models.

This action is pivotal in elevating the relevance of environmental and social issues among consumers in their decision-making.

Central to this strategy is developing educational resources that cater to all - from beginners to experts, young and old. The campaign could include creating content that educates consumers on the value of local production, different material types, and playing their role in a circular clothing system. Ensuring these educational resources and events are accessible to everyone, irrespective of age or expertise, is a crucial step towards creating a lasting cultural shift in consumption habits.

This campaign could be co-created by Mindful Fashion NZ, media, educators, and some selected brands who benefit by being key ambassadors for the campaign.

### *14. Build access to international markets*

**Timeframe | 0 months – ongoing**

**Lead** IN

**Stakeholders**

Continue to provide funding and education to support international growth for businesses with proven 'responsible' credentials. Responsible means businesses make considered decisions that promote positive social, environmental and economic impact.

The NZFCTI should work with stakeholders to identify the critical international markets seeking high-quality, responsibly produced textile-based products. Once the markets are identified, businesses with responsible business credentials should be provided with the necessary support to enter those markets. This support could encompass:

- Government negotiations as part of free trade agreements.
- Grants to allow businesses to participate in international trade shows.
- Publishing research about international clothing and textiles markets.
- Educating business leaders about how to enter new markets.

The NZCFTI should prioritise partnering with groups and government agencies that have experience facilitating international market access. Resources like the ones listed above may already be available and could be leveraged to benefit the NZFCTI.

Accessing international markets provides businesses with an additional revenue stream which allows for greater economic stability. However, rather than promoting growth at the expense of responsibility, economic stability should be achieved because businesses are responsible.

### *15. Develop tools to support sustainability ambition*

**Timeframe | 0 months - ongoing**

**Lead** MF

**Stakeholders**

i. Investigate sustainability ambitions and targets for the NZFCTI.

Establish multi-stakeholder group to investigate the development of sustainability targets for the NZFCTI. This group should consider data collection processes and reporting requirements so that progress towards targets can be measured realistically. Targets should be designed and utilised to build the NZFCTI's environmental and social ambition regarding identified impact areas, and reporting requirements should be designed in a way that is appropriate for the business size. These areas could include emissions reduction, material use, modern slavery and waste. The targets should be aligned with international benchmarks, fit for purpose for the size of business and achievable, to promote consistency between Aotearoa New Zealand and the international market. For example, upstream targets could be difficult to achieve because of business size and the consequent influence a business has on suppliers.

Once targets have been identified, convene a working group to implement, and continue developing and driving action based on the targets. This working group should provide ongoing support beyond the indicated timeframe.

ii. Develop and share guidance to support sustainability ambitions.

Mindful Fashion NZ to collaborate with other industry groups, businesses and individual actors to gauge what tools and support are needed and continue developing industry guidance and education to achieve sustainability ambitions and targets. This work will be particularly targeted towards SMEs. Existing initiatives should be leveraged to build NZFCTI understanding of what 'responsible' and 'sustainable' means and how they can be put into practice in all aspects of the NZFCTI from design, sampling, production, machining and manufacturing, through to sales and marketing. This guidance could capture potential topics such as:

- Addressing modern slavery and worker rights in offshore supply chains.
- Developing a GHG emissions inventory and how to use this to reduce emissions.
- Developing a materials strategy to grow use of low impact materials.
- Communicating accurate sustainability-related information in marketing.
- Navigating sustainability standards and writing voluntary non-financial disclosures.
- Further developing the Mindful Fashion NZ Climate Action Programme.

# Next steps

## Implementation requires collaboration

This report represents Phase 1 of a two-phase strategy. It has presented analysis of the current state, the case for change and a bold vision for the future for Aotearoa New Zealand's fashion, clothing and textiles industry.

Collectively, 15 recommendations have been proposed across four action areas to provide a roadmap for the NZFCTI to begin its transition to the future state. These recommendations clearly set out the initiatives where different stakeholders should take ownership and lead implementation of solutions, and where collaboration is necessary.

This report is a call to action for the NZFCTI and its stakeholders to play an active role in these initiatives. Phase 2 will focus on implementing the recommendations and will require each stakeholder to take initiative to play their role. Stakeholder engagement and wide-scale collaboration between all parties will be critical to success.

A key next step for Mindful Fashion New Zealand is to engage with the Government, to ensure the NZFCTI's current contribution to New Zealand is recognised, and to identify a lead government agency and/or Ministers that can champion the actions presented in this report, and work with the NZFCTI on implementation. This action must be prioritised for the NZFCTI to succeed in its advocacy efforts.

Implementing these recommendations also presents an opportunity to address business challenges, and systemic social and environmental impacts, and to realise commercial opportunities in new and existing areas.

Taken together, these recommendations will boost the NZFCTI's contribution to Aotearoa New Zealand's cultural, economic and environmental landscape.  Through growing a skilled workforce, advancing local materials and manufacturing, enabling a circular economy, and promoting New Zealand fashion, clothing and textiles, we can build an NZFCTI for the future.

## Closing thoughts

The NZFCTI is standing at the precipice of major change. The climate crisis is forcing governments, businesses and consumers across the world to address the social and environmental impact of clothing and textiles.

While progress towards sustainable action is happening, it is slow and limited to small pockets of individual businesses or initiatives. This report has aligned stakeholders behind a collective vision for transformation. It is now time to embrace that vision and create a clothing and textiles ecosystem where people, nature and business all thrive within planetary boundaries.

This report calls on all those engaged in Aotearoa New Zealand's fashion, clothing and textile industry to come together, embrace the vision, and co-create the future. With businesses, industry bodies and Government coming together we will reach a thriving and circular future for Aotearoa New Zealand's fashion, clothing and textile industry.

# Appendix A - Our Methodology

Figure 9: Report research methods


**The survey**

The study involved a comprehensive survey of the entire Aotearoa New Zealand clothing and textiles industry ("NZFCTI") ecosystem to examine its economic contours and features. As part of the survey, NZFCTI players and businesses across the value chain were asked about:

- Business
- Financials
- Workforce composition and the role of women
- Linkages with manufacturing and primary industries
- Export and supply chain linkages
- Sustainability and circular economy issues
- Structural and market trends
- Key challenges and prospects facing their business and the NZFCTI

**Profiling and constructing the NZFCTI**

The NZFCTI was split into detailed subsectors to highlight the breadth of the clothing and textile value chain. For reporting, some smaller subcategories were amalgamated. A structural economic profile was developed using:

NZ Stats Census data, which includes the level of NZFCTI employment and occupational employment.
NZ Stats employment data and weekly earnings data by occupation.
- NZ National Accounts Input-Output table.
- Gross Value Added (GVA) estimated using the sum of total compensation of employees and gross operating surplus.

A frontier scaling approach was used to leverage data from the NZFCTI survey. This enabled sub-sectoral profiles of the NZFCTI to be estimated based on the latest information from clothing and textile businesses, then scaled based off the official data sources.

Other publicly available sources were also used to determine the headline macroeconomic contribution of the NZFCTI.

**Input-Output Modelling (IO modelling)**

Findings from the survey informed the economic contribution analysis which was undertaken using IO modelling. Input-output modelling estimates the flow-on effects of the NZFCTI to the national economy.

- IO modelling estimates how the economic impacts of a market activity affect the broader economy.
- IO multipliers were used to quantify the NZFCTI's total economic contribution, the direct and indirect impacts:
    - The direct economic impact measures the output, employment and labour income generated by various components of the NZFCTI (see table below).
    - The indirect impact measures the supply chain impacts of the NZFCTI, including sourcing of goods and services used in clothing and textile activities.

IO modelling does have some limitations however. It does not consider supply constraints, price changes or structural changes in the economy. The method also considers average economic effects rather than marginal effects — this means that IO models do not account for economies of scale, unused capacity or technological change.

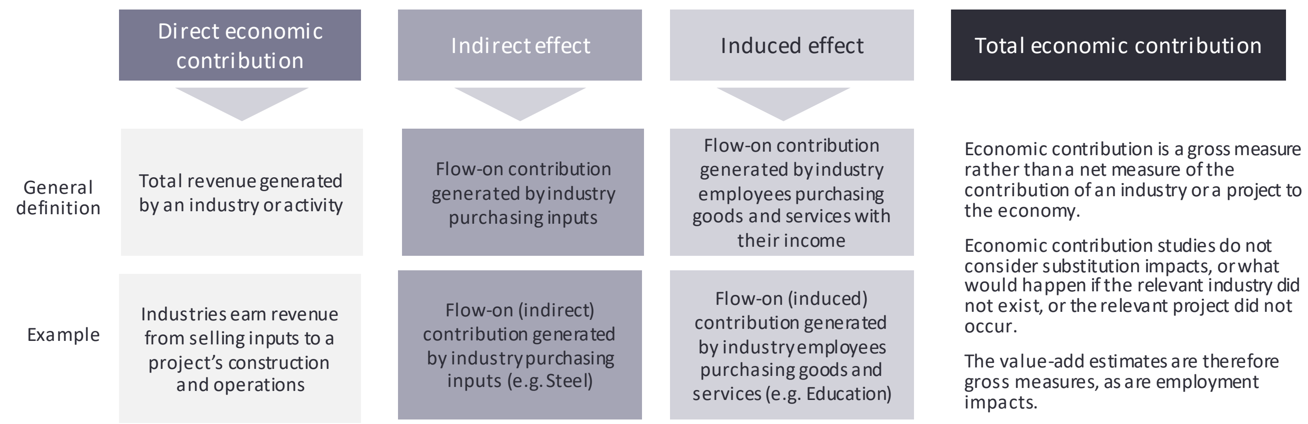



Figure 10: Economic contribution components

# Appendix A - Our Methodology

**Assumptions used in economic analysis**

- All figures are reported in New Zealand dollars in 2023 values
- The economic contribution of the NZFCTI is reported on an annualised basis for the 2022-2023 financial year.

**Breakdown of industry categories**

These industries were directly informed by the survey so businesses were able to allocate themselves to an industry.

| Economic output Industry | Survey Industry |
|---|---|
| Service provider | • Pattern makers<br>• Consultants<br>• Stylists<br>• Recycler<br>• Collector<br>• Modelling<br>• Graphic design<br>• Creative directors<br>• Photography and film services<br>• Business and financial services<br>• Logistics |
| Manufacturing | • CMT manufacturer<br>• Textile manufacturer |
| Retail | • Omnichannel retailer<br>• Bricks & mortar only retailer<br>• Online only retailer<br>• Designer label/brand<br>• Uniforms & workwear<br>• Clothing re-seller |
| Wholesale | • Wholesale fashion agencies, apparel wholesale and logistics |
| Textile supplier | • Trims and haberdashery supply<br>• Fabric agents and consultants<br>• Fabric wholesale |
| Media | • Publications<br>• Public relations and communications<br>• Print and digital news and reporting<br>• Advertising |
| Education | • Higher education<br>• Vocational education and training<br>• Professional development |

# Appendix B - Key Concepts and Definitions

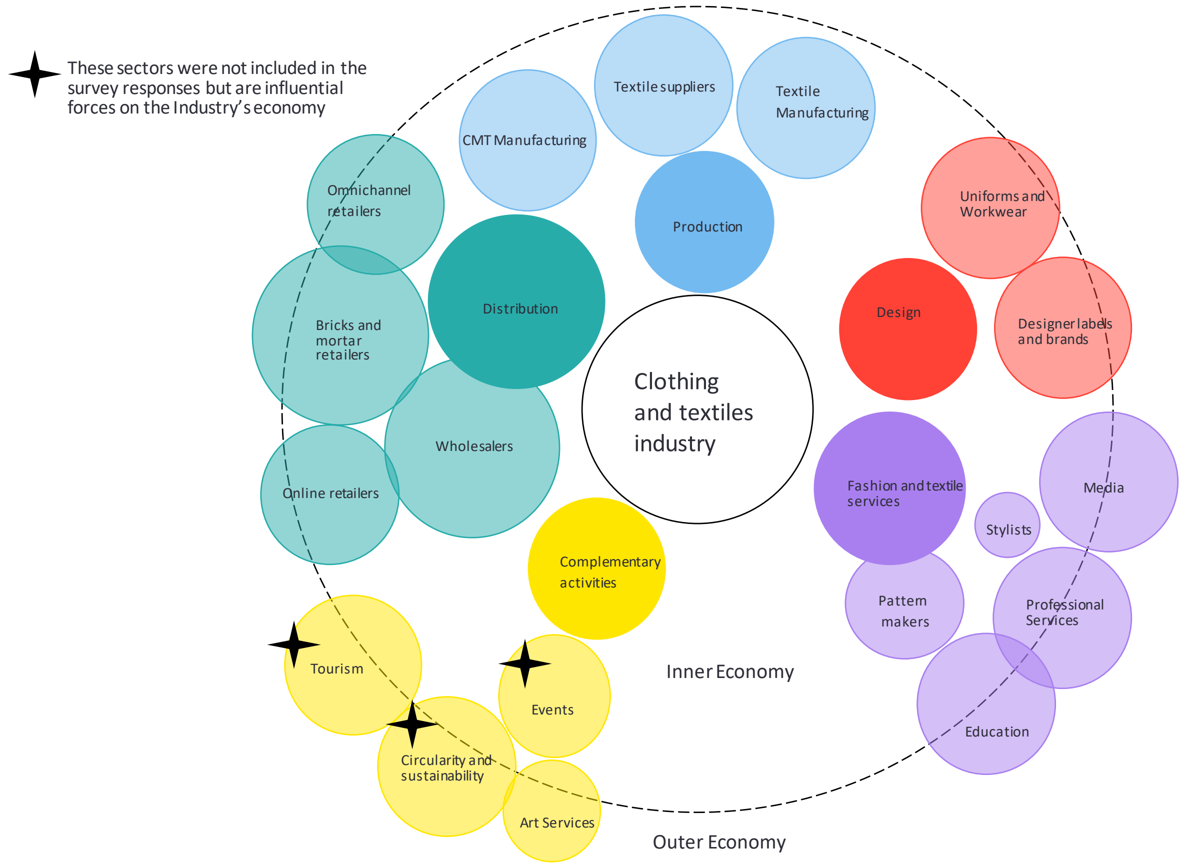
The key concepts used in this report are explained below.

- **Circular economy:** The circular economy is an economic system that is alternate to the traditional linear economy. A circular economy is based on three principles - designing out waste and pollution, keeping products and materials in use, and regenerating natural systems.[69]
- **Ecosystem**: An ecosystem is a dynamic network of interconnected actors operating within a bounded geographical space. For this report, the geographical space is Aotearoa New Zealand.
- **Just transition:** A just transition refers to greening the economy in a way that is as fair and inclusive as possible to everyone involved.[70] A just and fair transition ensures that the unprecedented opportunities and benefits on offer because of the transition are shared equitably across society so that all have access to a viable, prosperous, and secure future.
- **Stakeholders:** Stakeholders are an individual, group, or party who has an interest in, or who is affected by, the operation and outcomes of Aotearoa New Zealand's clothing and textiles ecosystem. In this report, the stakeholder groups are identified in Appendix C.
- **Sustainable:** Meeting the needs of the present without compromising the ability of future generations to meet their own needs.[71]
- **Value chain:** A value chain is the series of steps and processes that go into creating a product. In the NZFCTI, this typically involves raw material supply, production networks, export channels, and marketing networks at retail level[72].
- **Thriving:** Achieving profitable growth while maintaining environmental sustainability and ethical social practices. It involves responsible sourcing, manufacturing and fair labour practices which contribute to promoting a circular economy, diversity, inclusivity and representation.
- **Responsible:** Making decisions in a balanced and conscientious manner, considering social, economic, and environmental factors and impacts.
- **Product stewardship:** Product stewardship is a responsibility taken on by businesses to ensure the longevity of their products through their design and manufacture - and establishing systems for reuse and recycling to minimise landfill waste.[73]
- **Regenerative material**: A fibre or material that is grown/produced in a way that seeks to rehabilitate and/or enhance ecosystems as measured by net gains in specific indicators.[74]
- **Te ao Māori**: The Māori world and worldview, encompassing traditions, values, and beliefs.
- **Mātauranga Māori:** Māori knowledge, wisdom, and skills, connecting historical, cultural, and political aspects.
- **Te reo Māori:** The Māori language.
- **Tikanga Māori:** The customs and values guiding behaviour in Māori society, including social protocols and environmental stewardship.
- **Manaakitanga:** A Māori principle representing hospitality, kindness, and mutual respect, fostering community and belonging.

# Appendix B - Key Concepts and Definitions

**The clothing and textiles industry ("NZFCTI")**: The NZFCTI encompasses a wide range of sectors and roles including pattern making, textile production, retailing and education. Due to the NZFCTI's complexity, it is difficult to define its boundaries. This report has used the same industry economy mapping as the Australian Fashion Council "From high fashion to high vis" report. This alignment has been done to establish consistency in the economic modelling across Australia and Aotearoa New Zealand. See the figure below for what sectors are included in the inner and outer economies in the NZFCTI. The inner economy includes traditional industry activities. The outer activities are those that operate at a significant intersection with the inner activities but are not essential to the creation of clothing and textiles.

Figure 11: Sectors included within the clothing and textile Industry




# Appendix C - Stakeholder Groupings

| Stakeholder definitions: | |
|---|---|
| Industry bodies, NGOs | Organisations or systems that steer the functioning of the NZFCTI. Includes trade associations, advocacy groups, and non-profit organizations. |
| Government | The state authorities including local, regional, or central authorities that regulate, legislate, and support the NZFCTI. |
| Academia | Universities, research institutions, and scholars dedicated to studying and exploring the NZFCTI. |
| Media | Various platforms like newspapers, television, radio, and online channels that report, publicise, or critique aspects of the NZFCTI. |
| Investors | Individuals, banks, and other investors that financially support businesses within the NZFCTI with the hope of monetary return. |
| Consumers | Individuals or groups who purchase and make use of the clothing or textile goods produced within the NZFCTI. |
| Brands | The particular identities under which clothing and textiles are produced and sold in Aotearoa New Zealand. |
| Innovators | People or enterprises introducing new techniques, ideas, or products in the NZFCTI. |
| Manufacturers | Individuals or entities that engage in the process of making fibres, fabrics, clothing or textile products in Aotearoa New Zealand. |
| Wholesalers | Businesses that purchase and sell (trade) textile, trim, clothing and footwear products to other businesses in Aotearoa New Zealand. |
| Reprocessors | Organisations or entitites that transform waste textile materials into reusable substances or products. |
| Primary sector | The industry segment including farming that provides raw material (e.g., hemp or wool) for textile manufacturing in Aotearoa New Zealand. |
| Retailers | Businesses that sell clothing and textile goods to the consumer in the form of stores, e-commerce sites, etc. within the NZFCTI. |

# Appendix D - Workshop Overview

**Workshop 1**
The EY and Mindful Fashion NZ Stakeholder Workshop was held on January 31st 2024. The workshop presented initial opportunities and challenges to identify material topics to the NZFCTI and test high-level pathway options for feedback. This was achieved through groups brainstorming potential actions under the four action areas and selecting the top three recommended actions, consolidated by later groups contributing more ideas under each action area. Facilitators collected feedback on the suitability of the proposed desired state.

Attendees:

| Name | Clothing and textiles industry sector | Entity name |
|---|---|---|
| Emily Miller-Sharma | Designers/Brands | Ruby |
| Kate Sylvester | Designers/Brands | Kate Sylvester |
| Juliette Hogan | Designers/Brands | Juliette Hogan |
| Karen Walker | Designers/Brands | Karen Walker |
| Rebecca Gebbie | Designers/Brands | Swanndri |
| Jacinta FitzGerald | NGO | MFNZ |
| Vanessa Thompson | Services | Go Well Consulting |
| Julie Malone | Recruitment/Manufacturing | Apparel HR |
| Fraser Wood | Manufacturer | Stitch Perfect |
| Anthony Caines | Uniforms/Workwear | De Vere |
| Jennifer Whitty | Academic | Victoria University Wellington, School of Design |
| Manu Rastogi | Large Retailers | Kathmandu |
| Lynette Fielding | Large Retailers | Hallenstein Glassons Holdings Limited |
| Phil Southgate | Textiles | Charles Parsons |
| Trevor Hookway | Textiles | Hawes and Freer |
| Dan Ahwa | Media/PR/Events | NZ Herald VIVA |
| Yasmin Farry | Media/PR/Events | NZFW |
| Jane James* | Government | Ministry for the Environment |
| Paula Browning | NGO | WeCreate |
| Kara Biggs | NGO | Campaign for Wool |

*Participated as a practitioner working in government, with established relationships with Mindful Fashion and a broad view of the textiles system in Aotearoa.

# Appendix E - Individual Stakeholder Engagement

Mindful Fashion NZ conducted further stakeholder engagement. The stakeholder who provided additional feedback on the action areas and recommended actions were:

| Name | Entity name |
|---|---|
| Emily Miller-Sharma | Ruby Apparel |
| Kate Sylvester | Kate Sylvester |
| Juliette Hogan | Juliette Hogan |
| James Walker | JWC Consulting |
| Dan Ahwa | NZ Herald VIVA |
| Trevor Hookway | Hawes and Freer |
| Louina Fifita | Independent |
| Jacinta FitzGerald | MFNZ |
| Peri Drysdale | Untouched World |
| Karen Walker | Karen Walker |
| Karlie Morrow | Cirkel Life |
| Vanessa Thompson | Go Well Consulting |
| Julie Malone | Apparel HR |
| Yasmin Farry | NZFW |
| Paula Browning | WeCreate |
| Anthony Caines | De Vere |
| Kara Biggs | Campaign for Wool |
| Emma Wallace | Kowtow |
| Mat Junge | Albion Clothing |
| Jennifer Whitty | Victoria University Wellington, School of Design |
| Rebecca Gebbie | Swanndri |
| Manu Rastogi | Kathmandu |
| Lynette Fielding | Hallenstein Glassons Holdings Limited |
| Fraser Wood | Stitch Perfect |
| Phil Southgate | Charles Parsons |
| Emily May | Jaedon Enterprises |
| Michele Wilson | AWWA Period Care |
| Tim Deane | Norsewear |
| Emma Ensor | McDonald Textiles |
| Jane James* | Ministry for the Environment |

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2 *Sustainability and Circularity in the Textile Value Chain: A Global Roadmap*, United Nations Environment Programme, 2023. GHG estimates are dependent on the scope and boundary of the carbon footprint data.

3 *Fashion Clothing Consumption and Waste Flows in the Auckland Region report*, Sapere, 2023. These figures were based on the assumption of the NZ population in 2022 at 5,185,288 people. The report stated 14.28kg of fashion clothing is consumed per person, per annum and 10kg of clothing per person, per annum are sent to landfill.

4 *Workers Rights Consortium Factory Assessment – Body Fashion (Thailand) Findings, Recommendations, and Company Response, Worker Rights Consortium, 2023; Worker Rights Consortium Factory Assessment – Severance and Wage Theft from Workers at Style Avenue (El Salvador Supplier of Licensed Apparel to Outerstuff) Findings, Recommendations and Licensee Response, Worker Rights Consortium, 2023.*

5 Using information gathered from the survey, combined with desktop analysis of NZ Industry data, the economic footprint of the NZ Industry was evaluated utilising Input-output modelling. More information on the methodology can be found Appendix A.

6 "Structure of New Zealand's economy," *Infometrics Website*, ecoprofile.infometrics.co.nz/new zealand/Gdp/Structure

7 Gross Value Added (GVA) is a measure of the value of goods and services produced in an area, industry, or sector of an economy. The NZ Industry's GVA was estimated using the sum of total compensation of employees and gross operating surplus.

8 "Structure of New Zealand's economy," *Infometrics Website*, https://ecoprofile.infometrics.co.nz/new%20zealand/Employment/Structure The finance industry sits at 1.5%, the dairy cattle farming industry sits at 1.3% and the horticulture and fruit growing industry sits at 1%.

9 EY Industry Survey and Stakeholder Workshop.

10 CMT stands for Cut-Make-Trim. It's a type of manufacturing service where the client provides the manufacturer with the materials, and the manufacturer then cuts, sews, and finishes (trims) the garments according to the client's specifications.

11 Business size was based on self-reported business revenue. Micro (<$1m), Small ($1m - $5m), Medium ($5m - $15m), Large ($15m - $50m), Enterprise (>$50m). See figure 3.

12 This percentage is based on the EY Industry Survey.

13 This percentage is based on the EY Industry Survey.

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