

# Grand Challenges 2023

## Group 2

1. Nur Atika Nikma Dahlan
2. Mayuran Jayatharan
3. Lihuan Lin
4. Ali Esfandiary
5. Michelle Croughan
6. Daniel Clayton-Chubb
7. Neville Fields
8. Nikita Chitre

26<sup>th</sup> of October 2023  
Prato Campus

# The Challenge

Monash Impact 2030

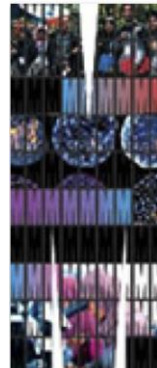
## Group 2 Challenge

Given the **global** fast fashion glut and its impact at a **local level**, consider an intervention or opportunity that extends, amplifies or exports Prato's history and heritage of **textile regeneration** practices at a local, national and global level.



### Climate change

Climate change threatens the fabric of our planet and the quality of air, water and biodiversity that sustains us.



### Thriving communities

Living well and together requires understanding and solution of medical, health and technological issues, and systemic social issues.

# Who We Are



## Disciplines Represented

Medicine  
Civil Engineering  
Pharmaceutical Science  
Chemistry  
Physics



**Notably**, no textile, fashion, recycling, circular economy, or qualitative researchers

# Fashion and Textiles

Why is this a problem?

“You can never be **overdressed** or overeducated.”

**Oscar Wilde**

“I love **new clothes**. If everyone could just wear new clothes everyday, I reckon depression wouldn't exist anymore.”

**Sophie Kinsella**

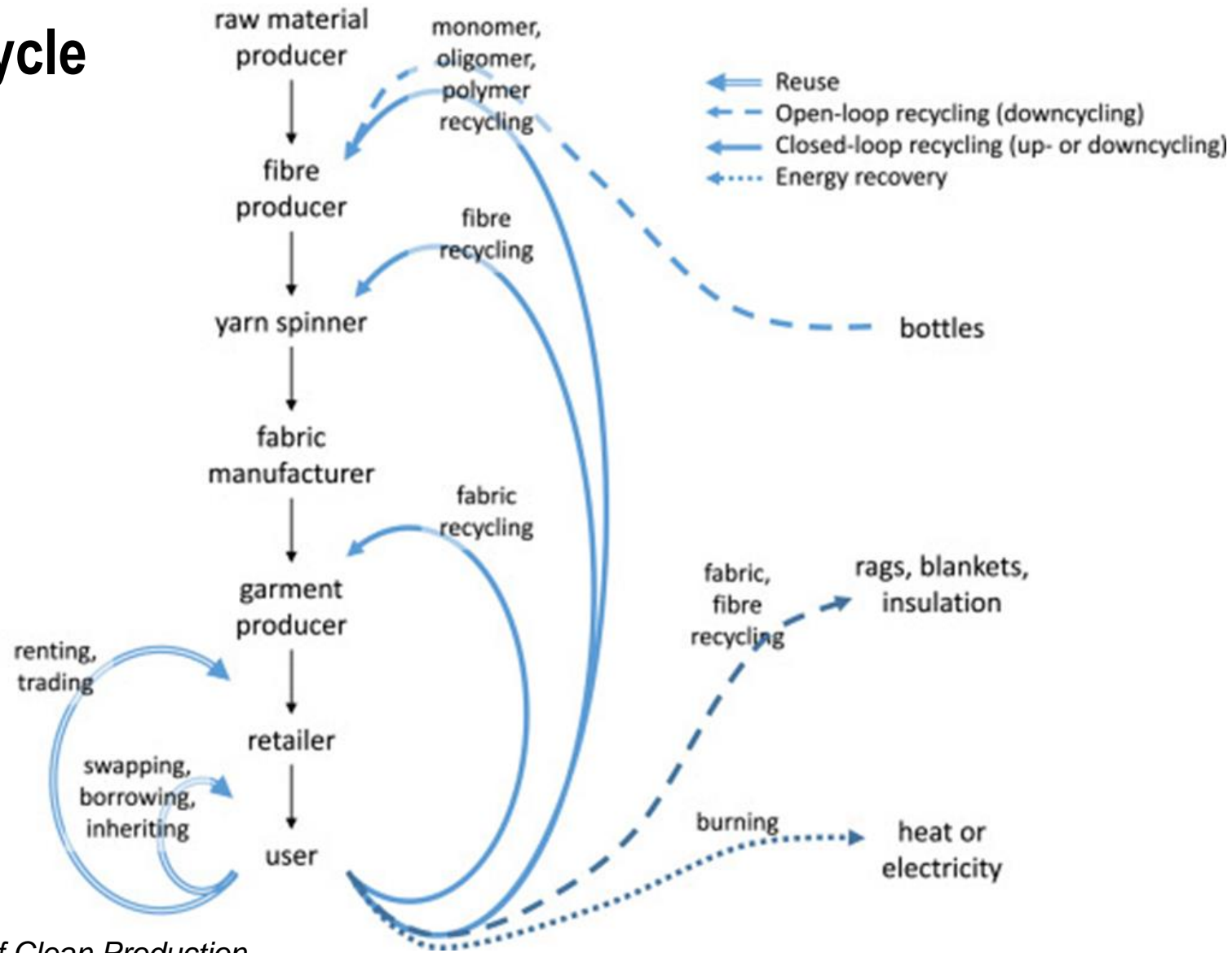
“Fast fashion is not free. **Someone somewhere is paying**”

**Lucy Siegle**

“You can't solve a problem on the same level it was created.  
You have to **rise above it** to the next level”

**Albert Einstein**

# Circular Life Cycle of Textiles



Sandin et al. (2018) *Journal of Clean Production*

# Fashion and Textiles

## CLIMATE CHANGE & THE ENVIRONMENT

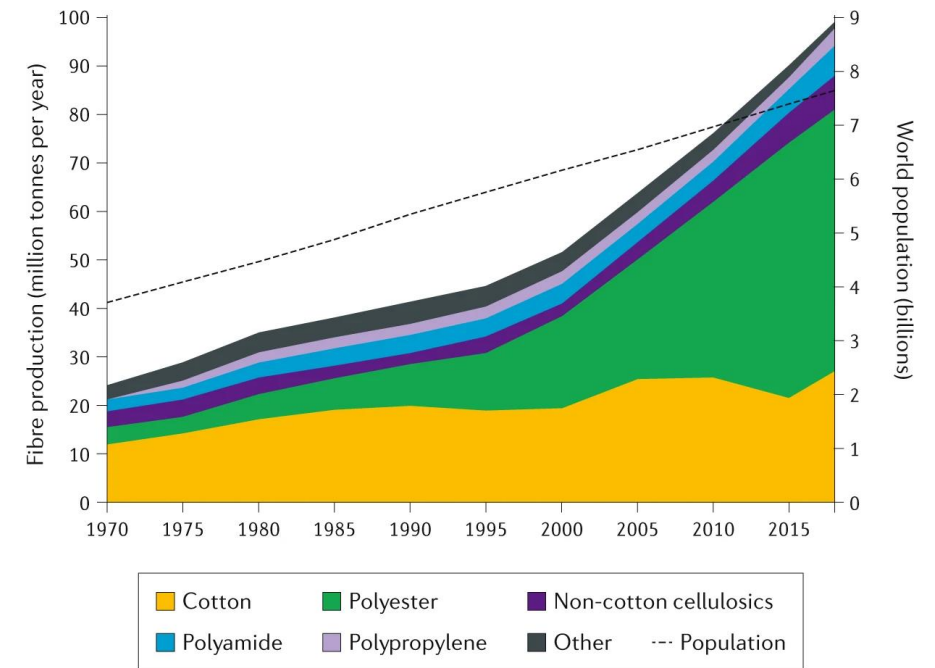
### Annual Impact of the Textile and Fashion Value Chain

- **92** million tonnes of waste produced
- **79** trillion litres of water consumed
- 'Fast Fashion' has led to a **doubling** of clothing production compared to 2020
- Majority of textile waste is **incinerated, landfilled (85%),** or **exported** to developing countries

8-10% of Global CO<sub>2</sub> Emissions

20% of industrial water pollution

35% of oceanic microplastic pollution



Niinimäki et al. (2020), *Nat Rev Earth Environ*

# Textile Destination: India

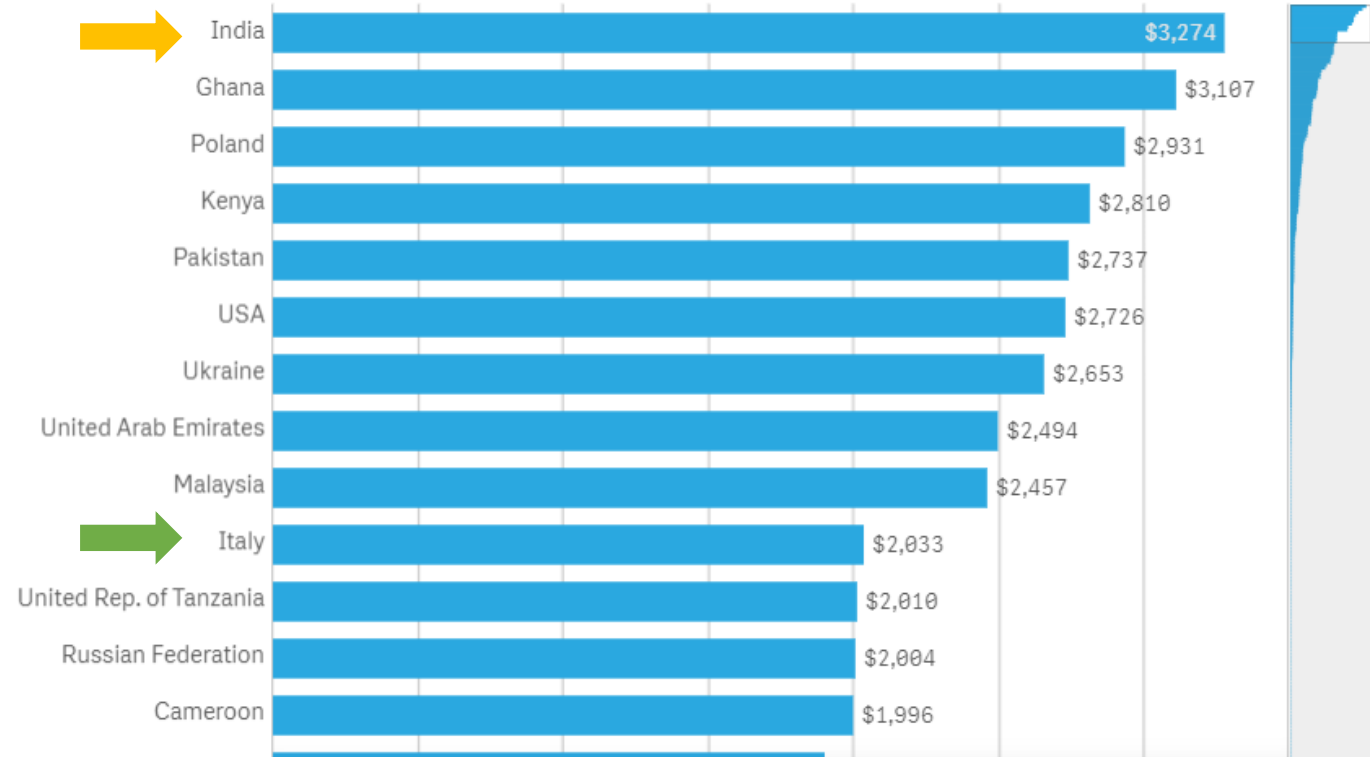
Kandla, Gujarat

## UN CommTrade Analytics

- Largest destination for exported used clothing is India worth \$3.27 billion USD
- 8.5% of global textile waste exported into India (7,793 kton)
  - **Laws prevent resale of pre-consumer textiles** locally to support local manufacturing
  - "Mutilated" textiles can be recycled but predominantly are shredded into low-quality fabrics
  - 5% incinerated
  - **17% landfill**

### Destination of exports

(MLN US\$)



<https://comtrade.un.org/labs/data-explorer/>

# Textile Destination: Ghana

Obrani Wawu “*Dead White Man’s Clothes*”

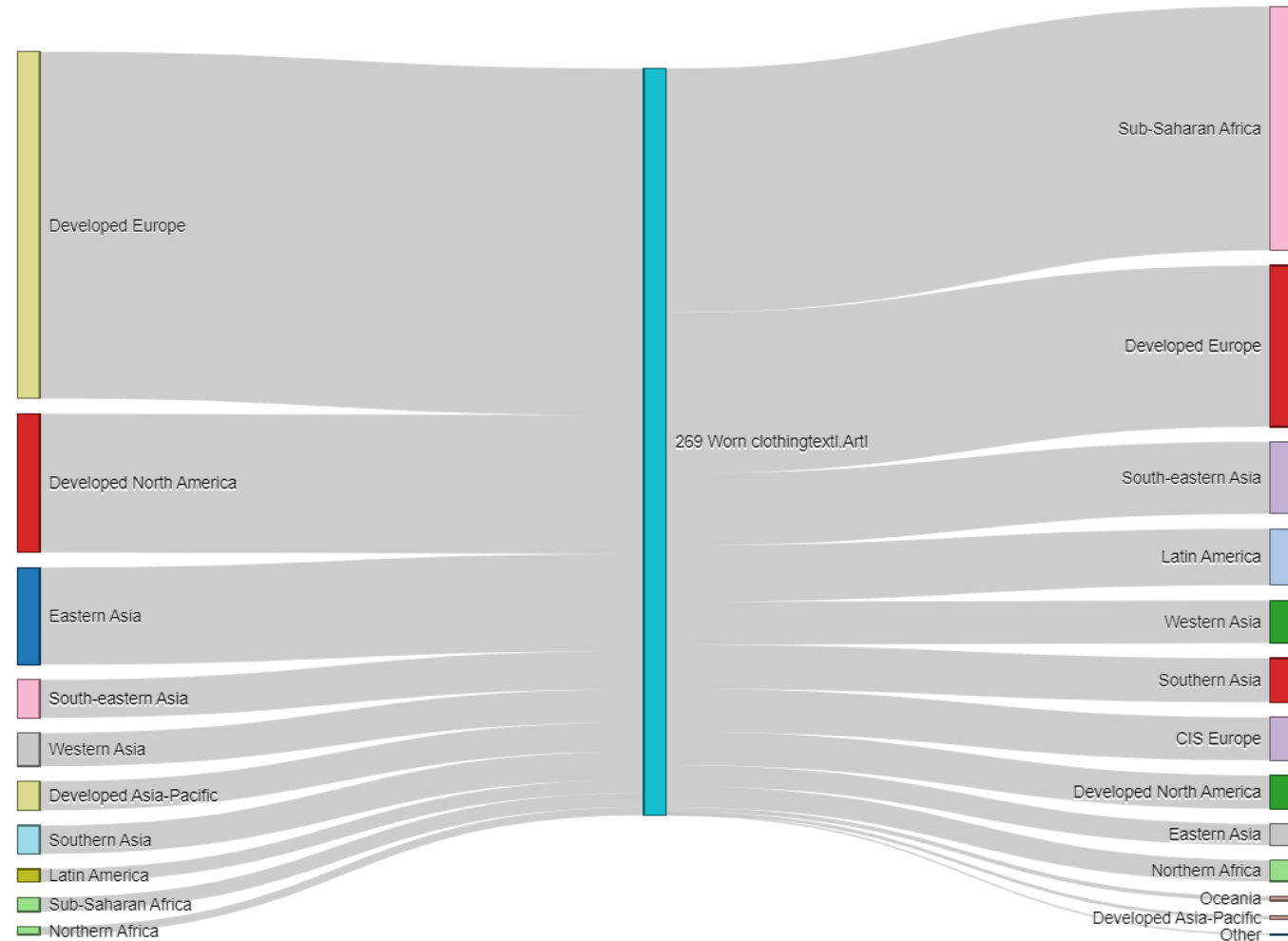
**Australia’s primary export destination used clothes**

- 2019 65 million tons used textiles into Ghana
  - **>40% discarded** into landfill or sea



<https://comtrade.un.org/labs/data-explorer/>

Main export flows (exporter->commodity->destination)



# Commission of the EU Sustainable and Circular Textiles

European Union Strategy Document March 2022

## Framework and Vision Statement

**By 2030 textile products placed on the EU market are long-lived and recyclable**, to a great extent made of recycled fibres, free of hazardous substances and produced in respect of social rights and the environment. Consumers benefit longer from high quality affordable textiles, fast fashion is out of fashion, and economically profitable re-use and repair services are widely available. In a competitive, resilient and innovative textiles sector, **producers take responsibility for their products along the value chain, including when they become waste**. The circular textiles ecosystem is thriving, driven by sufficient capacities for innovative fibre-to-fibre recycling, while the incineration and landfilling of textiles is reduced to the minimum.

*Consider tonight - Are your dress/shirt/pants today able to be recycled?*

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022DC0141>



EUROPEAN COMMISSION

# Prato as a Centre for Sustainability

THE CITY & THE REGION



Photos by Dan Clayton-Chubb

# Prato as a Centre for Sustainability

## SOCIOHISTORICAL CONTEXT



Photos by Dan Clayton-Chubb

# Prato as a Centre for Sustainability

## RECYCLING EXPERTISE



### THE PRATO EXPERIENCE

- Long history of textile recycling dating back almost **two centuries**
  - What was previously a choice is no longer a choice
- 142 million kilograms of textile material were converted into fibres in Prato in 2017
  - Some estimate **15% of total global fabric recycling** occurs in Prato
- Majority of textiles recycled in Prato are from the USA



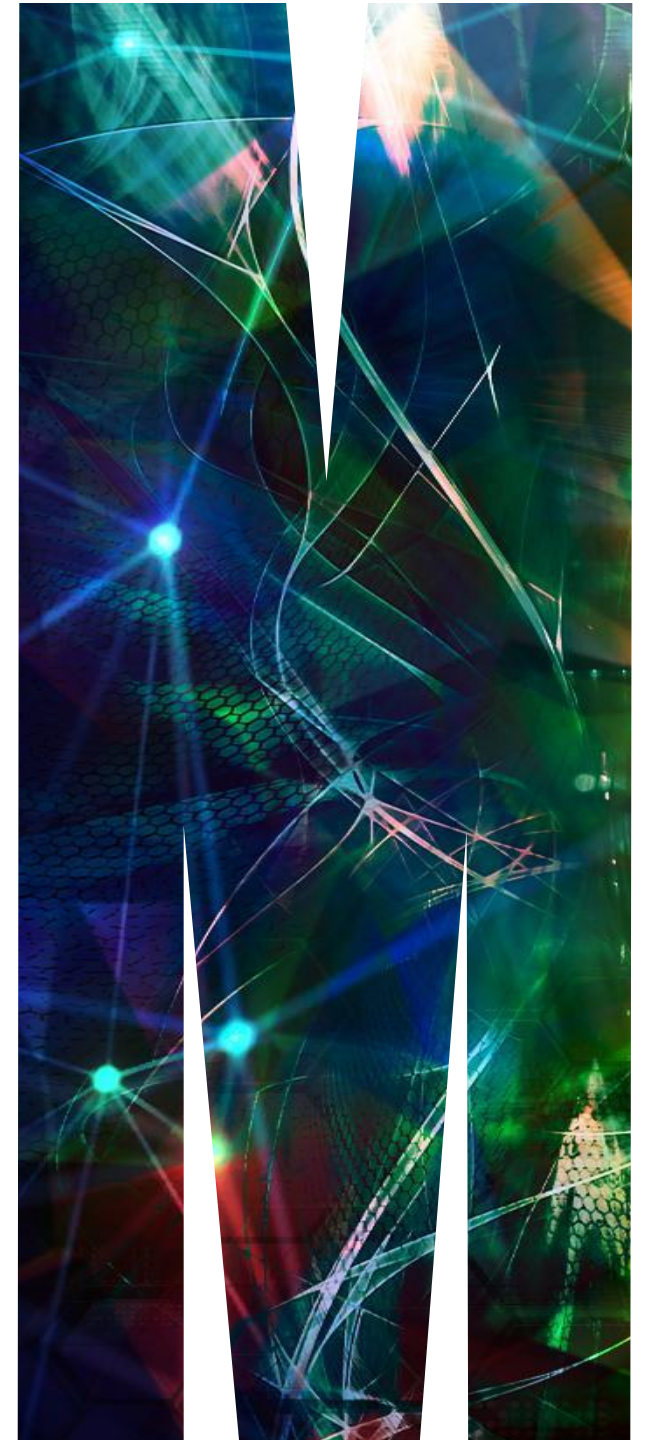
<https://www.theflorentine.net/2019/06/11/rags-stracci-prato/>

<https://www.thetimes.co.uk/article/remade-in-italy-inside-pratos-ancient-clothes-recycling-industry-wkrss968n>

<https://newseu.cgtn.com/news/2021-06-05/Rags-to-Riches-The-Tuscan-town-at-the-forefront-of-recycled-fashion-10PbReFPiNy/index.html>

## What Will We Address?

- 1. Enhancing local textile recycling skill**
- 2. Developing international education & expertise**
- 3. Creating a centre for collaboration between industry, academia, and consumer groups**



# Prato School Work Experience

## INVOLVE LOCAL COMMUNITY WITH PRATO'S INDUSTRY

- Declining number of skilled tradespeople
- Poor youth engagement
- PCTO – **Percorsi per le Competenze Trasversali e per l'Orientamento**
  - Existing work experience program
  - Links students with industry
- 1000s of small business are hard for individual students to engage with
- Utilise local organisations to connect schools, students and businesses



Identify local organisation(s) to be program development facilitators

Now – mid 2024

Engage with businesses and schools to develop PCTO programs. Promoting existing funding sources.

2024 – 2025

Offer programs to students and reflect on participation and engagement.

2026 onwards



# **PRATO SUSTAINABLE-FASHION FELLOWSHIP**

**INDUSTRY-PARTNERED APPRENTICESHIP TO PROMOTE  
TECHNICAL EXPERTISE**

# Monash Prato Sustainable-Fashion Fellowship

BUILDING BETTER TOMORROW FOR ALL

Leverage the Monash global education brand to promote the **on-the-ground and industrial expertise** of the Prato community

Beneficiaries

- Monash enrolled students (all campuses)

2026

Potential sponsors

- UG students → self-sponsored + credits allocated
- PG students → partially funded by Monash and the industry partner
- Textile companies and textile research and innovation firms

Duration of fellowship

- 6-12 months
- **Rotational basis**



# Prato Sustainable-Fashion Fellowship



## MICRO LEVEL IMPACTS

### PERSONAL IMPACTS

- Improved understanding of the integral role of textile and fashion recycling in mitigating the industrial impact on the planet
- Altered purchasing patterns and improved consumer consciousness
- **Improved employability in different supply-chain businesses** and geographies

TEXTILE EXCHANGE

#### Standards Monitoring, Evaluation, and Learning Manager

About Us Textile Exchange is a global non-profit driving positive impact on climate change across the fashion and textile industry. It guides a growing (...)

Read More →

## Acne Studios

Sustainability Coordinator

### Sustainability Finance Manager

Department: FINANCE & OPERATIONS

City: London

Location: GB

**BURBERRY**

At Burberry, we believe creativity opens spaces. Our purpose is to unlock the power of imagination to push boundaries and open new possibilities for our people, our customers and our communities. This is the core belief that has guided Burberry since it was founded in 1856 and is central to how we operate as a company today.

# Prato Sustainable-Fashion Fellowship



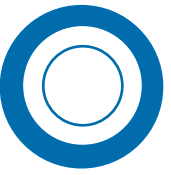
## MESO LEVEL IMPACTS

## LOCOREGIONAL IMPACTS

- Influx of fresh perspective & innovation
- Recruitment cost saving
- Multilingual support by English speaking students improves **industrial tourism sector** (provided the students possess basic Italian for internal communication)



# Prato Sustainable-Fashion Fellowship




## MACRO LEVEL IMPACTS

### GLOBAL IMPACT

- Market expansion by word of mouth
- **Exposure!** Prato as a sustainable fashion hub
  - Competitive advantage – attracts customers who prioritize eco-friendly products
  - Model for global influence
  - Maintaining Prato's heritage





# **PRATO SYMPOSIUM OF SUSTAINABLE FASHION**

**A THREE-DAY TRANSDISCIPLINARY SYMPOSIUM PRATO 2025**

# Prato Sustainable Fashion Symposium+

## MISSION STATEMENT

**“To bridge the gap between sustainable fashion theory and practice”**



**Textile Recycling Conference in Prato**

Natural Fibre Connect Presents  
Prato's Textile Recycling Industry



**Cairo Textile Week 2024**

CTW 2024: Where the Brightest Minds in the Textile Industry Meet

# Prato Sustainable Fashion Symposium+

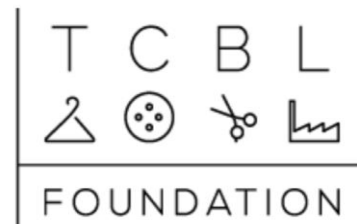
CONCEPT PROPOSAL



Comune di Prato



MONASH  
University



# Prato Sustainable Fashion Symposium+

## CONCEPT PROPOSAL



Textile Recycling Conference in Prato



Dialogue Sessions



New Technologies



Digitisation



Site Visits



Fashion Show

# Prato Sustainable Fashion Symposium+

## CONCEPT PROPOSAL

### ATTENDEES

- High and mid-level industry representatives
  - Leverage Prato connections
- Governmental and supra-governmental representatives
  - EU Commission
- NGOs
- **Prato business owners demonstrating local expertise in sustainable fashion**
  - History & story telling
  - Clothes sorting exhibits
    - Contextualise recycling skill requirements
- Influencers
- Global academic community



# Prato Sustainable Fashion Symposium+

PRATO EXPERTISE



## Rifò

- Prato-based company
- 78,889 garments produced in 2022
- 13.8 tonnes of old garments recycled
  - **85% of recycled garments successfully used in production**
- Opportunity to demonstrate skill and product offering



REMANUFACTURED CASHMERE HAT  
MARCELLO  
BEIGE SAND




MEN'S SWEET SHIRT CASHMERE  
REGENERATED FOLCO  
ROSA-VIOLET



CASHMERE SCARF REGENERATED FENICE  
ROSA-VIOLET

# Prato Symposium 2025

## EVENT BUDGET

 **NOVEMBER 2025 (TBC)**

### INCOME

DATE	DESCRIPTION	AMOUNT (EURO)
03/2024	Tiered Industry Sponsorship	€20,000
09/2024	Citi De Prato Sponsorship	€5,000
03/2025	Symposium Ticket Sales €150/day - €350/3-day	€24,000 (80 x €300)
03/2025	Welcome Reception (Runway)	€6,000 (80 x €75)
TOTAL:		€55,000

### SUMMARY

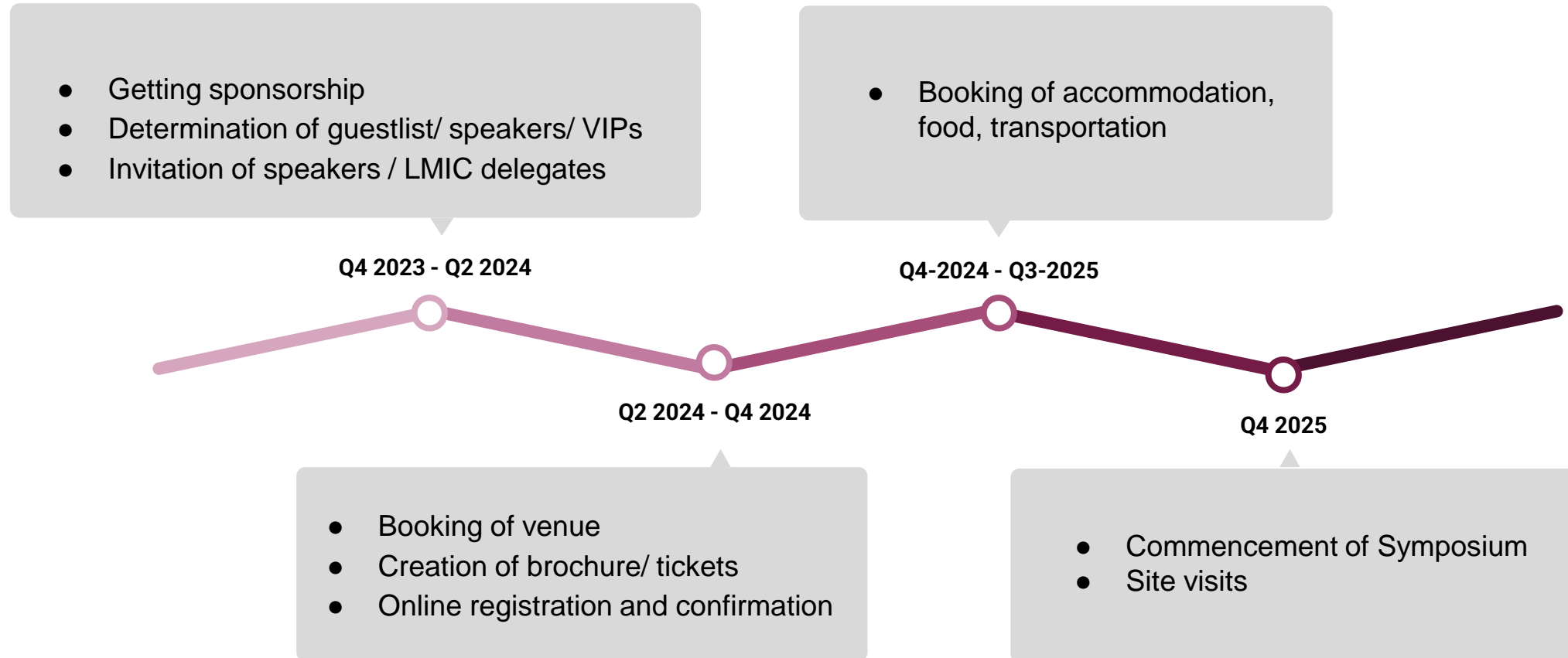
TOTAL INCOME	TOTAL EXPENSES	TOTAL SAVING
€55,000	€41,055	(+) €13,945

### EXPENSES 80-PERSON SYMPOSIUM

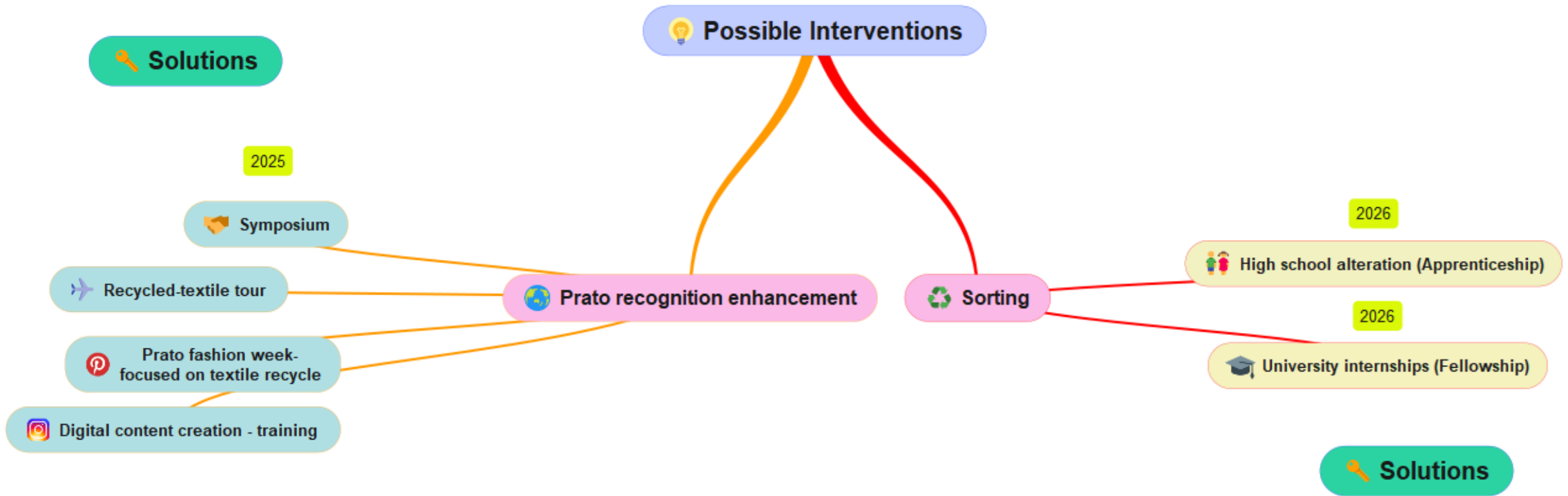
DATE	DESCRIPTION	AMOUNT
03/2025	Event Advertisement (Instagram 3-mo) / Print	€3,210
03/2025	Website/Registration Portal	€1,500
06/2025	Monash Prato Salon Grollo 3-Day Hire	€3,855
06/2025	Catering Monash Prato €47/pp Morning Tea/Lunch/Afternoon Tea	€3,760
06/2025	Monash Prato Terrace Reception Evening Venue	€370
06/2025	Welcome Reception Catering €36/pp Aperitivo / Apericena	€2,880
06/2025	Welcome Reception Model Runway + Lighting Cost	€10,000
06/2025	Invited Speaker / LMIC Bursary	€15,000
08/2025	Prato Textile District Site Tour	€480
TOTAL:		€41,055

# Prato Sustainable Fashion Symposium+

## PROPOSED TIMELINE



# Visual Abstract



# Conclusion

Prato is the **innovation epicentre for a circular textile ecosystem**

- Significant expertise and efforts currently underway to address this global challenge
- The current situation is no longer sustainable
- The EU commission targets by 2030 mandate change to the entire textile and garment sector and **Prato is well-positioned to lead this change**

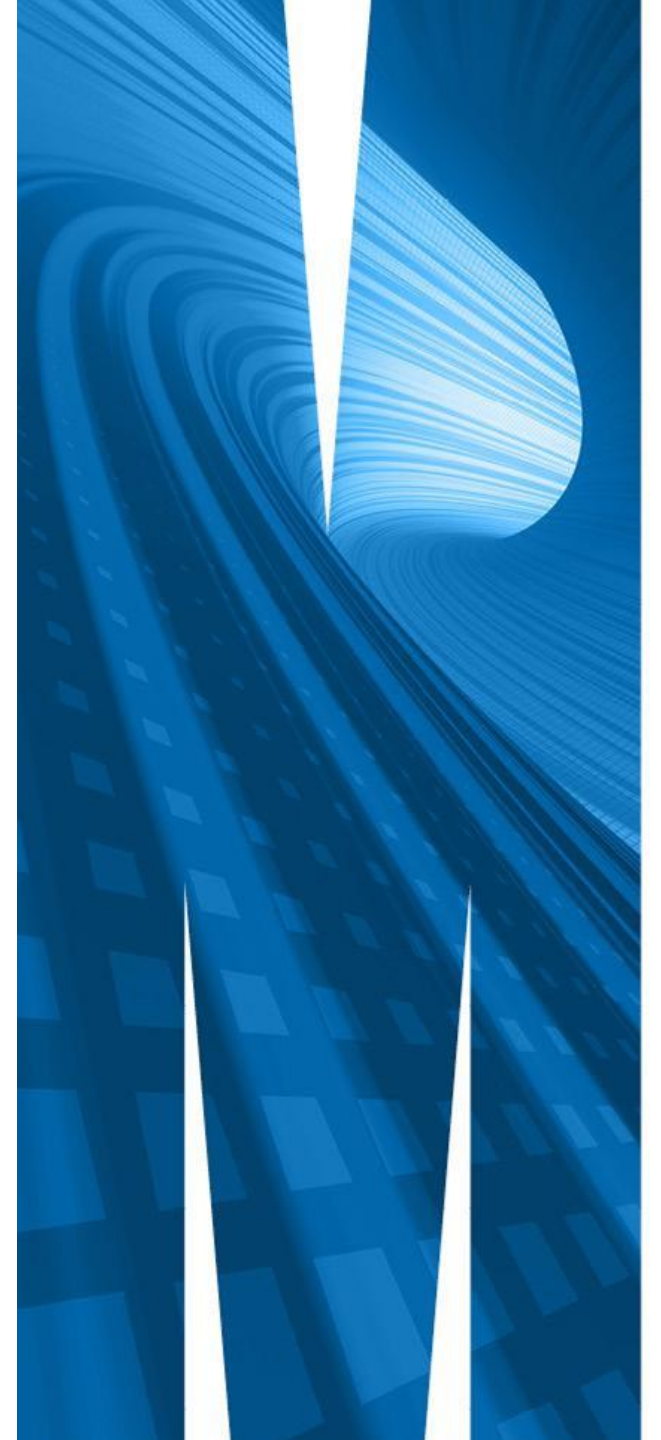
Prato has a **global reputation of textile excellence** that we aim to expand and celebrate locally, nationally and globally with the development of



1. Prato School Work Experience
2. Monash Prato Sustainable-Fashion Fellowship
3. Prato Sustainable Fashion Symposium 2025

# Monash **PITCH**

**P**ost-graduate **I**nterdisciplinary **T**eam  
**C**hallenges

Spiffy Marketing





We have to communicate our  
knowledge now... This is  
important for our environment...  
and it is no longer a choice.

**FRANCESCO MARINII**  
**TEXTILE ENTREPRENEUR MARINI INDUSTRIES**  
**PRESIDENT OF PRATO TEXTILE MUSEUM**

