RESYNTEX

Circular economy stakeholder perspectives:

Textile collection strategies to support material circularity

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Collecting textile waste in the circular economy

A circular economy aims to **maximize value and eliminate waste** by improving the design of materials, products, systems and business models.

Circular economy strategies encourage:

- The design of long lasting, reusable and easily recyclable products
- Decreasing the use of virgin (raw) materials and non-renewable resources and increasing the use of renewable resources and recycled materials
- **Shifting from "waste management" to "resource recovery" where everything has a value and zero waste goes to landfill**
- Shifting from linear supply chains that produce disposable products to circular supply chains that produce ongoing services (Product-as-service)
- Dramatically reducing the negative environmental aspects of economic development (such as pollution) through carbon-neutrality, using non-toxic-materials and other strategies

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“Everything has a value?”

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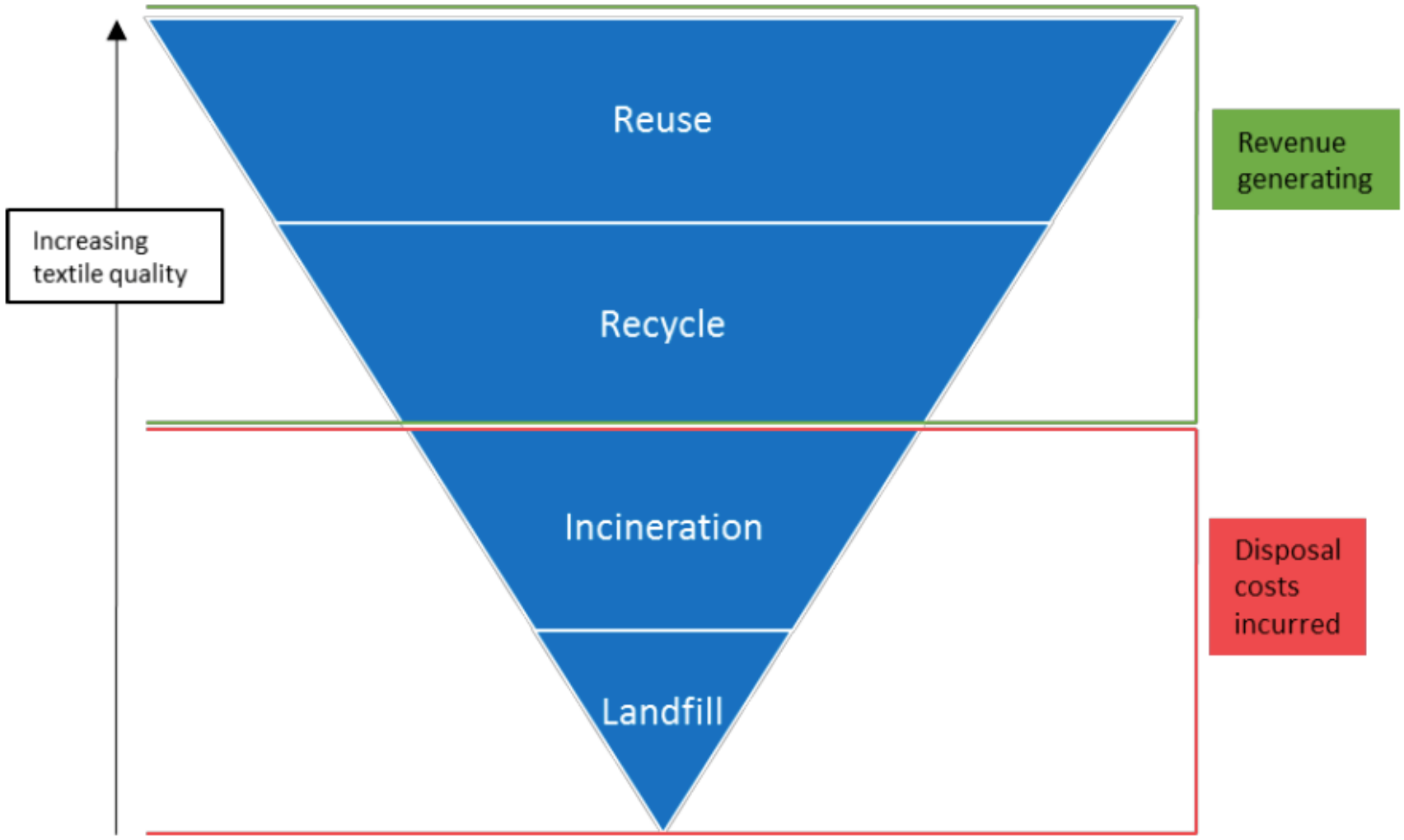
“Everything has a value?”

Figure 1: Textile waste hierarchy



Source: Riley, Bell, Parker & Morley (2016) – Textile Recycling Market Analysis

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“Everything has a value?”

The Resyntex Project aims to create a new circular economy concept for low grade and discarded textiles, in which **un-wearable** textiles are transformed into secondary raw materials of value to industry.

What are the **incentives and barriers** to increase the reuse and recycling rates for these non-wearable and low-grade textiles?

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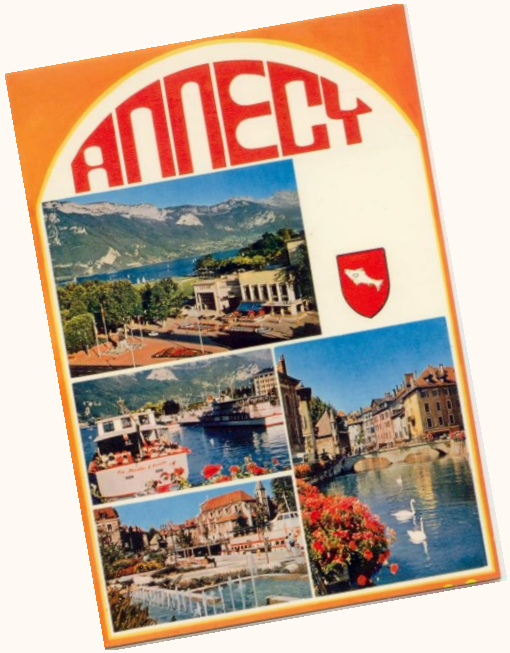
Case studies



- Greater Manchester - UK (GM)
- Haute-Savoie - France (HS)
- Lower Styria - Slovenia (LS)
- Prato / Northern Tuscany - Italy (NT)

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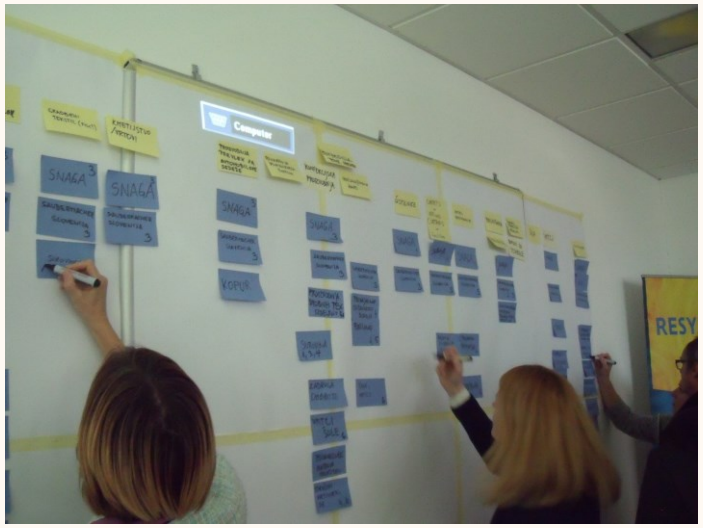
Focus Groups



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Barriers cited by stakeholders which impede the circular transition

- Low quality materials and blends dominate the end-of-life material flow
- Added-value and commercially viable recycling options remain scarce for the low-grade textiles fraction
- Outdated waste legislation
- Lack of traceability in the global waste chain
- Poor consumer demand for recycled products

The collection of low grade textiles presents an **economic cost** (collection, transport, sorting) that is not outweighed by the fraction that could deliver added-value through reprocessing, remanufacturing or recycling

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Drivers cited by stakeholders for enhanced textile circularity

- Natural resource depletion (water, soil, fossil fuels)
- Cost-cutting opportunity for the industry - Material streams opportunities
- Growing consumer awareness

- Residual waste management policy and EPR
- Design for end-of-life
- Bio-based economy shift

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How to?

Partnerships

- B2B
- Network innovation
- Reverse logistics & material stream connectivity

Policy incentives

- Landfill tax
- Accelerating market uptake of recycled products
- EPR-schemes
- Fiscal incentives and tax breaks

Collection

- All-textiles collection
- Segregation at source
- Consumer involvement

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Transitional risks

- Training and capacity-building
- Continued support to R&D

- Access to finance and investment
- Embedding sorting and recycling operations into existing infrastructure

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Conclusions

Shift from a product-specific to a material-specific approach

Triple bottom line impacts of environment, society and economics

Economies of scale, quality and consistency of supply

Integrated and locally embedded value chains

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