

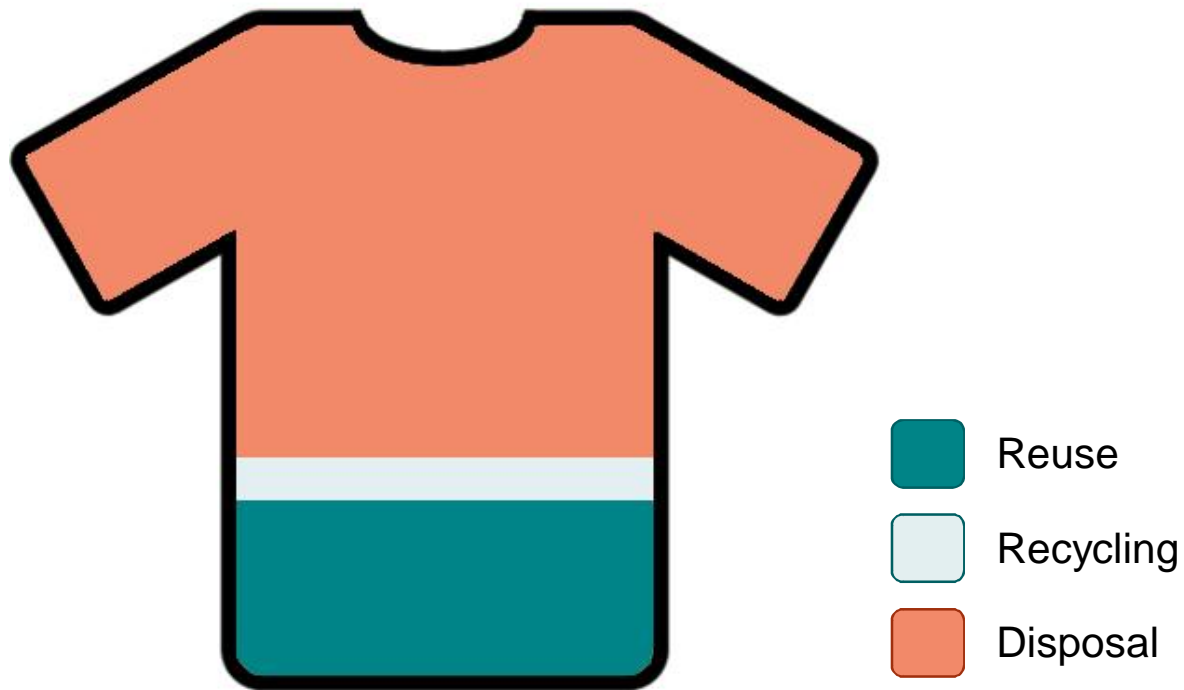


SIPTex project: Automated sorting of textiles for recycling

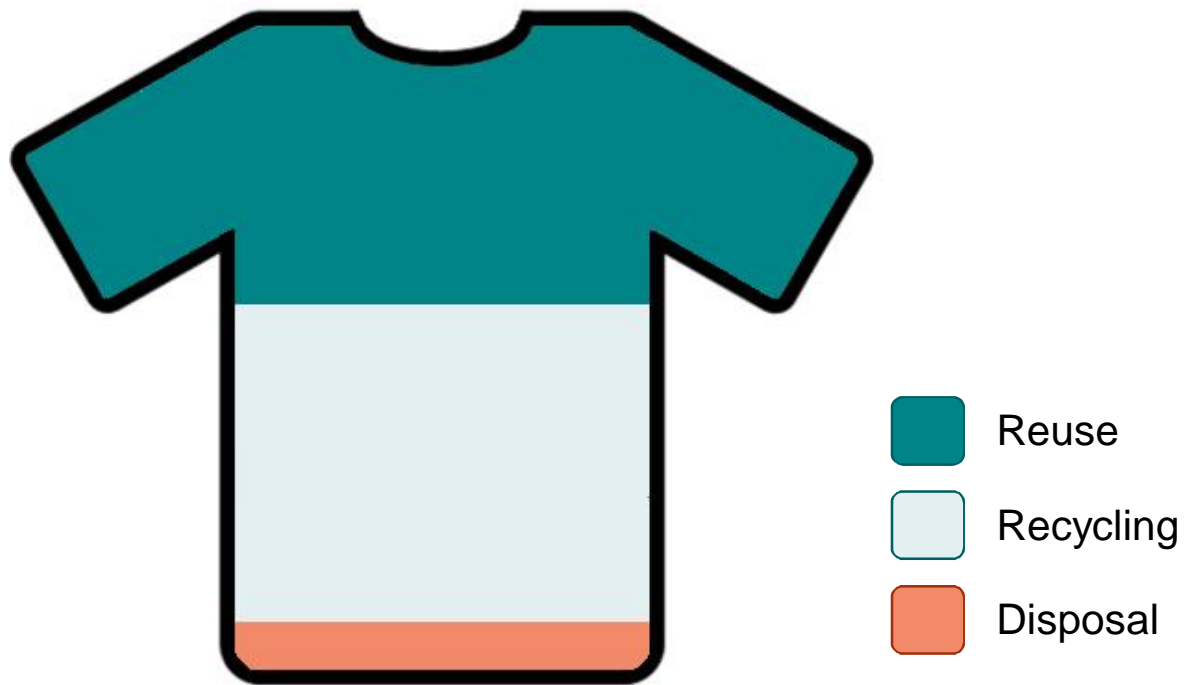
Maria Elander
18th September 2018



Handling of Swedish textiles today



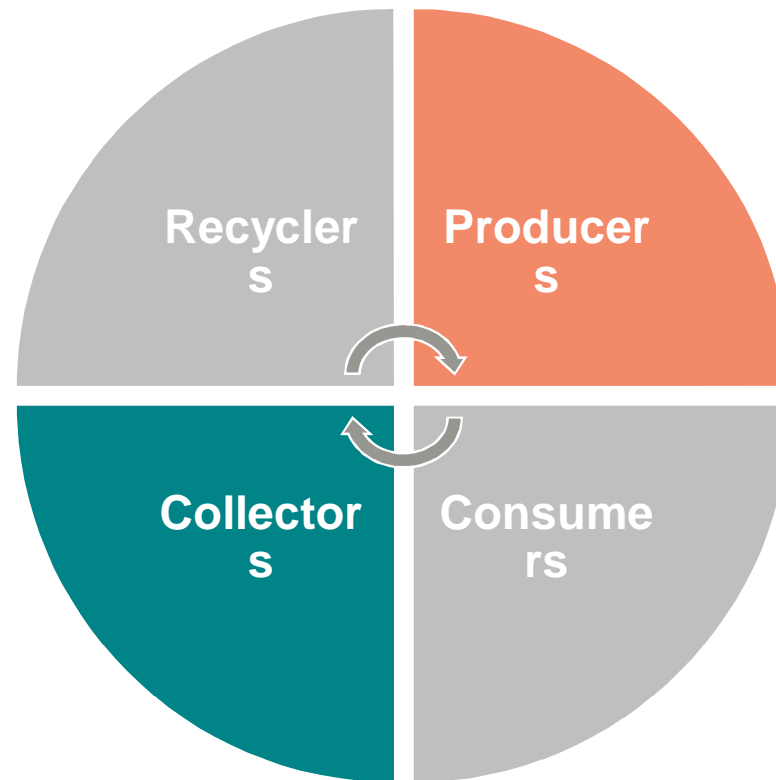
Handling of Swedish textiles tomorrow?



Different perspectives

- Manually sorted textiles
- Coarse recycling fractions
- Heterogeneous fiber mix
- Varying quality
- Main applications in downcycling (not fiber-to-fiber recycling)

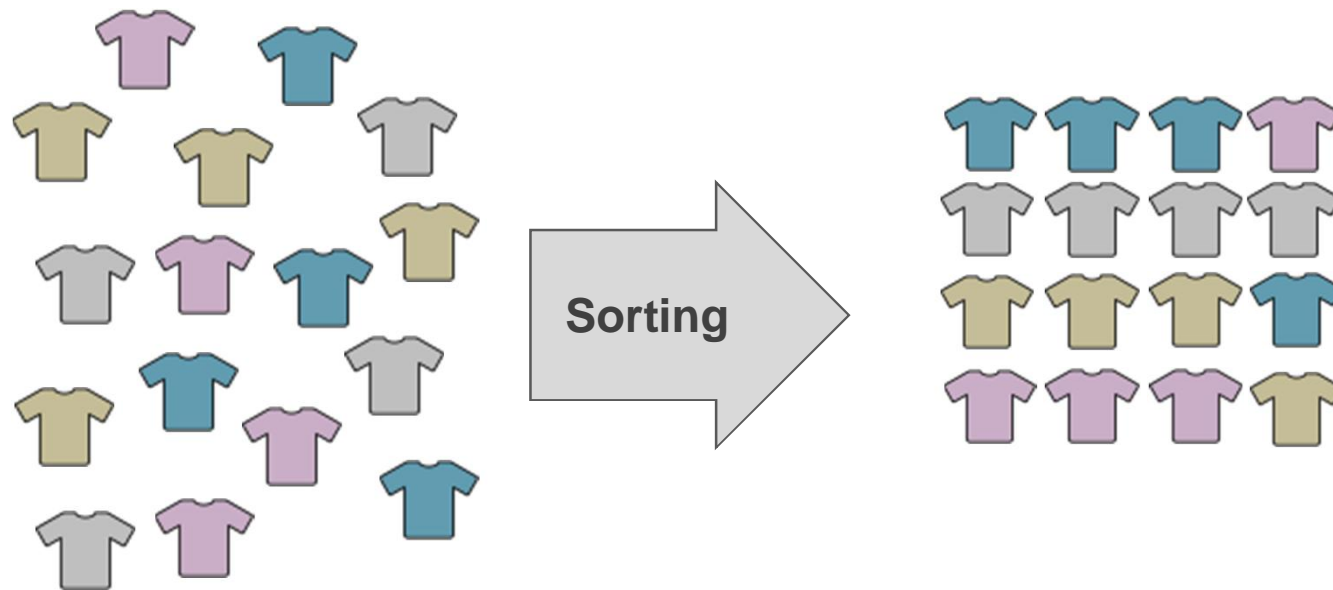
Lack of demand for textiles for recycling



Lack of supply of textiles for recycling

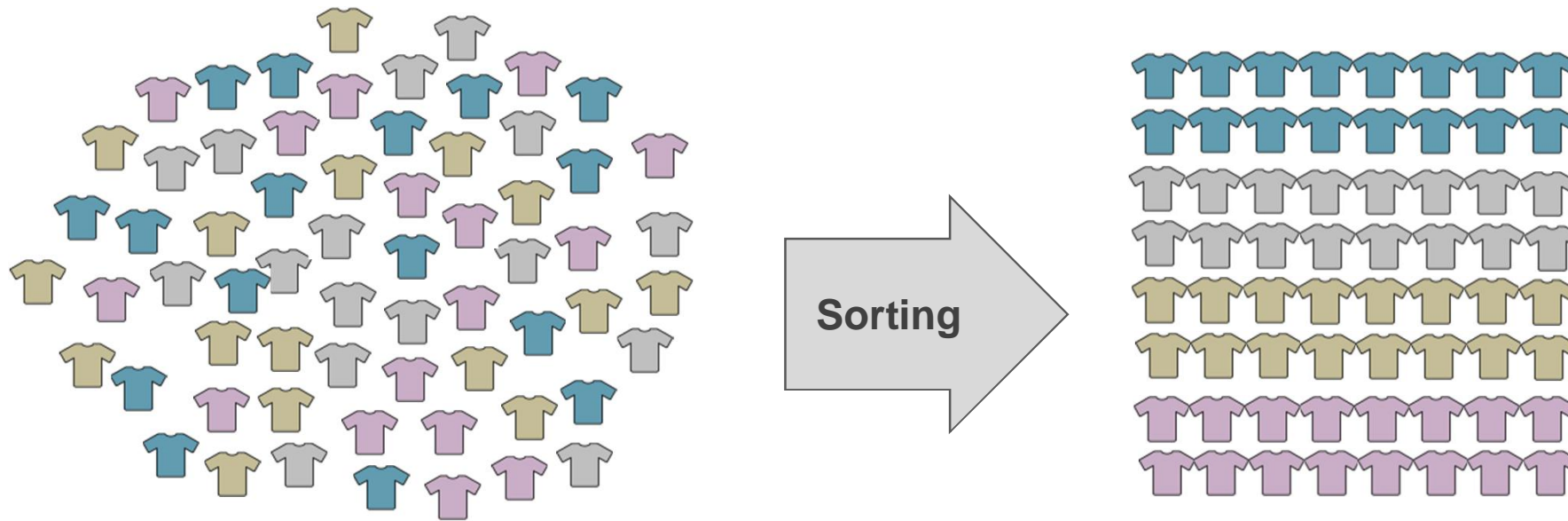
- Large volumes
- Quality assured recycling products
- Homogenous fiber mix (guaranteed fiber content)
- Use for fiber-to-fiber recycling

Today: Sorting to reduce disposal costs





Tomorrow: Sorting to replace virgin raw materials





With funding from













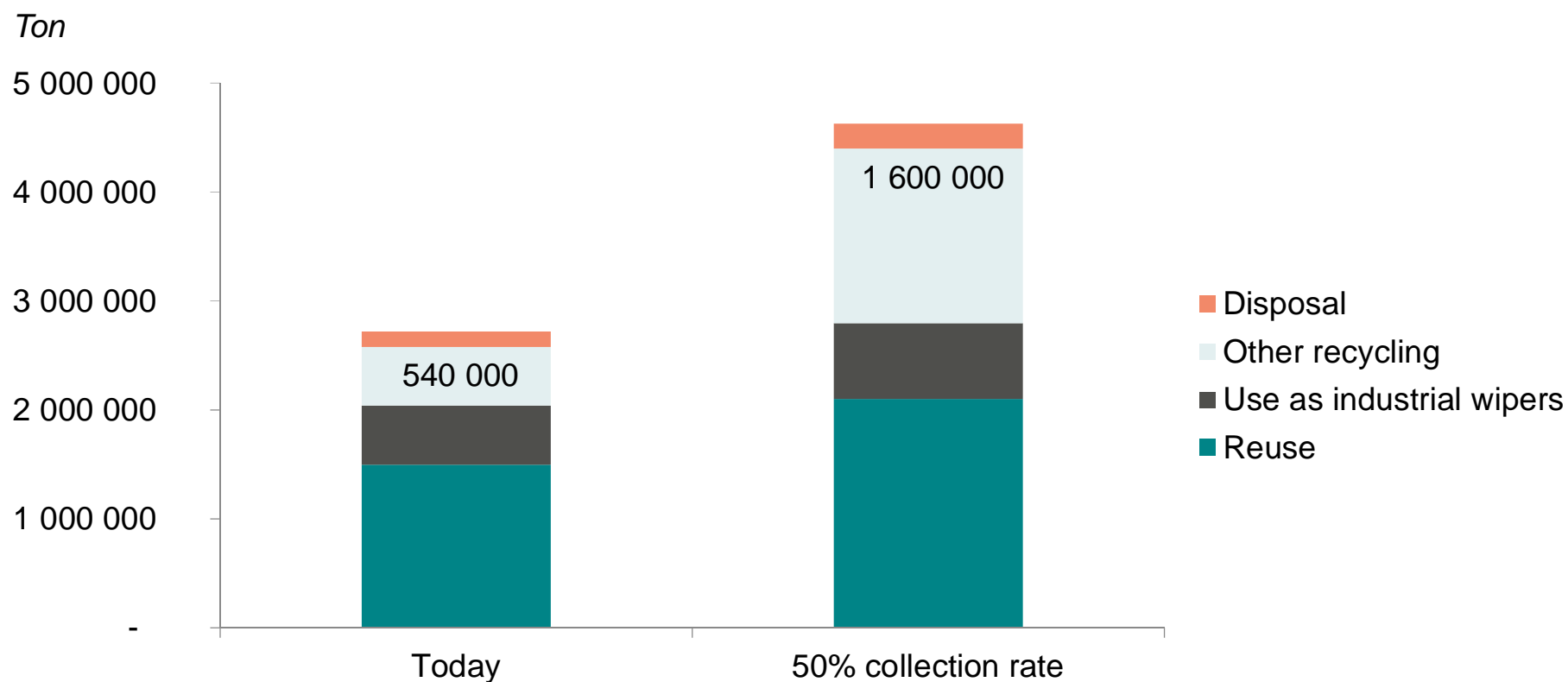
SIPTex features

- Fully automated feeding and sorting
- Near-infrared (NIR) and visual (VIS) spectroscopy
- Sorting into one positive and one negative fraction per scanning unit, based on
 - Color
 - Fiber type (cotton, polyester, wool, acrylic, polyamide, viscose etc.)
 - Minimum share of fiber type
- Continuous feeding of material
- Continuous scanning of full belt width
- Scanning of complete surface
- Individual nozzles along the full belt width

Challenges in sorting post-consumer textiles

- Multi-fabric garments (e.g. inner/outer layers, yarns with different core fibers)
- Labels
- Seams
- Prints
- Buttons
- Zippers
- ...

Urgent need for circular textile solutions (EU)



SIPTex 3?

- Creating a wider consortium for SIPTex step 3
- Handing in step 3 application (January 2019)
- Building an automated textile sorting facility in the south of Sweden
- Start of operation during 2020

SIPTex 3

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