Mapping of products including recycled textiles

SECTION 1 :
Materials preparation stages

SECTION 2 :
Materials integration processes
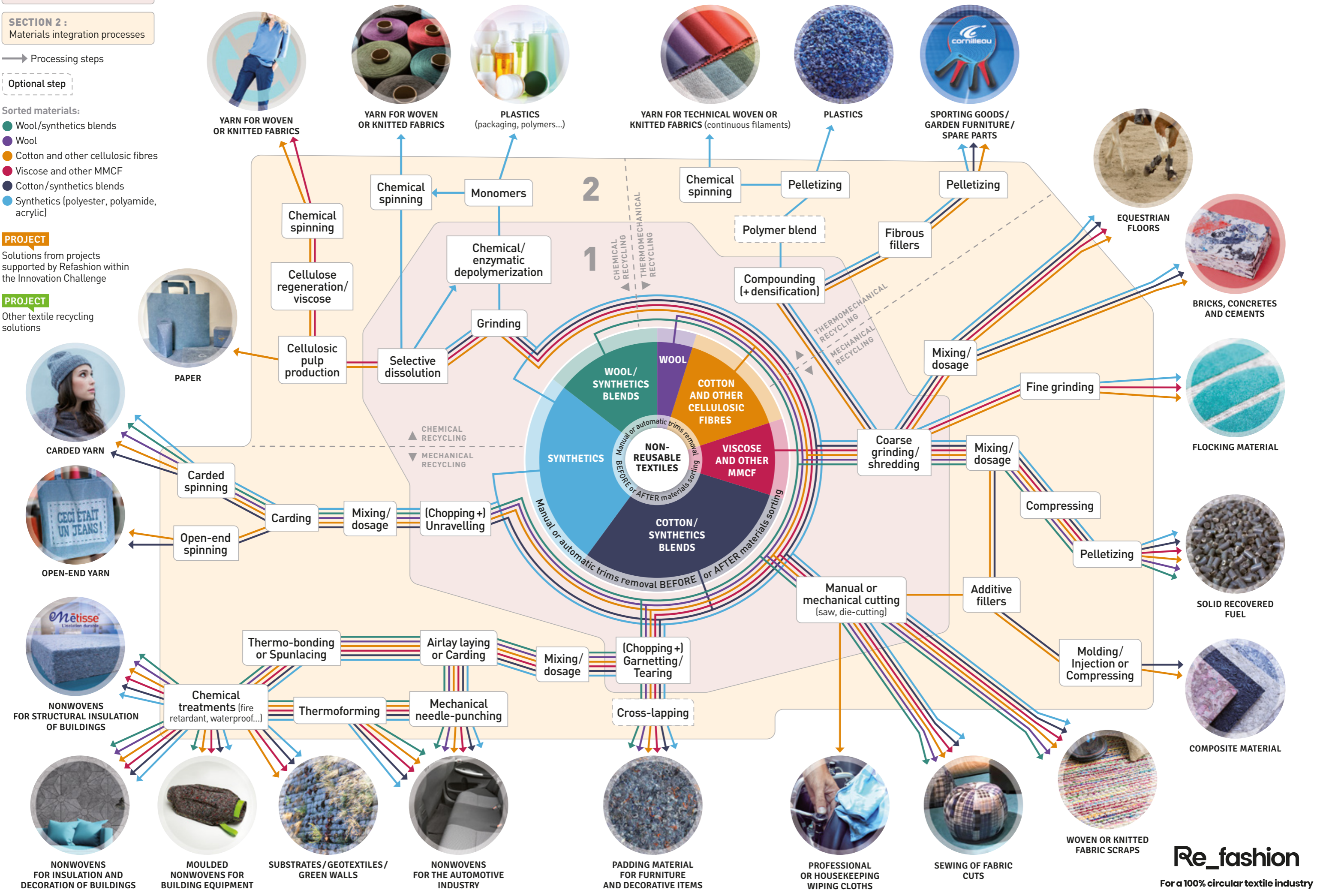
→ Processing steps

Optional step

Sorted materials:
- ● Wool/synthetics blends
- ● Wool
- ● Cotton and other cellulosic fibres
- ● Viscose and other MMCF
- ● Cotton/synthetics blends
- ● Synthetics (polyester, polyamide, acrylic)

PROJECT
Solutions from projects supported by Refashion within the Innovation Challenge

PROJECT
Other textile recycling solutions

Product categories (outer ring)

- YARN FOR WOVEN OR KNITTED FABRICS
- YARN FOR WOVEN OR KNITTED FABRICS
- PLASTICS (packaging, polymers...)
- YARN FOR TECHNICAL WOVEN OR KNITTED FABRICS (continuous filaments)
- PLASTICS
- SPORTING GOODS/ GARDEN FURNITURE/ SPARE PARTS
- EQUESTRIAN FLOORS
- BRICKS, CONCRETES AND CEMENTS
- FLOCKING MATERIAL
- SOLID RECOVERED FUEL
- COMPOSITE MATERIAL
- WOVEN OR KNITTED FABRIC SCRAPS
- SEWING OF FABRIC CUTS
- PROFESSIONAL OR HOUSEKEEPING WIPING CLOTHS
- PADDING MATERIAL FOR FURNITURE AND DECORATIVE ITEMS
- NONWOVENS FOR THE AUTOMOTIVE INDUSTRY
- SUBSTRATES/GEOTEXTILES/ GREEN WALLS
- MOULDED NONWOVENS FOR BUILDING EQUIPMENT
- NONWOVENS FOR INSULATION AND DECORATION OF BUILDINGS
- NONWOVENS FOR STRUCTURAL INSULATION OF BUILDINGS
- OPEN-END YARN
- CARDED YARN
- PAPER

Process steps

- Chemical spinning
- Monomers
- Chemical spinning
- Pelletizing
- Pelletizing
- Chemical spinning
- Cellulose regeneration/ viscose
- Chemical/ enzymatic depolymerization
- Polymer blend
- Fibrous fillers
- Cellulosic pulp production
- Grinding
- Compounding (+ densification)
- Selective dissolution
- Mixing/ dosage
- Fine grinding
- Coarse grinding/ shredding
- Mixing/ dosage
- Carded spinning
- Carding
- Mixing/ dosage
- (Chopping +) Unravelling
- Compressing
- Open-end spinning
- Pelletizing
- Additive fillers
- Manual or mechanical cutting (saw, die-cutting)
- Molding/ Injection or Compressing
- Thermo-bonding or Spunlacing
- Airlay laying or Carding
- Mixing/ dosage
- (Chopping +) Garnetting/ Tearing
- Chemical treatments (fire retardant, waterproof...)
- Thermoforming
- Mechanical needle-punching
- Cross-lapping

Central wheel

NON-REUSABLE TEXTILES

Manual or automatic trims removal BEFORE or AFTER materials sorting

- WOOL/ SYNTHETICS BLENDS
- WOOL
- COTTON AND OTHER CELLULOSIC FIBRES
- VISCOSE AND OTHER MMCF
- COTTON/ SYNTHETICS BLENDS
- SYNTHETICS

1 CHEMICAL RECYCLING / MECHANICAL RECYCLING

2 THERMOMECHANICAL RECYCLING

THERMOMECHANICAL RECYCLING / MECHANICAL RECYCLING

Re_fashion
For a 100% circular textile industry