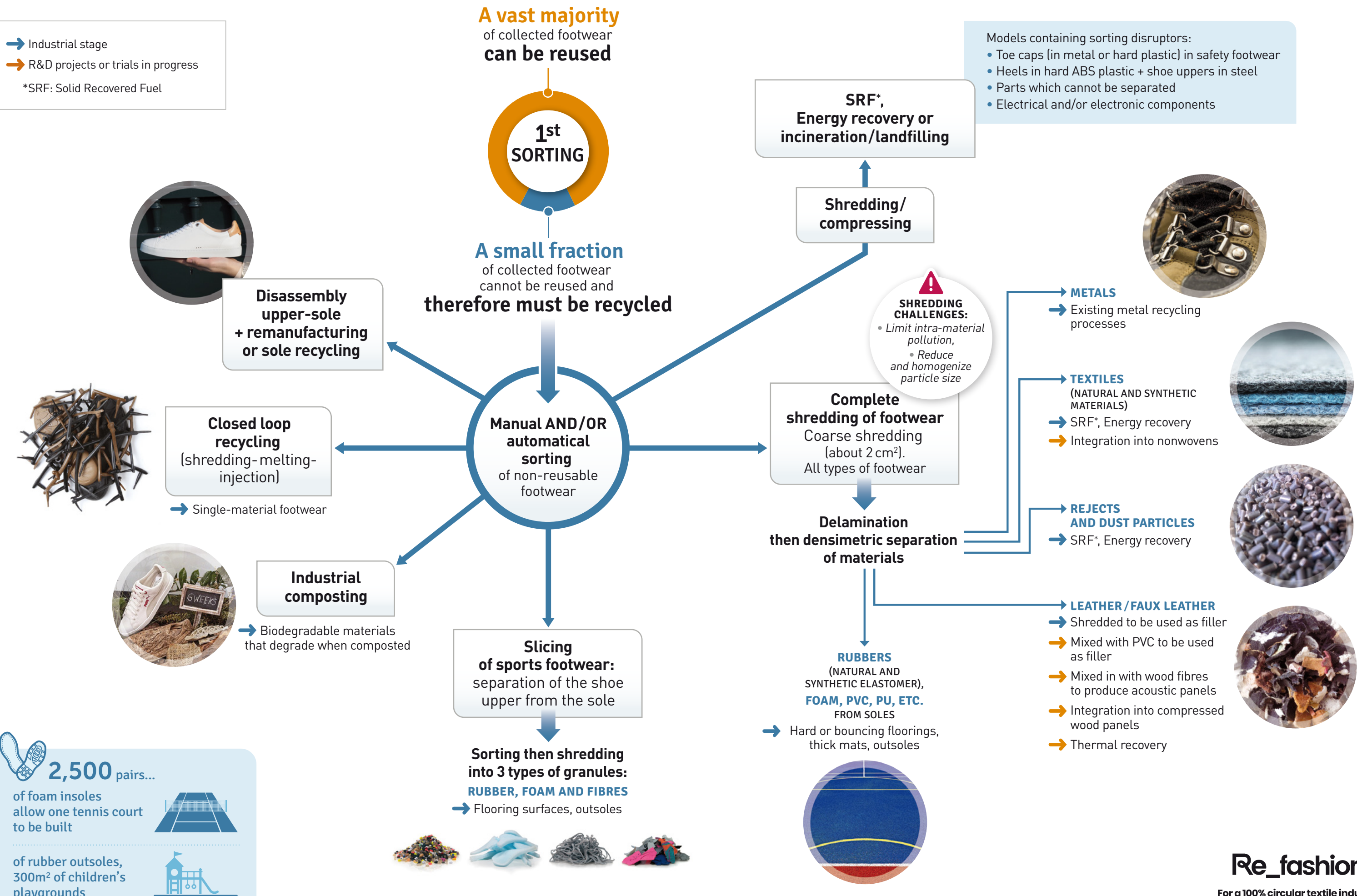


Mapping of footwear recycling

- Industrial stage
- R&D projects or trials in progress
- *SRF: Solid Recovered Fuel

- Models containing sorting disruptors:
- Toe caps (in metal or hard plastic) in safety footwear
 - Heels in hard ABS plastic + shoe uppers in steel
 - Parts which cannot be separated
 - Electrical and/or electronic components



A vast majority of collected footwear can be reused

A small fraction of collected footwear cannot be reused and therefore must be recycled

Manual AND/OR automatical sorting of non-reusable footwear

SRF*, Energy recovery or incineration/landfilling

Shredding/compressing

SHREDDING CHALLENGES:

- Limit intra-material pollution,
- Reduce and homogenize particle size

Complete shredding of footwear
Coarse shredding (about 2 cm²).
All types of footwear

Delamination then densimetric separation of materials

METALS
→ Existing metal recycling processes

TEXTILES (NATURAL AND SYNTHETIC MATERIALS)
→ SRF*, Energy recovery
→ Integration into nonwovens

REJECTS AND DUST PARTICLES
→ SRF*, Energy recovery

LEATHER / FAUX LEATHER
→ Shredded to be used as filler
→ Mixed with PVC to be used as filler
→ Mixed in with wood fibres to produce acoustic panels
→ Integration into compressed wood panels
→ Thermal recovery

RUBBERS (NATURAL AND SYNTHETIC ELASTOMER), FOAM, PVC, PU, ETC. FROM SOLES
→ Hard or bouncing floorings, thick mats, outsoles

2,500 pairs... of foam insoles allow one tennis court to be built

of rubber outsoles, 300m² of children's playgrounds

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