



mattress **iD**TM
By **tripleR.io**

Enabling circularity in the mattress industry

tripleR.io



What happens with disposed mattresses?



What happens with your old mattress?

30+ million
  in Europe  every year 

**= filling-up the Paris Louvre museum
6 times a year...**



What do we want to achieve?



transparent
communication

creating consumer
awareness



2nd life

refurbishing
rejuvenation



Collection&Sorting
Dismantling

Mono Waste Streams
Recycling

What do we offer?



Eco-system for all stakeholders in the lifecycle of a mattress



An industry proposal towards the EU commission for a mattress DPP system



2nd life for mattresses:
Refurbishing/rejuvenation



Improved end-of-life of mattresses :
better disassembly and recycling

Our EcoSystem Approach



standard data set – semantics – vocabularies
(public) data for consumer awareness/engagement
(restricted) refurbish and dismantle information



tools – fit for the mattress industry
product data management
DPP activation
Refurbishing application
Dismantling & recycling application



Item level identified data carriers, connected to the product cloud



consumer engagement



industrial operations



platform

How does it work?

Unique Product Identifier

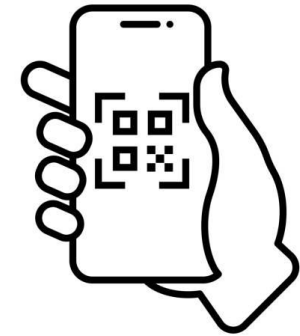


Linked to a Product Cloud

Product definition
Information for consumer
Information for end-of-life



Accessible via QR & RFID



Focus on life-time extension



DPP to facilitate the refurbishing process of <100d returned mattresses

Authenticity verification: did the customer return the correct mattress?

Combine digital data (*model, date of production, date of sale, date of return ?*) with physical inspection (*how does the mattress look like?*) to define refurbishing approach

Update DPP for refurbished mattress - transparency to consumer



DPP to optimize the mattress dismantling into various mono-waste streams as feedstock for upcycling

What data needed for dismantlers?

realistic approach (over-specification from recyclers)

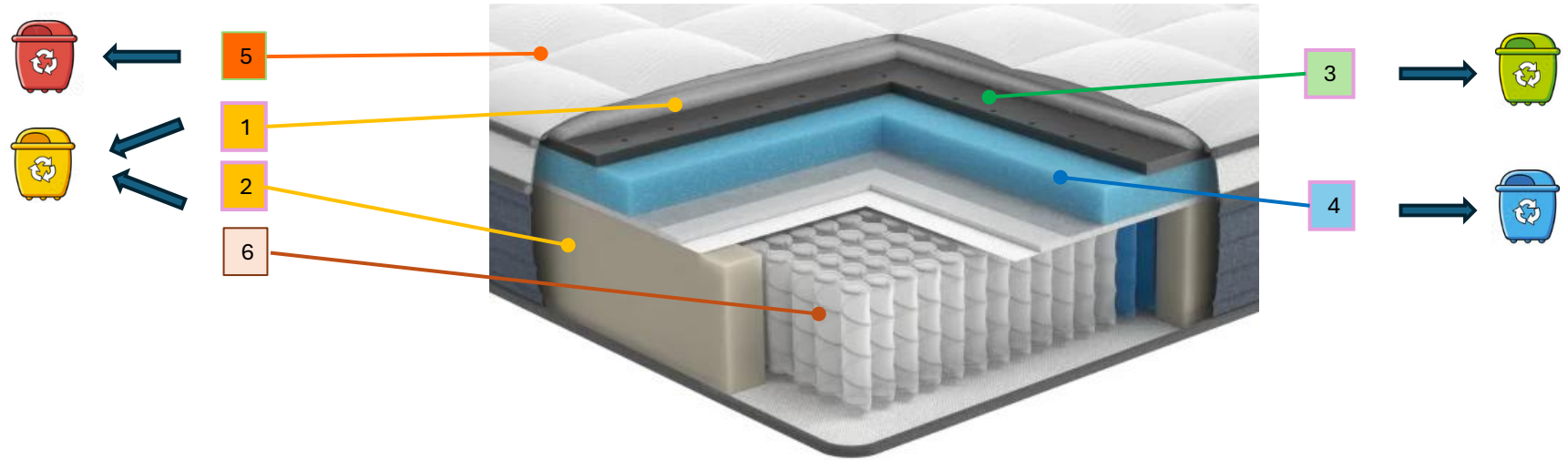
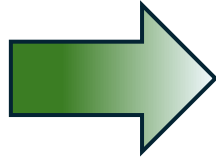
no business critical/confidential data

Focus on PU foam and Polyester textiles

data set for PU foam being finalized together with Europur

starting similar approach for polyester fabrics

Present in an easy way for low skilled workers



STEEL

Steel recycling

POLYURETHANE

1. Split Phase Recycling
2. Single Phase Recycling
3. Rebonded foam
4. Incineration

**UP
CYCLING**

POLYESTER

1. Chemical recycling
2. Thermomechanical recycling
3. Mechanical Recycling
4. Incineration

OTHER

Waste
Management

Challenges



uncertainty

the world is

V	Volatility
U	Uncertainty
C	Complexity
A	Ambiguity



Data !?



Cost



Benefit





Rik Holvoet

+32 475 475409

rik@tripler.io