

circular.fashion

Unlocking the circular economy





Our Purpose

Provide the missing
know-how, data flow
and **interconnection**
to power circular
systems for textiles



JAN N
—
JUNE



MONKL



SILFIR

BESTSELLER



OTTO

ARMEDANGELS



GANNI



<1% Fibre-to-Fibre Recycling

Regenerating fibres to virgin quality

| | |
|-----|--|
| <1% | |
|-----|--|

Ellen MacArthur Foundation, A New Textiles Economy: Redesigning fashion's future, 2017, p. 20





01

Missing data and know-how for **designers** on **recycling requirements** for circular design





02

Missing data for
customers on return
channels effective for
reuse & recycling





03

Missing data for **sorters**
to identify product and
material type for high
quality reuse & recycling

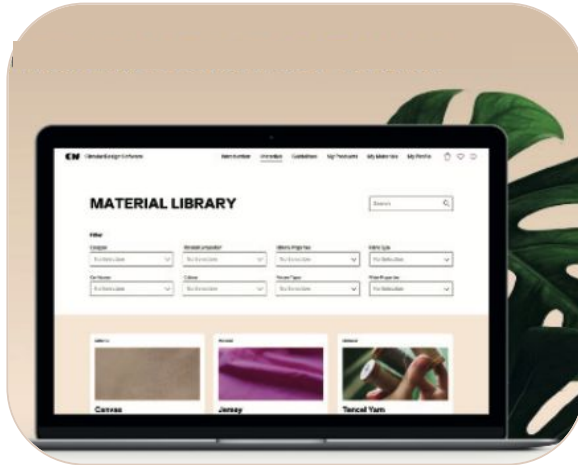




Actionable solutions with a holistic approach

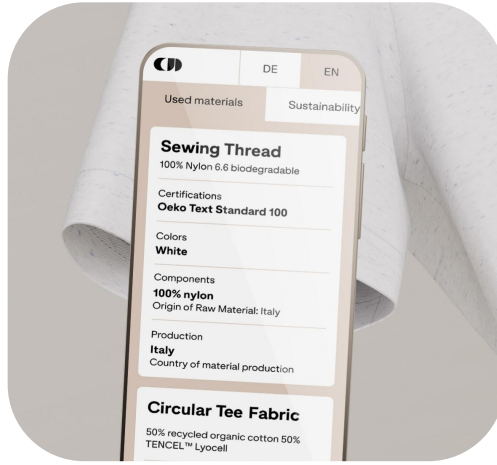
Design

01 Circular Design Tools & Services



Use

02 circularity.ID Product passport



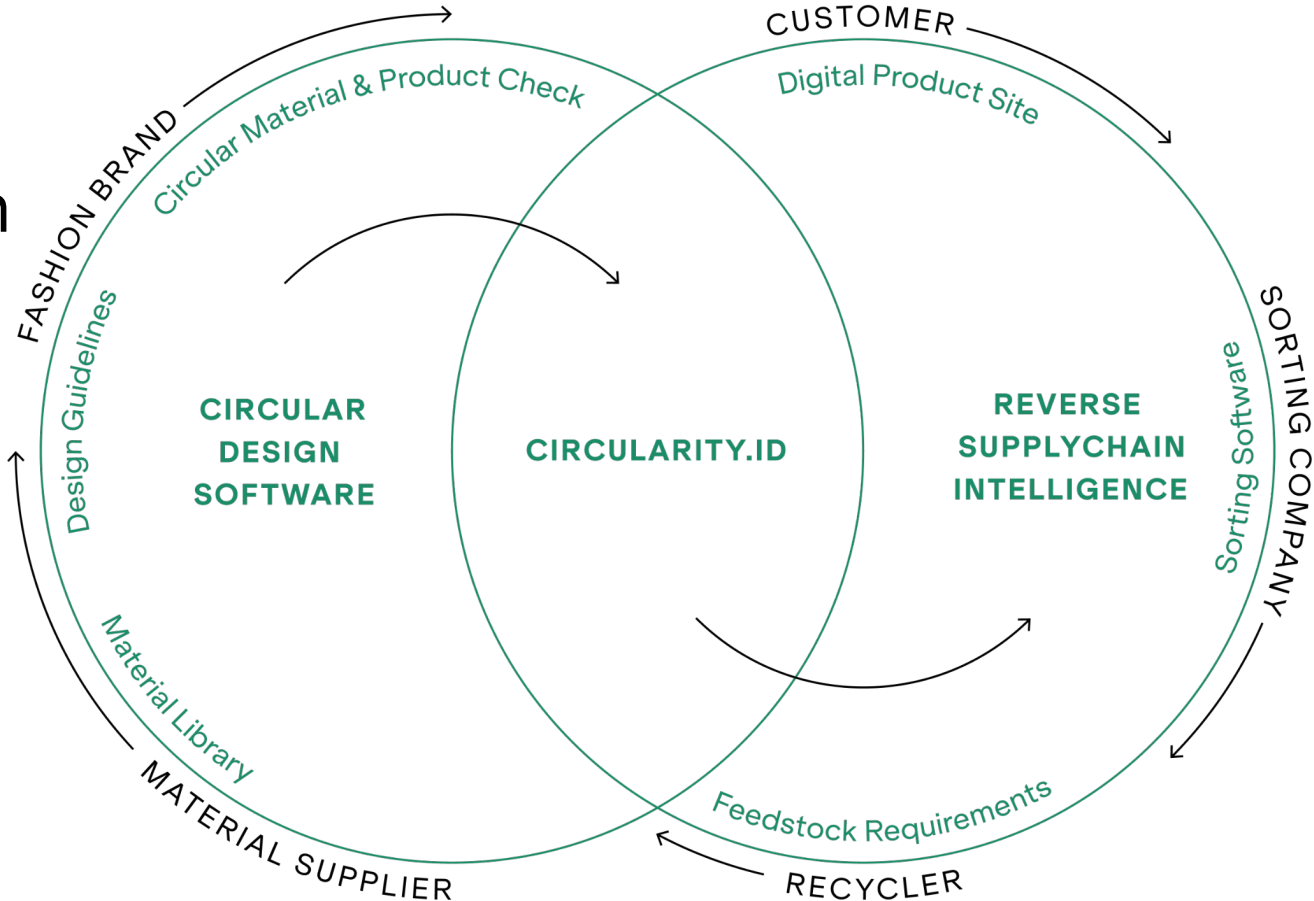
Circulation

03 Augmented Sorting Solutions





Our Ecosystem Interconnection Collaboration

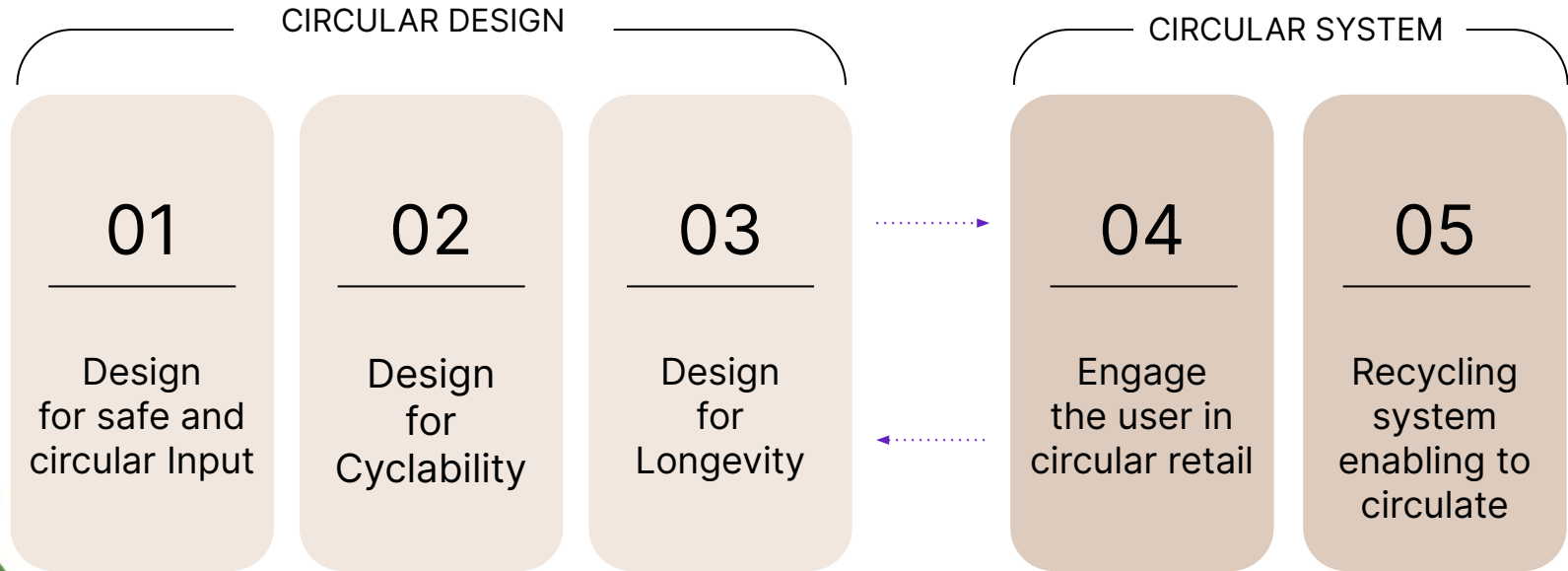




1 | Circular Product Design



Definition | Circular Product within a circular system



DRIVING INDUSTRY STANDARDS AND ALIGNMENT



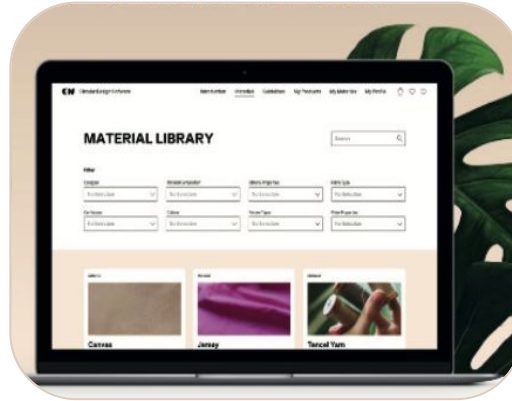
Circular Design | Software & Services

01 Circular Design Workshop



Value: Gain instant circular material and design know-how for your team

02 Circular Design Software



Value: Find the most innovative circular materials and trims validated for recyclability

03 Circular Product Check



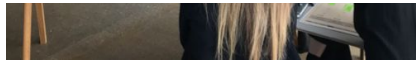
Value: Validate recyclability of products to be communicated to your customers



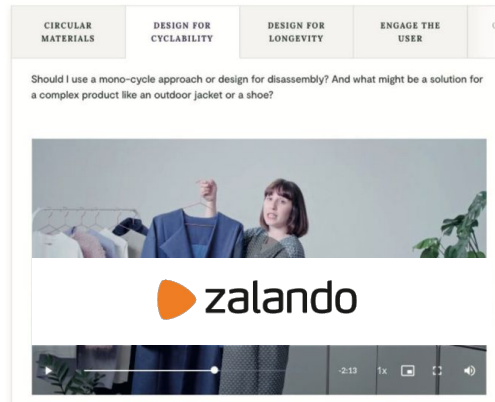
Circular Design | Workshop



BESTSELLER



MINDSET DRIVER FOR INNOVATION | CIRCULAR DESIGN THINKING

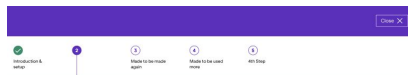


HUGO BOSS | KERING | MARC O'POLO | ZALANDO
H&M | OTTO | GANNI | BESTSELLER | MONKI





Circular Design | Software



Safe, Recycled & Renewable Inputs

Test for yourself main component of material. Best to do it just before Lorem ipsum dolor sit amet, consetetur adipisicing elit.

Safe Inputs

Design using materials that have improved environmental and/or social sustainability, and considers the health of people and ecosystems

General criteria

- ☒ All components of a product comply with [OEKO-TEX](#) certification Level 2 or Level 3.
- ☒ Product features materials, production and production processes that have the highest recycling and micro-particle release. To measure continuous improvement the product undergoes a test e.g. the [OEKO-TEX](#) Micro-particle release test. The [OEKO-TEX](#) Micro-particle release test is a test method developed by [OEKO-TEX](#) and states the best result in the micro-particle release test to allow comparison with test results of products with same specifications.
- ☐ Materials are made of high tensile yarns, tight fibre construction and suitable finishing processes to reduce micro-fibre shedding. e.g. no fleece or loose fibre construction – optional

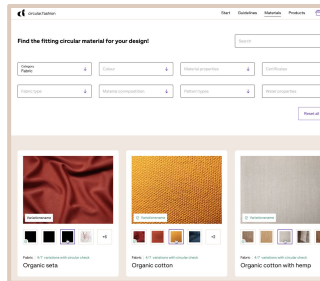
MMCFC specific criteria

- ☐ Virgin MMCFC parts ensure production practices with 40% of the main solvent recovery and reduced water consumption, based on declarations by the supplier e.g. [BASF](#).

Cotton – release at least one

- ☒ Virgin cotton parts contain a 95% of organic content certified [GOTS](#) or [GOTS](#) 95% if labeled with recycled content, virgin cotton parts are either [GOTS](#) Organic Recycled or [GOTS](#) Organic if virgin parts make up 95% of the product or certified [GOTS](#) Recycled or Organic. Virgin parts make up 95% of the product.
- ☒ Virgin cotton parts that are organic or recycled contain 95% content certified by a third party and audited annually to ensure that no toxic and pesticides prohibited by organic standards are a part of the process e.g. [GOTS](#) Certified Textile and Leather program.

Not complied yet.

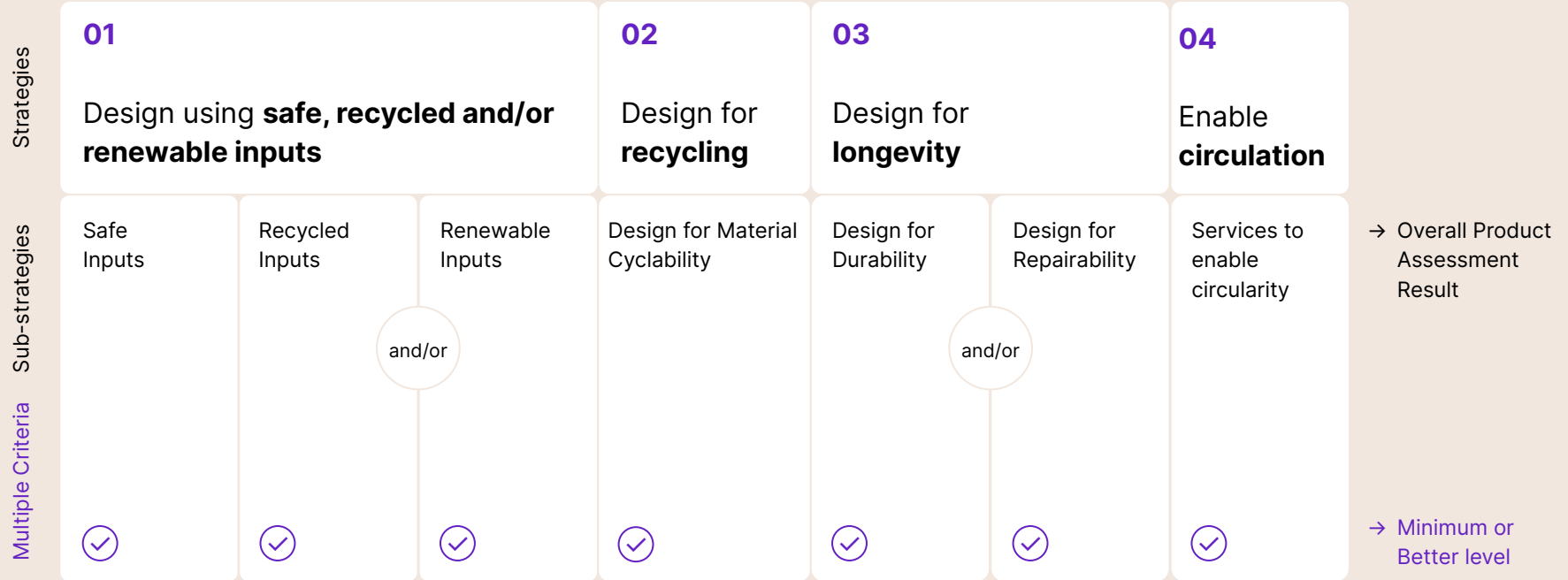


CIRCULAR DESIGN CRITERIA | DESIGN GUIDES | MATERIAL LIBRARY





circular.fashion's Circular Design Criteria

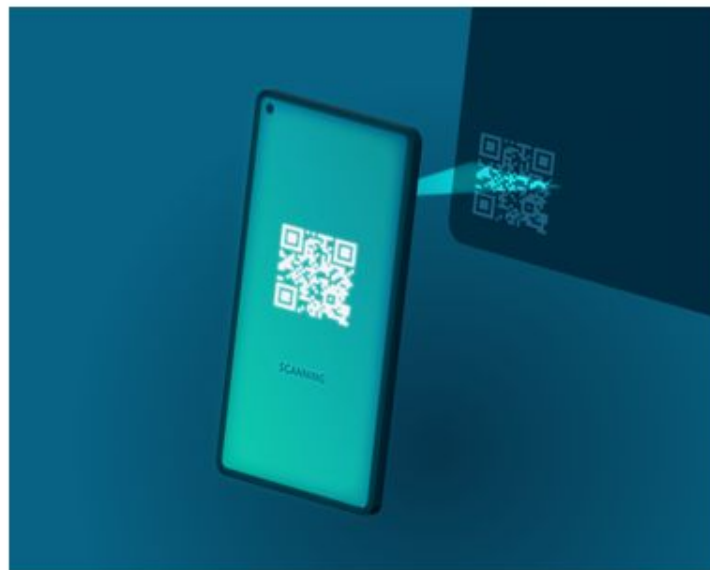




2 | Digital Product Passport

Digital Product Passport in a Nutshell

A **Digital Product Passport (DPP)** is a structured collection of product related data with pre-defined scope and agreed data ownership and access rights conveyed through a unique identifier and that is accessible via electronic means through a data carrier. The intended scope of the DPP is information related to sustainability, circularity, value retention for re- use, remanufacturing, and recycling.



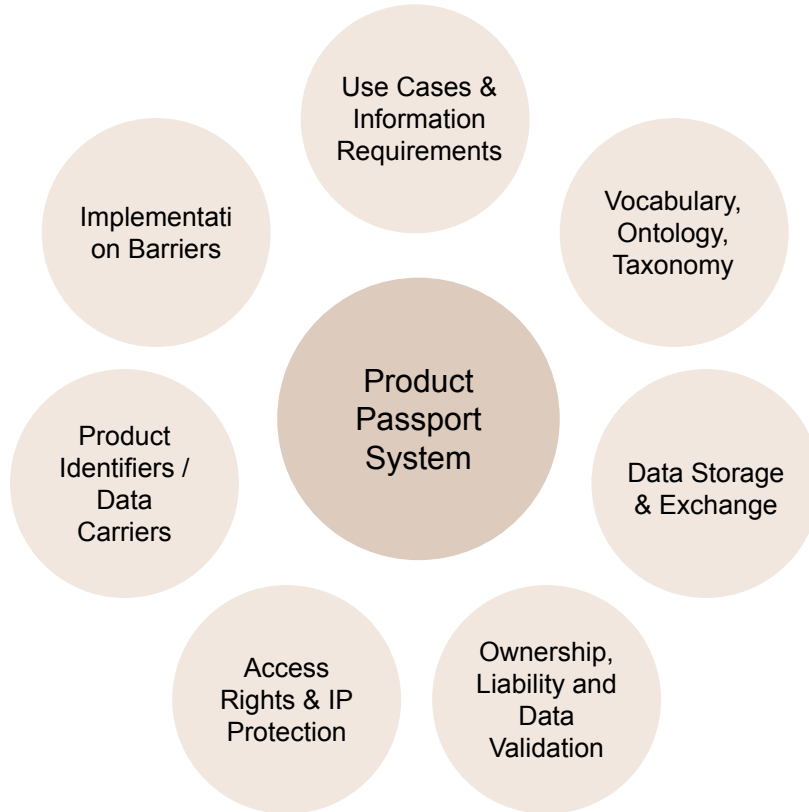
Digital Product Passport in a Nutshell

The DPP's goals are:

1. Enhancing sustainable production;
2. Extending product lifetimes, optimising product use, and providing new business opportunities to economic actors through circular value retention and extraction;
3. Supporting consumers in making sustainable choices;
4. Enabling the transition to the circular economy by boosting materials and energy efficiency; and
5. Supporting authorities to verify compliance. (European Commission).



Product Passport | **Aspects**





circularity.ID® | Components

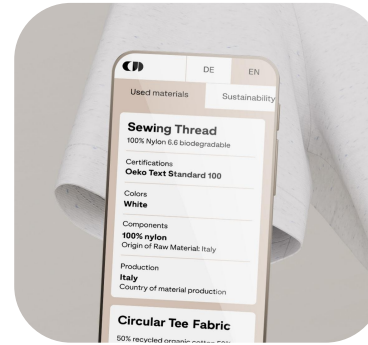
01 circularity data

```
1 <step>
2   <description>This circular t-shirt was
3   <city>Espomende</city>
4   <company_name>Brave Particle</company_n
5   <country>Portugal</country>
6   <oar></oar>
7   <postal>4740-010</postal>
8   <street>Avenida Comendador Francisco Al
9   <type>Production</type>
10 </step>
11 <assembly>
12   <name>T-shirt</name>
13   <material>
14     <name>Woven Care Label</name>
15     <description>A woven care label was s
16     <image>https://app.circular.fashion/
17     <colour>purple</colour>
18     <colour>purple</colour>
```

02 product identifier



03 digital product site



04 circulation Intelligence



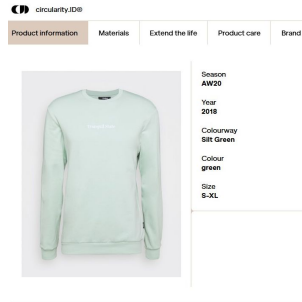
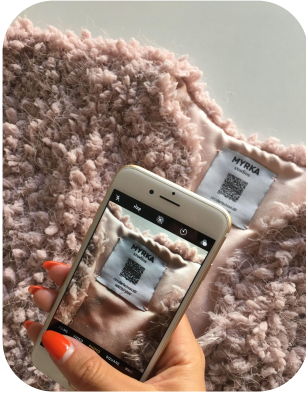
Product Platform



 armedangels



03 circularity.ID® | Digital Product Sites



TAKE BACK | RECOMMERCE | RECYCLING GUIDE

[Example Product Site](#)



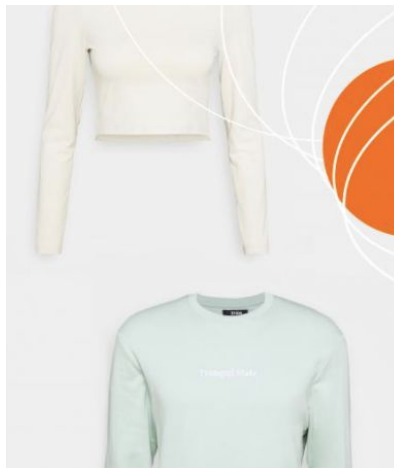
ARMEDANGELS

OTTO

zalando



circular.fashion | Success stories



 **zalando**

Use Case:

Full cycle Pilot

c.f services:

Circular Design Consulting
Circularity Trainings (200+ designers)
Circular Product Checks
circularity.ID Digital Product Site
Take back system connected to
pre-owned recommerce offer 'Zircle'



OTTO

Use Case:

Circular Collection with 10+ SKUs
Collaborative - Closed Loop Pilot
with 5+ brands

c.f services:

Circular Design Consulting
Circular Product Checks
circularity.ID Digital Product Site
Take back for Recommerce and
Recycling



ARMEDANGELS

Use Case:

T-Shirts with recycled content,
integrated NFC chip for consumer
experience and sorting interaction,
Collaborative - Closed Loop Pilot

c.f services:

Circular Product Check
circularity.ID Digital Product Site
Intelligent Sorting



HUGO BOSS

Use Case:

Plastic-free capsule collection

c.f services:

Circular Product Development
Circular Design Criteria Definition
Circularity Trainings (200+ designers)
Circular Retail Strategy Consulting



3 | Closing the loop





WASTE IS MATERIAL **WITHOUT AN IDENTITY**

Thomas Rau



New Business Case | **Circular Retail**

2ND HAND MARKET IS
PROJECTED TO **DOUBLE**
IN THE NEXT 5 YEARS

WHILE **CURATED** ASSORTMENTS
ARE DRIVING THE GROWTH



Style and trend based sorting
for Brand own **recommerce**

Source: GlobalData 2021 Market Sizing and Growth Estimates





04 circularity.ID® | **Intelligent Sorting**

Augmented Sorting: world's first ID-based sorting solution on product & material data

01 Recommerce

02 Fibre Recycling

TEXAID



SOEX







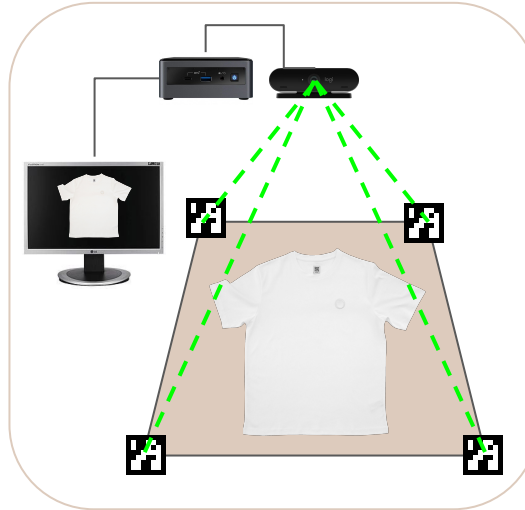
Augmented Sortierung | Technology Approaches

01 ID-based sorting



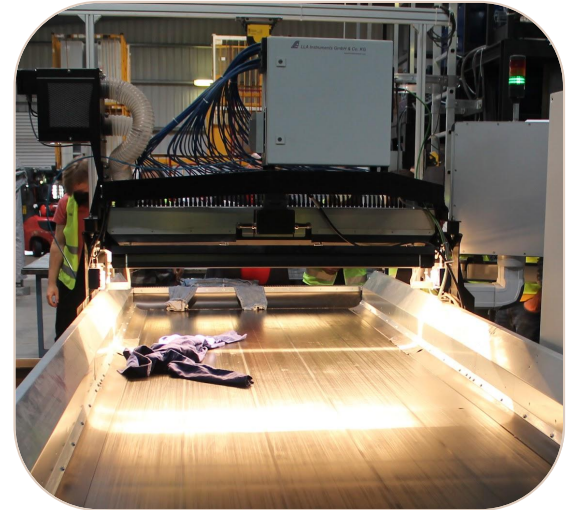
Digital Product Passport
Intelligent Sorting Station
2nd hand and recycling fractions

02 Image recognition - AI



AI based computer vision
2nd Hand sorting
(Recycling fractions - detrimming)

03 Spectroscopy



Raman Spectroscopy
Recycling fractions

Let's empower your products to circulate

Mario Malzacher - Co-Founder
mario@circular.fashion