

Cradle to Cradle at Desso



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Director Sustainability

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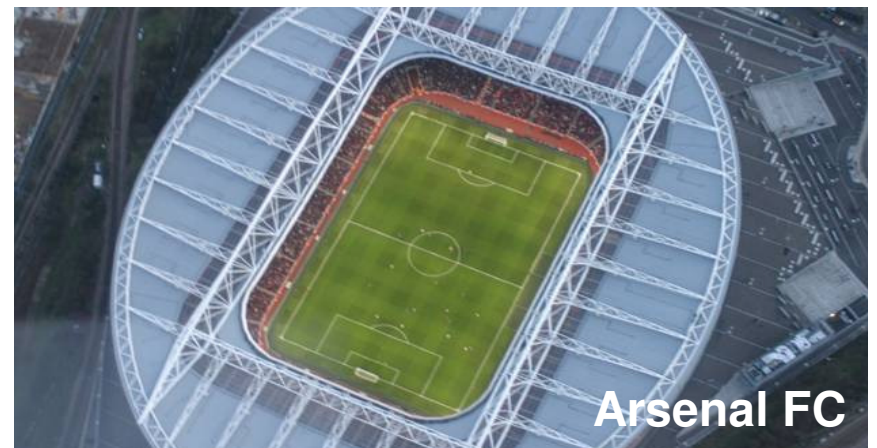
DESSO is...

a leading manufacturer of carpet tiles
and artificial grass pitches

950 employees

4 production locations

Global player



DESSO: Cradle to Cradle Company

DESSO Group

Business Overview

Carpets	80%
Business Carpet	50%
Hotel, Marine & Aviation	9%
Consumer Carpet	21%
Sports	20%

2009 Figures - % of total business turnover



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Innovation through

1. Creativity

DESSO transformed itself into a superior floor design company through better external focus via the “**Circles of Architects®**” programme.

2. Functionality

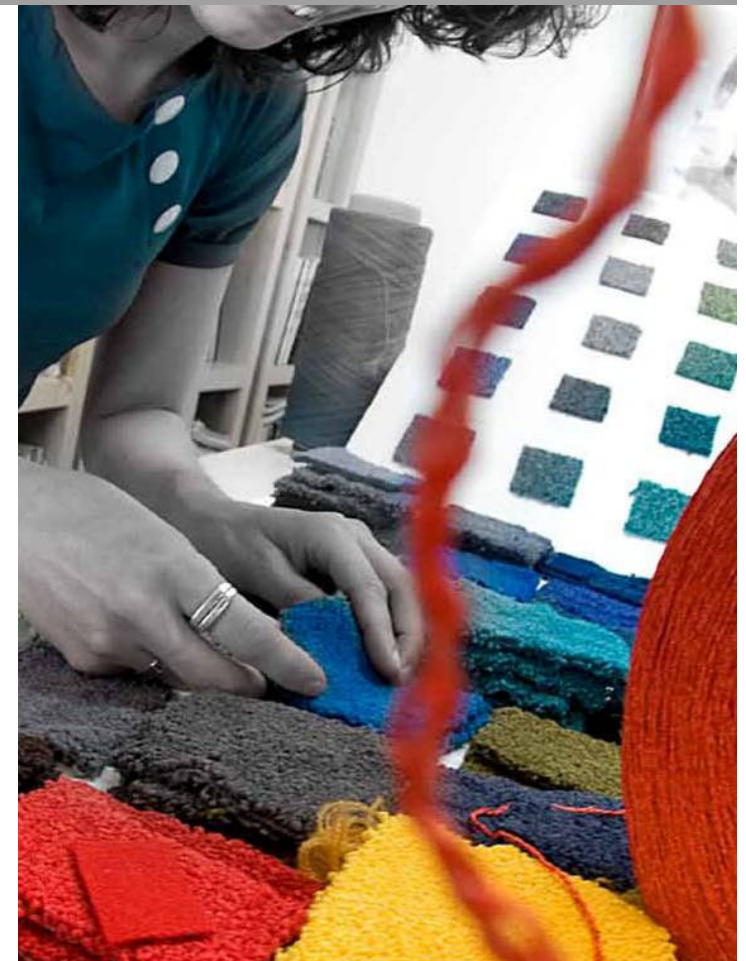
DESSO invented carpet tiles that significantly improve health by superior:

- **Indoor air quality**

- Less fine dust (8 times lower levels than hard floors with DESSO AirMaster®)
- No off-gassing

- **Sound absorption** in offices, healthcare and schools

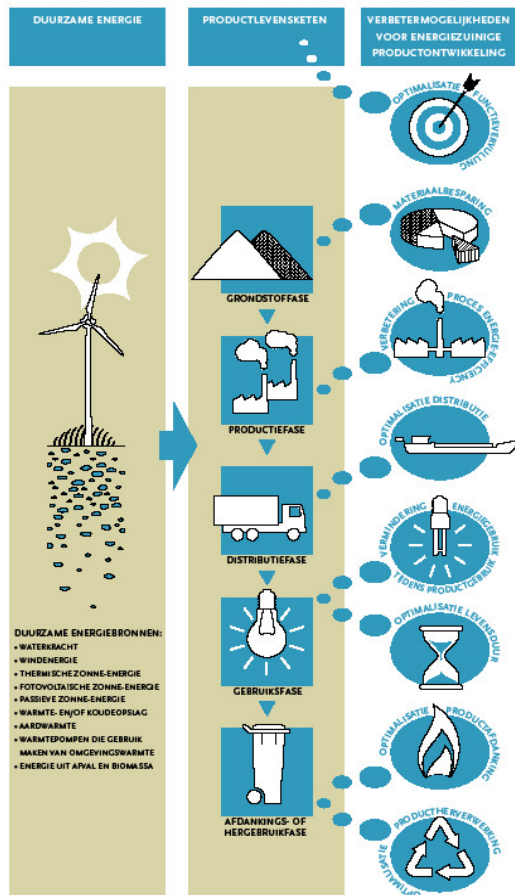
3. Cradle to Cradle®



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Sustainability

ENERGIE-EFFICIENCY VERBETERING VANUIT BREDER PERSPECTIEF

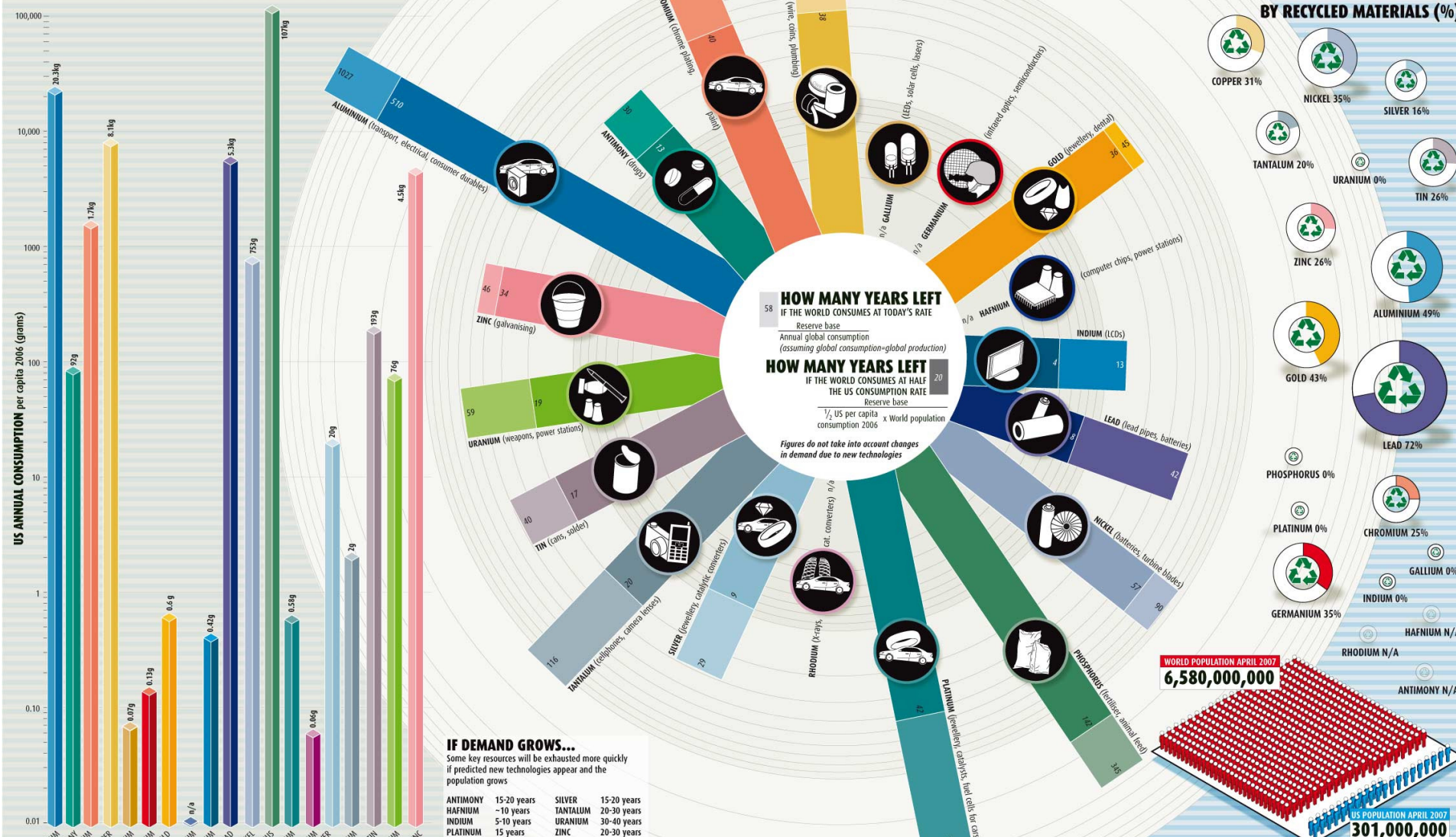


- All textile waste is recycled in other industrial processes.
- CO₂ emissions have been reduced by 41% since 2008, at our production facilities in Waalwijk and Dendermonde.
- DESSO uses 100% renewable electricity (hydropower) in our production locations in Waalwijk and Dendermonde.
- At DESSO's main production facility in Dendermonde daily 1043 m³ of water is processed by the water treatment plant after thaty Ozonised waste water is reused in production, saving 12% groundwater.

All about eco efficiency


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HOW LONG WILL IT LAST?



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The built environment

- 
- An aerial illustration of a sustainable built environment. The scene shows a cluster of buildings with red-tiled roofs and white walls, surrounded by lush greenery and palm trees. A winding river or canal flows through the area, with several bridges crossing it. In the foreground, there are docks with boats and a small boat on the water. The overall atmosphere is one of a harmonious and eco-friendly urban development.
- Do we have sufficient materials to built?
 - Can we preserve nature in the built environment?
 - How can we have a beneficial impact with cities
 - Buildings like a tree cities like forests

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How to go beyond

Sustainability with Substance

- ✓ Really make a difference
- ✓ Products are healthy and kind for humans and environment in **all** stages of the life cycle
- ✓ Inspiring concept and philosophy

A step further than sustainability

- ✓ Material management
- ✓ More stringent environmental and social rules
- ✓ Do better than just less bad

**With the C2C Design principles
DESSO is able to face these challenges**



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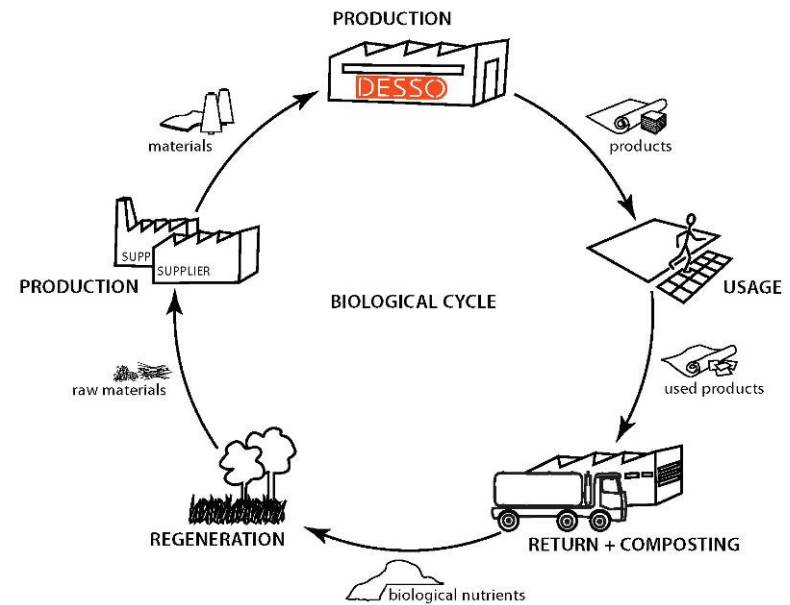
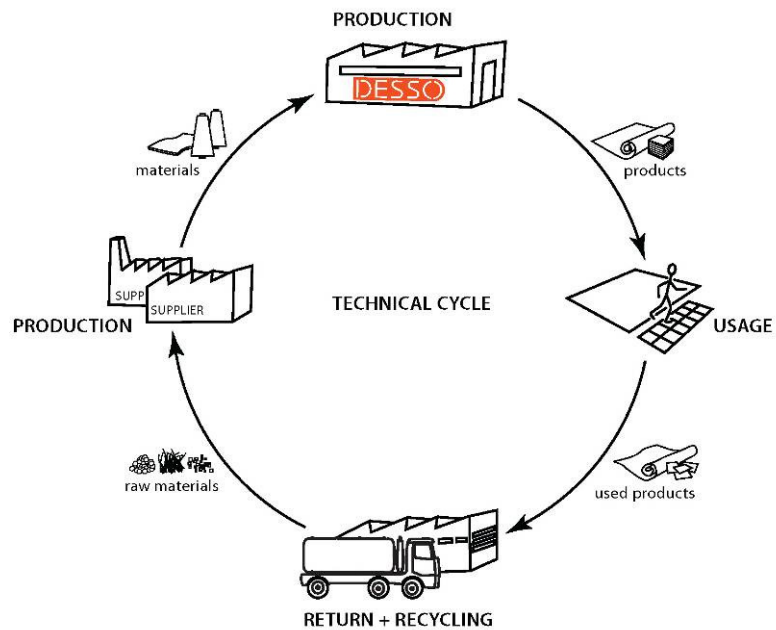
The Basic Principles



- Waste equals food
 - Use current solar income
 - Celebrate diversity
-
1. Improve quality of life and environment
 2. Re-utilize all materials used in the product.
Design criteria: easy disassembly
 3. Use post consumer materials as raw material in the product.
 4. All raw materials should be 100% safe for humans and environment.
 5. Use renewable energy in all stages of the cycle.

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The Cradle to Cradle® Cycles



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Goals 2020

- ✓ All products of Desso are developed according to C2C design criteria
- ✓ All materials and process inputs come from renewable or recycled sources.
- ✓ All materials are capable of returning safely to either natural systems or industrial systems
- ✓ Establish unique, tailored take back and recycling systems for closing the loop

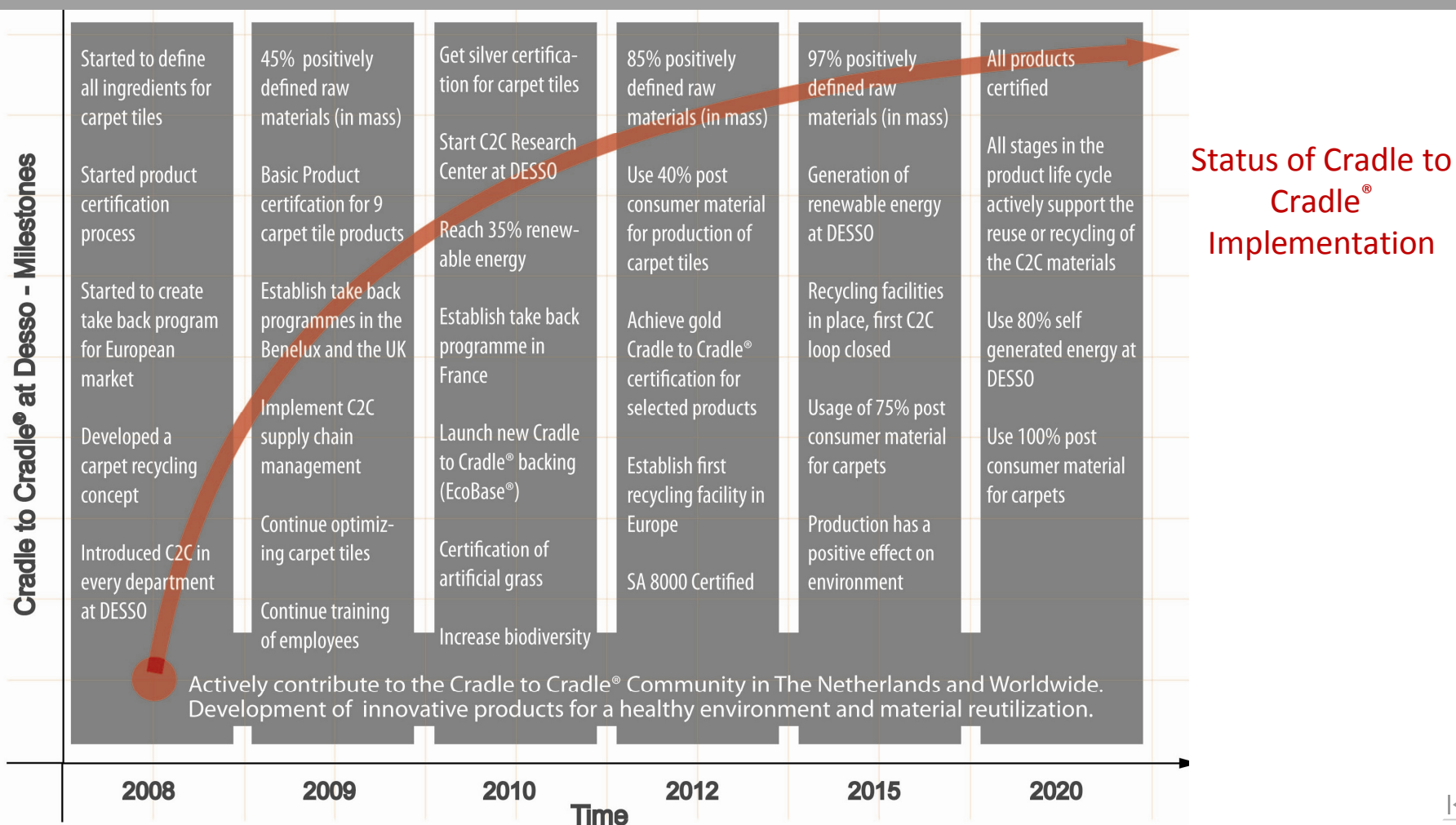


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Masterplan C2C

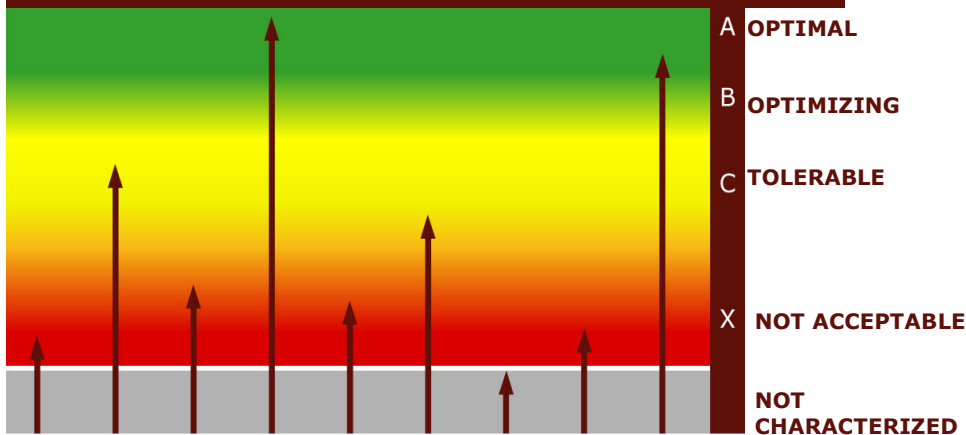


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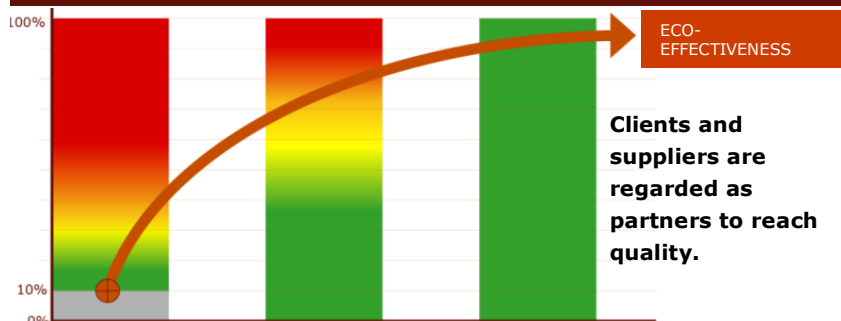
DESSO: Cradle to Cradle Company Being a C2C Company

IDENTIFY THE BEST: ABC-X CATEGORIZATION



The Passive Positive List

PROGRESS OF QUALITY FROM CRADLE TO CRADLE WITH TIME



No need to be perfect from day 1.



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WHEN BUSINESS MEETS THE ENVIRONMENT



DESSO: Cradle to Cradle Company Take Back™



- DESSO also offers a Take Back™ certificate to guarantee that material is recycled according to our Cradle to Cradle® principles.





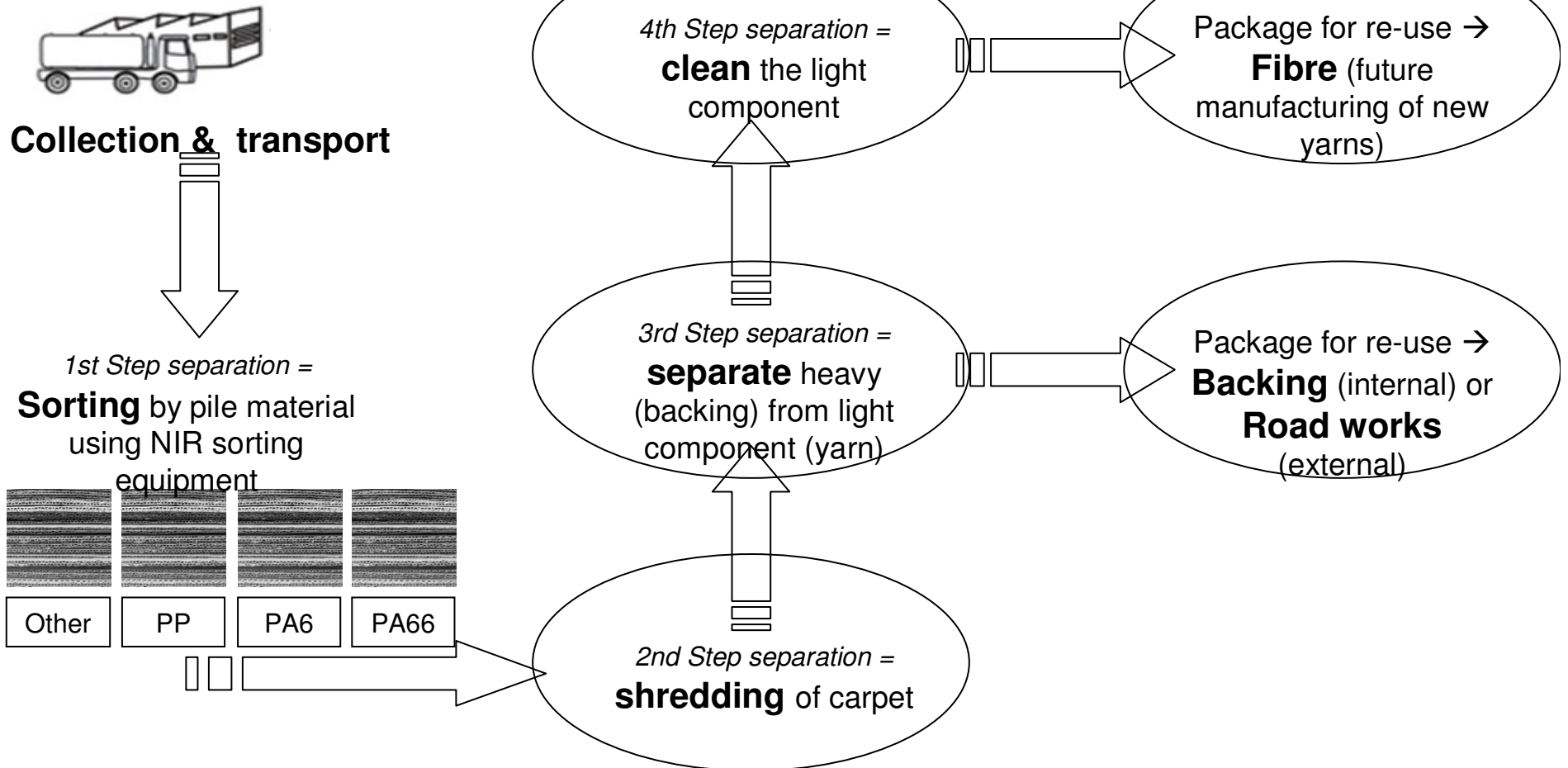
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WHEN BUSINESS MEETS THE ENVIRONMENT



DESSO
The Floor is Yours

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C2C Yarn recovery process



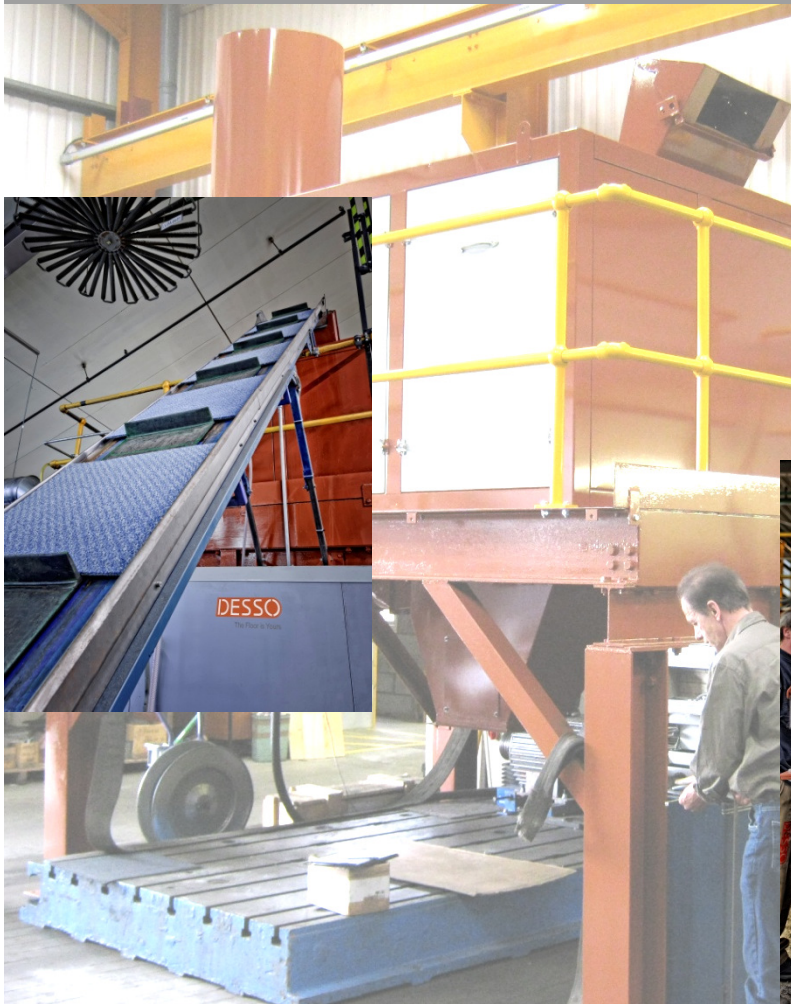


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WHEN BUSINESS MEETS THE ENVIRONMENT



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The Floor is Yours

C2C Yarn Recovery



Carpet shredder

Input:

Full carpet tiles, other carpet in investigation.

Output:

Light fraction with all the fibres and a heavy fraction containing the bitumen and latex



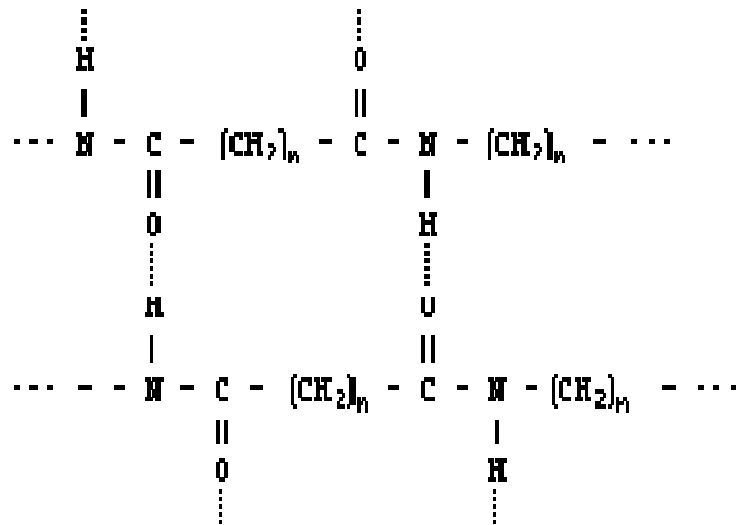


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WHEN BUSINESS MEETS THE ENVIRONMENT



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The Floor is Yours

Fibre Recovery



Fibre fluff content

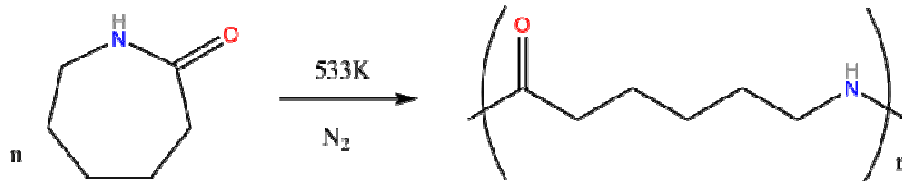
PET

PA6

PP

Glass

Challenge to separate



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Water purification



Aerobic purification

with

Ozone installation

In planning

Membrane filtration

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Postive impact from Products



- ✓ Airmaster, a product that captures fine dust. This way lower concentration in air
- ✓ Soundmaster, reduces sound dramatically for quieter surroundings. (less noise pollution)
- ✓ Fuelmaster, reduces the fuel consumption of planes because of low weight.

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Strategic plans



Energy

2020 100% durable energy

- ✓ Biomass
- ✓ Wind energy
- ✓ Solar energy

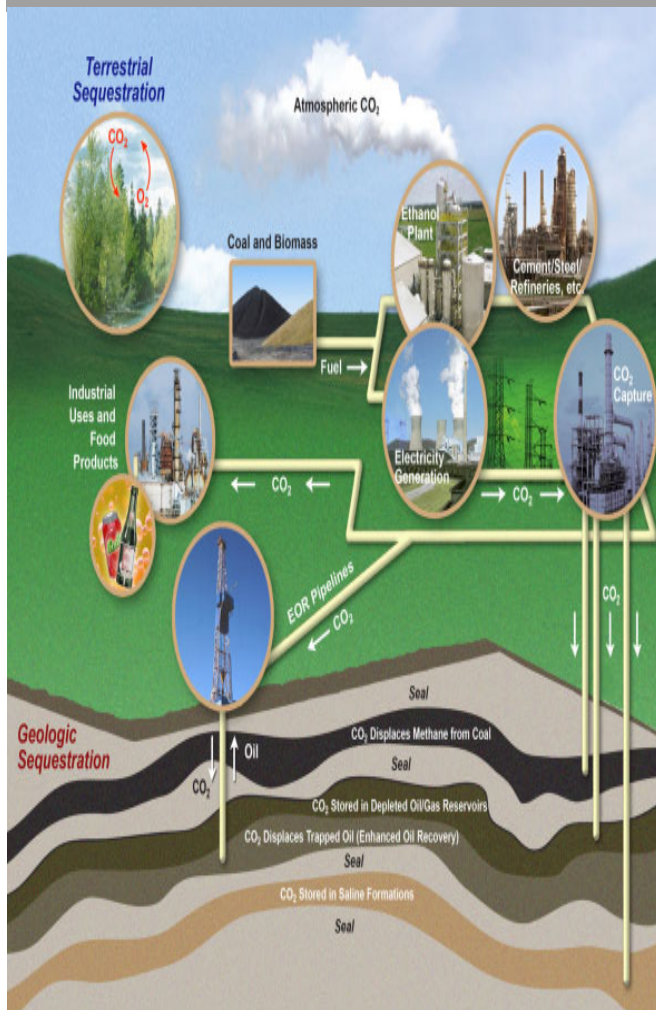
Biodiversity

Increase biodiversity in industrial environment.

- ✓ First “green roof” done
- ✓ Focus on certain species

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C2C & Carbon Management



Carbon footprint gives wrong focus

No consideration for:

- ✓Material scarcity.
- ✓Social aspect.
- ✓Diversity

How C2C improves climate.

- ✓Use current solar income
- ✓Increase biodiversity

Material management rather than compensation
Carpet from CO₂

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C2C Community

DESSO will contribute to:

- ✓ Dutch C2C development
- ✓ C2C community worldwide

Innovation Platform

- ✓ Encouraging all stakeholders to consider new products and C2C design paradigms
- ✓ Jointly develop know-how and new technology.

C2C business community

- ✓ Help stimulate the formation of necessary C2C infrastructure.



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Key learnings



Need for commitment from TOP to BOTTOM

Need for clear vision, plans and Consistency

Internal & External communication

It is about cooperation

Sustainability in combination with Design

The road less travelled...



Two roads diverged in a wood,
and I,
I took the one less traveled by,
And that has made all the difference.

Robert Frost, 1874 – 1963

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Thank you

For more information, please contact us
or visit our website

www.desso.com