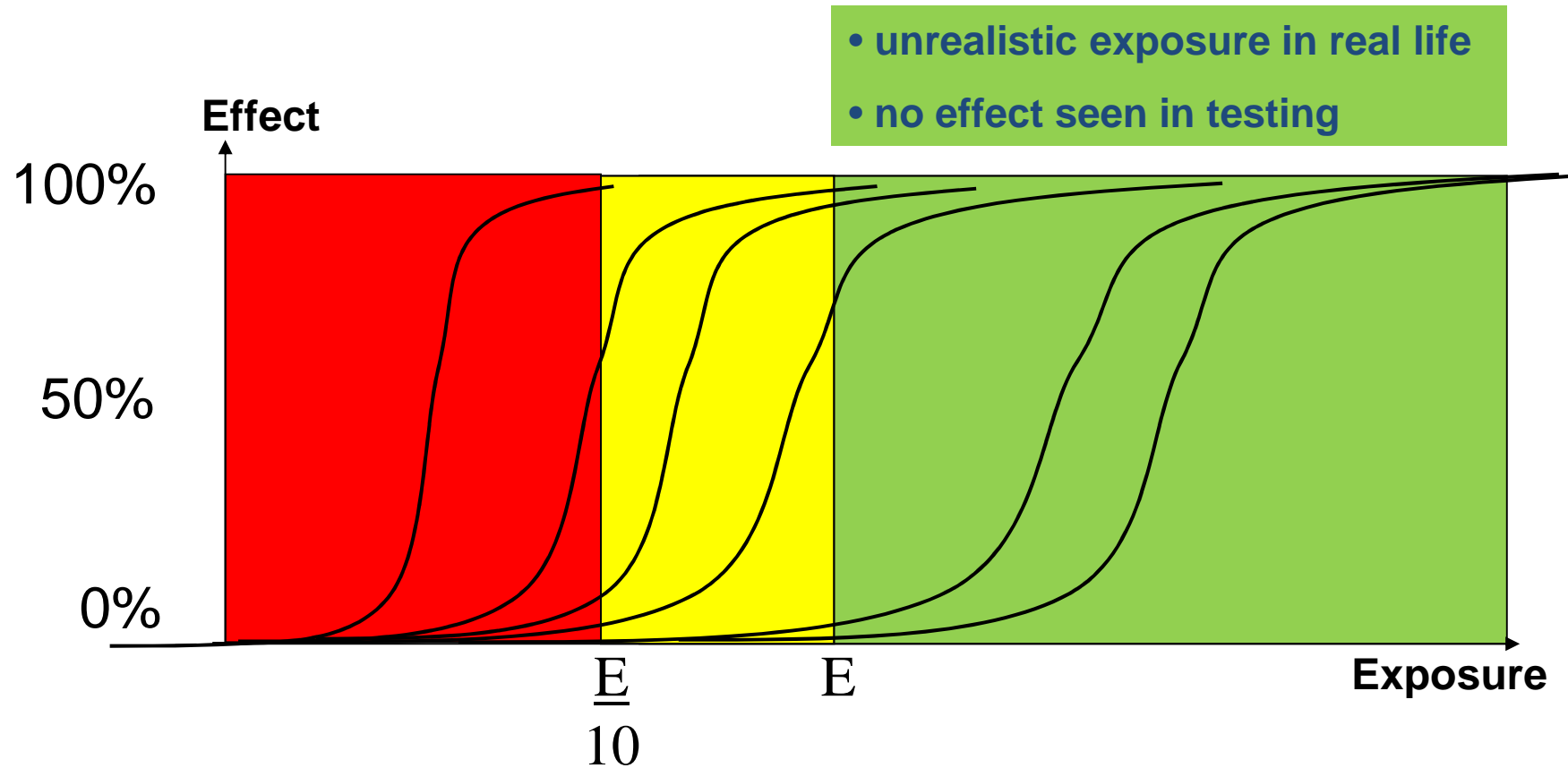
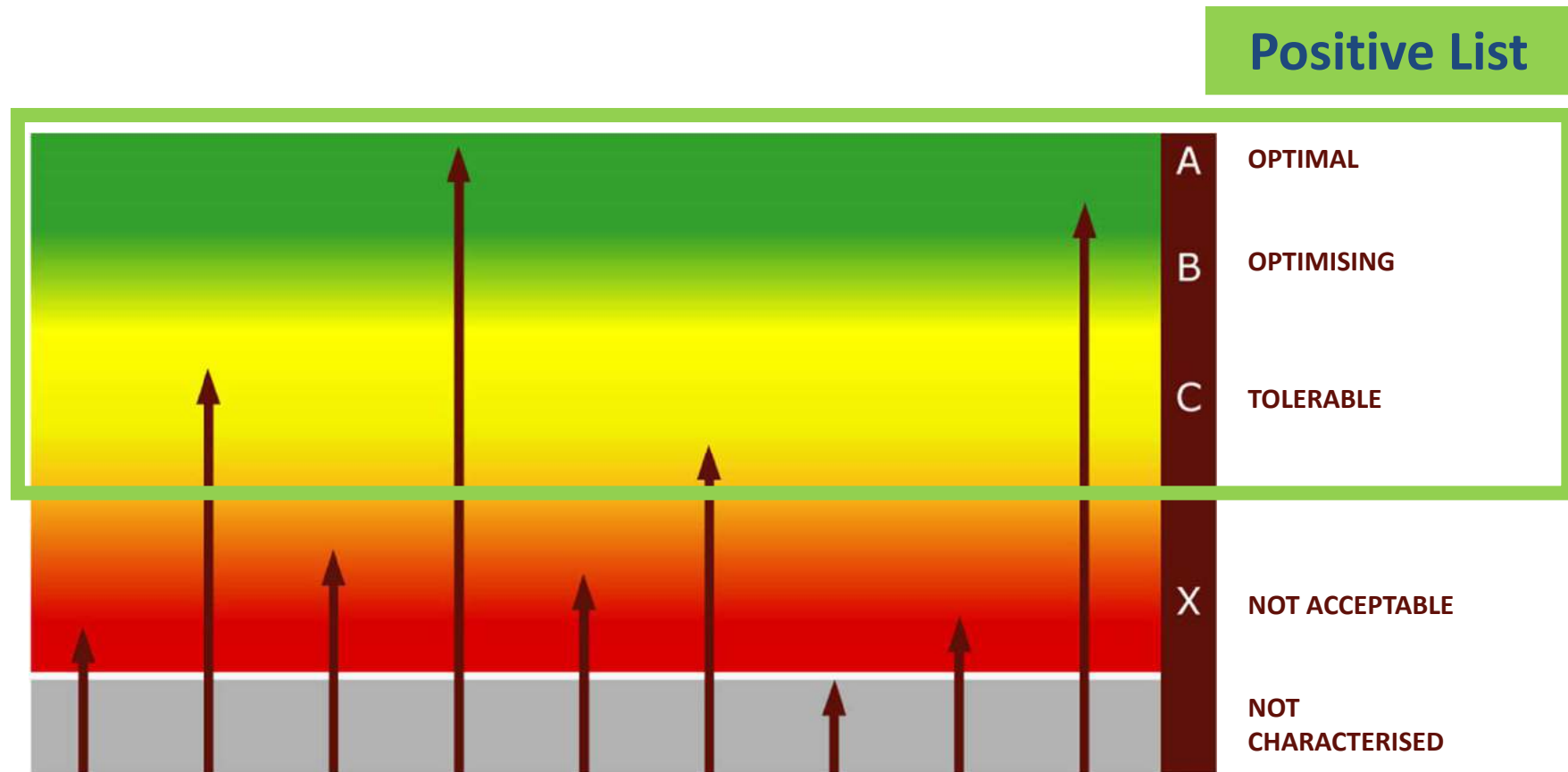


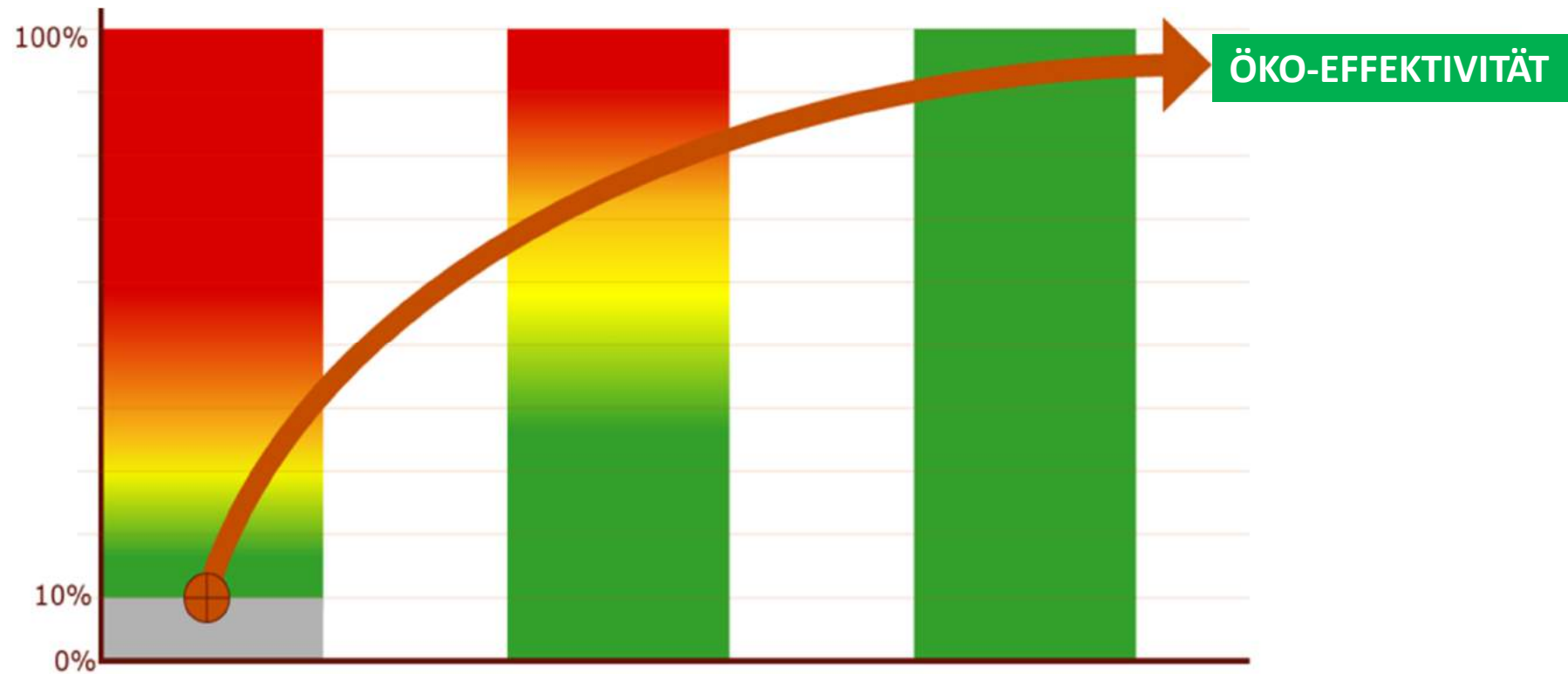
DIFFERENTIATION OF CHEMICALS



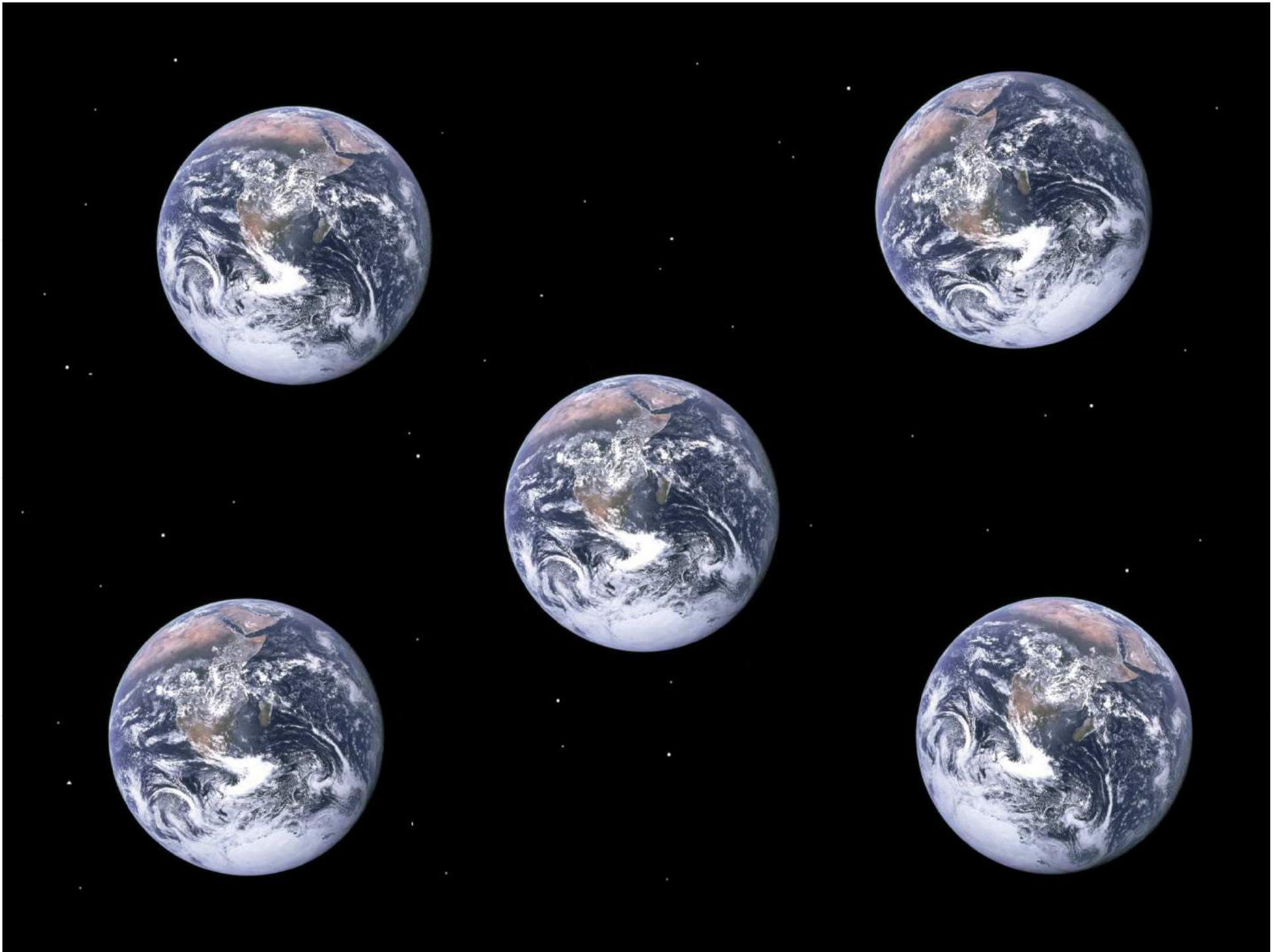
ABC-X CATEGORISATION OF SUBSTANCES



PROGRESS OF QUALITY THROUGH CRADLE TO CRADLE®




$$E = mc^2$$



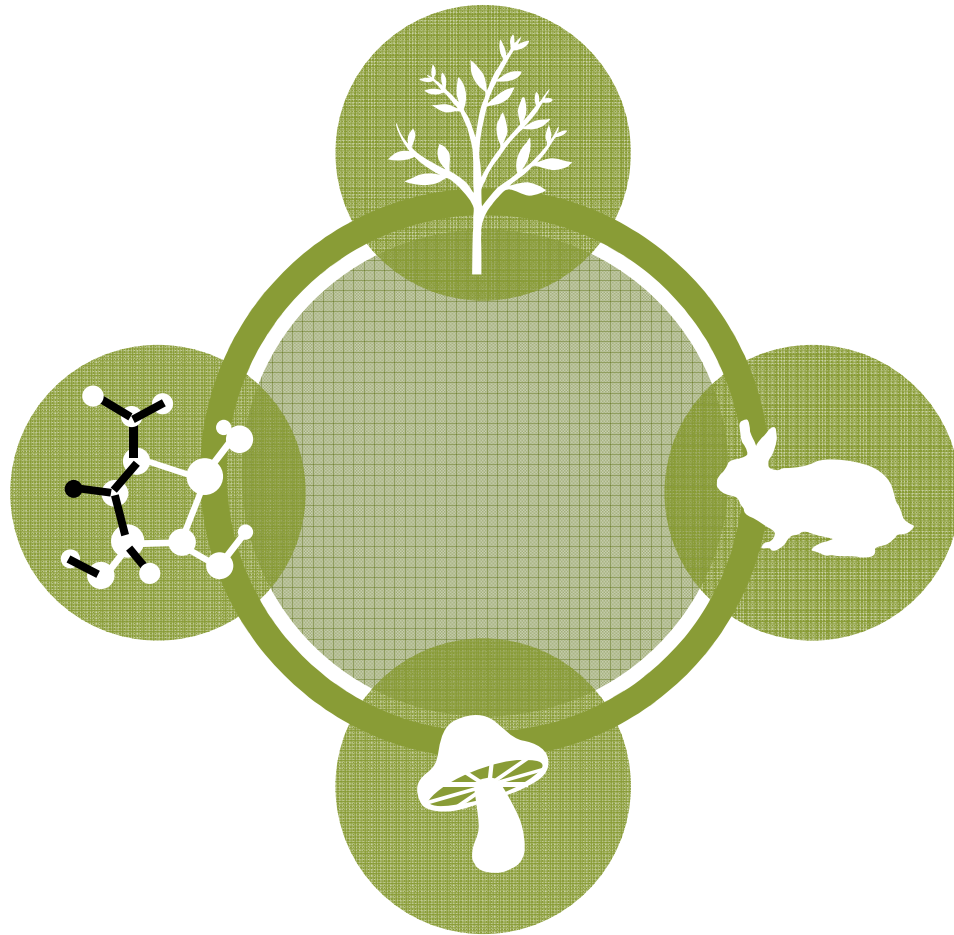


Innovation

Beauty

Quality

PRODUCT EXAMPLES



Biosphere

PAPER



 **STEINBEIS**
Papier mit besten Werten



PRINTING

gugler*
cross media



GUGLER* VIDEO



TEXTILES



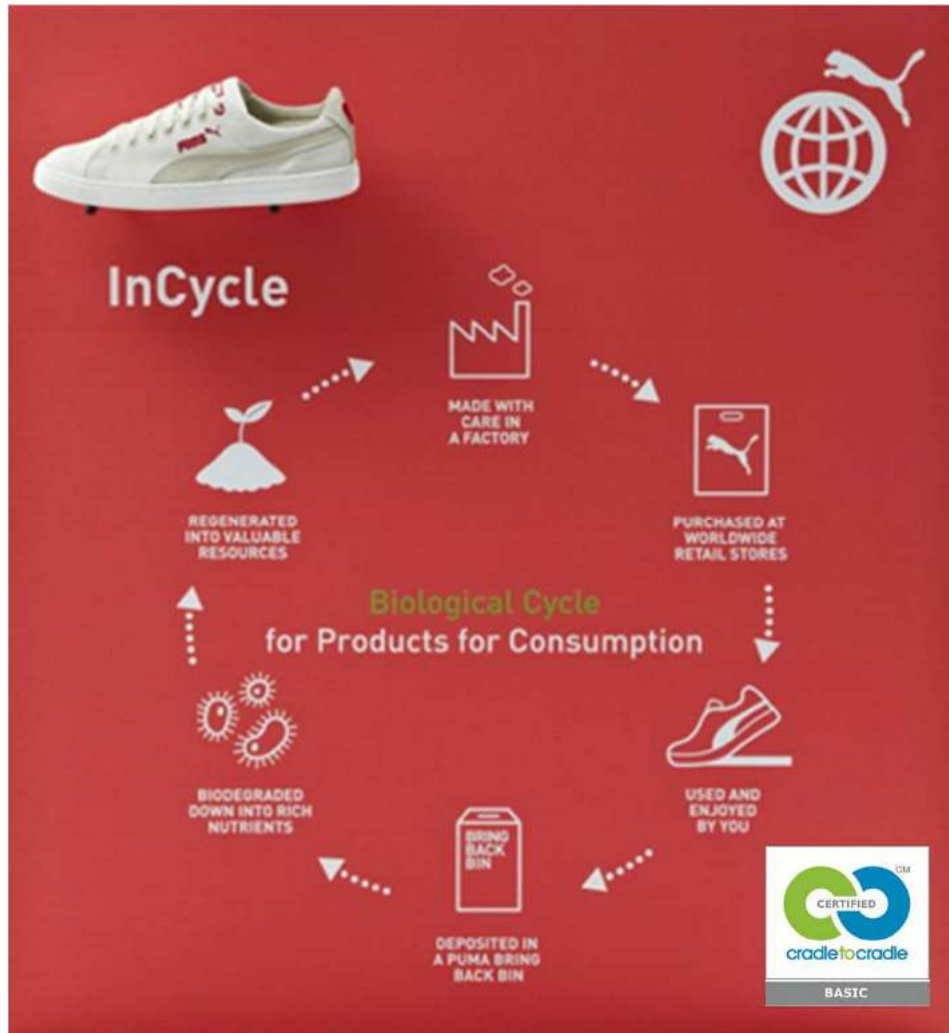
WORLDS FIRST CRADLE TO CRADLE®
CERTIFIED COTTON WORKWEAR



PUMA INCYCLE SNEAKER "BASKET"



INCYCLE COLLECTION



Shirts
biologically
decomposable

VOLCOM WITH AQUAFIL



ECONYL



AQUAFIL 
synthetic fibres and polymers

TEXTILES

 climatex®
GESSNER AG



Gabriel®

Gaja C2C



Quelle: http://c2ccertified.org/index.php/products/scorecard/climatex_lifeguard

Quelle: http://c2ccertified.org/images/made/images/product_images/lifecycle_270_180_c1_0_0.jpg



wet green®
Natural Leather Solutions



HEALTH & BEAUTY

AVEDA
THE ART AND SCIENCE OF PURE FLOWER AND PLANT ESSENCES



method.




VanHoutum



 **vendor**
WASHROOM HYGIENE



HOME & OFFICE SUPPLY

method.



Cradle to Cradle Certified GOLD

GREEN CARE PROFESSIONAL CLEANING & CARE RANGE

tana-Chemie GmbH and Werner & Mertz Group

Certification Standard Version 3.0



ECOVER

Cradle to Cradle Certified SILVER

ADD CIP 15 - ECO-POINT INTERNATIONAL B.V.
Eco-Point International B.V.

Certification Standard Version 2.1.1



replenish.



CLEANING PRODUCTS - OCEAN PLASTIC



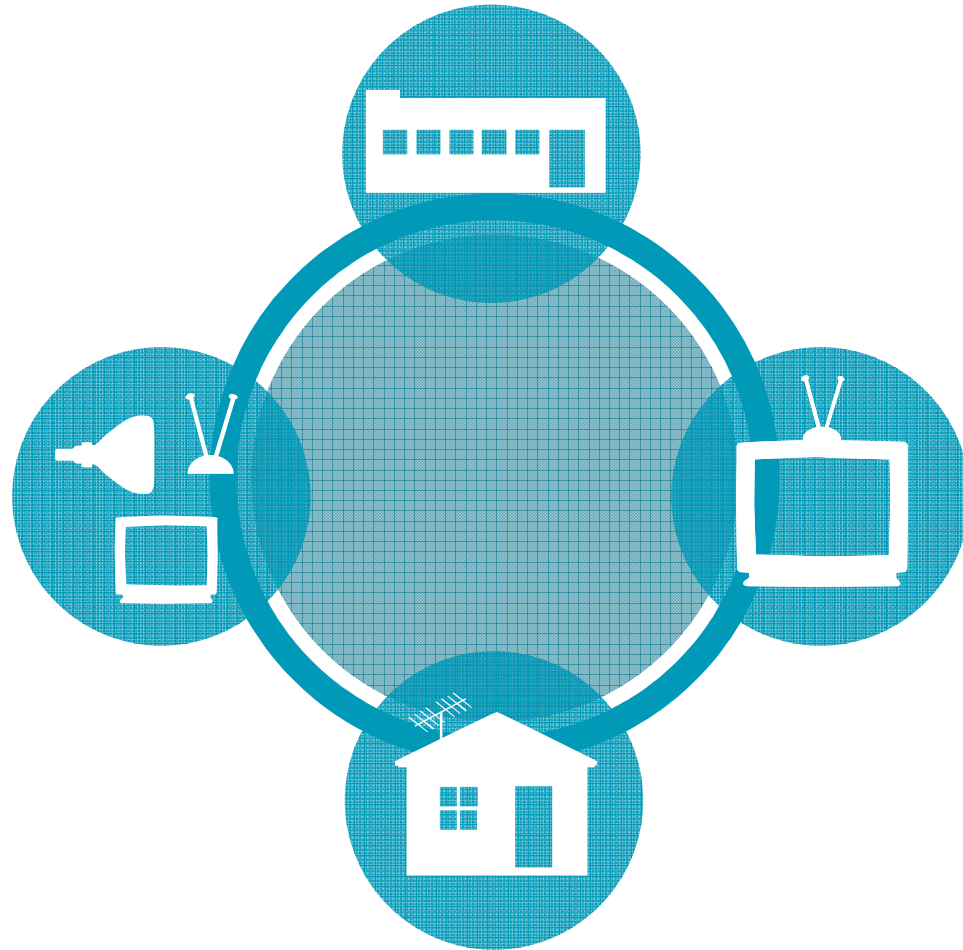
SYNBRA: BIOFOAM[®]



ECO VATIVE: MUSHROOM[®] MATERIAL



PRODUCT EXAMPLES



Technosphere

OPTIMISED FOR THE TECHNOSPHERE



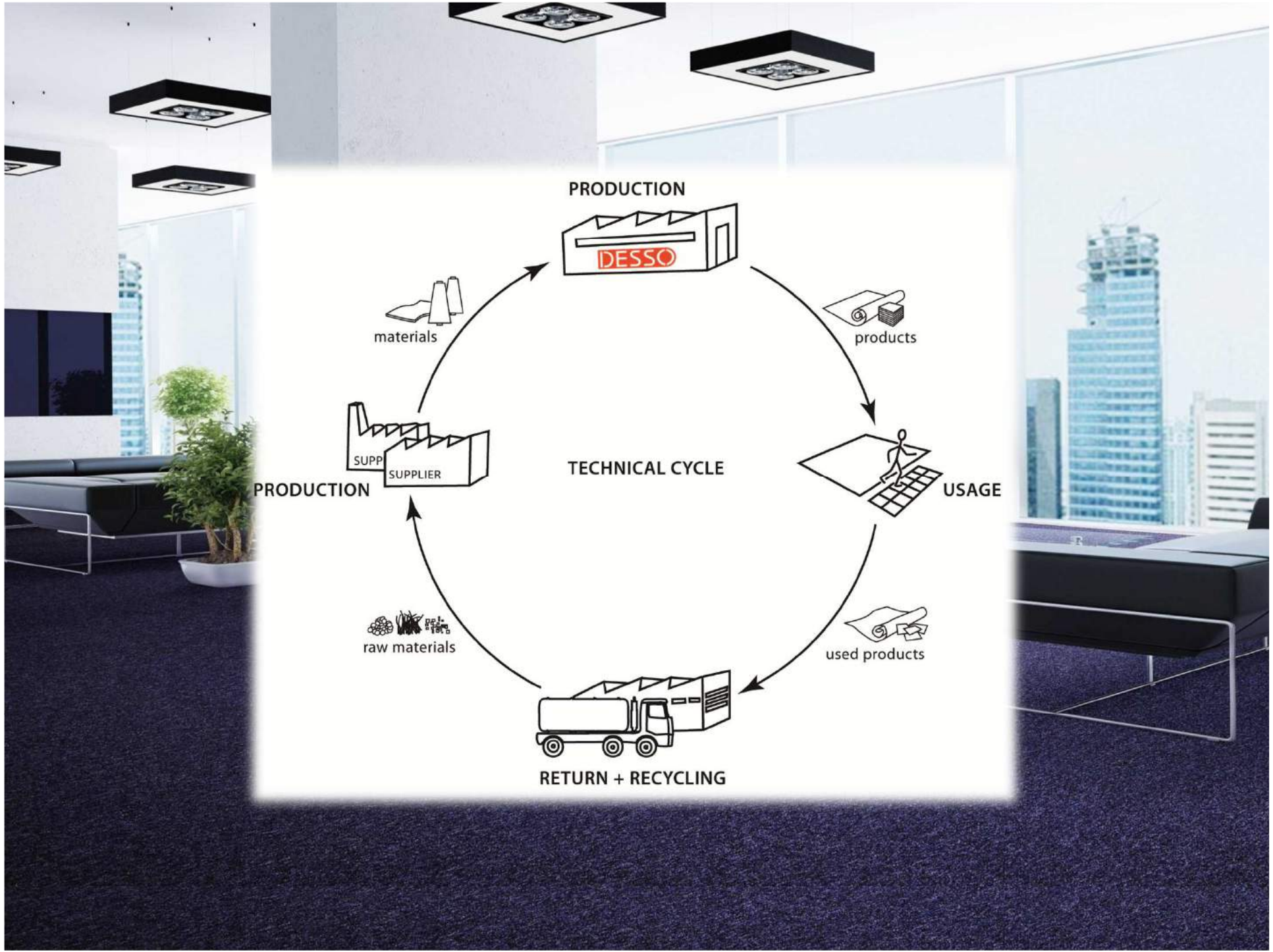
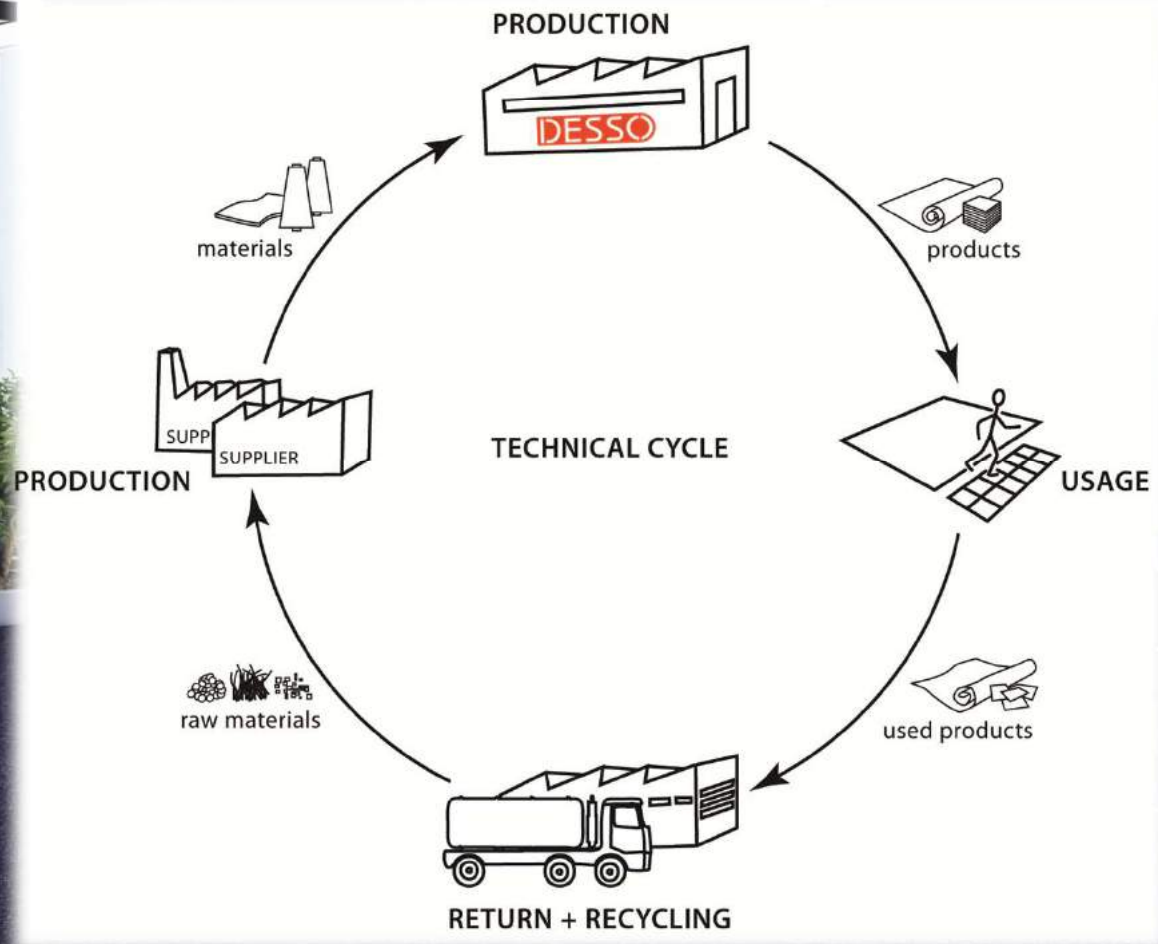
Toys

Gustav, the first Cradle to Cradle Toy



FLOORS





FURNITURE

auping



FURNITURE



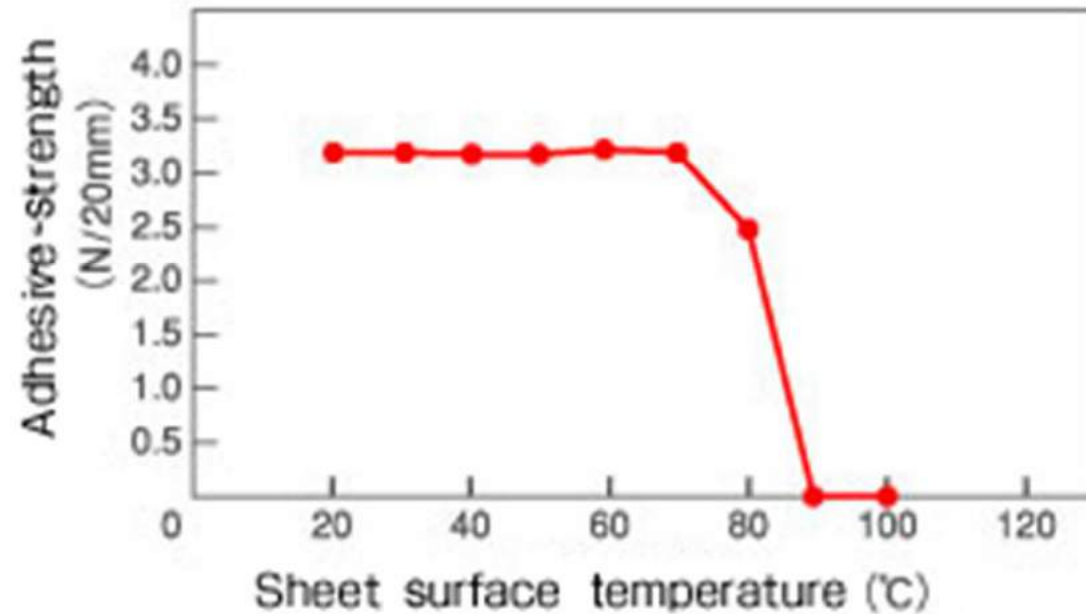
FURNITURE



ADHESIVES



■ Example of changes in adhesive strength by temperatures



MARKERS

STABILO GREENpoint 98% RECYCLT, 100% GUTES GEWISSEN.



KAPPE ZU



Die Zielgruppe

- » Schüler, Lehrer, Eltern und Büroangestellte mit hohem Umweltbewusstsein.

Der Stift

- » Hergestellt aus 98 % recyceltem Kunststoff.
- » Robuste breite Spitze mit 0,8 mm Durchmesser – für sanftes Schreiben, ausdrucksstarkes Hervorheben und farbindensives Strukturieren.
- » Handliche Stiftlänge und Clip für mehr Mobilität.
- » In 6 Farben erhältlich.

AUSZEICHNUNGEN

2011 CRADLE TO CRADLE SILVER ZERTIFIZIERUNG

farben



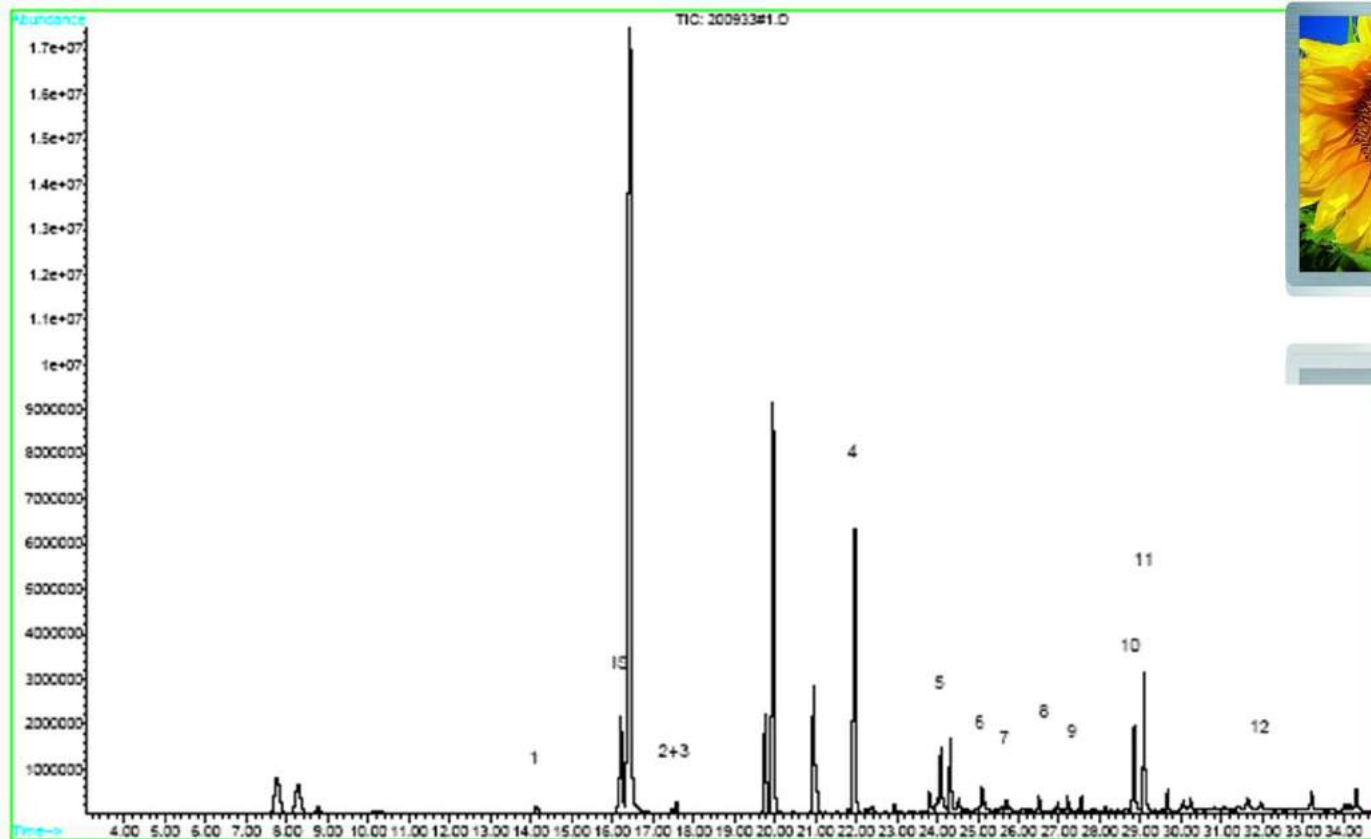
TV

Econova Green TV



TV

Off-gassing: Philips Econova Green TV



PACKAGING

laladoodoo™



PACKAGING



PACKAGING

Cradle to Cradle Certified SILVER

INCA PRESSWOOD PALLETS - LITCO INTERNATIONAL, INC.

Litco International, Inc.

Certification Standard Version 2.1.1



FOODSERVICE PACKAGING

Be Green Packaging, LLC

Certification Standard Version 2.1.1

PRODUCT WEBSITE



Cradle to Cradle Certified SILVER

MICRO-PAK® PE SHEET
Micro-Pak Ltd.

Certification Standard Version 2.1.1

PRODUCT WEBSITE



Cradle to Cradle Certified SILVER

220 L / 55 US GAL. PLASTIC TIGHT HEAD DRUM - MAUSER WERKE GMBH
Mauser Werke GmbH



THE EIGHT PARTNERS IN THE CARLSBERG CIRCULAR COMMUNITY



The **Green Fiber Bottle** Project **Better World in the Making**



KNOCK ON WOOD

A biobased bottle made from sustainably sourced wood-fiber.



IN THE NAME OF BEER LOVE

Will contribute to spreading sustainable beer love everywhere in partnership with ecoXpac.



AS GOOD AS GREEN

Strong, durable material, 100% compliant with the strictest food and beverage regulations.



ZERO WASTE

Will be 100% biodegradable and generate 0% waste.

Carlsberg unveils new Green Fiber Bottle design

9/28/2016 10:30

The new design of the Green Fiber Bottle was unveiled today at the Sustainable Brands 2016 Copenhagen conference.

The new design of Carlsberg's Green Fiber Bottle was revealed today, as 500 business leaders joined the Sustainable Brands community at the Sustainable Brands 2016 Copenhagen conference, aimed at inspiring business success through innovation and 'Activating Purpose' towards a sustainable future.



As part of the work of the Carlsberg Circular Community, Carlsberg kicked off the development project in 2015 with Danish packaging company EcoXpac to develop a beer bottle made from sustainably sourced wood fiber. The first prototype of a fiber-based bottle was revealed in January 2015 by Professor Flemming Besenbacher, Chairman of the Carlsberg Foundation, at the World Economic Forum in Davos.

NEW DESIGN

The new design of the beer bottle was developed with Carlsberg's partners in the Carlsberg Circular Community as well as CP+B Copenhagen and Kilo, a Danish industrial design studio. The prototype, which has been prepared based on the distinctive Carlsberg design, shows how the bottle might look like when it hits the market.

Sustainability Director, Simon Boas Hoffmeyer, revealed the new design at the Sustainable Brands 2016 Copenhagen conference. He said the new bottle is a milestone in the ambitious three-year project:













"The new bottle is a great milestone in the project, as having a physical prototype makes it easier for us to explain the new packaging format to consumers and colleagues. I think the new bottle looks great and shows how we can use innovation and design to help shape products for a better tomorrow," says Simon Boas Hoffmeyer, Sustainability Director.

"The bottle has been created with input from some of the leading packaging specialists in the world, who are very excited to participate in the project. Though we still have technical challenges to overcome, we're on track on the project," says Håkon Langen, Packaging Innovation Director.

The Green Fiber Bottle will be a landmark in sustainable innovation. Its fibers will come from responsibly managed sources, with trees replanted at the same rate that they are harvested. While the bottle will degrade into environmentally non-harmful materials if discarded randomly, the intention is that it will form part of a proper waste management system, just like today's bottles and cans.



BUILDING MATERIALS

<p>STRUCTURAL BUILDING MATERIALS Gold V2.1.1</p>  <p>ACCCYS TECHNOLOGIES PLC Accoya® Wood (Radiata Pine & Alder)</p> <p>Accoya® is a world leading high technology wood with properties that surpass the best tropical... MORE INFO »</p>	<p>BUILDING EXTERIORS Gold V2.1.1</p>  <p>HIGHLAND CRAFTSMEN Bark House® Poplar Bark Shingle Siding and Wall...</p> <p>Bark House® shingle siding was the first product HC® developed in 1990. We are the original... MORE INFO »</p>	<p>BUILDING EXTERIORS Gold V2.1.1</p>  <p>CENTRIA EcoScreen</p> <p>CENTRIA offers exterior perforated screenwall panels using Econolap 3/4", Style-Rib, and BRS-36 in 20... MORE INFO »</p>	<p>GARDEN & LANDSCAPE Silver V2.1.1</p>  <p>VAN HELVOIRT GROENPROJECTEN BV Bomenzand+ (Tree-Terra)</p>	<p>CONCRETE, CEMENT, AND MASONRY Silver</p>  <p>BORAL BRICKS, INC. Boral Bricks</p> <p>Boral® manufacturing plants are located across the southeast and southwest, and this geographic... MORE INFO »</p>	<p>BUILDING EXTERIORS Silver V2.1.1</p>  <p>BORAL COMPOSITES Boral TruExterior® Trim - Boral Composites</p> <p>Boral TruExterior® Trim is a revolutionary new exterior trim product that combines superior... MORE INFO »</p>
<p>SPECIALTIES AND MISCELLANEOUS APPLICATIONS Gold V2.1.1</p>  <p>CONSTRUCTION SPECIALTIES, INC. Expansion Joint Covers (Selected Models)</p> <p>C/S offers a wide variety of expansion joint covers for seismic, thermal and wind sway applications... MORE INFO »</p>	<p>INSULATION Gold V2.1.1</p>  <p>BAUFRITZ-GMBH & CO. KG HOIZ Insulation</p> <p>The first sustainable natural insulation in the world, made from wood chips "HOIZ" by Baufritz... MORE INFO »</p>	<p>CONCRETE, CEMENT, AND MASONRY Gold V2.1.1</p>  <p>HYCRETE TECHNOLOGIES Hycrete Admixtures - Hycrete Technologies</p> <p>Hycrete admixtures for concrete shut down capillary transport of water and chlorides through concrete... MORE INFO »</p>	<p>ELECTRICAL Silver V2.1.1</p>  <p>BYRNE ELECTRICAL SPECIALISTS Byrne Power/Data Centers</p> <p>Introducing an edgy solution to solve desktop power and data demands that takes your business where... MORE INFO »</p>	<p>HEATING, COOLING, & VENTILATION Silver V2.1.1</p>  <p>CONSTRUCTION SPECIALTIES, INC. C/S Louvers</p> <p>Conventional, Storm Resistant and Hurricane (Anodized finish only)</p>	<p>DAYLIGHTING & SHADES Silver V2.1.1</p>  <p>CONSTRUCTION SPECIALTIES, INC. C/S Sunshades</p> <p>Our Cradle to Cradle Silver certified C/S Cantilevered Sunshades not only look great on buildings... MORE INFO »</p>

TILES



CONCRETE

xella



BRICKS



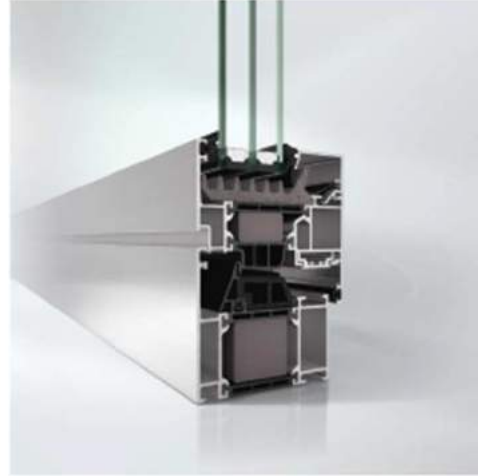

Wienerberger



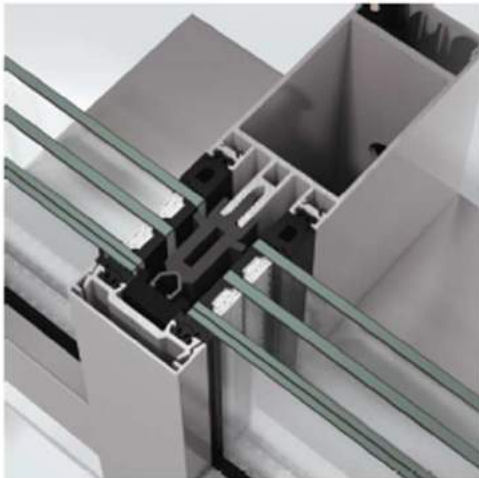
WOOD



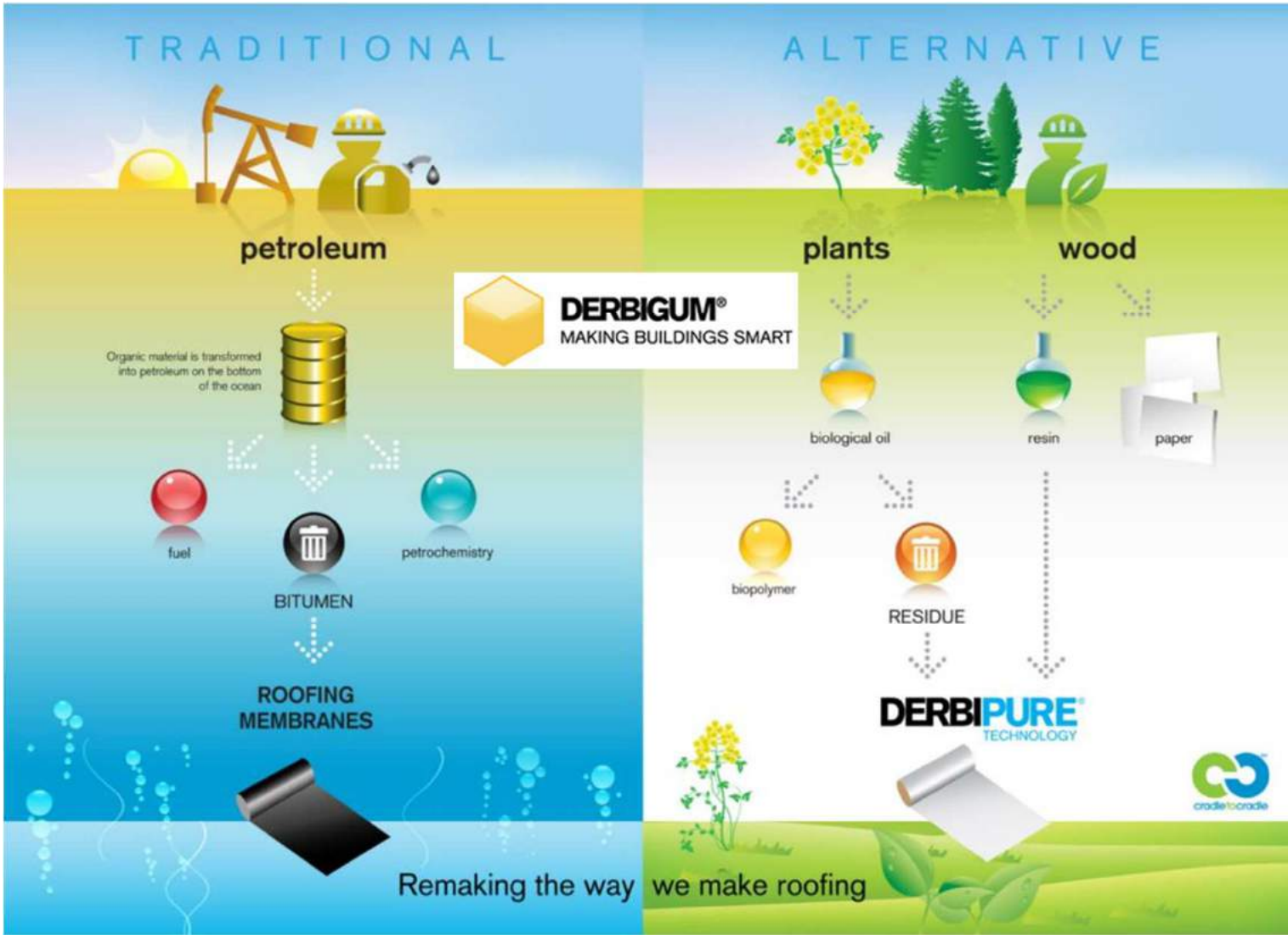
FACADES



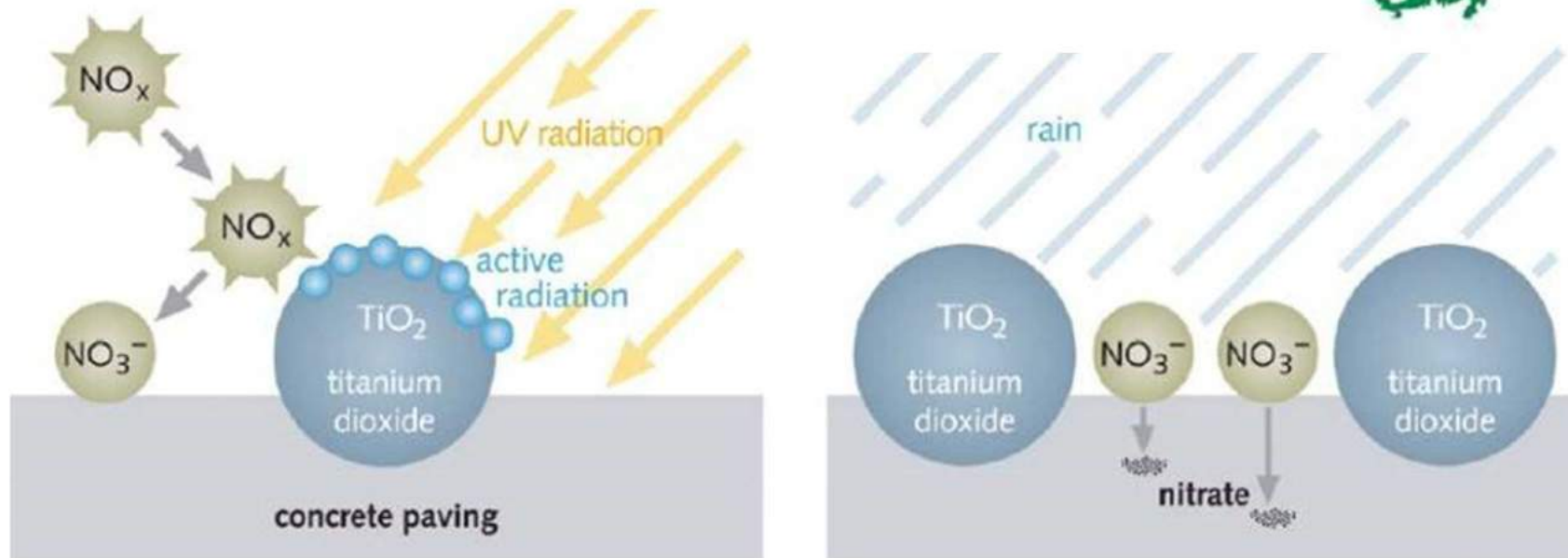
SCHÜCO



ROOFS

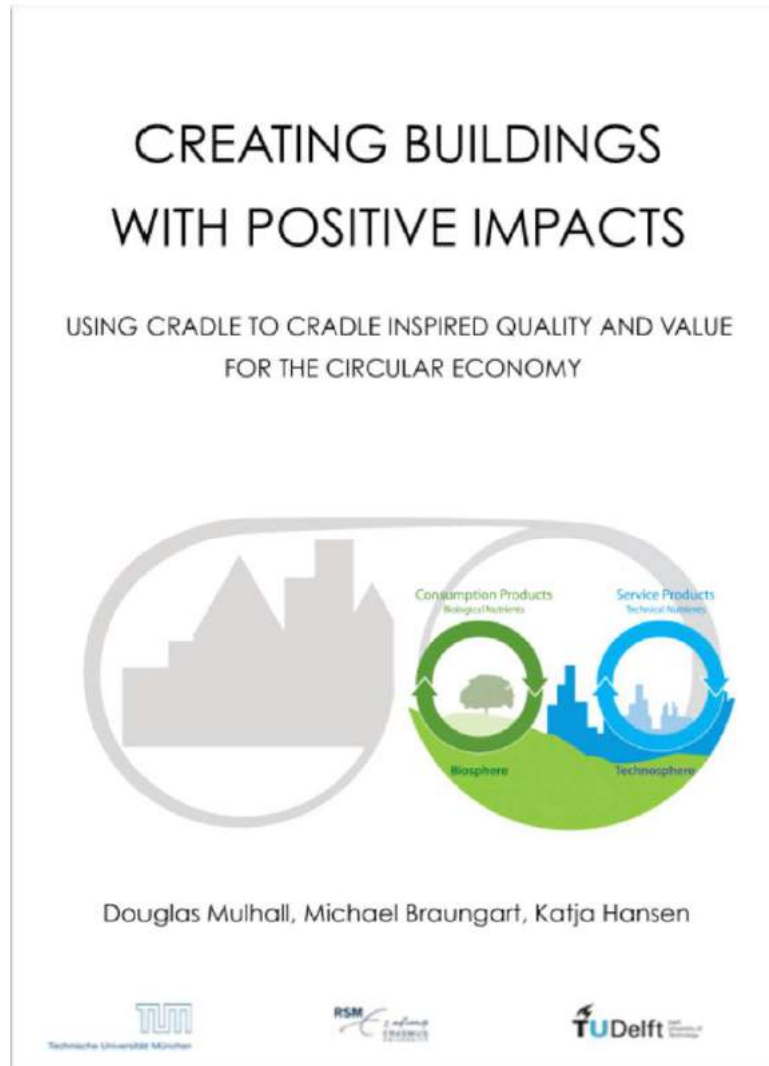


CONCRETE

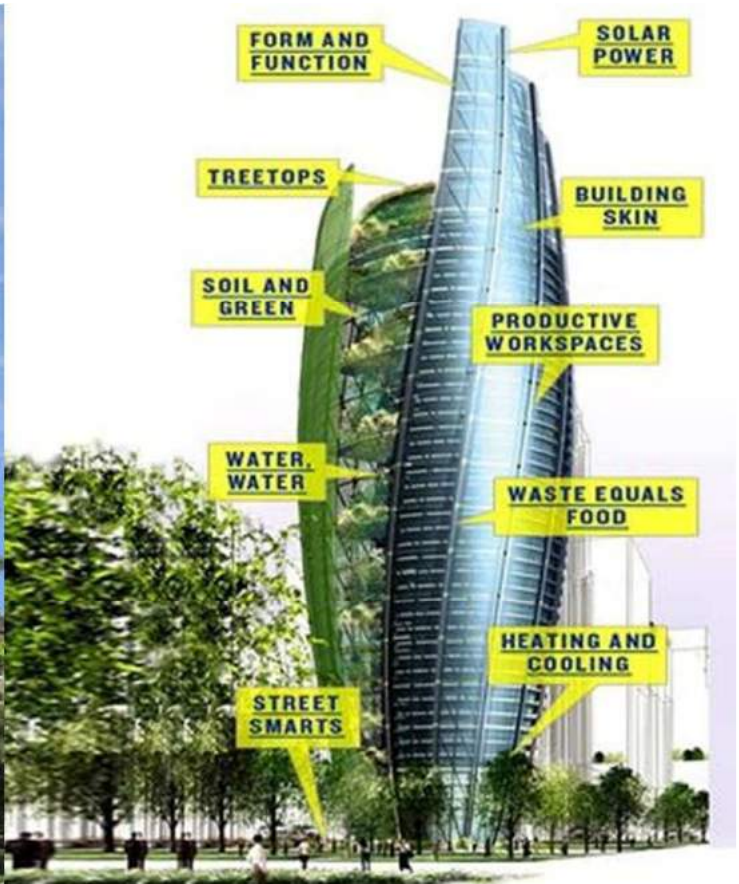
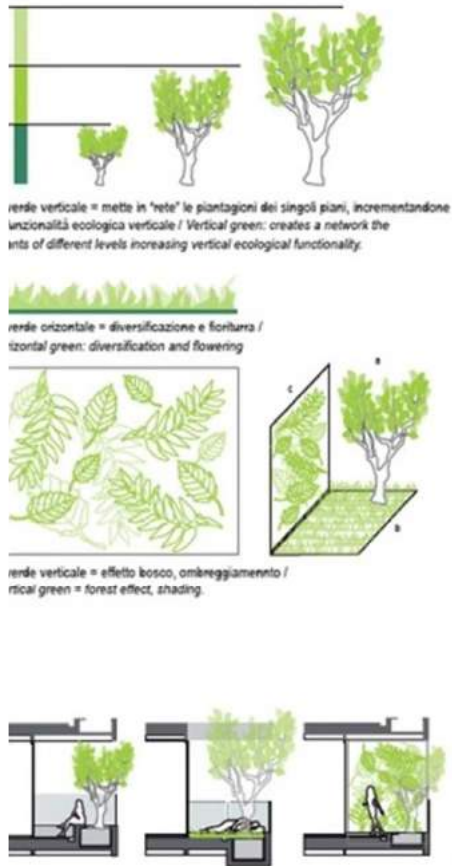


Stickstoffmonoxid aus der Umgebungsluft wird in Nitrat (NO_3^-) umgewandelt, welches bei Regen als Nährstoff in den Boden gewaschen wird.

CRADLE TO CRADLE - BUILT ENVIRONMENT



BUILDINGS LIKE TREES, CITIES LIKE FORESTS



C2C ARCHITECTURE



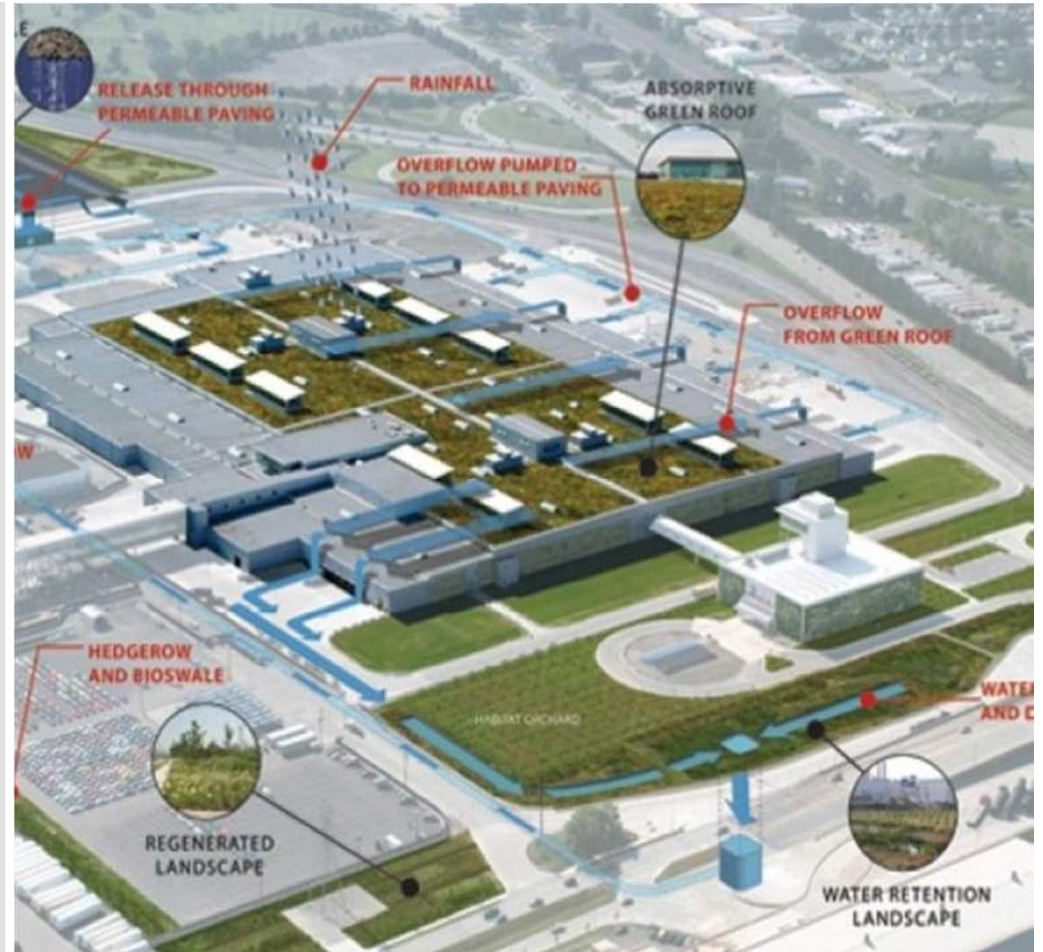
BIONORICA - NEUMARKT



FORD MOTOR COMPANY USA

C2C design strategies:

- Abundant natural light and fresh air.
- Restoration of native habitat to the site.
- Water retention landscape, phytoremediation garden.
- Inside the plant, wood flooring reduces stress on workers' feet and legs.
- An innovative air delivery system reduces the need for duct work.
- The plant's 10-acre vegetative roof—the largest installation of its kind in the United States—provides restoration of native habitat, effective thermal and acoustic insulation, and improved air and water quality.



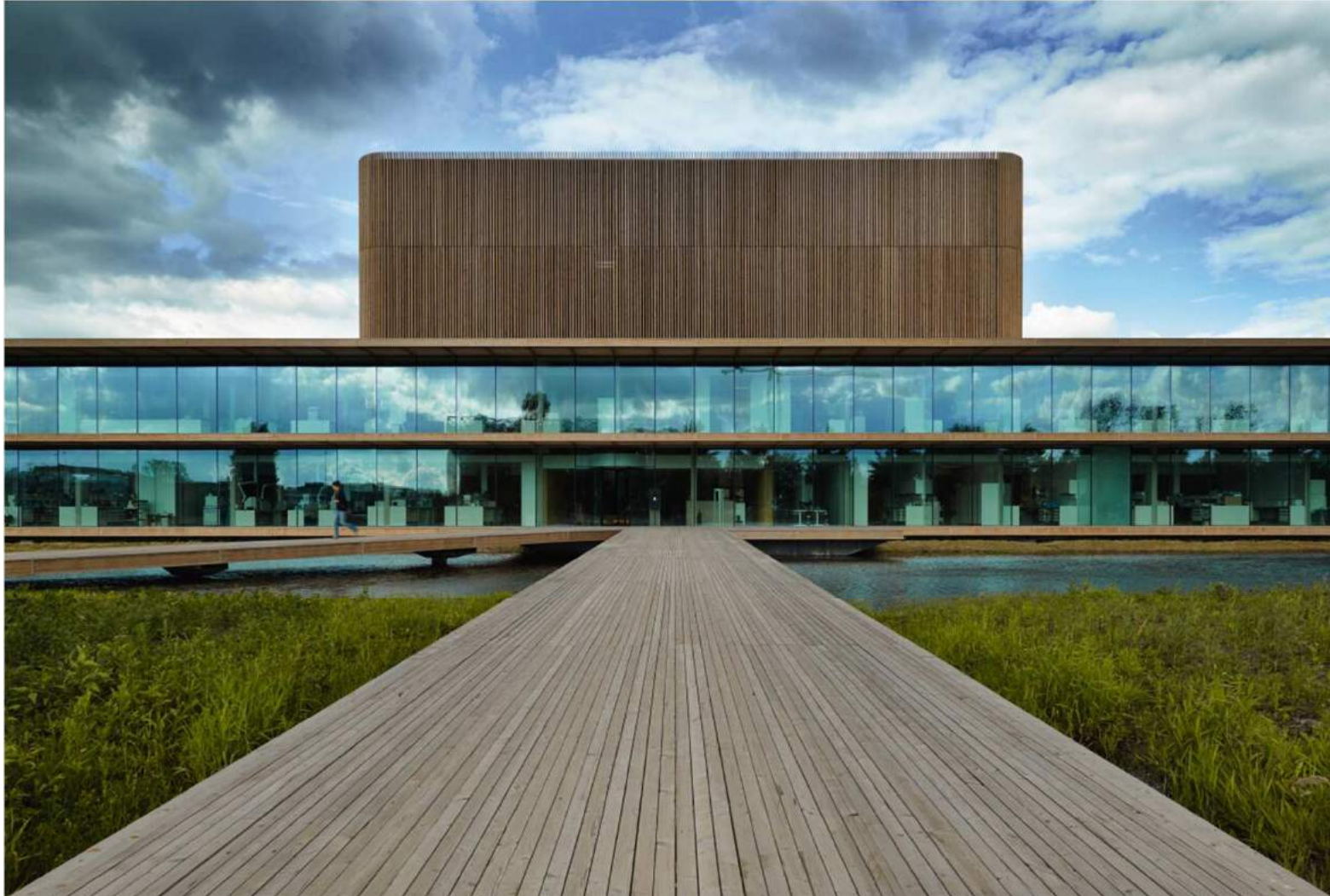
LIUZHOU - GUANGXI



PARK 20|20 – HOOFDDORP



NIOO-KNAW - WAGENINGEN



BACKSIPPAN PRESCHOOL RONNEBY



HAPPY HEALTHY SCHOOL

Building Integrated Greenhouse (BIG) project

happy healthy school

1 classroom
Remove the polluted air

2 greenhouse
Plants clean the polluted in- and outdoor air

3 cooling / heat storage
The clean air needs to be cooled and dehumidified

why?
In dense urban environments, air pollution is a major concern. The school building is a key location for air quality improvement. The school building is a key location for air quality improvement. The school building is a key location for air quality improvement.

the school will provide forest-quality air even in dense urban environments

cradle to cradle

IAS Institute for Advanced Studies
TUM Technical University of Munich



LYCEUM SCHRAVENLANT - SCHIEDAM



CITY HALL VENLO



CITY HALL VENLO



BUILDINGS AS MATERIAL BANKS (BAMB)



BUILDINGS AS MATERIAL BANKS (BAMB)



Get involved in the stakeholder network for special interest groups and visit:

www.bamb2020.eu

1.
Materials Passports



2.
Reversible Building Design



3.
Data management
(including BIM)



4.
Business Models



5.
Policies and Standards



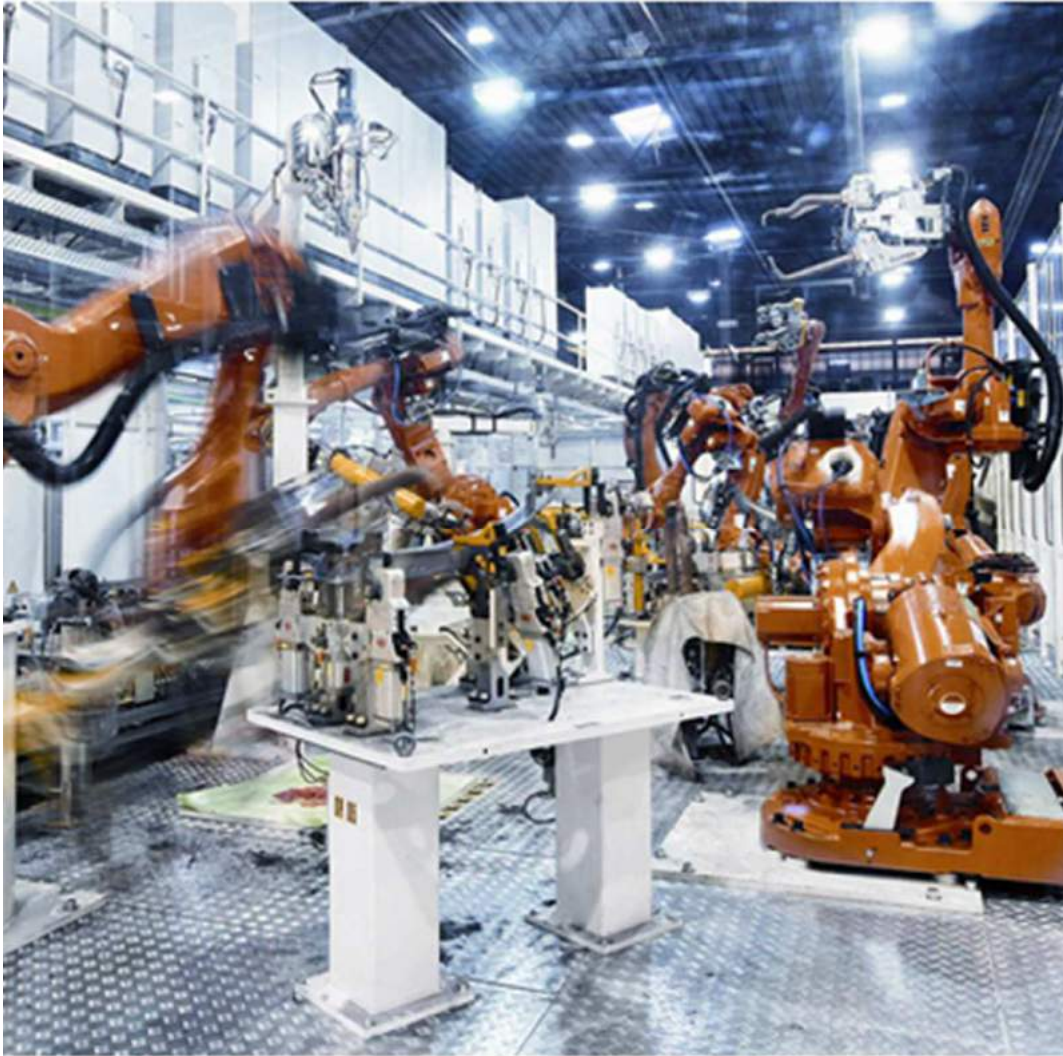
6.
Case Studies
and Pilots



MAERSK VIDEO



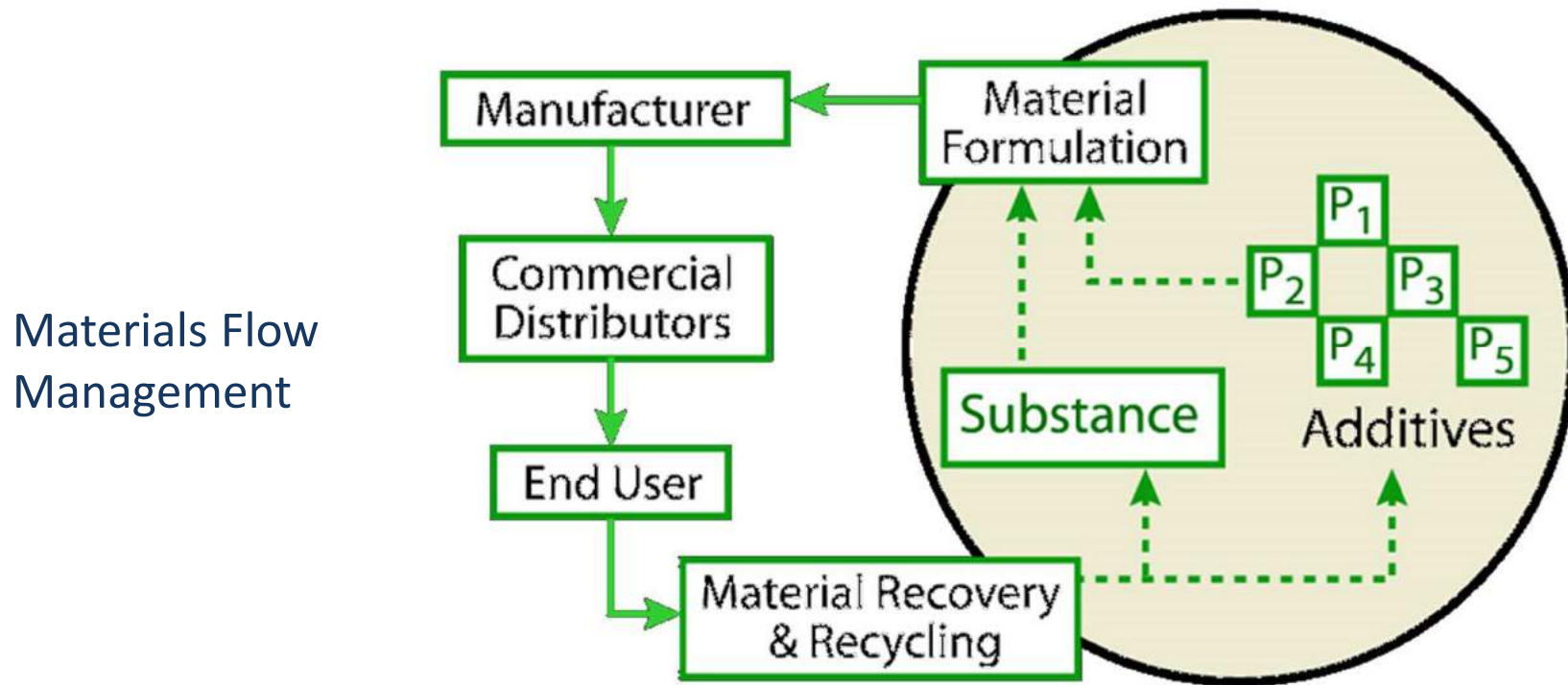
SERVICE PRODUCTS



MATERIALS AS SERVICE PRODUCT



INTELLIGENT MATERIAL POOLING



WASHING AS A SERVICE



3D PRINTING

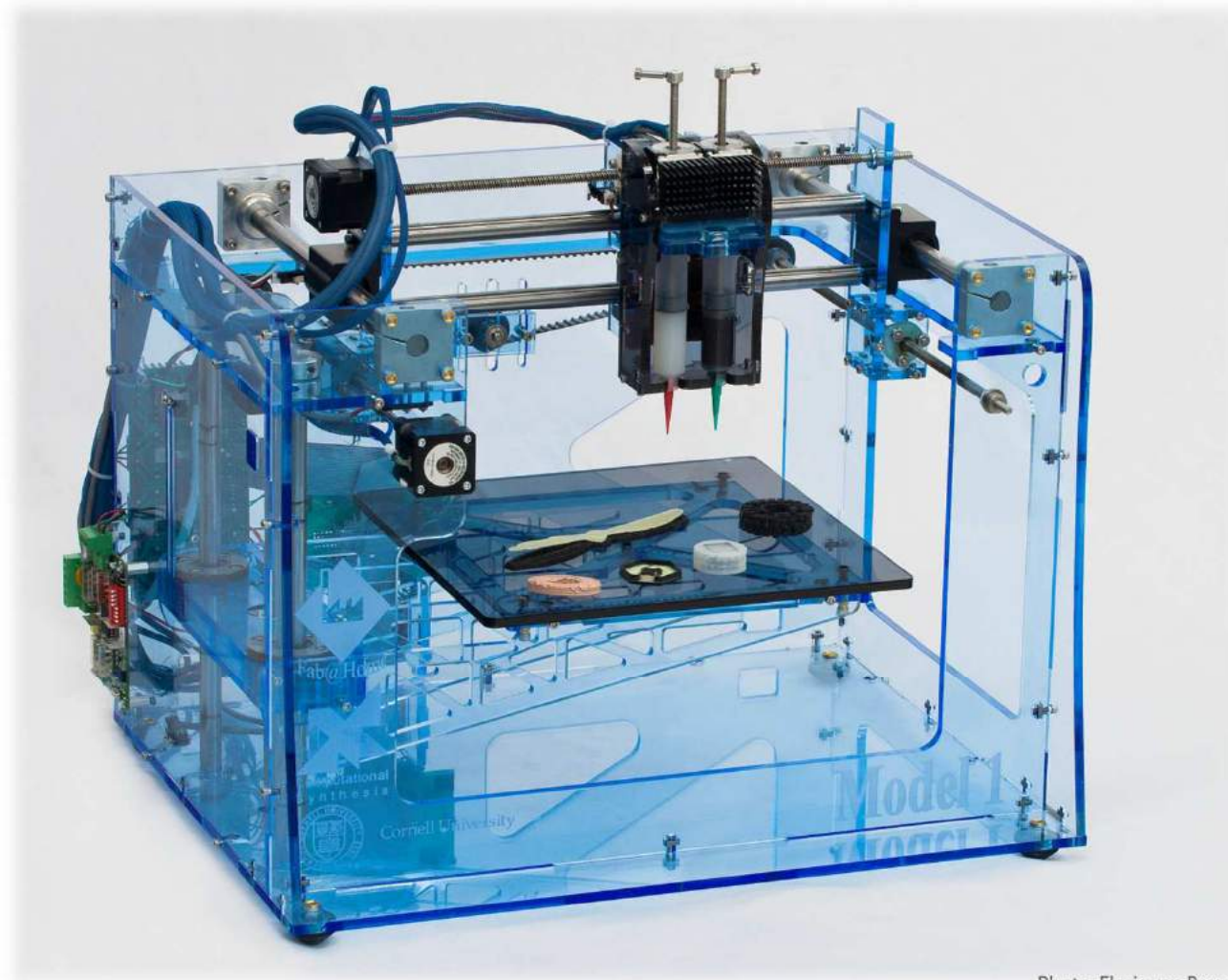


Photo: Floris van Breugel

URBAN MINING

URBAN MINING

Roughly 45 million tons of e-waste is produced worldwide each year. The U.S. (the largest producer of e-waste on Earth) alone produces 2.3 billion pounds annually.

Our electronic waste fills our limited landfill space and serves as long-term environmental and health hazards, but is also highly profitable.



CRUISE SHIP



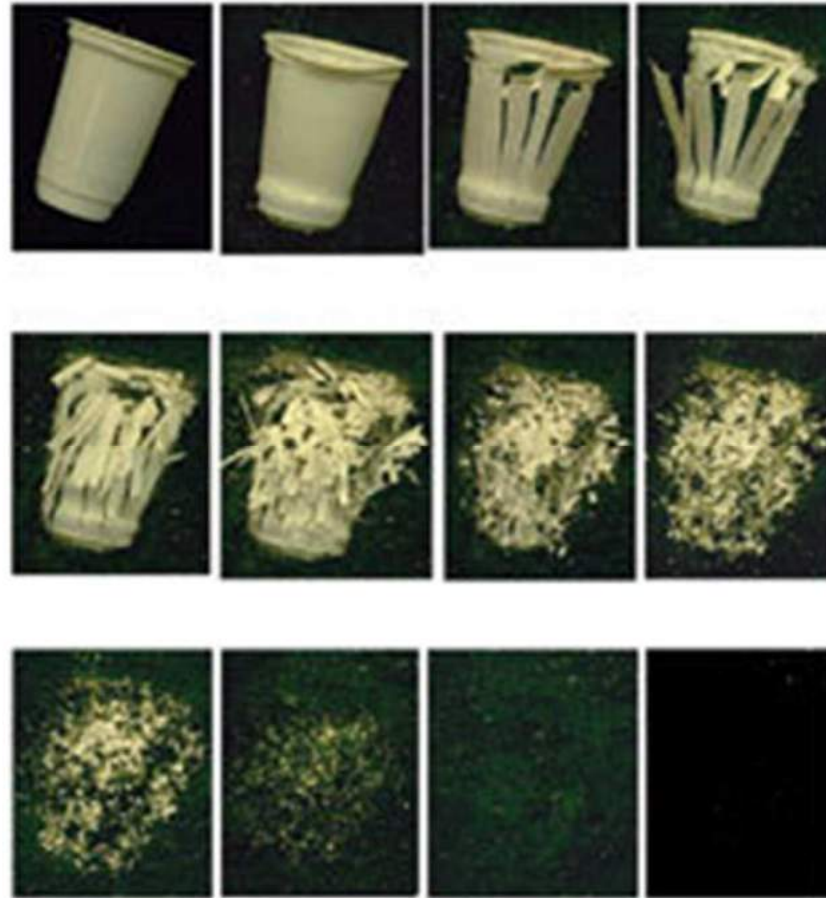
BIQ ALGAEBUILDING HAMBURG



RAWMATERIAL - ALGAE



PACKAGING: ALGAE BIOPOLYMERS



Decomposition of biodegradable plastics in salt water

NUTRIENT RECOVERY



Oia Instituto Ambiental

Latin America

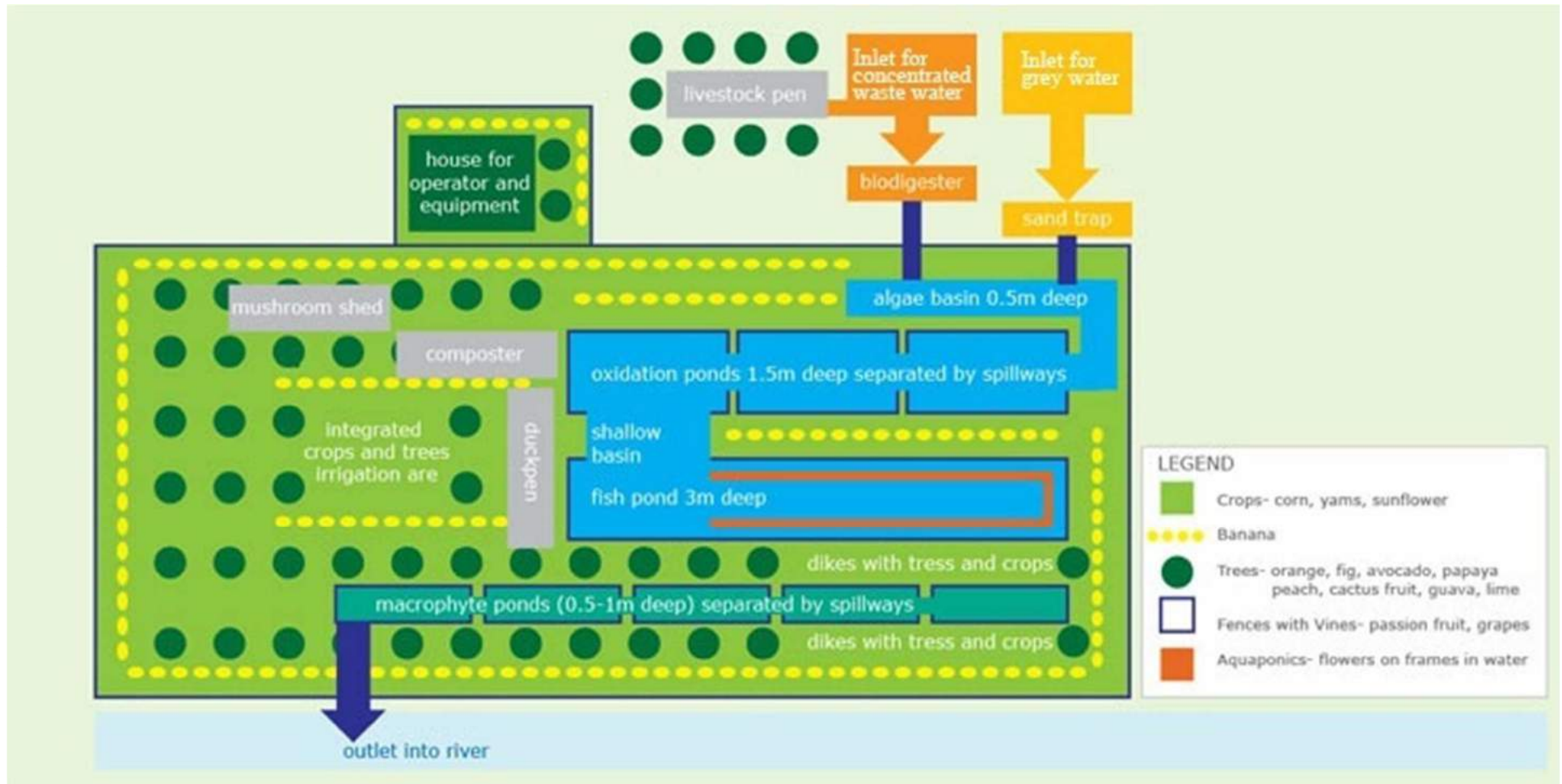


www.oia.org.br

NUTRIENT RECOVERY



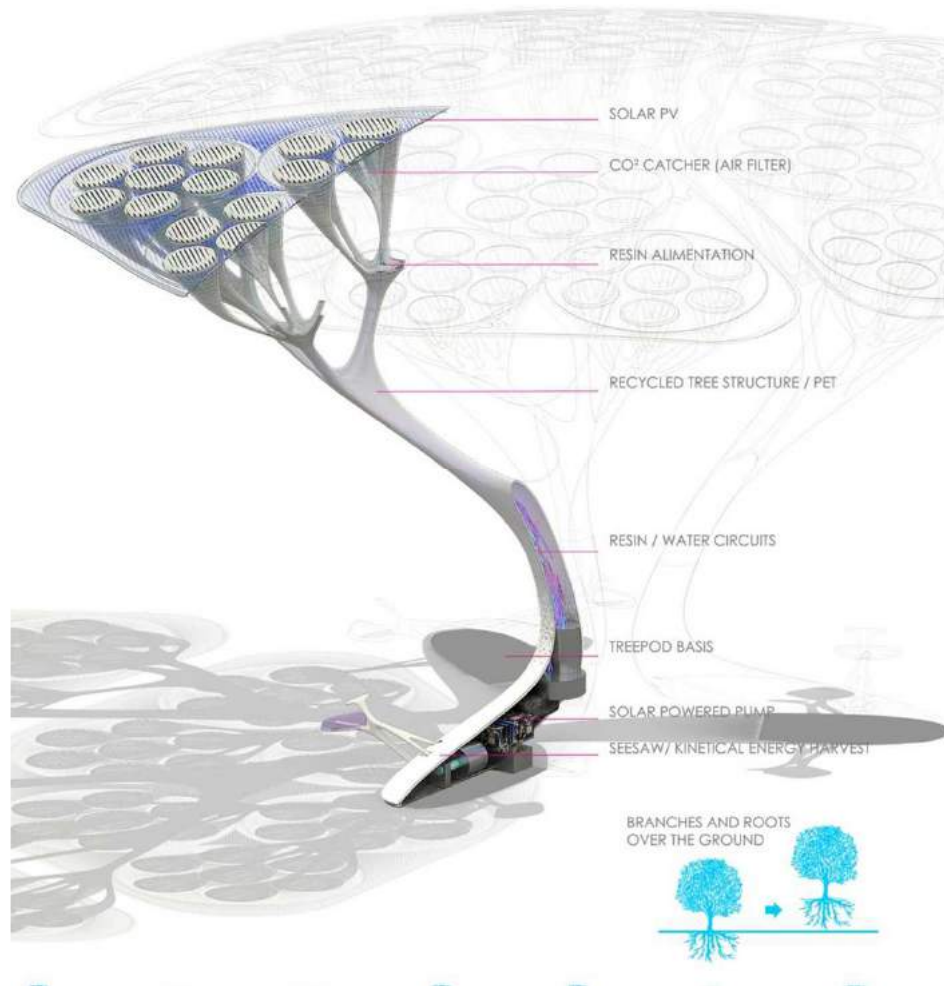
NUTRIENT RECOVERY



CITY TREE



ARTIFICIAL TREES



CRADLE TO CRADLE® – EDUCATION & RESEARCH



UNIVERSITEIT
TWENTE.



C2C-CONGRESS GERMANY



20/21 October 2017

Leuphana University Lüneburg



LEGENDE

GESTARTETE GRUPPEN
ETABLIERTE GRUPPEN



la Biennale di Venezia

15. Mostra
Internazionale
di Architettura

BIENNALE ARCHITETTURA 2016

REPORTING
FROM
THE FRONT

28.5-27.11
VENEZIA

A Building...

- ...THAT CLEANS THE AIR JUST...
- ...THAT CREATES A HEALTHY CLIMATE JUST...
- ...THAT CHANGES COLOURS WITH THE SEASONS JUST...
- ...THAT CELEBRATES HEALTHY ABUNDANCE AND BEAUTY JUST...
- ...THAT CAPTURES LIGHT & CO2 TO MANUFACTURE RENEWABLE MATERIALS JUST...
- ...THAT USES MATERIALS LOCALLY IN A GLOBALLY BENEFICIAL WAY JUST...
- ...THAT RESISTS FIRES, STORMS, FLOODS, DROUGHTS, AND EARTHQUAKES JUST...
- ...THAT PROVIDES MATERIALS FOR CIRCULAR SYSTEMS JUST...
- ...THAT EXCHANGES INFORMATION WITH ITS ENVIRONMENT JUST...
- ...THAT OFFERS SHADE TO PROTECT SPECIES FROM THE SUN JUST...
- ...THAT SYNTHESISES COMPLEX SUBSTANCES JUST...
- ...THAT IS A HABITAT FOR HUNDREDS OF SPECIES JUST...
- ...THAT OPERATES WITH RENEWABLE ENERGY JUST...
- ...THAT GENERATES SOIL AND NUTRIENTS JUST...
- ...THAT SUPPORTS DIVERSE WAYS OF LIFE JUST...
- ...THAT PROMOTES AND CELEBRATES BIODIVERSITY JUST...
- ...THAT CREATES SYMBIOTIC COMMUNITIES JUST...
- ...THAT FEEDS ANIMALS AND PLANTS JUST...
- ...THAT IS SAFE FOR THE BIOSPHERE JUST...
- ...THAT MAKES OXYGEN JUST...
- ...THAT GROWS OVER TIME JUST...
- ...THAT PURIFIES WATER JUST...
- ...THAT MAKES GERMANS, TREE HUGGERS AND OTHER EMOTIONAL PEOPLE SING JUST...
- ...THAT ADAPTS OVER TIME, IS SELF-RENEWING, RESTORATIVE AND SELF-REPLICATING JUST...

...like a Tree.

www.beneficialfootprint.com



Celebrating Our Human Footprint
A Building like a Tree – A City like a Forest

EPEA – Michael Braungart

invited to the 15th International Architecture Exhibition

La Biennale di Venezia 2016

28.05 - 27.11.2016

REPORTING FROM THE FRONT
curated by Alejandro Aravena



CELEBRATING OUR HUMAN FOOTPRINT

A BUILDING LIKE A TREE – A CITY LIKE A FOREST

Carbon neutral ↔ Carbon positive
Efficient ↔ Effective
Less bad ↔ More good
Low carbon ↔ Beneficial Carbon
Passive House ↔ A building like a Tree
Guilt management
Avoid, reduce, reuse ↔ Celebrating Life
Sealed Buildings ↔ Healthy Buildings
Cradle to Grave ↔ Cradle to Cradle

THE BATTLE
FIELD

















EPEA Internationale Umweltforschung GmbH
Head Office: Trostbrücke 4 | 20457 Hamburg

www.epea.com
epea@epea.com

