



The Floor is Yours



# SPRING

CRADLE TO CRADLE  
**FOUR SEASONS**

In nature, spring represents a period of dawn and new beginnings, initiating life. Everything around us is in bloom, offering fresh opportunities for proliferation and diversity. When we compare this season with the life-cycle of Cradle to Cradle products, it symbolises the period when new products are being launched after a stage of research and development, and the manufacture of new products and services.





DESSO CRADLE TO CRADLE

## NEW DAWN FOR DESSO

After signing a partnership agreement with the Hamburg-based Environmental Protection Encouragement Agency (EPEA), DESSO has now become the first carpet manufacturer in EMEA to adopt the Cradle to Cradle design.

This marks DESSO's radical decision to move beyond 'mere' sustainability in producing its carpets and artificial grass, making a fundamental, sweeping advance in its already impressive environmental credentials.

## CRADLE TO CRADLE DESIGN AT DESSO

Cradle to Cradle derives its inspiration from nature's changing seasons, creating continuous cycles of both biological and technical "nutrients". It envisages production design that creates products which are either biodegradable or are recycled in their entirety to provide the raw materials for new goods.

These products will have been produced using manufacturing processes which rely on renewable energy, seek to conserve water, and strive to embrace social responsibility.

Our new design objective is to ensure that our products are made from environmentally friendly materials that are good for human health simultaneously, at the end of their useful lives, products can be biologically or technically recycled.

DESSO CRADLE TO CRADLE

## WHAT DOES THAT MEAN FOR DESSO?

Carpets manufactured under Cradle to Cradle design principles will be available in the same full range, superior quality, and durability that the DESSO brand has always represented.

By gradually incorporating the Cradle to Cradle philosophy into our design processes, we ensure our products will promote good health and a positive impact on people and the environment.

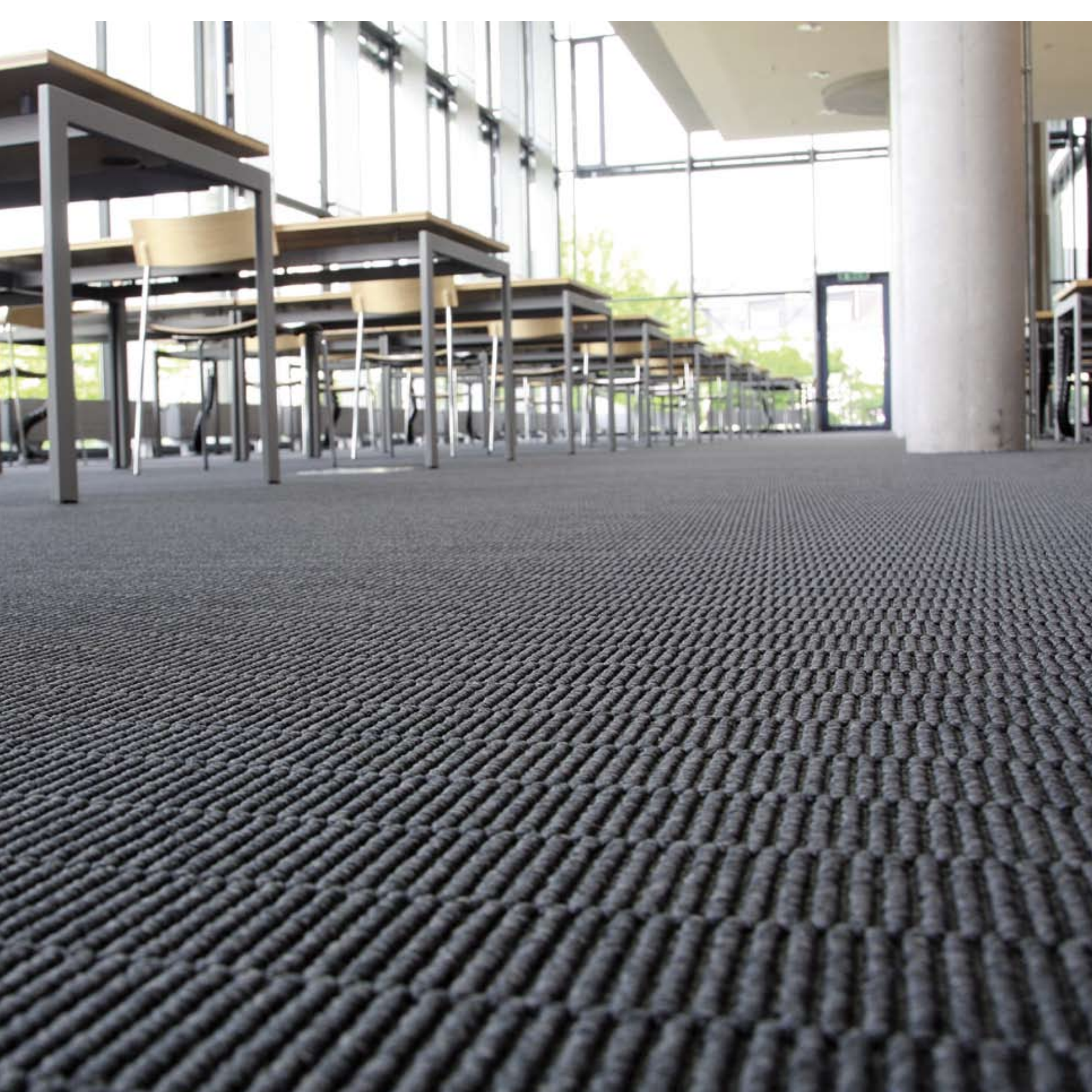
## ONGOING PROCESS

DESSO's commitment to Cradle to Cradle design is by definition one of long-term nature.

Achieving a Cradle to Cradle product is a challenging task. For example, certain instances require the development of entirely new technology. It must therefore be viewed not as immediately achievable, but as an ongoing process of development and improvement.

Cradle to Cradle design acknowledges and reflects this, being awarded not merely on the basis of current product status but also according to its degree of progress.







DESSO CRADLE TO CRADLE

## ABOUT DESSO'S VISION

It has always been important to DESSO to make beautiful and beneficial products. Now a new dimension of quality is added to this aim: Cradle to Cradle quality. Under this vision, quality no longer entails merely the tangible properties of the product, but also its effects on humans and the environment in the widest sense possible. It also entails the identity of the company that produced the product. DESSO is now setting off on this challenging and inspiring path, accompanied by the wide vision and experience of EPEA. It has decided to become a Cradle to Cradle company and to create Cradle to Cradle products. Following are the details of DESSO's Cradle to Cradle vision.

- DESSO will incorporate the Cradle to Cradle thinking into its systems.
- DESSO will adopt a general goal of progress for the implementation of Cradle to Cradle. It will periodically seek new Cradle to Cradle horizons for its operation as a company and strive to reach them.
- DESSO will not be less bad, but truly good. The Cradle to Cradle carpets will be positively designed products. No more "using less of the poisonous substances" but careful choice of good materials that do not harm health or environment, leaving the carpet with only its benefits, not its guilt issues.
- DESSO sees carpet as a nutrient. Products will be manufactured from materials which can be truly recycled, thus re-entering the technical cycle.
- Products will be designed for disassembly to improve recyclability. Easy disassembly prevents contamination of the material streams and facilitates reutilization.

# STAGES FOR IMPLEMENTATION OF THE VISION

## 2008 - 2010

- Develop phase-out plan for most ingredients rated as unacceptable according to Cradle to Cradle principles
- Develop prototype technical nutrient carpet
- Begin Cradle to Cradle product certification process for products
- Reach 50% purchased renewable energy for processing and manufacturing
- Begin construction of a take back system
- Begin set up of a true recycling concept

## 2010 - 2020

- Reach 50% use of post-customer products as process input for new carpets
- Reach 100% purchased renewable energy for processing and manufacturing
- Reach the goal of factory effluent water that is cleaner than the water it is discharged on
- Establish unique, tailored take back and recycling systems
- Implement Cradle to Cradle supply-chain management: suppliers, network of retailers, distributors, transporters etc.
- All DESSO carpets are developed and certified according to Cradle to Cradle design concepts
- All materials and process inputs come from renewable or recycled sources
- All materials are capable of returning safely to either biological or technical cycles
- All stages in the product life cycle actively support the reuse or recycle of materials at the highest possible level of quality







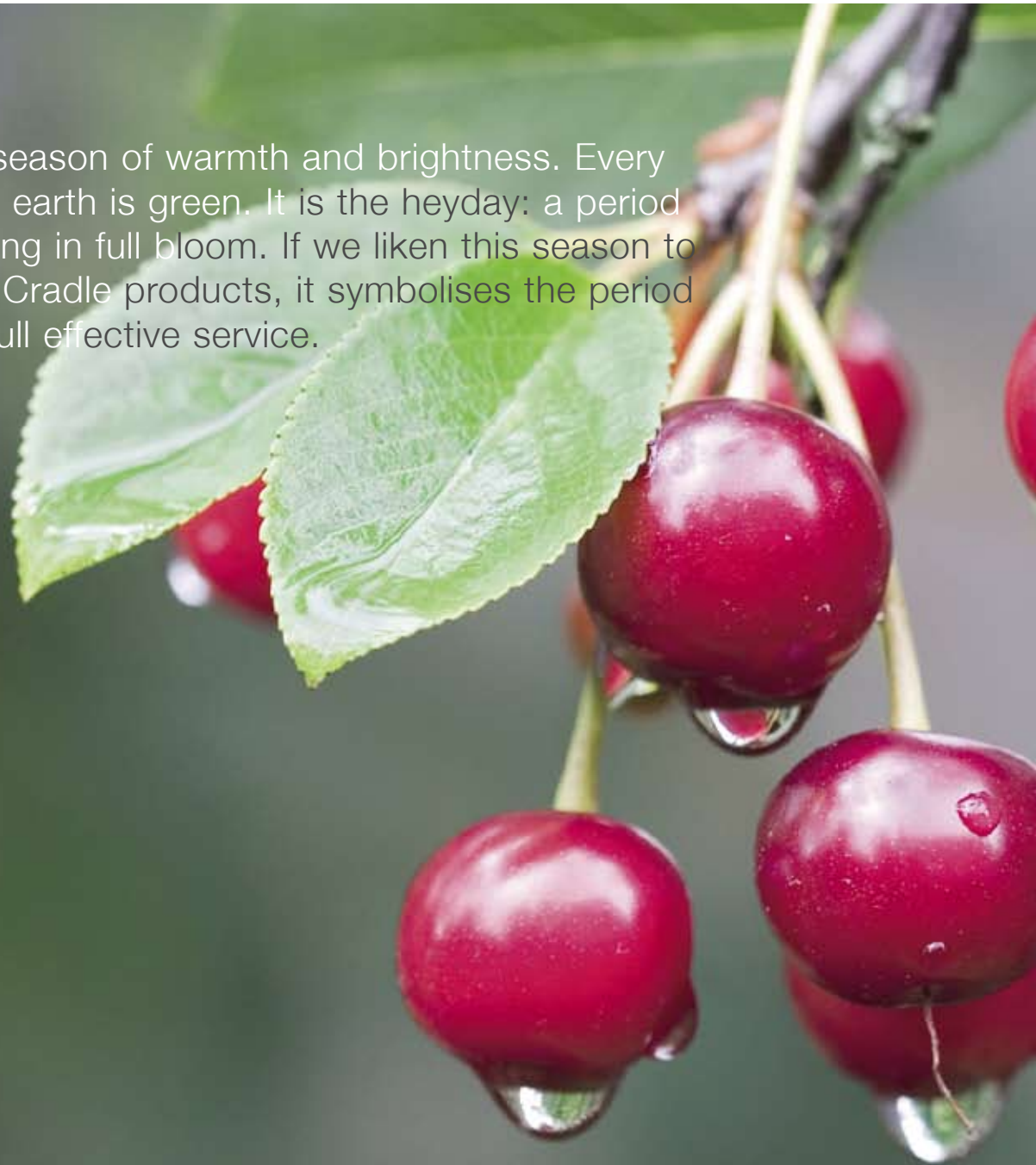
The Floor is Yours

A close-up photograph of a green plant stem, possibly a grass blade, with a single, clear water droplet clinging to its tip. The background is a soft, out-of-focus green, creating a natural and fresh aesthetic.

# SUMMER

CRADLE TO CRADLE  
**FOUR SEASONS**

In nature, summer is the season of warmth and brightness. Every leaf is on the tree and the earth is green. It is the heyday: a period of prosperity with everything in full bloom. If we liken this season to the life-cycle of Cradle to Cradle products, it symbolises the period in which products are in full effective service.





DESSO CRADLE TO CRADLE

## THE FUTURE IS BRIGHT

DESSO seeks to create carpeted environments which are more healthy than ever to live and breathe in. We strive to have a positive impact on the environment. This is why DESSO is developing carpet that is beneficial to indoor air quality by reducing the number of airborne particles when compared to uncarpeted flooring.

Furthermore, in a world where, all too often, homes and workplaces are tainted by the evaporation of hazardous chemicals used in everyday artifacts, Cradle to Cradle calls for products that are safe for human use, contributing not only to comfort and beauty but also to high quality and healthy surroundings. We already work with companies such as DOW Chemical Company, DSM, and Van Gansewinkel.



**“With Cradle to Cradle, DESSO is in it for the long haul. It is a challenging task which will involve the creation of entirely new products and technologies. But it is a task we are proud to undertake, for the betterment of our products, our brand, the people and our planet”.**

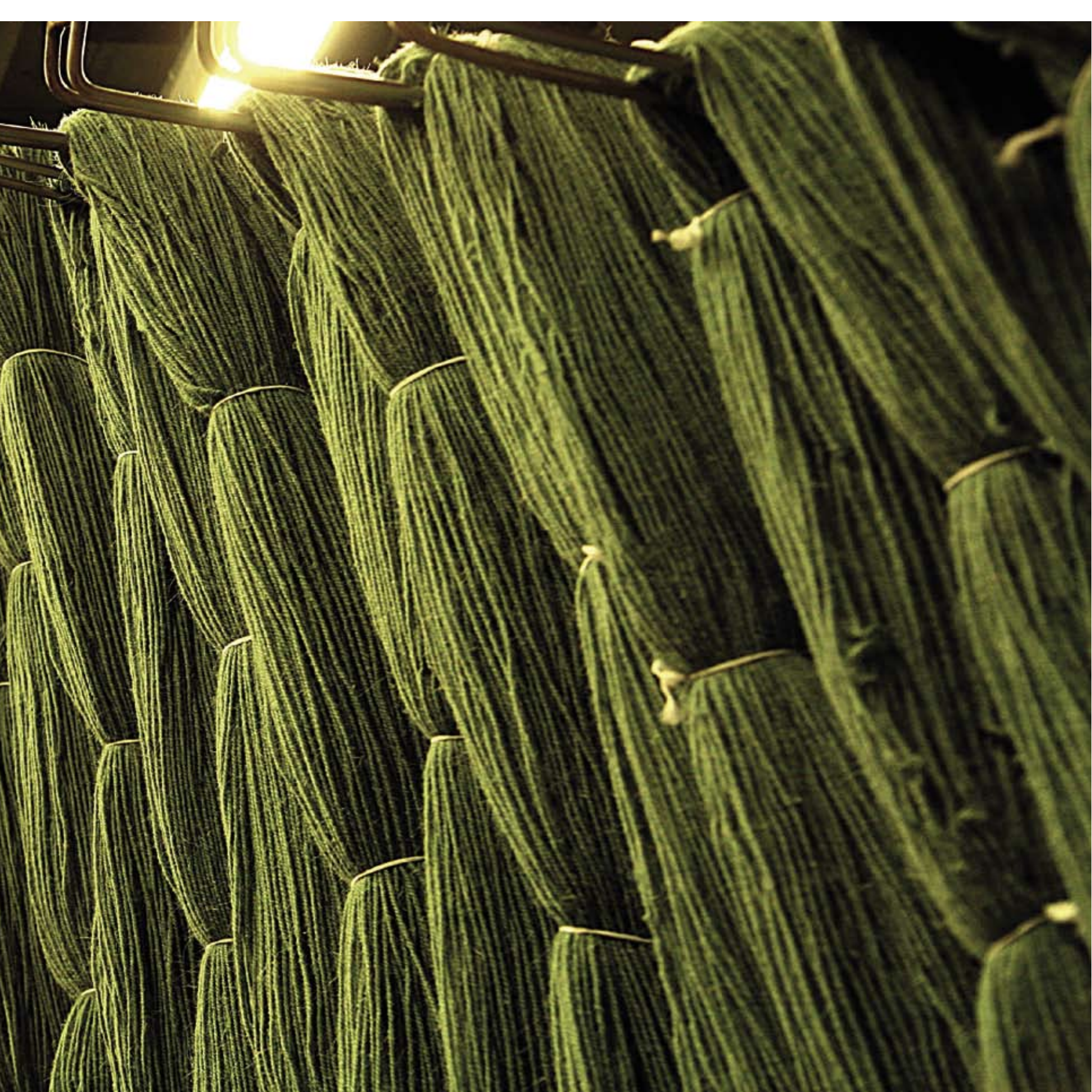
**Stef Kranendijk, CEO**

DESSO CRADLE TO CRADLE

## DESSO WILL ASSURE BEST QUALITY ALL AROUND

Designers and architects can now not only offer their clients greatly improved products but can also use those products to enhance the environmental credentials of their own designs even further. Dedicated to beauty and aesthetics, they agree that only positively defined chemicals are truly beautiful and therefore enjoy the opportunity to create new designs that are beautiful in all ways.





## FUTURE STEPS TO CRADLE TO CRADLE CERTIFICATION

Prior to formal Cradle to Cradle certification being granted, products, materials and components must all undergo a rigorous assessment procedure.

The initial stages of the certification process are comprised of assessing raw materials in terms of human and environmental health criteria as well as evaluating the manufacturing process according to recycling potential, energy and water use, and social responsibility. EPEA will assess DESSO's products and processes according to detailed information regarding all of the materials involved.

DESSO is working towards the passive positive list.

Here are the future steps to Cradle to Cradle certification:

- We list all the chemicals our products contain. Also all compounds are separated into their components (the base chemicals).
- CAS#, Material Safety Data Sheets are collected as well as all toxicological and eco toxicological data. EPEA evaluates all chemicals on 12 different criteria and gives an overall assessment Red, Yellow or Green.
- We are already working on phase out plans for those chemicals that have a red assessment. EPEA monitors these plans.
- Currently we are also developing products with positively defined chemicals and materials.





## EPEA AND DESSO

The Cradle to Cradle design concept was pioneered by eminent German scientist Prof. Dr Michael Braungart. He is working with DESSO personally.

Braungart and the architect William McDonough founded the Environmental Protection Encouragement Agency (EPEA) in 1987. EPEA is an international research and consultancy institute working with organisations and companies across a range of industries to improve product quality and environmental performance via eco-effectiveness.





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# AUTUMN

CRADLE TO CRADLE  
**FOUR SEASONS**

In nature, autumn is the mellow season of harvest, when fruits are gathered in. The falling leaves return to the earth, providing nutrients for nature's regeneration. When we compare this season with the life-cycle of Cradle to Cradle products, autumn symbolises the stage in which products are returned and disassembled. There is no waste; every part serves as a nutrient for a new future.





DESSO CRADLE TO CRADLE

## WASTE EQUALS FOOD

In nature, the sun's energy is used to fuel growth, and nothing is discarded because waste becomes nutrients. Rotting leaves or fruit simply provide the biological nutrients for the next year's growth.

Cradle to Cradle is an antidote to the hugely wasteful 'cradle to grave' approach where manufactured goods are eventually buried in landfill sites at the end of their working lives.

Cradle to Cradle promotes the circular economy rather than the linear economy.

The joy of Cradle to Cradle is that it does not demand that we be mean or sparing – that we seek to diminish our existence in pursuit of a 'zero' goal. In the Cradle to Cradle world it does not matter how much 'waste' is produced so long as it biodegrades, or can be returned and dismantled to provide the technical nutrients for new, recycled products.

## TAKE BACK SYSTEM AT DESSO

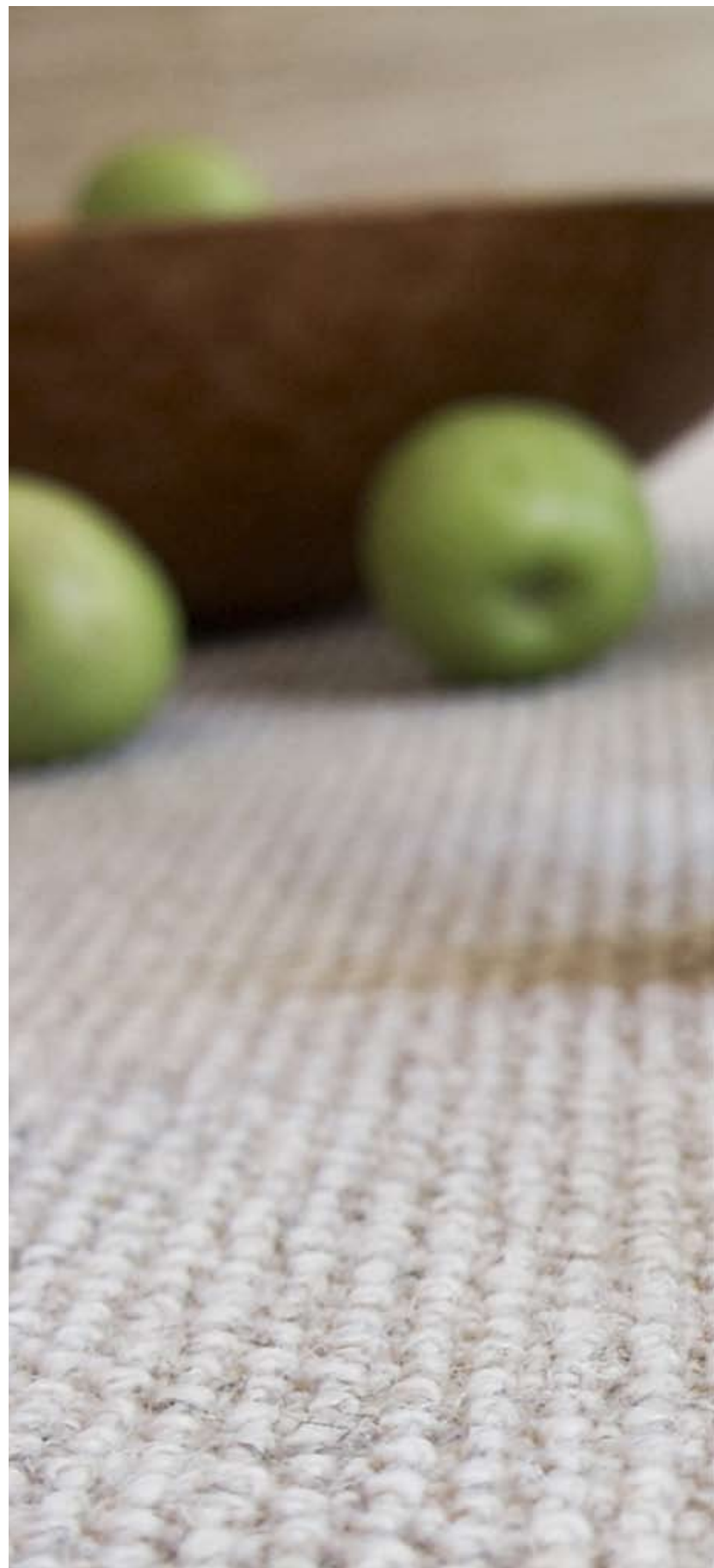
Within the Cradle to Cradle concept, it is vital that every part of each of our carpets and artificial grasses is completely integrated into a technical or biological cycle. Currently we are recycling the product in the cement industry where it is used as high caloric fuel, and the stabilizer we have (chalk) is used as raw material to produce cement.

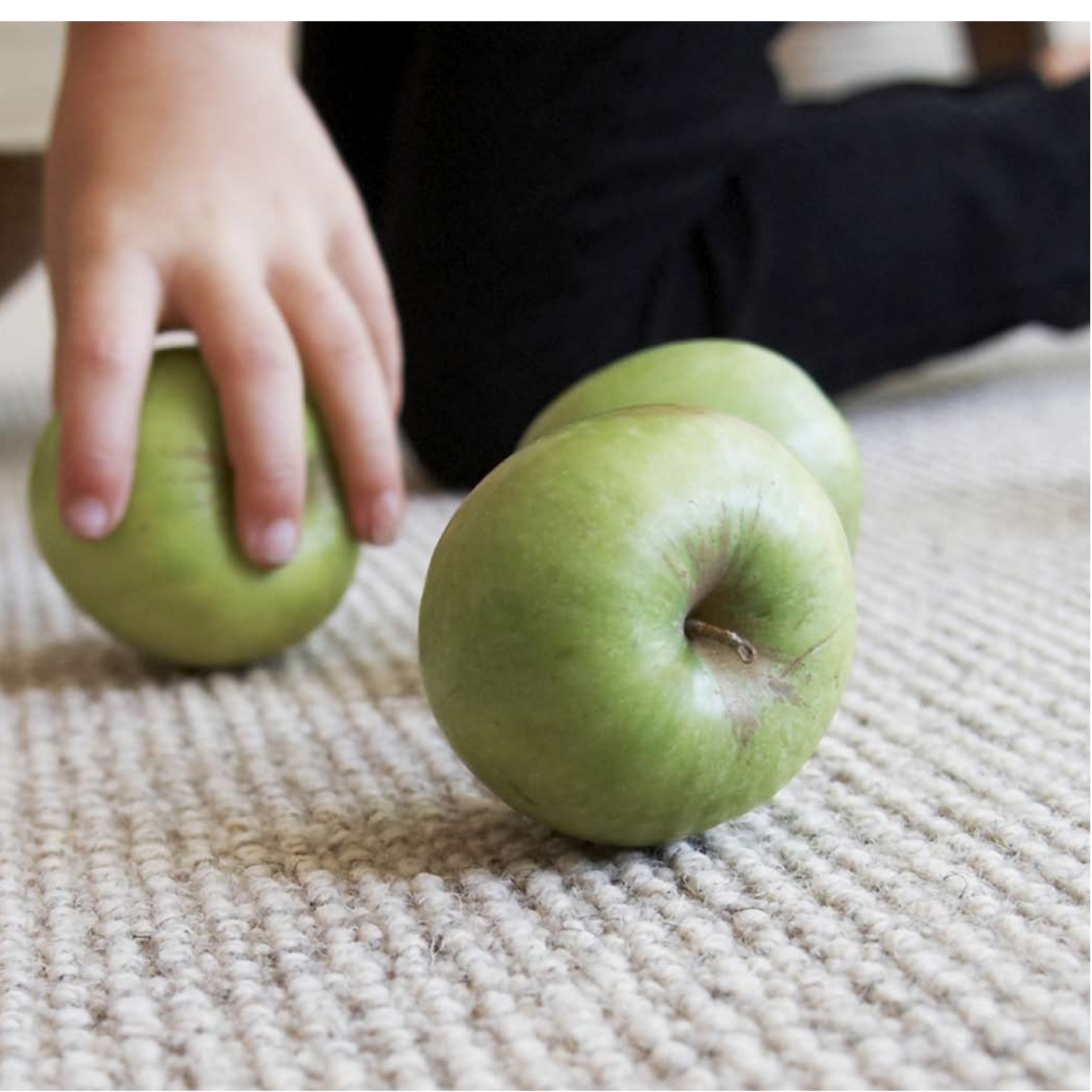
While carpets may be recyclable, it is vital to ensure that the recycling actually takes place. Under our Cradle to Cradle commitment, we will introduce a 'take back' system where we collect used carpets from our clients, thus ensuring that they can be properly reprocessed.

Together with our partners, we are working on rough separation based on yarn type and shredding. An innovative separation technique needs to be further developed in order to separate the yarn from the backing. The backing can be reused as backing and the yarn can be remelted as colored yarn again and in a further process to depolymerize this fraction to obtain the raw material for yarn again to produce white yarns. The challenge we face is to use renewable energy and optimized transportation throughout the complete chain.

DESSO is working on several possibilities:

- Reinforcement of concrete
- Road construction
- Roofing industry
- Recycling in carpet backing







DESSO CRADLE TO CRADLE

## THE CORE CYCLES OF CRADLE TO CRADLE

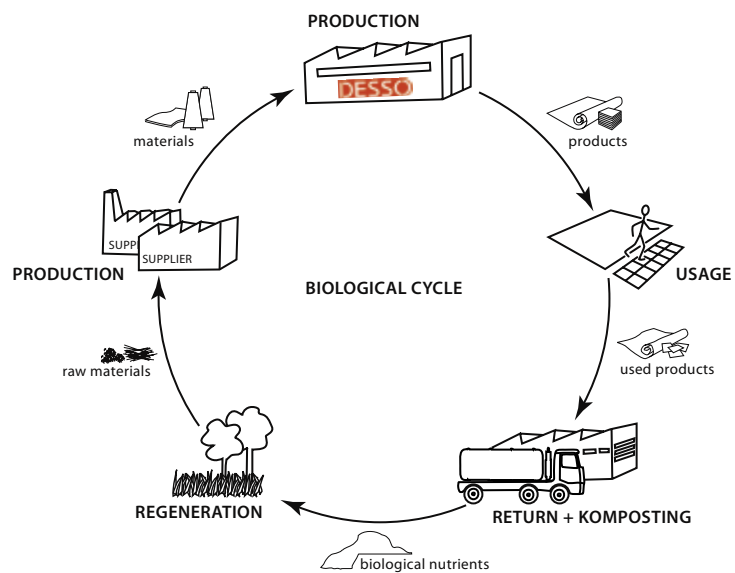
Cradle to Cradle takes its inspiration from nature, where recycling is universal – where everything is reborn again and again in a perpetual cycle of re-use and zero loss. Everything in nature is essentially the building blocks and nutrients of a next generation.

## ABOUT OUR BROCHURES

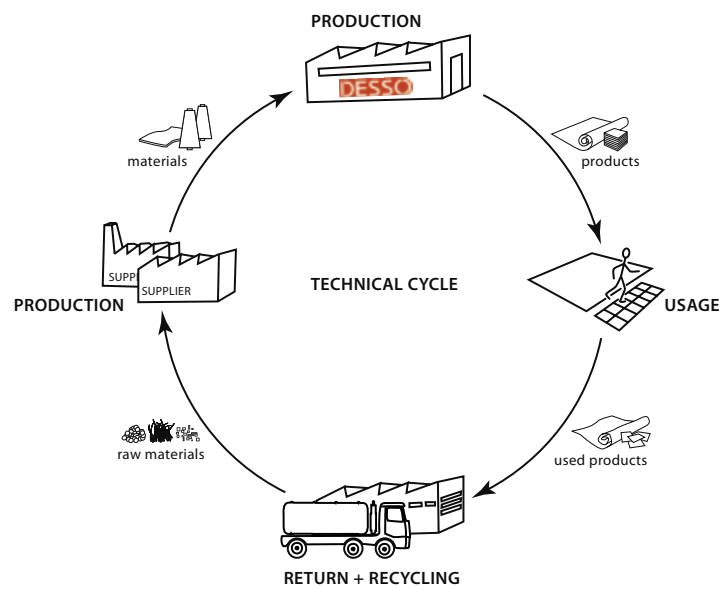
Our brochures are printed entirely on paper which is made with 100% post-customer recycled fibres. The paper meets the Blue Angel Environmental Standard for Printing and Writing Paper, and is certified by standards that promote environmentally appropriate, socially beneficial and economically viable management of the world's forests.

PLEASE RECYCLE

**For more information visit: [www.desso.com](http://www.desso.com)**



biological cycle, for products for consumption



technical cycle, for products for service

Graphs: Courtesy of EPEA







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# WINTER

CRADLE TO CRADLE  
**FOUR SEASONS**

In nature, winter is the season when energy returns to the roots and prepares for new growth. If we liken this season to the life-cycle of Cradle to Cradle products, winter symbolises the period of research into existing and upcoming trends and market demand, and the development and production of this in a new beginning.





DESSO CRADLE TO CRADLE

## DESSO IS PREPARING FOR A NEW ERA

Cradle to Cradle will inspire us to create carpets and artificial grass products of the very highest quality – as judged not simply according to their comfort, beauty and materials, but also in terms of the truly effective processes by which they will be created and of their remarkable capacity to be entirely recycled.

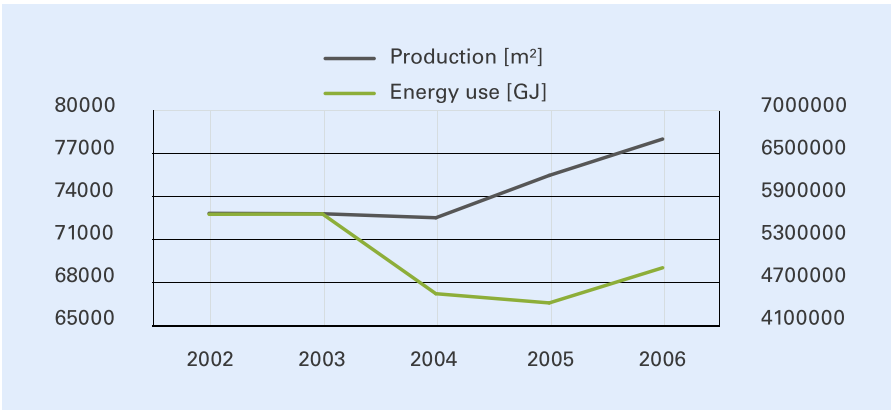
DESSO aims to reflect the Cradle to Cradle concept across its full range of carpet and artificial grass surfaces. These will be non-toxic, designed for disassembly and fully compatible with the technical or biological cycles.

DESSO is committed to the development of manufacturing processes that use only safe chemicals. A properly designed process ensures a healthy working environment for employees and has a positive effect on the environment.

Since DESSO is a strong believer of Cradle to Cradle we want to incorporate as much as possible of the philosophy into the products. We are however very dependent on suppliers to deliver Cradle to Cradle raw materials.

## ECO EFFICIENT STEPS

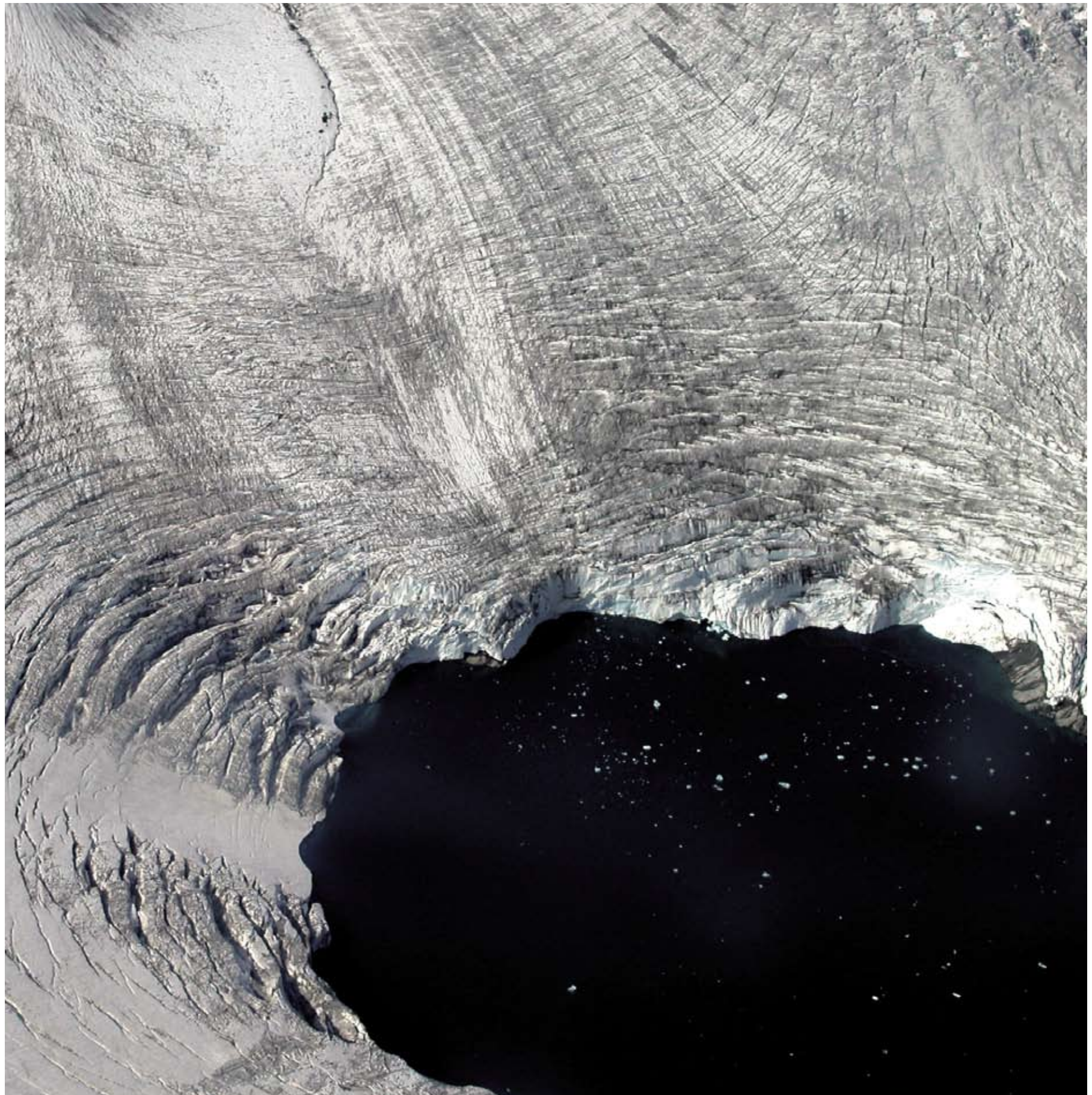
- All semi-finished carpet waste is recycled and used as high energy in other industries.
- All finished carpet waste is pelletised and used for fuel in other industries.
- All textile dust is extracted, collected and used as fuel in other industries.
- Our production scrap is used as fuel for the cement industry and energy power plants.
- At our production facility in The Netherlands alone, we have reduced energy consumption per m<sup>2</sup> of product produced by 23% since 1998, resulting in a 23% reduction in CO<sub>2</sub> emissions.



## ECO EFFECTIVE STEPS

The urgent need to safeguard the fragile health of our planet is now widely recognised, and sustainability is a term increasingly applied to practices and processes emerging from our new, environmentally aware society.

- At DESSO all polypropylene waste is recycled back into other industrial processes.





DESSO CRADLE TO CRADLE

## A CALL TO ALL OUR AFFILIATES

DESSO takes great pride in its integrity. We manufacture high quality products and are always keen to exceed our social, environmental, and corporate responsibilities. Cradle to Cradle thinking enables the manufacture of truly high quality products which are useful, attractive, healthy, and safe. But that is not all. There are also sound economic reasons why far-sighted companies should be seeking to pursue Cradle to Cradle principles.

It is our vision that in the near future, many businesses will face great challenges as the western economy enters a new phase. A growing scarcity of raw materials and an abundance of strict new laws to protect the environment will demand the creation of new products and new manufacturing methods.

Spreading the Cradle to Cradle philosophy is helping us achieve our goals. This is not only DESSO's challenge but that of all parties that are adopting Cradle to Cradle. Building a community enables all participants to further develop products that are beneficial for nature and humankind.

Together with Steelcase, Van Gansewinkel, Royal Haskoning, DSM, Philips, and architects and designers, DESSO is building a community for better understanding and spreading of the Cradle to Cradle philosophy. The more companies work together, the sooner the circular economy will become a fact.

We believe DESSO belongs to a select group of companies that are responsible enough to consider their influence on our whole world – companies that have the foresight to plan for a different economic future and also possess the necessary creativity to act on these ideas. We believe that these companies will prosper thanks to modern products that have been carefully designed for the new, cyclic economy of Cradle to Cradle.

This is why we actively encourage our clients, suppliers and indeed all our affiliates to move forward with us in the exploration of new business models and processes. Taking action will create an effect on our environment which is 'more positive' rather than 'less negative'. In other words, we can have a big footprint on the world but let's make it a good one!





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