



# CIRCULARITY OF SUSTAINABLE PACKAGING IN CLIMATE CONSCIOUS REALITY

OCTOBER 5TH, 2023 / ANNA MIKUTA-JONGEN



# WE ARE HENKEL

SALES

€22.4<sub>BN</sub>



-55%

CO<sub>2</sub> EMISSIONS FROM  
OUR OPERATIONS<sup>1</sup>

SOCIAL PROJECTS  
IN 2022

2,055

€2.3<sub>BN</sub>

ADJUSTED OPERATING  
PROFIT (EBIT)

147 YEARS

SUCCESS WITH  
BRANDS AND  
TECHNOLOGIES

WE EMPLOY MORE THAN

50,000

PEOPLE FROM  
124 NATIONALITIES



AROUND

39%

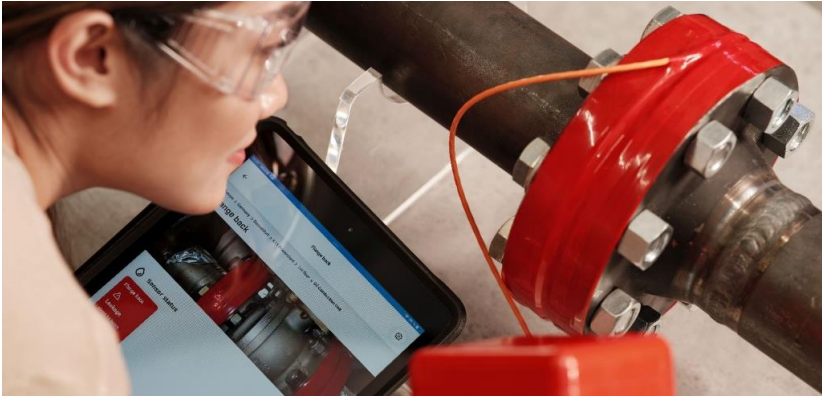
WOMEN IN  
MANAGEMENT



<sup>1</sup> Per ton of product, compared to the base year 2010

<sup>2</sup> CIRCULARITY OF SUSTAINABLE PACKAGING IN CLIMATE CONSCIOUS REALITY





Product Development (PD) and Application Engineering (AE) are embedded within our 9 Strategic Business Units (SBU).

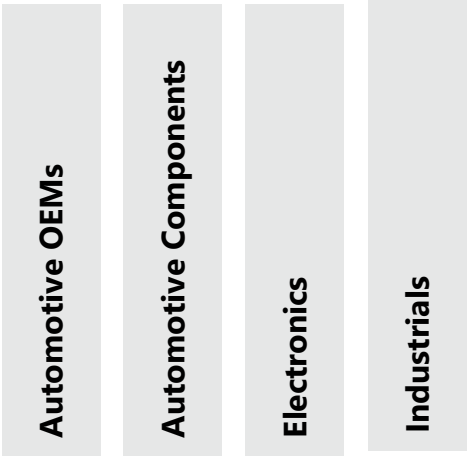
- We operate with ~2,500 innovators
- We have 61 laboratories worldwide
- We are active in 80 technologies
- We offer 20,000 applications and 80,000 products

# ADHESIVE TECHNOLOGIES

**LOCTITE**   **TECHNOMELT**   **BONDERITE**



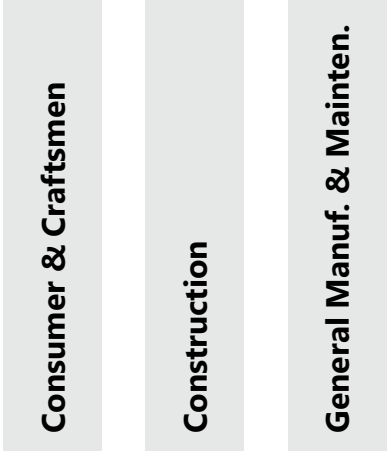
## Mobility & Electronics

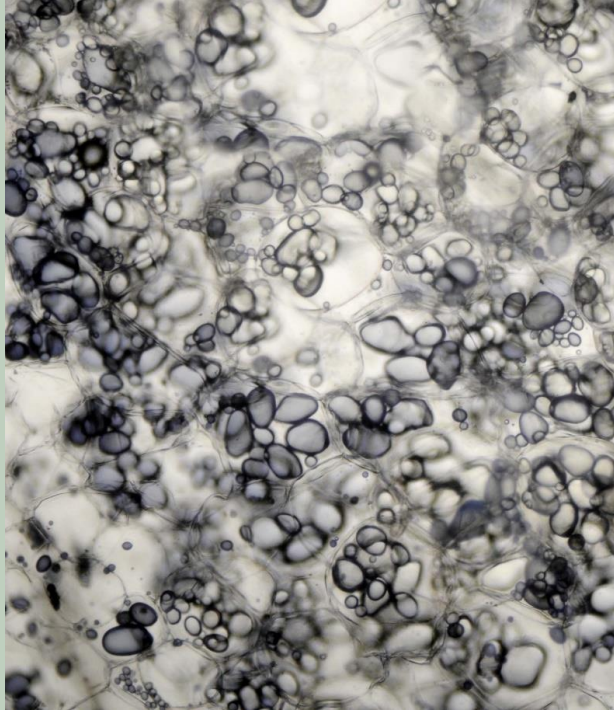
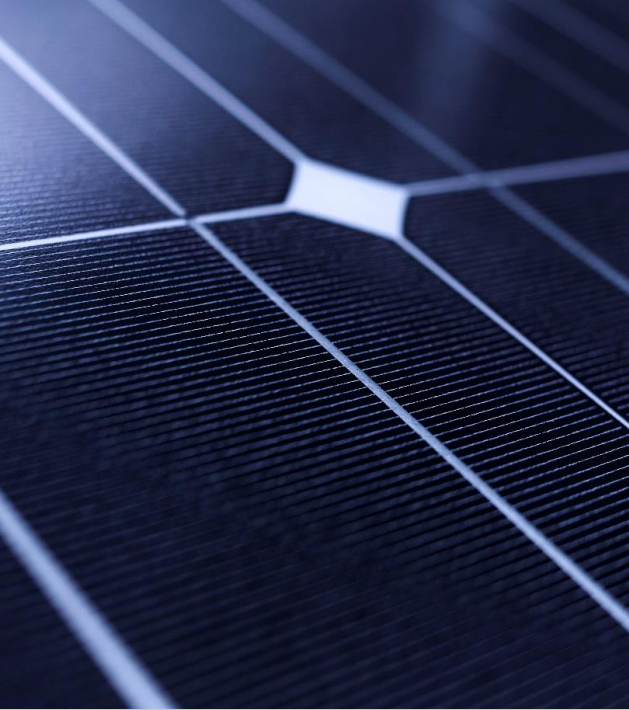


## Packaging & Consumer Goods



## Craftsmen, Construction & Professional





Henkel Adhesive Technologies

# SUSTAINABILITY. WE MAKE IT HAPPEN

## Our Vision

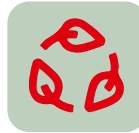
*We contribute to solving global challenges by **enabling sustainability** through material science and scientific know-how in bonding, sealing and coating.*



# WHERE WE DRIVE IMPACT



**Climate**



**Circularity**



**Safety**

# HOW WE DRIVE IMPACT

## OUR PROMISES FOR 2030

Leading by  
**EXAMPLE**

### **SUSTAINABLE OPERATIONS**

We will be the first global adhesives player with **climate positive operations**

### **SUSTAINABLE MATERIALS**

We will offer **net-zero or low emission** products to all our customers

Leading through  
**TECHNOLOGY**

### **ENABLING SUSTAINABILITY**

We will offer every customer solutions and services that **enable emission reduction and circularity**

### **TRANSPARENCY**

We will deliver **100% end-to-end transparency** on the sustainability of all our products according to leading standards



# **WE LOOK AT PACKAGING FROM 2 DIFFERENT ANGLES**

**OUR OWN  
PACKAGING  
FOR OUR  
PRODUCTS**



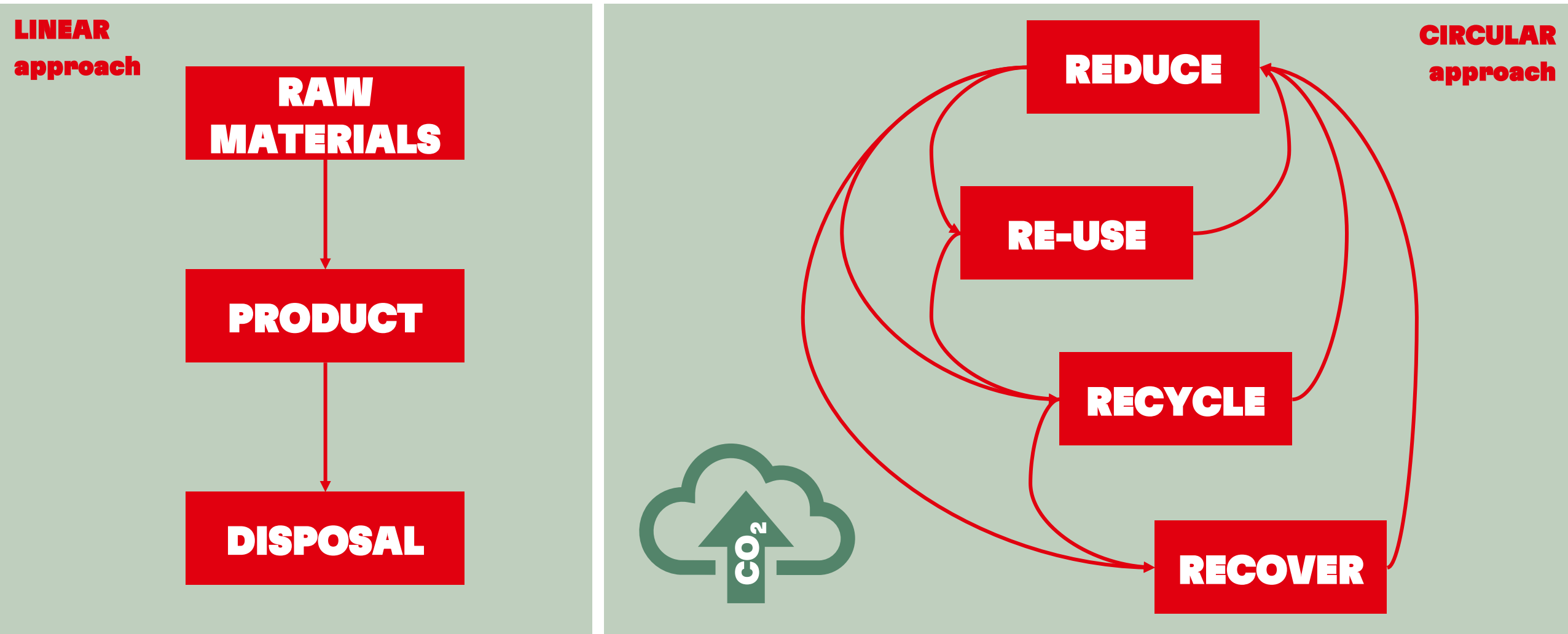
**OUR  
SOLUTIONS  
FOR  
PACKAGING  
INDUSTRY**

# WHAT CIRCULAR PACKAGING REALLY MEANS?



# CIRCULAR PACKAGING IS AN JOINT EFFORT

*The way of looking on packaging circularity needs to consider climate impact on each step of the process*



**IT IS NOT ONE  
ROUTE FITS ALL**

# PACKAGING PORTFOLIO INFLUENCE WHICH ROAD TO TAKE TO REACH CIRCULARITY GOAL

## Industrial packaging



## Commodity packaging

## Consumer packaging



## Functional packaging

**CIRCULARITY  
GOAL**



# LET'S ZOOM IN

WHAT ARE GAPS TO EMBRACE CIRCULAR APPROACH



# REDUCE SCOPE NEEDS RE-THINKING OUR PACKAGING

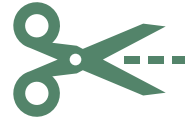
## REDUCE

### Light weighting



- Using optimal **material thickness** and **strengths** for the purpose (functionality, protection, collection etc.)
- **Challenging** legacy packaging (what was good then might change)

### Removing unnecessary packaging



- **Challenging** parts of packaging without obvious function – do we really need that part?
- **Re-thinking** the design and execution, functionality
- High level need for **innovation**

### Efficient production and logistics



- Is the packaging **optimally designed** for the production or is the production designed for packaging ?
- Where is the packaging coming from – is there other possibility close by?

### Fit for purpose material type



- Is the material chosen optimal? Can other material replace current one?
- What is the **purpose of packaging** and is the chosen material sustainable?
- **Material innovation** needs

# RE-USING PACKAGING NEEDS PARTNERSHIPS TO MAKE IT HAPPEN

**Definition:** The repeated use of a product or component for its intended purpose without significant modification<sup>1</sup>

## RE-USE

- Re-use systems are having many benefits especially for consumer goods – food, beverages, cosmetics
- Industrial solutions need specific landscape of collection, cleaning and standardization
- Re-use can also influence total footprint of solution

**Re-use framework for industrial packaging is needed**



# DESIGN THINKING WITH RECYCLED MATERIALS IN MIND IS NEW NORMAL

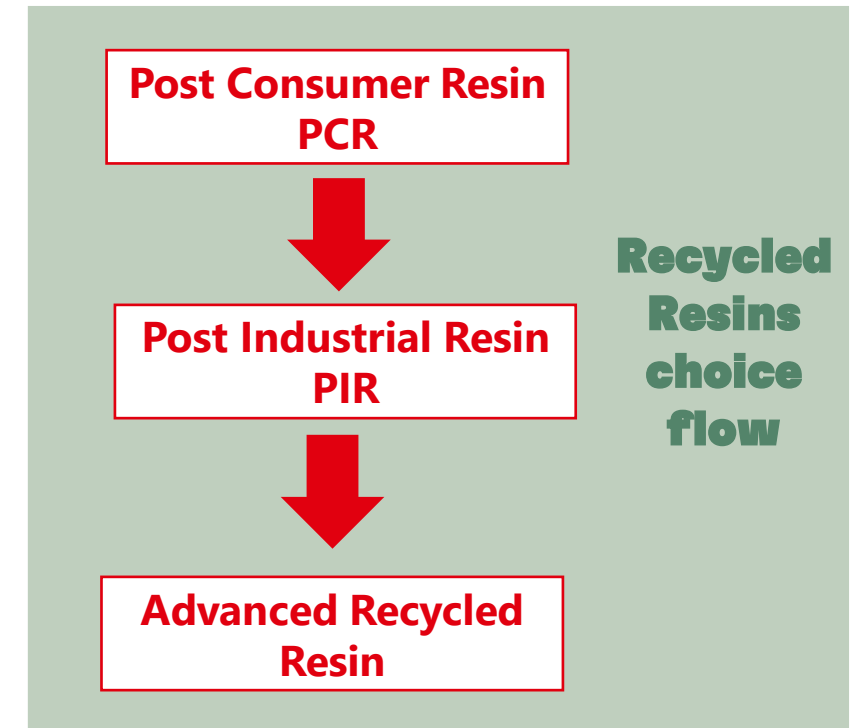
## RECYCLE

### Using recycled materials

- Paper based packaging shows that it is possible to establish the infrastructure and technology to use the recovered papers
- Metal can „recycle forever“, more tracking of the recycled flows are needed
- Plastic is new kids on the block – re-thinking way of using plastic is needed and education to consumers

### Consumer vs industrial - plastic

- Standard consumer packaging infrastructure exists
- Industrial infrastructure depends on the suppliers
- Removing contaminants from packaging in industrial set up is not developed enough

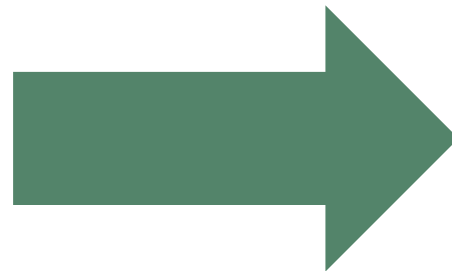
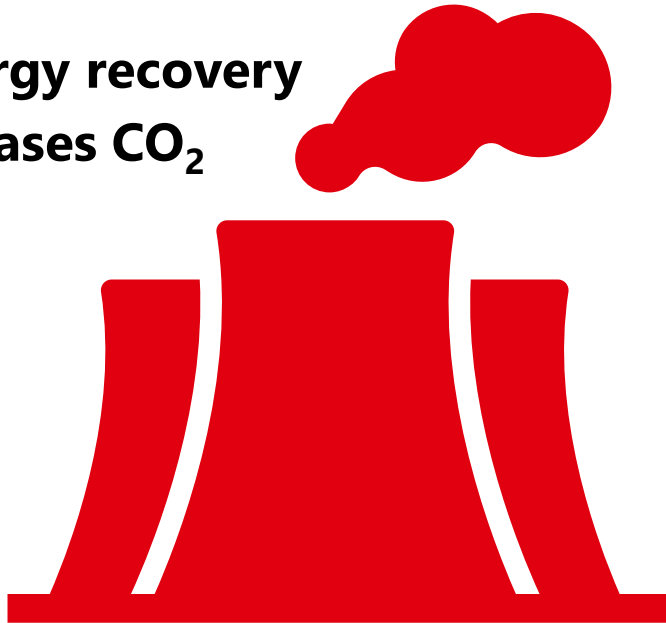


# RECOVERING ENERGY FROM PACKAGING WASTE MIGHT NOT BE THE BEST SOLUTION

## RECOVER

- Last resort in circular approach – should it be?

Energy recovery  
releases CO<sub>2</sub>



Captured carbon  
can be utilized





# SOME EXAMPLES FROM OUR BUSINESS

# EXAMPLES FROM OUR BUSINESS – OUR PACKAGING

## RECYCLED CARTRIDGES

- Focus on two of our biggest categories: **Sealants & Construction Adhesives**, across **several brands**
- **34 countries** in Europe in project scope
- **No compromise** on the **performance** and **quality** of our products



## REDUCTION OF PLASTIC MATERIALS FOR BLISTERED PORTFOLIO

- **Remove plastic** from blister cards
- **Recyclable secondary packaging\***
- Min. 85% recycled cardboard secondary packaging\*\*



## PU FOAM CAN RECYCLING

- 5 components** from each PU Foam can collected in Germany: **plastic, metal, cardboard, propellant and prepolymer** get recycled
- contributing to a **circular economy** with no compromise on performance:
- 30% recycled pre-polymer in formula
  - 25% recycled metal can
  - 98% recycled plastic



## PACKAGING REDUCTION: DECO MIX LIQUID CONCENTRATE

- **80% less plastic** vs. Perfax Ready & Roll 4.5kg bucket
- **Same strength. Same yield**
- **Easy to use: Lump free. Dust free. Fast.**



\* Certified by CyclosHTP

\*\* Recycled paper used in packaging differs between 87% to 96%. Please refer to your local waste disposal system to ensure the correct recycling process.

# EXAMPLES FROM OUR BUSINESS – OUR PRODUCTS

## BETTER RECYCLABILITY: SOLVENT-FREE ADHESIVE FOR POLYOLEFIN POUCHES

- Certified as fully **compatible with PE recycling** according to **RecyClass** testing protocols
- Solvent-free **allrounder** for medium performance up to **pasteurization**
- Optimized for mechanical recycling
- Low discoloration and no odor
- Very low impact on physical film properties of recycled polyolefin material



## PLASTICS REDUCTION: RECYCLABLE PAPER OVERWRAPS

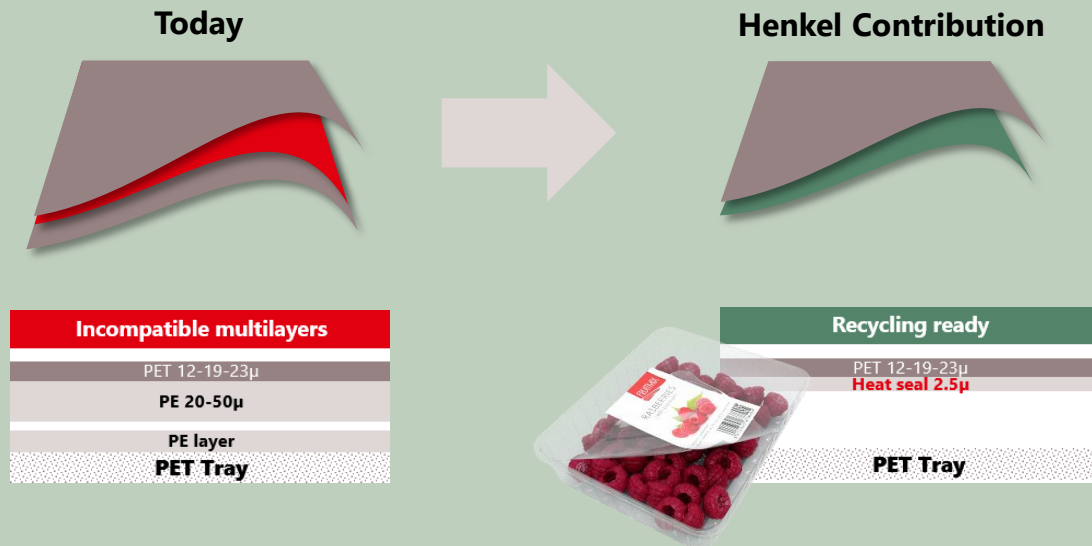
- Switch from PE plastic overwrap to 100% recyclable paper overwrap thanks to re-pulpable heat seal
- **Reduction of 370 tons of plastics / year for Sofidel**
- Suitable for primary and secondary paper packaging of **food and non-food items**, i.e. Tissue products, chocolate, powder sachets
- Re-pulpable with paper and enabling PE replacement
- Food safety:  
FDA 175.105, 176.180,  
EU BfR (direct)



# EXAMPLES FROM OUR BUSINESS – OUR PRODUCTS

## REDUCING FOOTRPRINT: HEAT SEAL COATING FOR PET LIDDING WITH ANTI-FOG PROPERTIES

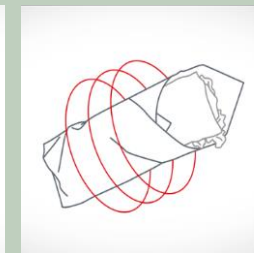
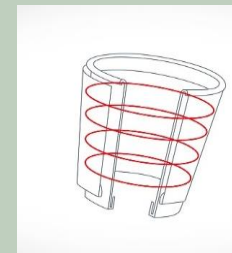
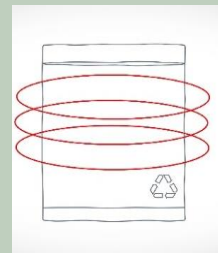
- **Recyclability:** tray & film form a mono material assembly
- **Transparency:** BOPET to replace PP or PET/PE
- **Lightweighting:** lid reduced more than 50wt%



## SUSTAINABLE INNOVATION: EPIX TECHNOLOGY

EPIX is a technology platform providing innovative solutions to current and future functionality, eCommerce and sustainability challenges.

- Thermal insulation
- Impact resistance
- Barrier properties
- Cushioning alternatives
- Aesthetics
- Smart packaging
- Limitless possibilities



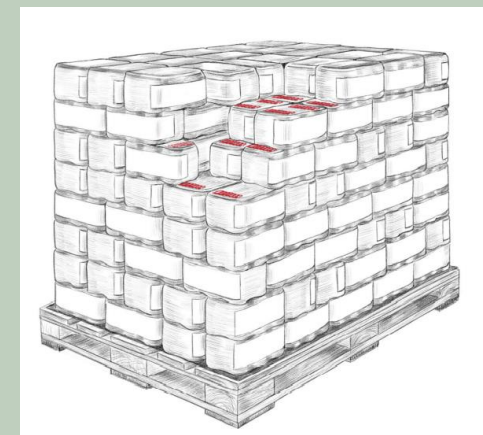
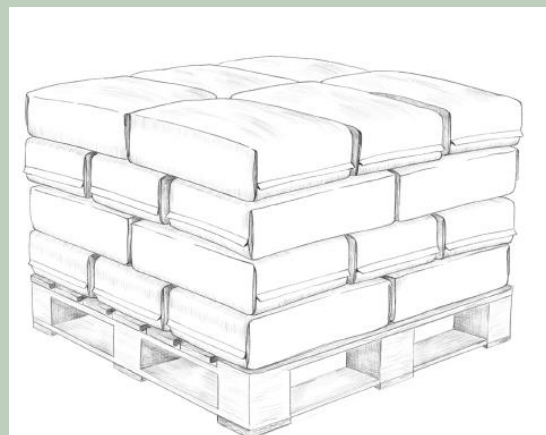


# EXAMPLES FROM OUR BUSINESS – OUR PRODUCTS



## MINIMIZE PLASTIC USE WITH TECHNOMELT SUPRA PS

- Reduce up to **90%** in shrink film consumption
- Save up to **80%** in material cost
- Improve automatic depalletizing thanks to reduced amount of intermediate layers



# HOW ALL THIS CONNECTS TO CLIMATE IMPACT?

# EACH STEPS TOWARDS CIRCULARITY NEEDS CLEAR CLIMATE IMPACT ANALYSIS



**The route to sustainable packaging is to balance circularity and carbon footprint**

## CARBON FOOTPRINT



- It is not possible to average the footprint per material – all depends on the production
- It is necessary to evaluate regionally/even country wise
- We need to have data exchange on the calculations
- We need exchange with recyclers and designers for end of life value chain understanding

Assumptions that one solution is better than other can be misleading



NEWS

### Lego backs down on recycling plastic bottles into bricks, citing increased emissions

26 SEPTEMBER 2023

According to Financial Times, Lego has reversed its decision to manufacture bricks from recycled plastic bottles, reporting that it has not reduced carbon emissions in comparison to virgin plastics made from crude oil.



# CIRCULARITY & REGULATIONS



# SUSTAINABLE PACKAGING IN REGULATIONS LANDSCAPE

**Regulations are  
accelerators of  
change**

**Regulations are  
concentrating on  
circularity** reduce,  
re-use or recycle



**not mentioning neither  
carbon capturing or  
climate impact of those  
options**

**WE NEED TO CHOOSE THE BEST OPTION FOR SPECIFIC  
SOLUTION, PACKAGING, PRODUCT OR LOCATION**

# TO DRIVE CIRCULARITY WE NEED PARTNERSHIPS TO MAKE IT HAPPEN





LET'S PARTNER AND INNOVATE TOGETHER TO ENABLE  
CIRCULARITY WITH CLIMATE IN MIND

**LETS DISCUSS  
POSSBLE PILOTS  
TOGETHER**





FIND OUT MORE ON [HENKEL.COM](https://www.henkel.com)