

Design for Recycling

Enabling the circular economy

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Packaged 2017 , Amsterdam June 20th

| Agenda

————— | Henkel at a glance —————

————— | Henkel & Sustainability —————

————— | Sustainability in Packaging —————

————— | Design for Recycling —————

| Henkel at a glance

Who we are

Over

51,000

employees worldwide

Around

€18.7 bn

sales,
3.1% organic
sales growth

16.9%

adjusted* return on sales
(EBIT)

€3.1 bn

adjusted* operating
profit

61%

of our sales generated
by our top 10 brands

140 years

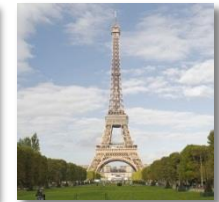
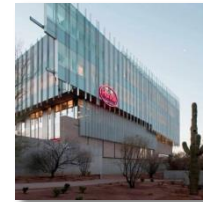
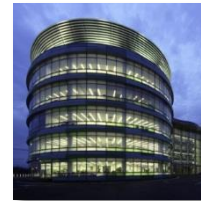
of brand success

* Adjusted for one-time charges/gains and restructuring charges.

| Henkel at a glance

Global footprint

- Henkel products and technologies available **worldwide**
- Employees from more than **120 nations**
- Strong presence in emerging markets: **42% of sales, 56% of employees**
- **171 manufacturing** and **17 major R&D sites** around the world



| Henkel at a glance

Leading positions in consumer and industrial businesses

Consumer Businesses

Laundry & Home Care



Persil **Purex** **Pril**

Beauty Care



Schwarzkopf **SYOSS**

Industrial Business

Adhesive Technologies



LOCTITE
TECHNOMELT



| Henkel at a glance

Did you know...

- ... that Henkel is the **world's number one** adhesives producer?
- ... that Henkel sells detergents for around **25 billion wash loads per year**?
- ... that **every second, more than 20 hair colorations** from Henkel are sold worldwide?
- ... that more than **80 different applications** of Loctite solutions are used in a Formula 1 car?



| Agenda

————— | Henkel at a glance —————

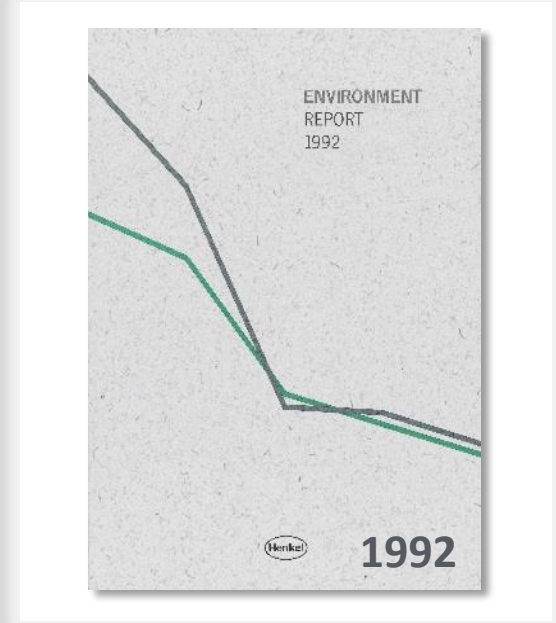
————— | **Henkel & Sustainability** —————

————— | Sustainability in Packaging —————

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| Henkel & Sustainability

The History - From first-aid center to public commitments



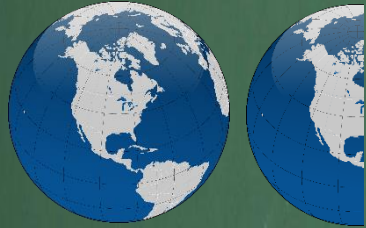
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Sustainability becomes a Henkel value



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Strategy and targets



today

7 billion people

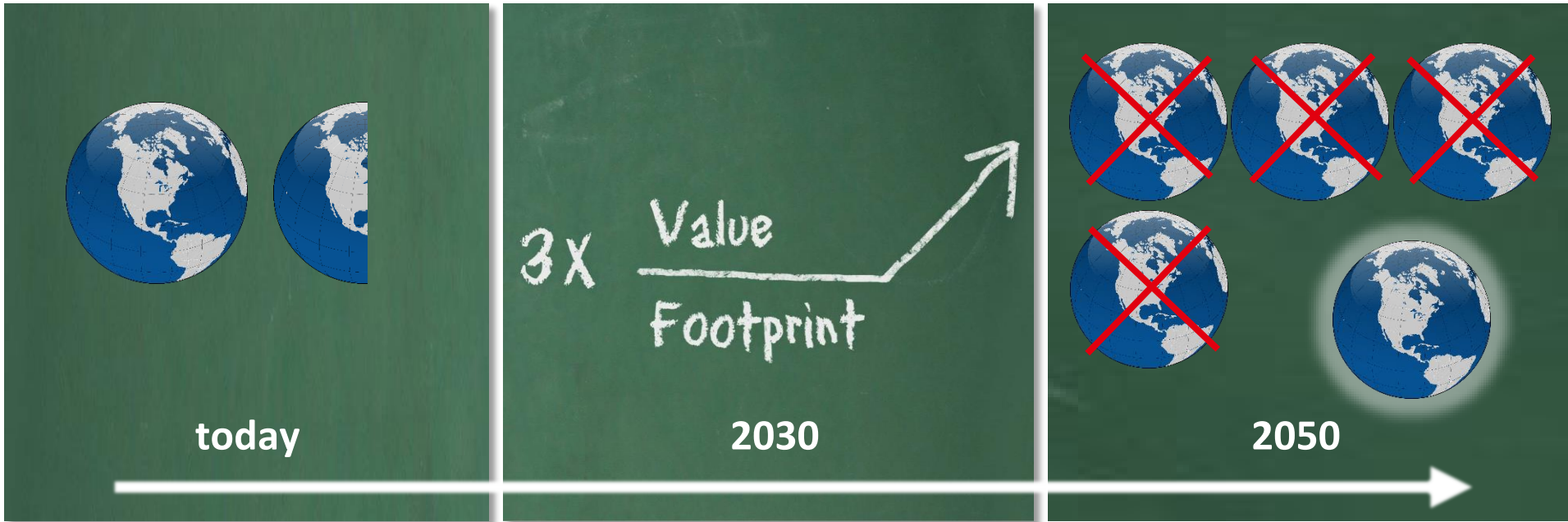


2050

9 billion people

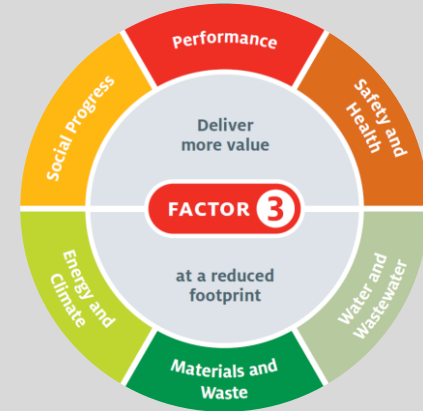
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Create value and reduce footprint - the Factor3



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Our focal areas translate “Factor 3” into concrete challenges



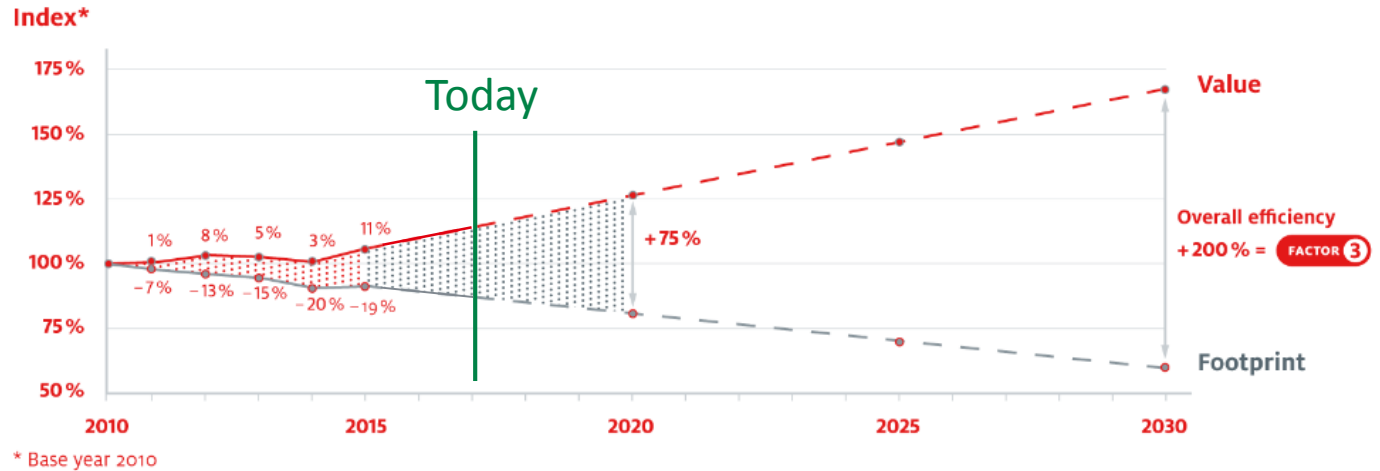
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Challenge ahead!

We did a lot!



But the most difficult is yet to come...



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Our mission

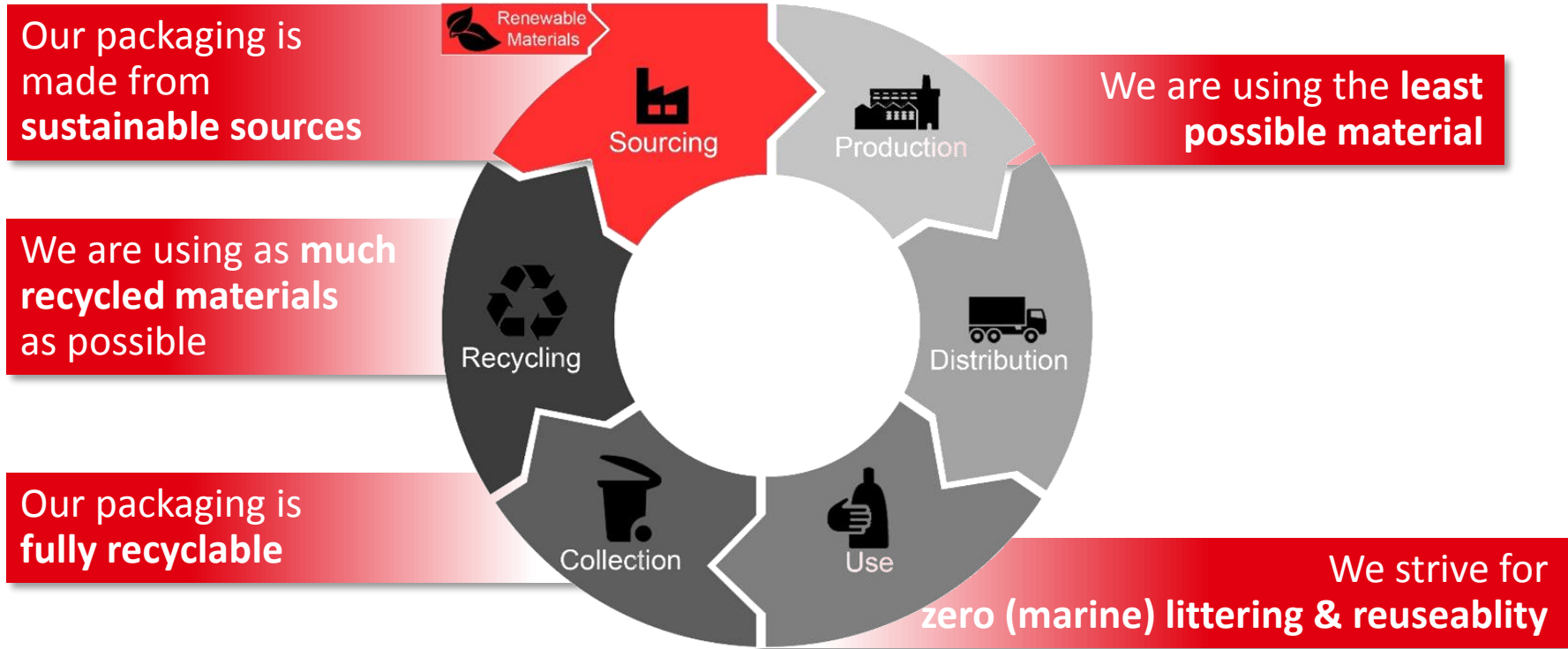


Smarter packaging to create sustainable value for people and planet



| Sustainability in Packaging

Enabling the circular economy



| Sustainability in Packaging

Initiatives in place

THE POWER OF RECYCLING

THE INNOVATION:

By using **25% RECYCLED ALUMINUM** in our deo cans, we can reduce our aluminum consumption significantly.



BUT THIS IS NOT THE ONLY BENEFIT:

But this is not the only benefit. **EXTRACTING primary aluminum** is a very energy intensive process. I.e. by using recycled aluminum we can also **SAVE ENERGY**.

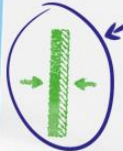


AND THERE ARE EVEN MORE BENEFITS TO COME:

The new alloy with recycled aluminum is **STRONGER**



This enables us to make the cans **THINNER** and **SAVE RAW MATERIALS**.



By this we can reduce their **WEIGHT**.



And less weight means **LESS ENERGY** in logistics.



THE RESULT:

Since 2013, we have rolled-out this technology to more and more formats. By this, we saved more than **14,000 metric tons CO₂** emissions over the years which is equal to:



205,000 energy-saving bulbs providing light for a whole year

ReAl™ Aluminum Cans



- 25% recycled Al-content
- - 15% weight reduction
- - 20% CO₂ - footprint



| Sustainability in Packaging Initiatives in place

**Learn how THIS
is now recyclable.**

LOCTITE 262™
THREADLOCKER

HIGH STRENGTH
• Fastenets to 3/4"

Part # 26231

WARNING: MAY CAUSE ALLERGIC SKIN REACTION. IRRITANT. Read back panel.

NET 1.69 FL. OZ. (50 ml)



| Sustainability in Packaging

Initiatives in place

**ACCEPTED
WASTE**



Plastic anti-perspirant and deodorant aerosol lids of any brand

Plastic anti-perspirants and deodorant aerosol nozzles of any brand



Anti-perspirant and deodorant aerosols of any brand



| Sustainability in Packaging

Initiatives in place



455 tons


of label liner waste at
Wassertrüdingen plant

▶ 20 truckloads 

RafCycle™

Collaboration with self-
adhesive label supplier
UPM Raflatac

 ENERGY - 42 %

 WATER - 9 %

Based on UPM Raflatac's LCA study

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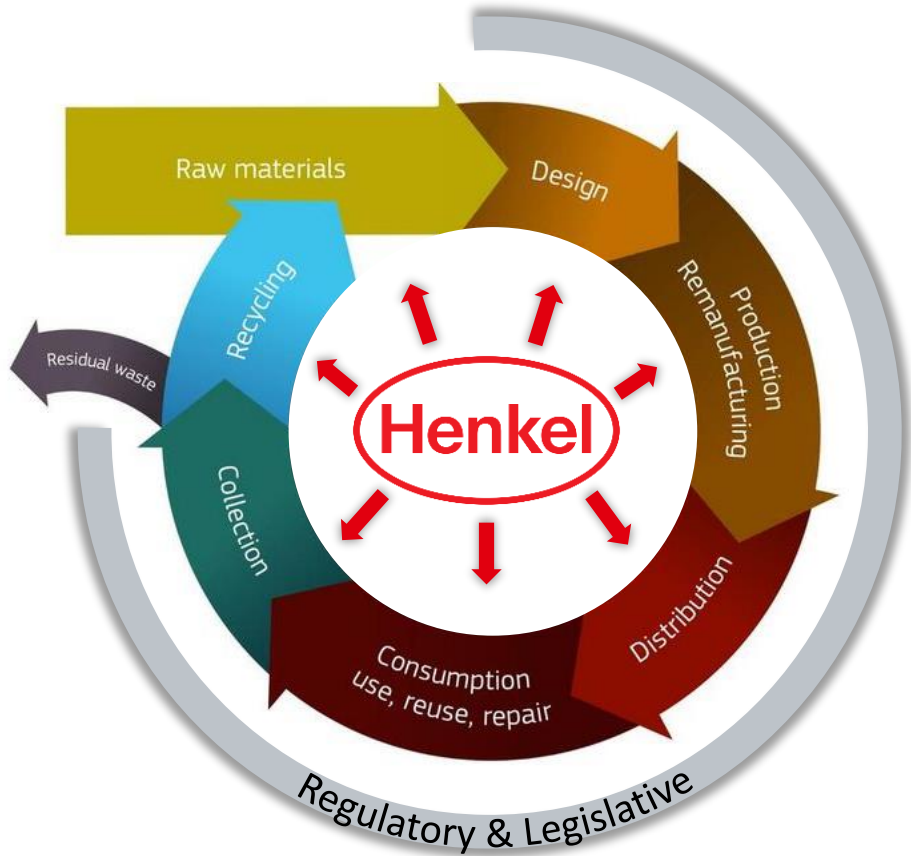
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Design for Recycling

The value chain



Linear economy



- Invest
- New applications
- Design



| Design for Recycling

Limitations & Constraints

Material & Sourcing



- Quality/Color
- Consistency
- Costs
- Odor
- Supply

Packaging Design



- Multi-material use
- Shelf – impact
- Label design
- Color range

Collection



- Eco-System
- Legislation
- Local funding
- Waste treatment

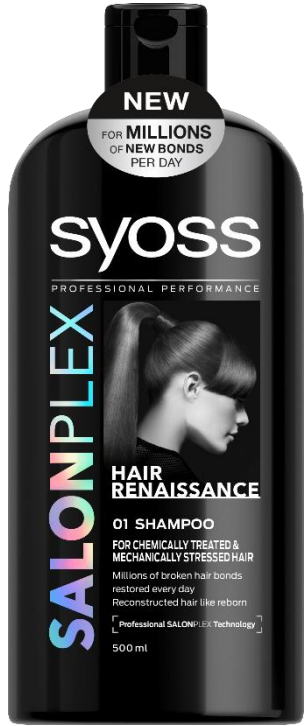
Sorting



- Material fractions
- Detection limits
- Flexibles
- Capacity
- Technology / Invest

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The shampoo bottle – an example



PP



PETE



OTHER



PP



PP

Design for Recycling

External assessment



Harmonize and standardize the qualification of recyclability criterias

	YES Full compatibility – materials that passed the testing protocols with no negative impact	CONDITIONAL Limited compatibility – materials that passed the testing protocols if certain conditions are met	NO Low compatibility – materials that failed the testing protocols OR
Container			
Size			
Colours			
Barrier			
Additives			

| Design for Recycling

Take-away's

Design

...is key – but there are no simple answers!

Technology

...will enable us to improve upon today's limitations

Regulatory

...will set a more ambitious framework

Connect

...to drive technical solutions and gain critical mass

Thank you!