

# Nachhaltige Verpackungsoptimierung

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**flying tiger**  
copenhagen

# Flying Tiger Copenhagen



- Retail: 900+ stores
- Europa, USA, Japan und Südkorea
- HQ in Kopenhagen; weiteres Büro in Shanghai
- Logistikzentren: Dänemark, Spanien, Großbritannien, USA und China

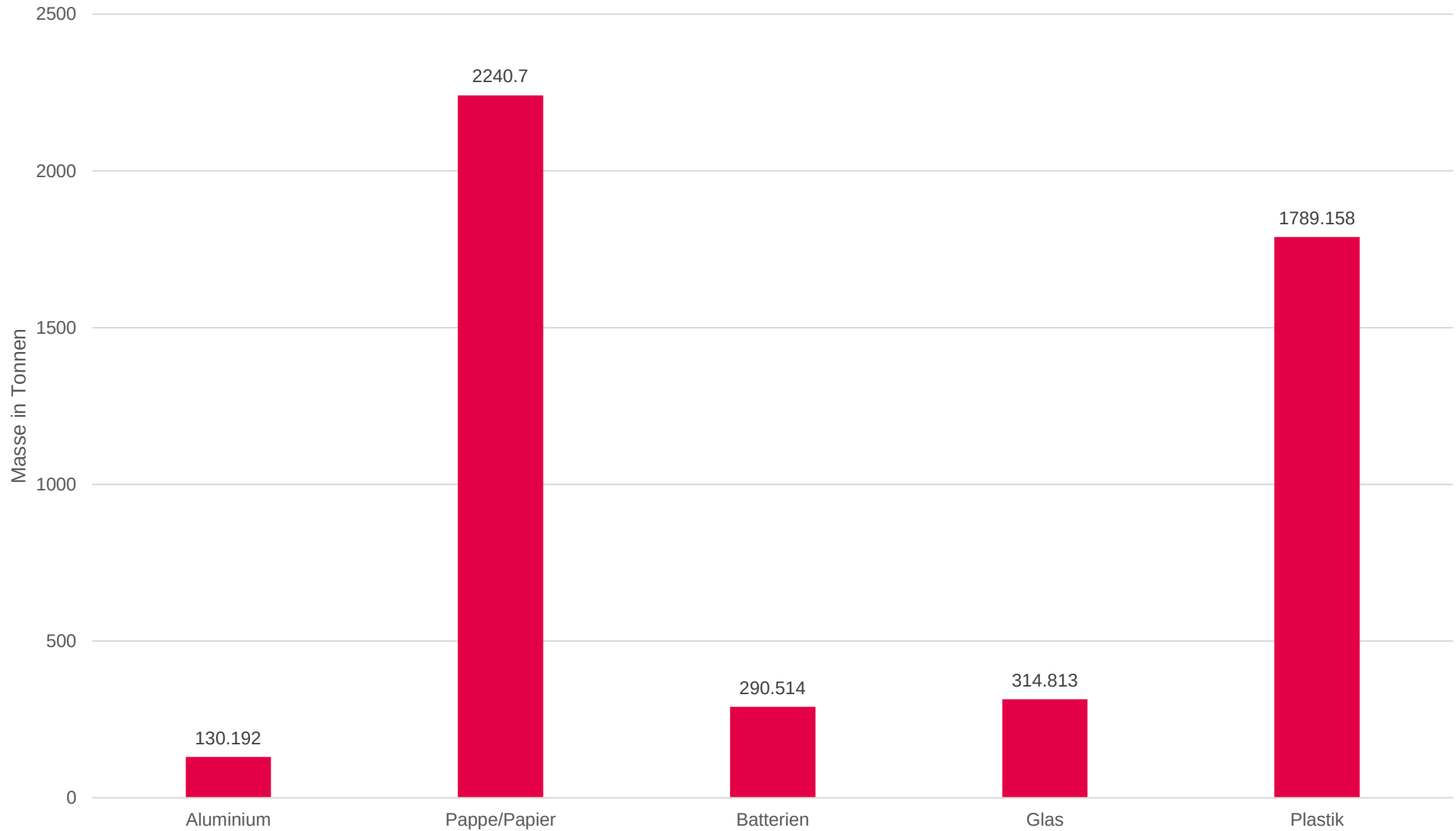




# Flying Tiger Copenhagen



# Verpackungsmaterial 2019





# Sustainability Targets

## Products

### Circular materials



#### 2022 goals

- Continuously offer our customers eco-friendly products
- Zero deforestation  
Sub targets: Only FSC certified paper and wood products. Only certified palm oil products

- 100% recyclable packaging  
Sub targets: Mono-component PET or separable, clearly marked recycling category
- 20% reduction of packaging materials

#### 2025 goals

- 100% recyclable or recycled products
- 50% reduction of single use products
- 50% reduction of plastics products
- 50% recycled plastics in products

## Operations

### Clean operations



#### 2022 goals

- 100% recyclable store furniture
- 100% marketing material in stores from eco-friendly forestry
- 50% renewable energy in own operations: warehouses, stores and offices

### Safe and fair labour



#### 2022 goals

- Build capacity and supplier ownership within our value chain

#### 2025 goals

- 100% of our products sourced from A/B rated suppliers

## People

### Community building

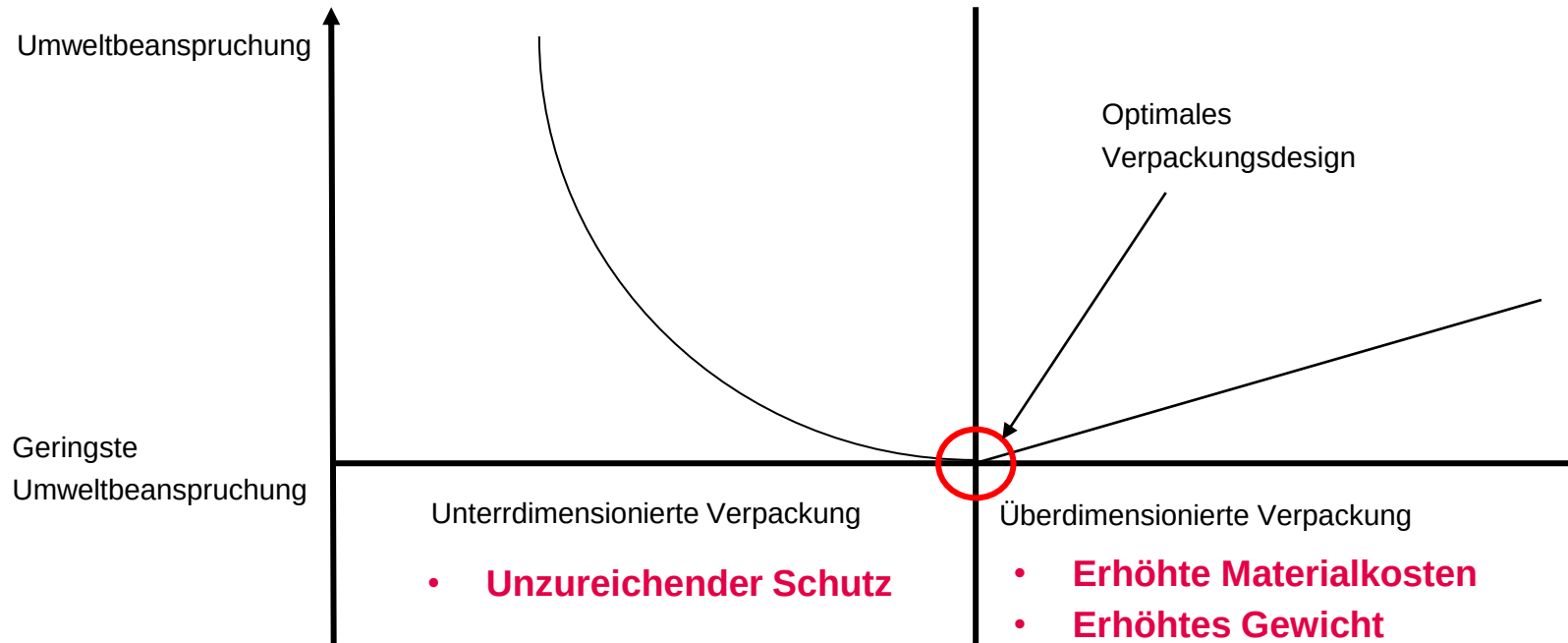


#### 2022 goals

- Continuously increase employees and engagement scores
- Contribute to consumers sustainability
- +1.000 homeworkers have been positively influenced by our community sourcing project



# Optimale Verpackung



# Optimierungsansätze



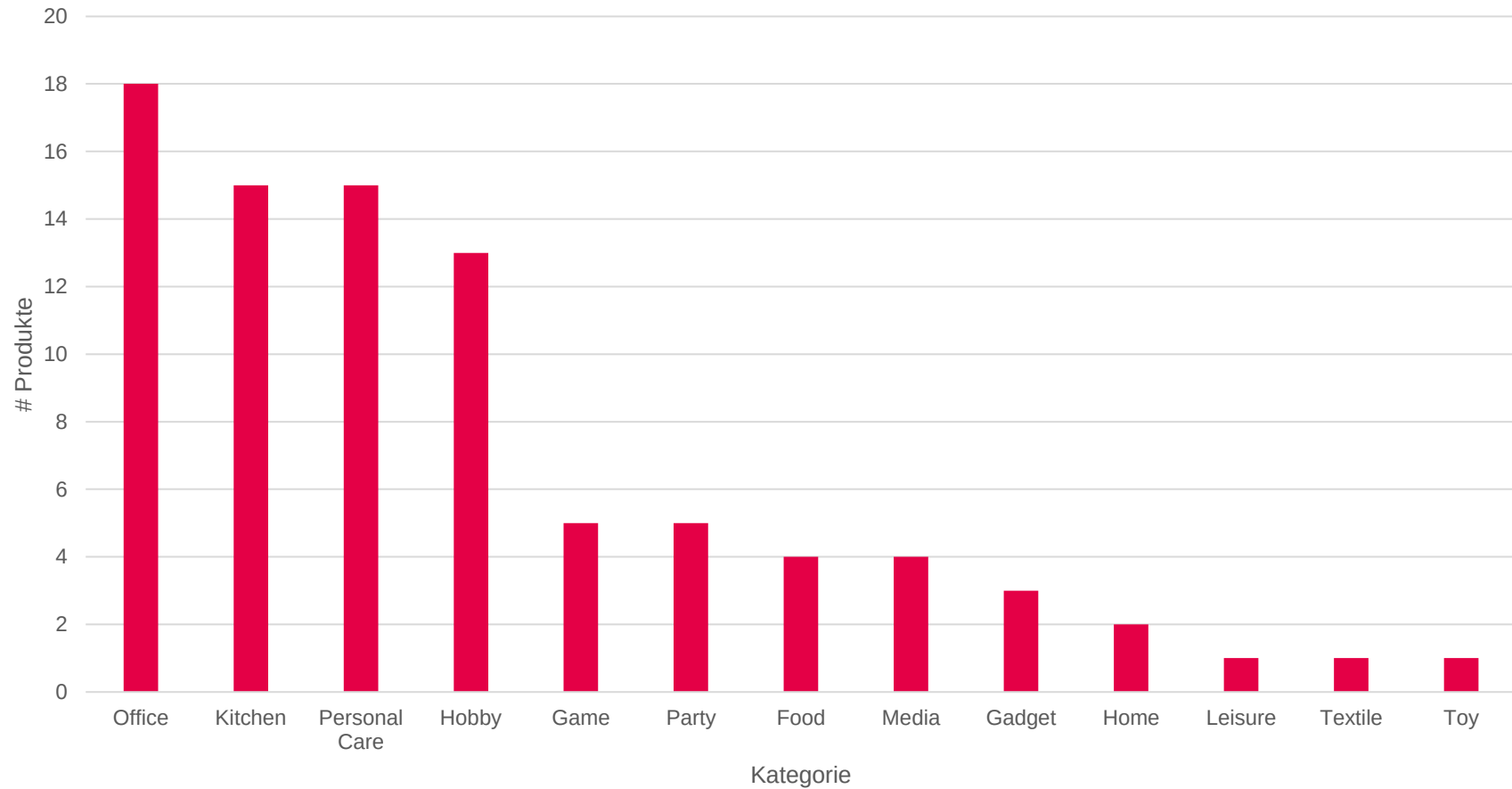
Größe der Umverpackung



Material der Umverpackung

# Produktauswahl

Insgesamt 87 Produkte

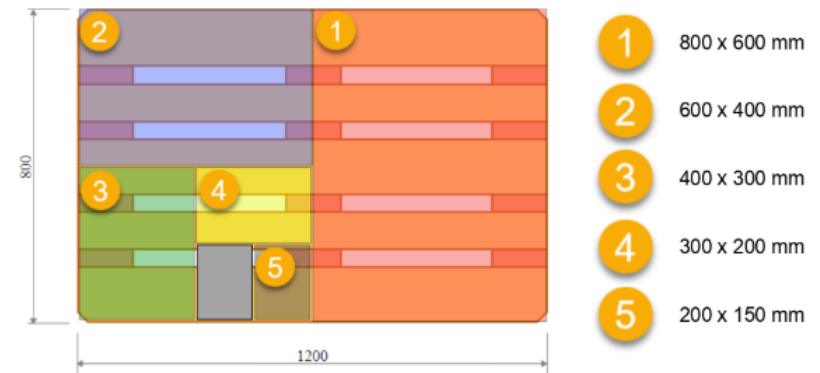




| Basisszenario                           | Szenario 1                                                               | Szenario 2                                         |
|-----------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------|
| Momentane Umverpackung bleibt bestehen. | Die Umverpackung wird der Produktverpackung angepasst. (100% Ausnutzung) | Die Umverpackung wird an Standardgrößen angepasst. |



Szenario 1: 100% Ausnutzung

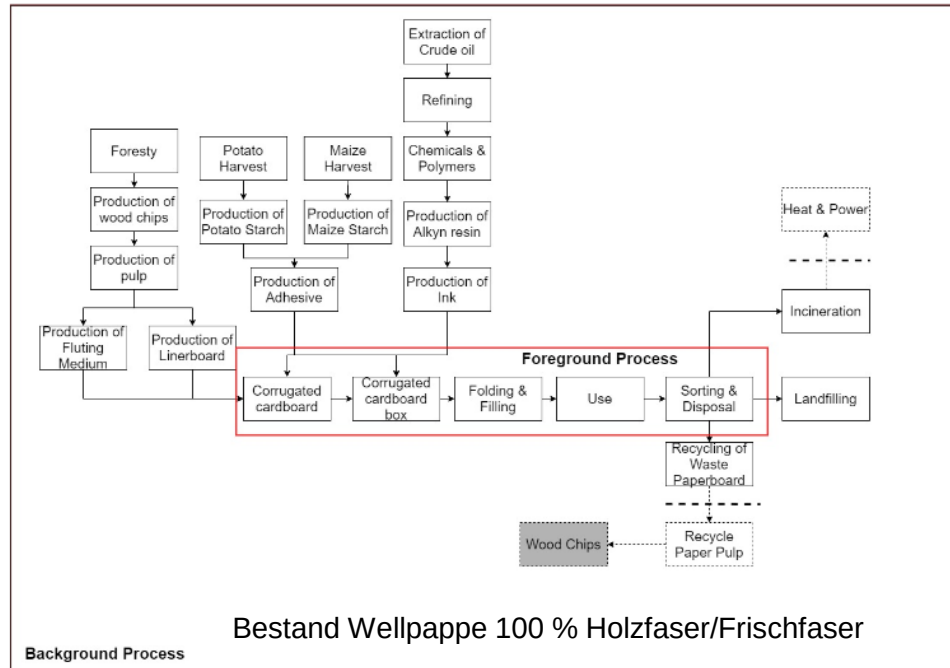


Szenario 2: Standardgrößen Umverpackung

# Szenarios im Vergleich

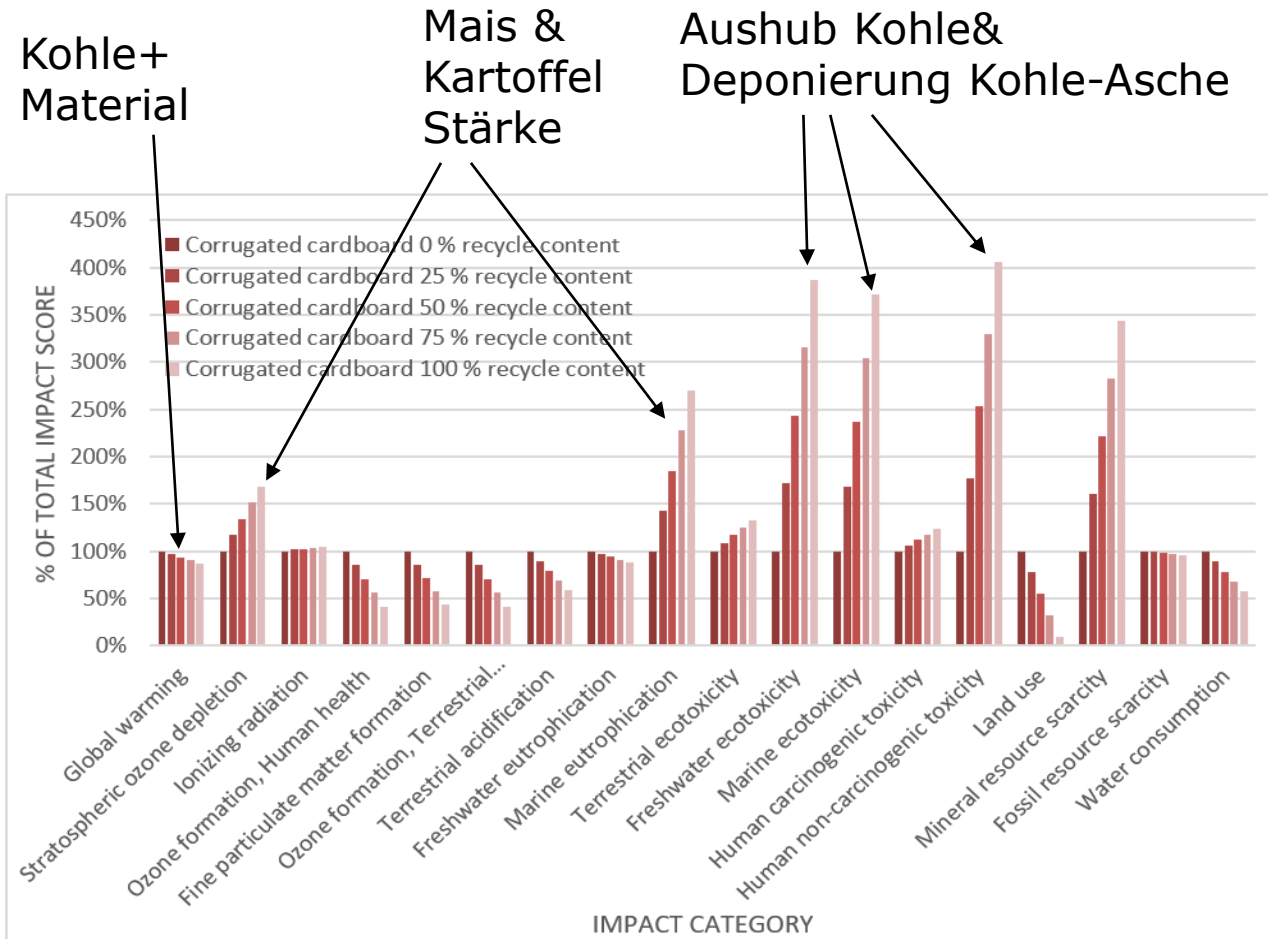
|                                  | Basis Szenario | Szenario 1 | Szenario 2 |
|----------------------------------|----------------|------------|------------|
| Container in TEU                 | 453            | 450        | 600        |
| Verpackungsmaterial<br>in Tonnen | 79,23          | 80,56      | 112,17     |
| CO2 Emissionen in<br>Tonnen      | 539,84         | 527,95     | 612,43     |

# Materialoptimierung – Life Cycle Assessment



Functional Unit: 'To facilitate protection during the transportation, handling and distribution of 24 pieces of item 1701903 (can be found in the database) on the route from China via the warehouse in Greve (DK) to the stores in Europe.'

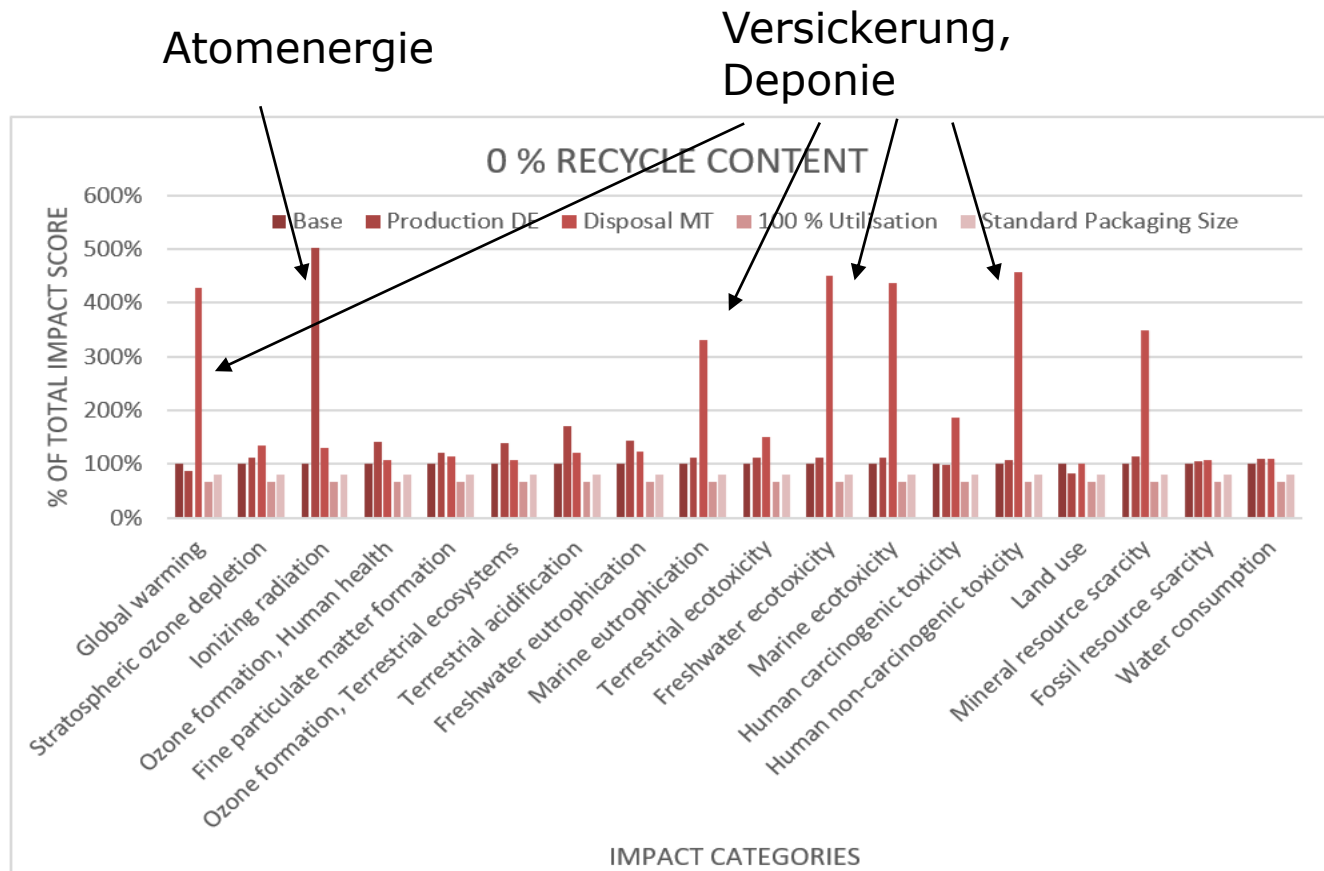
| Inputs from technosphere: materials/fuels                                                                                                       |  | Amount                         | Unit |             |
|-------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------|------|-------------|
| Fluting medium {RoW} containerboard production, fluting medium, recycled   APOS, U                                                              |  | 0                              | kg   |             |
| Linerboard {RoW} containerboard production, linerboard, testliner   APOS, U                                                                     |  | 0                              | kg   |             |
| Linerboard {RoW} containerboard production, linerboard, kraftliner   APOS, U_100%                                                               |  | 268.8                          | g    |             |
| Fluting medium {RoW} containerboard production, fluting medium, semichemical   APOS, U_100%                                                     |  | 115.2                          | g    |             |
| Packaging box factory {RoW} construction   APOS, U                                                                                              |  | $2.61 \cdot 10^{-9} = 2.61E-9$ | p    |             |
| Printing ink, offset, without solvent, in 47.5% solution state {RoW} printing ink production, offset, product in 47.5% solution state   APOS, U |  | $1.7 \cdot 0.38 = 0.646$       | g    |             |
| Adhesive for combining {CN}_apos                                                                                                                |  | $9 \cdot 0.64 \cdot 4 = 23$    | g    |             |
| Lubricating oil {RoW} production   APOS, U                                                                                                      |  | $0.91 \cdot 0.38 = 0.346$      | g    |             |
| Ethylene vinyl acetate copolymer {RoW} production   APOS, U                                                                                     |  | $0.0027 \cdot 0.75 = 0.00202$  | g    |             |
| Tap water {RoW} tap water production, conventional treatment   APOS, U                                                                          |  | $27.57 \cdot 0.38 = 10.5$      | g    |             |
| Transport, freight, lorry >32 metric ton, EURO5 {RER} transport, freight, lorry >32 metric ton, EURO5   APOS, U                                 |  | $0.38 \cdot 300 = 114$         | kgkm |             |
| Transport, freight, lorry >32 metric ton, EURO4 {RoW} transport, freight, lorry >32 metric ton, EURO4   APOS, U                                 |  | $0.38 \cdot 150 = 57$          | kgkm |             |
| Add line                                                                                                                                        |  |                                |      |             |
| Inputs from technosphere: electricity/heat                                                                                                      |  | Amount                         | Unit | Distributio |
| Electricity, medium voltage {CN} market group for   APOS, U                                                                                     |  | $0.07 \cdot 0.38 = 0.026$      | kWh  |             |
| Add line                                                                                                                                        |  |                                |      |             |



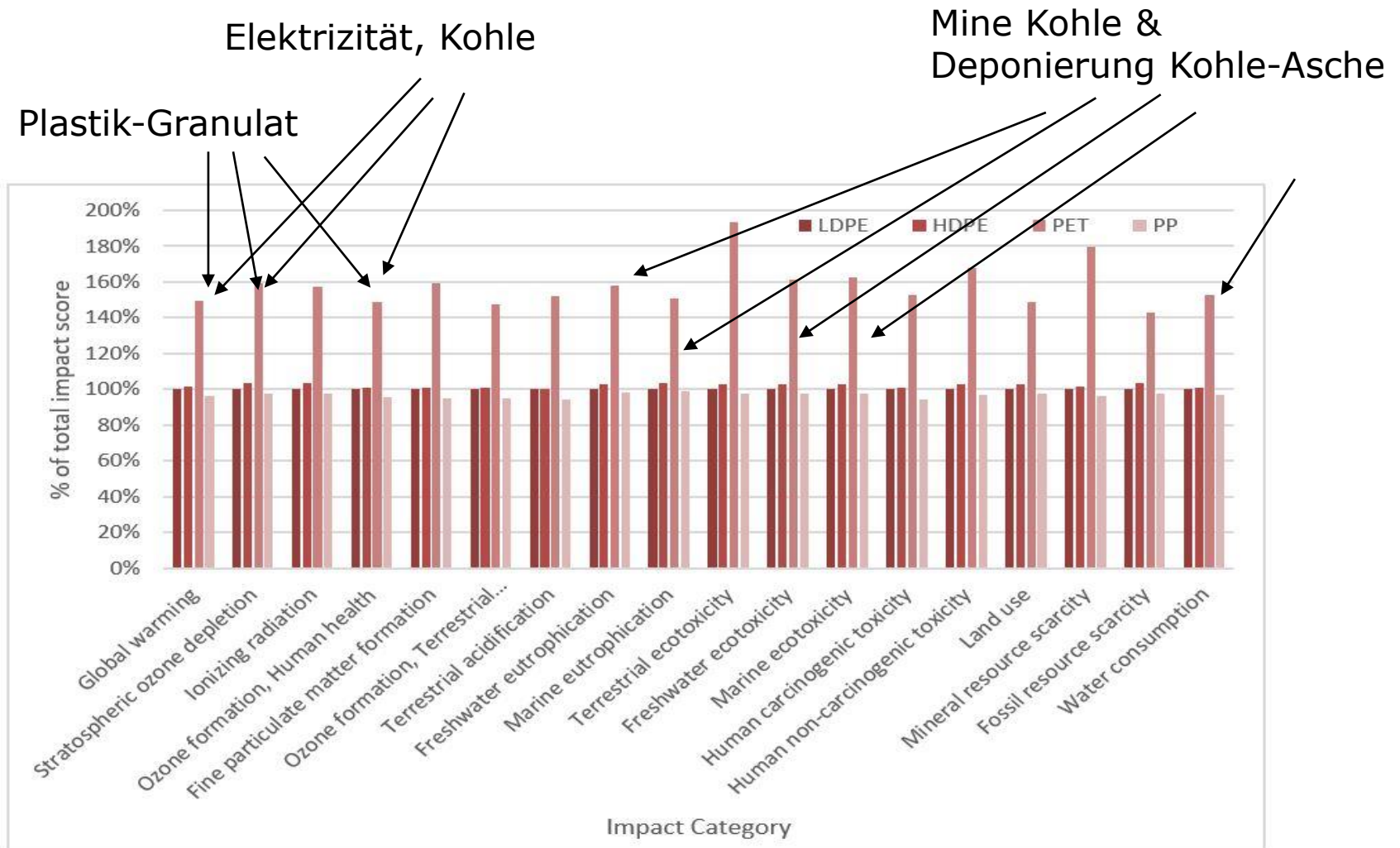
Internal normalised impact scores skaliert zu 100% Frischfaser



# LCA – Scenarios Wellpappe



Normalised impact scores skaliert für alle Szenarien zu dem Basisszenario



Internal normalised impact scores skaliert zu LDPE

# Fazit

- Short-term Solution:
  - Umverpackung: 100% Ausnutzung
  - 50% recycelte Inhaltsstoffe für Wellpappe
  - Wenn benötigt: PP als Folie
- Long-term Solution:
  - Standardgrößen bei Umverpackung



# Wrap, unpack recycle



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