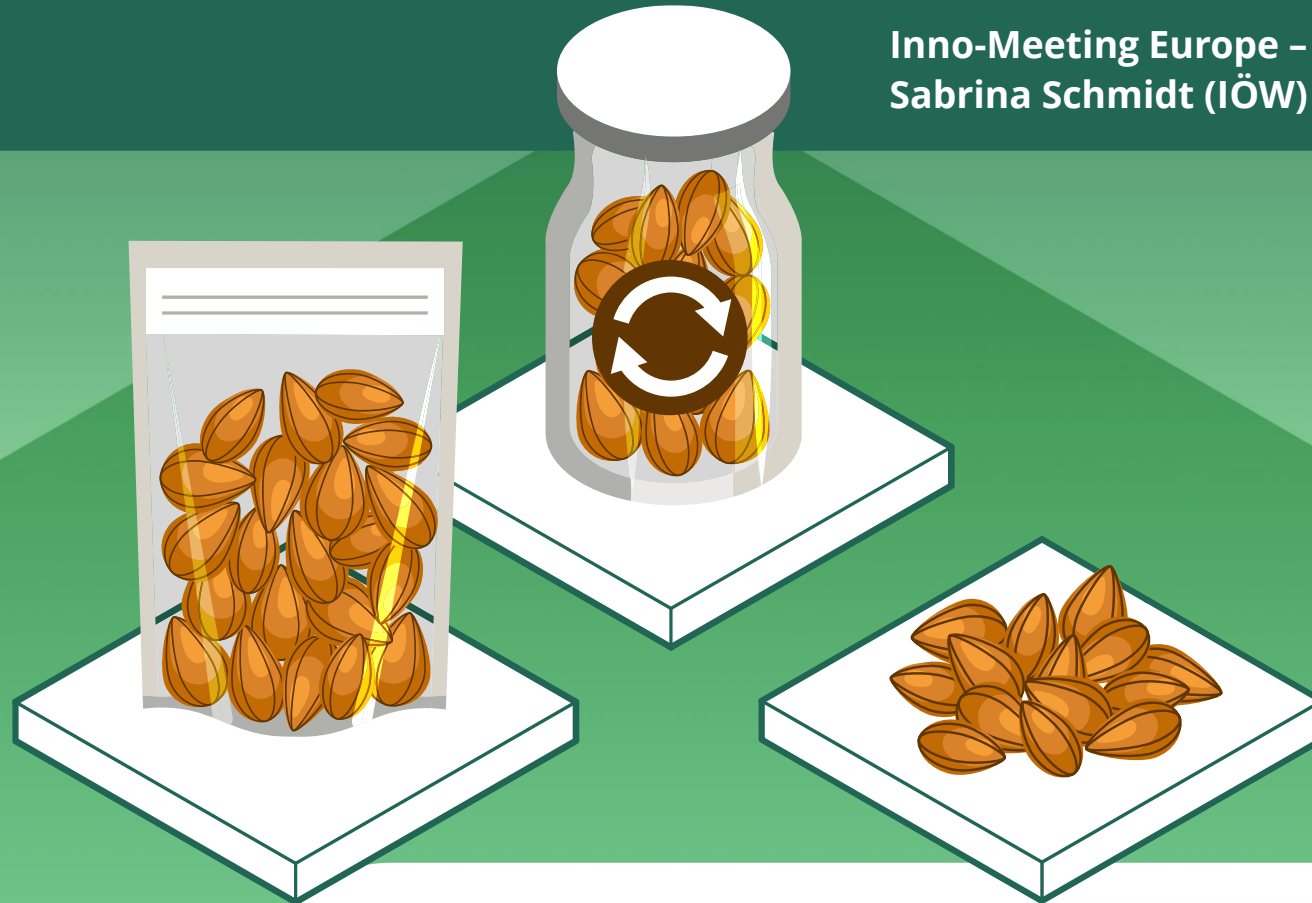


Step by step: How to select and introduce sustainable packaging

Inno-Meeting Europe – Flexpack & Climate Change
Sabrina Schmidt (IÖW)



PACKAGING POSES AN ENVIRONMENTAL BURDEN.

Packaging is the largest end-use markets for plastics (40.5 % in 2020).

Strong increase in consumption of plastic and paper/board packaging

Packaging has a short lifetime (~ 0.5 years on average).

24 % of plastic waste is incinerated, 18 % recycled.

Plastic waste enters into rivers and oceans. Exposure to wind, waves and sunlight turns it into microplastic.

LESS (plastic) PACKAGING AS PREVENTIVE MEASURE



SUSTAINABLE PACKAGING



WHAT DOES THIS EVEN MEAN?



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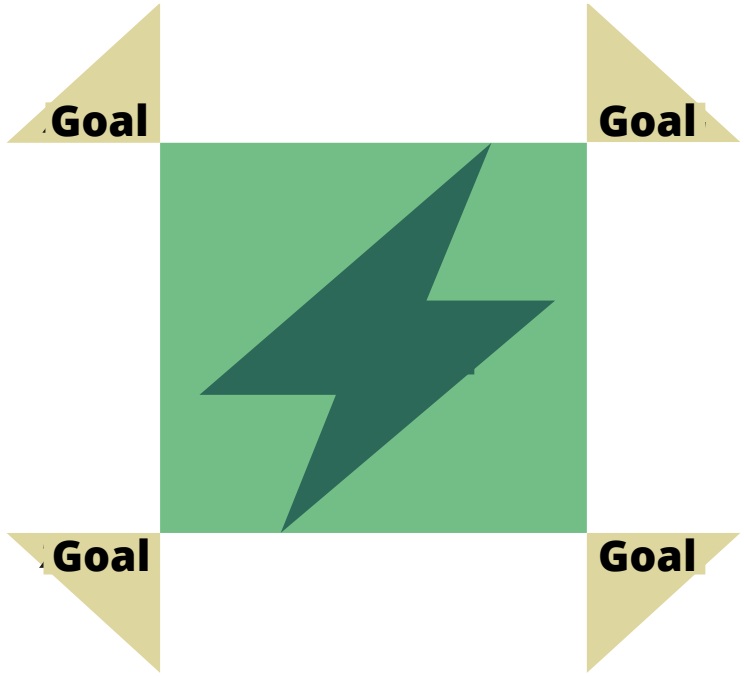


What is your understanding of sustainable packaging?

ⓘ Start presenting to display the poll results on this slide.

CONFLICTING GOALS CAN ARISE WHEN IT COMES TO SUSTAINABLE PACKAGING.

LESS (DISPOSABLE) PLASTIC PACKAGING
(unpopular with customers, littering problem)



SAME PRICE
(profitability)



Sustainable innovations lack **economies of scale** in competition with the plastics market, which has been highly diversified over decades.

SAME QUALITY/FUNCTION
(product protection incl. legal requirements, customer preferences, compatibility incl. machine runability)

GOOD ECOLOGICAL PERFORMANCE
(e. g., low CO₂ emissions)

REDUCE AND OPTIMIZE: SIX WAYS TO MORE ECOLOGICAL PACKAGING

1

Unpackaged

2

**Reusable
packaging**

3

**Reduced
material use**

4

**Material
substitution**

5

Re-design

6

Services

3 REDUCED MATERIAL USE

DEFINITION

Goods remain the same, but the packaging material is reduced.

- Reduce packaging volume
- Reduce product volume
- Change unit size
- Use materials more efficiently

ATTENTION

Less material in product packaging must not lead to more material in transport packaging.

4

SUBSTITUTE MATERIALS

DEFINITION

The packaging material is completely or partially replaced by another material.

FOR A BETTER LIFE CYCLE ASSESSMENT

- Ensure recyclability
- Reduce packaging weight
- Increase use of recycled materials

ATTENTION

Material substitution is often easier to implement than other packaging changes.

The exclusion of plastic or the use of renewable materials is not always the best alternative from an ecological point of view.



TWO CASE STUDIES



PACKAGING FOR ALMONDS AND LAUNDRY DETERGENT



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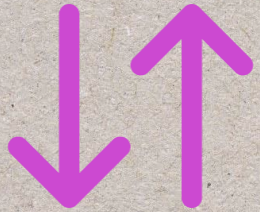
CASE 1: PACKAGING FOR ALMONDS

Plastic bag

Unpackaged

Returnable jar

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How would you rank different packaging for almonds?

ⓘ Start presenting to display the poll results on this slide.

CASE 1: PACKAGING FOR ALMONDS

- **Returnable jar:** option with the highest CO₂ output. Problem: Low filling capacity with high energy consumption for disposable lids, transport, cleaning and refilling
- **Plastic bag:** Less CO₂ emissions, but a lot of waste
- **Unpackaged:** The most sustainable way is to offer almonds in bulk containers.

CASE 2: PACKAGING FOR LAUNDRY DETERGENT

Plastic bottle

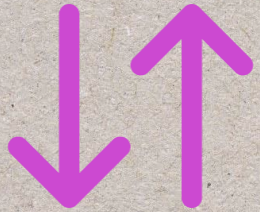
Stand-up pouch

Unpackaged

Cardboard

Foil bag

slido



How would you rank different packaging for laundry detergent?

ⓘ Start presenting to display the poll results on this slide.

CASE 2: PACKAGING FOR LAUNDRY DETERGENT

LIQUID LAUNDRY DETERGENT:

- **Plastic bottle:** causes particularly much CO₂ emissions
- **Stand-up pouch:** Less CO₂ emission, but the production of the plastic is very energy-intensive and the amount of non-recyclable waste is high
- **Unpackaged:** The most sustainable way is to offer detergent in refill stations.

WASHING POWDER:

- **Foil bag:** light weight therefore less waste than stand-up pouch
- **Cardboard:** Good recyclability

A decorative graphic on the left side of the slide, consisting of a yellow arrow pointing right, with a green arrow pointing right inside it.

FROM PACKAGING STRATEGY TO PACKAGING SELECTION



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A PACKAGING STRATEGY SETS ECOLOGICAL TARGETS.

A packaging strategy should ...

- state a vision or a goal.
- compile goals by criteria and “translate” them into measurable indicators.
- specify **steps** in terms of time and content for implementing the goals.



1 Ecological objectives and benchmarks

CO₂ emissions

waste

ressources

LCA parameters

2 Indicators

FIVE FACTORS HAVE A SIGNIFICANT INFLUENCE ON THE ECOLOGICAL IMPACT OF PACKAGING.



Packaging weight



Material selection



Production, filling and washing processes



Recyclability



Transport efficiency

SELECTING A PACKAGING SOLUTION INVOLVES EIGHT STEPS.

- 1 Technical requirements:** Suitability for and influences on the product
- 2 Selection of possible packaging variants:** E. g., chickpeas in glass jar → multilayer carton or returnable jar?
- 3 Collecting informationen:** Environmental assessments, influences on steps of the value chain
- 4 Assessment:** E. g., SWOT analysis, weighting of information
- 5 Identification of hotspots:** In case of returnable jar: development of reusable lids?
- 6 Inclusion of further factors:** Market studies, customer surveys
- 7 Decision:** Weighting the pros and cons of the multilayer carton and the returnable jar
- 8 Optional - Transfer to other product groups:** Check whether the packaging solution can be transferred to similar products like other beans



INVOLVING THE RIGHT STAKEHOLDERS



EMPLOYEES, SUPPLIERS, CUSTOMERS



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WORK TOGETHER WITH YOUR EMPLOYEES.

- Cooperation of several departments is necessary, e.g., sustainability, logistics, procurement, category management, marketing
- Trade-off between goals might be necessary → clear assignment of decision-making authority and responsibilities
- Understand the issue as a **continuous process**
- Familiarize employees with the new packaging, the purpose and the changed work processes, especially in logistics and at the Point of Sale
- **Inform and train** your employees on sustainable packaging



APPLY THE PACKAGING STRATEGY TO WORKING WITH SUPPLIERS.

**Communication
w/ suppliers**

- 1** Development of packaging-related criteria in supplier selection and contract design
- 2** Initiate new and closer collaborations with suppliers, with the goal of long-term joint ecological improvement of product, transport and shipping packaging along the entire value chain

Application of the targets and indicators from packaging strategy

Complex process with multiple development and adaption loops

CUSTOMERS NEED HELP WITH SUSTAINABLE CONSUMPTION.

PROBLEM	POSSIBLE SOLUTIONS
Customers are not aware of life cycle assessments and packaging in the value chain or generally reject plastic packaging.	<ul style="list-style-type: none">→ Color-coded labels on packaging, that indicate the degree of sustainability→ Raise awareness about packaging myths at the point of sale
Customers do not find the sustainable option in the wide range of products.	<p>Nudging strategies:</p> <ul style="list-style-type: none">→ Eye-catching product placement→ Color coding, e. g., through colored price tags
...	→ ...



THANK YOU VERY MUCH!



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Inno-Meeting Europe – Flexpack & Climate Change, 6.10.22

Free Packaging Guide (in German):

ioew.de/publikation/verpackungen_oekologisch_optimieren



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