





# Big Picture

**CE-Hotspot** 

Bottrop

12 - 14.09.2022



### Challenges Consumer wants colored card board Consumer needs to change Interrupted supply Legislation chains motivation CO<sub>2</sub> trash -> product Business model Motivation for necessary company? Knowledge of better design goes At least 70% if too slow from recycler to producer environmental impact Problem transition theory and reality The numbers are matching

"Challengs"and "Solutions"

## **Product Design**

Consumer must improve

Solutions



Design principles

Improve communication between producer + recycler

#### Examples

Too many different plastics

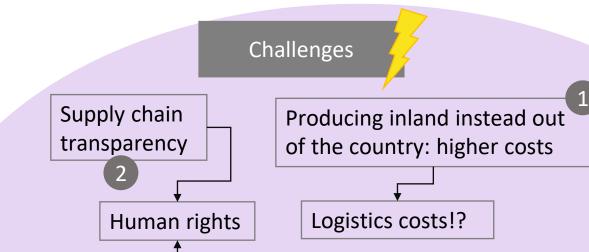
Raw materials impact

95% of weight is recycelt of a car

SWAP bycicle

Back to the Big Picture

### **Purchase & Production**



Buying from unsustainable suppliers vs. Criticizing them for methods

Short time solutions vs.
Longtime sustainable solutions

Difficulties to get funding for sustainable projects

Results

Stable and cheep energy supply + energy consumption regulations

#### Solutions

2 Block chain - switch (in thinking/doing) to realize 'constant change' continuously

Production in Germany?!

1

Glocalisation
Producing locally again

Remanufacturing

Second life parts



Component supplier resilient supply chain

Motivation

Current situation makes changes necessary

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Challenges Logistic & Sales More regulations? (legislation) How can sales force of Every product with info (how companies push circular can we motivate intrinsically?) aspects? Solutions Where to put it? Material chain error Cheaper to throw Material depos energy waste? Cradle to cradle building industry away than reselling Madaster = material passport Think about packaging Take-back is difficult?!? Informative / educational + Optimizing transport User experience burning is not the unique solution Eco system More information on the packaging? IT-Platform Change regulations -> declaration on packaging must Examples be "clear" **Buildings** as material banks Grey coloured Reuse packaging in paper packaging User-friendly take the industrial field back systems! Back to the Big Picture

Reuse

Repurpose the product

Sharing concepts
-> less materials
produced

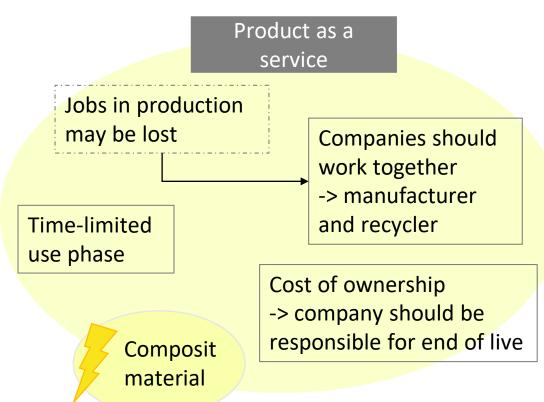
We can change

Intrinsic motivation



Keep the value of a product -> recycling only at the end

Business models that support repair a required Cost of repair is higher than cost of new product





Challenges End of life Phase Only 75% recycling rates "Current mindset Solutions by mass are required by causes automation **Business models** legislation for electronic and materials error!" devices 75 % **Upcycling** Remanufature LCA: Currently, only implementation Impacts where? of bulk recycling (materials with Repurpose Biodegradable Which impact is the largest mass) and products worth? downcycling Limited number "Innovation is not always more sustainable!" of recycling cycles Examples Blue citys: hub for **Products** innovative companies Food waste as Materials raw material **Furniture** Downcycling of from pallets wind energy & Hemp solar energy plants Mango leather → food goes to clothing! Rolls-Royce turbine **Plastics** Back to the Big Picture