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VERSITÄT

Interview – Navigating the Remanufacturing Trilemma: Balancing Customer, Manufacturer, and Lawmaker Interests

Guide

Basics

- Personal information will stay annonymous
- Audio Recordings will be erased after the papers release
- Summary of the interview will be provided

- Company
  - Area
  - Employees
- Current occupation
- Professional Experience
- Circular Economy…
  - Experience
  - Knowledge
  - Application
  - Certificates

Scope of Research

- Three mayor stakeholder
  - Customer
  - Manufacturers
  - Legislators
- Three research questions:
  - Which requirements do customers exhibit in context of circular economy?
  - Which requirements do manufacturers exhibit in a circular economy?
  - Which requirements do legislators exhibit in a circular economy?

- Literature research:
  - 880 papers found
  - 75 papers concidered useful
- Outcome
  - 51 Specific requirements
  - 11 General requirements

Goal of this interview

- Discussing synergies
- Discussing conflicts
- Rating:
  - 2 strong synergy (e.g. legal obligation)
  - 1 weak synergy (e.g. desire/ demand)
  - 0 neither (e.g. indifference)
  - -1 weak conflict (e.g. expense/ incconvenience)
  - -2 strong conflict (change of business/ behavior)

General Requirements	Synergies and Conflicts		
	C	M	L
(State) subsidies and incentives			
Branding and (Intellectual) property			
Circular/Sustainable business models			
Compliance with Regulations			
Data Handling			
information transparency			
Process Design			
Product Characteristics			
Product Design			
Product Labeling			
Strategic Cooperation			

*Customer (C), Manufacturer (M), Legislator (L)

(State) subsidies and incentives

- Consumers want incentives to return products to their manufacturers [24]
- Consumers want incentives for sustainable consumption [24]
- Regulations should incentivize sustainable production and consumption [27]

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Branding and (intellectual) property

- Companies should demonstrate a commitment to environmental protection and social responsibility
- Products should prove authenticity
- Manufacturers should build consumer trust through transparent communication and marketing strategies

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Circular/Sustainable business models

- Consumers want price-competitive circular business models
- Consumers want alternatives to linear consumption (e.g. rental, leasing, product-as-a-service, remanufactured products)
- Manufacturers should provide Product-Service Systems (rental, leasing, or subscription)

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Compliance with Regulations

- Compliance with ESPR
- Compliance with GDPR
- Compliance with EPR
- Compliance with the Ecodesign Directive
- Provide ESG reporting

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Data Handling

- Manufacturers should implement secure data management systems
- Provide data erasure

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Information transparency

- Companies should increase consumer trust through transparency about sustainability
- Consumers want transparency in product life cycle
- Consumers want information about environmental impact
- Consumers want information about reparability
- Consumers want comprehensive traceability information
- Products should contain sustainability information
- Provide pre-contractual information on product lifespan
- Provide pre-contractual information on reparability

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Process Design

- Manufacturing processes should be sustainable
- Manufacturing processes should minimize waste
- Manufacturing processes should minimize energy consumption
- Manufacturing processes should minimize water consumption

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Product Characteristics

- Products should be durable
- Products should be recyclable
- Products should be repairable
- Products should be customizable
- Products should be locally sourced
- Products should include eco-labels
- Products should contain recycled materials

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Product Design

- Products should be designed for durability
- Products should be designed for efficient material use
- Products should be designed for easy disassembly
- Products should be designed for recycling/repair/reuse/remanufacturing
- Products should be designed with modular components
- Products packaging should be recyclable
- Chosen materials should be durable
- Chosen materials should be recyclable
- Chosen materials should have a low environmental impact

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Product Labeling

- Manufacturers should adopt Digital Product Passports
- Provide recyclability labeling

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Strategic Cooperation

- Manufacturers should aim for strategic partnerships to provide Product-Service Systems
- Manufacturers should aim for co-creation across the value chain

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Final discussion and further thoughts?

General Requirements	Synergies and Conflicts		
	C	M	L
(State) subsidies and incentives	2	1	-1
Branding and (Intellectual) property	2	1	1
Circular/Sustainable business models	2	2	0
Compliance with Regulations	2	-2	2
Data Handling	2	0	2
Information transparency	2	-2	2
Process Design	0	1	1
Product Characteristics	2	-1	2
Product Design	2	1	1
Product Labeling	2	2	2
Strategic Cooperation	0	2	0