

# Circular Business Models

Tell us your story about your business idea and explain how it works within the circular business network. Prototype the architecture of your circular business and show us the benefits of it.

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# Circular Business Models Wheel

A process-oriented solution, concerned with using residual outputs from one process as feedstock for another process, which benefits from geographical proximity of businesses

**Industrial symbiosis**

Exploiting the residual value of resources: collection and sourcing of otherwise "wasted" materials or resources to turn these into new forms of value

**Extend Resource value**

Providing the capability or services to satisfy user needs without needing own physical products

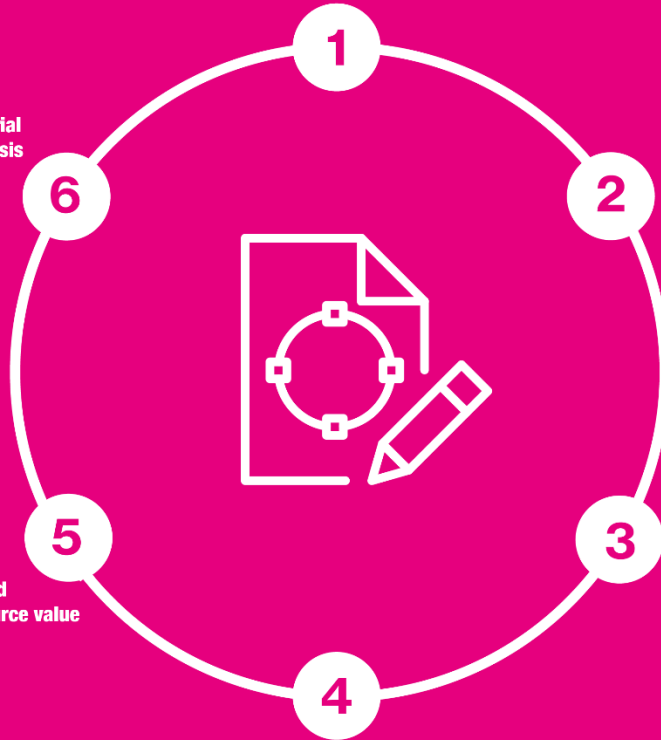
**Provide and perform**

**Extend product value**

Exploiting residual value of products – from manufacturing to consumption and then back to manufacturing – or collection of products between distinct business entities

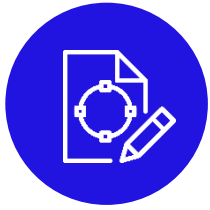
**Long-life**

Business models focused on delivering long-product life, supported by design for durability and repair for instance



**Encourage sufficiency**

Solutions that actively seek to reduce end-user consumption through principles such as durability, upgradability, service, warranties, reparability and a non-consumerist approach to marketing and sales



# New paradigm of doing business

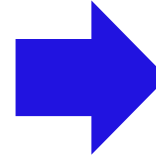
Hieminga (2015): Rethinking finance in a circular economy  
Kooloos et al. (2016): Money makes the world go round  
Hofmann (2017): Circular added value

## CONVENTIONAL BUSINESS MODELS

## CIRCULAR BUSINESS MODELS

### VALUE CREATION STRUCTURE

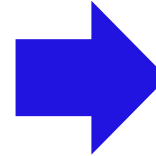
Value chain ends at the last customer/ user



Value circle – Customer/ user are part of the value creation processes

### COLLABORATION

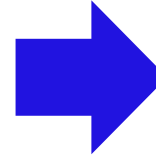
Traditional buyer-supplier relationships



Companies operate in a circular business network (actors who participate in the value circle) that often involve a strong element of collaboration and co-creation

### OWNERSHIP

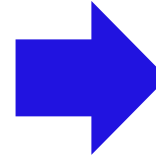
Ownership is central for the consumption and use of products and services



Access to a service is more important than ownership of a product that delivers the service

### SUCCESS MEASUREMENT

Success is measured in financial cost benefit analyses



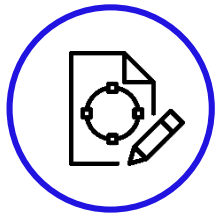
Success is measured in balanced ecological, social and financial indicators



# Types of business models

Characteristics/ Key aspects	Long Life Model	Modularity Model	Re-Value Model	Access Model	Service Model
<b>Ownership of product</b>	Customer	Customer	Customer	Company	Company
<b>Revenue streams (for company)</b>	Sales of initial product, Post-purchase services	Sales of initial product, Sales of spare parts	Sales of repaired/ refurbished products /recycled materials, Repair services	Access fee	Service fee
<b>Realization of resource efficiency/ Value exploitation</b>	Reduction in resource consumption through longevity of product	Reduction in resource consumption through lifetime extension	Addition of new value to products/materials after first life	High utilization per product, pay-per-use has effect on customer's use habit	Maximal value exploitation of resources due to professional planning
<b>Realization of resource circularity/ Material loop</b>	Encouragement of second-hand market and repair/ service market	Encouragement of reuse by facilitating repair/ upgrade	Encouragement of reuse by enabling second life	Prolongation of EOL through regular maintenance	Prolongation of EOL through regular maintenance
<b>Collaboration amongst stakeholders</b>	High quality demand throughout supply chain	Guarantee of compatibility between components	Knowledge transfer on technology, use patterns, failure mechanisms	Return of product post-consumption, Company-customer relationship	Recollection of product/ materials; direct feedback from customers
<b>Product Design</b>	Design for durability and reliability	Modular design/ ease of upgradability; Design for easy exchange, upgrade and repair	Design for easy upgrade and repair	Design for durability and reliability, repair at high service level	Design for durability and reliability, repair at high service level.
<b>Customer motivation</b>	Emotional attachment to brand value /Customer loyalty, Possible revenues from post-use sales	Adaptability and upgradeability of individual needs, Environmental awareness	Environmental awareness, Economic feasibility of upgraded/ repaired products	Flexible short-term solution, Economic feasibility, Convenience of product return	Delegation of task to professional

Source: Emmerich, Johanna (2017); "Identification of Circular business models and shortlists of applicable dematerialization options" PolyCE, Deliverable 1.1



# Circular Business Models

Business modeling is about building logic of how the business of firm works

Drawing sheet for designing, visualizing, and developing your circular business model

1. The questions in each field give you instructions for filling out the building blocks
2. You can add some of your post-its from your circular system prototype to the template
3. Visualize (words, sentences, drawings, etc.) further ideas, thoughts, impulses, and visions on post-its to each building block
4. Circular business modelling is an iterative process of continuous learning with no determined starting or ending point
5. Maybe you have different circular business ideas?



# Circular Business Modelling



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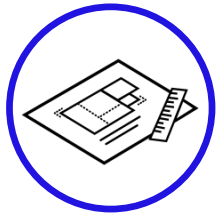
Print out in DIN  
A3 or bigger

# Circular Business Canvas



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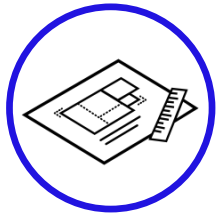
# Circular business model check list

## Implementation of circular business models

fair, neutral, good or excellent

	<b>Degree of consideration</b>			
Do you provide a platform to allow collaboration among product users?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you sell products or deliver and provide services?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you retain ownership of your products during the use-phase?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is the circular business model an ambition of individuals (you) or is it largely supported by the company?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are your customers and suppliers aware of circular business solutions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you have product-take-back programs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you involve customers as well as suppliers in your value-added processes (co-creation)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How closely do you cooperate with your customers, suppliers and the whole circular business network?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are there any legislations or government regulations that need to be followed for implementing circular business model (in terms of product liability, parts recycling, materials usage etc.)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>






# Circular business model check list



## Implementation of circular business models

fair, neutral, good or excellent

	Degree of consideration
Do you consider environmental and social aspects in the cost-benefit analysis (beside financial aspects)?	
Do you know the financial and accounting impact of providing services instead of selling products?	