

# Circular Design Cases (<http://circulardesigncases.nl/>)

Part of CIRCO creating business through circular design

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## Method & Tools

Several tools have been prepared for the process. These tools are applied in the process and will be updated on the basis of both experience in the process and feedback on the platform. You are happily invited to provide feedback or suggest alternative or complementary tools available to you.

## Products that Last

*Products that Last* is the result of a three-year research effort into the business opportunities and design challenges that prolonged product lifespans may present. A longer product lifespan is a cornerstone of the circular economy, because it helps to slow down the speed of the flow of materials and goods through society thus reducing waste. It addresses consumption practices, and ‘buys us time’ to figure out ways of closing materials loops. The book covers business models and design strategies that make it possible to earn money on products that last longer (through reuse, repair, refurbishment, remanufacturing). This philosophy is part of the circular economy.

### Business Model Archetypes

The five business model archetypes for “Products That Last” are intended to serve as a starting point for businesses and designers in thinking about longer-lasting products in a circular economy. They range from being primarily about product to being primarily about service. Click on the archetypes to see the examples.

#### **1. The classic long-life model** (<http://circulardesigncases.nl/examples/category/business-model-archetypes/classic-long-life-model/>)

Primary revenue stream from sales of high-grade products (e.g. the German company Miele’s washing machines) with a long useful life.

#### **2. The hybrid model** (<http://circulardesigncases.nl/examples/category/business-model-archetypes/hybrid-model/>)

Combination of a durable product and short-lived consumables (e.g. Océ-Canon, printers and copiers). Main revenue stream from repeat sales of the fast-cycling consumables.

#### **3. The gap-exploiter model** (<http://circulardesigncases.nl/examples/category/business-model-archetypes/gap-exploiter-model/>)

Exploits ‘lifetime value gaps’ or leftover value in product systems. Main revenue stream from selling products, parts and services based on the mixed product life of components (e.g. printer cartridges outlasting the ink they contain, shoes lasting longer than their soles).

#### **4. The access model** (<http://circulardesigncases.nl/examples/category/business-model-archetypes/access-model/>)

Provides product access rather than ownership (e.g. the Dutch company GreenWheels’ shared car use). Main revenue stream from payments for product access.

#### **5. The performance model** (<http://circulardesigncases.nl/examples/category/business-model-archetypes/performance-model/>)

Delivers product performance rather than the product itself (e.g. hours of thrust in a Rolls-Royce, ‘Power-by-the-Hour’ jet engines). Primary revenue stream from payments for performance delivered.

### Circular Design Strategies

Clustering the result of existing research done at Delft University of Technology has led to the identification of six design strategies for circular product design. Click on the strategies to see the examples.

**1. Design for Product Attachment and Trust** (<http://circulardesigncases.nl/examples/category/circular-design-strategies/product-attachment-and-trust/>)

Creating products that will be loved, liked or trusted longer

**2. Design for Product Durability** (<http://circulardesigncases.nl/examples/category/circular-design-strategies/product-durability/>)

Developing products that can take wear and tear without breaking down

**3. Design for Standardization & Compatibility** (<http://circulardesigncases.nl/examples/category/circular-design-strategies/standardization-compatibility/>)

Creating products with parts or interfaces that fit other products as well

**4. Design for Ease of maintenance and Repair** (<http://circulardesigncases.nl/examples/category/circular-design-strategies/ease-of-maintenance-and-repair/>)

Enabling products to be maintained in tip-top condition

**5. Design for Upgradability & Adaptability** (<http://circulardesigncases.nl/examples/category/circular-design-strategies/upgradability-adaptability/>)

Allowing for future expansion and modification

**6. Design for Dis- and Reassembly** (<http://circulardesigncases.nl/examples/category/circular-design-strategies/dis-reassembly/>)

Ensuring products and parts can be separated and reassembled easily

source: [www.productsthatlast.nl](http://www.productsthatlast.nl) (<http://productsthatlast.nl/site/app/index2.html#/page/0/6>)



source: [www.productsthatlast.nl](http://www.productsthatlast.nl) (<http://www.productsthatlast.nl>)

## Circular Design Toolbox

The Circular Design Toolbox is applied in the process and will be updated on the basis of both experience in the process and feedback on the platform.

### Circular Design Checklist

This document provides a set of design elements underlying the six Products that Last design strategies. It is prepared by Reversed Concepts as some sort of checklist to support designers in starting to work with the design strategies. It is based on publications also used as input for the Products that Last framework but (explicitly) not part of the framework. In working with the Circular Examples and Design Cases the checklist will be tested and adjusted.

- Compact presentation of the checklist ([http://circulardesigncases.nl/wp-content/uploads/2015/04/circular-design-checklist\\_version-0-9\\_150420.pdf](http://circulardesigncases.nl/wp-content/uploads/2015/04/circular-design-checklist_version-0-9_150420.pdf))
- Underlying document including bibliography ([http://circulardesigncases.nl/wp-content/uploads/2015/04/circular-design-checklist\\_bibliography\\_january2015.pdf](http://circulardesigncases.nl/wp-content/uploads/2015/04/circular-design-checklist_bibliography_january2015.pdf))

In the May 7th workshop we have tested the checklist for the first time by providing a set of cards (<http://circulardesigncases.nl/wp-content/uploads/2015/05/circular-design-cards-v1-1.pdf>) (on business card format) to all participants to guide them in applying the circular design strategies. It is too early to draw any conclusions rather than it was very usefull, much infomation to process in a short timeframe and not all definitions were that clear. Your invited to check the cards and share your opinion with us.

#### Business questions

1. Value proposition and customer relationships
2. Revenue model and cost structure
3. Key activities and key resources
4. Distribution and key partners

#### Added Value Elements

- Sales
- Operational services
- Installation services
- Maintenance services
- Commercial services
- Supportive services
- Logistic services
- Leasing , renting and sharing
- Platform services
- Recycling

In collaboration with:



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(<http://www.reversedconcepts.nl>)



(<http://www.clicknl.nl/design/circo/>)

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