

# Sustainable Business Design With Business Model Patterns

ISPIM Workshop (2.08) | Monday 8 June 2020 | 12:15-13:15

Prof. Dr. Florian Lüdeke-Freund, ESCP Business School

Prof. Dr. Henning Breuer, HMKW & UX Berlin Innovation Consulting



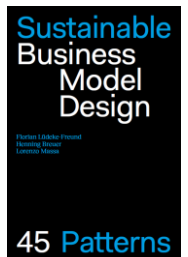
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# The team behind the patterns

Florian Lüdeke-Freund | ESCP Berlin (presenting)

Henning Breuer | HMKW & UX Berlin Innovation Consulting (presenting)

Lorenzo Massa | University of Aalborg

Sarah Carroux | University of Hamburg

Alexandre Joyce | DesjardinsLAB



## BACKGROUND: BUSINESS MODEL INNOVATION FOR SUSTAINABILITY

### *What is a key requirement for sustainable development?*

- Sustainable business must become “the new normal” (Schaltegger et al., 2016)

### *What is an approach for advancing sustainable business?*

- Business model innovation for sustainability (Bocken et al., 2014; Lüdeke-Freund et al., 2019)

### *How can business model innovation for sustainability be fostered?*

Patterns are proposed as a solution to make collective experience and knowledge tangible and to allow for selecting, refining, and applying different business models (e.g. Gassmann et al., 2014; Osterwalder & Pigneur, 2009; Remane et al., 2017).

### *What was missing?*

- I. Definition of the notion of sustainable business model (SBM) pattern
- II. Consolidation of current knowledge on SBM patterns
- III. A useful overview to support business model innovation for sustainability

## BACKGROUND: CHRISTOPHER ALEXANDER'S "PATTERN THEORY"

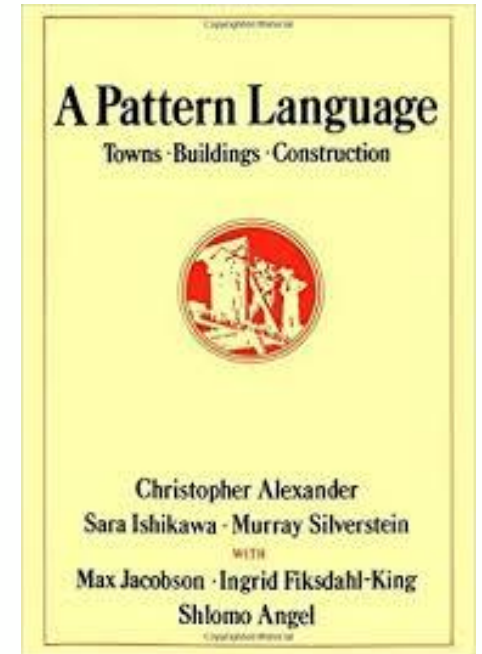
**"Each pattern describes a problem which occurs over and over again in our environment, and then describes the core of the solution to that problem, in such a way that you can use this solution a million times over, without ever doing it the same way twice."** (Alexander et al., 1977, p. X)

### Patterns

- Reusable, proven solutions to recurring problems
- Derived empirically
- Described encyclopedically

### Prominent examples of business model patterns

- Osterwalder, A., Pigneur, Y. & Smith, A. (2010). *Business Model Generation*.
- Gassmann, O., Frankberger, K. & Csik, M. (2014). *The Business Model Navigator*.

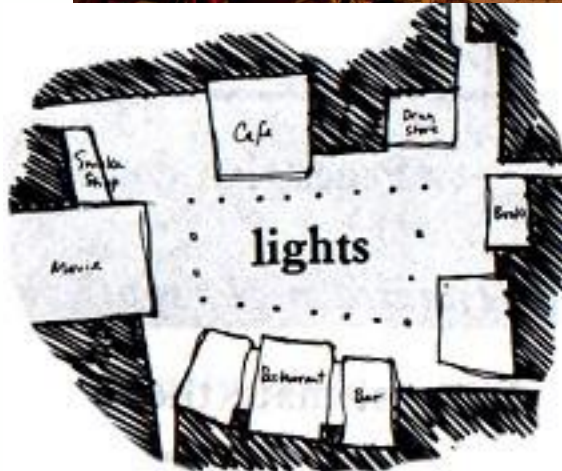




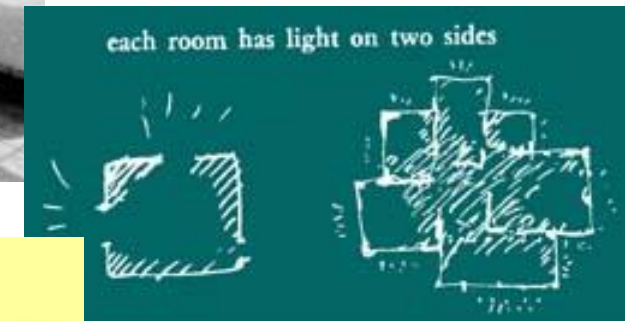
# THEORETICAL BACKGROUND: CHRISTOPHER ALEXANDER'S "PATTERN THEORY"



“Night life”



“Light on two sides  
of every room”



## BACKGROUND: BUSINESS MODEL PATTERNS



“Razor and Blade”



“Green Razor and Blade”

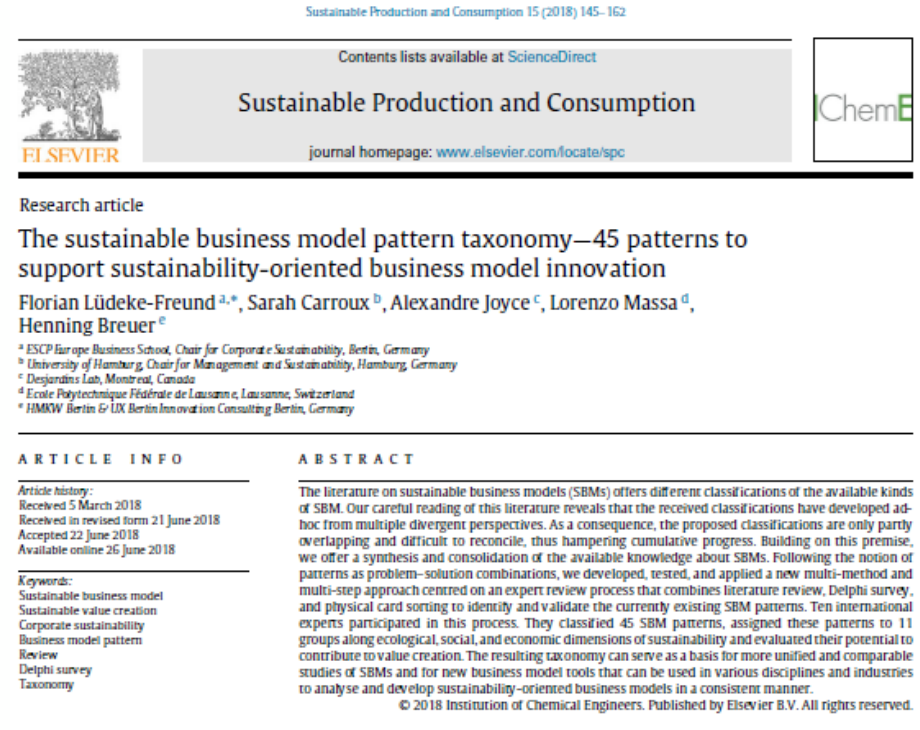
# BACKGROUND: RESEARCH ON SBM PATTERNS

**Business model patterns** allow storing, communicating, and making use of proven business model solutions:

- **Freemium** business models (e.g., Aravind)
- **Circular economy** business models (e.g., Interface)
- **Product-service** business models (e.g., Interface)
- **Multi-sided platform** business models (e.g., Uber)

...

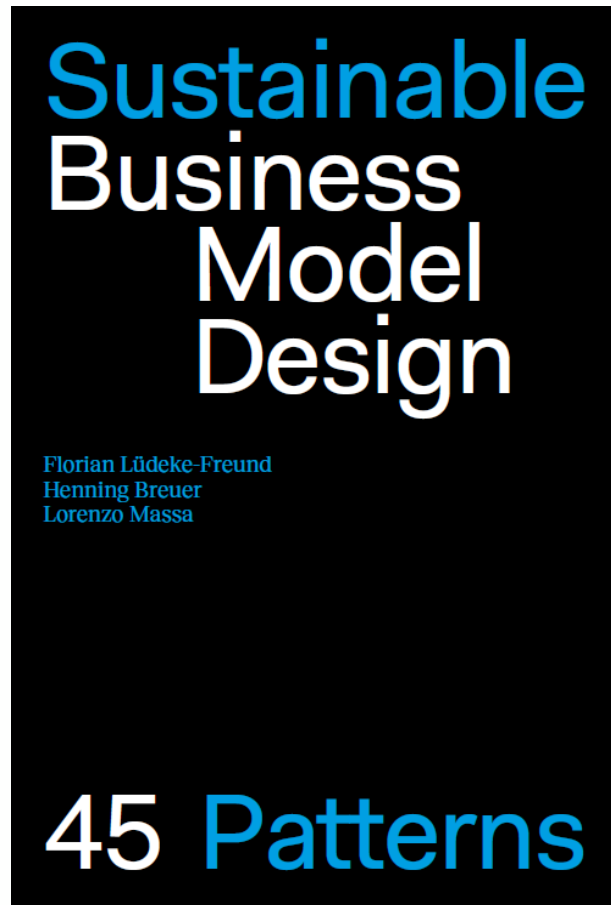
We identified **45 patterns** to support business model innovation for sustainability.



Lüdeke-Freund, Carroux, Joyce,  
Massa & Breuer, 2018,  
<https://doi.org/10.1016/j.spc.2018.06.004>



# SUSTAINABLE BUSINESS MODEL DESIGN: 11 PATTERN GROUPS



The eleven  
pattern  
groups at  
a glance

1

**Pricing & Revenue Patterns**  
primarily address the revenue model of a business model, i.e. these patterns define how offerings are priced and revenues generated.

6

**Giving Patterns**  
help donate products or services to target groups in need, i.e. these patterns define how costs are covered and social target groups are reached.

7

**Access Provision Patterns**  
create markets for otherwise neglected target groups, involving modified value propositions, channels, revenue, pricing and cost models, i.e. these patterns define how value propositions are designed, delivered, and to whom.

2

**Financing Patterns**  
address the financing model within a business model, i.e. these patterns define how equity, debt, and operating capital can be acquired.

3

**Eco-Design Patterns**  
integrate ecological aspects into key activities and value propositions, i.e. these patterns define how processes and offerings are designed to improve their ecological performance over their entire life cycle.

8

**Social Mission Patterns**  
integrate social target groups in need, including otherwise neglected groups, either as customers or productive partners, i.e. these patterns define how customers, partners, and employees are defined and integrated.

9

**Service & Performance Patterns**  
emphasize the functional and service value of products and offer performance management, i.e. these patterns are special in how value propositions are defined and delivered.

4

**Closing-the-Loop Patterns**  
help integrate the idea of circular material and energy flows into partnerships, key activities, and customer channels, i.e. these patterns offer alternative ways of how materials and energy flow into, out of, and return to a company.

5

**Supply Chain Patterns**  
modify the upstream (partners, resources, capabilities) and/or downstream (customers, relationships, channels) components of a business model, i.e. these patterns define how inputs are sourced and target groups are reached.

10

**Cooperative Patterns**  
integrate a broad range of stakeholders as co-owners and co-managers, i.e. these patterns are special in how partners are defined and how the organization is governed.

11

**Community Platform Patterns**  
substitute resource or product ownership with community-based access to resources and products, i.e. these patterns offer alternatives to how value propositions are defined and delivered.

# SUSTAINABLE BUSINESS MODEL DESIGN: EXEMPLARY PATTERN



**Challenge:** Traditional business models often build on the idea of constant sales growth and thus increasing resource consumption. But how to open up new and growing revenue streams while reducing resource use?

**Solution:** The solution is a modular offering that combines a durable product ('razor') with shorter-lived consumables ('blade'). Unbundling an offering in this way can help save resources and reduce negative impacts.

**Related patterns:** Product-Oriented Services and Use-Oriented Services; Product Design ...

**Outlook:** Further considerations, such as limitations.

**References:** Sources and further readings.

# SUSTAINABLE BUSINESS MODEL DESIGN: 45 PATTERNS

## Freemium

Ecologically and socially superior offerings often face a lack of demand. Limited purchasing power of target groups, competitors' lower prices, and a lack of experience can lead to critical market barriers. The Freemium pattern helps in overcoming these barriers with free basic offerings.

#pricing  
#customer barriers  
#monetizing access  
#sustainability

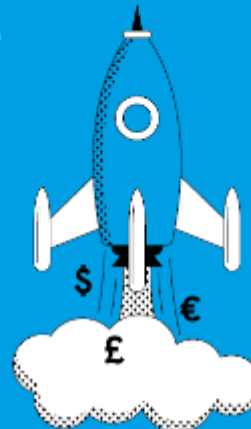


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## Innovative Product Financing

When potential customers cannot afford or do not want to purchase a new, uncommon, or radically different offering, the Innovative Product Financing pattern can help. Leasing, renting, or progressive purchasing schemes can be a door opener for sustainable offerings.

#pricing  
#financing schemes  
#customer barriers  
#early adoption



20

## Buy One, Give One

Some social groups need a product or service, but lack access to it or cannot afford to buy it. In the Buy One, Give One pattern a company donates goods or services to those in need in a fixed ratio to regular sales, thereby creating both commercial and social value.

#pricing  
#monetizing access  
#customer barriers  
#sustainable economic integration



23

... and many more.

## THE WORKSHOP: “CRISIS-DRIVEN, SUSTAINABLE BUSINESS MODEL DESIGN”

### Task

- Sketch a **sustainable business model (SBM) solution** to a Corona-induced challenge.
- Take the **company’s perspective**.
- Use **SBM patterns** to come up with a solution that has **ecological and/or social benefits**.

### Steps

1. Set up **breakout groups** and go to Mural.
2. You have **25 minutes** to come up with a solution.
3. Present your **results** after the breakout session.
4. **Discuss and reflect** on the experience of using SBM patterns.

## THE WORKSHOP: “CRISIS-DRIVEN, SUSTAINABLE BUSINESS MODEL DESIGN”

### Workshop procedure and instructions (25 mins)

1. **Review case and SBM pattern.** (5 mins)
2. **Collect ideas** for your business model solution, considering the value proposition, stakeholder, and revenue elements of a business model. (9 mins)
3. **Vote for the most promising ideas** to be used for your business model solution. Every participant has two votes per business model element. (3 mins)
4. **Sketch a business model solution** based on the selected ideas; prepare a 2-minutes pitch. (8 mins)



## THE WORKSHOP: “CRISIS-DRIVEN, SUSTAINABLE BUSINESS MODEL DESIGN”

### Case 1: Energy poverty – Buy One, Give One

- “Adequate warmth, cooling, lighting and the energy to power appliances are essential services needed to guarantee a decent standard of living and citizens' health. **Energy poverty** occurs when a household suffers from a lack of adequate energy services in the home.” (<https://www.energypoverty.eu/>)
- In 2018, **6.6% of all European households** had problems to pay their heating, electricity, etc. bills. We expect that this number will increase due to the Corona crisis.
- Many private persons and families suffer from **declining incomes**. At the same time, energy companies suffer from declining sales and increasing costs of making customers pay.
- The resulting challenge for a power company: **How Might We** provide energy to customers who cannot afford to pay for it because they lost their income due to the Corona crisis?
- How can the **Buy One, Give One** pattern be used to tackle this challenge?



# SUSTAINABLE BUSINESS MODEL DESIGN: EXEMPLARY PATTERN

## Buy One, Give One

Some social groups need a product or service, but lack access to it or cannot afford to buy it. In the Buy One, Give One pattern a company donates goods or services to those in need in a fixed ratio to regular sales, thereby creating both commercial and social value.

#giving  
#providing access  
#customer barriers  
#low-income customer segments



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**Challenge:** In both developed and developing countries, low-income customer segments often lack access to basic products and services. Businesses wanting to help solve such problems are challenged to use their core businesses to do so.

**Solution:** Donating goods or services in a fixed ratio to a company's core business sales or revenues can add a social value component to its value proposition. This allows customers to express their social commitment through their regular purchases.

***How Might We provide energy to customers who cannot afford to pay for it because they lost their income due to the Corona crisis?***

# RESULTS OF MURAL COLLABORATIVE BUSINESS MODEL IDEATION (1)

## 1 Review the Buy One, Give One pattern (sticky exercise)

Do you understand what the Buy One, Give One pattern is about? If yes, add a green sticky note to the grey area below; if not, add a red sticky note. Write your name onto your sticky.

⌚ 5 minutes



**Step 2 Instructions:** Write down any ideas that come to mind that address your business model challenge. We focus on three business model elements (9 minutes).

**Value Proposition:** What can be offered to energy-poor customers? What kinds of offerings are needed - what kinds of products or services? What is offered at a price, what is offered for free? Which benefits can be offered - what do they need? ...

**Stakeholders:** Who are the target customers? Who else is involved (e.g. business partners, donors, NGOs, public institutions ...)? Who are the key stakeholders involved in this Buy One, Give One business model? ...

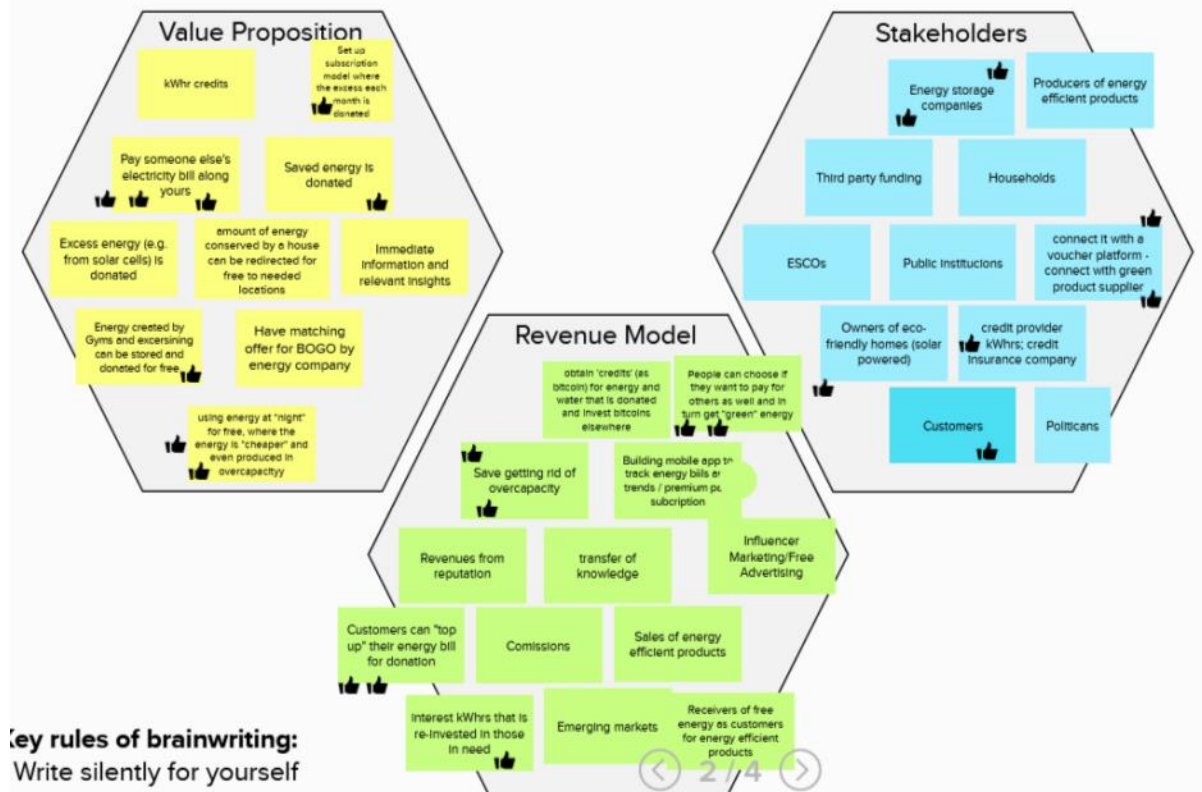
**Revenue Model:** Where do revenues come from in this model? Who is paying what? What is offered at a price; what is offered for free? Which revenue sources can be identified? ...

**Key rules of brainwriting:** - Write silently for yourself - Defer judgment - Go for volume - Build on the ideas of others - Stay on topic - Encourage wild ideas - Be visual

## 2 Brainstorm business model elements

Write down any ideas that come to mind that address the business model challenge. Remember, the key rules of brainstorming.

⌚ 9 minutes



# RESULTS OF MURAL COLLABORATIVE BUSINESS MODEL IDEATION (2)

## 3 Vote for most promising business model ideas

Vote for the most promising ideas. 6 votes per person - 2 votes for Value Proposition, 2 for Stakeholders, and 2 for Revenue Model.

⌚ 3 minutes

What are the core elements of the value proposition?  
What are the most important stakeholders?  
Which are the most promising revenue models?

**Step 4 instructions:** Prepare a short pitch of the business model solution based on the ideas with the most votes.

How does the business model function, how does it solve the challenge, and how does it allow the company to make a business?  
Prepare a 2-minutes pitch.

[Back-up]

Our Value Proposition consists of ... We are offering .... to [Target Group] ... Who need [dissatisfaction with the current situation] ... Other Stakeholders include ... We generate Revenues through ... We solve the problem of energy poverty by ... Buy One, Give one means that ... We turn this into a business opportunity by ...

## 4 Prepare a short presentation

Summarise your version of the Buy One, Give One business model based on the ideas with the most votes. Prepare a 2-minutes presentation/pitch.

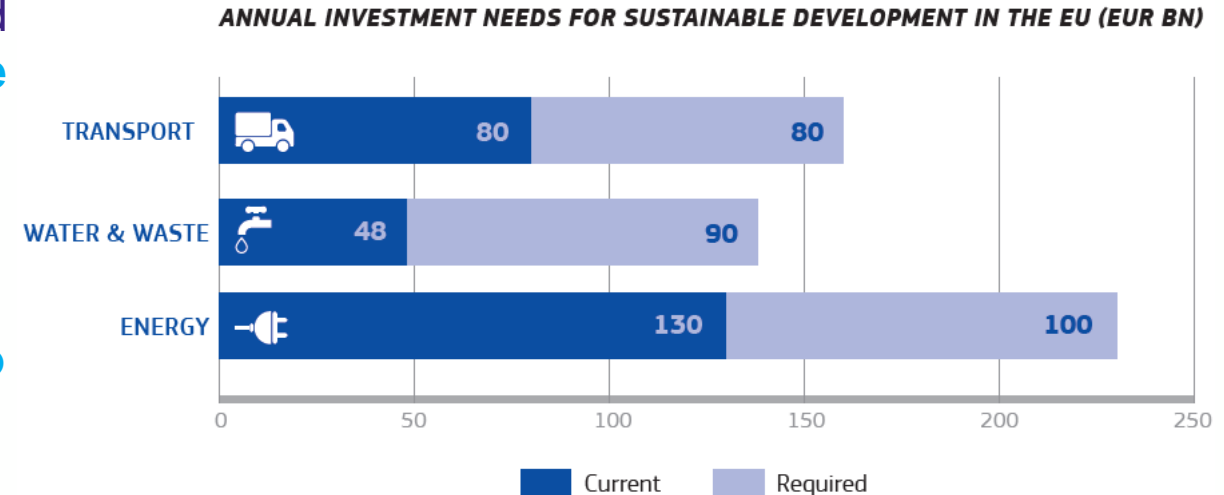
⌚ 8 minutes

Our Value Proposition consists of providing free energy to those in need. Other Stakeholders include private households producing own energy and gyms generating energy by its users. We generate Revenues through saving costs getting rid of overcapacities, better load balancing e.g. at night. We solve the problem of energy poverty by saving energy and donating it for free.

# THE WORKSHOP: “CRISIS-DRIVEN, SUSTAINABLE BUSINESS MODEL DESIGN”

## Case 2: Sustainable investing – Commercially-Utilised Social Mission

- The EU Commission’s “action plan on financing sustainable growth” ([Link](#)) aims to “reorient capital flows towards **sustainable investment**, in order to achieve sustainable and inclusive growth.”
- An additional funding of **€180bn per year** is needed to reach the EU’s energy and climate goals. **Private investors**, putting their money into savings plans, common stock funds, and other instruments, can make important contributions.
- However, private investors are still **very hesitant to invest sustainably**. A lack of transparency and information is one of the main reasons for this.
- The resulting challenge for financial consultants: ***How Might We** overcome the lack of transparency and information in order to motivate private persons to invest their money sustainably?*





# SUSTAINABLE BUSINESS MODEL DESIGN: EXEMPLARY PATTERN

## Commercially Utilised Social Mission

The Commercially Utilised Social Mission pattern helps to satisfy the consumption needs of a social target group with free offerings, while it allows the company to earn revenues from a second, commercial target group. The free offering attracts users from the social target group, who then become a resource for the business (e.g., by providing user data relevant to the commercial target group). This pattern creates social impact while maintaining the company's financial self-sufficiency.

#providing access  
#non-paying customers  
#cross-financing  
#multi-sided platform



**Challenge:** Some social target groups are unable or unwilling to pay for certain products or services. Offering these for free can solve this problem, but how to finance these offerings?

**Solution:** A free offering can attract a social target group. Turning this target group into a resource for a second, commercial target group allows revenues to be generated. Combining a free and a commercial offering enables the creation of a self-sustaining multi-sided platform.

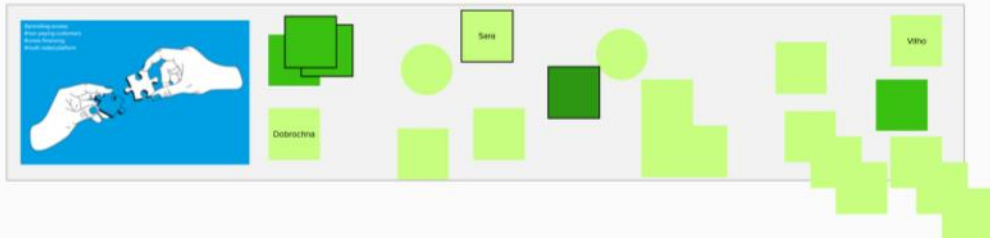
***How Might We overcome the lack of transparency and information in order to motivate private persons to invest their money sustainably?***

# RESULTS OF MURAL COLLABORATIVE BUSINESS MODEL IDEATION (1)

## 1 Review the Commercially-Utilised Social Mission pattern (sticky exercise)

Do you understand what the Buy One, Give One pattern is about? If yes, add a green sticky note to the grey area below; if not, add a red sticky note. Write your name onto your sticky.

⌚ 5 minutes



**Step 2 Instructions:** Write down any ideas that come to mind that address your business model challenge. We focus on three business model elements (9 minutes).

**Value Proposition:** What can be offered to energy-poor customers? What kinds of offerings are needed - what kinds of products or services? What is offered at a price, what is offered for free? Which benefits can be offered - what do they need? ...

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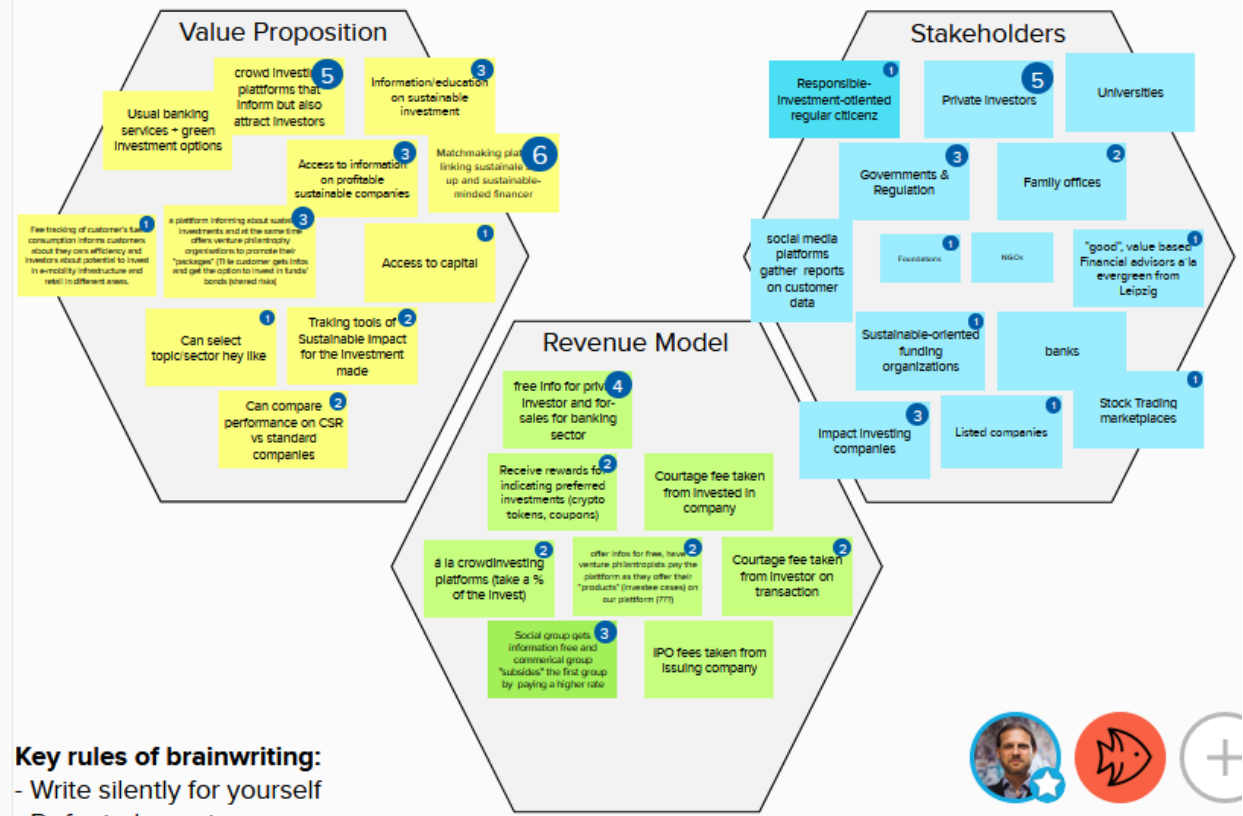
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Write down any ideas that come to mind that address the business model challenge. Remember, the key rules of brainstorming.

⌚ 9 minutes



### Key rules of brainwriting:

- Write silently for yourself  
- Defer judgment

# RESULTS OF MURAL COLLABORATIVE BUSINESS MODEL IDEATION (2)

## 3 Vote for most promising business model ideas

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## 4 Prepare a short presentation

Summarise your version of the Buy One, Give One business model based on the ideas with the most votes. Prepare a 2-minutes presentation/pitch.

⌚ 8 minutes

Our Value Proposition consists of a matchmaking platform.  
We offer information about investment opportunities (sustainable start-ups) free to private investors, and at a cost for financial intermediaries such as banks or professional impact investment companies.  
Sustainable start-ups get better access to funding, while sustainable investors get the information they need about investment opportunities.  
The involved Stakeholders include start-ups, impact investing companies, banks, and private investors.  
We generate Revenues by charging professional financial service providers a fee. Another revenue source can be fees from sustainable start-ups that are successful and issue shares to the market.  
Through matching different stakeholders' interests and satisfying their different needs, we offer a solution to the problem of too little sustainable investment, and at the same time turn this into a business opportunity for ourselves.

# FINAL DISCUSSION AND REFLECTION

## Done well

What worked well in using the patterns?

What are the strengths and opportunities of using patterns to motivate the development of more sustainable business models?

Are the patterns a source of inspiration?

## Do better

Is there something that did not work?

Which weaknesses did you observe in using the patterns?

Are the patterns limiting your creativity?

# THANK YOU!

Stay tuned for “Sustainable Business Model Design”

For updates write to [contact@sustainablebusiness.design](mailto:contact@sustainablebusiness.design)

