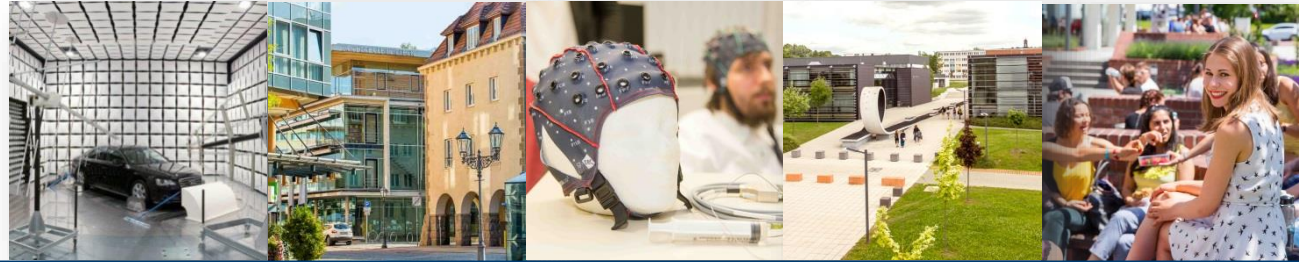


**Westsächsische Hochschule Zwickau**

University of Applied Sciences

HOCHSCHULE FÜR MOBILITÄT | UNIVERSITY FOR MOBILITY



# Sustainable Business Model Patterns and Anti-Patterns

# Agenda

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- Introduction
- Sustainable Business Model Patterns

# Agenda

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- Introduction
- Sustainable Business Model Patterns

# Business Model

- A good **business model** answers:
  - Who is the customer?
  - And what does the customer value?
  - How do we make money in the business?
  - How we can deliver value to customers at an appropriate cost?



(Magretta 2002, pixabay.com)

# Sustainable Business Models



<https://einbisschengruener.com/uebersicht-unverpackt-laeden/>

# Sustainable Business Models



<https://einbisschengruener.com/uebersicht>



# Sustainable Business Models



<https://einbisschengruener.com/uebersicht>



[www.pixa](http://www.pixa)

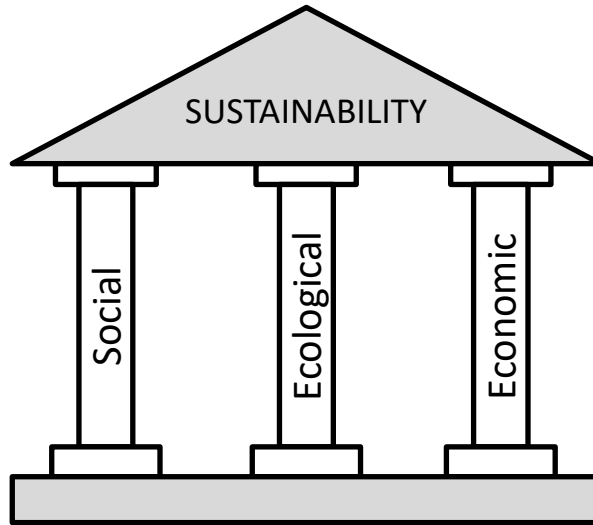


<https://nutrilicious.de/testberichte/sodastream-duo-test/>



# Multidimensional Sustainability

- The integration of sustainable goals in business models is of high importance.
- The triple bottom line-principle is often adapted.
- This calls for reflecting own activities in terms of environmental and social responsibility, in addition to economic obligations.





# Multidimensional Sustainability



# Sustainable Business Models



“A **business model for sustainability** helps describing, analyzing, managing, and communicating  
(i) a company’s sustainable value proposition to its customers, and all other stakeholders,  
(ii) how it creates and delivers this value,  
(iii) and how it captures economic value while maintaining or regenerating natural, social, and economic capital beyond its organizational boundaries.”  
(Schaltegger et al. 2016, p. 268)

www.pixa



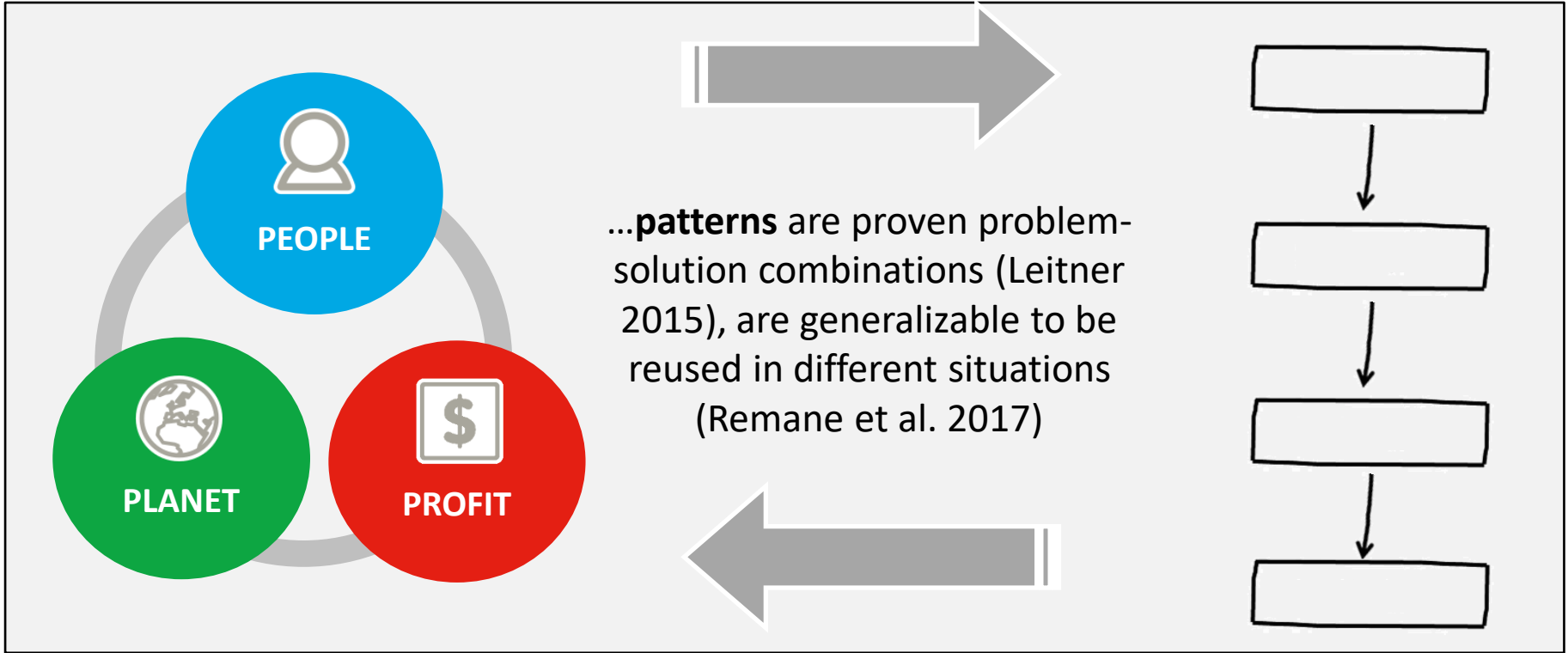
<https://nutrilicious.de/testberichte/sodastream-duo-test/>

# Agenda

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- Introduction
- Sustainable Business Model Patterns

# Sustainable Business Model Patterns



# Sustainable Business Model Patterns

- “A **sustainable business model pattern**
  - describes an **ecological, social, and/or economic problem** that arises when an organisation aims to create value,
  - and it describes the core of a **solution** to this problem that can be repeatedly applied in a multitude of ways, situations, contexts, and domains.” (Lüdeke-Freund et al. 2018, p. 13)

# Sustainable Business Model Patterns

- **45 patterns** to support sustainability-oriented business model innovation are identified
- the patterns are organized into **11 groups** along ecological, social, and economic dimension of sustainability



Sustainable Production and Consumption

Volume 15, July 2018, Pages 145-162



Research article

## The sustainable business model pattern taxonomy—45 patterns to support sustainability-oriented business model innovation

Florian Lüdeke-Freund <sup>a</sup>, Sarah Carroux <sup>b</sup>, Alexandre Joyce <sup>c</sup>, Lorenzo Massa <sup>d</sup>, Henning Breuer <sup>e</sup>

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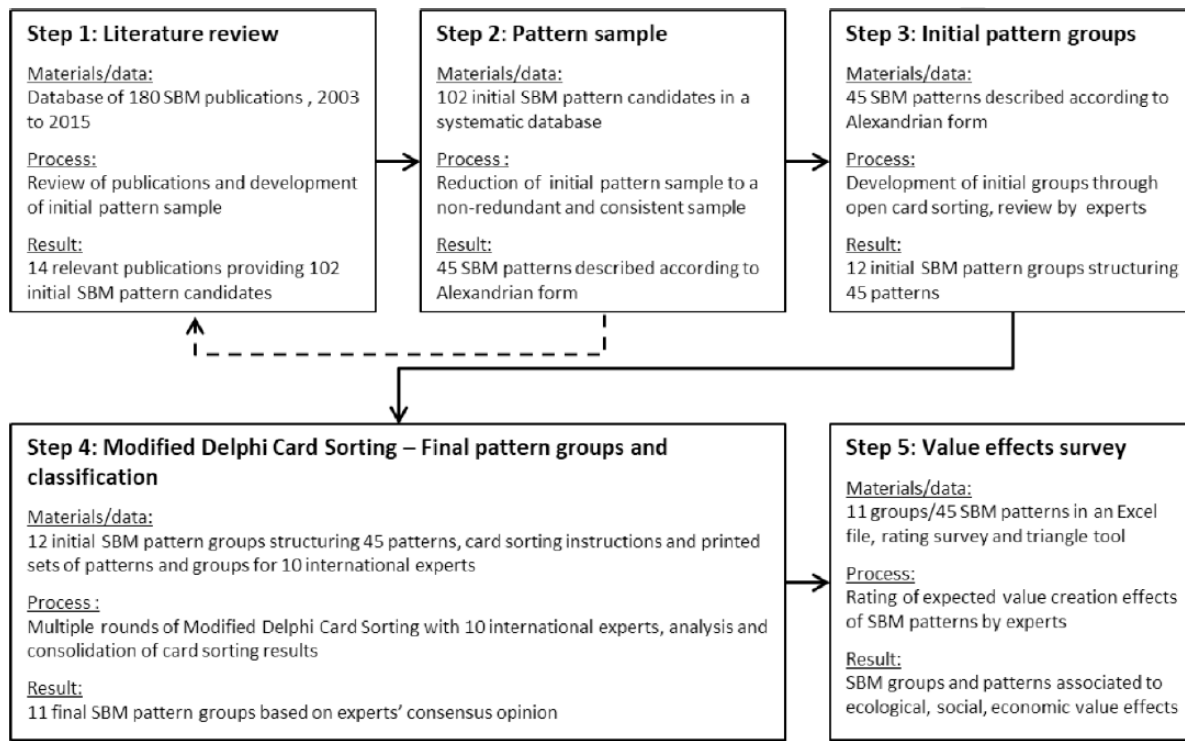
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<https://doi.org/10.1016/j.spc.2018.06.004>

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# Sustainable Business Model Patterns

- Research design:  
five-step approach to  
develop the SBM  
pattern taxonomy



(Lüdtke-Freund et al. 2018, p. 16)



# Sustainable Business Model Patterns

Pattern groups	Included patterns
<b>G1 Pricing &amp; Revenue Patterns</b> Patterns that primarily address the revenue model of a business model, i.e., how offerings are priced and revenues generated.	<ul style="list-style-type: none"> <li>• P7 "Differential pricing"</li> <li>• P11 "Freemium"</li> <li>• P16 "Innovative product financing"</li> <li>• P38 "Subscription model" <i>[Anchor]</i></li> </ul>
<b>G2 Financing Patterns</b> Patterns that address the financing model within a business model, i.e., how equity, debt and operating capital are acquired.	<ul style="list-style-type: none"> <li>• P6 "Crowdfunding" <i>[Anchor]</i></li> <li>• P21 "Microfinance"</li> <li>• P37 "Social business model: no dividends"</li> </ul>
<b>G3 Ecodesign Patterns</b> Patterns that integrate ecological aspects into key activities and value propositions, i.e., how processes and offerings are designed to improve their ecological performance over their entire life cycle.	<ul style="list-style-type: none"> <li>• P13 "Hybrid model/gap-exploiter model" *</li> <li>• P19 "Maximize material productivity and energy efficiency"</li> <li>• P27 "Product design" <i>[Anchor]</i></li> <li>• P39 "Substitute with renewables and natural processes"</li> </ul> <p>* No consensus opinion reached according to 50% PAW-threshold.</p>
<b>G4 Closing-the-Loop Patterns</b> Patterns that help integrate the idea of circular material and energy flows into partnerships, key activities, and customer channels, i.e., how materials and energy flow into, out of, and return to a company.	<ul style="list-style-type: none"> <li>• P5 "Co-product generation"</li> <li>• P15 "Industrial symbiosis" <i>[Anchor]</i></li> <li>• P23 "Online waste exchange platform"</li> <li>• P28 "Product recycling"</li> <li>• P30 "Remanufacturing/next life sales"</li> <li>• P31 "Repair"</li> <li>• P33 "Reuse"</li> <li>• P40 "Take back management"</li> <li>• P42 "Upgrading"</li> </ul>
<b>G5 Supply Chain Patterns</b> Patterns that modify the upstream (partners, resources, capabilities) and/or downstream (customers, relationships, channels) components of a business model, i.e., how inputs are sourced and target groups are reached.	<ul style="list-style-type: none"> <li>• P12 "Green supply chain management" <i>[Anchor]</i></li> <li>• P14 "Inclusive sourcing"</li> <li>• P20 "Micro distribution and retail"</li> <li>• P25 "Physical to virtual"</li> <li>• P26 "Produce on demand"</li> <li>• P35 "Shorter supply chains"</li> </ul>

# Sustainable Business Model Patterns

Pattern groups	Included patterns
<b>G6 Giving Patterns</b> Patterns that help donate products or services to target groups in need, i.e., how costs are covered and social target groups are reached.	<ul style="list-style-type: none"> <li>P2 "Buy one, give one" [Anchor]</li> <li>P3 "Commercially utilized social mission"</li> </ul>
<b>G7 Access Provision Patterns</b> Patterns that create markets for otherwise neglected target groups, involving modified value propositions, channels, revenue, pricing and cost models, i.e., how value propositions are designed, delivered, and to whom.	<ul style="list-style-type: none"> <li>P1 "Building a marketplace" [Anchor]</li> <li>P8 "E-transaction platforms"</li> <li>P9 "Experience-based customer credit"</li> <li>P17 "Last-mile grid utilities"</li> <li>P44 "Value-for-money degrees"</li> <li>P45 "Value-for money housing"</li> </ul>
<b>G8 Social Mission Patterns</b> Patterns that integrate social target groups in need, including otherwise neglected groups, either as customers or productive partners, i.e., how customers, partners, and employees are defined and integrated.	<ul style="list-style-type: none"> <li>P10 "Expertise broker"</li> <li>P18 "Market-oriented social mission" [Anchor]</li> <li>P22 "One-sided social mission"</li> <li>P36 "Social business model: empowerment"</li> <li>P41 "Two-sided social mission"</li> </ul>
(Inclusion Patterns – <u>deleted</u> after the first Delphi round)	n.a.
<b>G9 Service &amp; Performance Patterns</b> Patterns that emphasise the functional and service value of products and that offer performance management, i.e., how value propositions are defined and delivered.	<ul style="list-style-type: none"> <li>P24 "Pay for success"</li> <li>P29 "Product-oriented services"</li> <li>P32 "Result-oriented services" [Anchor]</li> <li>P43 "Use-oriented services"</li> </ul>
<b>G10 Cooperative Patterns</b> Patterns that integrate a broad range of stakeholders as co-owners and co-managers, how partners are defined and how the organisation is governed.	<ul style="list-style-type: none"> <li>P4 "Cooperative ownership" [Anchor]</li> </ul>
<b>G11 Community Platform Patterns</b> Patterns that substitute resource or product ownership with community-based access to resources and products, how value propositions are defined and delivered.	<ul style="list-style-type: none"> <li>P34 "Sharing business" [Anchor]</li> </ul>

# Sustainable Business Model Patterns

## G5 Supply Chain Patterns

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

- P12 “Green supply chain management” [*Anchor*]
- P14 “Inclusive sourcing”
- P20 “Micro distribution and retail”
- P25 “Physical to virtual”
- P26 “Produce on demand”
- P35 “Shorter supply chains”

## Pattern (P5.1) “Green Supply Chain Management”

- **Context:** There is growing pressure on companies to be more transparent and efficient, e.g. in terms of using natural resources and avoiding risks and harms to their supply chain partners and customers.
- **Problem:** The efficiency and transparency of supply chains needs to be improved, inter alia to mitigate ecological and social risks. Companies must reduce the use of non-sustainable materials and find ways to substitute risky inputs, source and reuse waste and surplus materials.
- **Solution:** Sourcing raw inputs and components in the most eco-friendly way possible and reducing or even eliminating toxic inputs. Suppliers are urged to commit to green supply chain management. Partners and networks are crucial for green supply chains.

# Sustainable Business Model Patterns

## G5 Supply Chain Patterns

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

- P12 “Green supply chain management” *[Anchor]*
- P14 “Inclusive sourcing”
- P20 “Micro distribution and retail”
- P25 “Physical to virtual”
- P26 “Produce on demand”
- P35 “Shorter supply chains”

## Pattern (P5.1) “Green Supply Chain Management”

- **Example:** IKEA has developed the “IKEA Way on Purchasing Products, Materials and Services” (IWAY) as a supplier code of conduct. IKEA has systemized and formalized social and environmental standards, which are to be met in the sourcing of raw materials and core services throughout the entire company. This has resulted e.g. in reduced use of toxic chemicals.

# Sustainable Business Model Patterns

## G11 Community Platform Patterns

Patterns that substitute resource or product ownership with community-based access to resources and products, how value propositions are defined and delivered.

- P34 “Sharing business” [Anchor]

## Pattern (P11.1) “Sharing Business”

- **Context:** When a product or other asset is not used very often, when it is expensive or not fully proven (e.g., e-mobiles), many consumers are not willing to purchase it. Individual and exclusive ownership also means that more resources must be used to satisfy consumers’ needs.
- **Problem:** Private ownership of products results in direct risks, liabilities, and high costs for product users, as well as high levels of resource consumption. Private ownership can also inhibit efficient use of products and other assets.
- **Solution:** Sharing, or collaborative consumption, is about matching the supplier side of a platform with the demand side of that platform. The product is shared among a number of users, whenever the individual user needs access to the product. Sharing models have in common that the consumer does not pay for buying a product but only for using it.

# Sustainable Business Model Patterns

## G11 Community Platform Patterns

Patterns that substitute resource or product ownership with community-based access to resources and products, how value propositions are defined and delivered.

- P34 “Sharing business” *[Anchor]*

## Pattern (P11.1) “Sharing Business”

- **Example:** Turo (formerly RelayRides) operates a peer-to-peer car sharing marketplace. Private car owners can rent out their vehicles via Turo’s online platform and thus increase the usage of their vehicles while earning money.

for more details on the defined patterns and groups,  
see appendix in Lüdeke-Freund et al. (2018)

# Sustainable Business Model Patterns

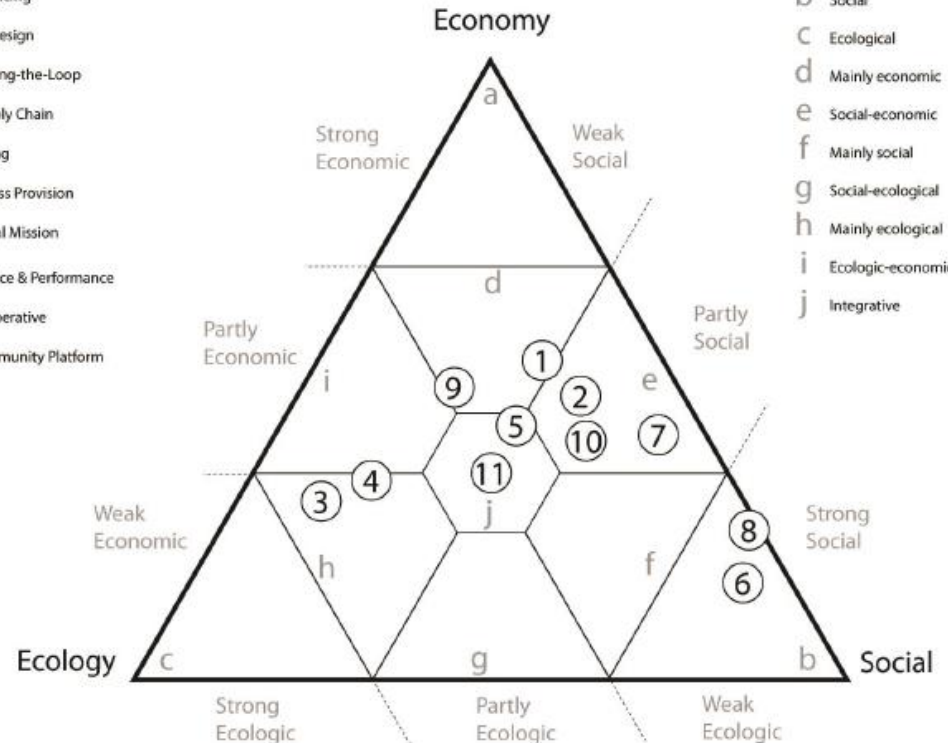
- The taxonomy of sustainable business model patterns (group level in relation to the forms of ecological, social, and economic value creation)

## Pattern Groups

- ① Pricing & Revenue
- ② Financing
- ③ Ecodesign
- ④ Closing-the-Loop
- ⑤ Supply Chain
- ⑥ Giving
- ⑦ Access Provision
- ⑧ Social Mission
- ⑨ Service & Performance
- ⑩ Cooperative
- ⑪ Community Platform

## Forms of Value Creation

- a Economic
- b Social
- c Ecological
- d Mainly economic
- e Social-economic
- f Mainly social
- g Social-ecological
- h Mainly ecological
- i Ecologic-economic
- j Integrative





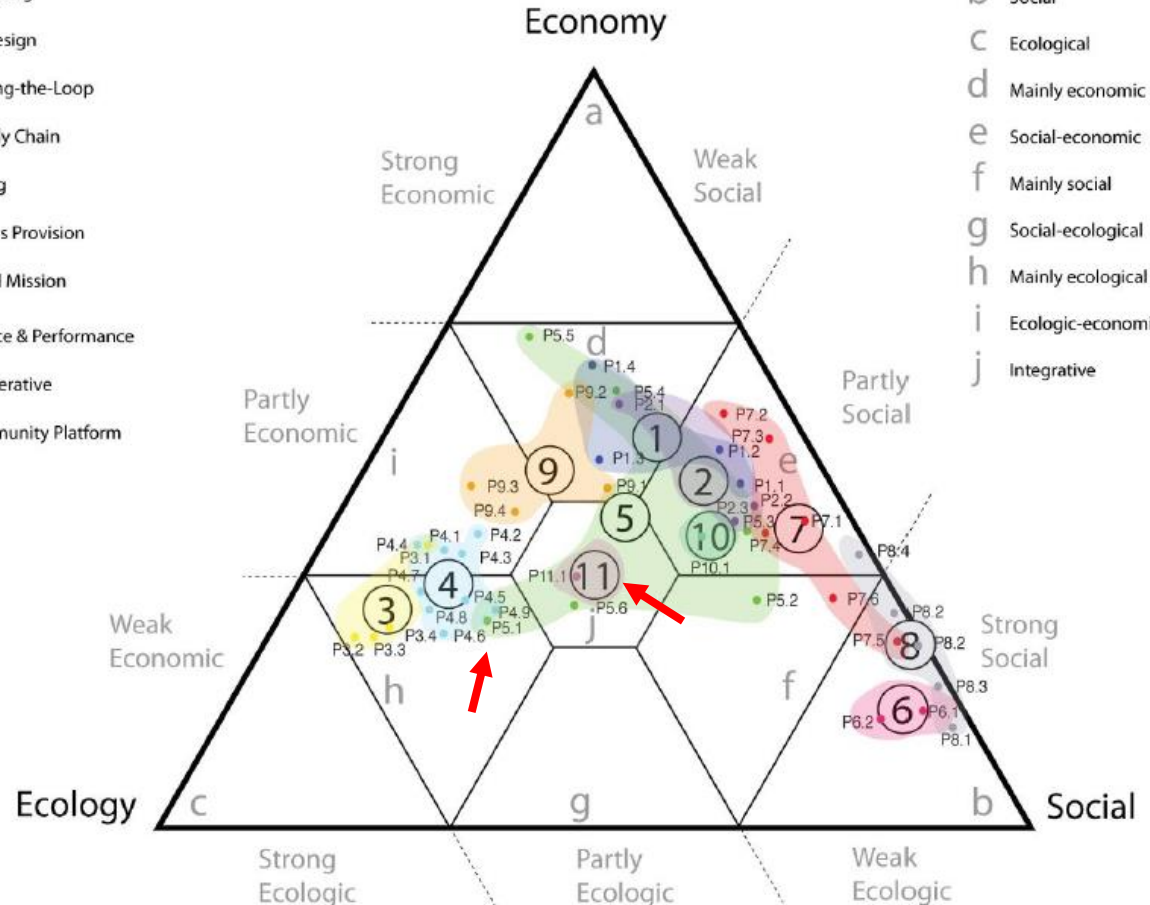
- Pattern (P5.1)  
“Green Supply Chain Management”
- Pattern (P11.1)  
“Sharing Business”

## Pattern Groups

- ① Pricing & Revenue
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