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STRATEGIC MANAGEMENT IN THE DIGITAL ECONOMY

Sustainability Strategy and Sustainable Business Model



Objectives and Agenda

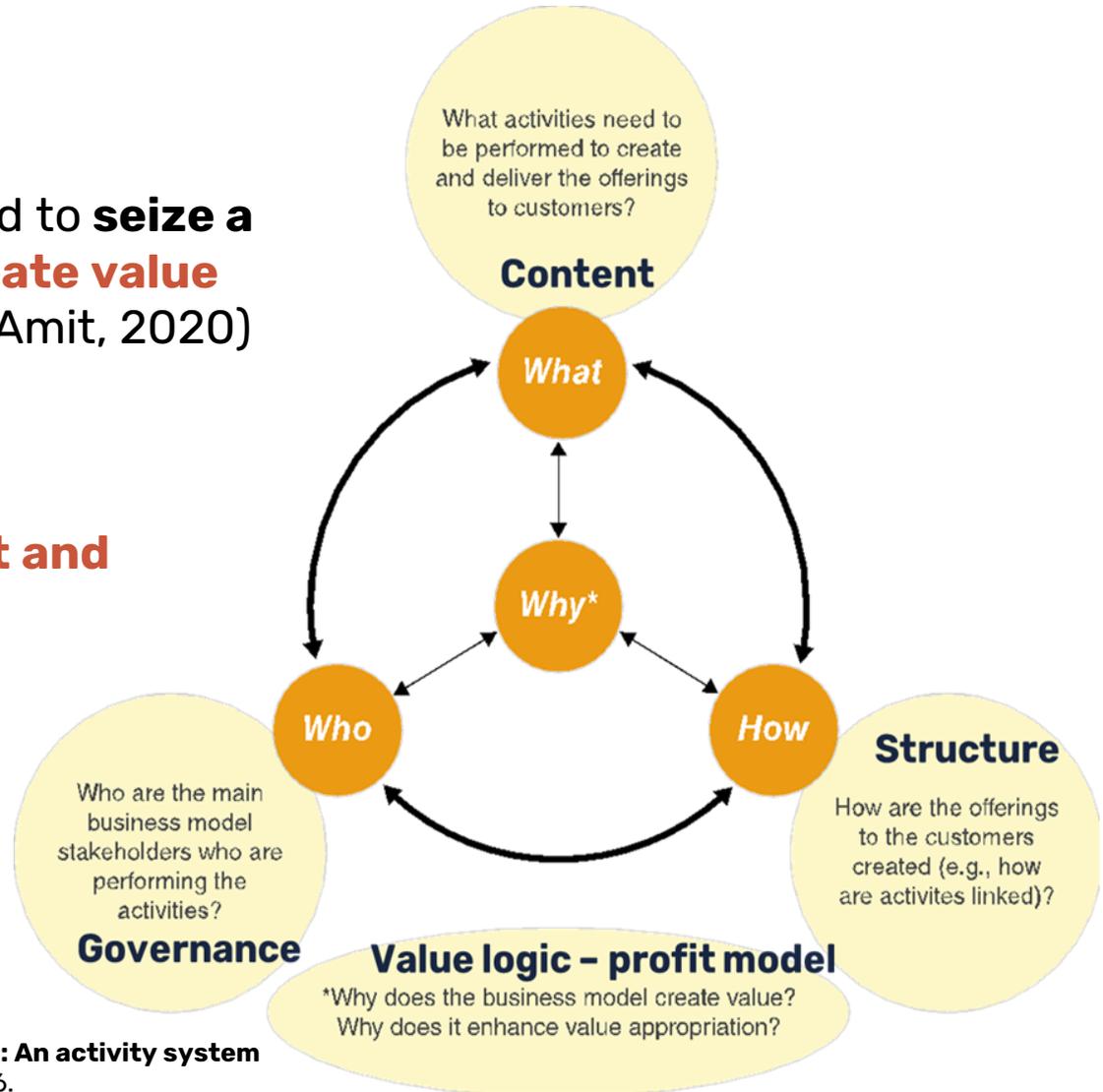
- Understanding the relationship between **Sustainability Strategy** and **Business model innovation (BMI) - CEBM/SBM**
- Introducing **Business Model Archetypes** and **SBM archetypes**
- Sharing research project: **CEBM archetypes identification based on LLMs**

What is business model?

“A business model is designed to **seize a market opportunity** and **create value** for **all stakeholders**”(Zott & Amit, 2020)

4 dimensions

A **system of interdependent and interconnected** activities
– dynamic and non-linear



Recommend reading:

Zott, C., & Amit, R. H. (2010). **Business model design: An activity system perspective**. *Long Range Planning*, 43(2-3), 216-226.

UBER / DIDI

Dimension	Explanation
WHAT	Provides fast, convenient, on-demand urban transportation. Offers transparent pricing, cashless payment, real-time tracking, and reliable service quality. Wide range of options (UberX, Uber Black, Uber Pool, Comfort, XL, also DIDI).
HOW	Mobile app enables ride requests, matching, navigation, and payment. Algorithm-driven supply-demand matching reduces waiting time and increases efficiency. Dynamic pricing adjusts to demand peaks. Two-sided rating system ensures safety and quality. Uses independent drivers instead of owning vehicles, enabling rapid global scaling. (and so on)
WHO	Riders seeking convenient, affordable, safe transportation. Drivers wanting flexible income opportunities. Business clients using Uber for Business. City regulators and ecosystem partners (maps, payment providers). (and so on)
WHY	Takes commission (20–30%) from each ride. Gains revenue through surge pricing during peak demand. Expands value capture via Uber Eats, Freight, and membership programs (Uber One). Business partnerships and enterprise accounts contribute additional revenue streams. (and so on)

Business Strategy and BMI

The business model **extends central ideas** in business strategy and its associated **theoretical traditions**.

SO, Business Strategy ≠ Business Model

Thinking 🤔
Same business strategy but different business model?
Lidl vs. Aldi

Business Strategy	BM
Competitive Advantages => How to compete? How to gain competitive advantages	Value logic/Value creation How to create and capture value?
Porter's five force (competition, positioning, trade-offs) RBV (resource -VRIN)	⇒ CAN do, WHAT ? WHO ? ⇒ HOW – activities – resources and WHO? ⇒ WHO? WHY? - relationship/partnership
TCE (why firm exists? => reduce cost)	⇒ HOW? non-linear but 'network'
value chain (linear) network effects	⇒ HOW? Interdependent activities

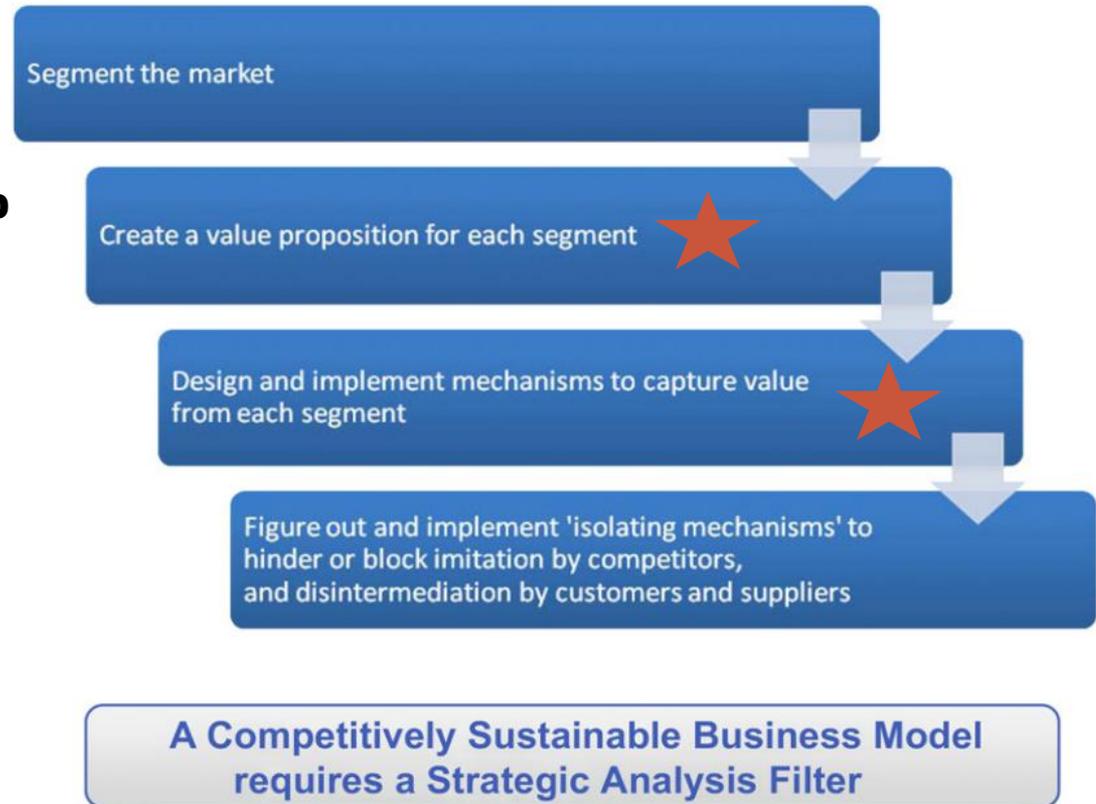
Recommend reading:

Zott, C., Amit, R., & Massa, L. (2011). **The business model: recent developments and future research**. *Journal of management*, 37(4), 1019-1042. Available at: <https://journals.sagepub.com/doi/pdf/10.1177/0149206311406265>

Business Strategy and BMI

Complementary relationship

Coupling strategy analysis with business model analysis is necessary in order to protect whatever competitive advantage results from the design and implementation of new business models.



Recommend reading:

Teece, D. J. (2010). **Business models, business strategy and innovation.** *Long range planning*, 43(2-3), 172-194.

What is Sustainable Business Model?

Main purposes:

- Transfer to a more **sustainable** economic system.
- Achieve sustainability ambition by integrating **sustainability** considerations.
- Become a source of **sustainable** competitive advantage.

Two approaches to modifying the business model concept:

1. incorporate **concepts, principles, or goals** that aim at **sustainability**.
2. integrate **sustainability** into **Content (WHAT), Structure (HOW), Governance (WHO), and/or Value logic (WHY)** mechanisms.

Recommend reading:

Geissdoerfer, M., Vladimirova, D., & Evans, S. (2018). **Sustainable business model innovation: A review**. *Journal of Cleaner Production*, 198, 401-416.



What is Sustainable Business Model?

Source	Definition
Boons and Lüdeke-Freund, 2013	Sustainable business model innovation is understood as the adaption of the business model to overcome barriers within the company and its environment to market sustainable process, product, or service innovations. (p. 13)
Loorbach and Wijsman, 2013	Sustainable business model innovation describes businesses' "searching for ways to deal with unpredictable [...] wider societal changes and sustainability issues. " (p. 20)
Bocken et al., 2014	"Business model innovations for sustainability are defined as: Innovations that create significant positive and/or significantly reduced negative impacts for the environment and/or society, through changes in the way the organisation and its value-network create, deliver value and capture value (i.e. create economic value) or change their value propositions. " (p. 44)
Geissdoerfer et al., 2016	"Sustainable business innovation processes specifically aim at incorporating sustainable value and a pro-active management of a broad range of stakeholders into the business model." (p.1220)
Roome and Louche, 2016	Sustainable business model innovation describes the "processes through which [...] new business models are developed by businesses and their managers [...] how companies revise and transform their business model in order to contribute to sustainable development. " (p. 12)
Schaltegger et al., 2016	Sustainable business model innovation describes the creation of "modified and completely new business models [that] can help develop integrative and competitive solutions by either radically reducing negative and/or creating positive external effects for the natural environment and society" (p. 3)
Yang et al., 2016	"Sustainable business model innovation can be more easily achieved by identifying the value uncaptured in current business models, and then turning this new understanding of the current business into value opportunities that can lead to new business models with higher sustainable value. " (p. 2)

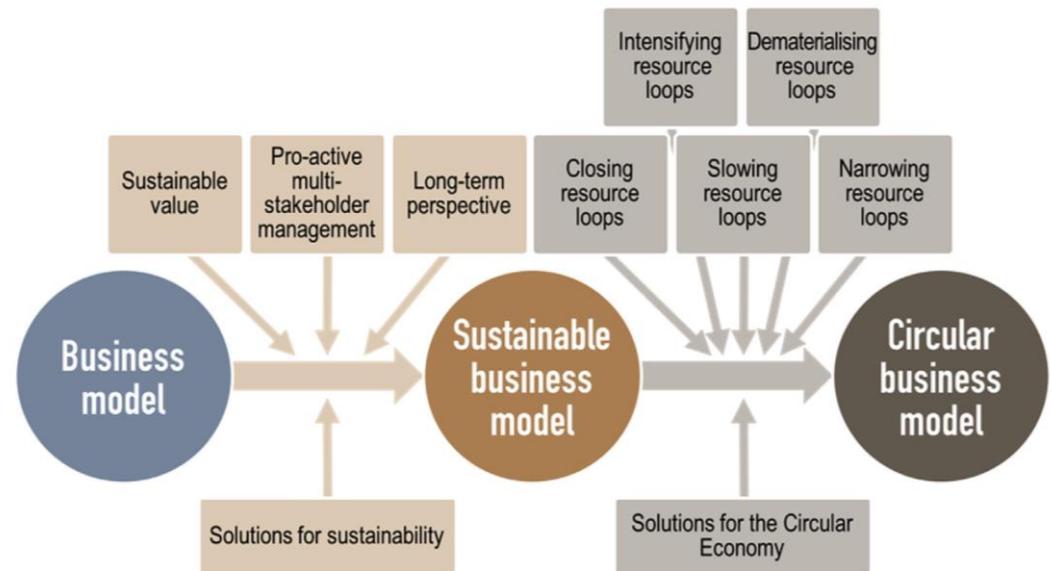
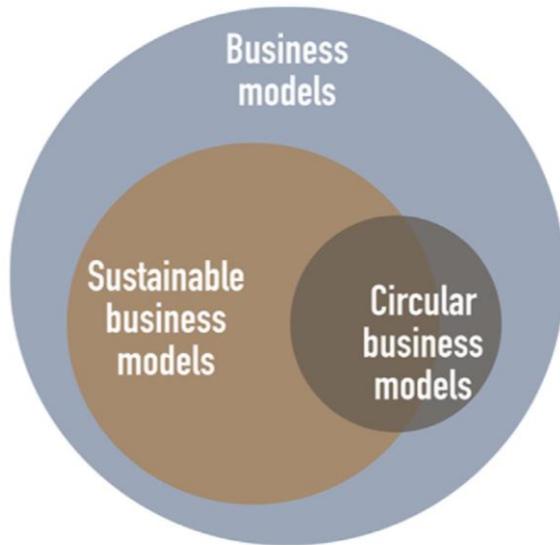
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Geissdoerfer, M., Vladimirova, D., & Evans, S. (2018). **Sustainable business model innovation: A review.** *Journal of Cleaner Production*, 198, 401-416.

What is Circular Economy Business Model (CEBM) ?

- Circular business models (CBMs) represent an overlapping concept with SBMs.
- CBMs implement sustainability through by different **resource loop strategies**.

Bocken, N., & Ritala, P. (2022). Six ways to build circular business models. *Journal of Business Strategy*, 43(3), 184-192.



Recommend reading:

1. Geissdoerfer, M., Vladimirova, D., & Evans, S. (2018). **Sustainable business model innovation: A review**. *Journal of Cleaner Production*, 198, 401-416.
2. Bocken, N. M., De Pauw, I., Bakker, C., & Van Der Grinten, B. (2016). **Product design and business model strategies for a circular economy**. *Journal of industrial and production engineering*, 33(5), 308-320.

What is Circular Economy Business Model (CEBM) ?

- **Slowing resource loops:** Through the design of **long-life goods and product-life extension** (i.e., service loops to extend a product's life, for instance through repair, remanufacturing), the utilization period of products is extended and/or intensified, resulting in a slow down of the flow of resources.
- **Closing resource loops:** Through recycling, the loop between **post-use and production is closed**, resulting in a circular flow of resources. These two approaches are distinct from a third approach toward reducing resource flows.
- **Resource efficiency or narrowing resource flows**, aimed at using **fewer** resources **per product** – improve resource efficiency.
- **Intensifying resource loop:** aimed at a more **intense use phase** (e.g., sharing economy).
- **Dematerialising resource loop:** add the substitution of product utility by service and software solutions (e.g., digitization solution/service).

What is 'archetype'?

Understanding 'archetype':

1. Activity systems: Not readily imitated

Meta-models: describe 'structure logic' of business model (elements / relationship)

Specified graphical framework: for one firm/one sector

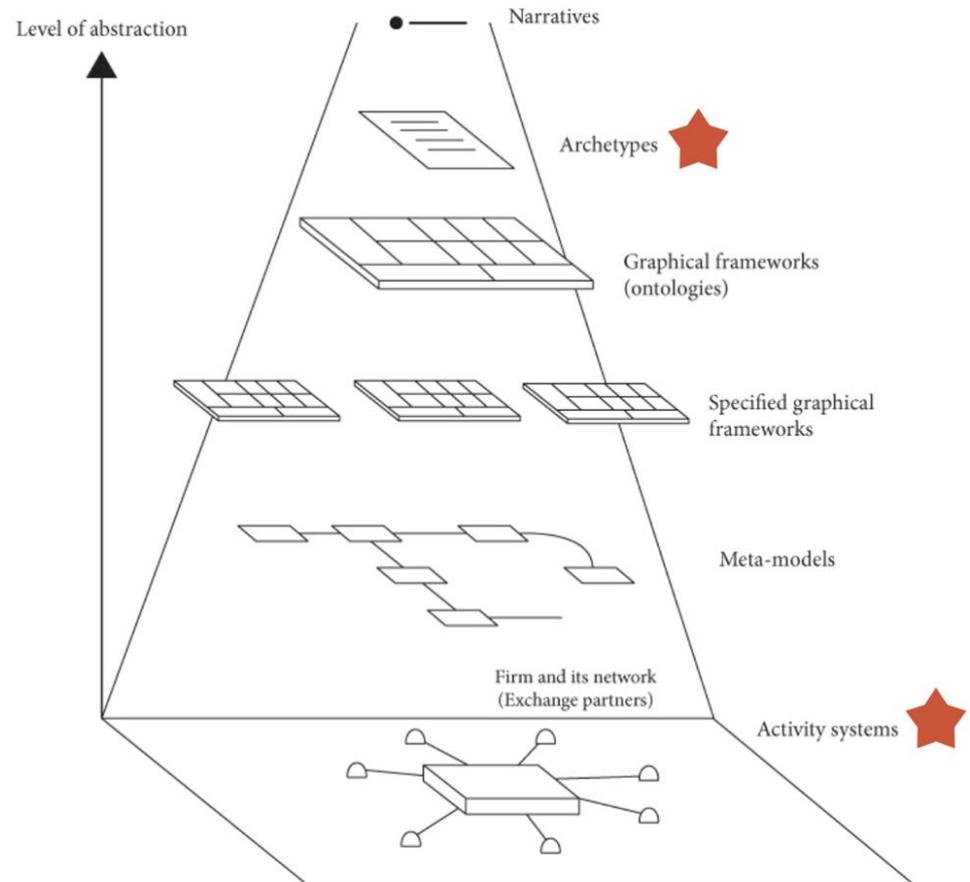
2. Graphical framework: visualisable -
Business Model Canvas

Archetype: a recognized patterns, e.g. *Razor & Razor Blade BM*

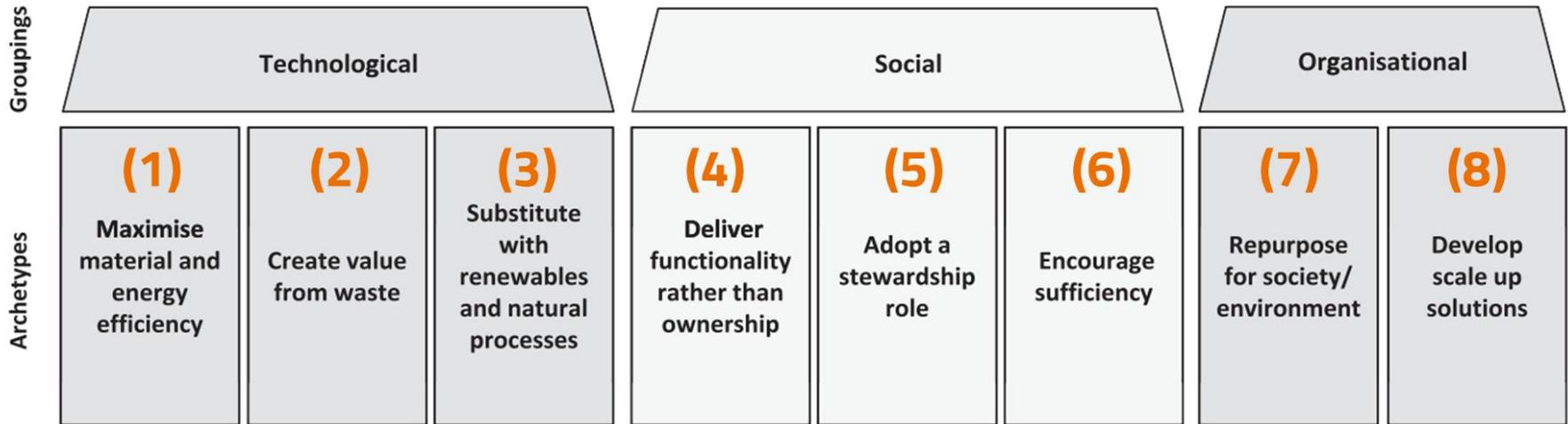
- *Highly abstract*

- *Easily imitated*

3. Narratives: verbal description of how a firm doing business



SBM archetypes



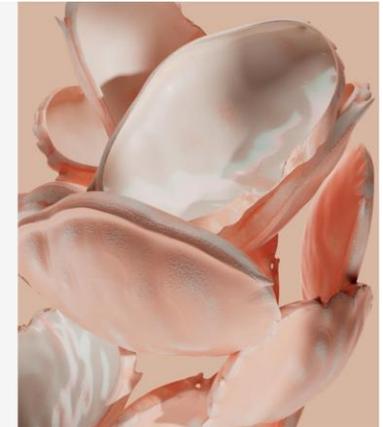
Recommend reading:

Bocken, N. M., Short, S. W., Rana, P., & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. *Journal of cleaner production*, 65, 42-56.

Maximise material productivity and energy efficiency | Technological innovation

- Low carbon manufacturing/solutions
- Lean manufacturing
- Additive manufacturing
- De-materialization (of products/packaging)
- Increased functionality (to reduce total number of products required)

allbirds



Create value from 'waste' | Technological innovation

- Circular economy, closed loop
- Cradle-2-Cradle
- Industrial symbiosis
- Reuse, recycle, re-manufacture
- Take back management
- Use excess capacity
- Sharing assets (shared ownership and collaborative consumption)
- Extended producer responsibility



Substitute with renewables and natural processes | Technological innovation

- Move from non-renewable to renewable energy sources
- Solar and wind-power based innovations
- Zero emissions initiative
- Blue Economy
- Biomimicry
- The Natural Step
- Slow manufacturing
- Green chemistry

Published 30 January 2025 • Inter IKEA newsroom

IKEA accelerates the shift to renewable electricity in production

The share of renewable electricity in production of IKEA products went from 71% to 75% in [FY24](#). To continue this journey, IKEA is launching a third wave of its renewable electricity programme to support suppliers in accessing more renewable energy sources.

IKEA invests €1.5 billion to accelerate phase out of fossil fuels



'functionality' rather than 'ownership' | Social innovation

- Product-oriented PSS - maintenance, extended warranty
- Use oriented PSS - Rental, lease, shared
- Result-oriented PSS - Pay per use
- Private Finance Initiative (PFI)
- Design, Build, Finance, Operate (DBFO)
- Chemical Management Services (CMS)

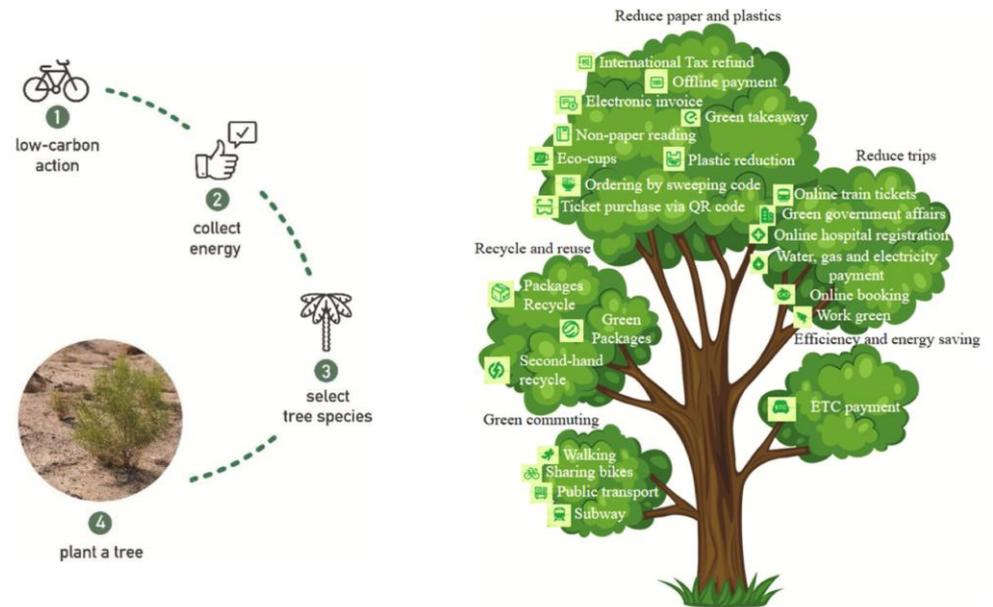


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Adopt a 'stewardship' role | Social innovation

- Biodiversity protection
- Consumer care - promote consumer health and well-being
- Ethical trade (fair trade)
- Choice editing by retailers
- Radical transparency about environmental/ societal impacts
- Resource stewardship



Encourage sufficiency | Social innovation

- Consumer Education (models); communication and awareness
- Demand management (including cap & trade)
- Slow fashion
- Product longevity
- Premium branding/ limited availability
- Frugal business
- Responsible product distribution/ promotion

patagonia[®]



patagonia[®]



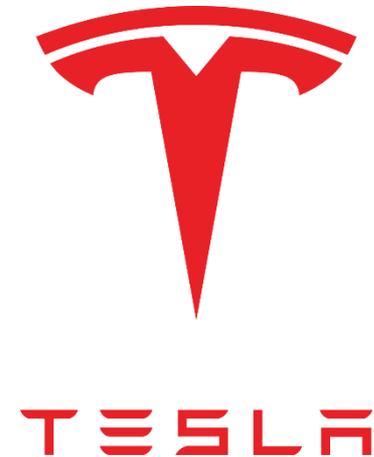
Patagonia Media 1 (available on Moodle)



Patagonia Media 2 (available on Moodle)

Develop scale-up solutions | Organizational innovation

- Collaborative approaches (sourcing, production, lobbying)
- Incubators and Entrepreneur support models
- Licensing, Franchising
- Open innovation (platforms)
- Crowd sourcing/ funding
- “Patient / slow capital” collaborations



10 CEBM archetypes

1. Re-generate

1.1 Companies must 100% utilize renewable and recyclable energies (e.g. solar power, wind power), or biomass energy derived from organic materials (e.g. animal residues) for production in all plants, to generate renewable energy and prohibit utilization of fossil fuels (e.g. coal, oil etc.). If companies generate surplus renewable, recyclable or biomass energy beyond their own production needs, the excess energy can be transferred to the power grid to support the sharing of renewable energy supplies.

2. Used-Oriented PSSs

3. Reuse

4. Repair

5. Industrial Symbiosis

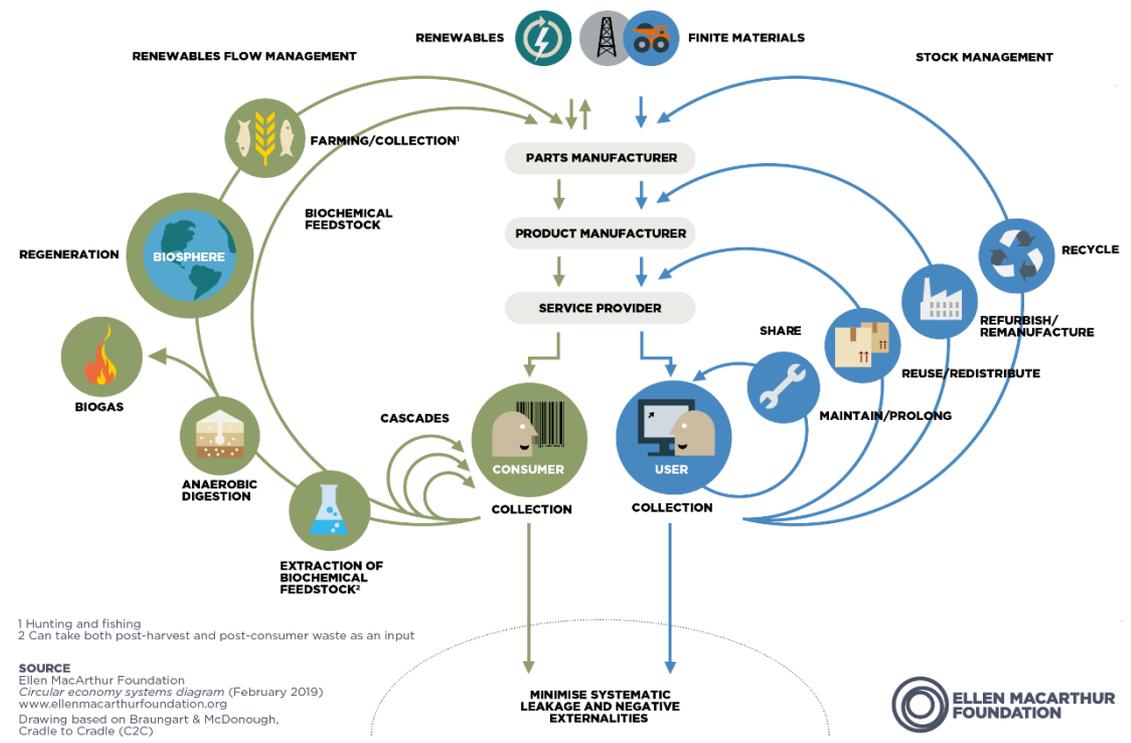
6. Product-oriented PSSs

7. Refurbish/Remanufacture

8. Recycling

9. Result-oriented PSSs

10. De-materialized



Research Design

