



Sustainable Business Models



Programma

- 9:00 Introductie
- 11:00 Pauze
- 13:00 lunch

Junion Hanenberg



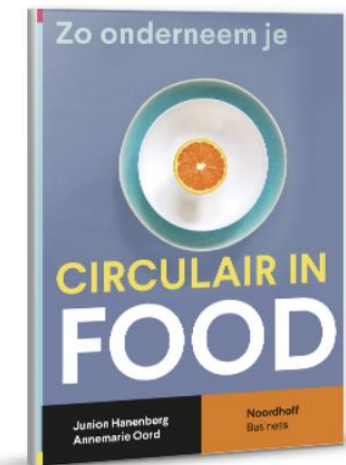
- Since 2010 lecturer Marketing at Hogeschool Rotterdam (RBS)
- CEO/Founder IntelligentFood
- Junion@intelligentfood.nl
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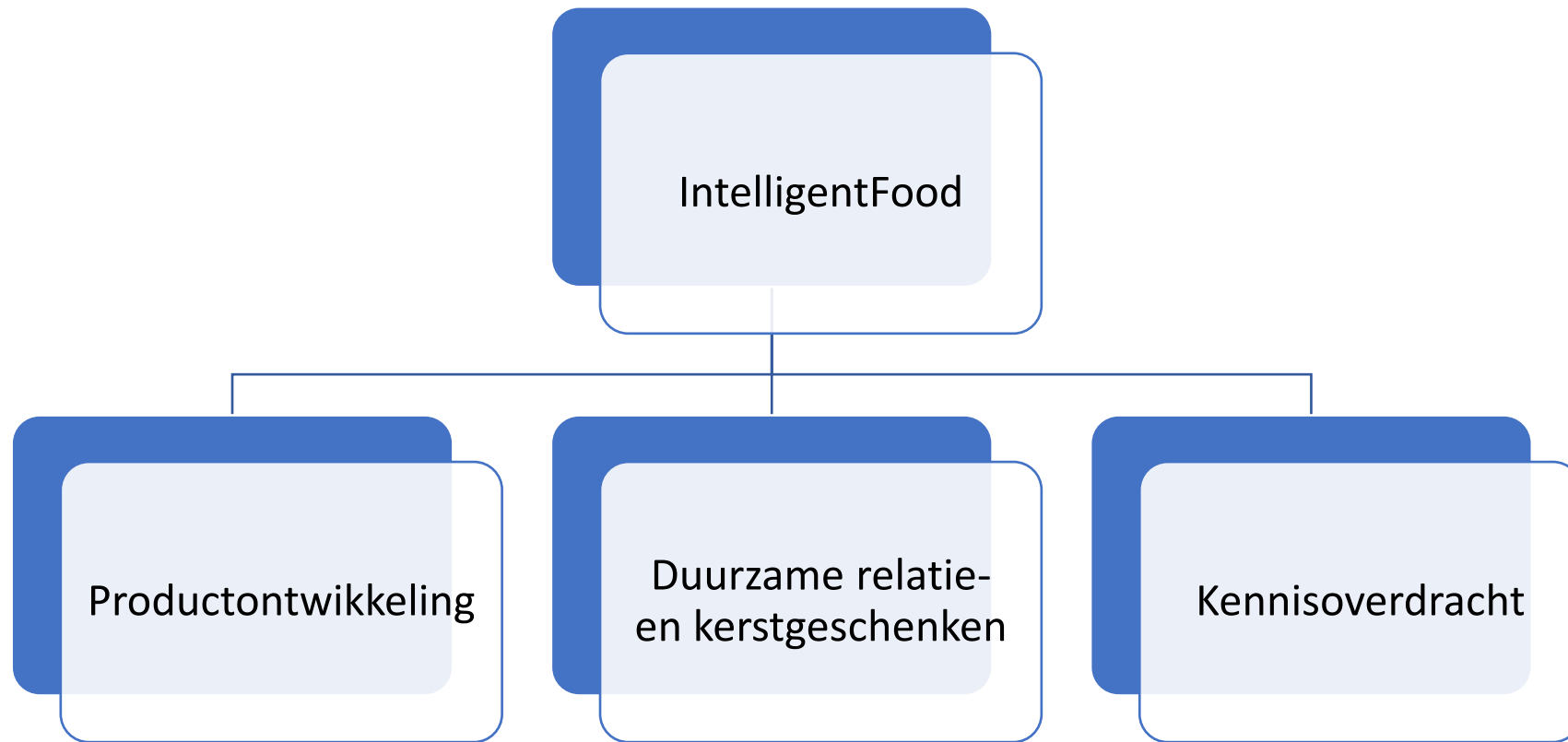
Categorieën ▼ Webshop ▼ Digitaal lesmateriaal Klantenservice

- Author of

Zo onderneem je circulair in food



Een concrete uitwerking van BMT



Let's change the face of
Food waste



www.kerstpakketmeteengoedverhaal.nl

CAROLA WIJDOOGEN

7 Rollen voor duurzaam succes →

DÉ PRAKTISCHE VERANDERGIDS
VOOR DUURZAAMHEIDS-
PROFESSIONALS



- 1 Inleiding 13
- 2 De Netwerkrol 19
- 3 De Strategische rol 41
- 4 De Coördinerende & Initiërende rol 61
- 5 De Stimulerende & Verbindende rol 85
- 6 De Mentorrol 107
- 7 De Innoverende rol 133
- 8 De Monitoringrol 153
- 9 De dynamiek van duurzaamheid 175
- 10 Competenties 189

VRAGEN?
OPMERKINGEN?
OBSERVATIES?

VANDAAG DEEP DIVES -
BMI
-CONTEXT: TRANSITIE &
SUPPLY CHAINS

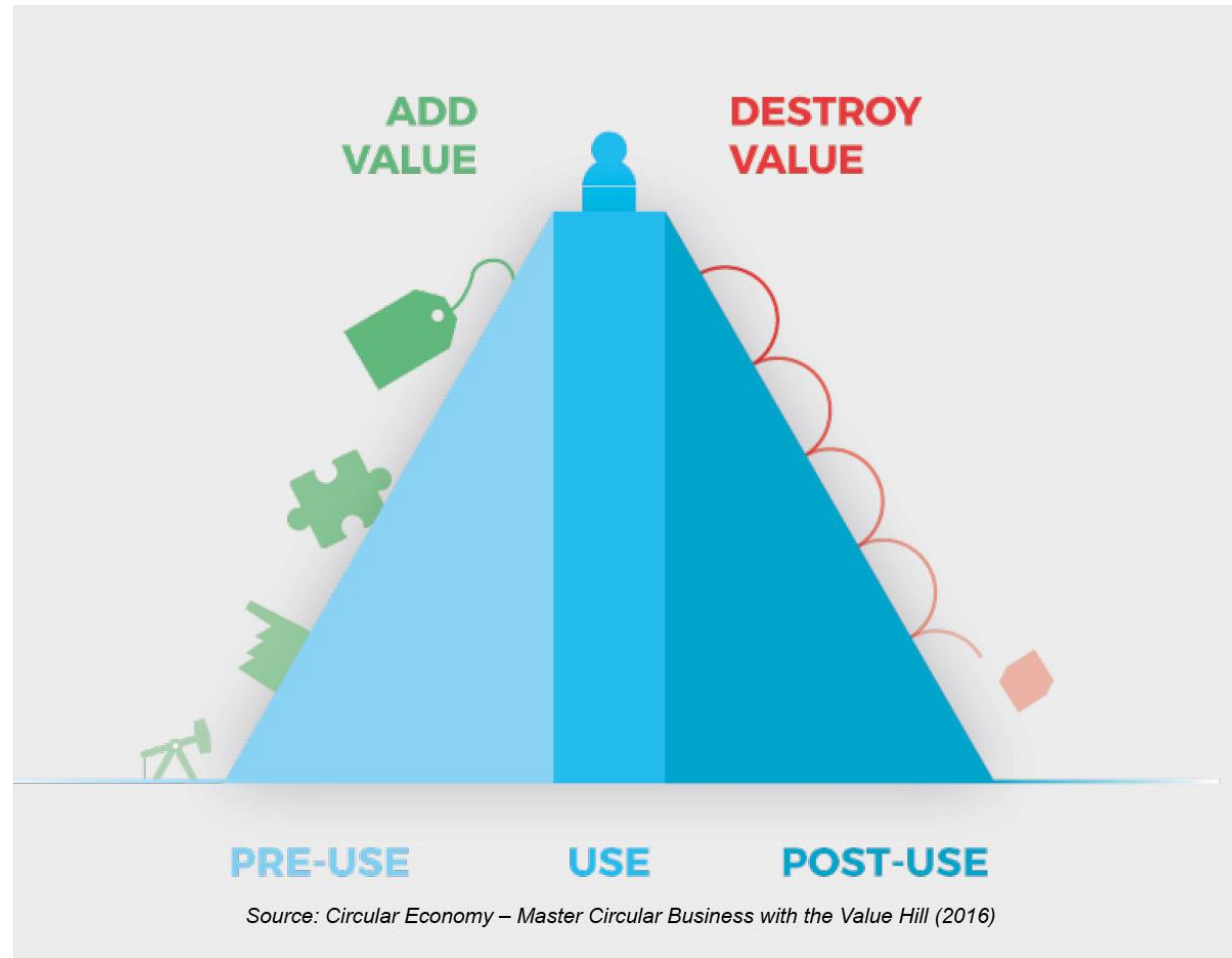
Leerdoelen vandaag

- Toepassen van criteria voor het bepalen of en hoe je bestaande innovatieprocessen benut en of je van disruptieve innovatie **zinnig gebruik kunt maken**. (BMI)
- Hoe maak je zinnig gebruik van bijvoorbeeld natuurlijke processen, om innovatieve ideeën te ontwikkelen?
- Hoe maak je innovaties beleefbaar?

What is a business model?

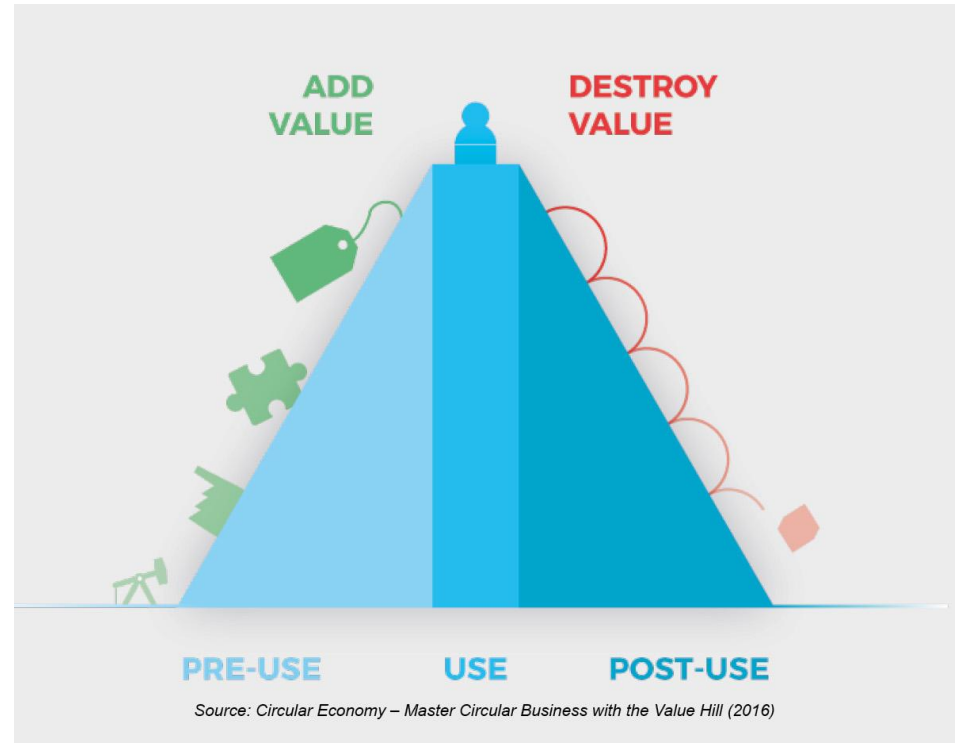
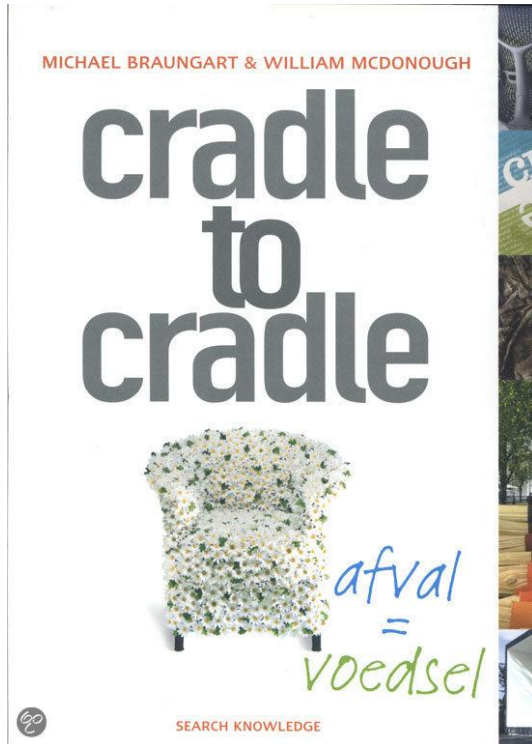
A business model organises the creation of value at a given moment, in a given context, for ~~certain~~ stakeholders, given the means available.
all

The Value Hill

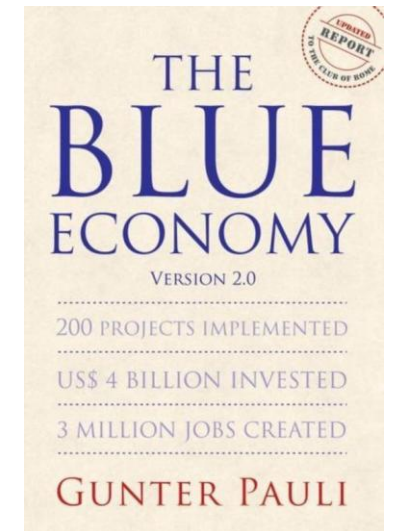


Hoe gaan wij met producten om?

A circular economy (all stakeholders)



2012



2016

Braungart & McDonough vs. Gunter Pauli

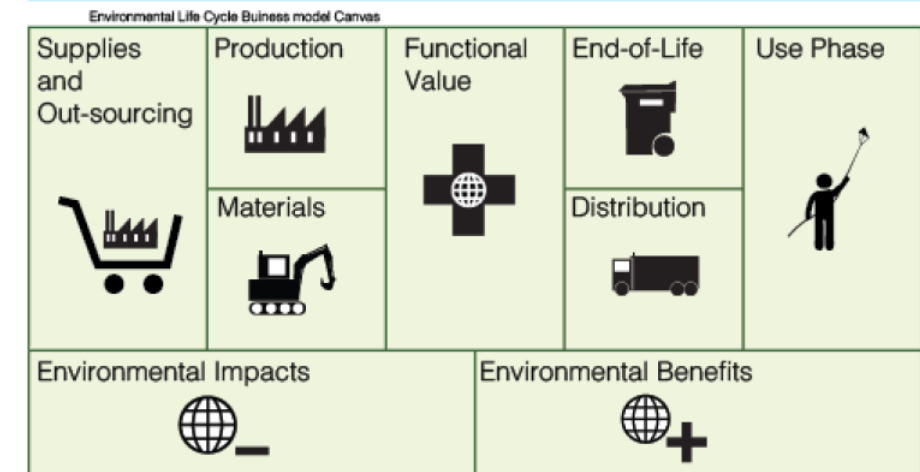
voorkomen vs. oplossen

Shortcomings?

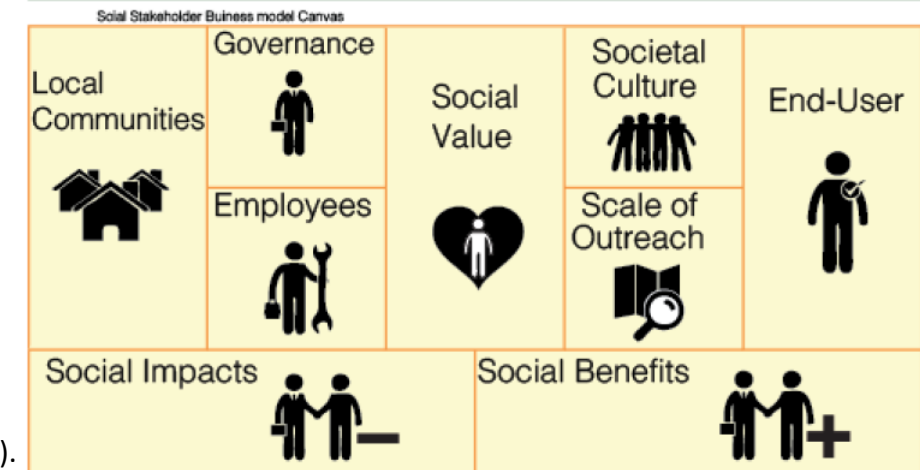
The economic layer



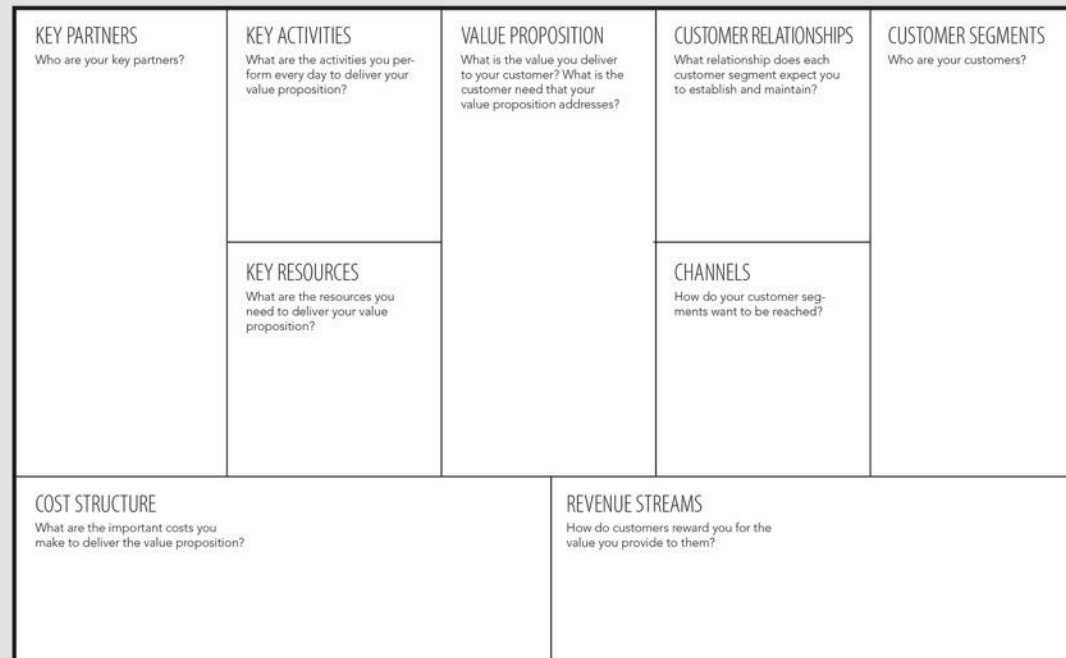
The Environmental layer



The social layer



BUSINESS MODEL CANVAS



DESIGNED BY BUSINESS MODEL FOUNDRY AG

Strategyzer
strategyzer.com

Osterwalder, A., & Pigneur, Y. (2010).

Joyce, A., Paquin, R., & Pigneur, Y. (2015).



Figure 1 Adapted sustainable business model canvas (Bocken, 2015 developed from Osterwalder and Pigneur, 2010 and building on Richardson, 2008)

A large orange circle is positioned on the left side of the slide, partially cut off by the edge.

Why would we need another BMT?

- Because there is greater need for the How question. How to
 - Organising multiple value creation?
 - Combine sustainability, circularity and inclusiveness?
 - Apply these types of models also to non-profit organisations?
 - Take the long-term into account?
 - Include the external context?



JAN JONKER EN NIELS FABER (EDITORS)

Organising for Sustainability

*A template for developing
new business models*

Organising for Sustainability

A template for developing new business models

We have a narrowing window of just over a decade (by 2030) to implement radical reductions (45-50%) in global greenhouse gas emissions to stay below 1.5°C. The urgency to scale up action and transition to a different, sustainable, and more circular society has never been greater. For companies and organisations to become future fit requires a change in thinking about how they fundamentally do business. Society will demand business models that have a positive impact on people, and the environment.

Transitioning to a new economy will require a different vision of how to organise value creation: shifting from a primary focus on capturing monetary value to also delivering environmental and social impact or multiple values. The Business Model Template (BMT) sketched in this workbook offers entrepreneurs, intrapreneurs, and students a structured approach to navigate this complexity and develop sustainable business models.

The Business Model Template (BMT) approach outlined consists of three phases (Definition, Design & Results) which are elaborated in ten business model building blocks enabling the iterative development of novel sustainable business propositions. Moreover, the Business Model Template (BMT) can be used to make existing business models more sustainable. Organising for Sustainability is the result of years of research. The Business Model Template (BMT) has been tested extensively with practitioners and students alike and countless examples and additional resources are included to make Organising for Sustainability your go-to-handbook for developing sustainable business models.

The digital version of Organising for Sustainability is freely available thanks to sponsors OCF 2.0 Foundation (Doetinchem, NL), The Hague University of Applied Sciences, Rotterdam University of Applied Sciences, Saxion University of Applied Sciences and TMO Fashion Business School. See www.newbusinessmodels.info

GEANNE VAN ARKEL

FONS CLAESSEN

KOEN DITTRICH

NIELS FABER

JAN JONKER

MONIEK KAMM

IVO KOTHMAN

NAOMI MONTENEGRO NAVARRO

ERIK VAN DEN OORD

JOS REINHOUDT

DAVE VAN SCHAIJK

MIRELLA SOYER

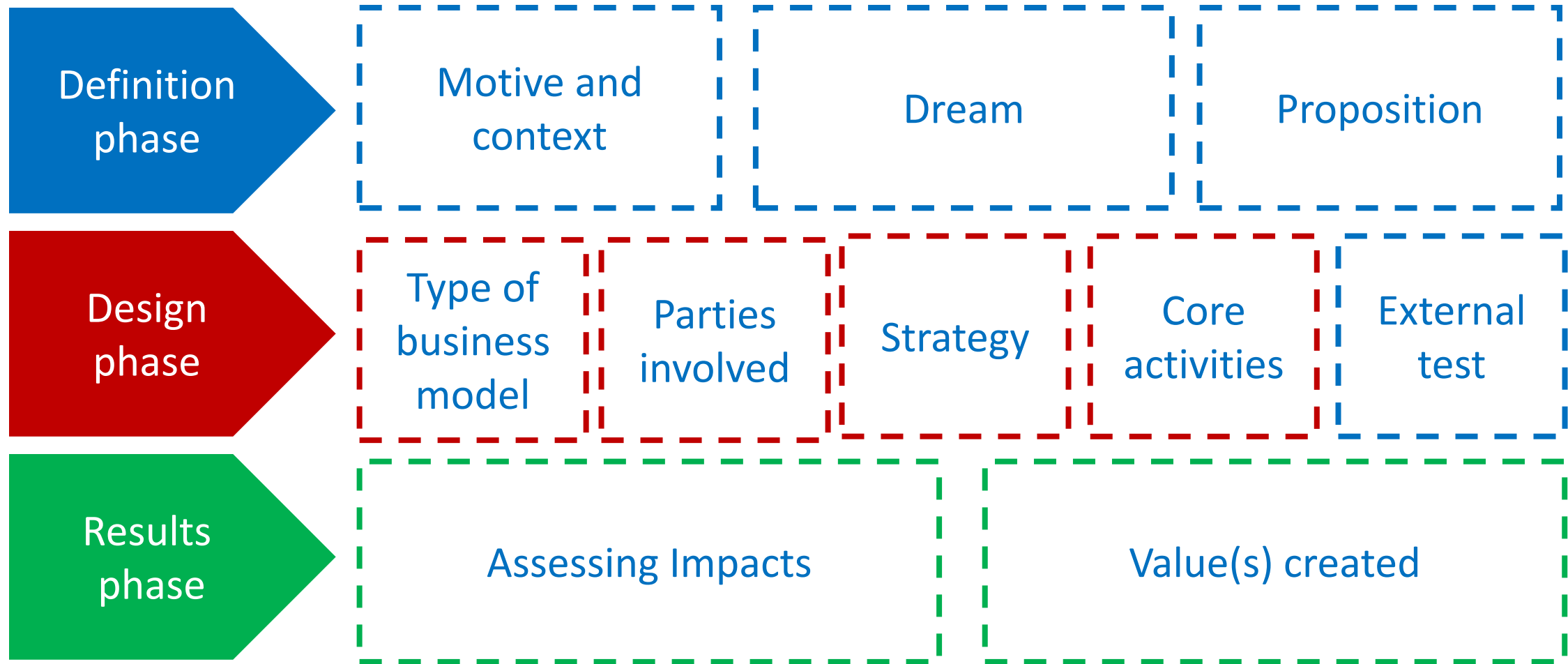
EGBERT WILLEKES



www.newbusinessmodels.info

The Dutch version can be downloaded for free from this website: <https://intelligentfood.nl/waarom-meedoen/>

Business model template development



You can start anywhere!

Definitie- fase ►

De aanleiding is iets wat zo'n impact op je heeft dat je wilt bijdragen aan een duurzame oplossing.

De droom geeft aan wat er verandert door jouw businessmodel als alles lukt wat je je daarmee hebt voorgenomen.

Een propositie is de belofte over de waarde die een organisatie afgeeft en over wat er van een product of dienst verwacht mag worden.

Ontwerp- fase ►

Hier maak je een keuze uit een van de drie basisvormen voor duurzame businessmodellen:
(1) platform,
(2) community-based en
(3) circulair.

Hier gaat het om het identificeren van partijen (zoals burgers, bedrijven, overheid) die samen moeten werken om de propositie te realiseren.

De strategie is het plan dat je volgt om je droom te realiseren en dat bepaalt welke keuze je maakt om de propositie van een organisatie te realiseren.

Een kernactiviteit is dat waar een organisatie hoofdzakelijk mee bezig is, waar zij goed in is en waar ze haar bestaansrecht aan ontleent.

Met de externe toets check je in de wereld om je heen het nut, de toegevoegde waarde en de haalbaarheid van het businessmodel.

Resultaat- fase ►

Hier benoem, beredeneer en bepaal je de impact die je met je businessmodel gaat realiseren aan de hand van indicatoren.

De ambitie van elk duurzaam businessmodel is het tegelijkertijd creëren van meerdere waarden, uitgedrukt in een mix van bijvoorbeeld geld, tijd, energie en inclusie.

Definition stage ►

The motive is something that impacts you so severely that you want to contribute to its sustainable solution.

The dream shows what the impact is of your business model if everything works out the way you intended.

The proposition is a promise of the value that an organization delivers and of what can be expected from a product or service.

Design stage ►

Here you make a choice between one of the three basic types of sustainable business models: (1) platform, (2) community-based and (3) circular.

Here it is about identifying actors (such as citizens, companies, the government) that need to cooperate to realize the proposition.

The strategy is the plan you follow to realise your dream and it denotes the choices you make to realize the proposition of an organization.

A core activity is that which an organization mainly deals with, what it is good at, and what provides its licence to operate.

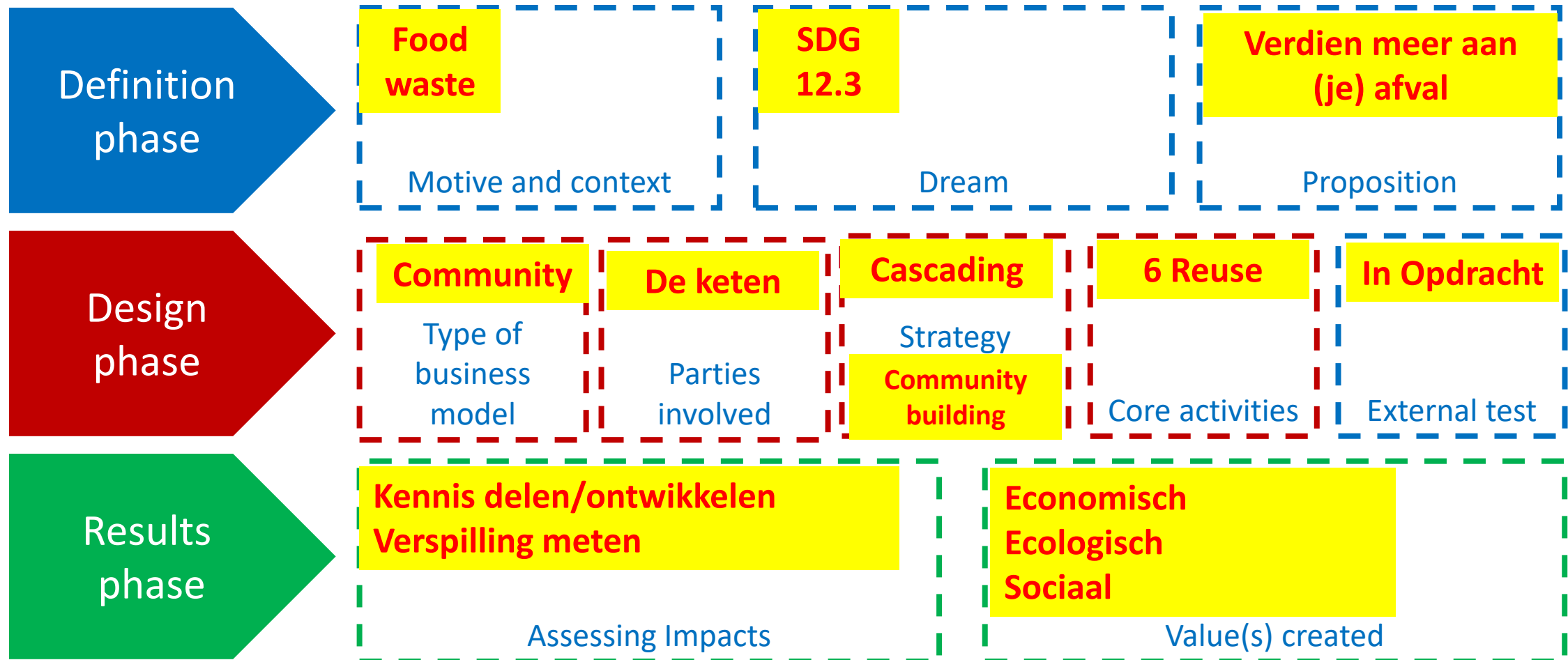
With the external test, you check the use-case, the added value, and the feasibility of your business model in its environment.

Result stage ►

Here you name, explain and determine the impact that you and your business model will have using a set of indicators.

The ambition of every sustainable business model is to simultaneously create multiple values, expressed in a mix of (for example) money, time, energy and inclusion.

Business model template IntelligentFood



You can start anywhere!

Design
phase

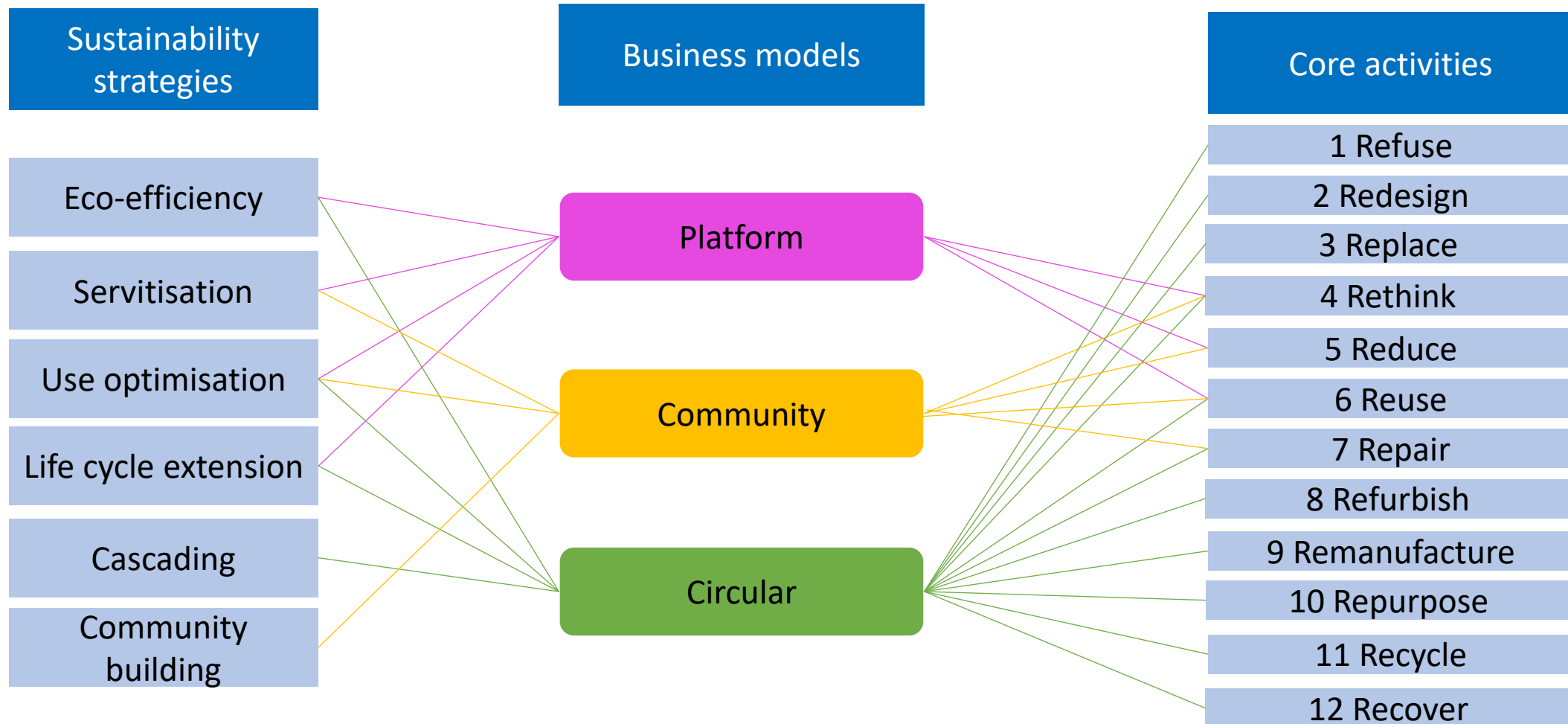
Type of
business
model

Parties
involved

Strategy

Core
activities

Choosing core activities



Define
phase

Motive and
context



Source: <https://wasteboards.com>

- **What** is your problem, opportunity, or challenge?
- **Why** is this a problem and for whom?
- And what is the **context** in which this occurs?



- Quick scan of facts (avoid mixing opinions and facts)
- Macro analysis DESTEP, SWOT, Confrontation matrix
- Life Cycle Assessment, Social Life Cycle Assessment and Life Cycle Cost analysis
- Trend analysis or scenario developments

De aanleiding is iets wat
zo'n impact op je heeft
dat je wilt bijdragen aan
een duurzame oplossing.

Define
phase

Motive and
context

Dream

De droom geeft aan wat
er verandert door jouw
businessmodel als alles
lukt wat je je daarmee
hebt voorgenomen.

- What is the **goal** you dream of?
- What is your **BHAG**, your Big Hairy Audacious Goal?
- **How** are you going to make the difference?



Define
phase

Motive and
context

Dream

De droom geeft aan wat
er verandert door jouw
businessmodel als alles
lukt wat je je daarmee
hebt voorgenomen.

What if we did not produce any more waste?

What if production systems regenerated our ecosystems?

What if we replaced unemployment with an abundance of jobs and innovations that make sense?

What if our economy generated more income and happiness for all?

Cas 3 : Coffee : Export Crop Provides Food Security



Education ▾



Cas 3 : Coffee : E

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rotterzwam

Proefpakket Rec

Bekroond circulair concept voor hoogwaardig hergebruik van koffiedik en productie van oesterzwammen en snacks. Specialist in het lokaal sluiten van kringlopen, creëren van bewustwording over duurzaamheid en de circulaire economie.

Van koffiedik naar zwam naar bitterbal

Bekijk onze producten hier

The Blue Economy



Define
phase

Motive and
context

Dream

Proposition

- **What** are you going to do to solve the problem, seize the opportunity, or take up the challenge, and for whom?
- **How** do you propose to create value for Whom?
- Develop a **one liner** that captures the proposition best

Party 1	Party 2
Proposition 1	Proposition 2

Commonland creates four values: inspiration, social capital, natural capital and financial capital



Een propositie is de belofte over de waarde die een organisatie afgeeft en over wat er van een product of dienst verwacht mag worden.

Source: Commonland, <https://www.Commonland.com>

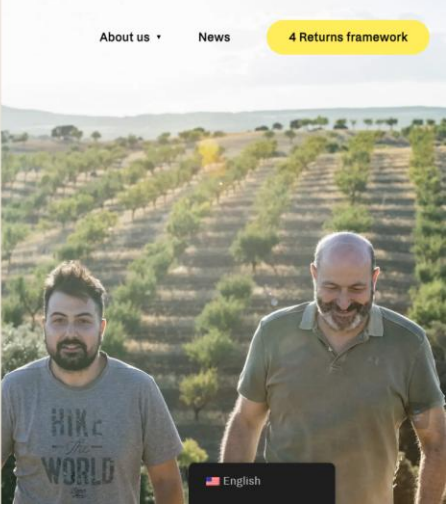
Foundation Commonland

COMMONLAND[Mission](#)[What we do](#)[Get involved](#)[Landscapes](#)[About us](#)[News](#)[4 Returns framework](#)

Restoring landscapes to create a brighter future on planet Earth

What we do →

We bring people together to restore landscapes and regenerate the Earth: our common land. With our holistic approach to landscape restoration - the 4 Returns framework - anyone can work with nature and their local community to restore a landscape at scale.



English

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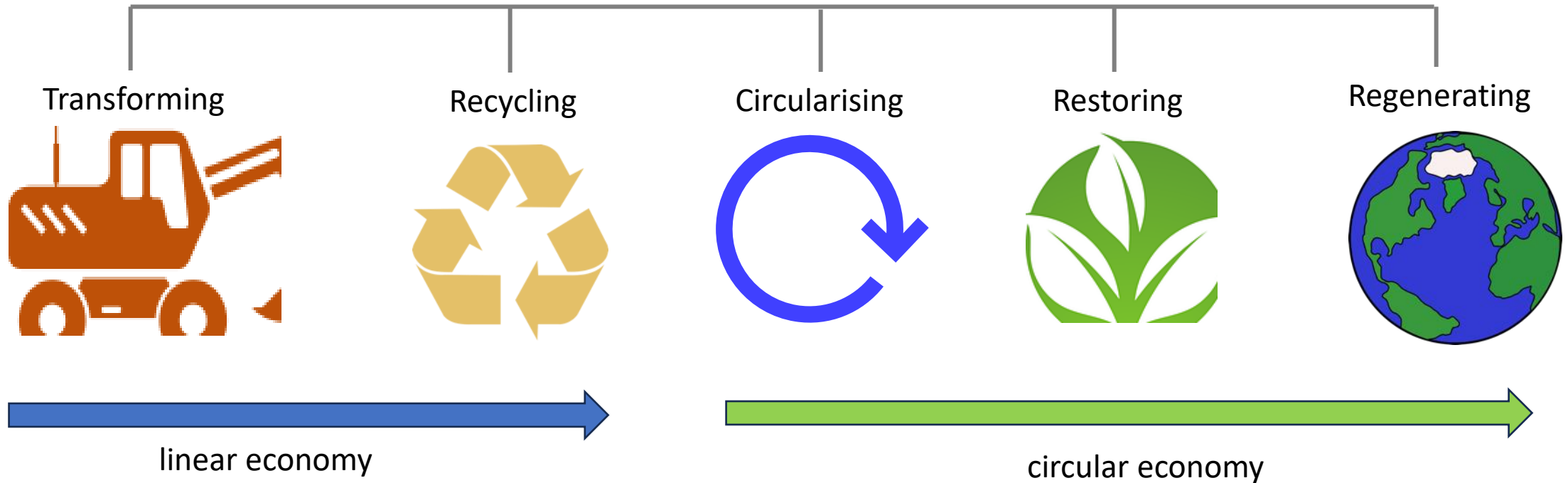
Define
phase

Motive and
context

Dream

Proposition

Positions of value creation



Define
phase

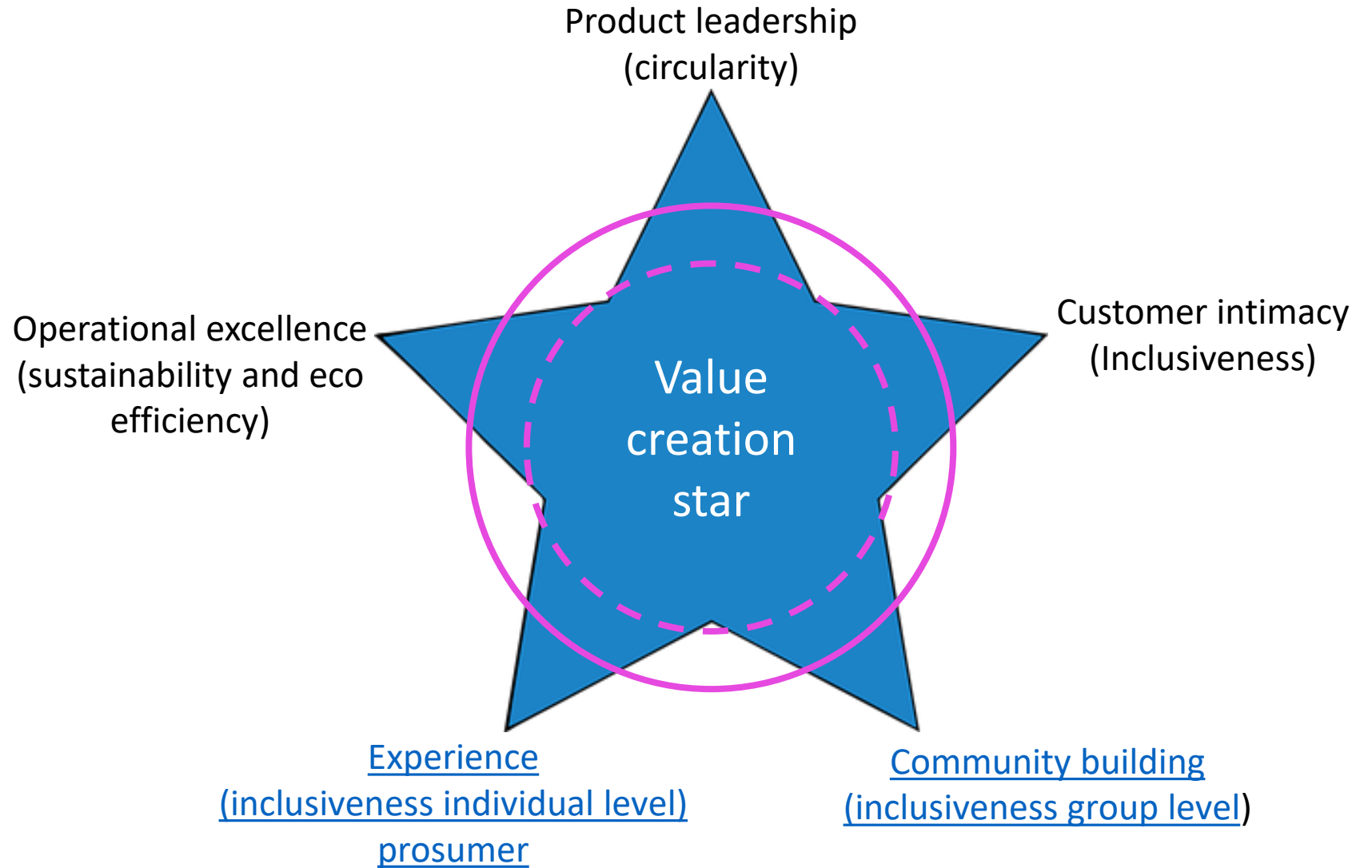
Motive and
context

Dream

Proposition

Five strategies for value creation

Treacy & Wiersma
waardecreatie



Define
phase

Motive and
context

Dream

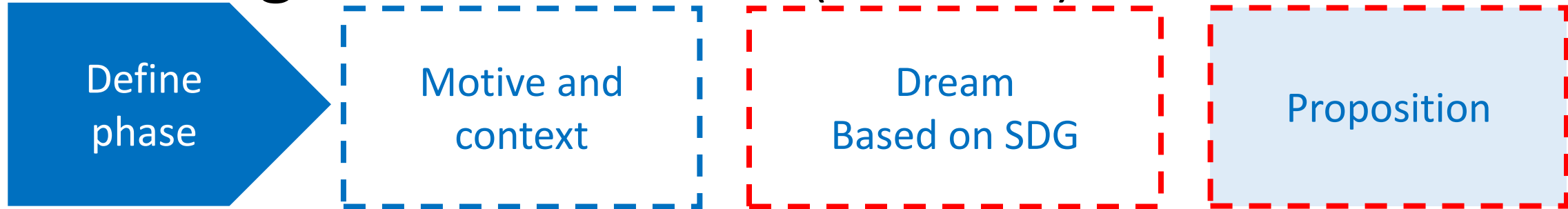
Proposition

“Make a real choice too, choose green, honest and human. Do more with your money. With us you manage all your money matters in a sustainable way. The choice is yours. Follow your heart. Use your head.”
(Triodos Bank)

“By financing sustainable development with your money. By setting our own sustainability goals. And by promoting sustainability in the financial world. With money you can exert much influence to make the world more beautiful. For ourselves and for future generations. That's how money makes you happy.”
(ASN Bank)

“We don't hire people to bake brownies, we bake brownies to hire people.”
(Greystone Bakery)

Assingment: In teams (15 min)



Party 1	Party 2	Party 3	Party 4
Proposition ?	Proposition ?	Proposition ?	Proposition ?

In teams of 2, define the dream and propositions for one of your companies.

- Create a matrix listing all the parties that are involved, and the values that are created for each party
- Identify propositions that have a strong appeal to be inspired
- Try several one-liners and realise that they will change over time

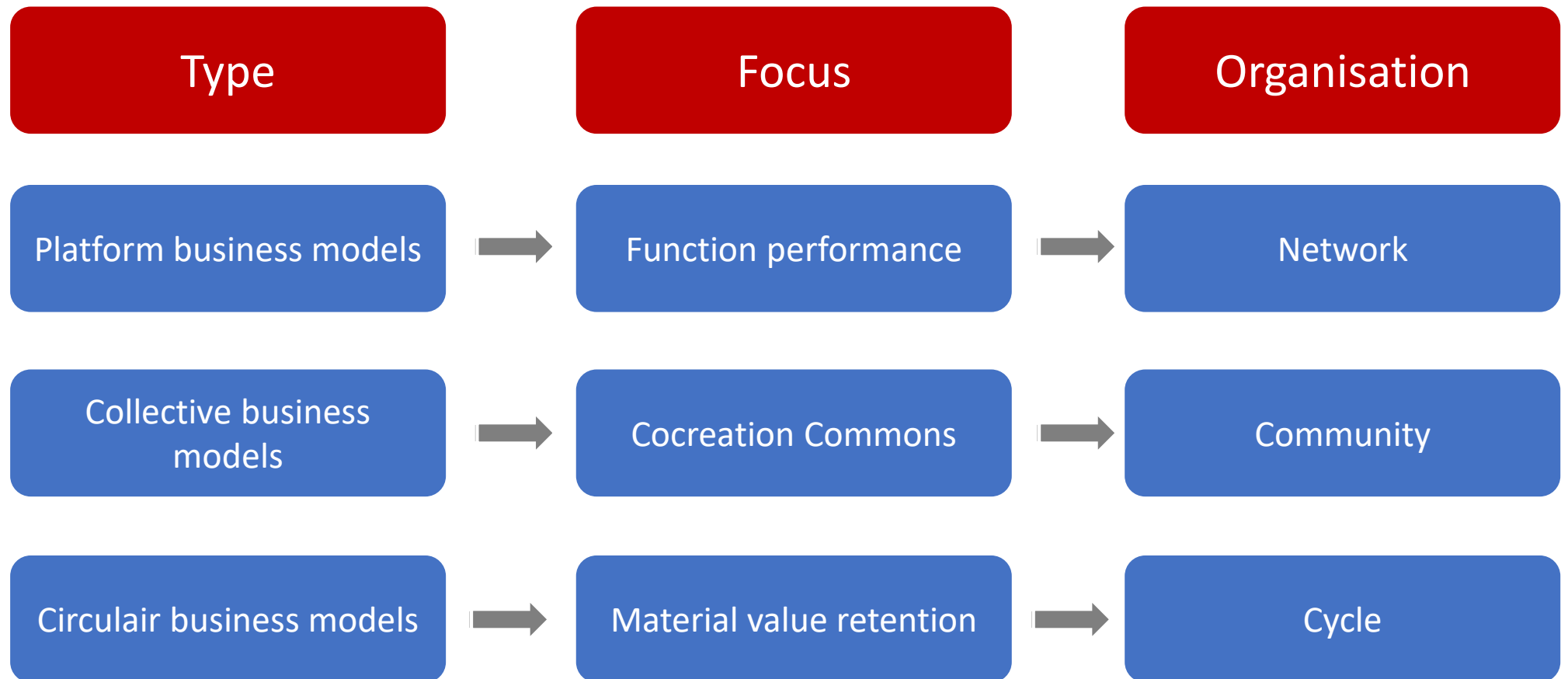


This is a preparation for the case you have to hand in.

Design
phase

Type of
business
model

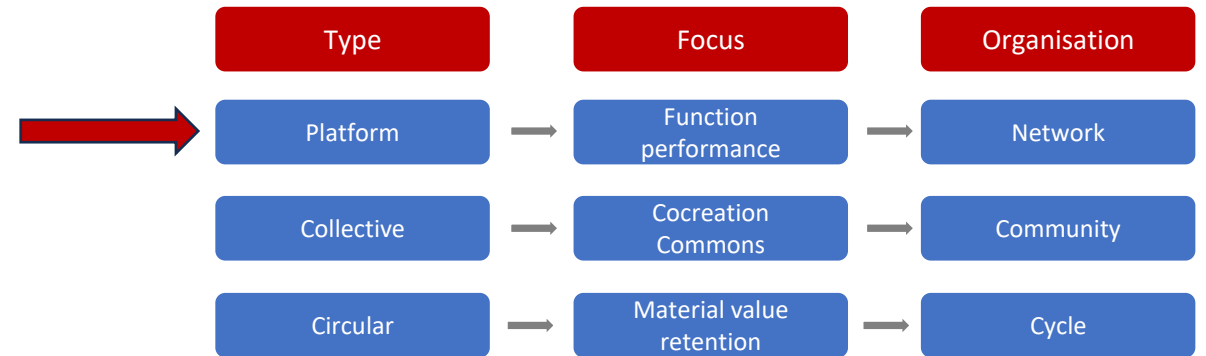
The logic of value creation



Design
phase

Type of
business
model

Platform business models



- Logic of value creation

- Brokering of available idle capacity
- Value creation by facilitating the transaction between those with capacity and those in need of it
- Digitalisation and crypto technology enable the development of this model
- Transactions could be bilateral, or multilateral
- Examples:
 - <https://wastebase.eu/database/>
 - Excess materialsexchange (<http://excessmaterialsexchange.com>)
 - [Peerby](#), Marketplace (marktplaats), ebay, BlablaCar, Floow2, AirBNB

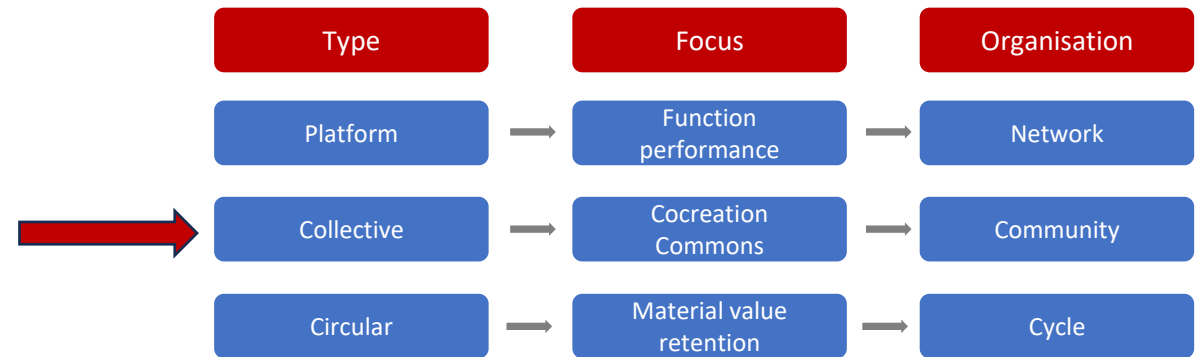
<https://platforminnovationkit.com/>

- PLATFORM EVOLUTION CANVAS
 - <https://platforminnovationkit.com/user-guide-platform-evolution-canvas-2/>
- PLATFORM TEAM CANVAS
 - <https://platforminnovationkit.com/user-guide-platform-team-3/>
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- HOW DO YOU WANT TO MONETIZE YOUR PLATFORM?
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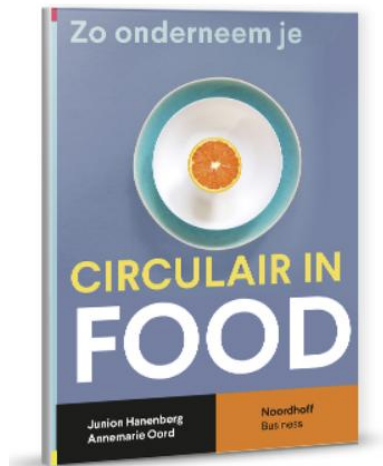
Design
phase

Type of
business
model

Community based business models



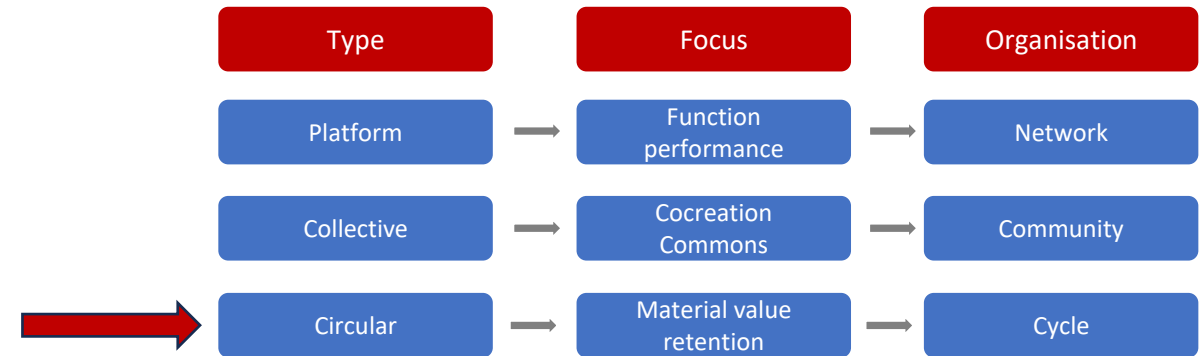
- Logic of value creation
 - A growing number of people is willing to invest in their own neighborhood, if this results in tangible benefits.
 - This is also referred to as “the commons” defined as a set of shared resource(s) material and non-material, maintained or co-created by a community and governed by the same community’s norms and rules (Restakis, 2017).
 - Based on principles of:
 - Joint investment (time, money, energy, waste, mobility)
 - Sharing of results (e.g. power, food, money)
 - **Multiple value creation**
 - Examples include power, food, mobility
 - Windpower Nijmegen, <https://thuisgekookt.nl/> , <https://herenboeren.nl/>



Design
phase

Type of
business
model

Circular business models



- Logic of value creation
 - Value creation by **closing material loops** in order to reduce resource usage, waste and maximise product lifetimes.
 - Most material loops require the involvement of **more stakeholders**
 - Because of quality loss of the materials itself, the challenge is to **replace virgin** materials with renewable materials. Other circular activities involve **repair** and **maintenance** in order to extend the **life-time of products**.
 - Closing the loop fully, is a challenge.
 - Examples:
 - Rotterzwam (<https://www.bluecity.nl/organisatie/rotterzwam/>)
 - <https://magiecreations.com/nl/>
 - Peelpioneers.nl (<https://peelpioneers.nl>)
 - Gunter Pauli (<https://www.theblueeconomy.org/en/>)



Design phase

Type of
business
model

Parties
involved

- With **whom** will you collaborate, who do you need, who might influence your plans, what role will stakeholders have in your plan?



- Network analysis of all parties that are relevant for your business model. Approaches are a mesh network model, cluster tree model
- Forcefield analysis by indicating how these stakeholders could influence your model or influence each other.
- Stakeholder value analysis focuses on the current and future value of the transactions in your model
- See <https://businessmodellab.nl/en/tools> to help you execute these exercises

Design
phase

Type of
business
model

Parties
involved

	Ecological values		Societal values		Economical values	
	Proposition 1	Currency	Proposition 2	Currency	Proposition 3	Currency
Stakeholder 1						
Stakeholder 2						
Stakeholder 3						
Stakeholder 4						
Stakeholder 5						
Stakeholder 6						
Stakeholder 7						

Currencies



Money

+



Time

+



Energy

+



Mobility

+



Waste

+



Regenerate
nature

+



knowledge

+

?

=



Assingment: In teams (10 min)

- In teams of 2, define the dream and propositions for one of your companies.
- Add the values that are created for each party

	Ecological values		Societal values		Economical values	
	Proposition 1	Currency	Proposition 2	Currency	Proposition 3	Currency
Stakeholder 1						
Stakeholder 2						
Stakeholder 3						

Currencies



Money

+



Time

+



Energy

+



Mobility

+



Waste

+



Regenerate
nature

+

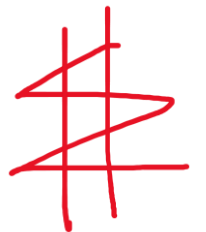


knowledge

+



=



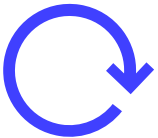
Design
phase

Type of
business
model

Parties
involved

Strategy

Typology of strategic choices



Positions of value
creation

Transformation

Recycling

Circularity

Restoration

Regeneration

Traditional
strategies

Product leadership

Operational
excellence

Customer Intimacy

Experience

Community
building

Sustainability
strategies

Eco-efficiency

Servitisation

Use optimisation

Life cycle extension

Cascading

Community
building

Design phase

Type of
business
model

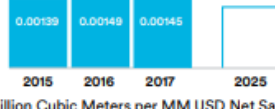
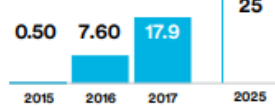
Parties
involved

Strategy

Eco efficiency

- Reducing of material and energy during the entire lifespan of a product, while increasing output with less input
- Often used to reduce negative impacts (e.g. waste, pollution, waste)
- The strategy lowers the ecological footprint, while doing the same things.
- **Doing the same, but better!**

2025 Goals Scorecard

	3M Goal	Goal Progress										
	Reduce Global Manufacturing Waste  10%	 <table><tr><th>Year</th><th>2015</th><th>2016</th><th>2017</th><th>2025</th></tr><tr><td>Metric Tons per MM USD Net Sales</td><td>5.21</td><td>5.33</td><td>5.03</td><td></td></tr></table>	Year	2015	2016	2017	2025	Metric Tons per MM USD Net Sales	5.21	5.33	5.03	
Year	2015	2016	2017	2025								
Metric Tons per MM USD Net Sales	5.21	5.33	5.03									
	Achieve global zero landfill status at more than 30% of manufacturing sites	 <table><tr><th>Year</th><th>2015</th><th>2016</th><th>2017</th><th>2025</th></tr><tr><td>Percentage of Total Manufacturing Sites</td><td>28.2</td><td>26.6</td><td>27.9</td><td>30</td></tr></table>	Year	2015	2016	2017	2025	Percentage of Total Manufacturing Sites	28.2	26.6	27.9	30
Year	2015	2016	2017	2025								
Percentage of Total Manufacturing Sites	28.2	26.6	27.9	30								
	Reduce Global Water Use  10%	 <table><tr><th>Year</th><th>2015</th><th>2016</th><th>2017</th><th>2025</th></tr><tr><td>Million Cubic Meters per MM USD Net Sales</td><td>0.00139</td><td>0.00149</td><td>0.00145</td><td></td></tr></table>	Year	2015	2016	2017	2025	Million Cubic Meters per MM USD Net Sales	0.00139	0.00149	0.00145	
Year	2015	2016	2017	2025								
Million Cubic Meters per MM USD Net Sales	0.00139	0.00149	0.00145									
	Improve Global Energy Efficiency  30%	 <table><tr><th>Year</th><th>2015</th><th>2016</th><th>2017</th><th>2025</th></tr><tr><td>MMBtu per MM USD Net Sales</td><td>937</td><td>962</td><td>935</td><td></td></tr></table>	Year	2015	2016	2017	2025	MMBtu per MM USD Net Sales	937	962	935	
Year	2015	2016	2017	2025								
MMBtu per MM USD Net Sales	937	962	935									
	Increase Global Renewable Energy  25%	 <table><tr><th>Year</th><th>2015</th><th>2016</th><th>2017</th><th>2025</th></tr><tr><td>Percentage of Total Electricity Purchase</td><td>0.50</td><td>7.60</td><td>17.9</td><td>25</td></tr></table>	Year	2015	2016	2017	2025	Percentage of Total Electricity Purchase	0.50	7.60	17.9	25
Year	2015	2016	2017	2025								
Percentage of Total Electricity Purchase	0.50	7.60	17.9	25								

Design
phase

Type of
business
model

Parties
involved

Strategy

Servitisation strategy

Product as a service

- Also referred to as Product as a Service (PAAS models)
- Marketing of a function, instead of selling the product itself
- This strategy can lead to dematerialization, in other words lower the need of new products

Forms of servitisation

1. Product oriented strategy
 - Selling a product with a maintenance package (all types of accessories that fit a specific (reasonable cheap) product (e.g. printers))
2. User oriented service strategy
 - Using idle capacity
 - Supplier remains the owner, while the customer uses the product for the duration of the contract (lease contracts of cars, etc.)
3. Performance oriented service strategy
 - Supplier sells a particular performance, for which the customer pays (e.g. lumen of Philips)

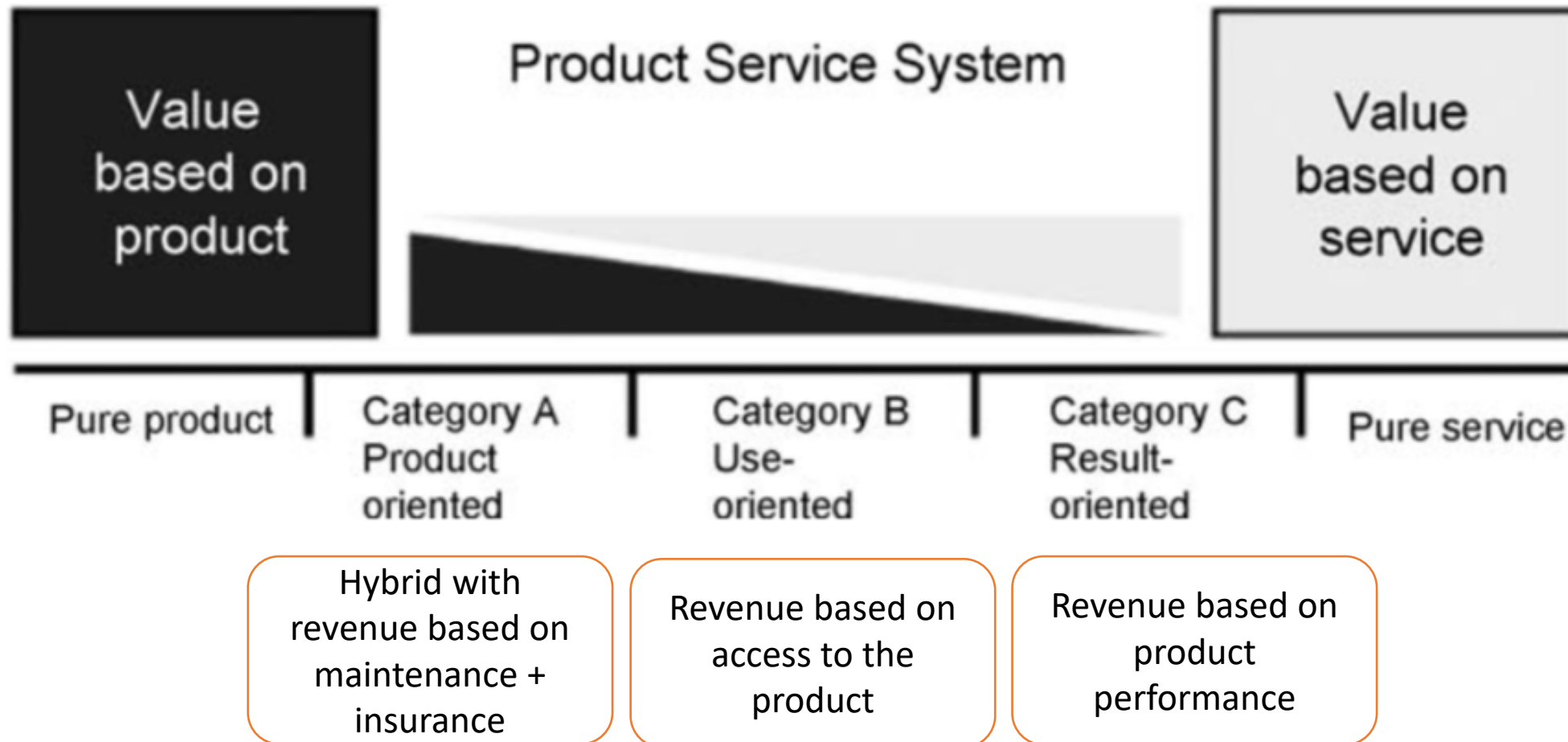
Design
phase

Type of
business
model

Parties
involved

Strategy

Servitisation strategy



Design
phase

Type of
business
model

Parties
involved

Strategy

Usage optimisation strategy

- Making idle capacity available. For example, on average a car is only used 10% of the time.
- Strategy makes often used of a platform to increase usage optimization
- Examples are the MRI machine that is shared among hospitals, Felyx and BlaBlaCar.
- The ecological value is debatable, the intense usage of products increases wear and tear.
- Social value is obtained by making these products available for those with a smaller wallet.



Design phase

Type of
business
model

Parties
involved

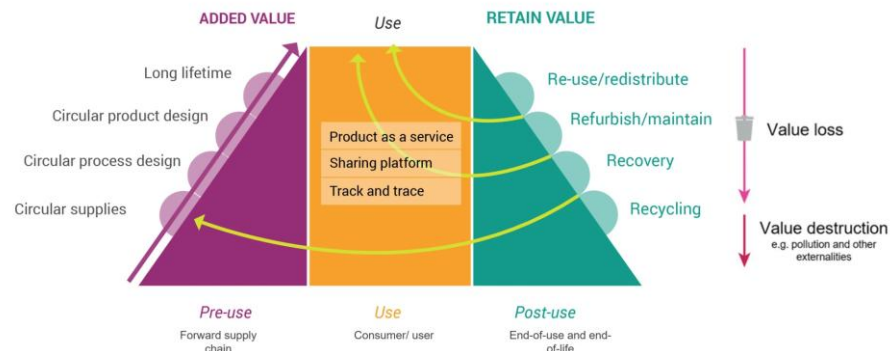
Strategy

Life time extension strategy

- Essence is to extend the lifetime of the value of a product and its components.
- At the core is product design for life cycle extension and repair.
- Is seen as the central strategy of coming to a circular economy.



Source: www.fairphone.com



<https://www.europarl.europa.eu/news/nl/press-room/20231117IPR12211/nieuwe-eu-regels-zodat-consumenten-apparaten-laten-repareren-en-niet-vervangen>

Design phase

Type of
business
model

Parties
involved

Strategy

- Developing a loop with several parties, with the intention to retain the materials at the highest possible level.
- Conversion:
 - Sludge into biogas
- Substitution:
 - Plastic waste used in bicycle paths



Cascading strategy

Primeur met fietspad van plastic afval

Zwolle heeft een wereldprimeur met een fietspad gemaakt van gerecycled plastic. Het fietspad dat vorige week in gebruik werd genomen is onderdeel van een project 'Plastic Road', dat zou moeten leiden tot meer duurzame wegen die in het hele land kunnen worden toegepast.

JANNEKE VAN DER HEIDE

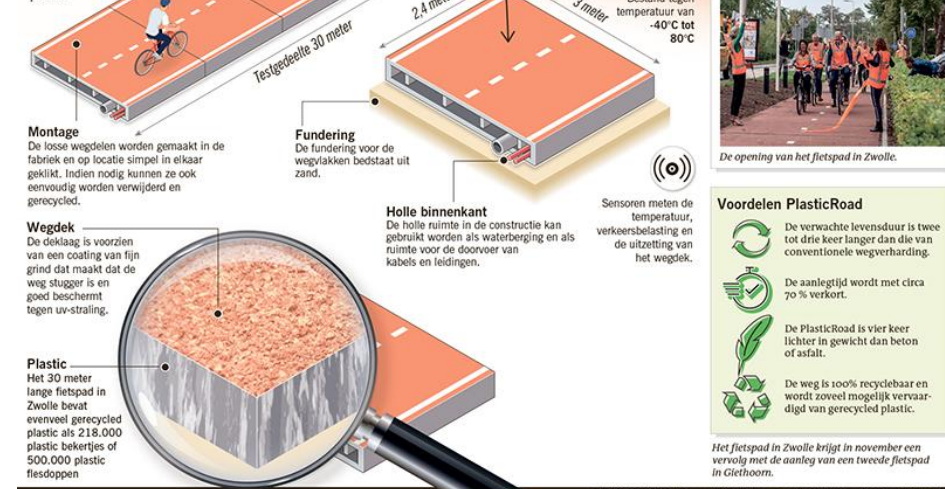
Van idee naar fietspad

Het idee voor een plastic fietspad is ontstaan door problemen waar gemeenten, provincies en waterschappen mee kampen, zoals grote hoeveelheden neerslag, een grotere behoefte aan mobiliteit en een overvolle ondergrond te combineren met de plastic afvalproblematiek.

Plastic Road

PlasticRoad

Het fietspad bestaat uit gerecyclede plastic elementen, die door het gebruik van een nieuw soort polymeer dezelfde kwaliteiten bezitten als een gewone weg. Het concept is in 2015 gelanceerd door het Nederlandse wegenbouwbedrijf KWS. Samenwerking met de firma's Wavin en het Franse Total zorgden voor de verdere ontwikkeling van het plastic product.



Design
phase

Type of
business
model

Parties
involved

Strategy



Cascading strategy



Design
phase

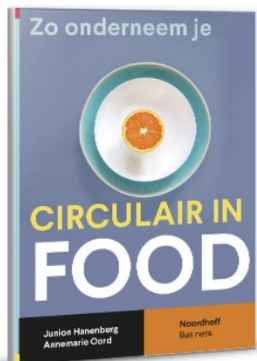
Type of
business
model

Parties
involved

Strategy

Community building strategy

- Jointly organizing the creation of value for and within the community
- Often based on provision of services such as food, energy etc.
- The idea is that every community has all sorts of idle competences



In the Netherlands (Reijn, 2018):

- In 2017 there are 392 energy cooperatives
- In 2024 700+ energy coops
- Oldest, Deltawind (1989) has 2000 members and is based on the Island of Goeree Overflakkee.

Design
phase

Type of
business
model

Parties
involved

Strategy

Core
activities

1 Refuse

Refuse materials that are harmful to the environment

2 Redesign

Redesign products so that they last and can be repaired

3 Replace

Replace technical materials with restorative renewable materials

4 Rethink

Intensify product use by (e.g. sharing products)

5 Reduce

Increase efficiency of product manufacturing by using fewer resources and materials

6 Reuse

Reuse of discarded product, that is still in good shape, by another customer

7 Repair

Repair defective product and maintain its functionality

8 Refurbish

Restore an old product and bring it up to date

9 Remanufacture

Use parts of a discarded product in a new product with the same function

10 Repurpose

Use parts, or the discarded product in a product with a different function

11 Recycle

Process materials of the product at material level (same or lower)

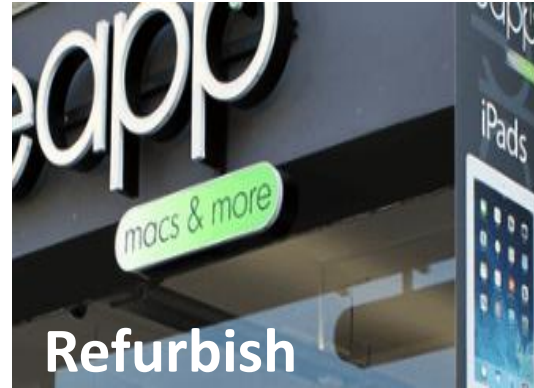
12 Recover

Incineration of material with energy recovery

More circular

More linear

Examples



Ioniqa's Circular Process

100% recycled

75% less CO₂

Price & Quality competitive to oil



Recycle



Recover

Design
phase

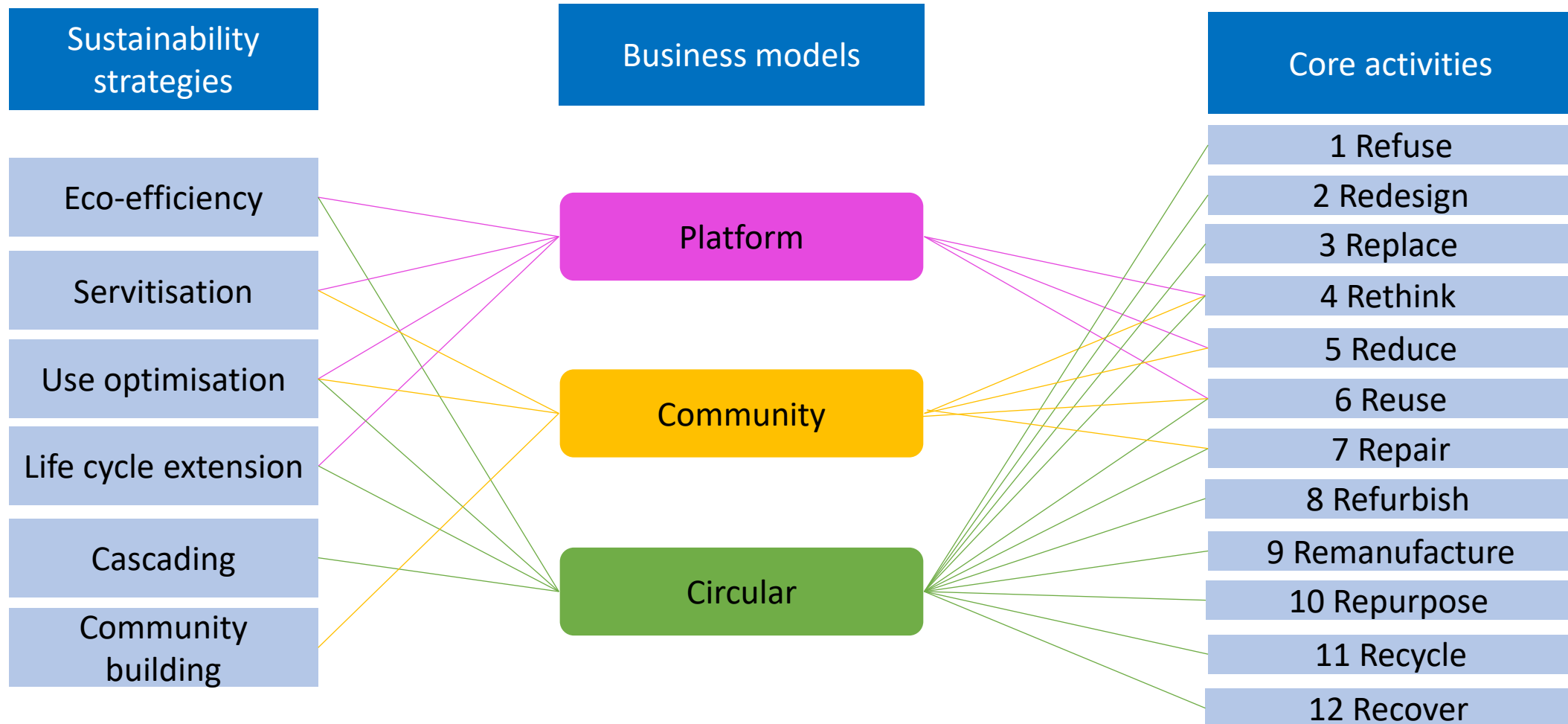
Type of
business
model

Parties
involved

Strategy

Core
activities

Choosing core activities



Design
phase

Type of
business
model

Parties
involved

Strategy

Core
activities

External
test

Reality
check

- ✔ **Market feasibility.** Who needs your product or service? Does it already exist?
- ✔ **Is it financially feasible?** How much should be invested and what returns are expected?
- ✔ **Technological feasibility.** What technology is needed? How advanced are these technologies. Is it feasible?
- ✔ **Legislative feasibility.** Is it allowed? What legal frameworks need to be taken into account?
- ✔ **Ethical.** What are the ethical aspects of this idea? Who is disadvantaged? What are the negative social and environmental impacts.
- ✔ **Timeframe.** How much time does it take to execute it. Is this time available?
- ✔ **Relevance.** Is it still relevant by the time the idea enters the market?

IntelligentFood en een onderdeel van ons businessmodel



Design
phase

Type of
business
model

Parties
involved

Strategy

Core
activities

External
test

New
ideas

- ✔ Does it already exist?
- ✔ Is it allowed?
- ✔ To which type of economy does it contribute?
- ✔ Side effects?
- ✔ Feedback from everybody

Results
phase

Assessing Impacts

What is the impact of the business model?



Time

In terms of **output** of
product/service or the
direct result

In terms of **outcome** in
terms of intermediate
environmental effects

In terms of **impact** or
sustainable effects on the
long term

Assessing Impacts



1. **Brainstorming** and **prioritizing** the types of impact
2. **Assessing impacts:**
 - **Environmental impacts**
 - Life cycle assessment analysis <https://ecochain.com/knowledge/life-cycle-assessment-lca-guide/>
 - **Social impacts**
 - Social life cycle assessment <https://ec.europa.eu/jrc/en/publication/social-life-cycle-assessment-state-art-and-challenges-supporting-product-policies>
 - ISO 26000 <https://www.iso.org/iso-26000-social-responsibility.html>
 - **Financial impacts** – Life cycle costing <https://ec.europa.eu/environment/gpp/lcc.htm>
 - **Global Development Goals** <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>
3. **Reporting impacts:**
 - Global reporting initiative (www.globalreporting.org)
 - Reporting 3.0 <https://reporting3.org>
 - Integrated reporting <https://integratedreporting.org>

Food Waste Challenge

Meer resultaat door minder verspilling in de horeca

Zo belangrijk is de horeca ➤ **Zoveel** kunnen we besparen



Groot:

1,8% van het BBP

Waardevol:

€ **€28** miljard omzet

Werkgelegenheid:

448.000 banen

Groei in 10 jaar:

+ 5.000 bedrijven
+ 28% banen

In totaal
46.000
bedrijven (18.000
restaurants)

€ **582 miljoen**
61 miljoen kilo voedsel
121.000 ton CO₂

Top 5 tips: best werkende acties

1 Commitment

Iedere medewerker tekent persoonlijk voor zijn of haar betrokkenheid. Deal!

2 Sociale norm

Laat zien dat er al heel veel andere chefs ook meedoen.

3 Smileys

Een rode, verdrietige smiley op de vuilnisbak. En een blij groene op de koelkast. Zulke subtiele aanwijzingen werken echt!

4 Boegbeeld

Laat zien dat de chef (of een ander intern boegbeeld) zich echt in zet om voedselverspilling te voorkomen.

5 Doggy Bag

Laat op de menukaart zien dat het normaal is om een doggy bag te vragen.

Bewijs:
het kan anders

➤ **Zoveel** leverde de Food Waste Challenge de deelnemers op in **6** weken:

21% minder voedselverspilling, dit is een besparing van **75.240 kg** voedsel, ofwel **€ 757.775,-** en **150.480 kg CO₂**.

Het grote doel voor **2030**

-50%

voedselverspilling

De Nederlandse horeca als voortrekkers.

291 miljoen
Euro kosten bespaard

30,5 miljoen
kg minder voedsel gebruikt

60.500 ton
CO₂ minder uitstoot

Meer informatie: [rabobank.nl/foodwastechallenge](https://www.rabobank.nl/foodwastechallenge)

Results
phase

Assessing Impacts

Value(s) created

Revenue models

Transactions
Valuation

Monetary revenue
models

Hybrid revenue
models

- Sales of product, -> transfer of ownership
- Sales of product with take back guarantee
- Sales of product with service, transfer of ownership with rental component
- Temporary transfer of ownership with take back guarantee
- Temporary transfer of ownership including service (operational lease)
- Sales of a total solution (product and service)

- Sale of use, access or function
- Sale of performance
- Sale of advice
- Use based on deposit, or rent
- Cascading incomes
- Exchange based on hybrid values

Results
phase

Assessing Impacts

Value(s) created

Hybrid transactions



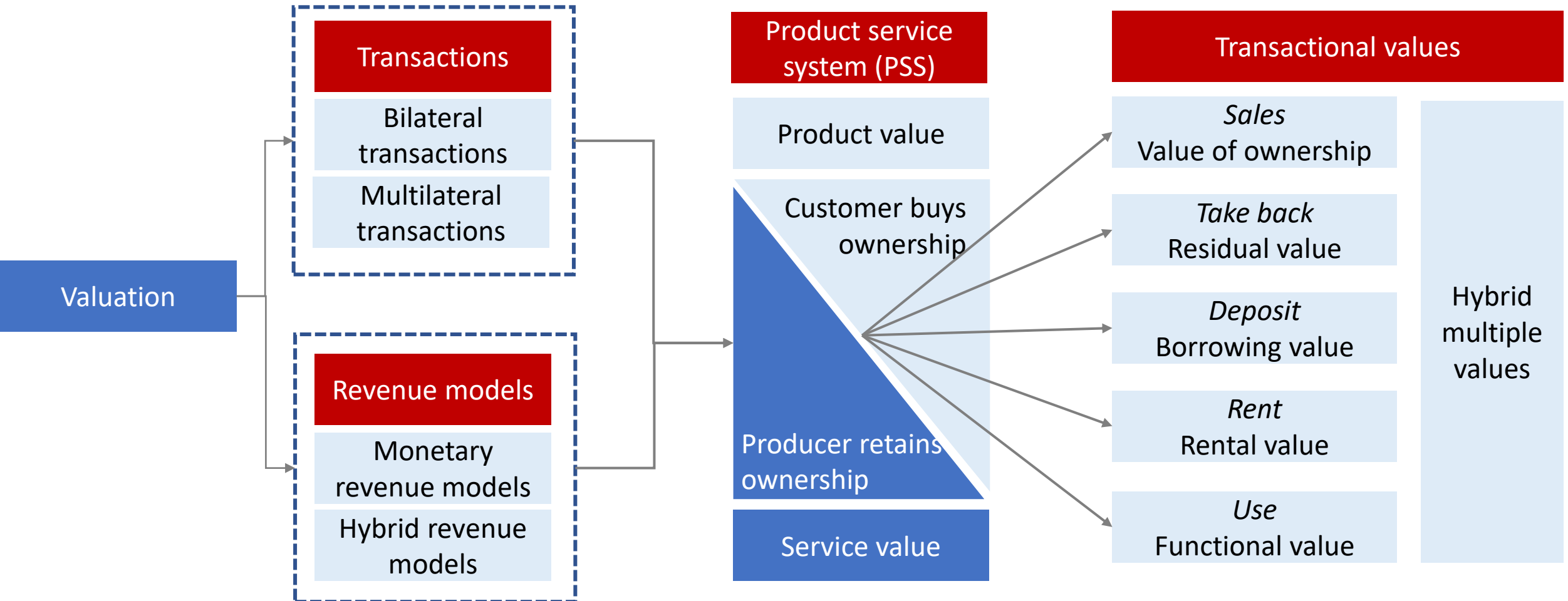
Currencies

Results
phase

Assessing Impacts

Value(s) created

Typology of transaction and revenue models



Results
phase

Assessing Impacts

Value(s) created

Hybrid transactions



[Samsambank](https://www.samsambank.nl/)



<https://www.investopedia.com/terms/l/local-exchange-trading-systems-lets.asp>



<https://www.socialtrade.org>



VALUE OF A BEE ?

Biomimicry

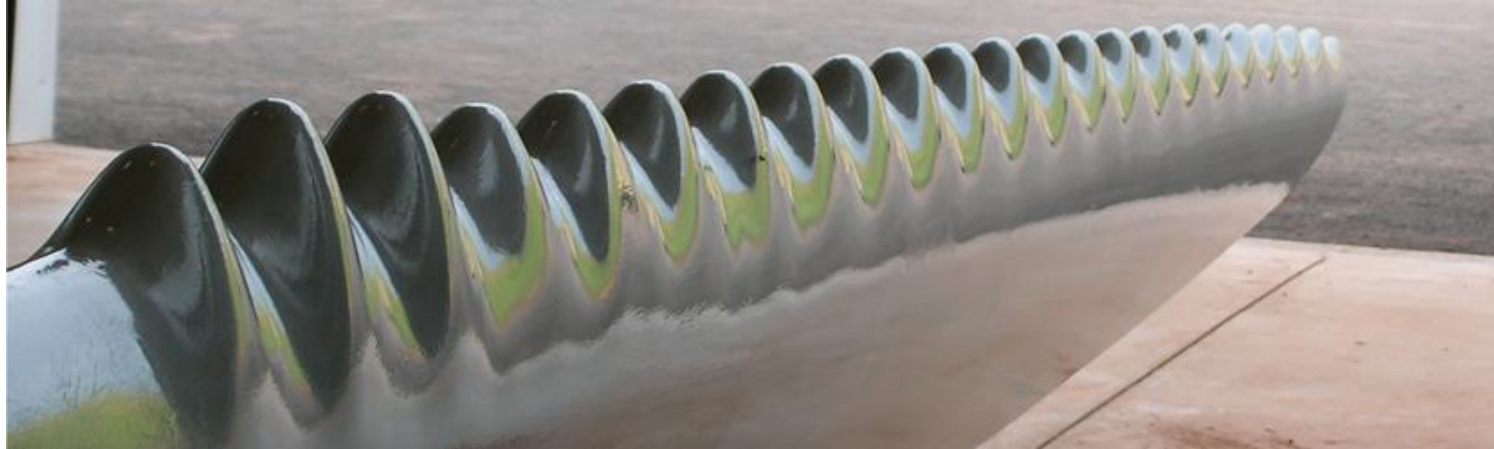
- Dat 'leren van de natuur', noemen we ook wel biomimicry. De natuur wordt geïmiteerd om duurzaamheidvraagstukken in onze samenleving op een andere manier aan te pakken. Veel product- en procesontwerpen ontleen ideeën en principes aan voorbeelden uit de natuur

Vaak technisch van aard

Enkele voorbeelden

- **Energie: efficiëntere windturbines dankzij borstvinnen van bultruggen**
- **Ecologie: naar slimme watersystemen dankzij de Stecocara-kever**
- **Architectuur: slimmere ventilatiesystemen dankzij termieten**
- **Geneeskunde: hoe muggen ons kunnen leren betere naalden te maken**
- **Communicatie: hoe dolfijnen ons waarschuwen voor tsunami's**

Energie: efficiëntere windturbines dankzij borstvinnen van bultruggen



[Het bedrijf Whalepower](#) gebruikt de hobbelige vorm van borstvinnen van bultruggen als inspiratiebron voor de wieken van windturbines. Hierdoor verhogen zij de efficiëntie van apparatuur, zoals waterpompen, ventilatoren en afzuigers. Het uitrusten van windturbines met deze technologie kan volgens het bedrijf de efficiëntie van energieopwekking met 20 procent verhogen.

Ecologie: naar slimme watersystemen dankzij de Stecocara-kever



De Stecocara-kever kan een knap kunstje: water uit de lucht opvangen. Een patroon van knopen langs de rug van de kever stelt het schepsel in staat om vocht op te vangen uit bijvoorbeeld de ochtendmist. De druppels glijden vervolgens van de bultjes in kleine kanalen naar de mond van de kever. Academici gebruiken onderzoek naar dit systeem momenteel om biomimetische patronen te ontwikkelen waarmee water uit de lucht kan worden gewonnen. Technologie afgeleid van deze kever die gedijt in een van de zwaarste omgevingen op aarde, kan heel goed helpen bij het starten van de volgende generatie van schoon watertechnieken.

Architectuur: slimmere ventilatiesystemen dankzij termieten



Termieten hebben vaak een slechte naam vanwege hun destructieve eigenschappen. Termieten zijn echter berucht voor de manier waarop zij van enkele van de meest uitgebreide ventilatiesystemen voor koeling op aarde creëren. Zelfs op sommige van de heetste plaatsen blijven deze termietenheuvels uitzonderlijk koel van binnen. Ingenieursbureau Arup bouwde een volledig winkelcentrum in Zimbabwe op basis van dit natuurlijke convectiesysteem en zorgde zo dat er 10 procent minder energie wordt gebruikt dan bij een traditionele faciliteit met airconditioning.

Geneeskunde: hoe muggen ons kunnen leren betere naalden te maken



Bijna iedereen wordt weleens gestoken door een mug – vaak ook zonder dat je het door hebt. Onderzoekers [bestudeerden wat we kunnen leren van de mond van een mug](#). Het blijkt dat de punt van de mond van de mug is samengesteld uit verschillende bewegende delen die met een minimum aan gedoe en een minimum aan pijn in de huid werken. Deze ervaring is nu uitgangspunt voor het ontwerp van een pijnloze injectienaald.

Communicatie: hoe dolfijnen ons waarschuwen voor tsunami's



Dolfijnen kunnen de oproepen van specifieke geluiden tot op 25 kilometer afstand herkennen. Dit toont aan dat ze in staat zijn om correcte informatie te communiceren en verwerken ondanks hun uitdagende omgeving: het water. Op basis van de manier waarop dolfijnen in deze omstandigheden communiceren, heeft [een bedrijf genaamd Evologics](#) krachtige onderwatermodems ontwikkeld voor gegevensoverdracht, die momenteel worden gebruikt in het tsunami-waarschuwingssysteem in de hele Indische Oceaan.

Birds and biomimicry



References

- Bakker, C., den Hollander, M., van Hinte, E., & Zijlstra, Y. (2014). *Products that last: Product design for circular business models*. Delft: TU Delft.
- Bocken, N., Short, S., Rana, P., & Evans, S. (2013). A value mapping tool for sustainable business modelling. *Corporate Governance*, 13(5), 482-497. doi:10.1108/CG-06-2013-0078
- Datta, P. P., & Roy, R. (2010). Cost modelling techniques for availability type service support contracts: a literature review and empirical study. *CIRP Journal of Manufacturing Science and Technology*, 3(2), 142-157.
- Jonker, J., & Faber, N. (2020). *Duurzaam organiseren - template voor het ontwikkelen van nieuwe businessmodellen* (J. Jonker & N. Faber Eds.). Amsterdam: Boom.
- Joyce, A., Paquin, R., & Pigneur, Y. (2015). *The triple layered business model canvas: A tool to design more sustainable business models*. Paper presented at the ARTEM Organisational Creativity International Conference, Nancy.
- Lewandowski, M. (2016). Designing business models for circular economy - Towards the conceptual framework. *Sustainability*, 8(43). doi:doi:10.3390/su8010043
- Manninen, K., Koskela, S., Antikainen, R., Bocken, N., Dahlbo, H., & Aminoff, A. (2018). Do circular economy business models capture intended environmental value propositions? *Journal of Cleaner Production*, 171, 413-422. doi:10.1016/j.jclepro.2017.10.003

References

- Marketline. (2018). *Renewable energy in Europe - Industry report*. Retrieved from MarketLine <http://advantage.marketline.com.ezproxy.hro.nl/Product?ptype=Industries&pid=MLIP2758-0006>
- Osterwalder, A., & Pigneur, Y. (2010). *Business model generation: A handbook for visionaries, game changers and challengers*. New Jersey: Wiley.
- Proka, A., Hisschemoller, M., & Loorbach, D. (2018). Transition without conflict? Renewable energy initiatives in the Dutch energy transition. *Sustainability*, 10(1271), 1-19. doi:10.3390/su10061721
- Reijn, G. (2018, August 13). *Niemand wil zo'n molen in zijn achtertuin. Maar als er iets tegenover staat, is het een ander verhaal [Nobody wants such a windmill in his backyard. But if there is something opposite, it is a different story]*. Retrieved from Volkskrant <https://www.volkskrant.nl/economie/-niemand-wil-zo-n-molen-in-zijn-achtertuin-maar-als-er-iets-tegenover-staat-is-het-een-ander-verhaal-~bc2fd7ad/>
- Tukker, A. (2015). Product services for a resource-efficient and circular economy – a review. *Journal of Cleaner Production*, 97, 76-91. doi:10.1016/j.jclepro.2013.11.049

Filled-in Business Model Template

Definition phase

The motive is something that impacts you so severely that you want to contribute to its sustainable solution.

The dream shows what the impact is of your business model if everything works out the way you intended.

A proposition is the promise on the value that an organisation delivers and on what can be expected from a product or service.

Design phase

Here you make a choice between one of the three basic types of sustainable business models: (1) platform, (2) community-based and (3) circular.

Here it is about identifying actors (as citizens, companies, the government) that need to cooperate to realise the proposition.

The strategy is the plan you follow to realise your dream and it denotes the choices you make to realise the proposition of an organisation.

A core activity is that which an organisation is mainly dealing with, what it is good at, and what provides its license to operate.

With the external test, you check in your environment the use-case, the added value and the feasibility of your business model.

Result phase

Here you name, reason and determine the impact that you and your business model will realise, using a set of indicators.

The ambition of every sustainable business model is to simultaneously create multiple values, expressed in a mix of for example money, time, energy and inclusion.