

Multiple Value Creation: an introduction

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Maastricht University

About values and valuation

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- **Values as moral and ethical principles that guide our behaviour:** honesty, equality, empathy, aspiring to be non-judgemental, minimise your carbon footprint, ...
- **The value of something (willingness to pay or accept):** a unique painting, a house painting job, clean air, animal wel-being, nuisance, ...
- Values cannot be translated into a price

Valuation methods

- Social return of investment
- Quality: quality adjusted life year
- Costs and benefits (monetised)
- Multicriteria-analysis
- The price difference between soil that is at risk of occasional flooding and soil that isn't, (hedonic pricing method)
- Damage restoration costs...

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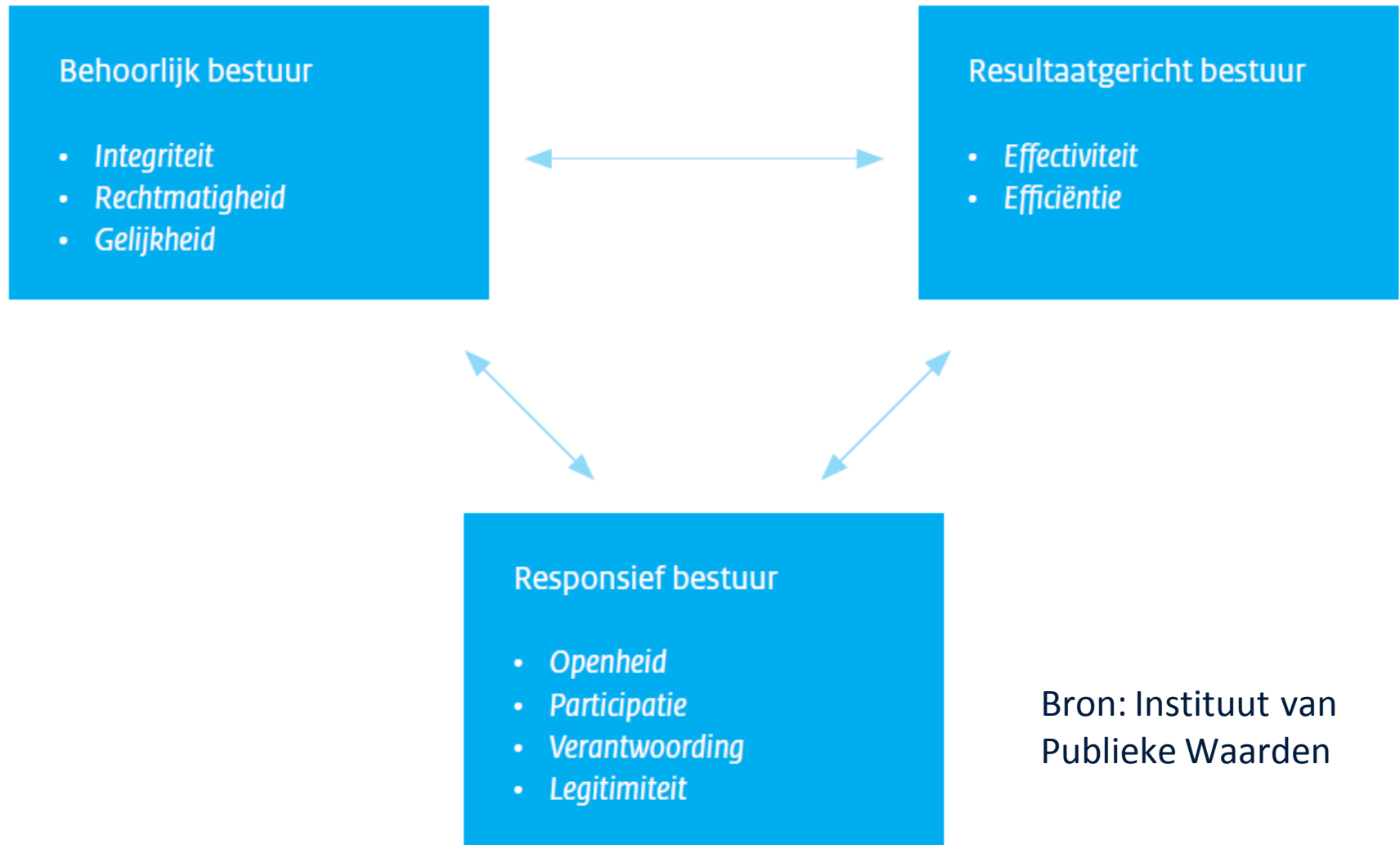


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Value-based principles of good governance



Figuur 1: botsingen tussen verschillende waardenclusters



Values clusters in the water sector



- Undertake tasks (legally) granted to them in an **efficient** and **reliable way**
- Participatory (via elections and beyond)
- **Sustainable** (beyond environmental quality of waters)
- Tasks water companies:
 - Providing cheap and safe drinking water
 - Waste water treatment
 - Rain water & transport
 - Flood protection
 - Environmental quality of rivers, creeks
 - Contributing to public goals of carbon reduction, circularity, ...



Approaches to value creation

- CSR: mostly about protecting the reputation of the company without fundamental product change
- Triple bottom line (Atkinson)
- Values-driven business cultures
- **Shared value creation:** more innovation oriented than CSR (Porter and Kramer, 2011)
- **Sustainable Business Model Innovation (SBMI) (*new earning model*)** (Boons & Lüdeke-Freund, 2013; Schaltegger, et al., 2016; Geissdoerfer et al., 2018; Bocken, 2019)



Four examples of Multiple Value Creation



- 1) Kristalbad in Twente
- 2) Repurposing of old landfills
- 3) Rondeel eggs
- 4) Nijsen/Granico (about food waste as pig feed)

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Multiple value creation in Kristalbad in Twente



KRISTALBAD, WATER STORAGE

Kristalbad is situated between the two easternmost cities in the Netherlands, Enschede and Hengelo. In case of heavy rainfall, water runs from Enschede to Hengelo. Kristalbad is a water storage area to prevent flooding of Hengelo.

Public
finance

Water storage

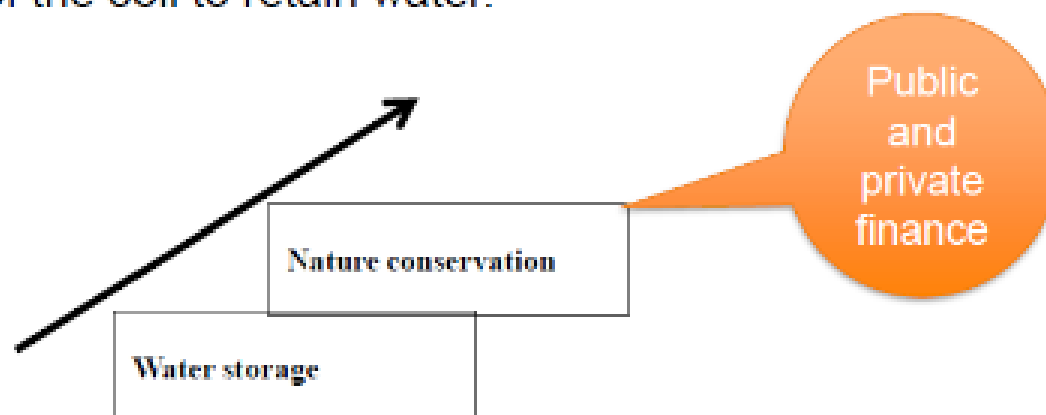


Source: Jurgen van den Heijden, AT Osborne



KRISTALBAD, NATURE CONSERVATION

Eco system service of nature is to enhance the capacity of the soil to retain water.

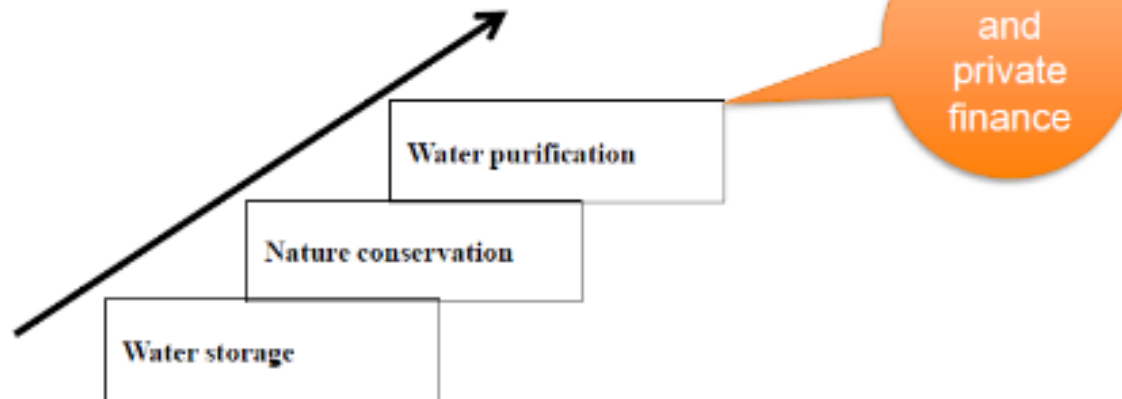


Source: Jurgen van den Heijden, AT Osborne



KRISTALBAD, WATER PURIFICATION

Eco system service of nature is to purify water.

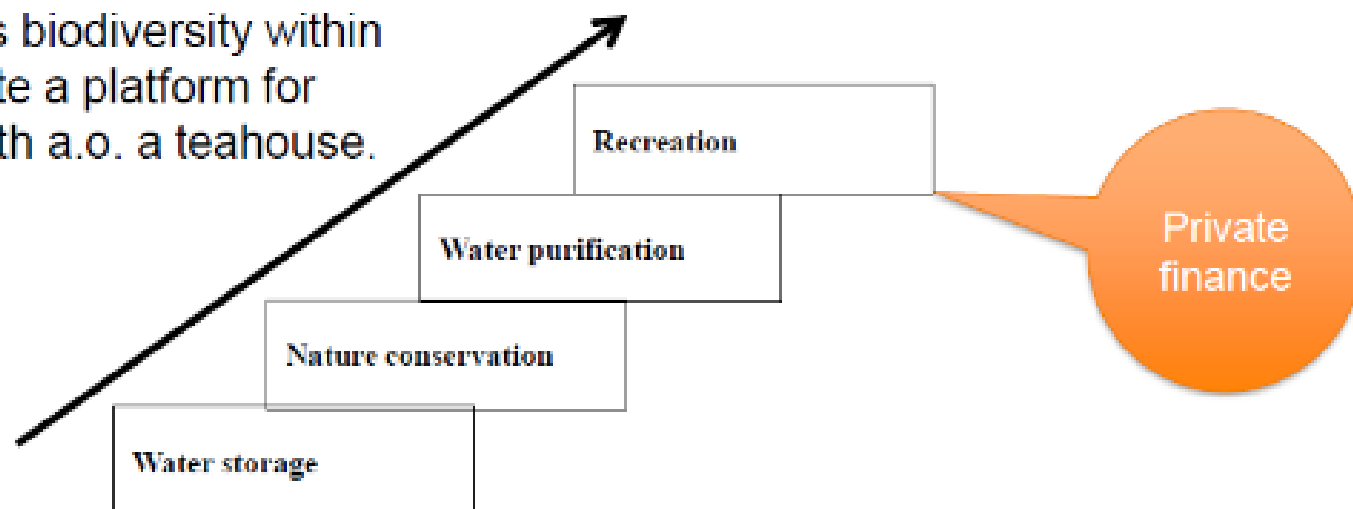


Source: Jurgen van den Heijden, AT Osborne



KRISTALBAD, RECREATION

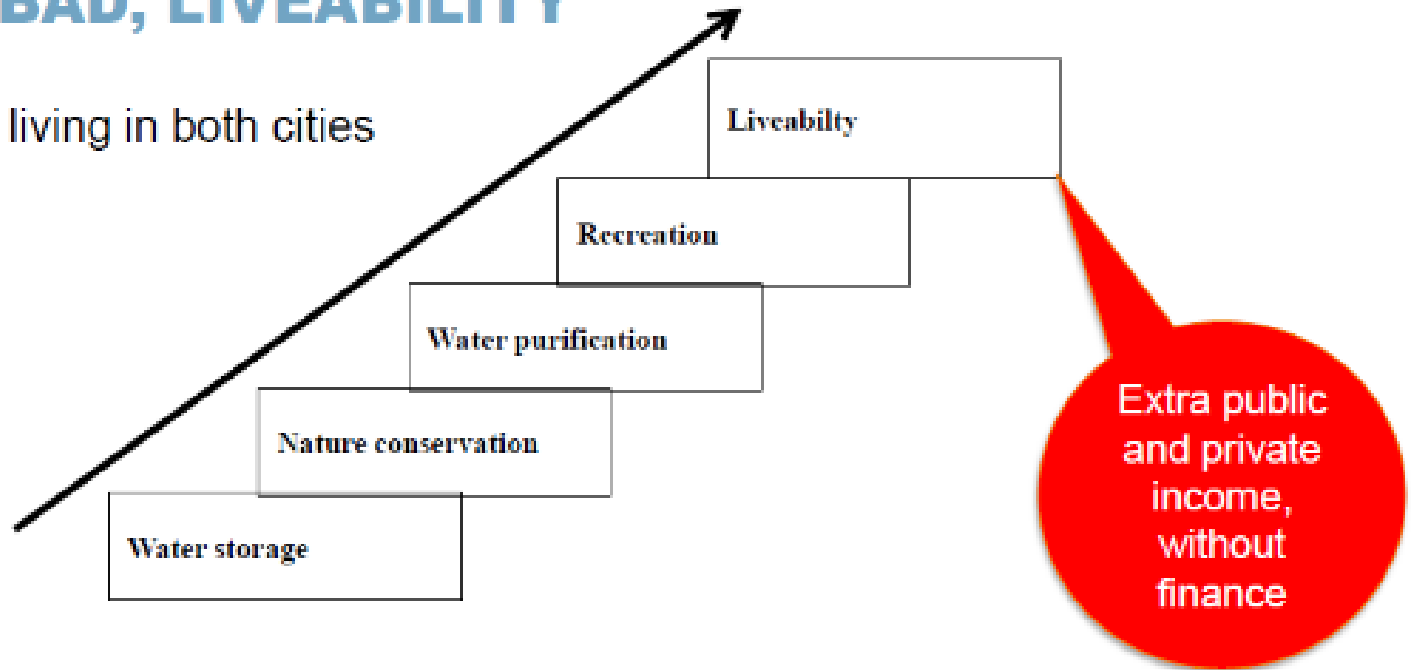
Nature and its biodiversity within the area create a platform for recreation, with a.o. a teahouse.



Source: Jurgen van den Heijden, AT Osborne

KRISTALBAD, LIVEABILITY

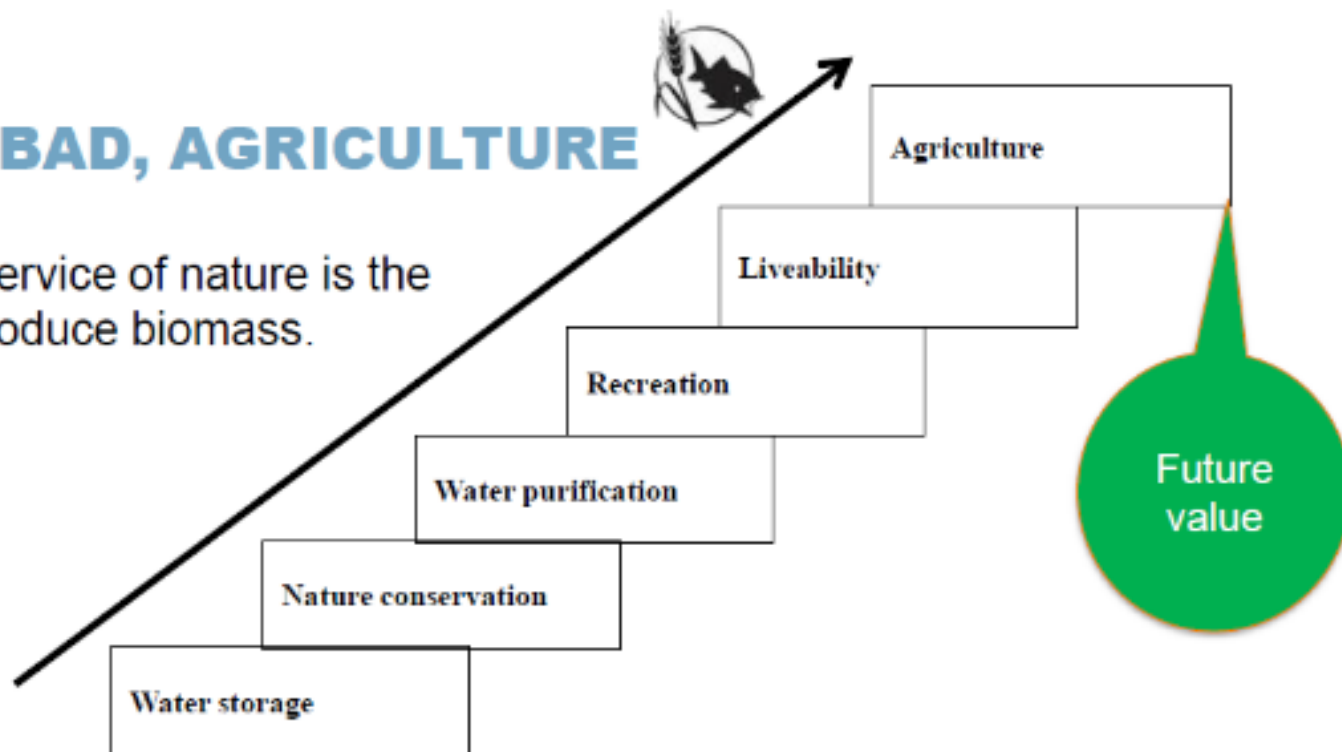
The quality of living in both cities increases.



Source: Jurgen van den Heijden, AT Osborne

KRISTALBAD, AGRICULTURE

Eco system service of nature is the capacity to produce biomass.



Source: Jurgen van den Heijden, AT Osborne

MULTIPLE BENEFIT BUSINESS CASE, LESS COSTS

- Kristalbad is a multiple benefit business case wherein:
 - › Each benefit shares building and maintenance costs with the other benefits.
 - › E.g. water storage, purification and recreation share assets / space.
- This makes a stronger business case for each single benefit than working on this benefit apart.

Source: Jurgen van den Heijden, AT Osborne



New land-use purposes of old landfills



Casus voormalige stortplaatsen

- Portfolio van om te beginnen 20 stortplaatsen
- In totaal 4000 stortplaatsen in Nederland, voormalig en in gebruik



Source: Jurgan van den Heijden, AT Osborne

Problem: The projects have to be **separately funded** even though their viability depends on the projects being done simultaneously

Fonds voor meervoudige investeringen

- Wij hebben financiers (o.a. Rabo, BNGBank, SVn) portfolio's van meervoudige projecten aangeboden ter financiering.
- Daarmee konden zij NIET uit de voeten, omdat zij enkel in staat zijn tot de financiering van enkelvoudige projecten, liefst zo groot mogelijk.
- Onze volgende stap is daarom nu het ontvlechten van geïntegreerde projecten in enkelvoudige investeringen, die in de realisatie en exploitatie weer geïntegreerd worden.

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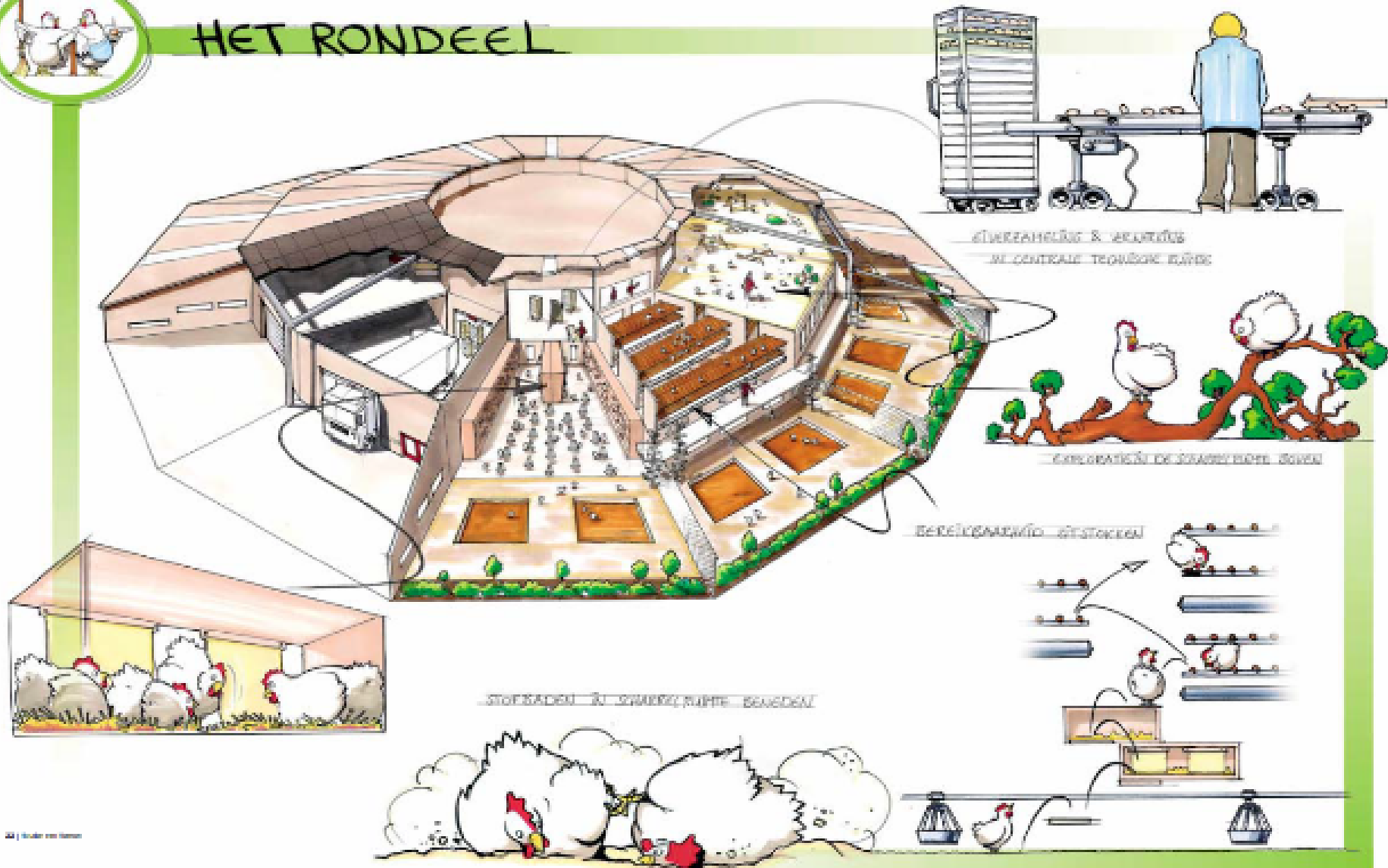
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Two examples from business

Rondeel-eggs: eggs from happy and healthy chicken thanks to a novel husbandry system and a partnership between farmers, an animal NGO, a packaging company, retailers and consumers willing to pay 10 cent extra per egg



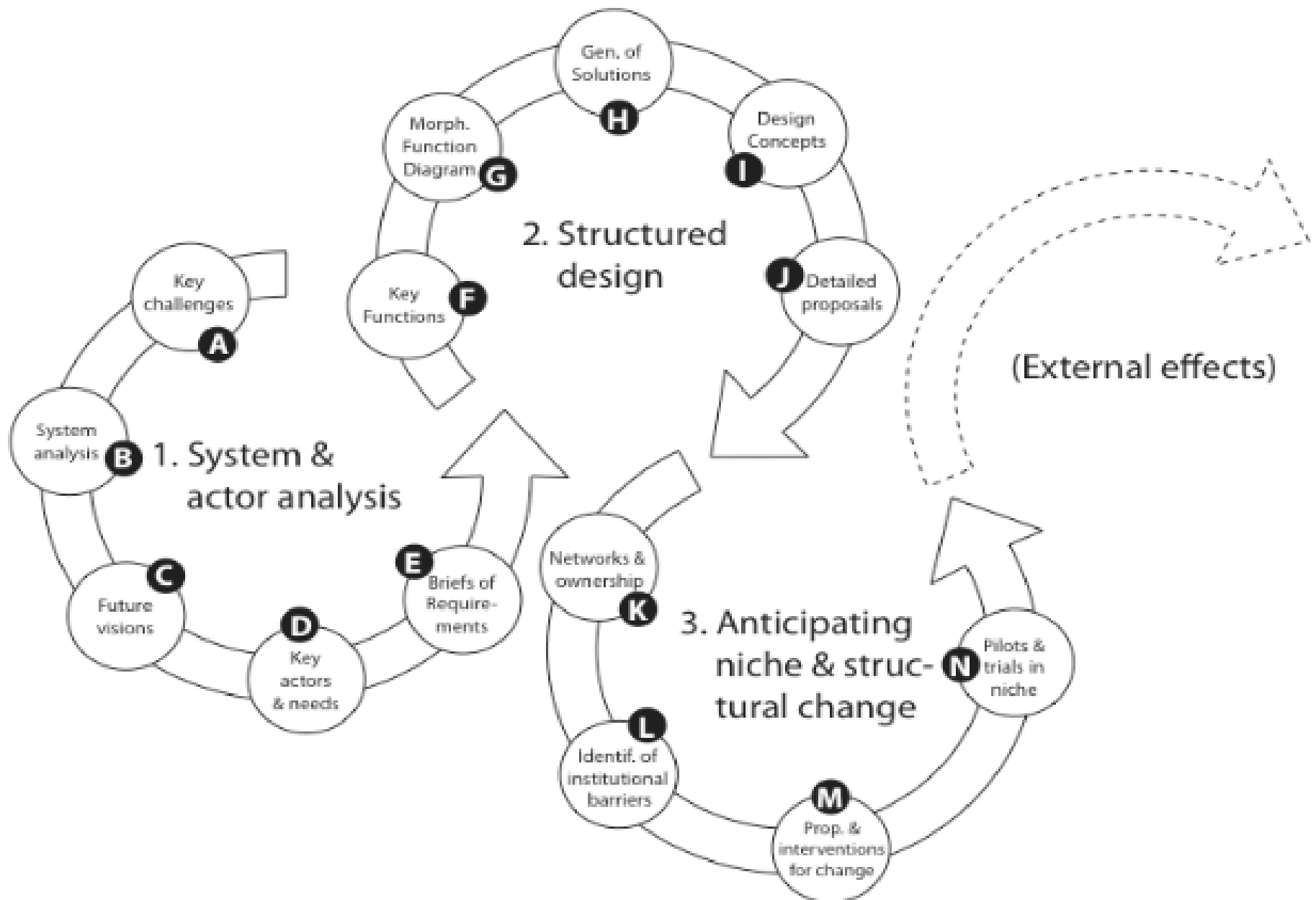
HET RONDEEL



Characteristics

- **Two climate zones** with space for walking and possibilities for resting, laying an egg, eating and drinking
- No contact with birds
- Centralised egg collections and sorting (**labour-intensive**)
- Healthy feed
- **Premium price** for farmers
- **Special packaging** (environmentally benign, special shape to differentiate it from other eggs)





Bos, A.P., Groot Koerkamp, P., Gosselink, J.M.J., Bokma, S. (2009). **Reflexive Interactive Design** and Its Application in a Project on Sustainable Dairy Systems. *Outlook on Agriculture*, 38(2): 137 – 145

Towards a circular pig husbandry sector

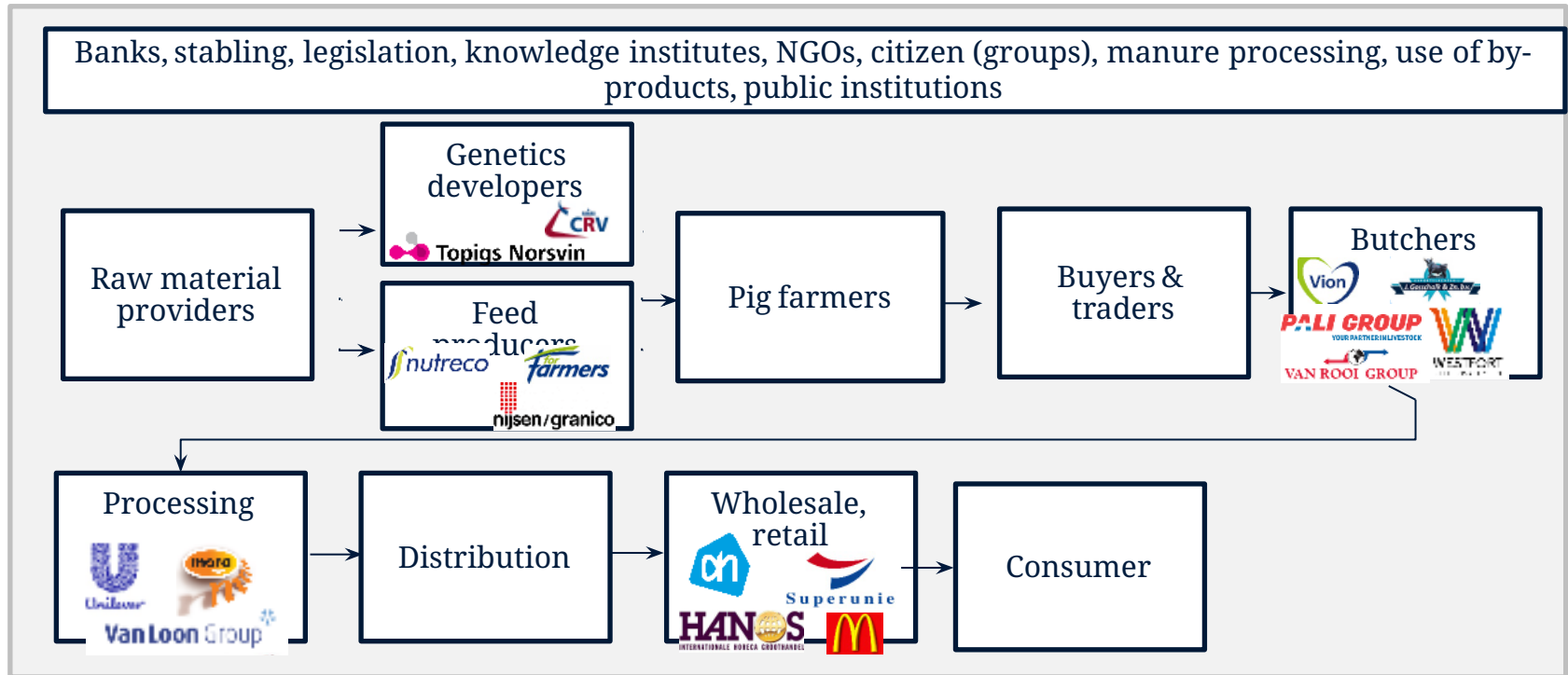
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The value chain



Innovation process



2017: Exploration Nijsen/Granico

2018: Search for like-minded partners: Kipster, Gemeente Peel & Maas, NGO Stichting Natuur en Milieu in project intention.

Ambition to approach retailer

2019: First presentations to retail, division in three projects

2020: Start international talks

Discussions about:

- *What does a sustainable pig sector mean?*
- *What sustainability issues do we aim to tackle?*
- *What are the implications for roles and activities in the value network?*

2014	2015	2016	2017	2018
<ul style="list-style-type: none"> Traditional business model under pressure due to small margins, commodity position and scarce supply of residual flows. Kipster asks Nijsen/Granico for circular chicken feed 	<ul style="list-style-type: none"> Coincidental connection SuperUnie Value-research feed i.c.w. Wageningen University Sketch businesscase Kipster Idea Food for Feed for Food 	<ul style="list-style-type: none"> Exploratory meetings Kipster, to align retail and NGOs Exploratory meetings NGOs Natuur & Milieu, Milieudefensie and Dierenbescherming Initial exploring critical stakeholders and barriers: SuperUnie required to align butchers as butchers cannot work in badges Conflict SuperUnie on responsibilities 	<ul style="list-style-type: none"> Novel roles and activities, particularly for retailer and pig entrepreneur Barriers for alignment critical stakeholders Prioritizing collaboration partners Financers show interest Start Kipster 	<ul style="list-style-type: none"> Modelling stakeholder network as-is and to-be, in collaboration with the focal researcher and a consultant Define key-stakeholders, their characteristics and envisioned barriers for alignment Define potential partners and defenders (Knowhouse, Municipality, pig entrepreneurs) Development of three business model strategies and preferred strategy Envisioning future role Nijsen/Granico: from 'feed producer' to 'circular concept provider'
<ul style="list-style-type: none"> Nijsen/Granico starts talking to international partners Conversations with Van Loon and Lidl continue Lidl continues to supply residual products for Kipster 	<ul style="list-style-type: none"> Kipster opens 3rd stable Supply problems Nijsen/Granico for Kipster. Nijsen/Granico asks Lidl for help and Lidl helps with list of potential residual products <p><u>Circular Pig:</u></p> <ul style="list-style-type: none"> Negotiate priorities value creation NGO agrees on sourcing process Exploring structure and sensitivities in the sector: pricing, feed-farmer relations Conflict over concreteness pricing Improved understanding power and position of Nijsen/Granico's new role NGO makes explainer Circular Pig <p><u>Banketvarken:</u></p> <ul style="list-style-type: none"> Presentation Nijsen/Granico to Lidl and butcher, mentioning specific numbers pricing, value propositions, costs Critical publication Kipster, revealing emerging discontent existing farmers 		<ul style="list-style-type: none"> Process split up in 3 projects: <ol style="list-style-type: none"> 1. The Pigster consortium, about circular pig farming. Participants: 1 customer (Albron), BOM, Kees Schepers. Experiment with pigs "the duke of berkshire" 2. The Banquet Pig, a project started with Lidl 3. The Circular Pig, project of offering the concept to other retailers Acceleration Banquet Pig due to meetings Lidl and Van Loon Nijsen/Granico proposes its new role as a strategic partner for circular food concepts in addition to pig feed producer to Lidl 	<ul style="list-style-type: none"> Project proposal drafted by NGO's, Ruud Zanders and Municipality. Realisation that company growth is limited when sticking to the societal value proposition Discussion about certification schemes Realisation of dropouts (limited amount of pig farmers) NG requests the independent consultant to be an external broker

Envisioned value creation

As-is	To-be
Sourcing from food waste and raw materials; human-animal competition for land	Sourcing only from food waste , eliminate competition
Fragmented value chain	Network-orientation, integrated value chain
Price-focus	Focus on multiple forms of value
Pig entrepreneurs in weak position	Improved position pig entrepreneurs
Food to biomass, legally obstructed for animal feed	No food waste
High negative environmental and social impact (CO2, methane, smell, phosphate, animal welfare)	Low / no negative environmental/ social impact
Global, oil-based sourcing	Regional, sustainable sourcing

Multiple Value Creation

Societal Value Propositions	Environmental Value Propositions	Partner Value Propositions	Consumer Value Propositions
<ul style="list-style-type: none"> • Elimination of human-animal competition for land • Contribute to solving manure problem • Decrease smell and improve air quality in areas surrounding stables 	<ul style="list-style-type: none"> • No additional need for resources & agricultural land (forests, soy, wheat) • Carbon emission reduction through local sourcing & production process • Less phosphate pig manure 	<p><u>Pig farmers</u></p> <ul style="list-style-type: none"> • Decrease manure problem • Price/volume certainty • Improved image <p><u>Retailer</u></p> <ul style="list-style-type: none"> • Circularity • Avoid waste costs • Improved image & avoid NGO campaigns <p><u>Butchers</u></p> <ul style="list-style-type: none"> • Distinct proposition to retail <p><u>NGO</u></p> <ul style="list-style-type: none"> • No additional resource need & agricultural land • Reduced CO2 emission through regional sourcing & production • Less phosphate pig manure 	<p><u>Immediate:</u></p> <ul style="list-style-type: none"> • Certified meat • Improved taste and structure • Improved animal welfare • Improved environmental performance (renewable energy, manure) <p><u>Long-term:</u></p> <ul style="list-style-type: none"> • Improved environmental performance (logistics)

Improvement perspective

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- Will this innovation work? Why/why not?
- Are actors missing in the debate?
- Who will have to change the most?
- What is the role of the retailer (e.g. Albert Heijn)?
- How to create an improvement perspective for the key actors?

Initial findings (I)

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- **Circular Business Model Innovation (CBMI)** involves next to a new process or product, also new forms of collaboration based on different understanding of value (relational in addition to transactional partnerships, normative & strategic boundaries)
- Multiple actors must engage in **simultaneous and coherent boundary change** to establish a novel compound intentional logic for CBMI
- Improvement perspectives of several critical actors (pig farmers, butchers, retailers, consumers) not clear yet (surrounded with uncertainty), their acceptance and collaboration is to be won

Initial findings (II)

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- **Pig farmers as key-partner are not involved yet,** current partners involved for creating improvement perspectives for key-actors.
- Vulnerable sector; not much financial space and willingness to innovate.
- Ambition for only waste streams means certain pig feed companies will disappear from the market unless they can find a new improvement perspective (earning model)

Organizational Boundaries

“the demarcation between the organization and its environment”

Santos and Eisenhardt (2005, p. 491)

- Identity – the choice of ‘who we are’
- Power – ability to control relationships
- Competence – resources, capabilities, knowledge
- Efficiency – demarcation of transactions

Boundaries are interrelated: logic of identity sets rules for inclusion and activities

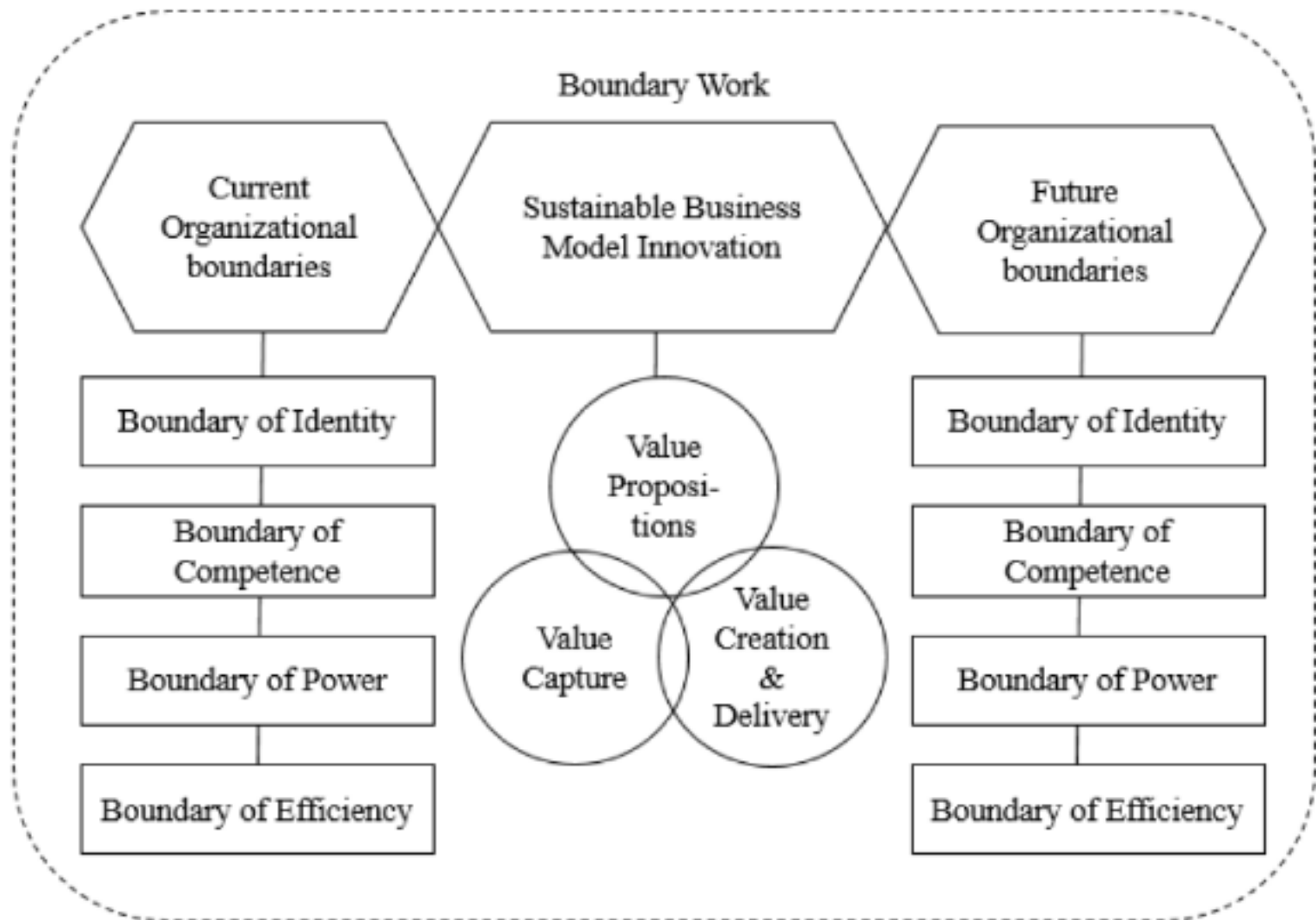
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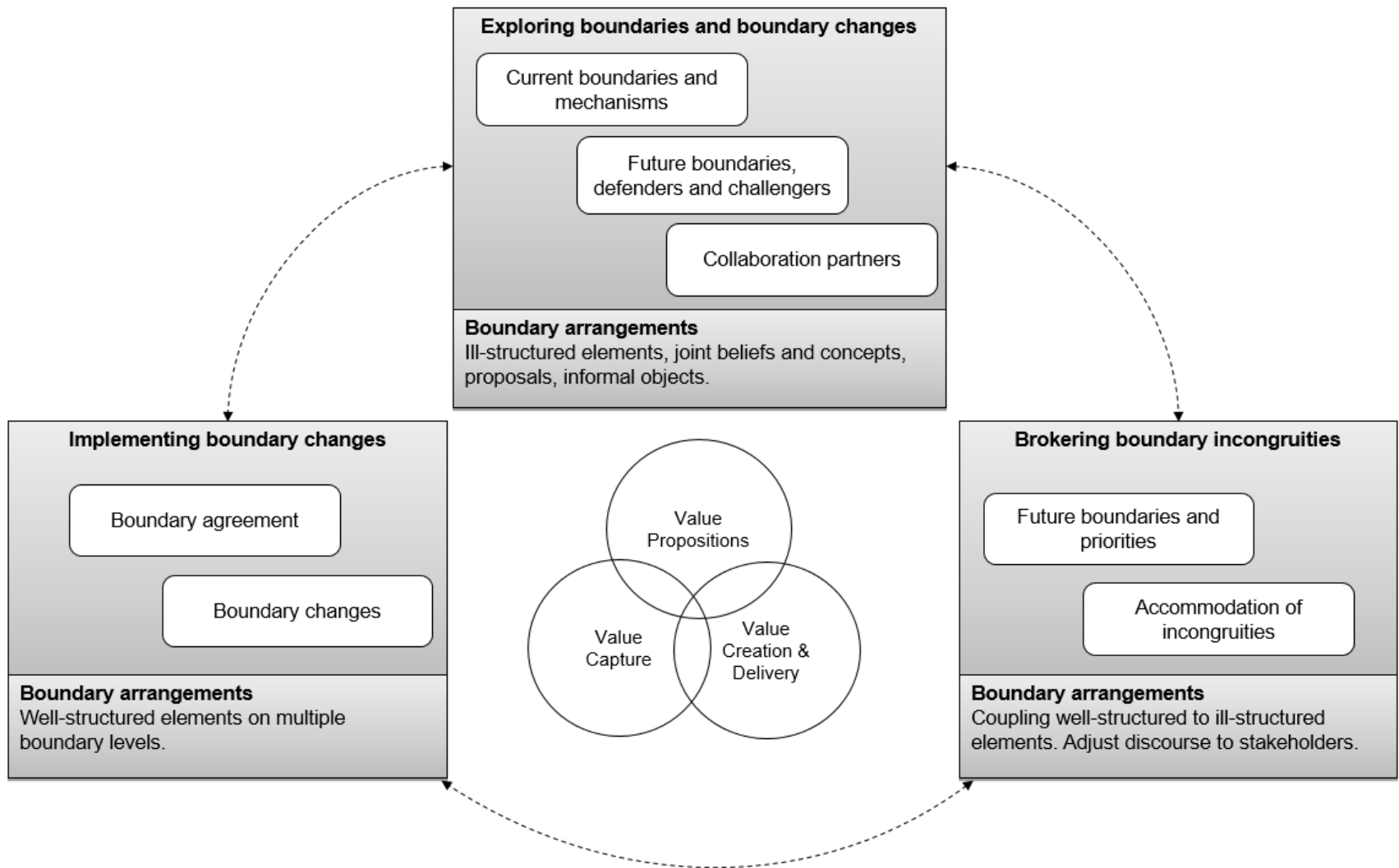
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Source: Velter, Bitzer, Kemp and Bocken (2020) Boundary work processes for sustainable business model innovation: An empirical case of circular pork production in the Netherlands, paper for *Organization & Environment*



Source: Velter, Bitzer, Kemp and Bocken (2020) Boundary work processes for sustainable business model innovation: An empirical case of circular pork production in the Netherlands, paper for *Organization & Environment*

Boundary changes in the Nijsen / Granico case

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- N/G shifted from being a pig feed producer to a provider of sustainable, circular meat / a strategic partner for sustainable feed concepts (**identity change and competence change**)
- Lidl Germany changed their processes and activities in helping Nijsen/Granico to solve resource problems (**efficiency and power boundary change**)
- The municipality took a proactive, supportive role (instead of a normal reactive role)
- **The actors learned to talk about the concept, values and responsibilities**

Source: Velter, Bitzer, Kemp and Bocken (2020) Boundary work processes for sustainable business model innovation: An empirical case of circular pork production in the Netherlands, paper for *Organization & Environment*



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Societal innovation for MVC

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- seeks **multi-actor improvement perspectives** that result in better societal practices.
- A better societal practice is **more societally complete**: all actors supporting each other in the societal practice and required for the viability of this practice are present, and their interests are met (*shared values are helpful but not a precondition*)
- Externalization of costs and misery is prevented through design thinking and collaboration.
- A reactive approach of limiting the side-effects of present technologies and practices is complemented and ultimately replaced by an opportunity-based approach of (societal) innovation.

Source: Diepenmaat, Kemp, Velter (2020) Why sustainable development requires societal innovation and cannot be achieved without this, *Sustainability*, 12(3), 1270; <https://doi.org/10.3390/su12031270>



Issues for societal innovation

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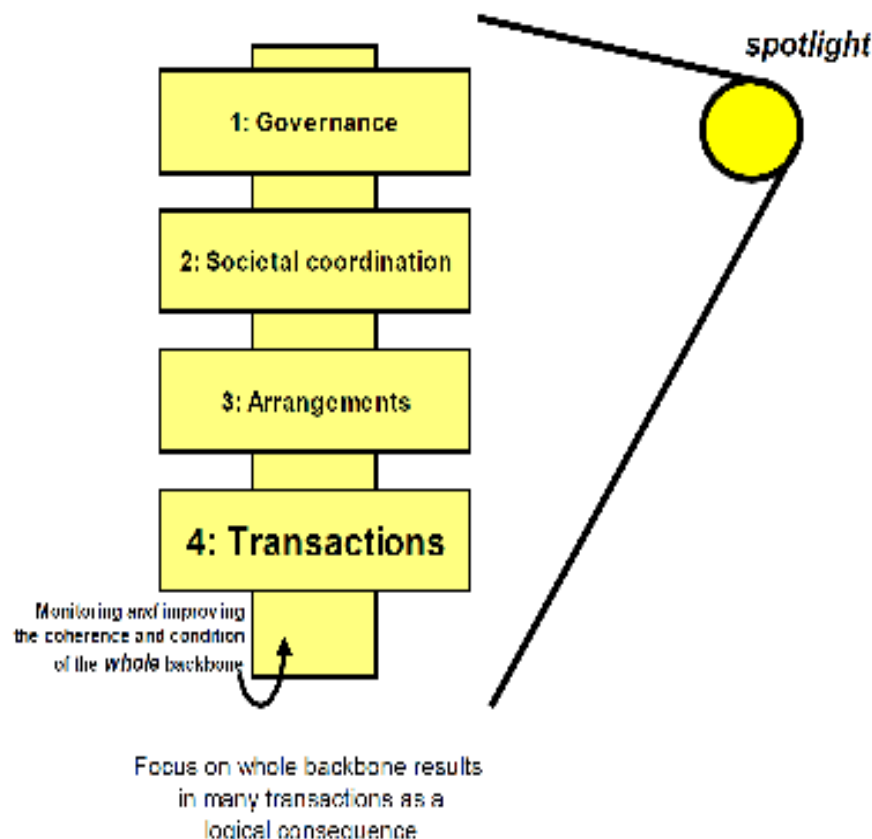
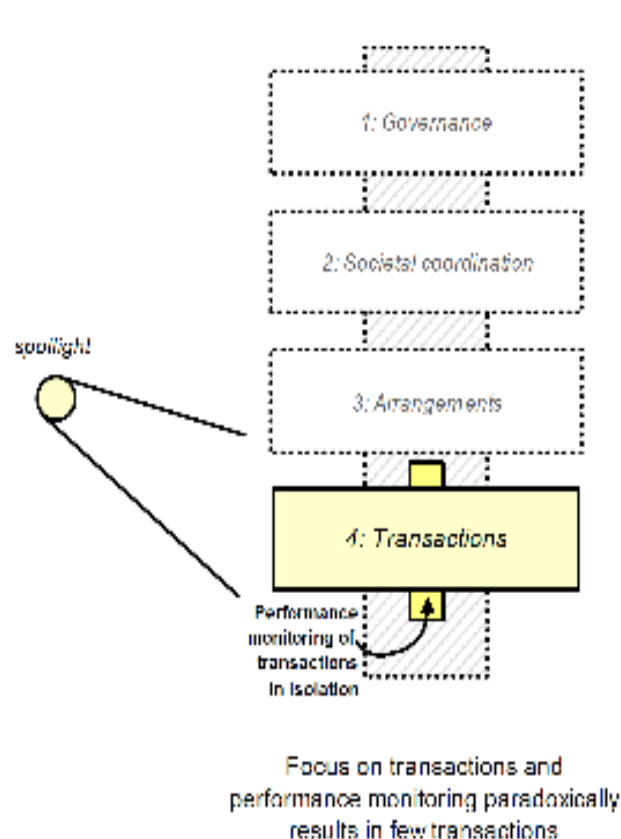
- **Finding compatible improvement perspectives for all actors** in a new value network (see Diepenmaat et al., 2020)
- From sustainability ambitions to design goals and ways of meeting those goals via exploration brokering and implementation of boundary changes (Velter et al., 2020)
- Attractive transactions may require changes in institutional arrangements & governance and self-correcting forms of guidance (Diepenmaat, 2019)

The backbone of societal

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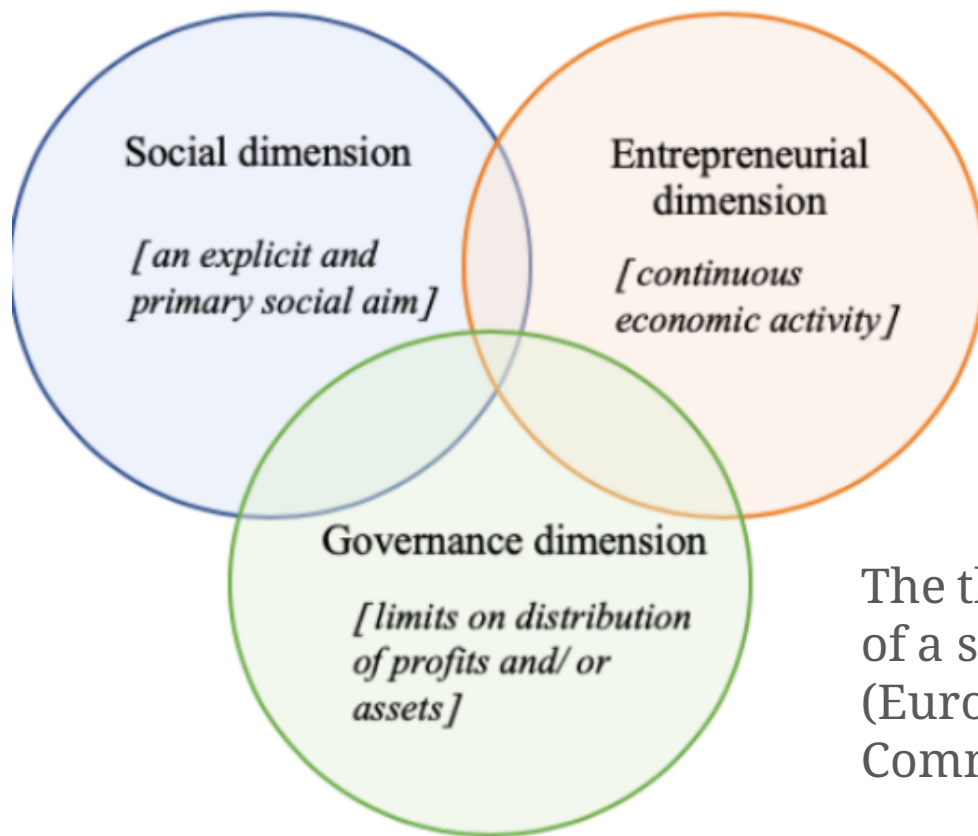
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Source: Henk Diepenmaat (2017) Ruggengraat voor het klimaat, Advies voor de Borgingscommissie Energieakkoord voor duurzame groei, Zeist.

Social enterprises

Actively deal with multiple value creation by seeking positive social impact next to economic viability



The three dimensions of a social enterprise (European Commission, 2015).

Questions for discussion

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- 1) Can social problems be solved through social enterprises (and environmental problems through green companies)?
- 2) If not, what role for business, government, academia and NGOs?
- 3) ?