



23/06/2014

Ecoproduction – is dit nieuw ?

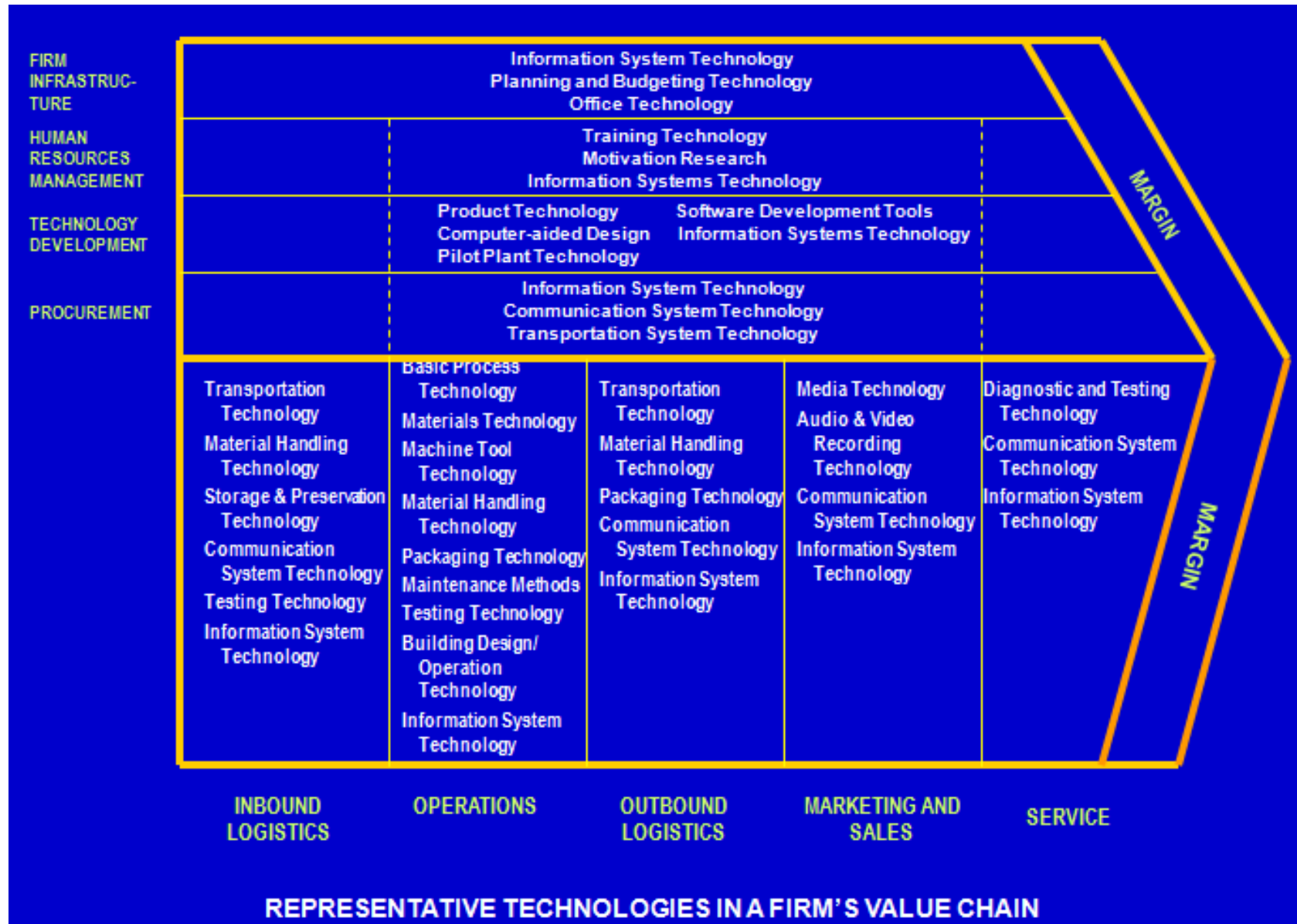
Rik Ampe



Eco-innovatie in een bedrijfscontext

Zoek in het duurzaamheidsbos de bomen

'Porter' 1980



Waardeketen 1980 Porter

Een antwoord ? Ja, maar voor individuele bedrijven.

Radicale innovaties gebeuren zelden, drastische ingrepen in een waardeketen, zeer riskant voor één bedrijf alleen.

Risico verlagen door: (1990 Porter)

- Value shaining (meestal een speler eruit) en andere combinatie in waardeketen
- Niche spelers
- Beschermde omgevingen (blue lagoon)

Geen innovatie is achteruitgaan (bij gebrek aan oorlog, schaarste ...).

“Op het toppunt van het succes hangt de geur van verrotting in de lucht”

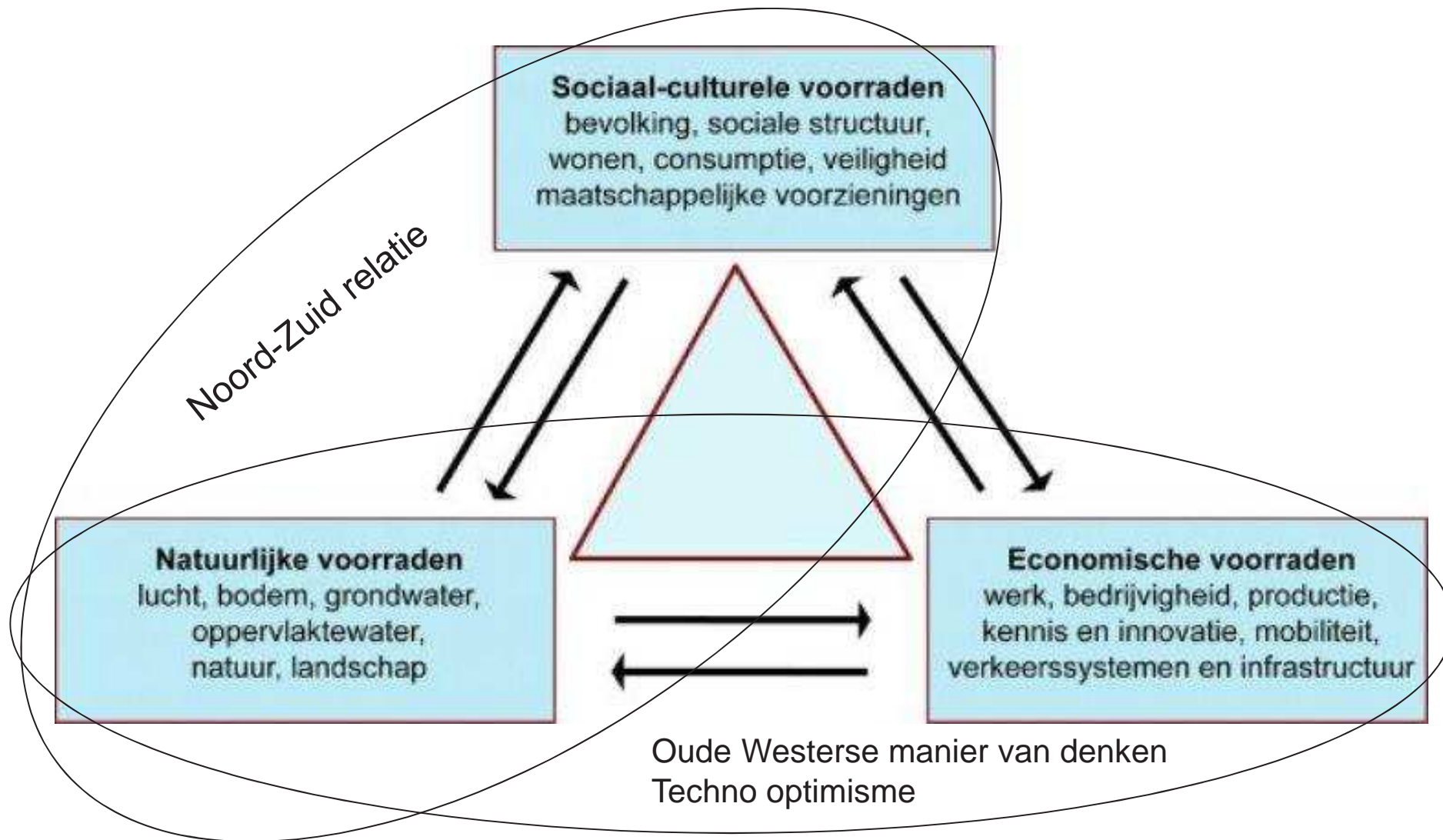
“Recente” drivers waren veiligheid, kwaliteit, lokaal, milieu ...

Minder drastisch, Vlaanderen is te klein ... (Amerikanen doen het bewust bv. pharmaceuticaal niet innoverend maar beheersend)

Product- en dienstenvernieuwing

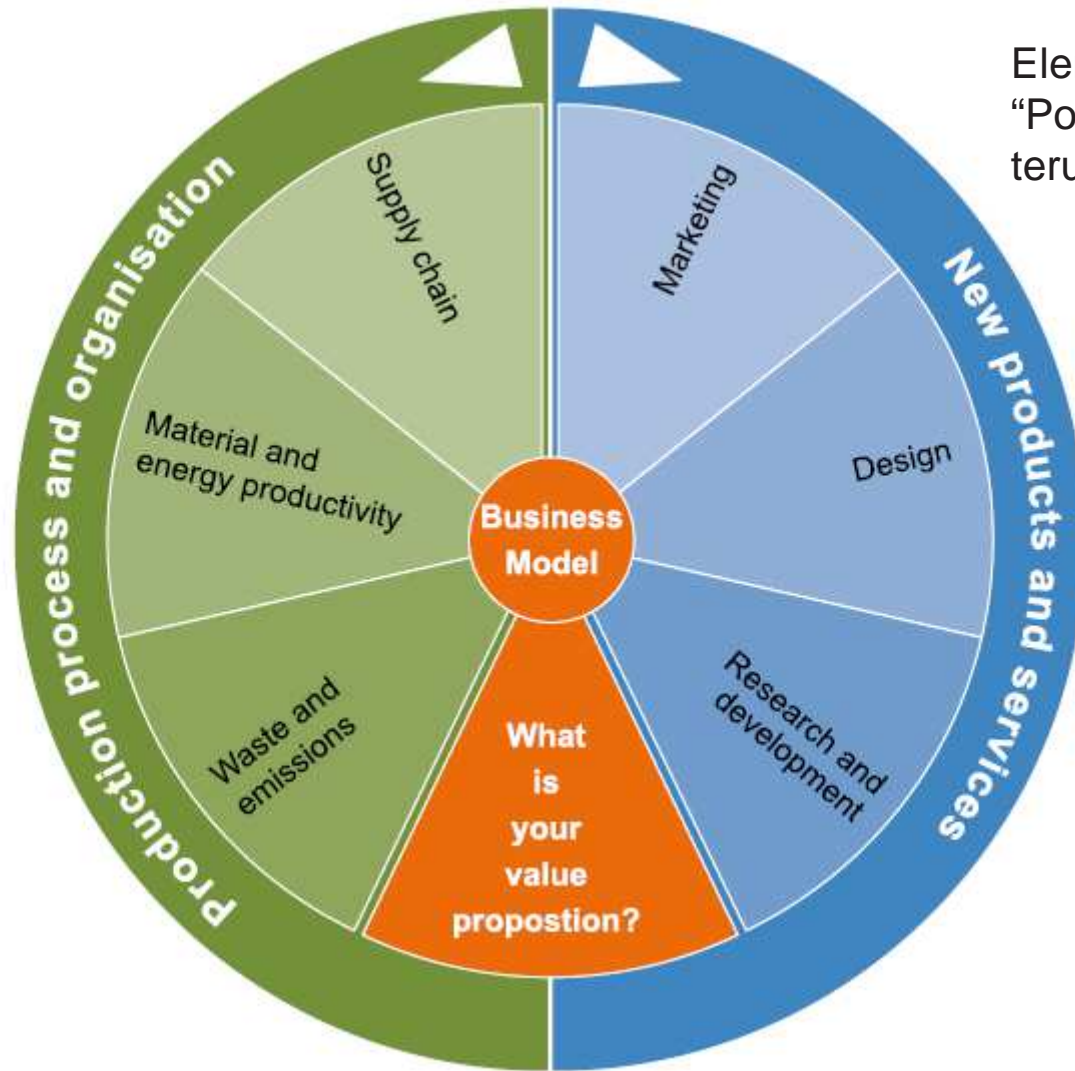
Vergelijk door LCA ... maar statisch

Wat was het uitgangspunt eigenlijk



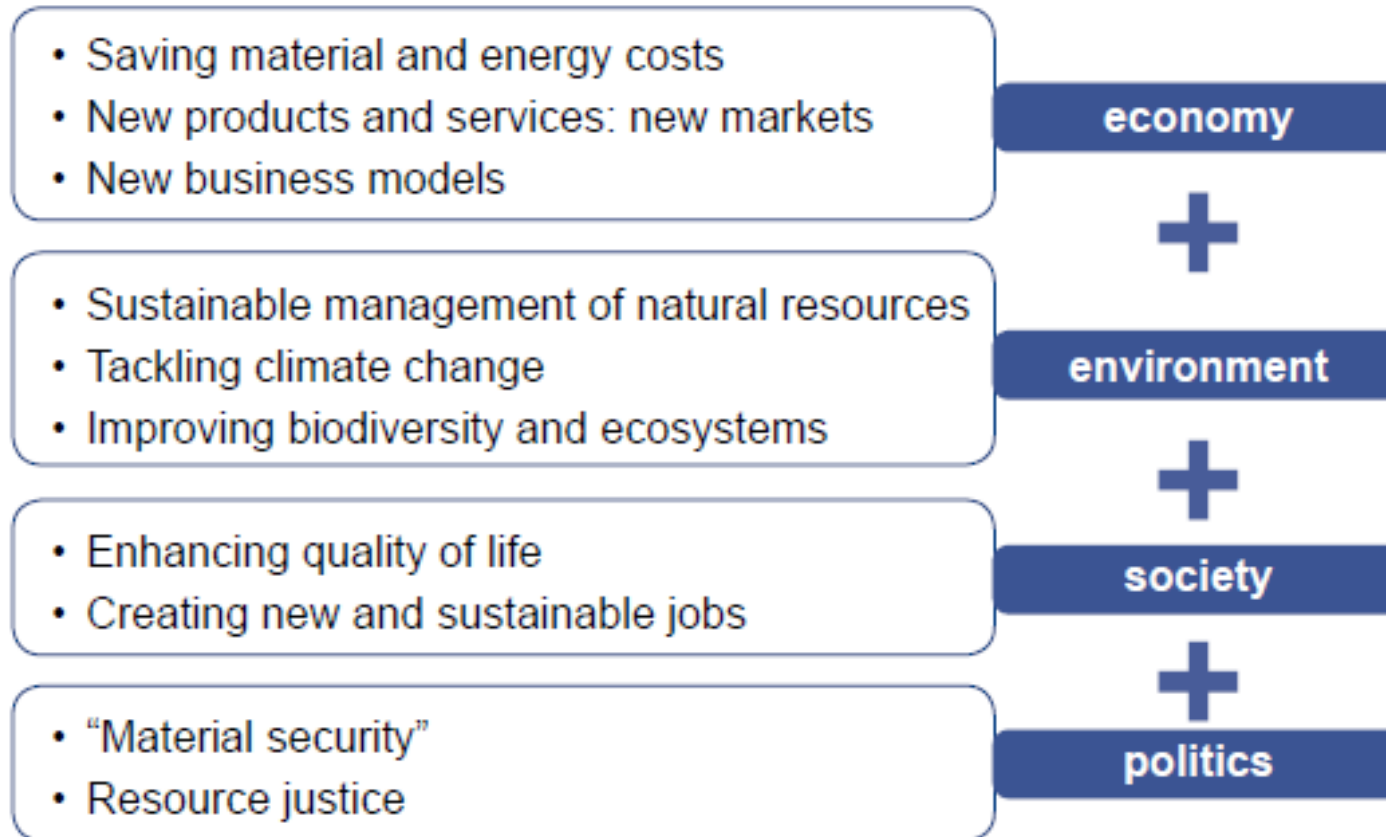
- » De dimensies van een duurzaamheidsdriehoek zijn niet te overzien vanuit een bedrijf of zelfs regio (vb. biobrandstof ↔ voedselketen).
- » De grenzen van systemen zijn niet congruent en dus geen optimalisatie mogelijk.
- » Eco-design bekijkt de wereld door de 'gepaste' bril, de juiste focus. (dimensie van de markt, de transportkost, de lokale gemeenschap ...)

Eco-innovation Wheel

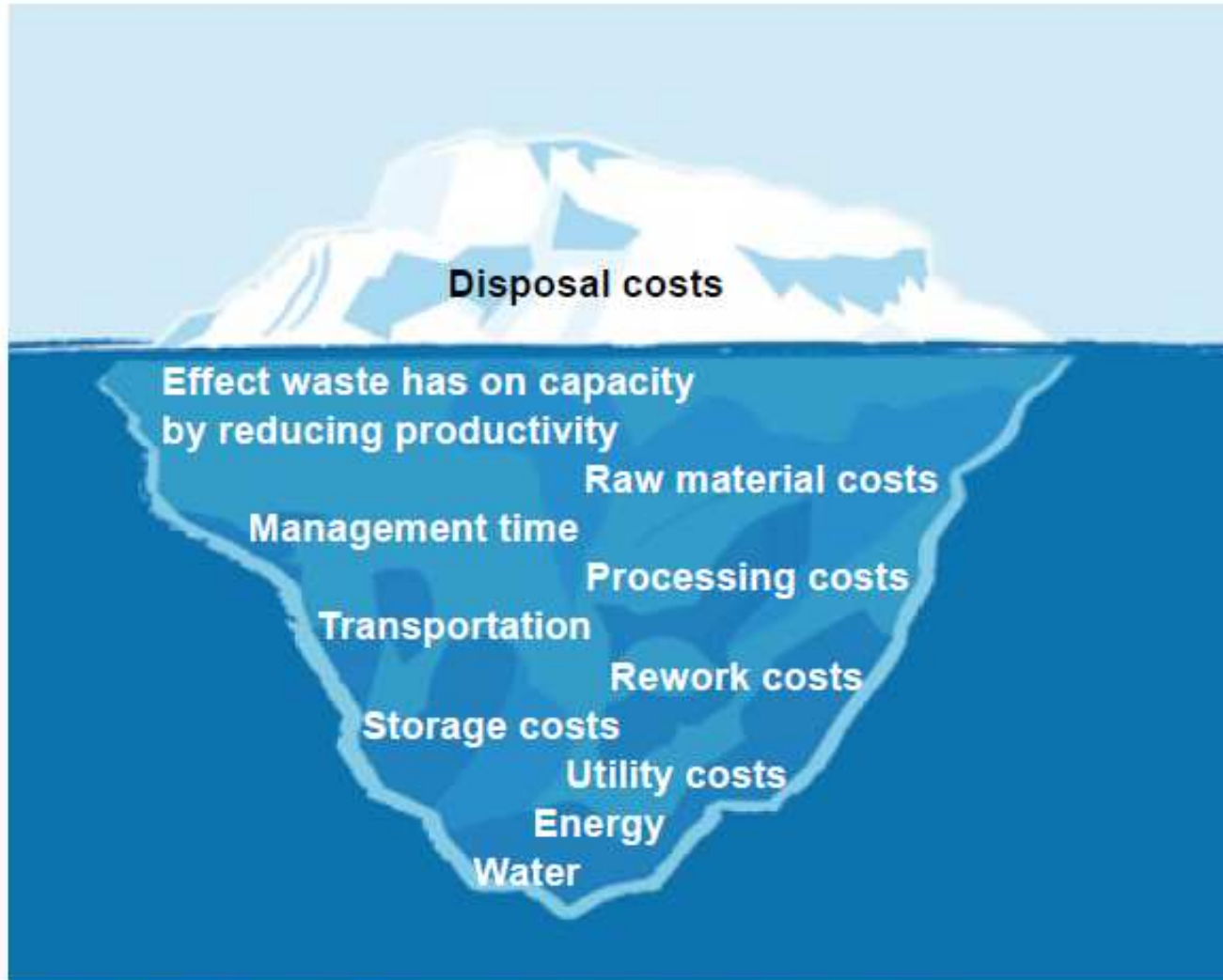


Elementen die we zowel bij “Porter” als bij “de groenen” terugvinden.

Why Eco-innovation



Hidden waste costs



Source: WRAP 2012, Why waste prevention makes good business sense, available on www.wrap.org.uk/supply_chain

DESIGN STRATEGY	REMANUFACTURING PROCESS						
	Core Collection	Inspection	Disassembly	Cleaning & storage	Remediation	Reassembly	Testing
Design for Core Collection	✓	✓					
Eco-Design		✓	✓	✓		✓	
Design for Disassembly		✓	✓	✓	✓	✓	
Design for Multiple Lifecycles				✓	✓		
Design for Upgrade					✓		
Design for Evaluation		✓					✓

The Lifecycle Impact Tool, completed for a hypothetical timber-framed glazed window*



		Source	Transport	Manufacture	Packaging	Distribution	Use	End of Life
ISSUE	Materials	Potential biodiversity Impact of timber harvesting	NA	Weight of materials in product	NA	NA	NA	Waste disposal/ use of saw mill offcuts & dust
	Energy	Energy required to manufacture (glass, steel fastenings) and timber processing	Distances transported	Impact of Kiln drying (timber) & glass cutting	NA	Transit efficiencies to user	Performance of the window in terms of heat loss, heat gain, day lighting and ventilation Coating replacement (timber), durability of windows/replacement cycle	NA
	Water	Water consumed in glass and steel manufacture	NA	NA	NA	NA	NA	NA
	Waste	Waste from Manufacture opportunities (glass, timber)	Wastage in transit	Waste and additional raw materials usage (timber, glass)	Options to reduce packaging	Wastage in transit	NA	Recycling & recovery
	Pollution	Emissions from glass & steel manufacture	NA	Dust from timber saw	NA	NA	NA	Methane from landfill of timber
	Social	NA	NA	NA	NA	NA	Window - heat loss, heat gain, daylighting and ventilation	NA

* Source: Adapted from The Windows Sustainability Action Plan-Defra, October 2010

Design Focus areas and how they address impacts

	Key Questions	Environmental Benefits	Business Benefits	
DESIGN FOCUS AREAS	Design for Material Sourcing	<ul style="list-style-type: none"> • Reduced resource depletion • Reduced embodied energy/water • Reduced transport burden • Reduced carbon dioxide (CO₂) emissions • Reduced impact on biodiversity 	<ul style="list-style-type: none"> • Reduced transport costs • Improved image/access to markets 	
	Design for Manufacture	<ul style="list-style-type: none"> • Reduced CO₂ emissions and depletion of water resources • Reduced resource depletion 	<ul style="list-style-type: none"> • Reduced energy costs • Less waste - Reduced material cost 	
	Design for Transport and Distribution	<p>Have you considered size, shape and volume of your products from a packaging and transport viewpoint?</p> <p>When specifying packaging do you consider embodied energy and water, production of VOCs or hazardous substances?</p>	<ul style="list-style-type: none"> • Reduced CO₂ emissions and depletion of water resources • Reduced air pollution • Reduced transport use – less emission and wear and tear on infrastructure • Reduced potential for proliferation of hazardous substances in the Environment 	<ul style="list-style-type: none"> • Reduced transport costs • Reduced packaging costs
	Design for Use (Including installation and maintenance)	<p>When you design your products, do you think about their energy and/or water consumption when they are used?</p> <p>Do you consider the amount of consumables and any hazardous materials that may be released during use?</p> <p>Do you consider their longevity and ease of maintenance?</p>	<ul style="list-style-type: none"> • Reduced demand on new material resources • Reduced CO₂ emissions • Reduced depletion of water resources • Reduced potential for proliferation of hazardous substances in the Environment 	<ul style="list-style-type: none"> • Lower lifecycle costs for customer – Increased profits from increased prices • Reduced maintenance costs • Good product image
	Design for End of Life	<p>When you design your products, do you think about how easily they could be reused or dismantled and recycled?</p> <p>Do you consider any hazardous substances in the product that might be released during dismantling or recycling?</p>	<ul style="list-style-type: none"> • Reduced use of land for landfill • Reduced demand on new material resources • Reduced CO₂ emissions • Reduced depletion of water resources 	<ul style="list-style-type: none"> • Compliance with regulation • Reduced end of life costs

**Uitdagingen C2C
in de bouw.**

OVAM - studie

max 2% nieuwbouw/jaar
min 98% bestaande gebouwen

98%

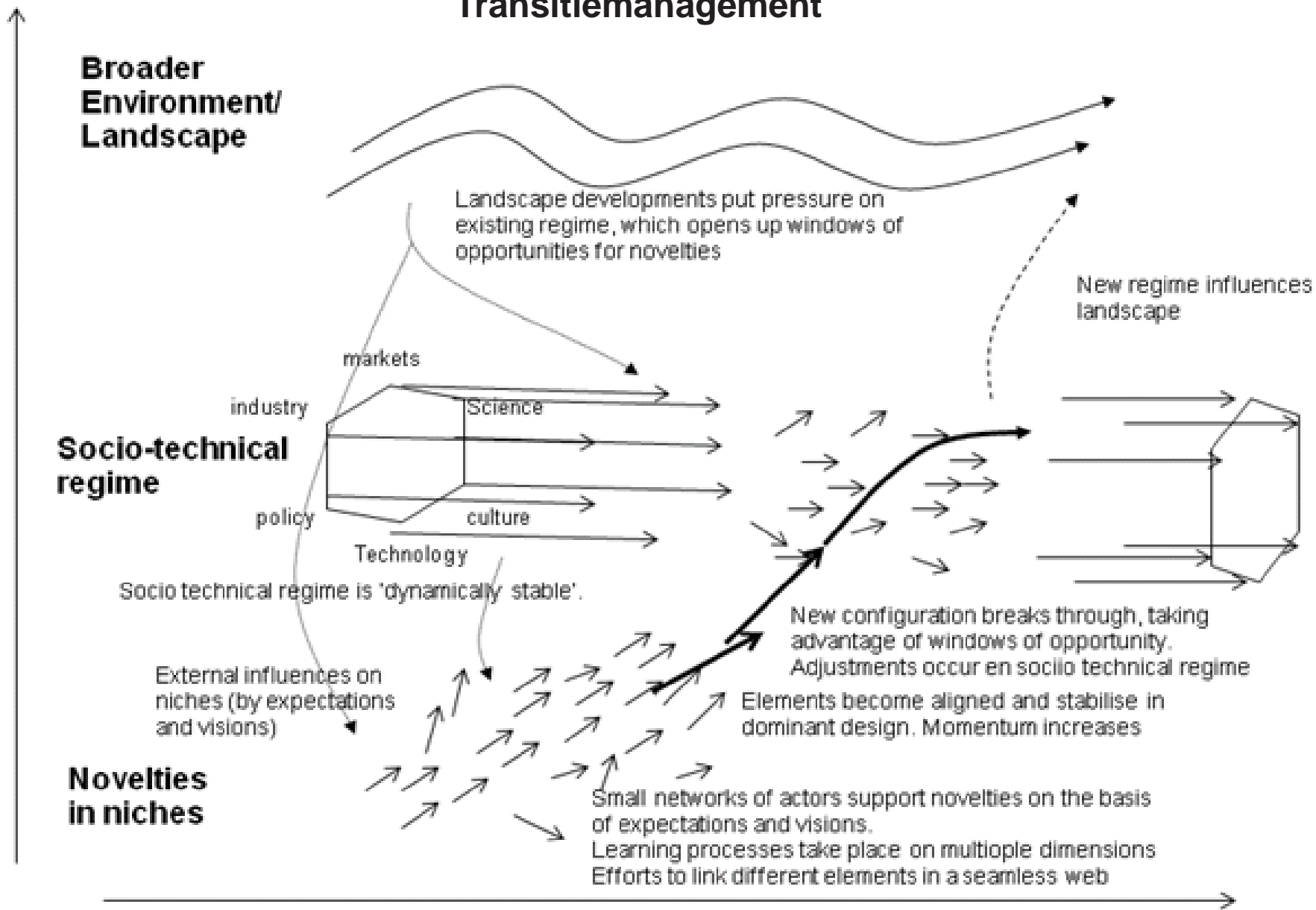
2%

Nederlands Instituut voor Ecologie, Wageningen, 2010

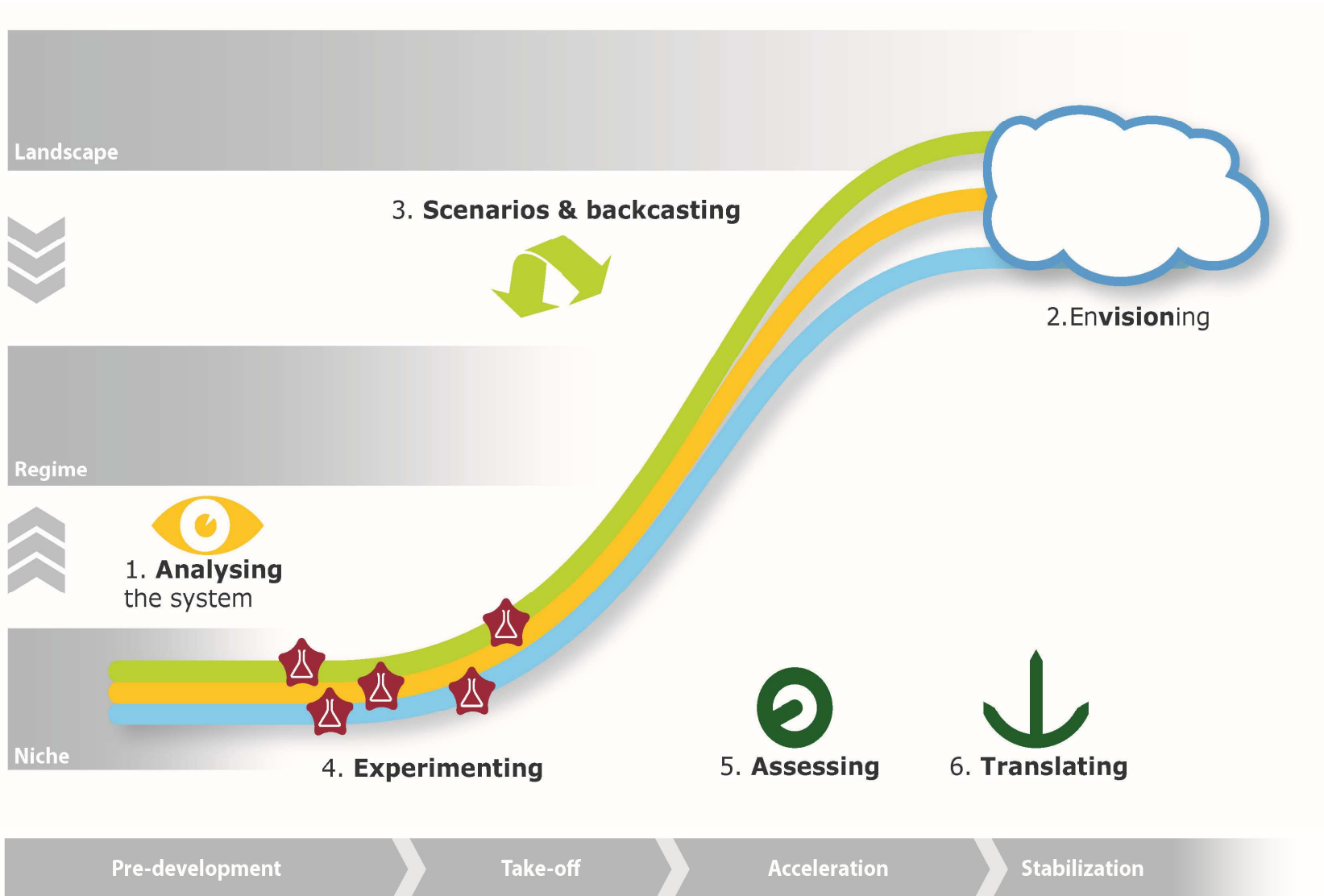
“There is not yet a 100% C2C building!”

SEARCH kantoor, Amsterdam, 2008

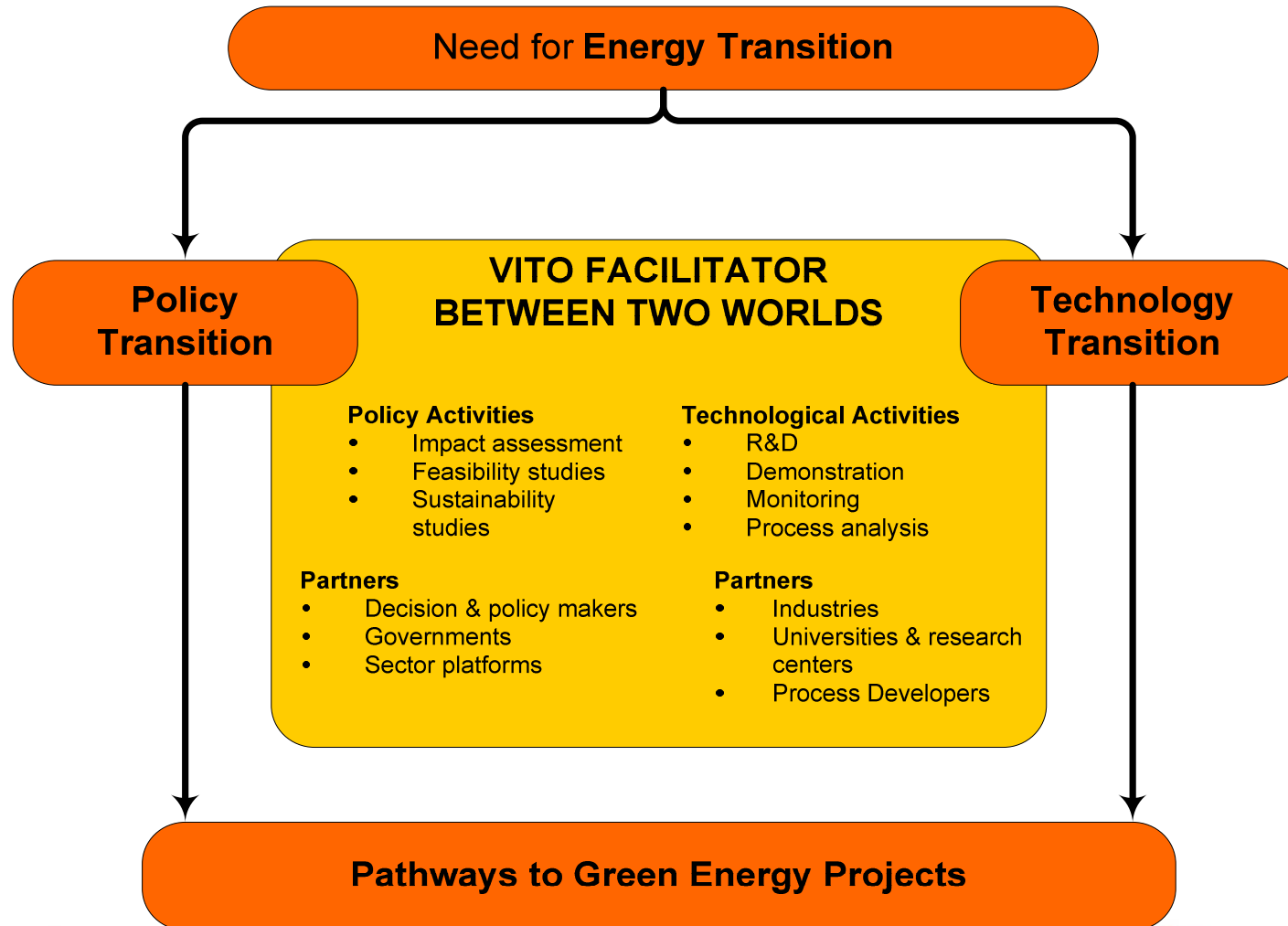
Transitiemanagement



Transitie



VITO's sterkte: geen technologische transitie zonder een beleidstransitie



Referenties:

Recent Publications

[Eco-innovate: a guide to Eco-innovation for SMEs & business coaches](#)

Over 13,000+ downloads since March 2013

[Eco-design for the construction industry: a guide for SMEs](#)

[Remanufacturing & product design](#)

Bedankt voor uw aandacht.