



stiftung für nachhaltige entwicklung
fondation pour le développement durable

Business Models for Circular Economy

30. 11. 16 – 63rd LCA Forum, Zürich
Raphael Fasko – Rytec AG

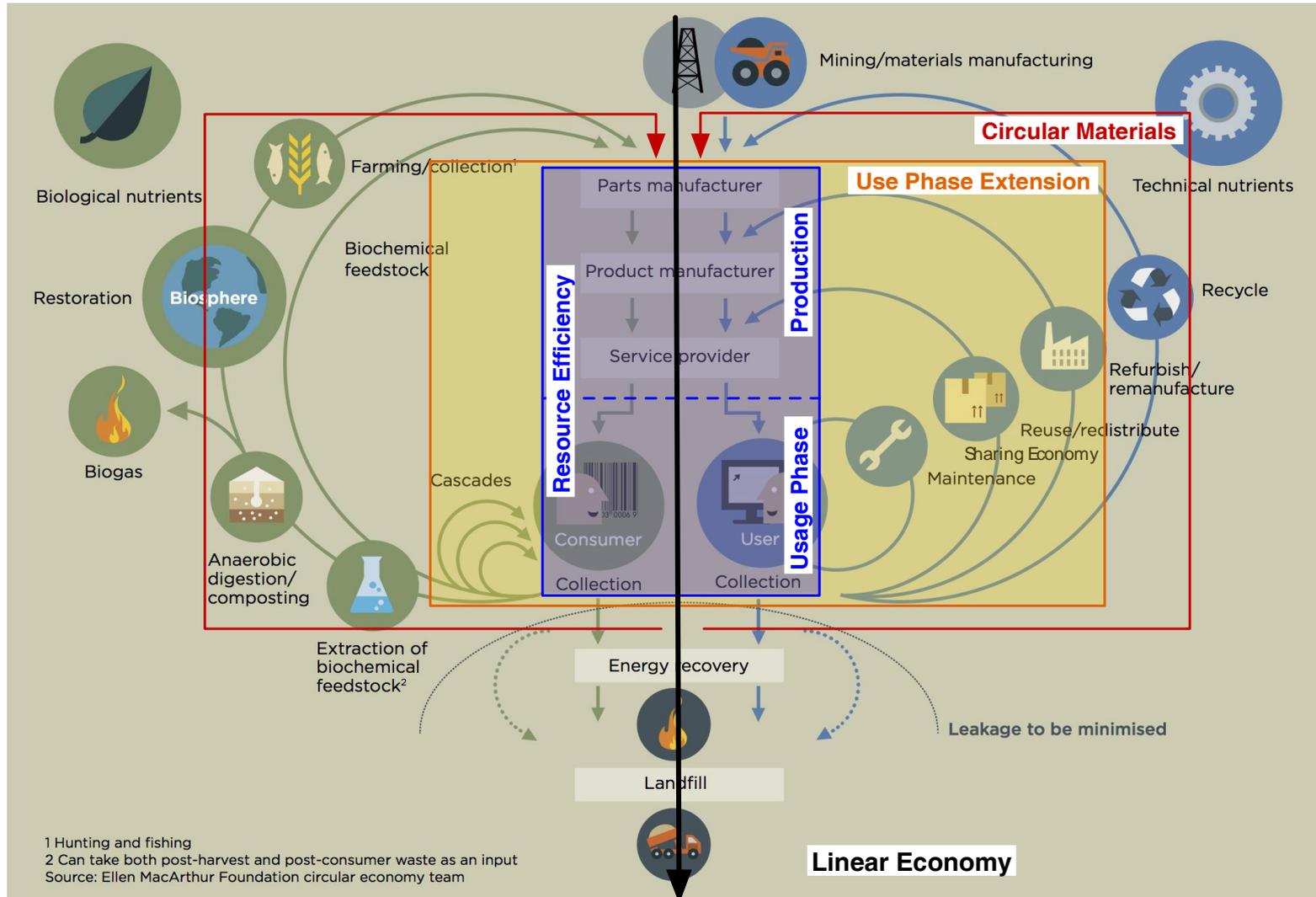
Rytec & sanu durabilitas

- **Rytec**
 - Consulting- and engineering company in the waste industry
 - Energy efficiency of waste incineration
 - Concepts for the ongoing transition in the industry
 - How can we be catalyst for circular economy?



- **sanu durabilitas**
 - Swiss foundation for sustainable development
 - Researching new sustainability topics and solutions
 - Kick-starting and catalyzing the societal discussion on those topics

Circular Economy Landscape

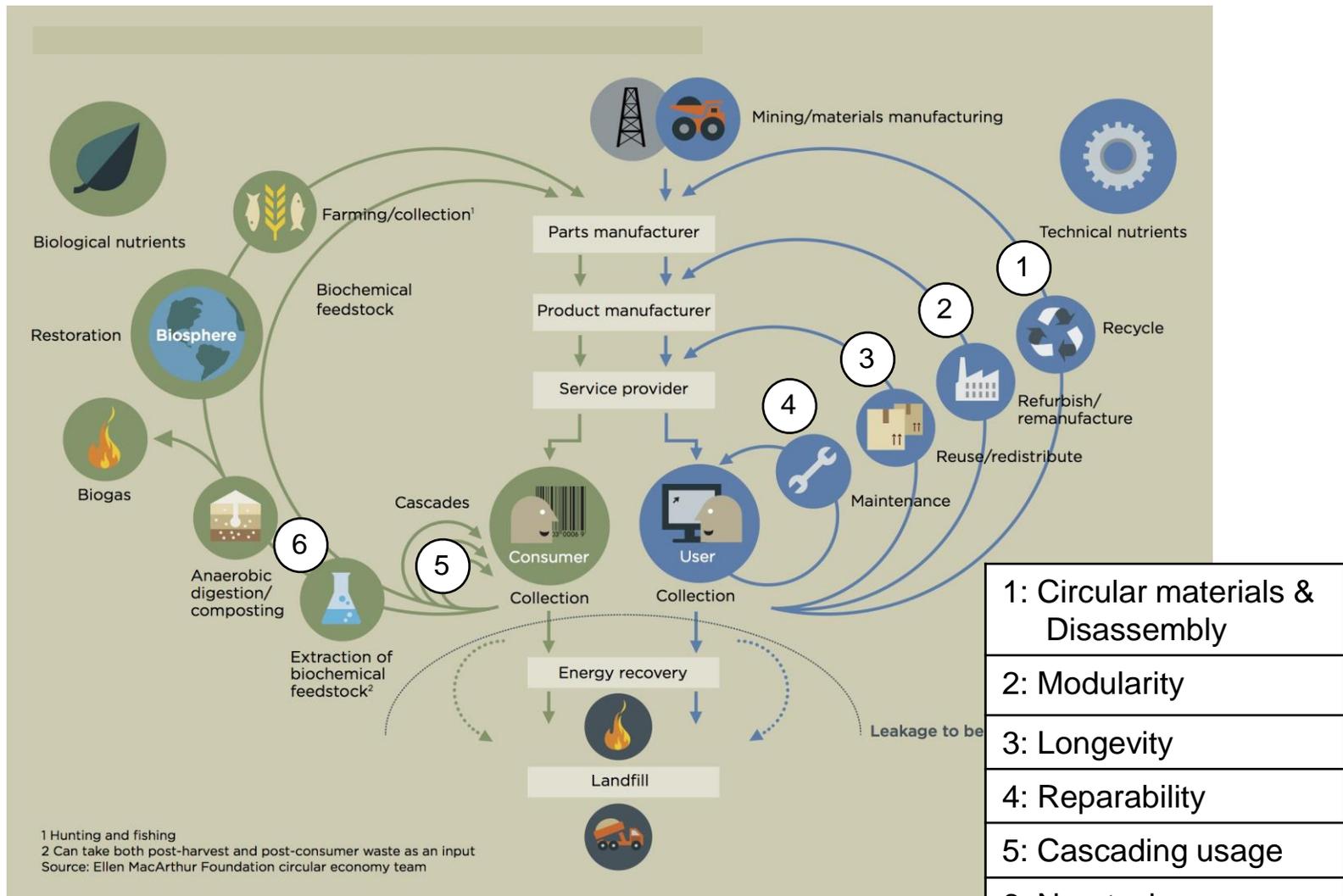


1 Hunting and fishing

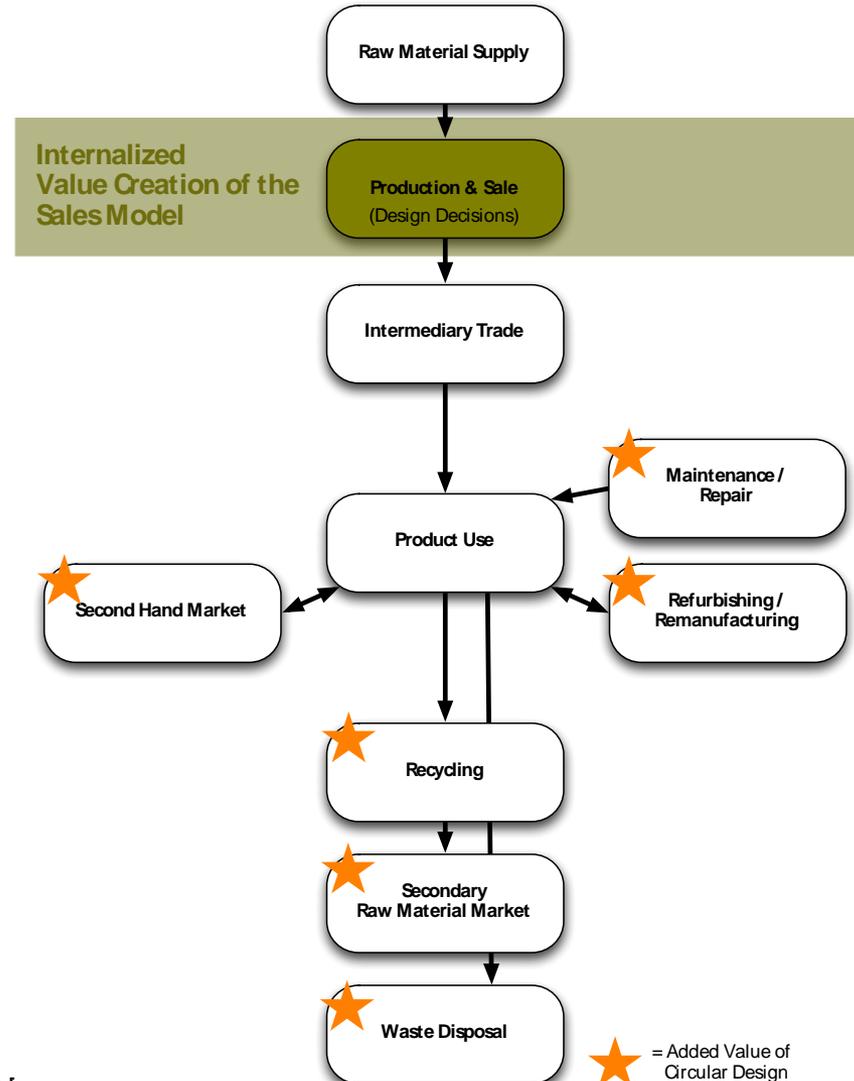
2 Can take both post-harvest and post-consumer waste as an input

Source: Ellen MacArthur Foundation circular economy team

Circular Economy Design Principals



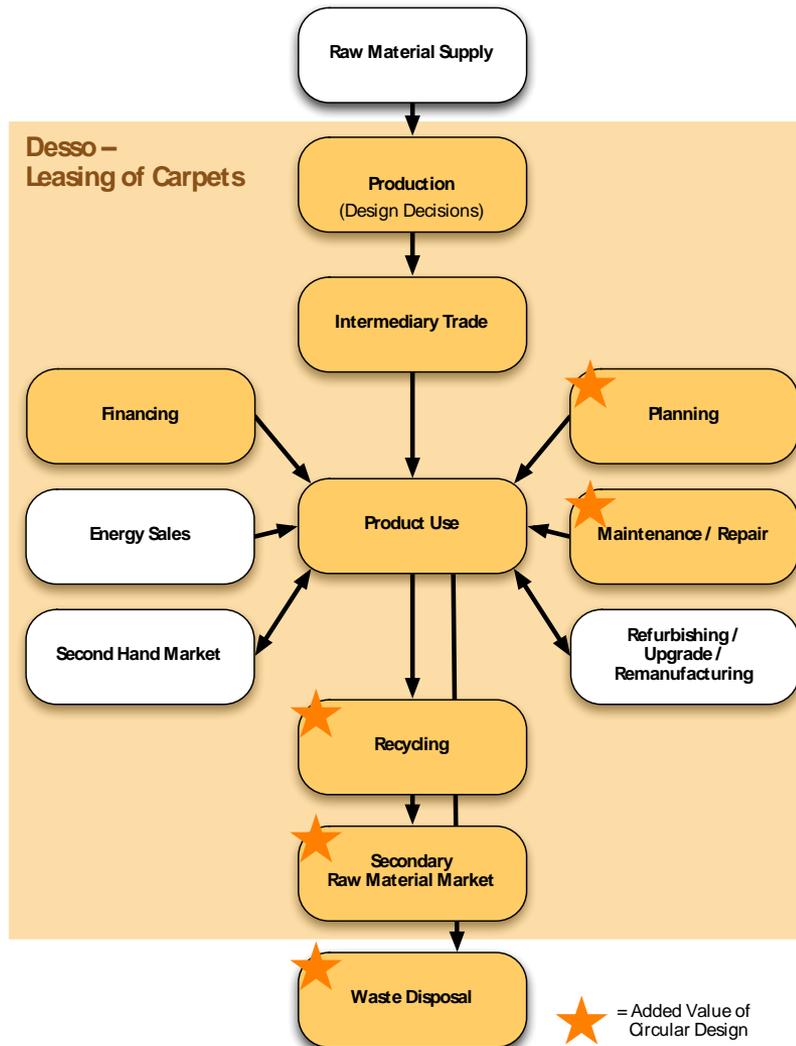
The Bad News – Value Chain of Sales Models



The Good News – Business Models for Circular Design

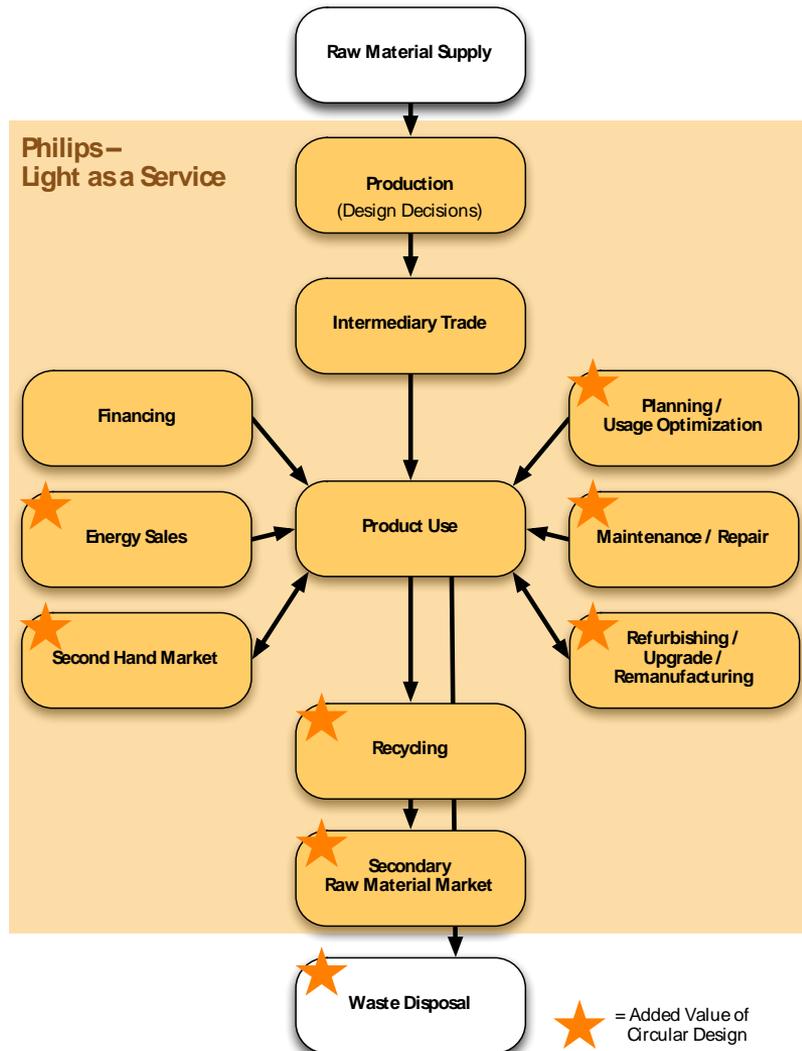
Sale	Rental / Leasing	Service
Ownership with user	Ownership with the producer / provider	

Value Chain of Leasing / Rental Model – Desso: Carpet



Quelle: Desso

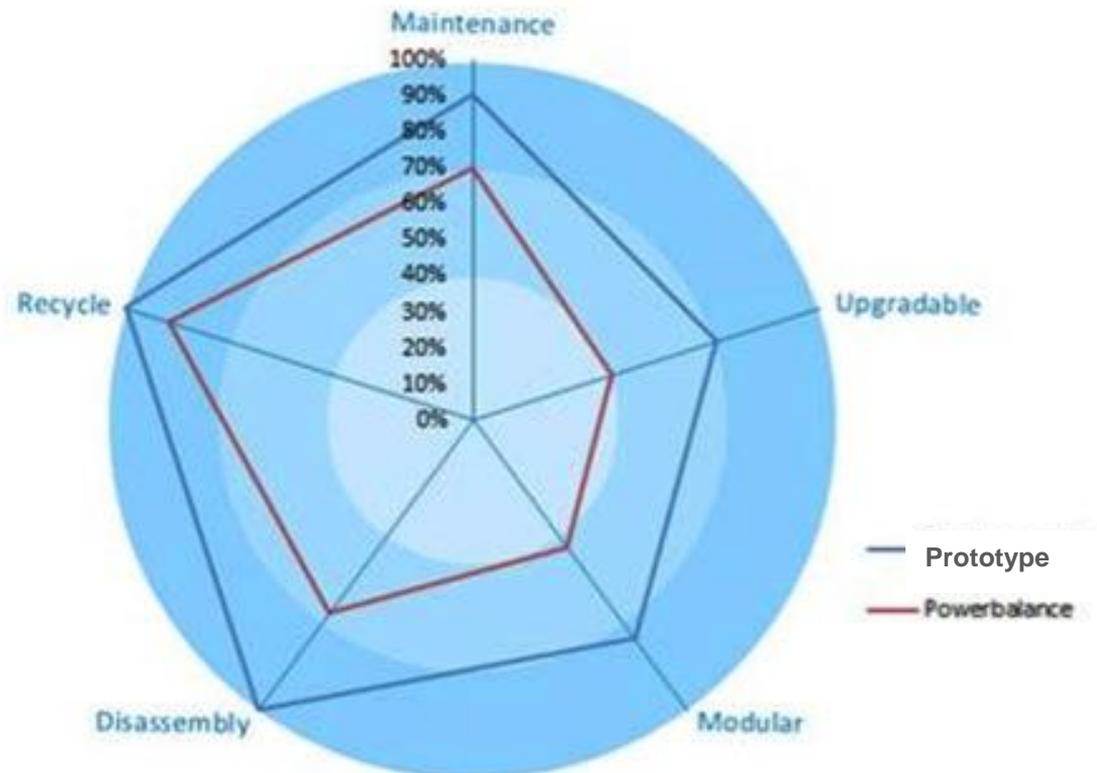
Value Chain of a Service Model – Philips: Light as Service



Quelle: Turntoo

Philips: Light as Service – New Design Requirements

- New requirements for the designers
- Selection of best suitable lighting equipment for the service model



Take Home Message

Circular Hardware needs Circular Software!

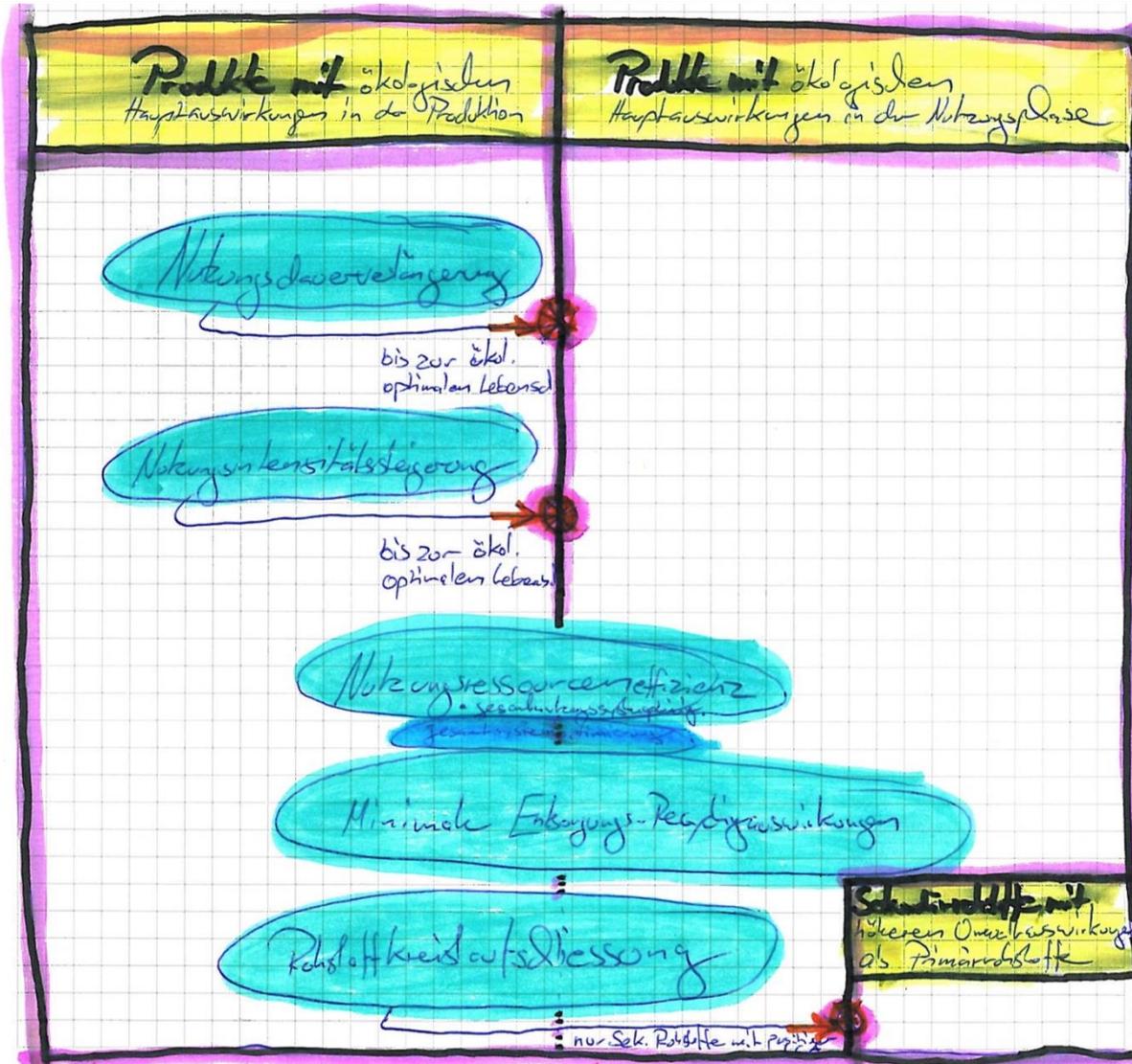
Circular business models are the door opener for
economic-ecological win-win-situations.

Paradigm shift in the stimulation of “eco design”:
Away from **legislation and technical design** discussions
towards
promotion of **business model and competitiveness**

BUT... – Important Questions

- When do we get an effect from the business model to the design?
- Ecological risk of the business models

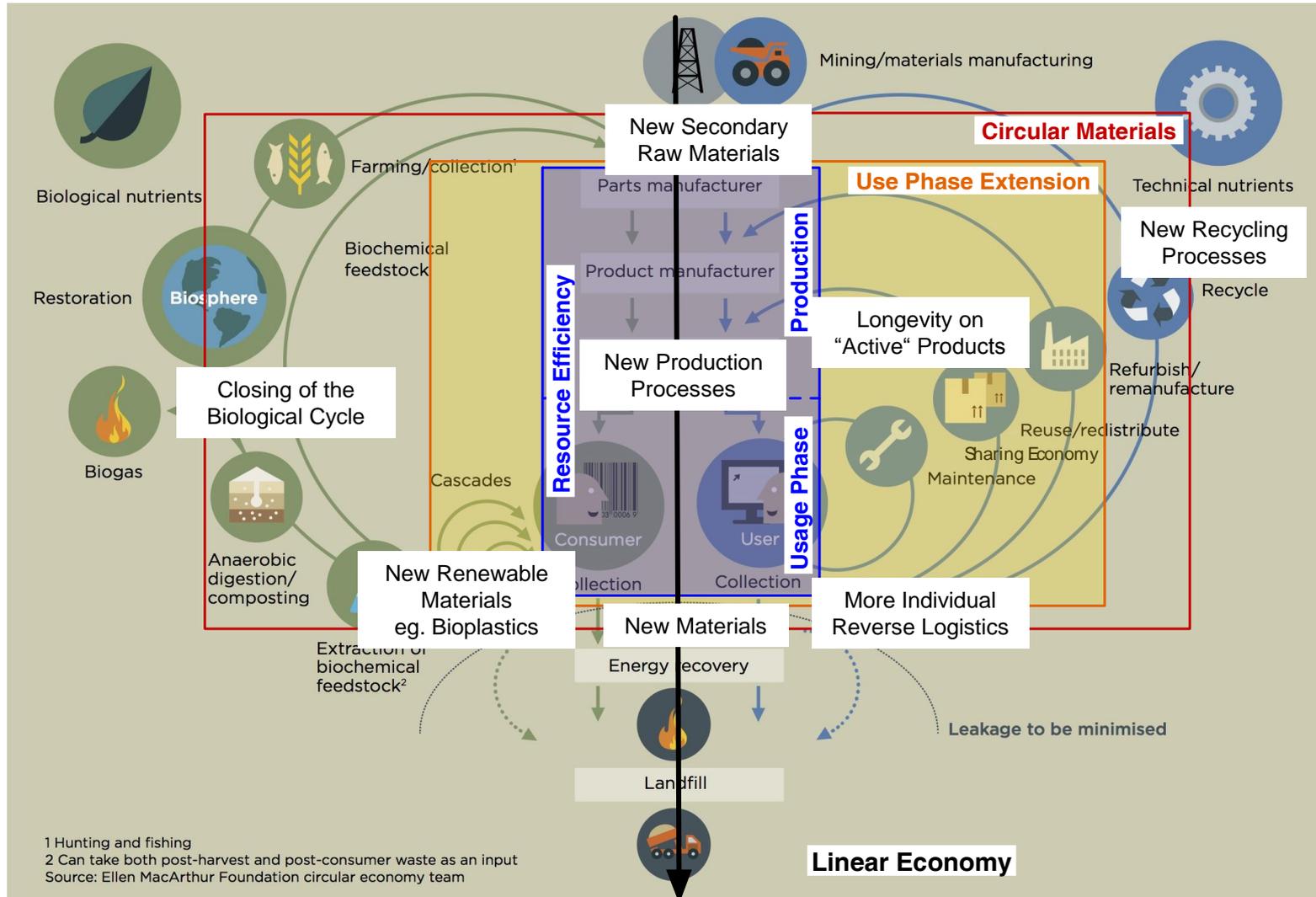
The Ecological Risk Landscape



BUT... – Important Questions

- Effect from business model to design?
- Ecological risk of the business models
 - Longevity
 - Circular Materials
 - New Technologies
- Rebound Effect:
 - More consumption & reduction of ecological benefits
 - Cheaper Service
 - More Accessible & Convenient Service

Hotspots for LCA



Questions / Discussion...

Thank you for your attention!

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Further Reading:

Report on circular business models (in German):

http://www.rytec.ch/docs/kreislaufgeschäftsmodelle_sanu_2015_0.pdf