Circular Economy in Context: What it means for Nestlé

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Nestlé at a glance

Unmatched product and brand portfolio

- CHF 88.8 billion in sales in 2015
- 335,000 employees in over 150 countries
- 436 factories in 85 countries
- Over 2,000 brands
- 1 billion Nestlé products sold every day

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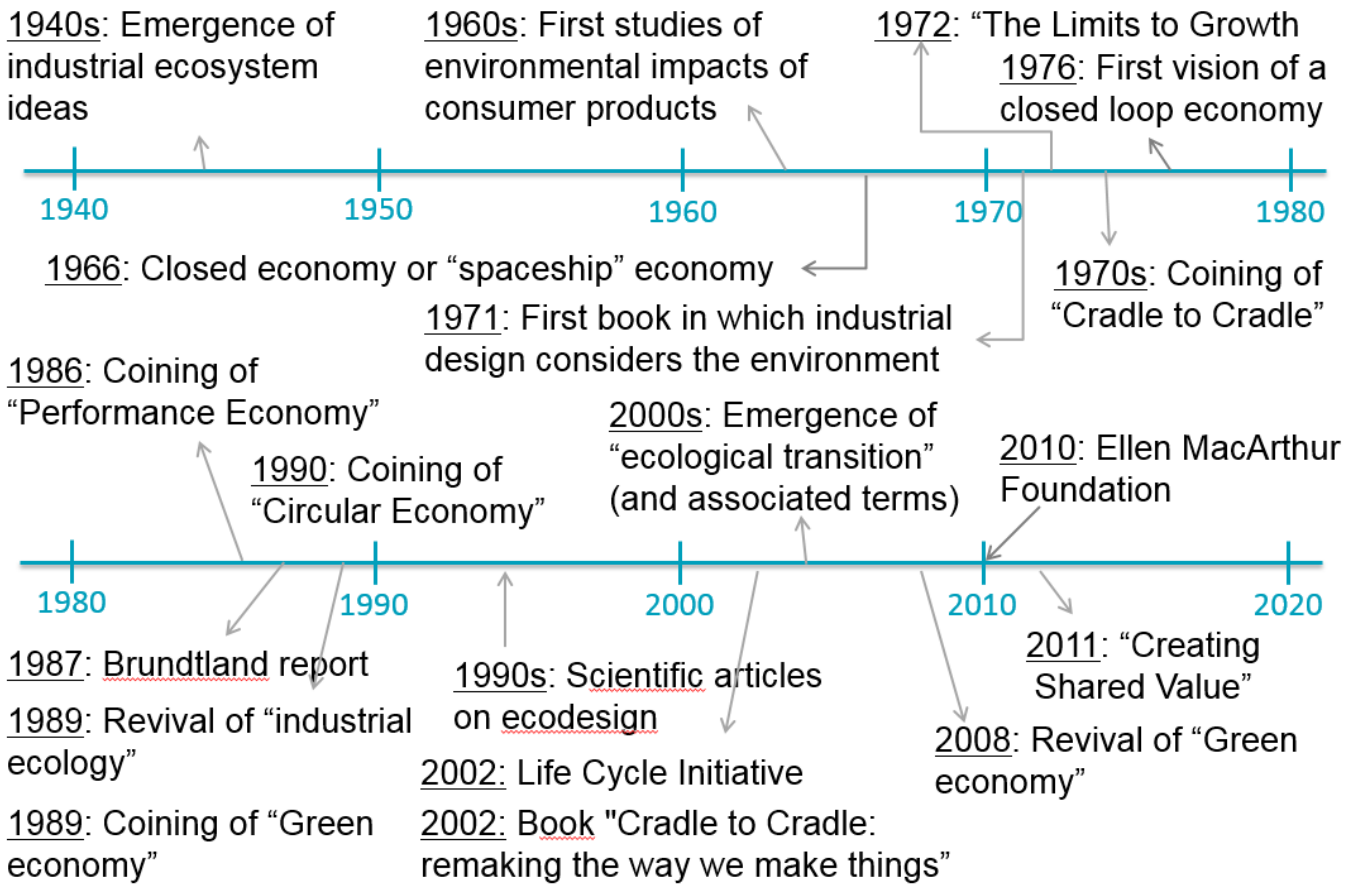
Overview

- Circular Economy: A critical review of concepts (Nov 2015). Presentation of a white paper prepared by CIRAIG / Polytechnique Montréal

- Circular Economy in the Food & Beverage Sector: Nestlé Position

Circular Economy Timeline



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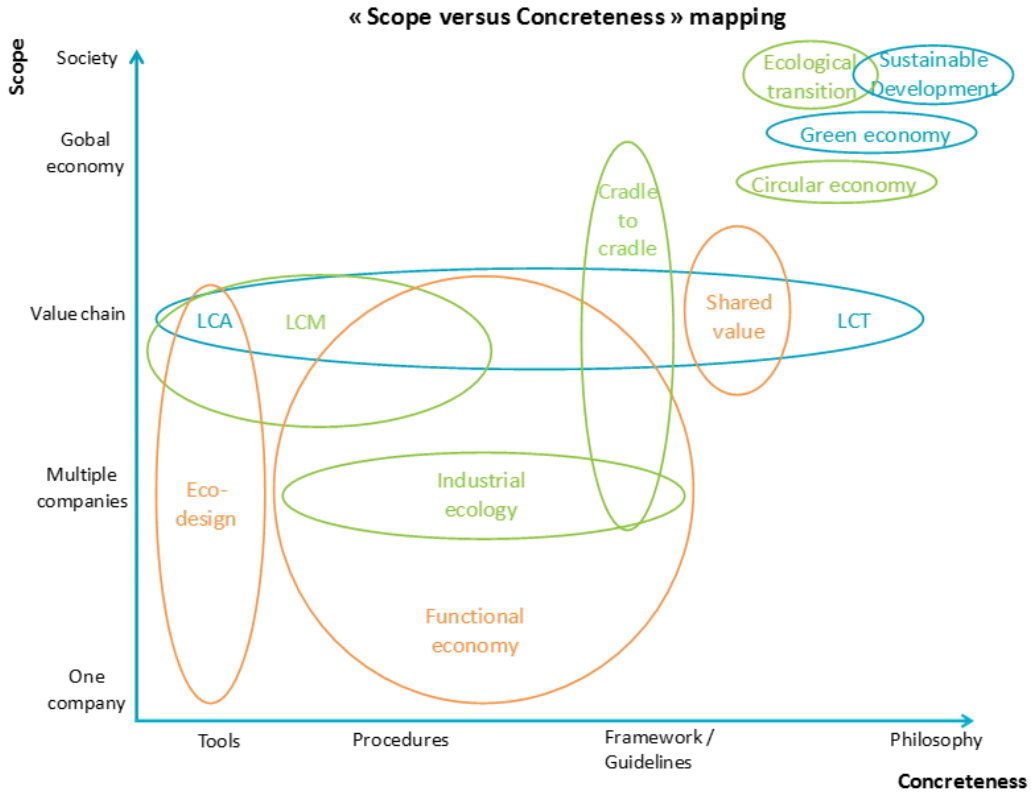
Mapping: Scope vs. concreteness



Many different definitions of Circular Economy coexist

Organization	Definition	Main variables
Ellen MacArthur Foundation	"an industrial system that is restorative or regenerative by intention and design. It replaces the 'end-of-life' concept with restoration (…) and aims for the elimination of waste through the superior design of materials, products, systems, and, within this, business models."	**5 pillars - effectiveness rather than efficiency**
EDDEC, Montréal	"Drawing on how natural ecosystems function, the circular economy already shows that resources efficiency creates economic, social and environmental value. Its ultimate objective is to achieve economic growth decoupling from natural resources depletion"	Focus on **value creation and decoupling**, inspired by ecosystem functioning
ADEME, France	"CE is an exchange and producing economic system that (…) aims to increase the efficiency of resource use and reduce the impact on the environment."	Focus on **efficiency** and **impacts reduction**
Government Netherlands	"A circular economy is an economic system that takes the reusability of products and materials and the conservation of natural resources as starting point. It also strives for value creation for people, nature and the economy in each part of the system."	**Focus on resource conservation** - inclusion of the **3 SD dimensions**
EEA	"…foresees a production and consumption system that generates as little loss as possible."	Focus on **zero waste and efficiency**
IPAG	"an innovative management style that integrates social, economic and environmental dimensions in a business approach that stimulates local economic development and job creation"	A **management approach** rather than a global system or a new paradigm; includes the social dimension
Accenture	"In a circular economy, growth is decoupled from the use of scarce resources through disruptive technology and business models based on longevity, renewability, reuse, repair, upgrade, refurbishment, capacity sharing, and dematerialization."	Focus on decoupling, **new business models** and disruptive technologies

Concluding Thoughts

- **Circular economy is a "social construct", i.e.**
  - An concept currently being developed with evolving content and boundaries
  - No absolute truth about what CE is or should be: diverging directions in which the concept is pushed or pulled by various actors
- **Some fundamentals**
  - CE as a response to resource scarcity, builds on "cradle to cradle thinking"
  - Absent themes (from mainstream definitions): social pillar and equity
- **What is new?**
  - Not really the ideas or the content → rather the framework that links all this together
- **What is its added value?**
  - Offering this encompassing framework
  - Giving hope? → Sustainability becomes achievable, with continued profits

Nestlé Position on Circular Economy

Circular Economy offers a Vision
- that works as a conceptual framework, with potential unintended side effects
- improved environmental impacts is the aim, not circularity
- LCA is well suited to measure environmental performance

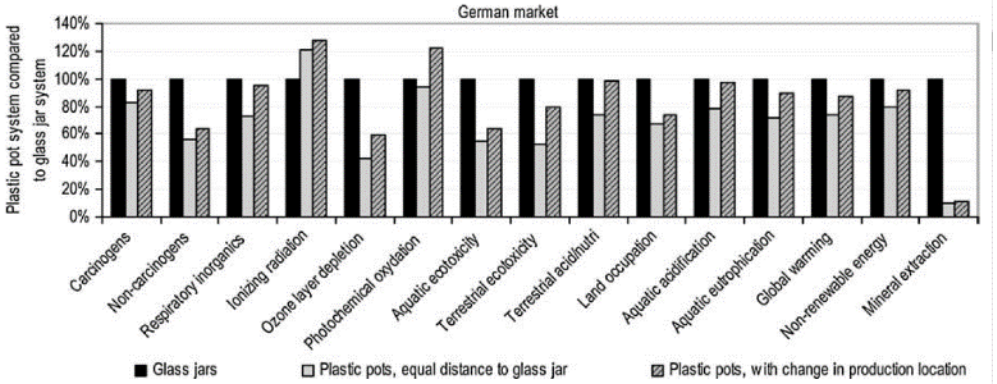
Circular Economy is useful to
- reduce resource consumption of products & services
- develop & strengthen comprehensive waste management systems

Don’t look at packaging in isolation – sustainable food systems require acting beyond packaging

Issues with Circular Economy in food systems
- key challenges of food systems have to be tackled
- social aspects are interlinked with environmental ones

Using circularity / CE as a tool / measure can worsen environmental performance

* Humbert *et al.*, 2009, Int J LCA 14, 95-106



Recyclable glass jars perform **worse in 14 out of 15** environmental indicators when compared to plastic pots

Contradictions between CE & LCA confirmed :

- Biodegradability for empty dry food packaging
- Recycled content in PET bottles (in preparation)
- Reusable packaging
- Energy recovery

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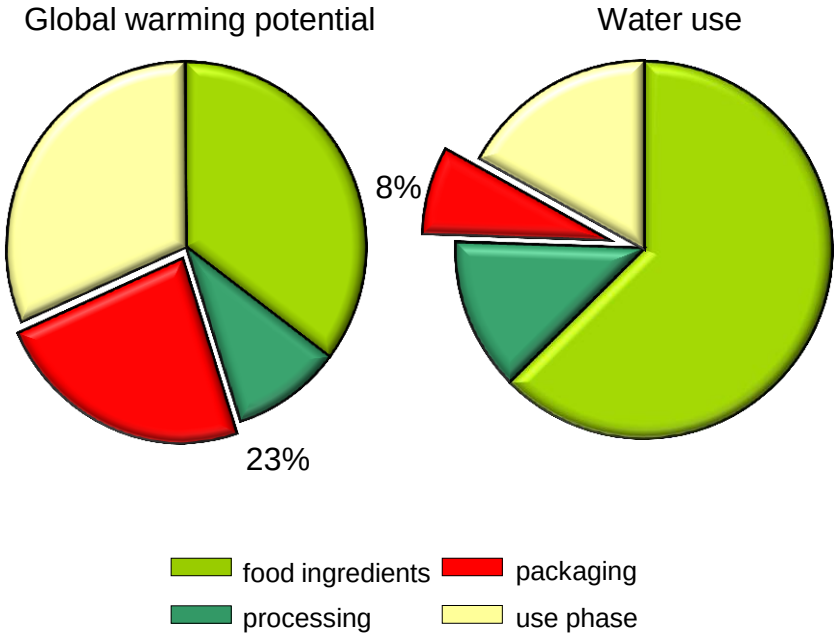
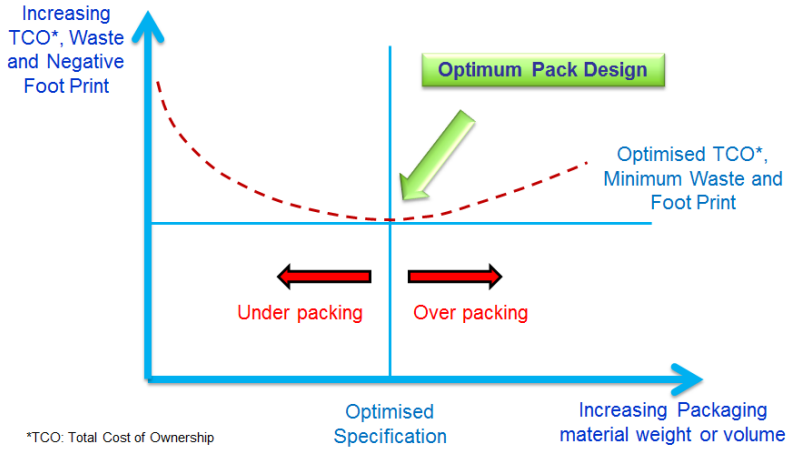
Don’t look at packaging in isolation – packaging is also a solution to reducing impacts



Source: conservative estimate based on internal Nestlé screening LCA studies



Source: EUROPEN, 2009. *Packaging in the Sustainability Agenda: A Guide for Corporate Decision Makers*. Available: http://www.europen.be/index.php?action=onderdeel&onderdeel=6&titel=Publications&categorie=0&item=36

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Key challenges for sustainable food systems

- Healthy & sustainable food for 10 bio people:
  - Hunger, malnutrition, and obesity
  - Competition on land due to energy & renewable raw materials
  - Increased animal protein consumption
- Combat food waste : 30% of food produced is never eaten (by humans, although most of it is eaten by animals or composted)
- Reduce impacts on (and adapt to): climate change, water scarcity, biodiversity loss
- Social aspects in particular with farmers in evolving economies