Business models and value network approaches for the circular economy

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Gap between resource availability and demand

Resource supply / demand imbalance 2015-2050

Scenarios include limited resource stocks only and therefore differ from total material consumption. Most notably exclude construction mineral volumes (e.g. sand and gravel) where scarcity is not an issue.
Moving to a circular economy

• Business necessity
  - Creating less waste
  - Reducing dependence on raw materials

• Technical challenge: need for innovative solutions
  - Design for recycling, refurbishment, remanufacture
  - Capturing, breaking down and re-using materials from waste streams
  - Substituting materials with lower footprint

• Realization challenge
  - Re-use needs to make business sense
  - You cannot do circular economy on your own – need to orchestrate collaboration in the value network
Implementation of sustainability efforts slow

• Sustainability initiatives often lack sense of urgency (Slawinski and Bansal 2012)
  - Relevance needs to be fought for
  - Effects often not directly visible
  - Requires specialist knowledge
  - Conflicts with short term financial goals
  - Not part of normal practice

• Local initiatives need to be ‘sold’ internally (Howard-Grenville 2007)
Why companies care about circular strategies

1. Focus on circular material strategies in product or process design
2. Focus on product-service systems and customer relations
3. Focus on building circular value networks
4. Focus on sustainable identity: Sustainability as unique selling proposition
Approaches to the Circular Economy

Sustainable Materials Management Strategies

- Sourcing sustainably through recycling, remanufacturing, reuse, repair, refurbishing,
- Shared use and consumption
- Extending product lifecycles

Business Strategies

- Delivering value to customers by including SMMS in business model
- Product-service systems
- Stewardship & Transparency
- Cost efficiency & Sustainable identity

Value Network Strategies

- Collaborating with value network to fully exploit shared value
- Lean & local supply chain management
- Take back management & industrial symbiosis
- Platform approaches
BMIX RAW: The Circulator

- [www.circulator.eu](http://www.circulator.eu)

Tool developed as part of KAVA project

- Overview of strategies and mix & match tool
- Explanation of archetypes
- Browsing cases
Bridging Gaps between Research, Innovation and Society

• Reduce (human) costs of trial and error

• Broadening R&D processes by introducing more actors, more (societal) aspects
  - Identify bottlenecks, user concerns, diverging preferences of stakeholders etc.

• Tools: organization of multi stakeholder scenario workshops

• Feedback loops from workshops into design of innovation