

Circular Economy: About Value Retention (Options), and how to reduce CE complexity

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What?!

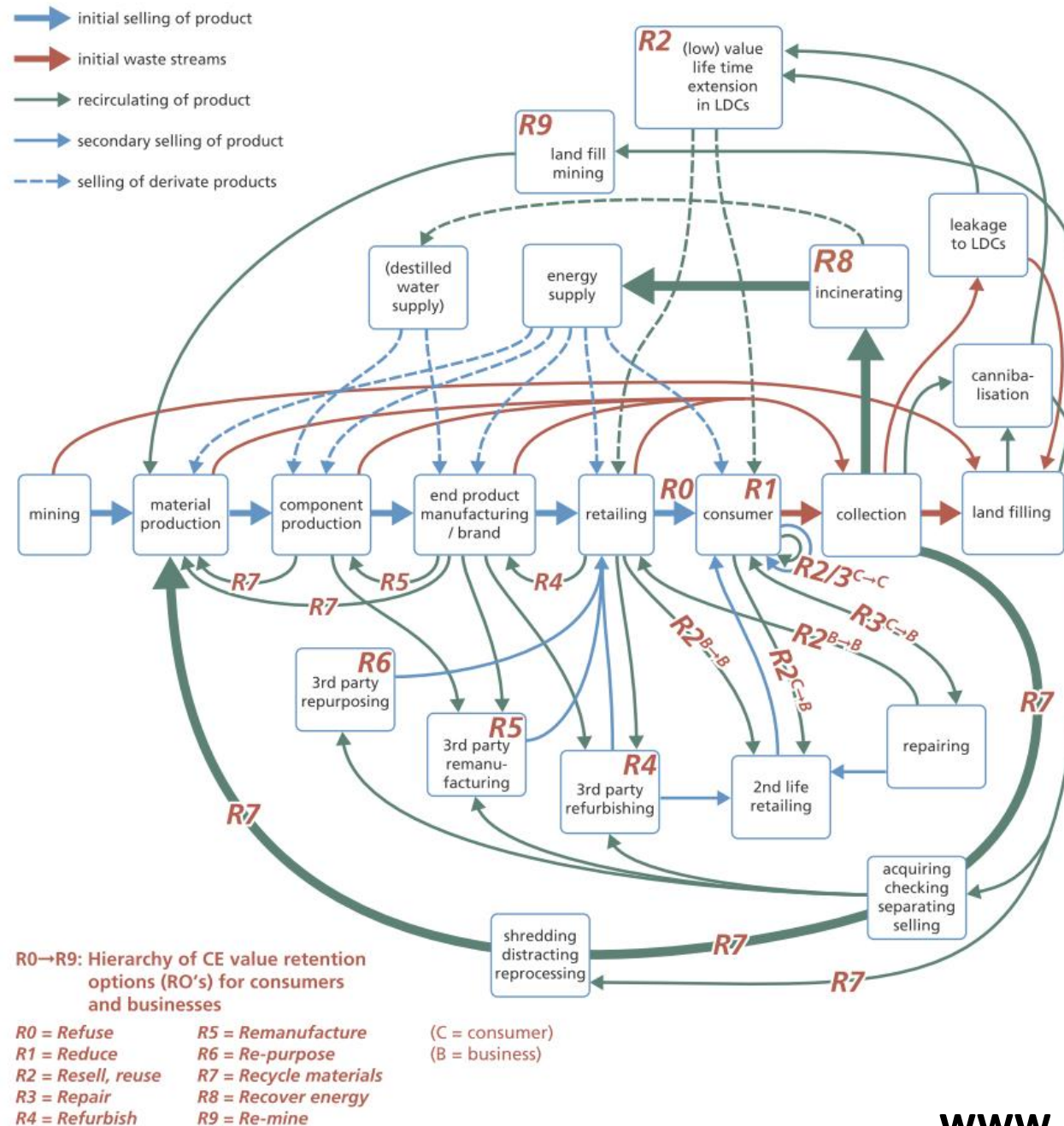


Fig. 3. Mapping Circular Economy Retention Options: The Product Produce and Use Life Cycle.

Circular Economy: A controversial paradigm



Full length article

The circular economy: New or Refurbished as CE 3.0? — Exploring Controversies in the Conceptualization of the Circular Economy through a Focus on History and Resource Value Retention Options

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ABSTRACT

Over the last decade, the concept of the circular economy has regained attention, especially related to efforts to achieve a more sustainable society. The ‘revival’ of the circular economy has been accompanied by controversies and confusions across different actors in science and practice. With this article we attempt at contributing to advanced clarity in the field and providing a heuristic that is useful in practice. Initially, we take a focus on the historical development of the concept of circular economy and value retention options (ROs) for products and materials aiming for increased circularity. We propose to distinguish three phases in the evolution of the circular economy and argue that the concept – in its dominant framing – is not as new as frequently claimed. Having established this background knowledge, we give insights into ‘how far we are’ globally, with respect to the implementation of circularity, arguing that high levels of circularity have already been reached in different parts of the globe with regard to longer loop value retention options, such as energy recovery and recycling. Subsequently, we show that the confusion surrounding the circular economy is more far reaching. We summarize the divergent perspectives on retention options and unite the most common views a 10R typology. From our analyses, we conclude that policymakers and businesses should focus their efforts on realization of the more desirable, shorter loop retention options, like remanufacturing, refurbishing and repurposing – yet with a view on feasibility and overall system effects. Scholars, on the other hand, should assist the parties contributing to an increased circular economy in practice by taking up a more active role in attaining consensus in conceptualizing the circular economy.

1. Introduction to Confusions in Conceptualizing CE

During the last 5–10 years, the concept of the ‘circular economy’ (CE) has received growing attention on various levels, among them policymaking, advocacy and consultancy, and science. A Scopus search on the term shows an increase of 50% in academic publications over the past five years, a trend that is even more visible for the Journal of Resources, Conservation and Recycling: the first CE article is recorded in 2007, and over two thirds of the total 101 publications listed on the term stem from the period 2015–2017.

In international politics, the urgency of closing materials loops is also more recently actively promoted by consortia of global actors, like the OECD,¹ the WEF¹ and UNEP³ through various reports and events (UNEP, 2011, 2016; OECD, 2016; WEF, 2014, 2016). Japan and China were the first key Asian economic players to formally introduce CE

policies on national level. In Europe, many states have implemented CE initiatives, policies and pilot programmes, most notably Denmark, Germany, the Netherlands, and the UK are taking the lead (EUKN, 2015). On supranational level, the European Union (EU) is – more slowly – following suit with a CE action plan, including legislative proposals (EC, 2015).

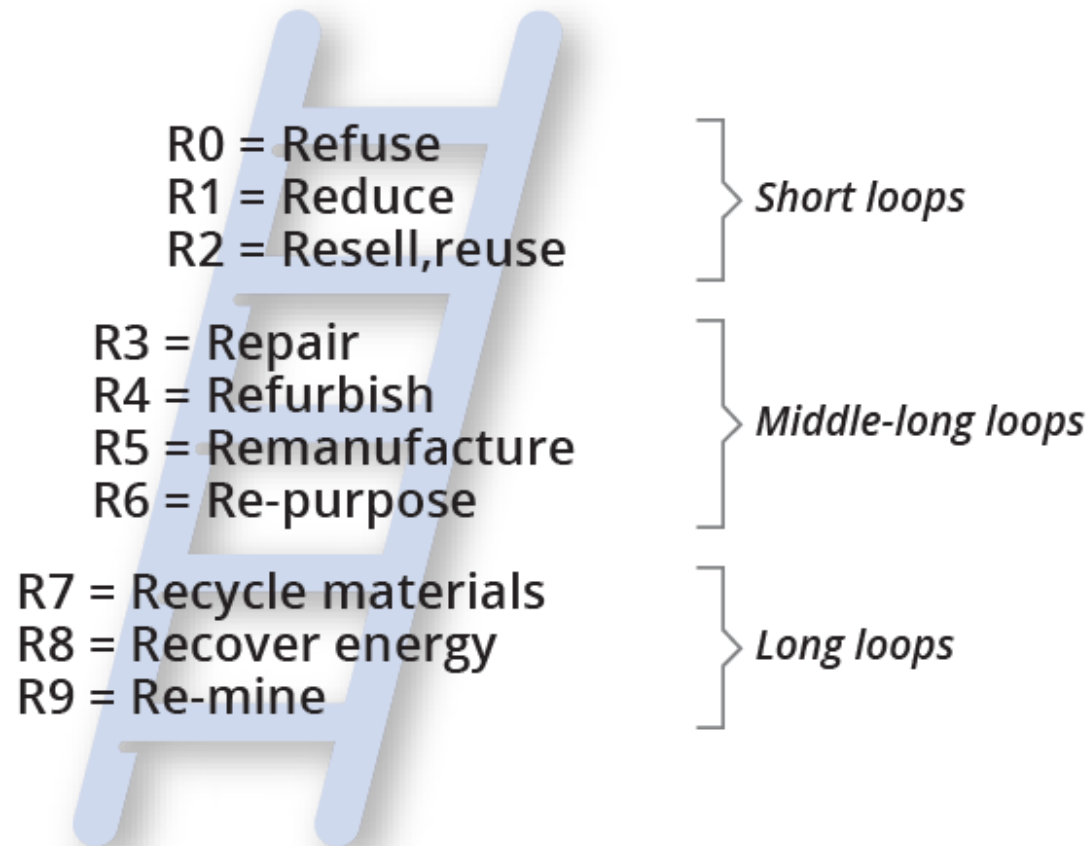
As this article shows, large differences manifest itself globally with regard to CE, yet the potential ascribed to CE of breaking the global “take-make-consume and dispose” pattern of growth – a linear model based on the assumption that resources are abundant, available, easy to source and cheap to dispose of (...)” (EEA 2016, p. 9) is widely shared among different societal actors across the globe. The move towards a more circular economic model can hence be interpreted as confrontation with these untenable assumptions. CE is widely posed as alternative model of production and consumption, a growth strategy enabling the

^{*} Corresponding author.E-mail address: d.reike@uu.nl (D. Reike).¹ OECD = Organisation for Economic Co-operation and Development; WEF = World Economic Forum; UNEP = United Nations Environment Programme

Circular Economy = Value Retention (or 'action imperatives')

R0 → R9:

Hierarchy of CE options for consumers and business



Reducing Circular Economy complexity: Core messages

Core messages	High-income countries	Low-income countries
for consumers		
for producers		

Circular Economy: Core messages

Core messages	High-income countries	Low-income countries
for consumers	<p><i>as buyer:</i> be selective and ask for recycled content</p> <p><i>as consumer:</i> share and separate what is left over</p>	<p>How to not copy consumerism of high-income countries</p> <p>Maintain sharing cultures</p> <p>Demand proper waste collection and recycling infrastructures</p>
for producers	<p><i>In designing:</i> rethink your value chains, shorter loops</p> <p><i>In selling:</i> be transparent, and take full responsibility of end-of-life</p> <p>Full producer responsibility: full price calculations</p>	<p><i>In designing:</i> knowledge transfer and capacity building</p> <p><i>In selling:</i> upgrade to global standards</p> <p><i>In exporting:</i> stop waste dumping</p> <p>Full producer responsibility: include proper treatment in LIC countries in EPR fees</p>

Background information

- Reike, D., Vermeulen, W.J.V., Witjes, S., 2018. **The circular economy: New or Refurbished as CE 3.0? — Exploring Controversies in the Conceptualization of the Circular Economy through a Focus on History and Resource Value Retention Options.** Resour. Conserv. Recycl. 135, 246–264.
<https://doi.org/10.1016/j.resconrec.2017.08.027> [Open access here](#)
- **Producer still insufficiently responsible for circular economy** - Recent whitepaper on more stringent Extended Producer Responsibility (EPR): see March 2021 Press Release at <https://www.uu.nl/en/news/producer-still-insufficiently-responsible-for-circular-economy>

Thank you !

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