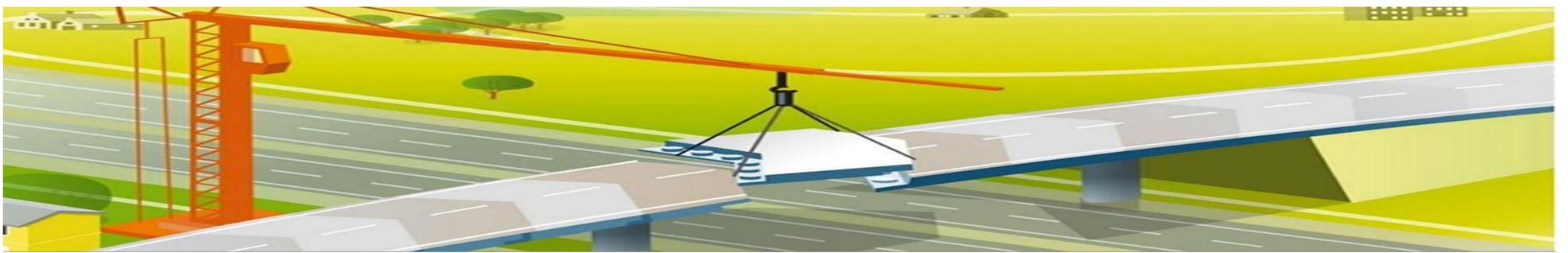




# How to 'bridge' the circular value gap: An explorative case study in public tendering of circular bridges

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## Research Objective

In our current linear economy, approximately 80% of the resources we use are directly discarded after usage<sup>1</sup>. As a consequence, this harms the environment as vast quantities of waste are combusted or sent to landfill sites<sup>2</sup>. A circular economy represents one of the most powerful and recent attempts to conceptualize the integration of economic activity and environmental wellbeing in a sustainable way<sup>3</sup>. The shift to a circular economy requires innovative business models that either replace existing ones or seize new opportunities<sup>4</sup>. However, changing a business model into one through which circular value can be captured is challenging<sup>5</sup>. Therefore, this paper researched the follow research question:

**How can triple bottom line value be captured through a circular business model ?**

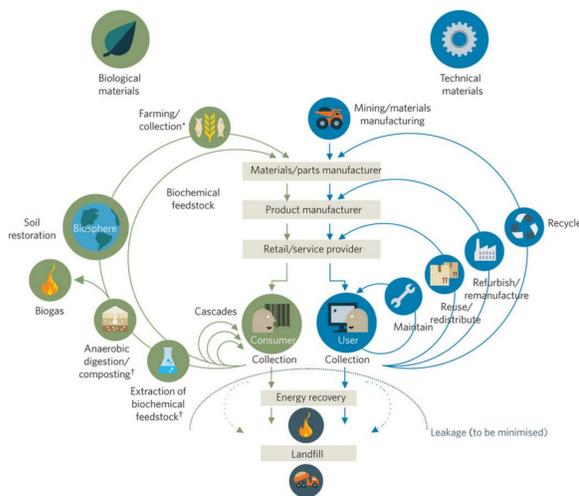


Figure 1. The Circular Economy Butterfly Diagram (Ellen MacArthur Foundation, 2019)

## Methods

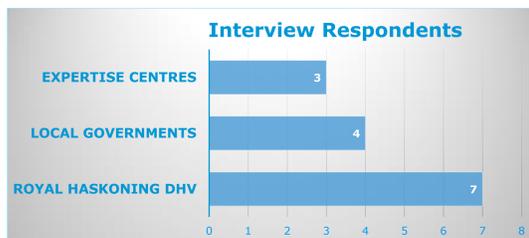


Figure 2. Research Sample

- Explorative Case Study
- Expert Interviews (N=14)
- Transdisciplinary Research Approach
- Inductive Data Analysis Procedure<sup>6</sup>

## Results

### Meta Categories results

1. The diffuse definition of circularity
2. The main drivers of circularity in business models
3. The main challenges of circularity in business models
4. Cooperation and knowledge sharing

Table 1. Overview of the categories derived from the interview results

Sources: <sup>1</sup>Planing, P. 2015; <sup>2</sup>Bocken, N. M. P., Short, S. W., Rana, P., Evans, S. 2014; <sup>3</sup>Murray, Skene, & Haynes, 2017; <sup>4</sup>Ellen MacArthur Foundation, 2019; <sup>5</sup>Lewandowski, 2016. <sup>6</sup>Elliott & Gillie, 1998, p. 331; Jain & Ogden, 19999, p. 1597; Hoepfl, 1997

## Results (Quotes)

- "Everyone talks about circular economy but there is not really one clear definition that everyone works from." [Expert RHDHV]
- "How are we going to implement it as a water board [...]. We are still at the very beginning." [Expert Water Board]
- "Only in some assignments we measure the carbon footprint or environmental impact. " [Expert RHDHV]

## Discussion

The case results display several prominent challenges to capture value through circular business models. These challenges offer interesting insides towards an answer on the research question: **[1]** The definition of circularity is not clear; **[2]** How to implement circularity in practice? and **[3]** An absence of comprehensive triple bottom line measurement systems

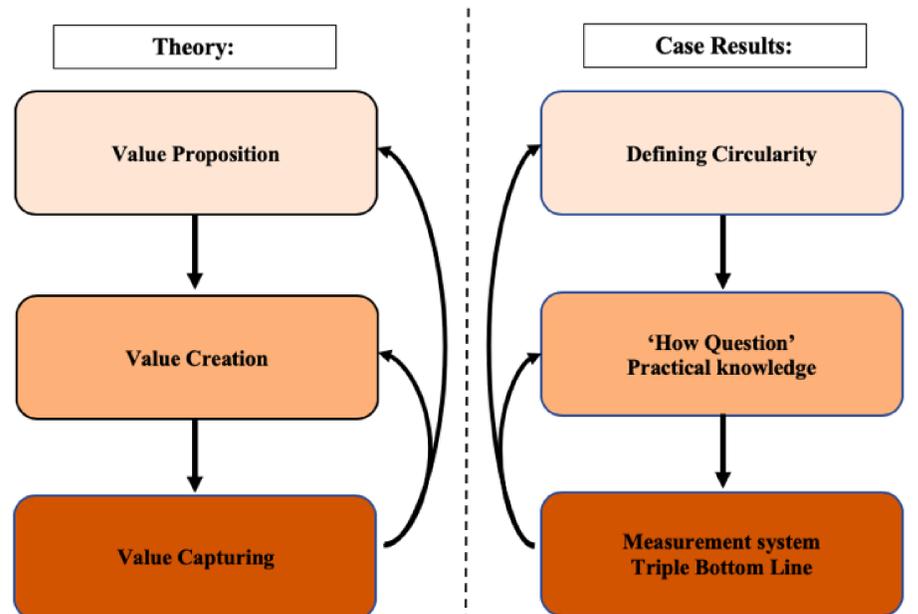


Figure 3. Linking the business model theory with the challenges from the case results

## Recommendations – 'Bridging' the challenges

1. Start with a 'good' value proposition
2. Alignment with organizations strategy & business practices
3. A comprehensive measurement system for a feedback loop
4. Sufficient knowledge base necessary for an assessment

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