

Circular maturity model

The research is based on the following question:

"How can the circular performances of Dutch businesses in the trade and industrial sector be made transparent in a holistic, representative, and attractive way?"

Authors

Astrid van den Berg, Brent Rietveld, Jop de Winter

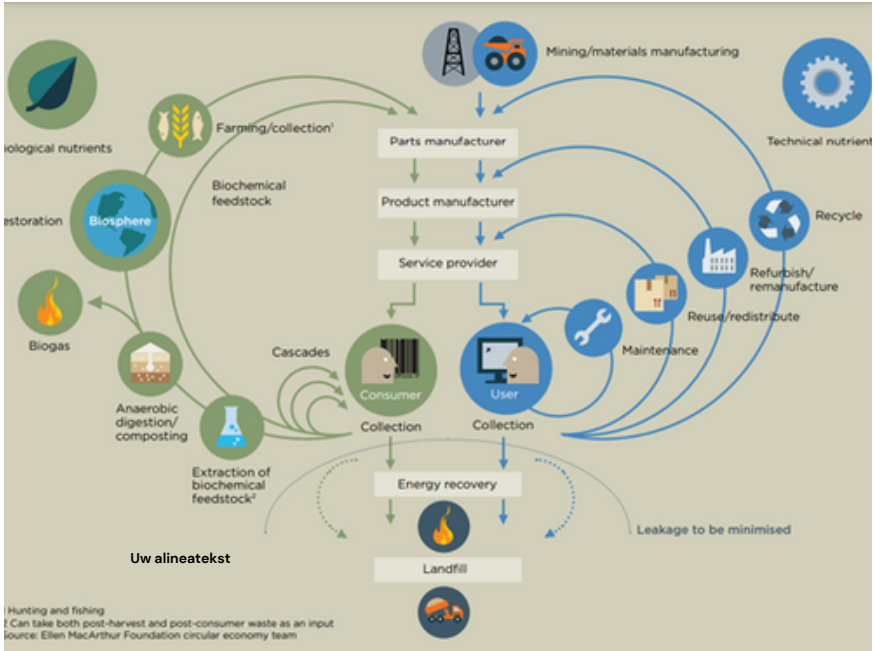
Affiliates

University of Applied Sciences
Utrecht, The Netherlands
Minor Business Information Management

Introduction

Circular performance is an interesting and fast moving subject in the Netherlands (Berkel van & Schoenaker, 2020). There has been made many maturity models that don't mention a holistic perspective (Uhrenholt J. N., 2022). According to Sacco et al. (2021), a new maturity model must include a holistics perspective because, as said before, in the current models this is a missing aspect.

So for Dutch businesses in the trade and industrial sector, this research was designed to find the answers to the issues of what a Circular Performance Maturity Model (CPMM) should look like and how a CPMM should function in order to assess their level of circular maturity.

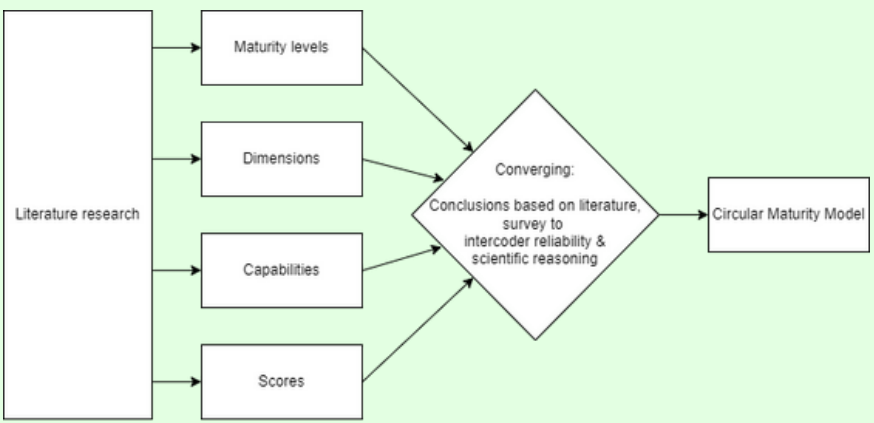


Background - Circular Economy

According to the Ellen MacArthur Foundation (2013), the circular economy is an economic and industrial system that is restorative and regenerative by design. It is aimed at preserving the highest value and usability of products, components and materials.

Methode

- Diverging
 - Literature Search
- Converging
 - Scientific Reasoning
 - Inter-coder Reliability
 - Survey



Maturity Levels

0. None – There is no circular awareness, elements of circular economy in strategies or related activities in the organization.
1. Basis – The organization appears to have a need for CE, and there are discussions about how and where to act.
2. Exploratory – Demonstration projects and pilots are being started within the various functions in the organization. This allows the value of a CE to be proven and organizational capabilities to be tested.
3. Systematic – Means for pursuing a CE are implemented throughout the organization. Successful pilots are also being carried out, after which scaling up is started.
4. Integration – Circular initiatives and ambitions are aligned throughout the organization and critical supply chain.
5. Regenerative – The organization is really engaged in CE and is regenerative and restorative by design.

Results

To determine dimensions, different maturity models have been compared at what dimensions are used. By comparing different researches, there has been made a selection of usable dimensions. Those dimensions are:

1. Strategy
2. People
3. Product
4. Process
5. Technology
6. Environment



Besides the dimensions, different capabilities have been selected to make each dimension measureable. Each capability can score between 0 and 5. This is according to the method of Likert (1932).

According to The Ellen McArthur Foundation (2013) it is possible that a circular maturity isn't done at all.

Once all of the CPMM survey's questions have been answered, a radar graph can be created using the data. This radar graphic gives a simple and clear understanding of the organization's level of circular maturity for each dimension. See an illustration below



Conclusion

There should be six levels in a CPMM where a company can be scaled from 0 to 5. Additionally, six different dimensions, including strategy, people, product, process, technology, and environment should be used. Each of these dimensions should contain roughly 10 capability questions. Last but not least, each capability question should be given a score between 0 and 5, allowing the results to be combined into radar graph that will give the organization a rapid and accurate summary of how they have performed. By creating a CPMM in this manner, we hope to be able to assist Dutch businesses in the trade and industrial sector in measuring their level of circular maturity.

References

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