



ISO TC323 – Ad-hoc group 3 ‘Measuring Circularity’

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New Work Item Proposal

- **Indication of the preferred type or types of deliverable to be developed**

- International Standard
- Technical Specification
- Publicly Available Specification

- **Is this a Management Systems Standard (MSS)?**

- Yes No

- **Proposed Standard Development Track (SDT)**

- 18 months* 24 months 36 months
48 months

Measuring Circularity: objective 1

The **first** objective of the NWIP is:

“To develop a generic method or framework for measuring or assessing circularity, taking into consideration the sustainability (environmental, social and economic) impacts of circular solutions”.

Notes to objective 1:

- ‘Taking into consideration the sustainability impacts’ does not mean to measure all these impacts, because that will be outside the scope of TC323.
- ‘Taking into consideration’ emphasizes the need for an integrated view or holistic thinking of circularity and sustainability.

Measuring Circularity objective 2

The **second** objective of the NWIP is:

“To provide guidance to sectors and groups of stakeholders on how to use the generic method for sector specific measurement or stakeholder specific measurement”.

Notes to objective 2:

- This general framework should provide guidance on assessing and measuring circularity that is overall applicable to all levels, sectors and stakeholders.
- However it would be preferable if the framework can also give initial guidance how specific sectors or stakeholders can use this framework for their purposes to customize it.

Measuring Circularity scope: levels

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Full length article

Circular economy indicators: What do they measure?

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Circular Metrics Landscape Analysis



wbcscd

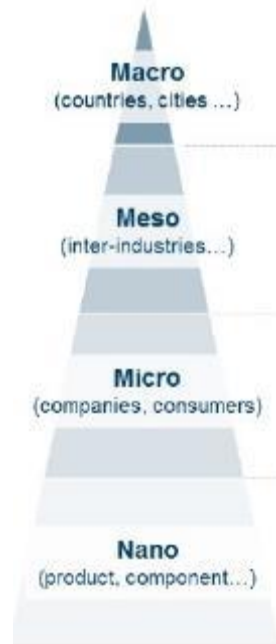
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EUROPEAN COMMISSION
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MAY 2018

A joint report of the current indicators of water, materials and energy consumption for a circular economy transition

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Measuring Circularity scope: levels

1. **Macro**: this is the highest level where cities, countries and international agencies reside
 2. **Meso**: it represents all inter-industries and inter-firm networks
 3. **Micro**: this is the level where companies and consumers stand
 4. **Nano**: this is the lowest level of analysis possible at which stand products and components.
- The standard should address all levels to ensure some kind of alignment and consistency between the different levels.
 - However the circularity measurement of a product or service is considered as high priority for the development of the framework.

Measuring Circularity: understanding assessment and measurement

This NWIP should aim to provide guidance on both the assessment and measurement of circularity.

- ‘assessing circularity’ will focus on guidance how to assess the application of the CE principles, how to assess the decision taking on the different CE strategies and/or business models, the goals defined and their performance.
- ‘measuring circularity’ will focus more on the purposes and outcomes of different circularity indicators, using relevant techniques how to measure.

Measuring Circularity: CE and sustainability in broader context

Circular Economy is strongly related to SDG 12



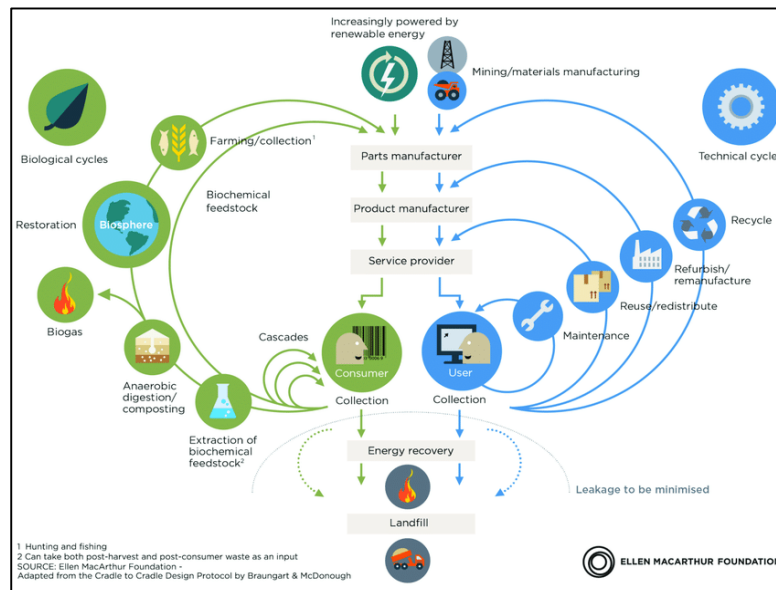
Measuring Circularity: CE and sustainability in broader context

It is advised that the development of an ISO standard according to this NWIP will conduct an investigation on how to align with the SDGs, when taking into consideration the impacts of different circular solutions.

Measuring Circularity: cycles

The circularity assessment and measurement should address the technological cycle and the biological cycle.

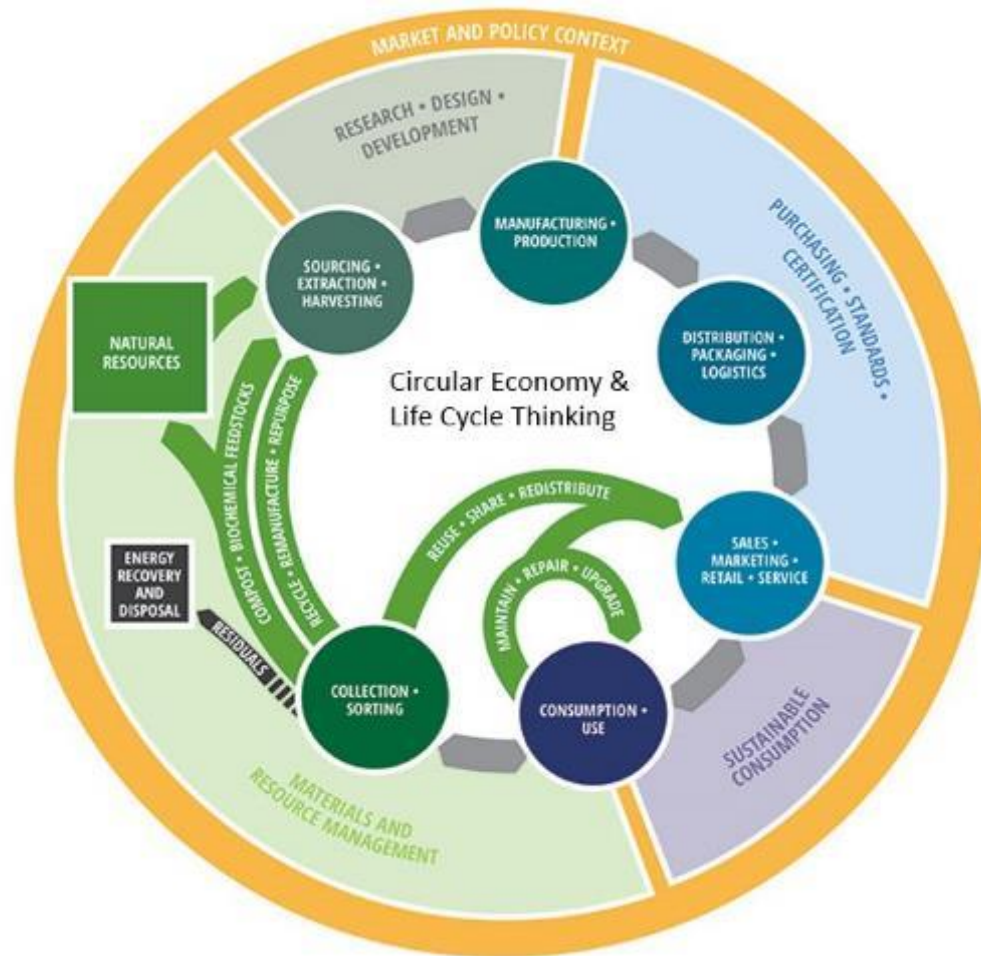
- However there are many similarities between the two cycles.
- It is important to look at the interventions between both cycles and their impacts.
- Attention needs to be paid to find synergies between them and ways in which they can reinforce each other.



Measuring Circularity: connection with Life Cycle Thinking

- Life Cycle Assessment (LCA) provides insights in the impacts along the entire life cycle and is very well suited to assess the sustainability impacts of circular solutions.
- By combining LCA for environmental impact, Social LCA for social impact and Life Cycle Costing (LCC) for economic impact an holistic view of the sustainability impact of circular solutions can be achieved.
- Both circular solutions and Life Cycle Thinking require systemic thinking, a principle inherent to circular economy.

Measuring Circularity: connection with Life Cycle Thinking



Circular Economy and Life Cycle Thinking connection:

example paper and packaging

Source: [circulareconomylab](http://circulareconomylab.com)

Measuring Circularity: quantitative and qualitative indicators

- The standard should explore the feasibility and relevancy of both quantitative and qualitative approaches of the assessment.
- Qualitative indicators should be consistently measurable and comparable when applied to different options.

For instance they could be quantified on a point scale, for instance on par/benchmark, slightly better, significantly better, and so on.

Measuring Circularity: other considerations

- **Small and Medium Enterprises (SMEs):** Considering the number of small and medium-sized enterprises all over the world, metrics should also offer applicability to SMEs.
- More considerations needed?