

LCA and transitioning to a Circular Economy

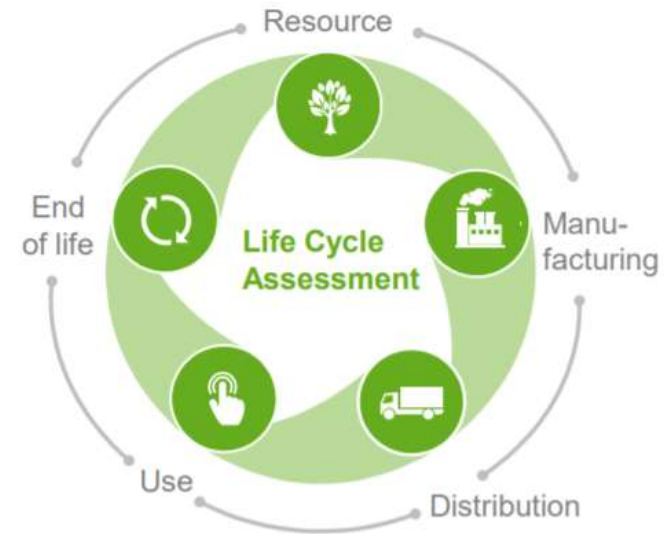
Best Practice Working Group, LCA NZ

Co-chairs: Kelly McClean and Adam Schofield

LCA NZ Life Cycle Association New Zealand

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About BPWG



The purpose of the Best Practice Working Group (BPWG) is to **support LCA practitioners in New Zealand and business users.**

The group works to identify requirements for New Zealand specific LCA/LCM resources, and to facilitate their development.

BPWG contributions welcome from all members.

Current members:

- Kelly McClean (co-chair)
- Adam Schofield (co-chair)
- Joanne Duncan
- Gaya Gamage
- Kimberly Robertson
- Jeff Vickers
- Andrew Barber

- Future: You?

Recent activity

- BPWG refreshed in 2019, after hiatus of 18 months.
- Over this time EPDs, CE, low carbon activities have gained momentum in NZ.
- Previous BPWG work:
 - Methodology advice and recommendations
 - Description of Impact Categories and their relevance in the New Zealand context
 - Recommended LCIA Indicators, midpoint indicators and calculation methods
 - New Zealand Inventory Database (feasibility study)
- 2020 strategy in development to guide priorities and address NZ research gaps **Workshop @2pm today to shape these goals**

LCA and CE – At a Glance

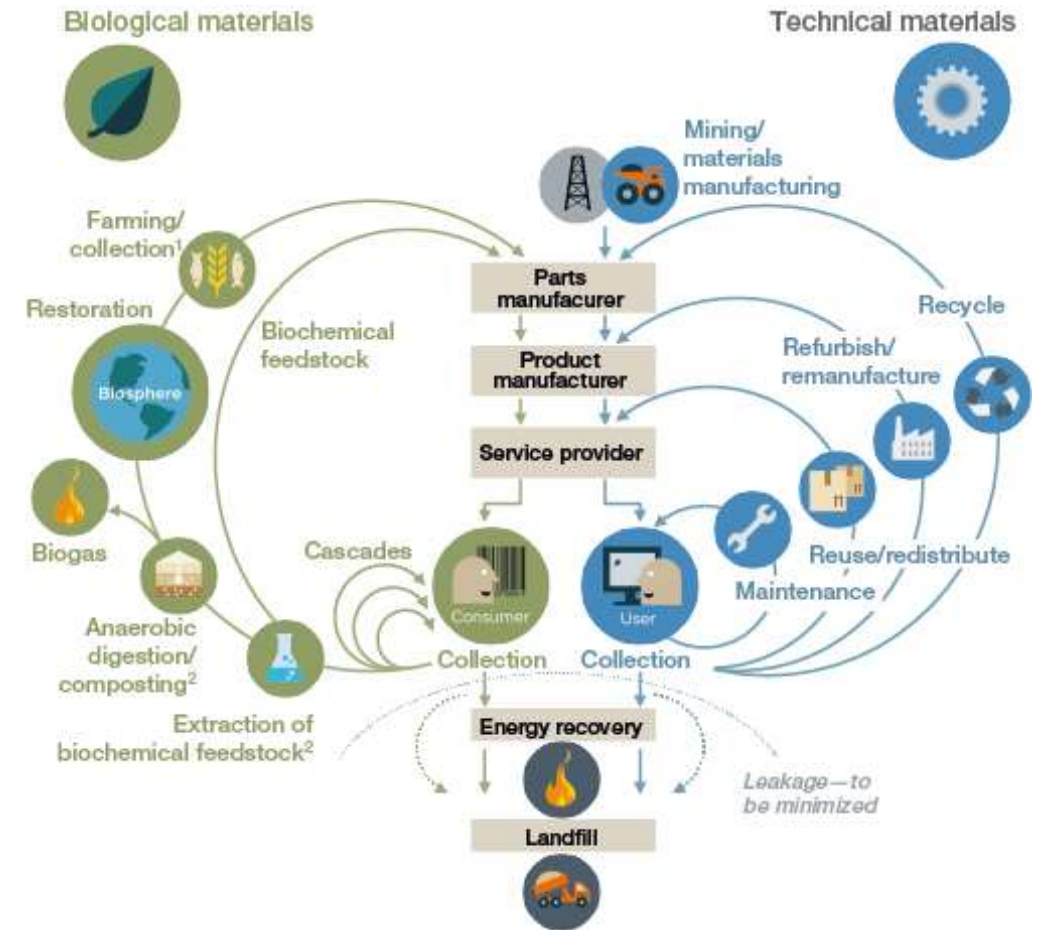
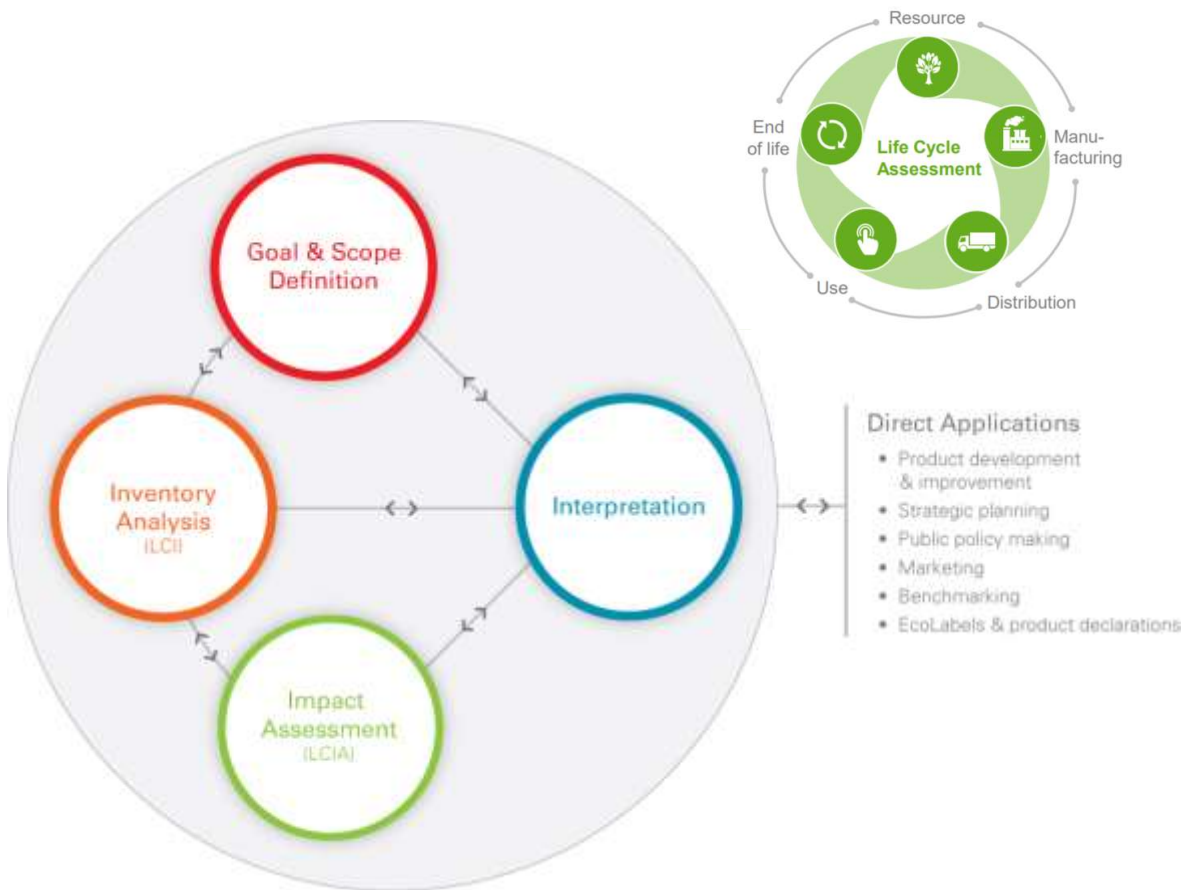


Image credits: LCANZ, Ellen MacArthur Foundation, Cradle-to-Cradle

Benefits of Circular Economy

- CE is accessible so non-experts 'get it', can contribute.
- Ellen MacArthur Foundation comms, commitments from multi-nationals and govt - including MFE in NZ. Economic argument amplified at key forums.
- Visual, exciting, common sense and has cut through.



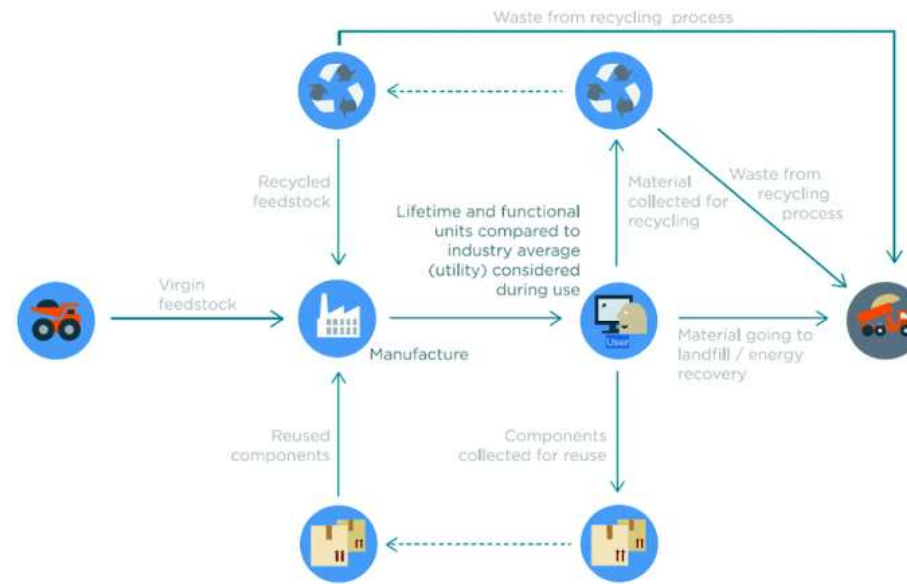
Circular economy in NZ

- CE has now moved beyond a ‘buzzword’
- CE has gained momentum, alongside other low carbon strategies, and is influencing govt policy and business strategy at board/exec level e.g. infrastructure investment, new business models and product redesign.
- CE inherently uses a life cycle approach, but over the entire system, not limited to single product stream
- Scientific rigour and evidence-base needed to support decision-making



Circularity indicator

- Material circularity indicator now available to use in LCA (developed in 2015) via Gabi and SimaPro
- Easy to implement as uses process flow and data collected for rest of LCA
- Data used from inputs into manufacturing process and end-of-life
- Issue with CI is that recyclability of product dominates result



LCA supporting CE



What's good?

- Identifying trade offs, shifting of burdens
- Accounting for existing value chain, movement towards consequential via software can work. Supports decision-making tools.
- Carbon, water use, energy use etc assessment
- ISO standard, can develop EPDs from LCA.

What's not so good?

- Time, resource, expensive to carry out LCA
- Gaps exist...
 - Limited NZ data available.
 - Not all impacts have suitable impact categories (marine pollution/leakage)
- Modelling material loops limited, ends with single product instead of linking to other cycles.
 - Circular economy is based on entire system, not just single products
 - In particular, biological cycle MIA

LCANZ Circular Economy Activities



- LCA and CE section added to website this year.
- Discussion paper and relevant resources to be released soon by BPWG.
- Recommend LCA community get involved, ensure methodology is fit for purpose to address whole of life, end of life and finally circular design. Value there for business and govt.
- NZ LCI data gap identified, work to support improved data via BPWG in pipeline for 2020.



Conclusion

1. CE is complementary, not in competition. It is a gateway for non-experts to understand life cycle thinking, product stewardship and circular design.
2. CE concepts based on LCM concepts and needs the power of LCA to ensure solid decision-making process
3. #rethinkLCA fitting - there is a role here for LCANZ community, what is it?
 - NZ data especially important for industry groups - individual businesses can leverage NZ data to provide evidence-base for CE transition activities.
 - Get involved with LCANZ - it is our association. If there are areas that need work let's address them together.

BPWG will be workshopping 2020 goals today, welcome to join us!

Thank you!

LCANZ Life Cycle Association New Zealand