



The European voice of the
adhesive and sealant industry

**Workshop „Zirkuläre Wirtschaft – mehr als Recycling!?“
15. Februar 2019 beim VCI in Frankfurt**



Circular economy; the new reality

Dr. Péter Krüger, Covestro Deutschland AG
Chair of Sustainability Development Committee, FEICA



What is a Circular Economy (CE)?

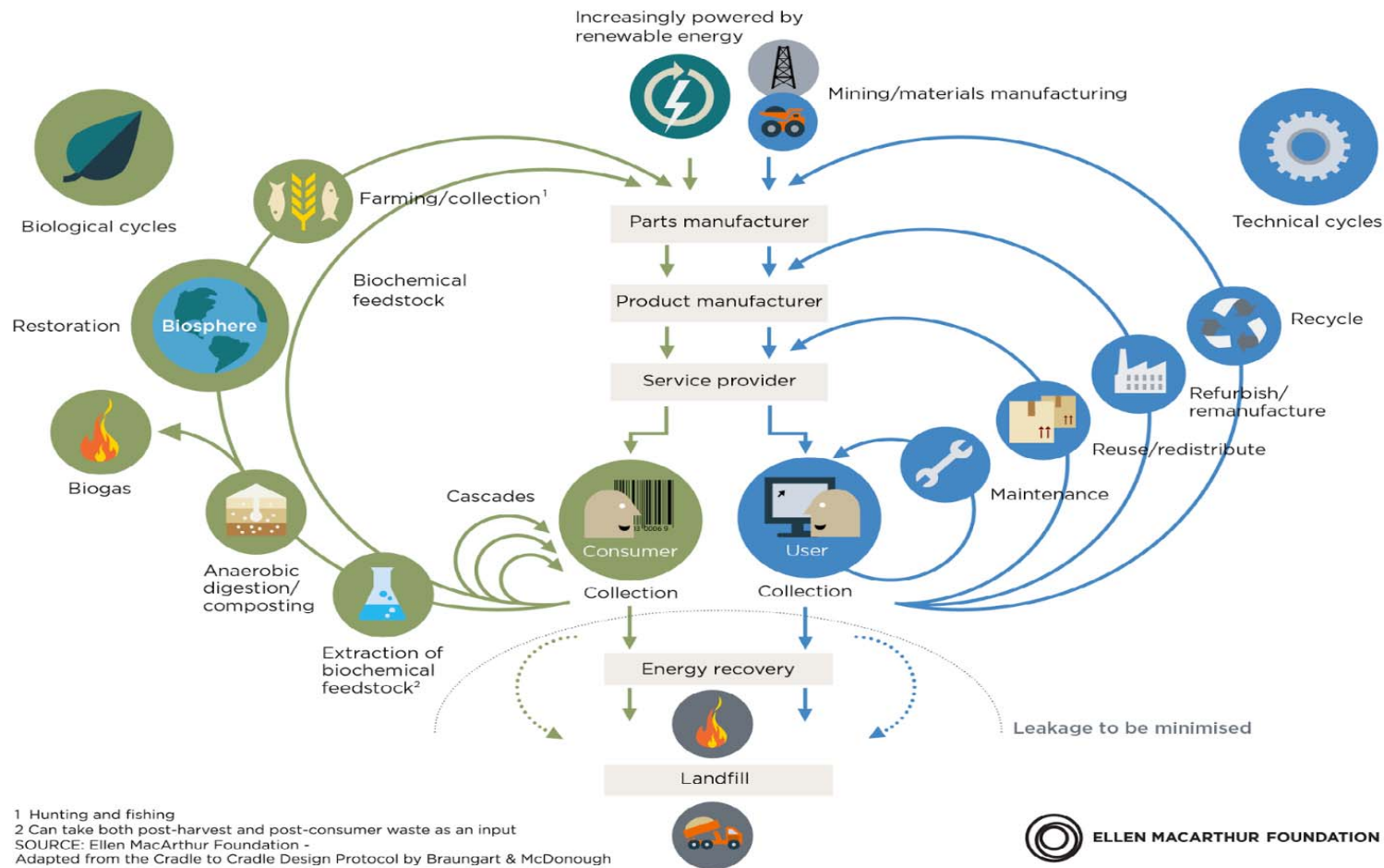
“Looking beyond the current “take, make and dispose” extractive industrial model

The circular economy is restorative and regenerative by design.

Underpinned by a transition to renewable energy sources, the circular model builds economic, natural and social capital.”

The Circular Economy

CIRCULAR ECONOMY - an industrial system that is restorative by design



1 Hunting and fishing
 2 Can take both post-harvest and post-consumer waste as an input
 SOURCE: Ellen MacArthur Foundation -
 Adapted from the Cradle to Cradle Design Protocol by Braungart & McDonough

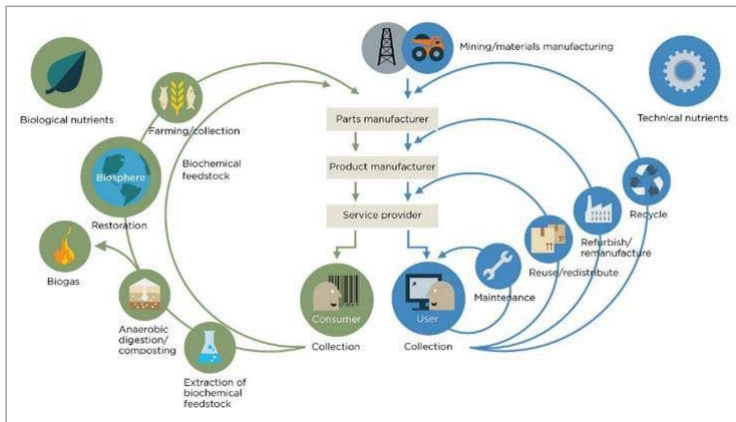
the circular economy seeks “to be restorative and regenerative by design”

Moves away from the linear “take make and dispose” model

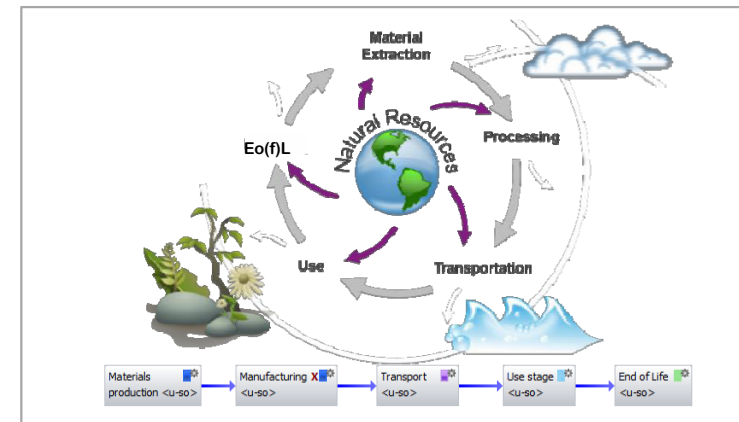
Circular Economy and Life Cycle Assessments



Circular Economy (CE)



Life Cycle Assessment (LCA)



- **Philosophy**
- Aims to integrate business value in sustainability
- Proposes several measures to close loops
- **Principle driven**
- **e.g. optimize resource use**

- Assessment tool
- Quantifies environmental performance through a standardized methodology
- Simulates the complex reality
- Data driven
- e.g., optimize resource use from an environmental perspective

European Parliament and Commission push for CE solutions

Comments from EU Parliament Report

- *Stresses the importance of obliging manufacturers/sellers to take responsibility for*
 - *the entire lifecycle of a product*
 - *to boost repairability*
 - *extend the life of the product and recyclability*

Strong Political pressure from the Parliament and Commission to implement CE in Europe and also via UN into other regions – a spreading global issue!!



FEICA has prepared a Position Paper on CE – *it is on our website*

FEICA paper highlights relationship of adhesives/sealants and CE:

- **Support** for the principles on **Circular Economy** as a paradigm shift
- **Commitment** to **sustainable** (environmental) **improvements** based on **LCAs** developed over decades – it is **not just** about **recycling!**
- **Commitment** for **innovation** along **value chains** to develop eco-designed products to enhance CE on material/energy efficiency and waste reduction
- **Good Practice stories**, supporting elements of CE and Sustainability
- Identify need to put “substance in the game”

Adhesives and Sealants supporting elements of CE and enhancing Sustainability, Circularity and Waste reduction



Examples on FEICA website as “Good Practice Stories”

Adhesives for increased crash resistance in automotive

LIGHTWEIGHT

Posted 09 March 2018



Lightweight solutions for automotive bodies. In a case study, the elimination of 1,000 welding points and 30 kg weight can result in a net reduction of 330 kg CO₂-eq. per vehicle during its typical lifetime, while increasing the car's rigidity and crash resistance.

Graphic material & pictures © SIKA

Crash-resistant structural adhesive solutions for lightweight composite materials in the automotive industry allow the reduction of the CO₂ footprint during production and use phase, while at the same time improving passenger safety.

- Conserving resources is a key driver in sustainable development. Lightweight composite materials can save material and energy in the production and use phase.
- Adhesives enable the bonding of dissimilar materials (e.g. steel/aluminium/plastic) to create composite materials, which combine the properties of the constituent materials while reducing weight and improving the mechanical performance.
- Crash-resistant structural adhesive solutions enable the elimination of welding points and the use of thinner metal sheets while increasing the car's rigidity and crash resistance.

For more details about this Good Practice, see the company's related document 'Sustainability in structural bonding - Automotive'.

Related documents



Sustainability in structural bonding - Automotive industry

Uploaded 09 March 2018

2019-02-15, Frankfurt

An example of a Good Practice Stories

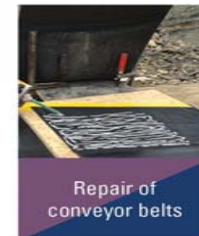
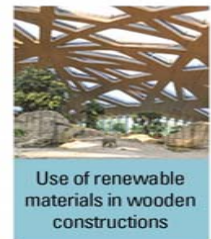
Note that we need more positive Sustainable & CE examples!!

This below is the Carlsberg video can we load it into the presentation?

<https://www.youtube.com/watch?v=NY0ikbi7Pa4>

**Add the ASC? FEICA Video here
please**

*Any
questions
?????*



Where to put “*Substance in the game*”



Your Business

- **Share CE at board level as this is a paradigm shift for the industry and you will need a strategy to manage the changes**
 - ***There are risks to current business models but opportunities for companies who accept the new CE reality***

Your Customers

- ***Plan to engage in dialogue with your customers to identify whether end products can be improved/ recycled and if under threat how to support change through innovation***
 - ***Encourage them to consider “end of life” in product design***

Where to put “*Substance in the Game*”

FEICA future plans:

- *Meet Recycler / other industry associations as required to challenge any negatives arising on our products*
- *Communicate on innovations from A&S – particularly for recycle*
- *Consider an outreach campaign when the new Commission and Parliament are in place in 2nd half 2019 supporting our industry in EU*
- *Publish “World without A&S” on website for all to use*

In summary to pro-actively position A&S as positive contributors in a future CE world!