



In partnership with



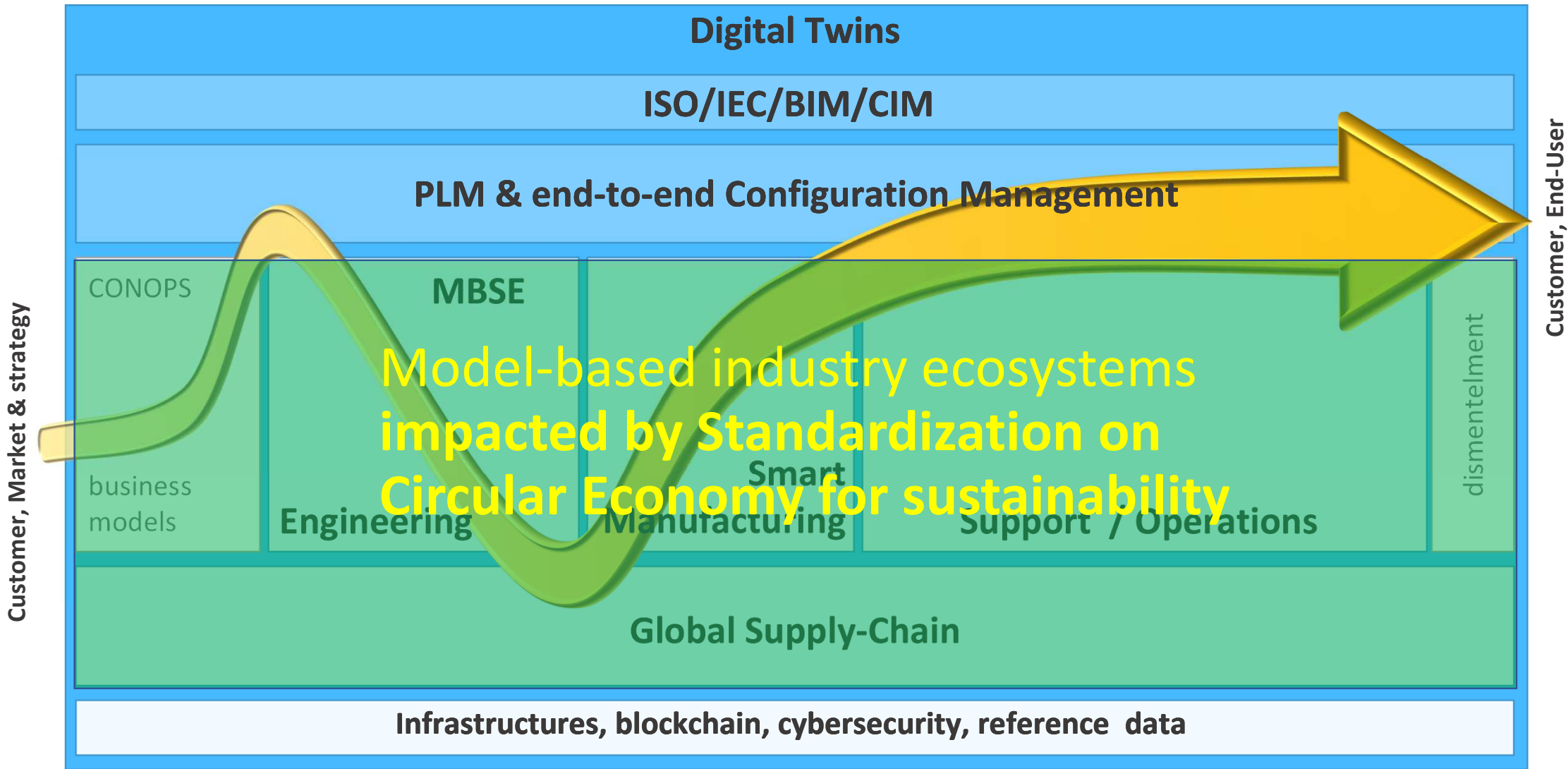
AFNeT Standards Days

Standardization and Circular Economy

Martial Patra – Thierry Cormenier - Patrick Lamboley

presented by Martial Patra (Chair of CEN-CENELEC Ecodesign Coordination Group)

<http://standardsdays.afnet.fr> - AFNeT Standards Days 2020 : 6 & 7 October 2020



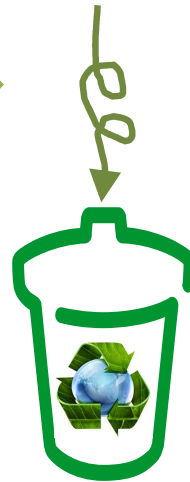
Business models

LINEAR
ECONOMY



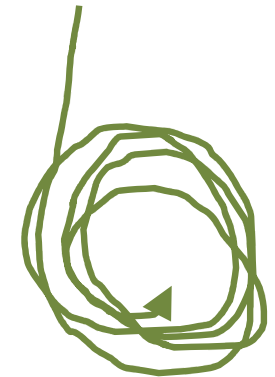
Waste
management

RECYCLING
ECONOMY



Closing
the loop

CIRCULAR
ECONOMY



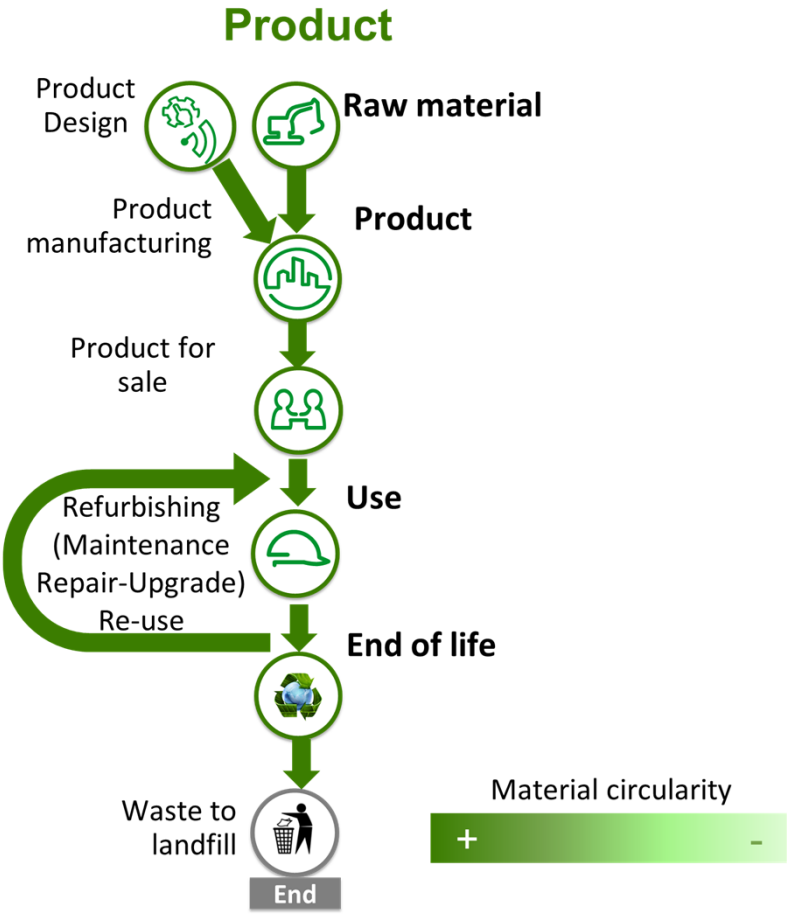
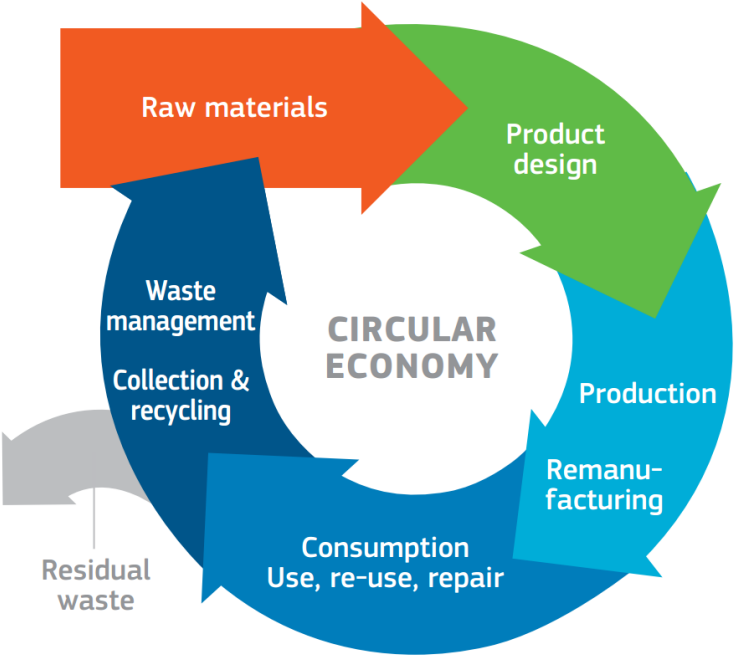
Design out **waste** and **pollution**,
Keep products and materials in use,
Regenerate **natural systems**.

Source: <https://www.ellenmacarthurfoundation.org/>

Standardization and Circular Economy

Let's consider the circular life cycle of product in a system...

- Circular economy modifies the life cycle representation to combine the user and the manufacturers' points of view...

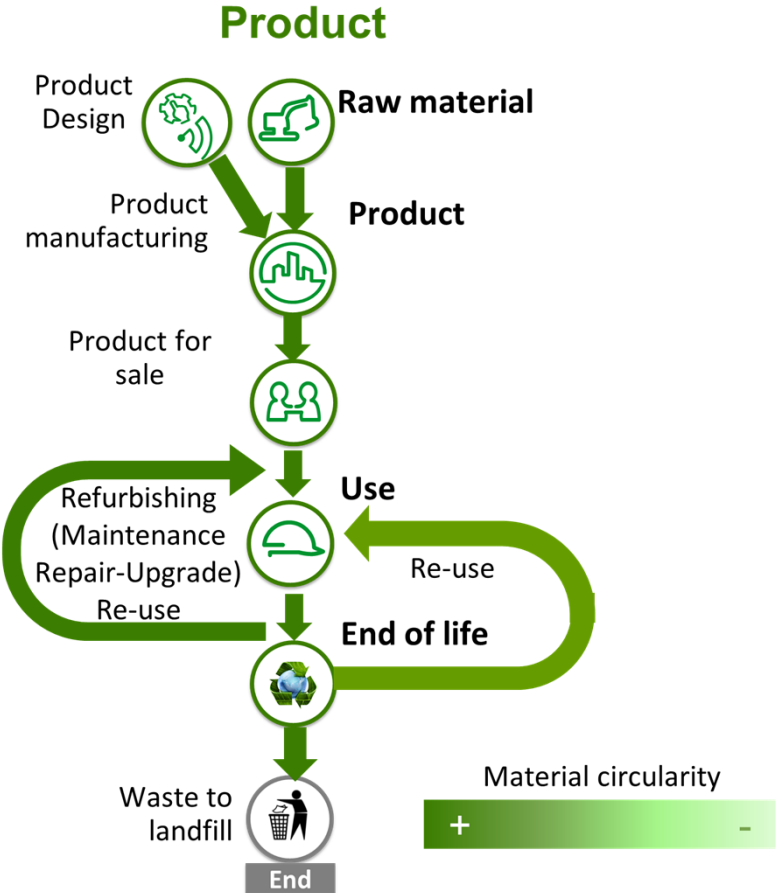
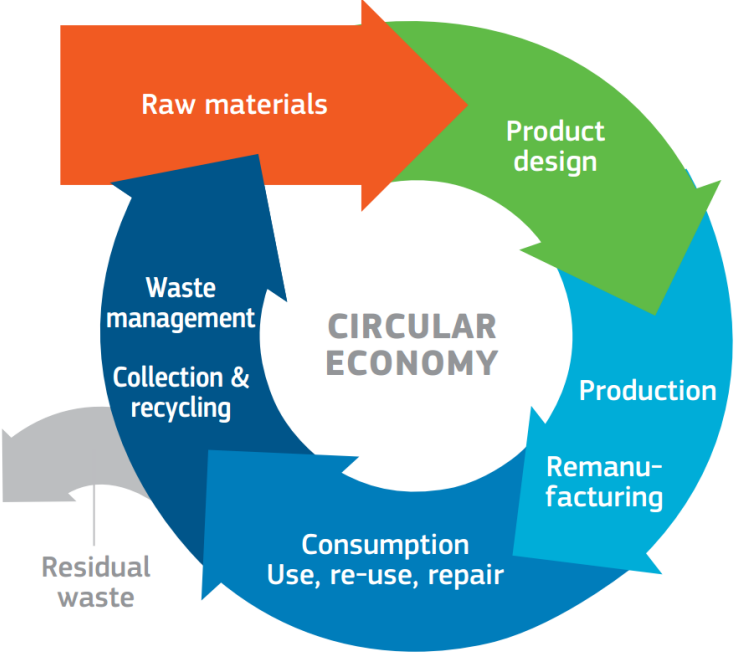


...for sustainable ecosystems

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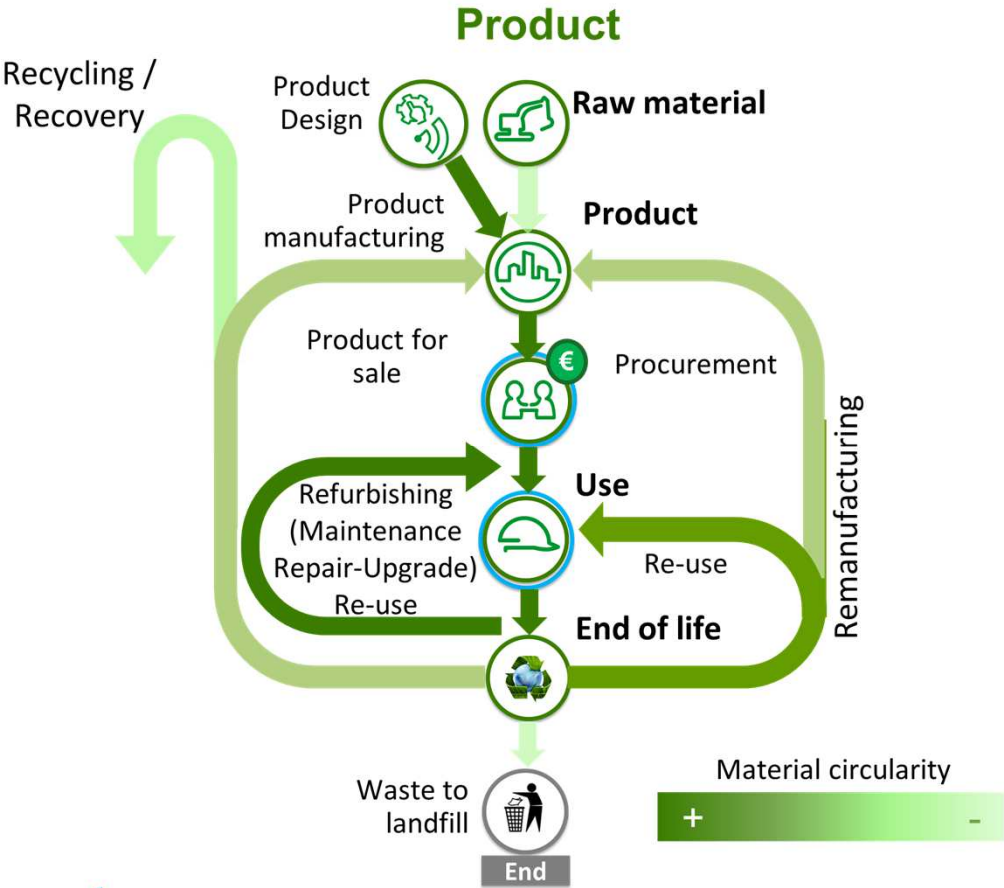
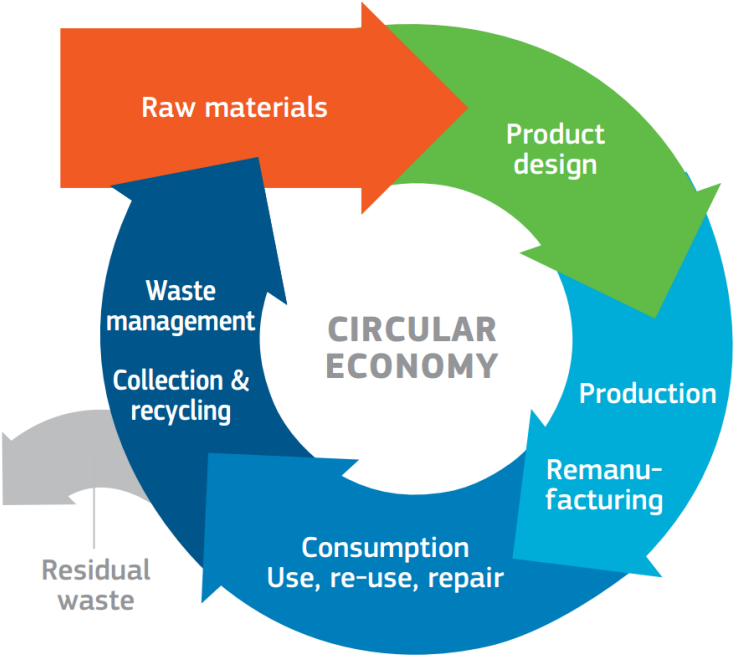


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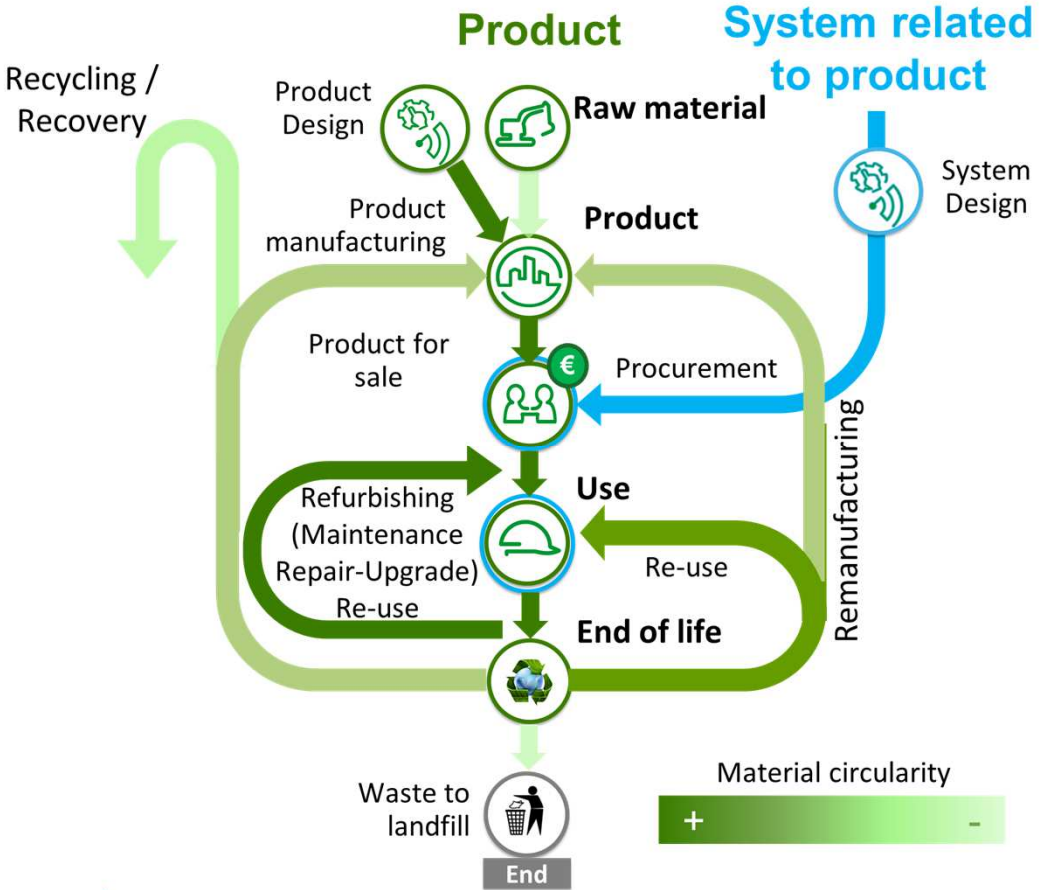
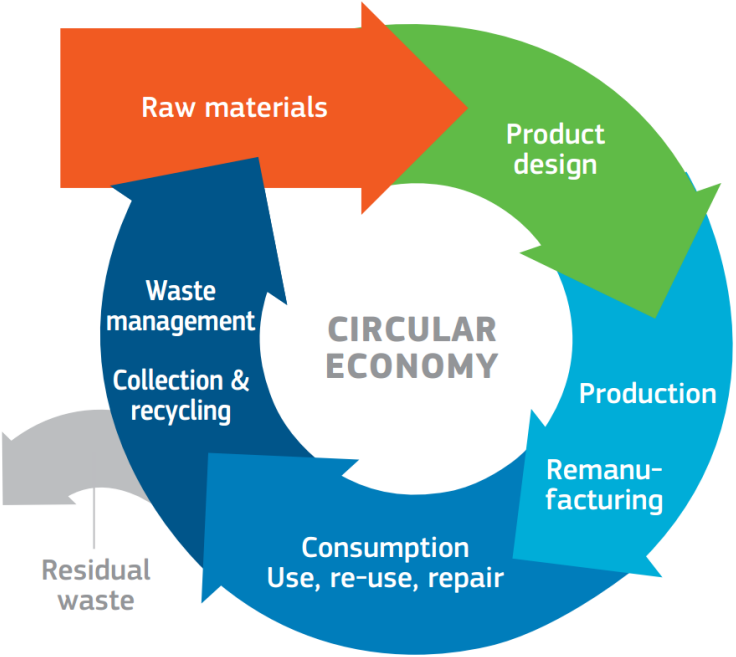


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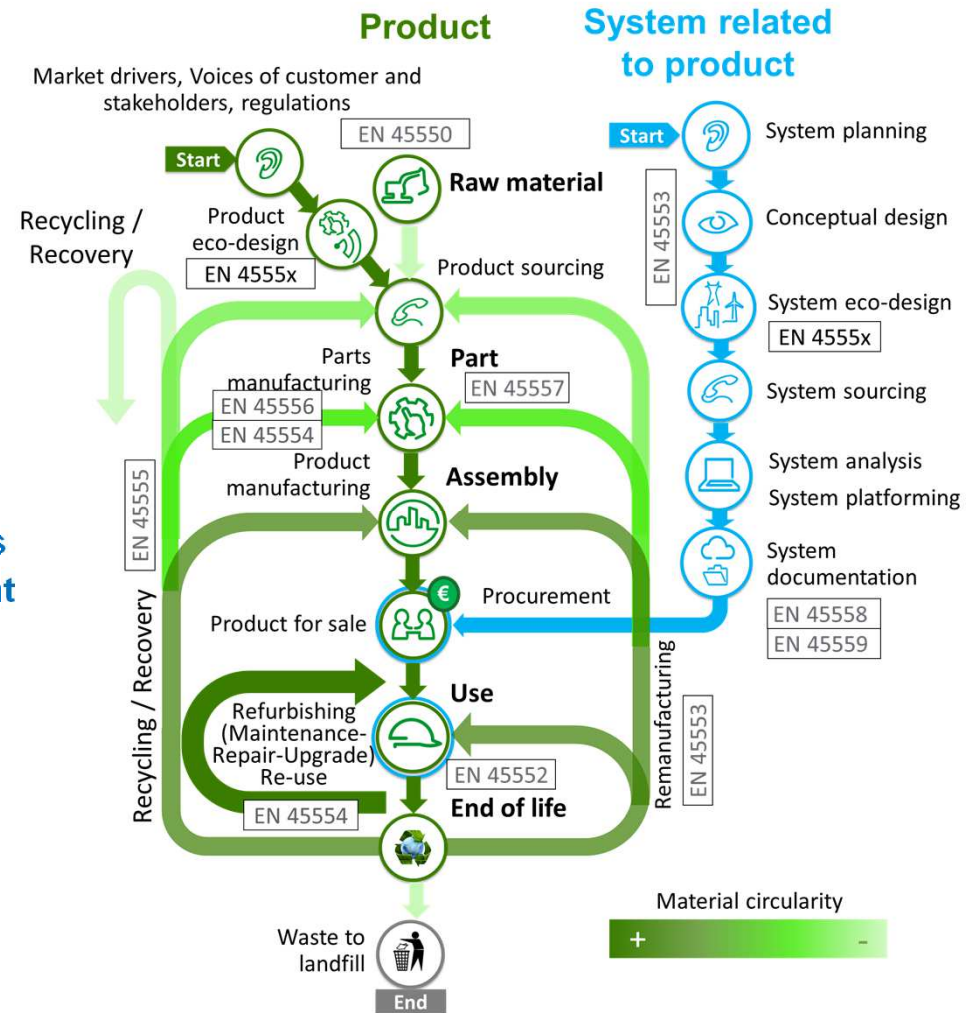
...for sustainable ecosystems

Life cycle for circular design

EU Standards for Material Efficiency **Assessment** of Energy-related-Products

- EN 45550: **Terms** and **definitions** related to material efficiency of ErP
- EN 45552: Method for assessment of **durability** (including **reliability**)
- EN 45553: Method for assessment of ability to **remanufacture**
- EN 45554: Methods for assessment of ability to **repair, reuse, upgrade**
- EN 45555: Methods for assessing the **recyclability** and **recoverability**
- EN 45556: Method for assessing the **proportion** of **reused components**
- EN 45557: Methods for assessing the **ratio** of **recycled material content**
- EN 45558: Method to **declare** the **use** of **critical raw materials**
- EN 45559: Methods for providing material efficiency **information**

Longer lifespan is supported by implementation of **digitalized products** and **systems** aiming optimized asset management.



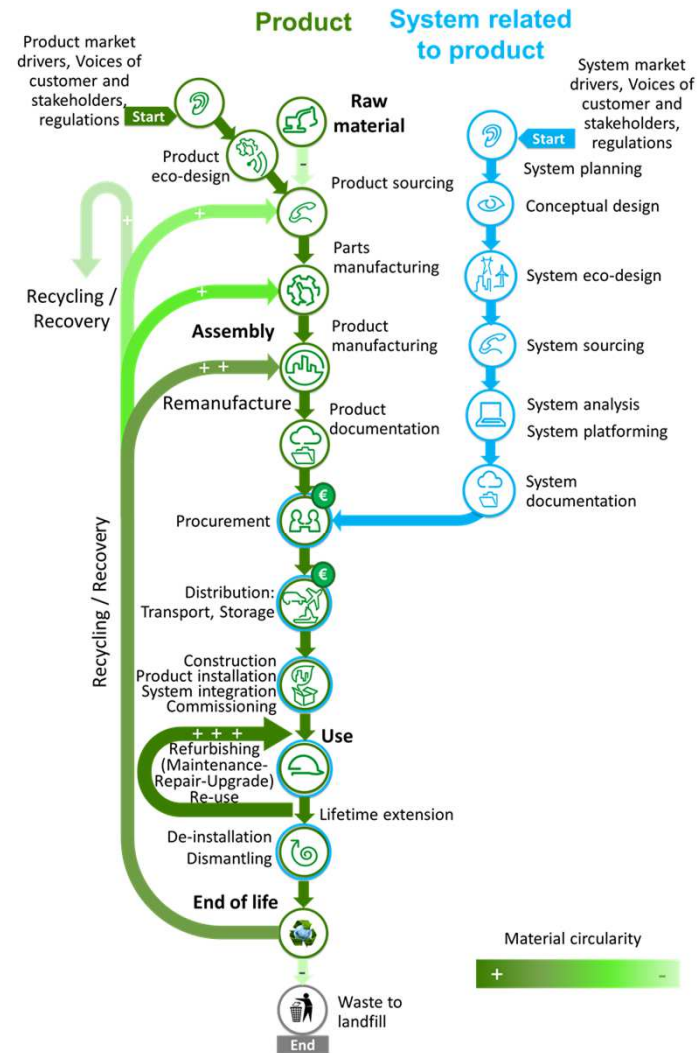
Standardization and Circular Economy

Extended Life cycle for circular design

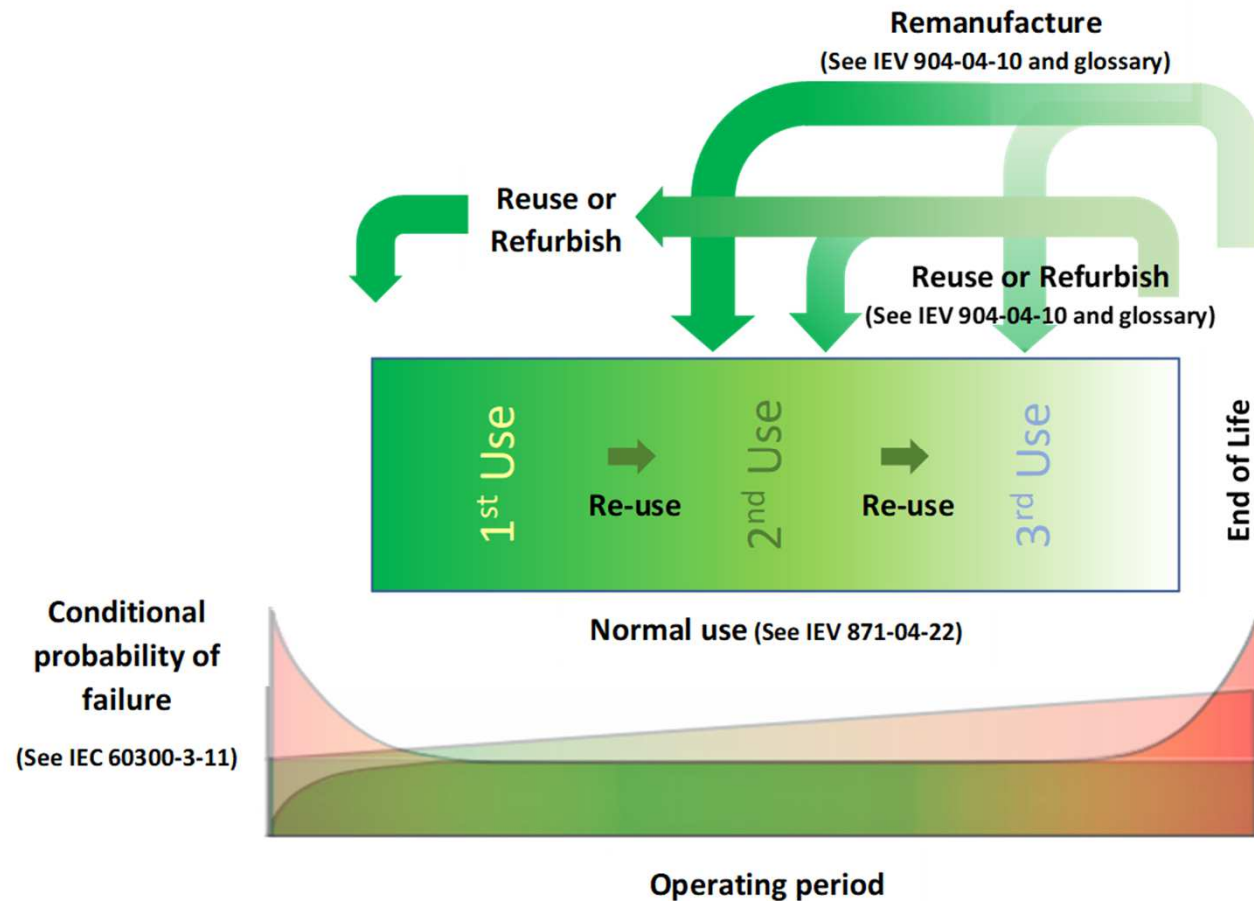
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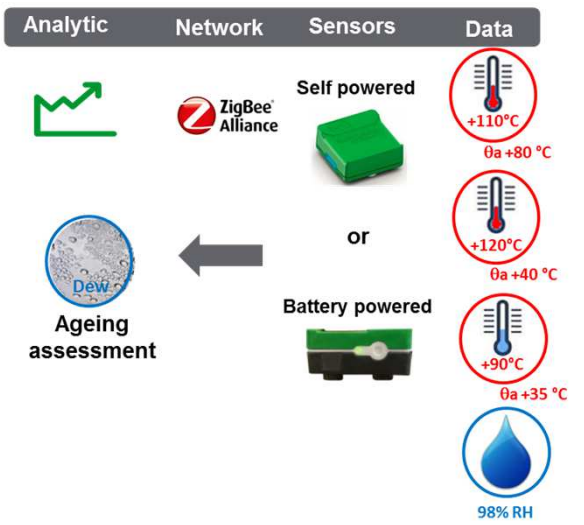
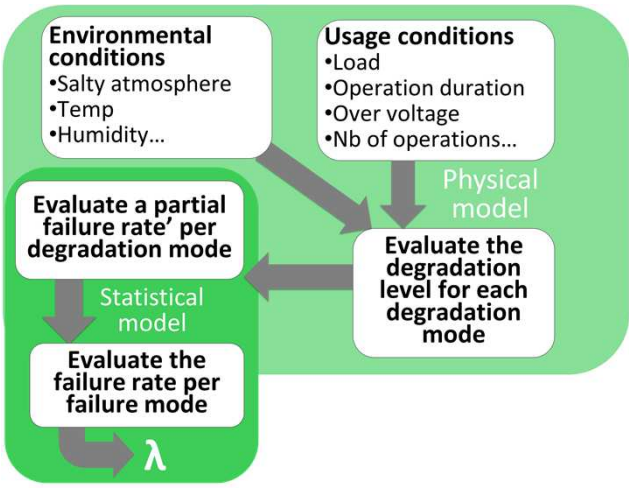
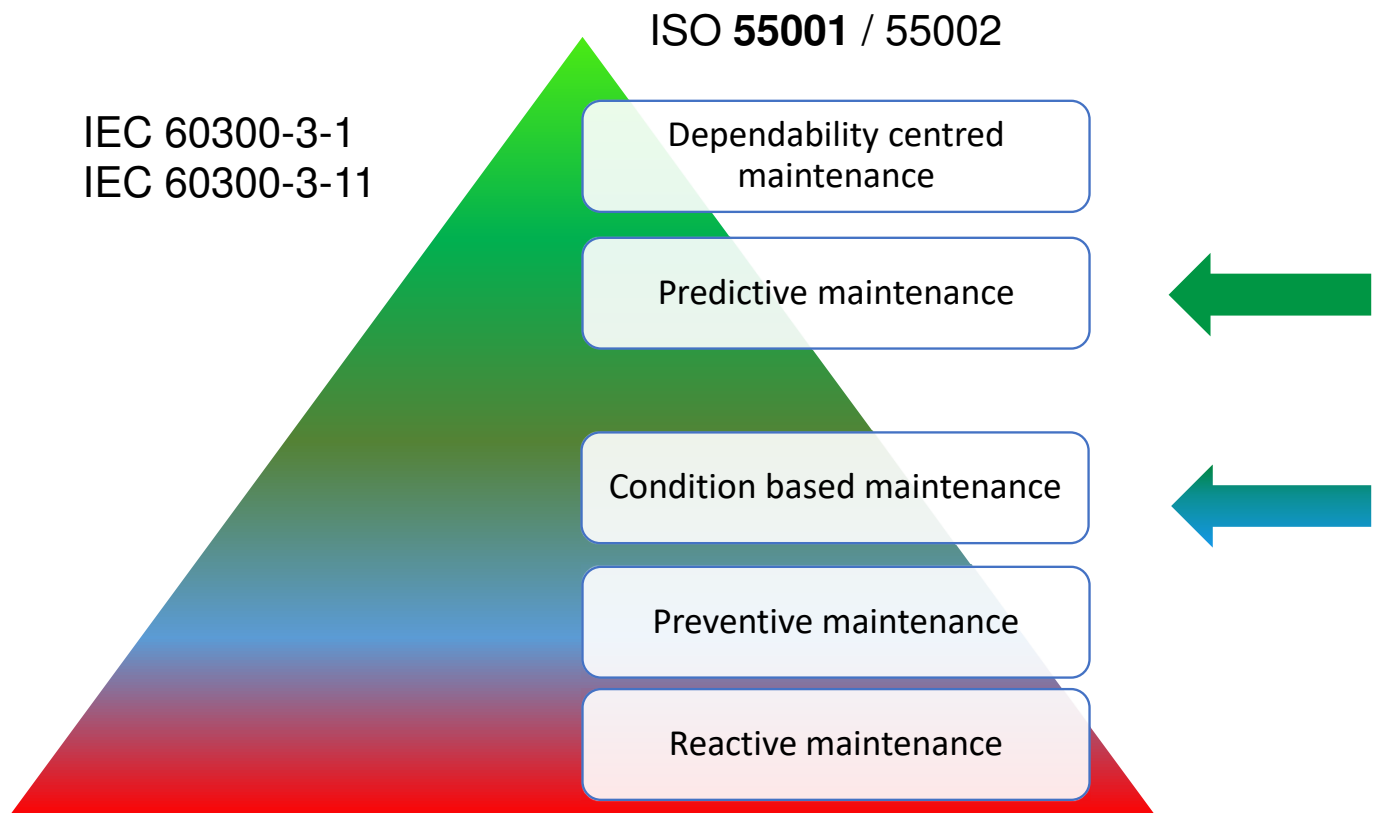
aiming optimized asset management and environmental footprint reduction.



How to transform waste into resource based on dependability?
How to accelerate services, because dependability would become more contractual ?



Use phase – Services → Maintenance

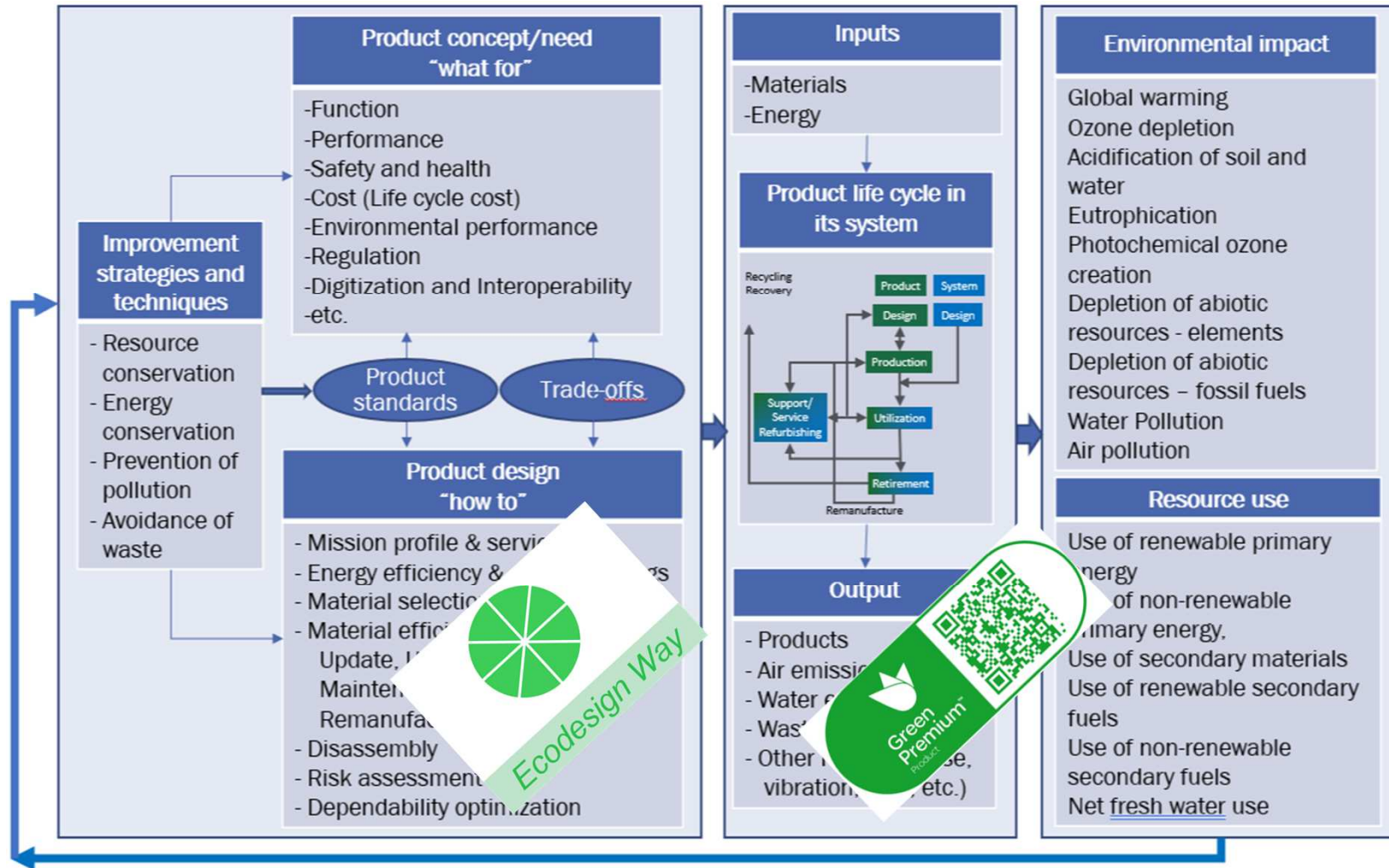


Sustainability needs optimized asset management where system constraint and risks classification help for decision making.

Standardization and Circular Economy

From the user needs to sustainability

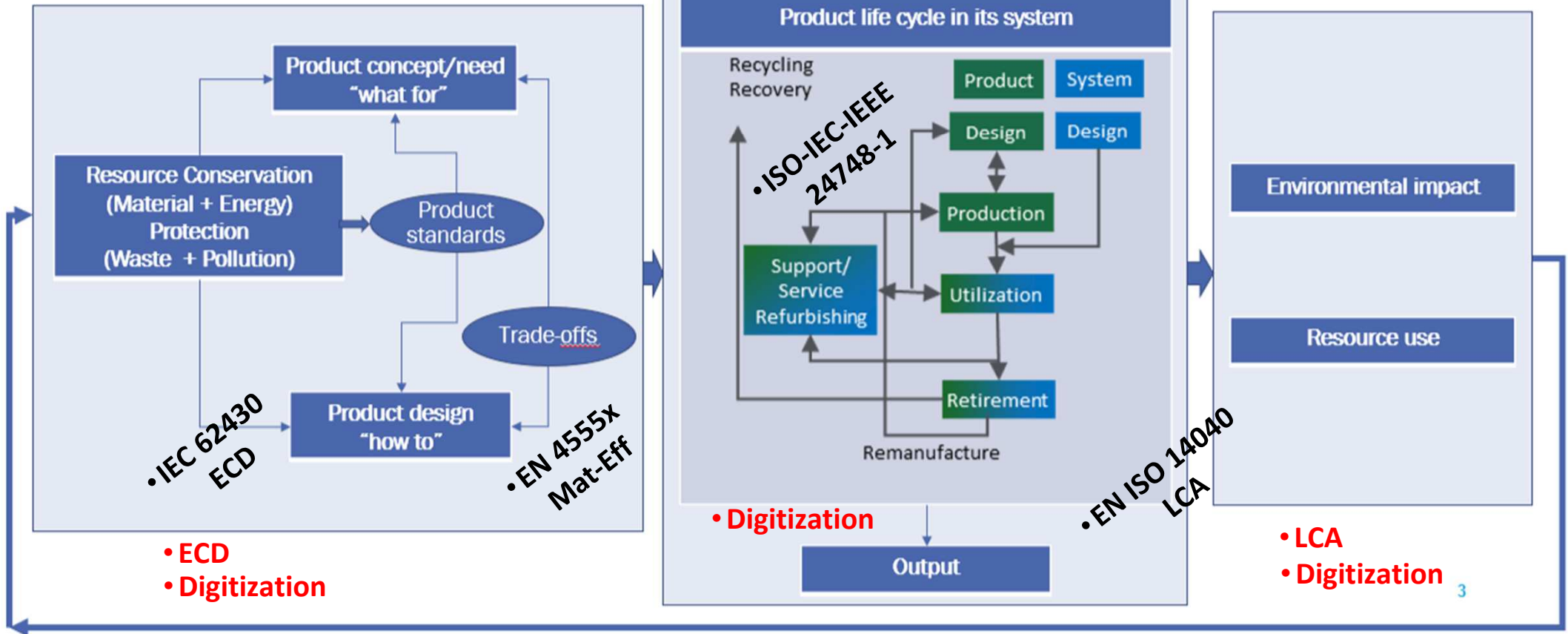
• IEC GUIDE 109



Standardization and Circular Economy

From Environmental constraints and user needs to circular Economy for sustainability

• IEC GUIDE 109



Questions
&
Answers



6th and 7th October

<http://standardsdays.afnet.fr>