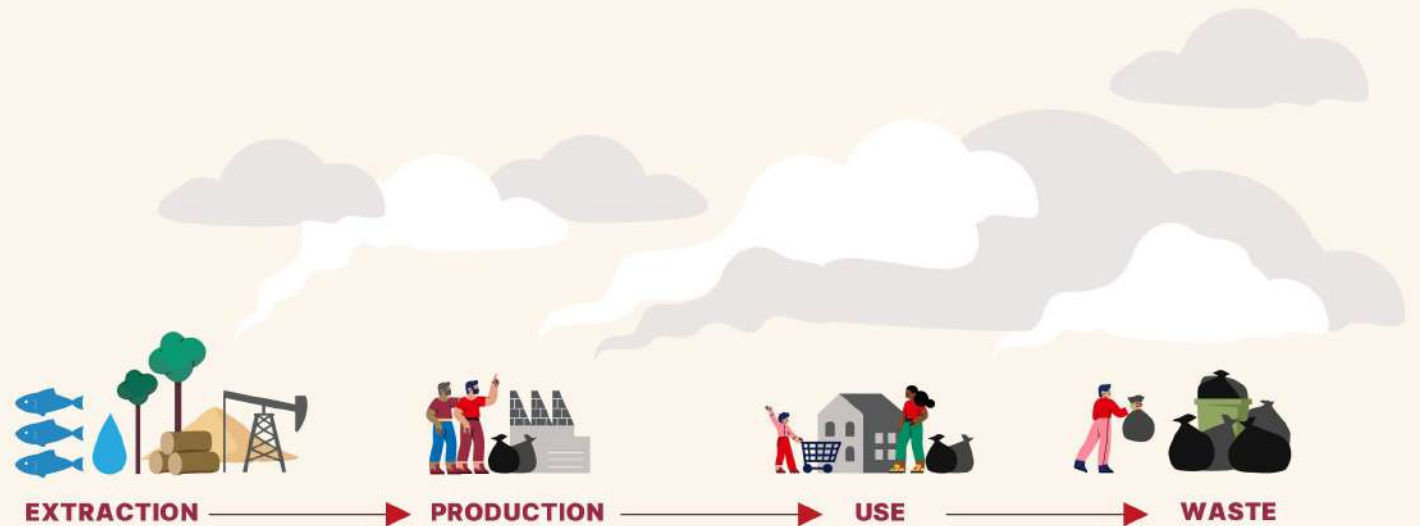


The global economy is linear

This linear economy leads to resource depletion, biodiversity loss, waste and harmful losses and releases, **which collectively are causing serious damage to the capacity of the planet to continue to provide for the needs of future generations.**

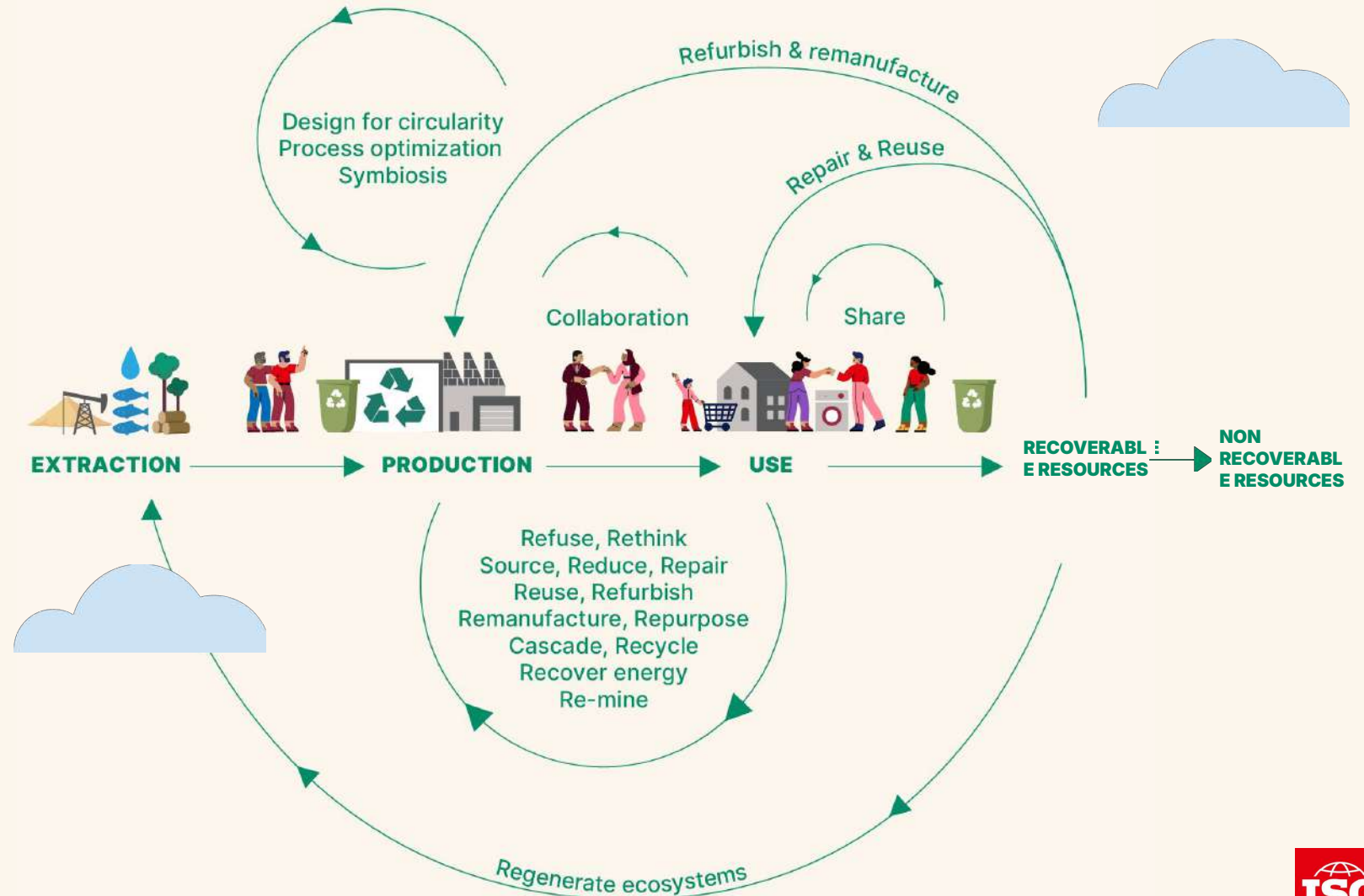
Several planetary boundaries have already been reached or exceeded:

- ✓ Climate change,
- ✓ Biosphere integrity,
- ✓ Novel entities,
- ✓ Land-system change,
- ✓ Freshwater change,
- ✓ Biogeochemical flows nitrogen and phosphorus.



Towards a circular economy

Transition towards an economy that is more circular, based on a circular use of resources, can contribute to meeting current and future human needs.



This transition calls into question our modes of production and consumption.

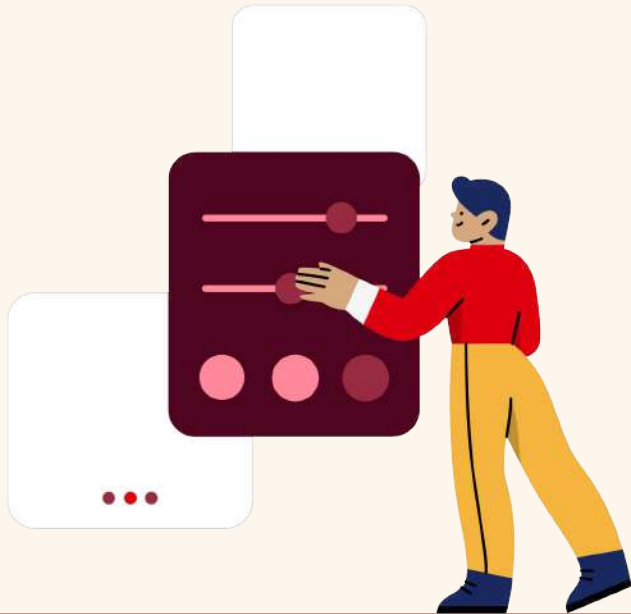
It can also contribute to the creation and sharing of more value within society and interested parties, while natural resources are managed to be replenished and renewed, securing the quality and resilience of ecosystems.

Answers for the circular economy transition

ISO 59000 family of standards

A common understanding:

Definitions, principles, actions, business models, value networks, measures, assessment, ..., all what is needed to act now!



ISO 59004

Circular economy
**Vocabulary, principles
and guidance for
implementation**



ISO 59010

Circular economy
**Guidance on the
transition of business
models and value
networks**

ISO 59020

Circular economy
**Measuring and
assessing
circularity
performance**

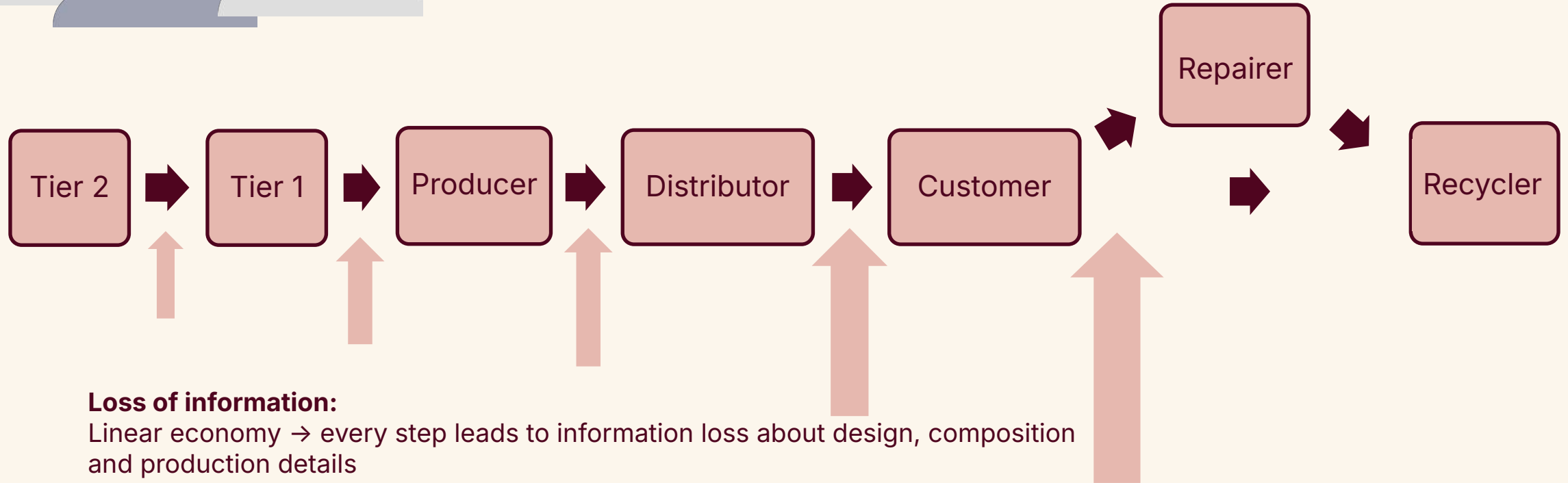
ISO 59040

Circular economy
**Product Circularity
Data Sheet**

ISO 59014

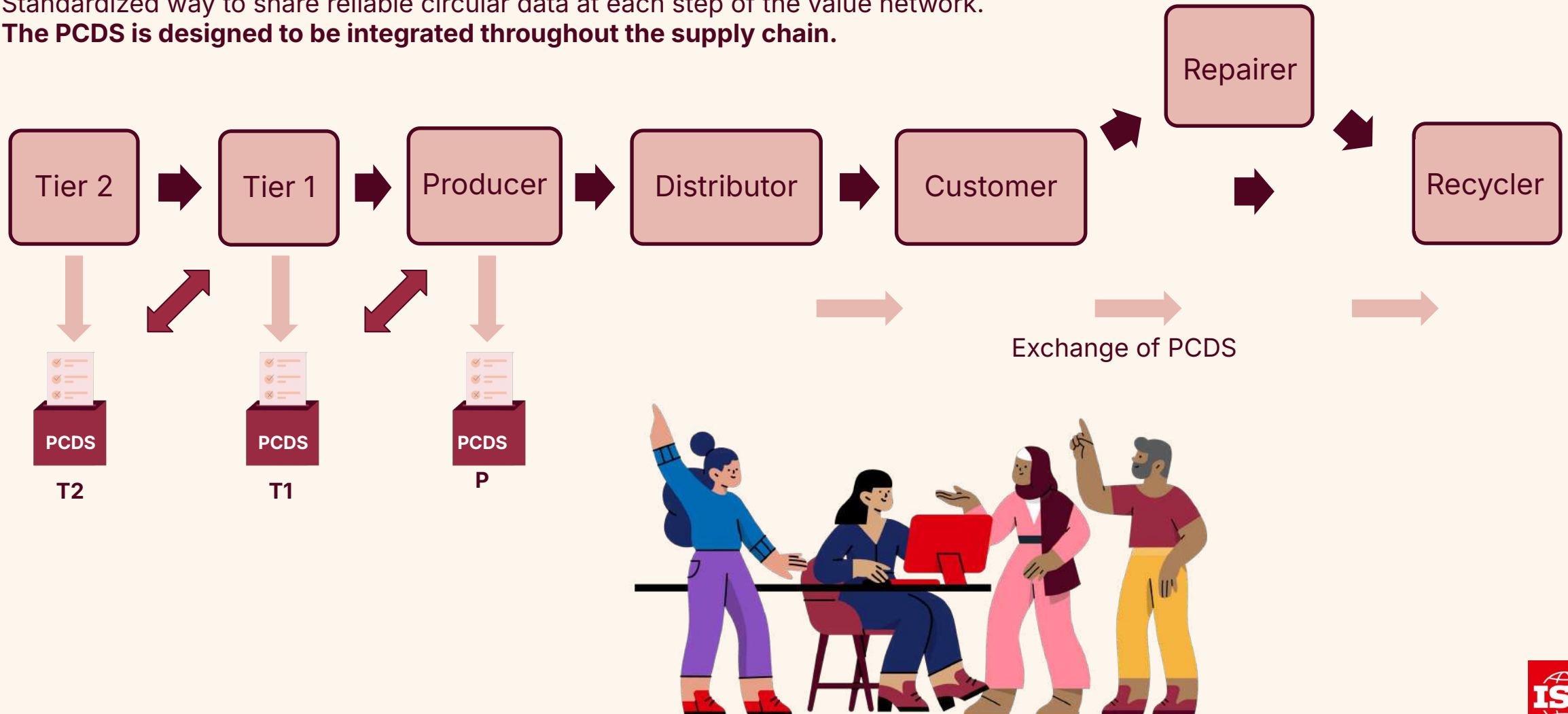
Environmental
management and
circular economy
**Sustainability
and traceability of
secondary materials
recovery – Principles,
requirements and
guidance**

Problem statement: Lack of data, difficulty to access the data



Solution: Product Circularity Data Sheet

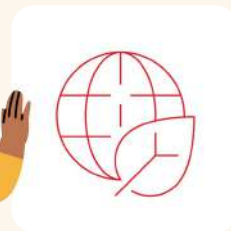
Standardized way to share reliable circular data at each step of the value network.
The PCDS is designed to be integrated throughout the supply chain.



Ease circular economy data exchange

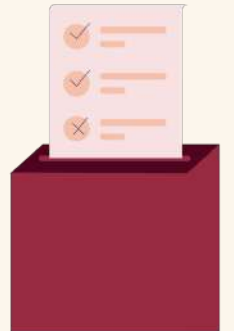
ISO 59040 in a nutshell

- ✓ Establishes a general methodology for **information exchange supporting the interoperability of circular economy related information**, based on the use of a product circularity data sheet (PCDS).
- ✓ **Specifies requirements** for completing a PCDS by an organization, when acquiring or supplying products in order to permit **the exchange of circular economy related information** about those products.



When establishing a PCDS, acquirer and supplier should consider a relationship strategy, plan and associated agreement to:

- ✓ **General methodology**
 - Identify circularity aspects for determined products and improve them
 - Identify the value network
 - Determine responsibilities
 - Use of specification data fields
 - Use of persistent identifier data fields
- ✓ **Specific requirements**
 - Establish and maintain a PCDS Template including mandatory and additional statements:
 - Company and product information,
 - Material inputs,
 - Circular production,
 - Durability and extended lifetime,
 - Circularity at end of product use period,
 - Circularity benefit.

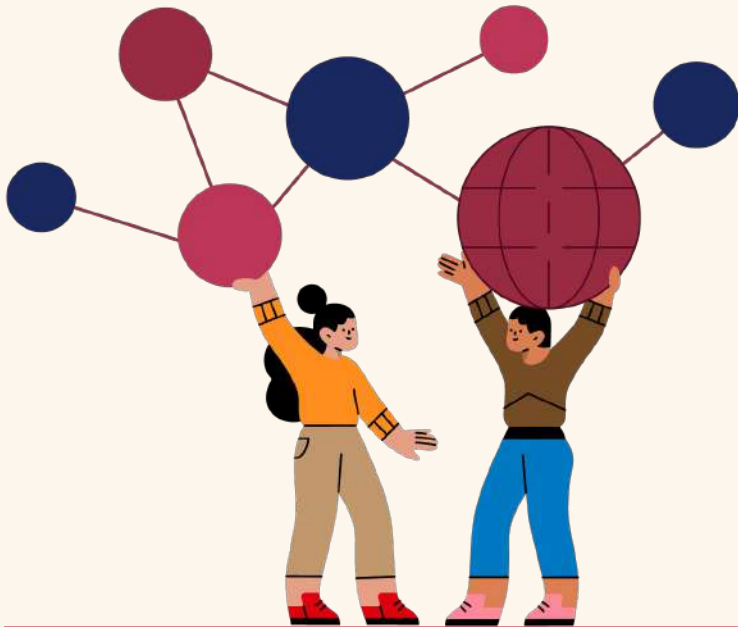


Ease circular economy data exchange

ISO 59040 in a nutshell

Main considerations and objectives

- Based on True / False (binary) statements
- Protection of confidential business information
- Use of unique ID's for interoperability across value networks
- Leverage machine readability
- Promotion of bottom-up information flow along with the product
- Mandatory statements applicable to any product regardless of the sector
- Focus is on Business-to-Business
- SME inclusive



Example: What a PCDS contains



Few statement examples of specific requirements (not exhaustive list)

(not exhaustive list)



Material inputs

- The product contains no known hazardous substances according to the relevant cited reference standards or regulations
- The product composition is disclosed at the 100 ppm threshold
- The product contains 0% of reused parts
- The product contains 25-50 % of post-consumer recycled materials (mass fraction out of the total product mass)



Durability and extended lifetime

- Certified third party expert knowledge is required to conduct repairs of the product
- The product can be updated to extend its useful life
- The product is designed with reversible mechanical connectors for physical demounting
- 75-95% of the product is designed to be taken apart from the total product assembly



Circularity at end of product use period

- 0-10% of the product is known to be released into the environment during use
- 25-50% of dismantlable components can be either reused or recycled
- The product is designed for cycling in the technical cycle
- The product is not designed for industrial composting



Thank you

Switch to alternative models to decouple the global economy from the consumption of limited resources...

...Let's implement Circular Economy within our organizations!



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To join ISO TC 323 Circular Economy



Contact your national standardization body



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