International Organization for Standardization is an independent, non-governmental international organization.

In 170 countries, representing ISO:
- BIS Bureau of Indian Standards, India
- AFNOR Association française de normalisation, France
- ABTN Associação Brasileira de Normas Técnicas, Brazil
- RSB Rwanda Standards Board, Rwanda
- JISC Japanese Industrial Standards Committee, Japan
- ...

From all stakeholder groups develop standards:
- Academics,
- Institutions,
- Companies,
- NGOs,
- ...

ISO 9001 - Quality management systems — Requirements
ISO 14001 - Environmental management systems — Requirements with guidance for use
ISO 13485 - Medical devices — Quality management systems — Requirements for regulatory purposes
ISO 26000 - Guidance on social responsibility
ISO 16654 - Microbiology of food and animal feeding stuffs — Horizontal method for the detection of Escherichia coli O157

Etc...

Coordinates system, Geneva based
CIRCULAR ECONOMY, a worldwide challenge to tackle resource depletion… but not only!

Created in 2019, TC323 produces some transversal standards related to Circular Economy.

100 countries and numerous international organizations
A PACKAGE to implement Circular Economy

Coming soon!
ISO 59 004 - Circular Economy – Vocabulary, principles and guidance for implementation
ISO 59 010 - Circular Economy – Guidance on the transition of business models and value networks
ISO 59 020 - Circular Economy – Measuring and assessing circularity performance

Still on works
ISO 59 040 - Circular Economy – Product Circularity Data Sheet
ISO 59 014 - Environmental management and circular economy – Sustainability and traceability of secondary materials recovery – Principles and requirements

ISO TR 59 031 - Circular Economy – Performance based approaches
ISO TR 59 032 - Circular Economy – Review of business model implementation
Circular economy definition

**economic system** that uses a **systemic approach** to maintain a circular flow of resources, by **recovering, retaining or adding** to their value, while contributing to **sustainable development**.

Note 1 to entry: Resources can be considered concerning both stocks and flows.

Note 2 to entry: The inflow of virgin resources is kept as low as possible, and the circular flow of resources is kept as closed as possible to minimize waste, losses and release from the economic system.
Focus: ISO 59004 - Terminology, principles and guidance for implementation

Final Draft International Standard

- **Systems thinking**
  - life cycle perspective
  - long-term approach
  - considering the impacts on environmental, social, and economic systems

- **Value creation**
  - recover, retain, or add value
  - provide effective solutions
  - use resources in an efficient way

- **Value sharing**
  - collaborate along the value chain or value network in an inclusive and equitable way
  - share value created with the provision of solutions

- **Resource stewardship**
  - manage stocks and flows of resources to contribute to their availability for present and future generations
  - closing, slowing and narrowing resource flows
  - reduce risks associated with dependence on virgin resources

- **Resource traceability**
  - collect and maintain data to enable resource tracking
  - accountable for sharing information with interested parties

- **Ecosystem resilience**
  - contribute to the regeneration of ecosystems and biodiversity
  - preventing harmful losses and releases
  - take into account planetary boundaries
Focus: ISO 59004 - Terminology, principles and guidance for implementation

### Actions that contribute to a circular economy

*Applicable across the value chain. The guidance for resource management can help prioritizing actions to achieve a better circularity performance.*

- Design for circularity
- Circular sourcing
- Circular procurement
- Process optimization
- Industrial, regional or urban symbiosis
- Reduce, reuse, repurpose
- Maintenance and repair
- Performance-based approaches
- Sharing to intensify use
- Refurbishing
- Remanufacturing
- Reverse logistics
- Cascading of materials
- Recycling
- Waste management
- Material recovery
- Energy recovery
- Regenerate ecosystems

### Actions to support a circular economy transition

- Education and research
- Innovation
- Collaboration and networks
- Helping users change their behaviour
- Policy and legal system
- Financial services
- Digitalization

Guidance for resource management

- Refuse
- Rethink
- Source
- Reduce
- Repair
- Reuse
- Refurbish
- Remanufacture
- Repurpose
- Cascade
- Recycle
- Recover energy
- Re-mine
A STRATEGY to ANSWER the challenge and WORK together

- 2019 - 2023
  - Elaborating a package of standards, develop at the same time 3 standards
to get a common understanding of what CE is, actions to implement and
indicators to measure the performance
  - Working together to align the 3 standards: Alignment sessions to reinforce consensus
  - Involving all geographical regions, developing and developed countries:
twinning, meetings’ location (Africa, South America, Caribbean), …
2024 - 2025

- Promoting the published standards (award, brochure, events, ...):
  communication Task Force creation
A STRATEGY to IMPROVE the WORK done

- **2024 - 2025**
  - Revising the published standards: decision to be taken during the ISO meeting in nov. 2025
  - Launching an international survey to gather:
    - How organizations digest the published texts
    - Examples of implemented actions

Objective: to feed the standards’ revision

- Improve understanding
- Integrate some requirements?
- Integrate some examples?
- Better consider SMEs needs?
## Standards and regulations

<table>
<thead>
<tr>
<th>Standard</th>
<th>(Technical) regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document established by consensus and approved by a recognized body that provides for common and repeated use, rules, guidelines or characteristics for activities or their results aimed at achieving the optimum degree of order in a given context.</td>
<td>Regulation (document providing binding legislative rules, that is adopted by an authority) that provides technical requirements, either directly or by referring to or incorporating the content of a standard, technical specification or code of practice.</td>
</tr>
<tr>
<td>Document approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method</td>
<td>Document which lays down product characteristics (shape, labelling, design, performance etc.) or their related processes and production methods with which compliance is mandatory.</td>
</tr>
<tr>
<td>WTO, TBT Agreement, Annex 1</td>
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The Principles for the Development of International Standards

- Transparency
- Coherence
- Effectiveness and relevance
- Openness
- Impartiality and consensus
- Development dimension

Additional ISO emphasis

- Due process
- National implementation / adoption of ISO standards
- Stakeholder engagement
What can you do??

**Visibility:** Ensure your constituency is aware of the international standards that exist or are under development

**Harmonization:** Ensure that standards that already exist are referenced

**Connect:** Contact one of our members.

**Identify:** Identify gaps.
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!

For additional information
melissa.demedeiros@afnor.org
korter@iso.org
catherine.chevauche@veolia.com

To join ISO TC323 Circular Economy
Contact your national standardization body
List on https://www.iso.org/committee/7203984.htm

https://www.linkedin.com/company/iso-tc-323-circular-economy/
Annex
Process to elaborate international standards

Standards development:
Consensus building through experts’ meetings

Standards access:
Online Browsing Platform (OBP)

Access the most up to date content in ISO standards, graphical symbols, codes or terms and definitions.

Preview content before you buy, search within documents and easily navigate between standards.
Why Circular Economy?
Questioning our modes of production and modes of consumption

Source: The circularity gap report 2023
Analyze the current business models and value networks through the circular economy principles and actions to implement to transition to circular business models.
**Focus: ISO 59020 - Measuring and assessing circularity**

*Final Draft International Standard*

**Scope:** The standard specifies a framework for organizations to measure and assess circularity, enabling those organizations to contribute to sustainable development.

=> Applicable to multiple levels of an economic system from regional to product level including organizations and inter-organizations levels.

=> Include some requirements regarding indicators to be measured.

---

**Measure and assess your circularity is key to transition**

Based on a circularity measurement taxonomy

- **Monitor circular actions**
  - Reuse, Reduce, Repair, Recycle, Remanufacture, etc…

- **Measure flows**
  - Retain, regenerate, create, etc…

- **Assess sustainability impacts**
  - Social, environmental and economic impacts

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<table>
<thead>
<tr>
<th>Indicator category</th>
<th>Man-datory / Optional</th>
<th>Circularity indicator</th>
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<tbody>
<tr>
<td><strong>Energy</strong></td>
<td>Optional</td>
<td>A.4.2 Average energy consumption of renewable energy</td>
</tr>
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</tr>
<tr>
<td><strong>Water</strong></td>
<td>Optional</td>
<td>A.5.2 Percent withdrawal from a circular source</td>
</tr>
<tr>
<td></td>
<td>Optional</td>
<td>A.5.3 Percent discharged in with quality requirements</td>
</tr>
<tr>
<td></td>
<td>Optional</td>
<td>A.5.4 Ratio of internal wastewater recirculation</td>
</tr>
<tr>
<td><strong>Economic</strong></td>
<td>Optional</td>
<td>A.6.2 Material productivity (L)</td>
</tr>
<tr>
<td></td>
<td>Optional</td>
<td>A.6.3 Resource index (RII)</td>
</tr>
</tbody>
</table>

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<tr>
<th>Resource Inflows</th>
<th>Man-datory / Optional</th>
<th>Circularity indicator</th>
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<tbody>
<tr>
<td>Mandatory</td>
<td>A.2.2 Average reused content of an inflow (X)</td>
<td></td>
</tr>
<tr>
<td>Mandatory</td>
<td>A.2.3 Average recycled content of an inflow (X)</td>
<td></td>
</tr>
<tr>
<td>Mandatory</td>
<td>A.2.4 Average renewable content of an inflow (X)</td>
<td></td>
</tr>
<tr>
<td>Optional</td>
<td>A.3.2 Average lifetime of product or material relative to industry average</td>
<td></td>
</tr>
<tr>
<td>Optional</td>
<td>A.3.3 Percent actual reused products and components derived from outflow (X)</td>
<td></td>
</tr>
<tr>
<td>Mandatory</td>
<td>A.3.4 Percent actual recycled material derived from outflow (X)</td>
<td></td>
</tr>
<tr>
<td>Optional</td>
<td>A.3.5 Percent actual recirculation of outflow in the biological cycle</td>
<td></td>
</tr>
</tbody>
</table>

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ISO 59040 helps to:
- **Provide basic product circularity data** about products,
- Improve circularity data **sharing efficiency**,
- Encourage improved **product circularity performance**.

- General methodology and format for **reporting and exchanging** information about the circular economy aspects of products when acquiring or supplying products;
- **3 tier system based on picklist concept:**
  - Minimum set of circular required statements needed to have a solid base of statements;
  - Additional optional statements which can be made required;
  - Free form addition linked to a statement or supplemental information.
Focus: ISO 59014 - Environmental management and circular economy – Sustainability and traceability of secondary materials recovery – Principles and requirements

Draft International Standard

Scope

• Establishes principles, specifies requirements and provides guidance for facilitating the sustainability and traceability of activities for the recovery of secondary materials.

• Specifies requirements and provides guidance for organizations that engage with individuals involved in subsistence activities (SAs) within secondary materials recovery with the aim of ensuring their safe and healthy working conditions and the continual improvement of the well-being, livelihoods and professional practices.

• Is intended for use by organizations seeking to recover secondary materials in a systematic and responsible manner by using life cycle and circular economy thinking.

• Does not provide quality criteria for specific types of secondary materials recovered. Final treatment such as energy recovery and disposal do not fall within the scope of this standard.

=> Applicable to any organization, regardless of their size, type and nature of the activities or the location/region at which they occur.
Operational requirements

- **Classification and determination of recovery pathways** => to increase recovery based on documented methodology
- **Collection of recoverable resources** => separate collection
- **Sorting** => traceability
- **Material recovery processing** => select the destructive or non-destructive process to maximize the material recovery with the best environmental and social outcome
- **Logistics** => prevent environmental and human health risks

Management and organizational requirements

- Social responsibility => consider the value chain, stakeholder engagement, labour practice and decent work conditions
- Risk => inform affected communities and authorities about environmental and health
- Resource use => minimize resource use
- Monitoring, evaluation and continual improvement
- Competences and training

Traceability requirements => upstream and downstream data requirement - value chain vision and interested parties vision
Focus: ISO 59010 - Guidance on the transition of business models and value networks

Analyze the current business models and value networks through the circular economy principles and actions to implement to transition to circular business models.
Focus: ISO 59020 - Measuring and assessing circularity

Final Draft International Standard

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Measure and assess your circularity

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  - Social, environmental and economic impacts
Focus: ISO 59040 - Product Circularity Data Sheet

ISO 59040 helps to:
- Provide basic product circularity data about products,
- Improve circularity data sharing efficiency,
- Encourage improved product circularity performance.

- General methodology and format for reporting and exchanging information about the circular economy aspects of products when acquiring or supplying products;
- 3 tier system based on picklist concept:
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[Table of statements and categories discussed in the document]
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