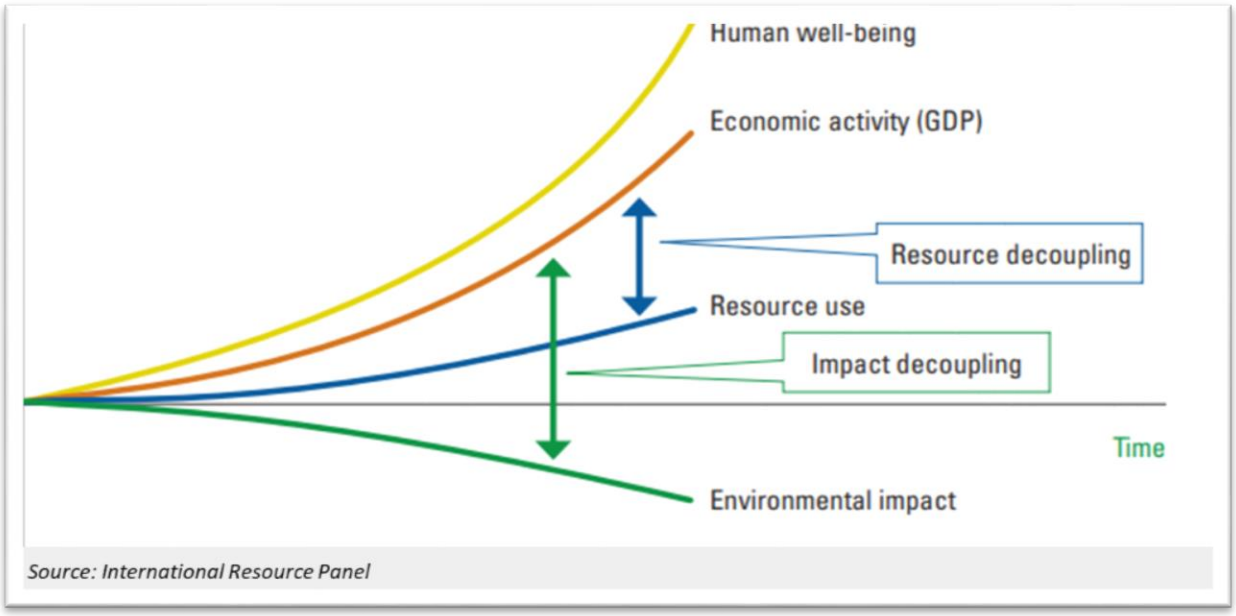
ISO 59000 Series: Business Friendly

Circular Economy Standards

ISO 59000 series of international standards provide much needed framework for organizations to develop, implement & institutionalize Circular Economy and transition from current unsustainable model of Take-Make-Use-Waste.



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International Standards on Circular Economy (ISO 59000 Series)

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During the World Circular Economy Forum 2023, in Helsinki, one of the Speakers from the UN Economic Commission for Europe (UNECE) said that there are currently “200 different definitions and ways of explaining Circular Economy”.

If a term has so many definitions then how can an organization develop a common understanding about the subject among its leaders, managers and staff ? Varying interpretations of a term adds complexity and challenges of implementation. E.g. challenge of a standard framework to use for developing a strategy and establishing supporting measurements to monitor progress towards circularity.

Given the above situation, importance and promising potential of Circular Economy and the demand from interested organisations to go Circular, International Organization for Standards (ISO), led by Technical Committee ISO/TC 323, developed the first International Standards on Circular Economy (ISO 59000 Series).

Currently following three standards are issued out of total planned five standards:

1. **ISO 59004** - Circular economy-Vocabulary, principles and guidance for implementation
2. **ISO 59010** - Circular economy — Guidance on the transition of business models and value networks
3. **ISO 59020** - Circular economy — Measuring and assessing circularity performance

ISO 59000 Standard Talks to Organizations And Its People.

Standards usually contain lot of technical jargon, are often complex and not enjoyable to read. E.g. ISO 9000 standard defines Quality as *“degree to which a set of inherent characteristics of an object fulfils requirements”*. How many professionals, managers, leaders, staff in an organisation will relate this definition to Quality and will be able to implement it in their routine work? Not many for sure.

Expecting, ISO 59000 standard to be a not so user-friendly standard, reading it was a pleasant surprise. It uses simple, business friendly language directed towards organisations and its people for use in day-to-day work.

Let me demonstrate it with some examples taken from ISO:59004.

Firstly standard is very well structured into five “Streams” incorporating the key concepts of Circular Economy. These five Streams are well aligned with the way a business is designed, operated and managed. These five streams with supporting requirements are:

1. Creating added value (e.g. Design for circularity, Circular sourcing, Circular procurement etc.).
2. Retaining value (e.g. Reduce, Repurpose, Maintain, Repair, Reuse, Share to intensify use etc.)
3. Recovering value (Reverse logistics, Recycling, Waste management, Energy recovery etc.)
4. Regenerating eco systems (e.g. removal of harmful substances and remediation of soil and water bodies, protection of biodiversity etc.)
5. Transitioning to Circular Economy e.g. Helping users change their behaviour, Innovation, Collaboration, Education (benefits of the circular economy) etc.

ISO 59000 Provides Actionable Ideas to Organizations Going Circular

Management Systems standards are generic in nature so that all types and sizes of organizations can implement them. Usually standards do not suggest actions and is left to organizations to decide. However this time around it is different.

Within each of the five Streams, standard provides list of actions an organisation can consider for implementation within their organization and also covering their entire value chain or value network.

Here are a few examples taken from ISO:59000:

Stream	Few Examples of Suggested Actions	Inspiring Examples of Implementation
Creating added value	• Provide users with information about the environmental impact; • Design and construct assets (e.g. new buildings) for dismantling or reuse after a use phase; • Switch from buying virgin resources to a take-back scheme to collect own products or materials for repurposing internally.	Brummen Town Hall[1] in Holland is a shining example of design-for disassembly circularity. It is designed and constructed for subsequent disassembly and reuse of their constituent building materials - 90% of all the materials in the extension building from 2013 is designed to be reusable when it is dismantled.
Retaining value	• Deliver product access rather than the product itself; • Design for longer life; • Provide a product and agree to repurchase the product after a certain amount of time;	Philips Lighting Circular Business Model[2]: Offers lighting in a product/service combination comprising manufacturing, installation, maintenance and reuse of lighting equipment.

[1] https://ellenmacarthurfoundation.org/circular-examples/brummen-town-hall

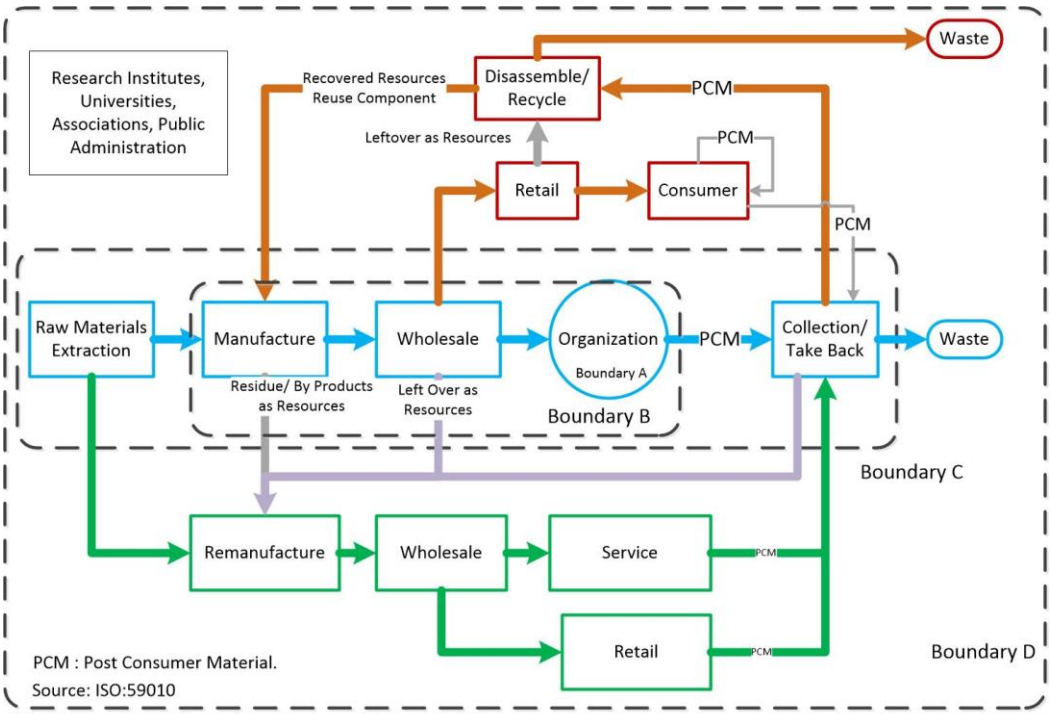
[2] https://www.lighting.philips.co.in/support/connect/future-of-light/design/taking-a-circular-lighting-approach

	• Purchase and sell second-hand products.	Client simply buys the light they need and leases equipment, service and performance for a contracted period of time.
Recovering value	• Ensure proper collection: separate collection of materials, have appropriate collection schemes; • Support or build secondary material and product trading platforms; • Incentivize user engagement for closing the cycles (e.g. Through take-back schemes).	Circular Computing[3] has set up laptop remanufacturing factory in Ras Al Khaimah, UAE with their unique Circular Computing remanufacturing process re-using 99% of the original materials to remanufacture laptop and the last 1% goes into recycling, where it is transformed into pallets.
Transitioning to Circular Economy	• Involve suppliers into the process of design for circularity, and build supply chain collaborations; • Facilitate training of relevant actors (such as suppliers, logistics and architects); • Offer circular economy training programmes to foster awareness in users, employees and others.	As part of "War on Waste4" Majid Al Futtaim's Carrefour launched internal programme to reduce food waste called the "War on Waste" project involved training over 4,000 frontline employees to better manage fresh food product life-cycle.

Organisations can pick and choose actions, individually or in combination, from the five Streams, prioritize them and allocate resources accordingly to realize their strategy for going circular. Implementing such actions can contribute to narrowing, slowing or closing resource flows and help reduce Green House Gas emissions.

In another example, annexure (A) of ISO 59004 provides guidance to organizations on defining the boundaries which can help organizations implement circularity in a planned and phased manner covering its entire value chain and network. Refer image below taken from ISO:59004). Covering the organizations entire value chain and value network is essential to become fully circular and derive the maximum environmental and economic benefits.

[3] UAE Circular Economy Landscape Report 2023
[4] Ibid.



NOTE 1 The arrows indicate the value network's resource flows.
NOTE 2 In this example, research institutes, universities, associations and public administration that are not connected by arrows are organizations that indirectly influence the organization's circular economic activities. They can be mapped based on how they interact with the organization's activities.

Away from Usual Requirements, Simpler User-Friendly Language and Much More

For a change the standard has moved away from the past traditional structure and the usual requirements one typically finds in ISO 9000 (Quality), ISO 14000 (Environment), ISO 45000 (Health & Safety), ISO 22301 (Business Continuity) etc. Requirements of leadership commitment, Documented Information, Resources, Operations, Audits, Control of non-conforming products, Management Review etc. are not part of ISO 59000.

Plus use of the commonly used terms in business such as Transition, Business Models, Purpose, Vision, Value Chain, Investment, Buying shares/ bonds, Reverse Logistics, Reuse etc. in the ISO 59000 conveys strong business orientation and readers will easily relate to it.

Conclusion

Much awaited standard by ISO harmonizes the understanding of the Circular Economy definitions, principles and concepts. It provides the needed framework with implementation guidance and great ideas for organisations to begin their transition from current unsustainable linear economy model to Circular Economy.

This should help decouple resource use from economic activity and environment impact decoupling from economic activity.

Thanks to leadership of Mr. Hans Kroder, Mrs. Catherine Chevauche and team members of ISO Technical Committee 323 for developing a business focused standards (ISO:59000 series) on Circular Economy.

Author

Mr. Sunil Thawani is an Author, Board Member and Speaker. He developed Circular House Guidelines for Buildings for UAE Government entity in line with the principles of Circular Economy. These were released during COP28, UAE, 2023.

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