ISO/FDIS 59004~~:2023(E)~~

ISO/TC 323~~/WG 1~~

Secretariat: AFNOR

Date: 2024-01-31

Circular ~~Economy — Terminology~~economy — Vocabulary, principles and guidance for implementation

Économie circulaire — Vocabulaire, principes et recommandations pour la mise en œuvre

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Published in Switzerland

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 323, *Circular economy*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

0.1 Background

The global economy is "linear" as it is mainly based on extraction, production, use and disposal. This linear economy leads to resource depletion, biodiversity loss, waste and harmful losses and releases, all of which collectively are causing serious damage to the capacity of ~~our~~the planet to continue to provide for the needs of future generations.[28] Moreover, several planetary boundaries have already been reached or exceeded.

There is an increased understanding that a transition towards an economy that is more circular, based on a circular use of resources, can contribute to meeting ~~our~~ current and future human needs (welfare, housing, nutrition, healthcare, mobility, etc.). Transitioning towards a circular economy can also contribute to the creation and sharing of more value within society and ~~stakeholders~~interested parties, while natural resources are managed to be replenished and renewed and in a sustainable way, securing the quality and resilience of ecosystems.

Organizations recognize many potential reasons to engage in a circular economy~~,~~ (e.g. delivering more ambitious and sustainable solutions; improved relationships with ~~stakeholders~~interested parties; more effective and efficient ways to fulfil voluntary commitments or legal requirements; engaging in climate change mitigation or adaptation; managing resource scarcity risks, increasing resilience in the environmental, social and economic systems~~)~~, while contributing to satisfying human needs.

The ISO 59000 family of ~~documents~~standards (see Figure 1) is designed to harmonize the understanding of the circular economy and to support its implementation and measurement. It also considers organizations, such as government, industry and non-profit, in contributing to the achievement of the United Nations (UN) Agenda 2030 for Sustainable Development[29].

~~The family of documents also considers organizations, such as government, industry, and non-profit organizations in contributing to the achievement of the UN Agenda 2030 for Sustainable Development.~~

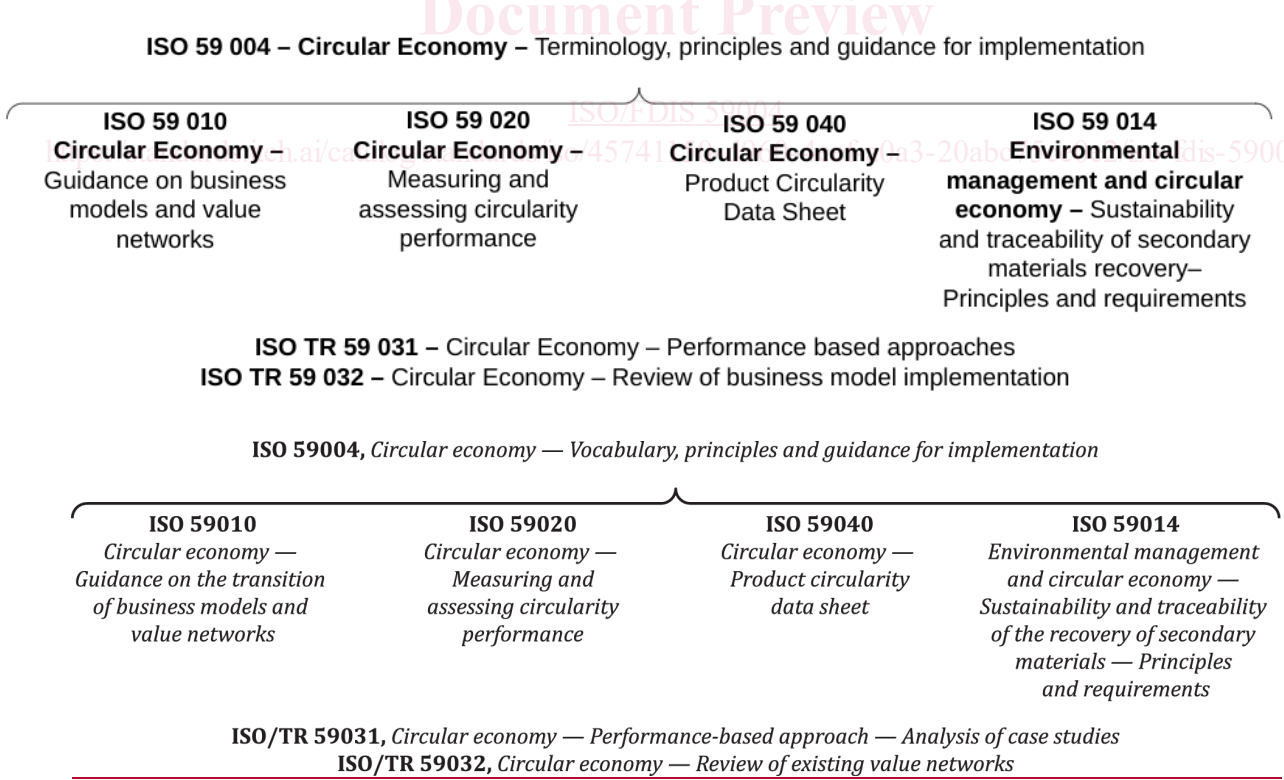

Figure 1 ~~— The —~~ ISO 59000 family of ~~documents~~standards

0.2 Relationship between this document, ISO 59010 and ISO 59020

This document, ISO ~~59004, ISO~~ 59010[1] and ISO 59020[2] are interconnected, as shown in Figure 2, and support organizations in implementing a transition towards a circular economy.

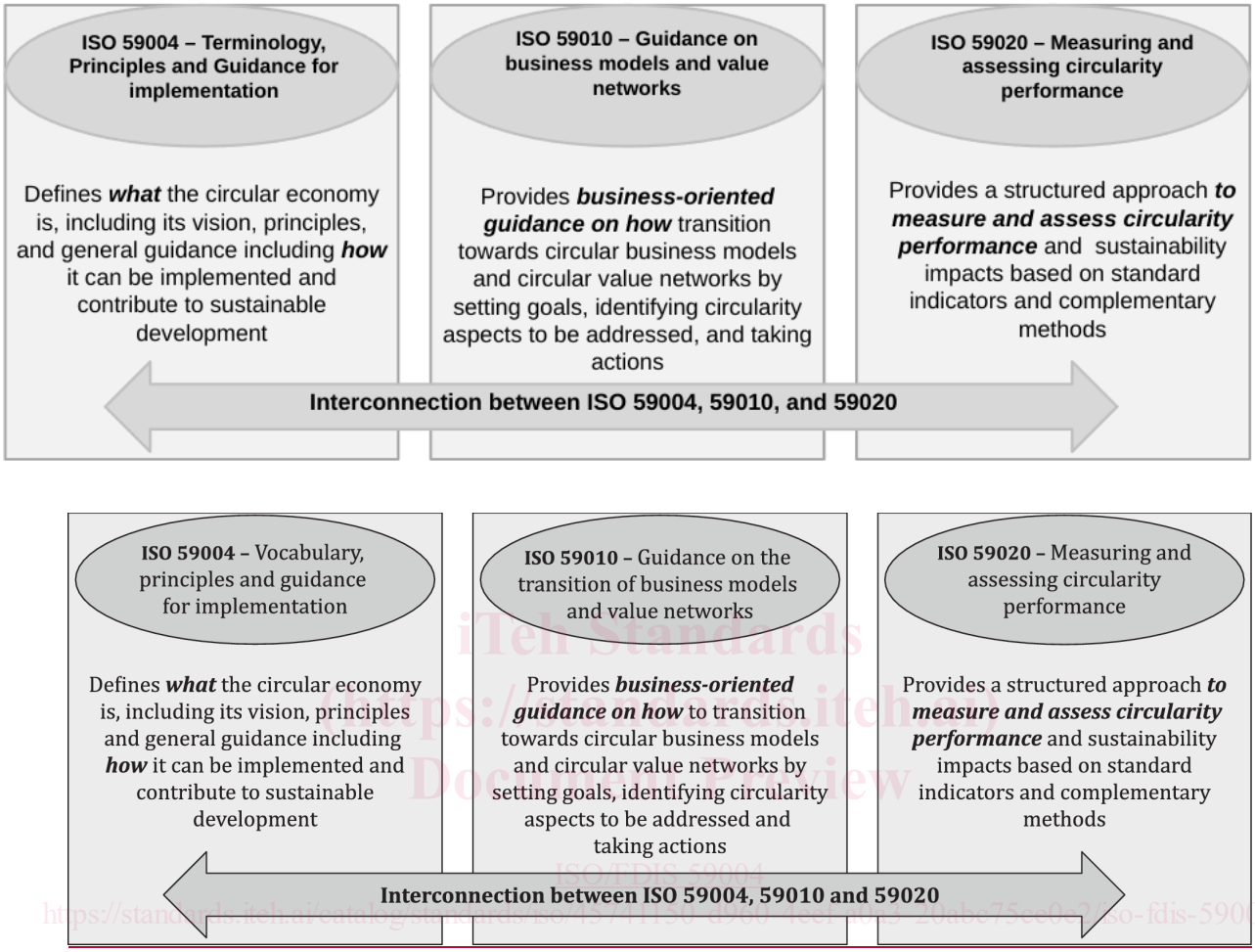

Figure 2 — Relationship between this document, ISO 59010 and ISO 59020

0.3 Purpose and the outline of this document

This document ~~brings~~gives guidance ~~to~~for any kind of organization. It describes the main terms and definitions (see Clause 3), a circular economy vision (see Clause 4), the circular economy principles (see Clause 5), provides practical guidance on actions that contribute to a circular economy (see Clause 6) and guidance to implement a circular economy in any kind of organization (see Clause 7).

[1] Under preparation.
[2] Under preparation.

Circular ~~Economy — Terminology~~economy — Vocabulary, principles and guidance for implementation

1 Scope

This document defines key ~~terminology and~~terms, establishes a vision and principles for a circular economy, and ~~provides~~gives guidance, including possible actions, for an organization to implement.

It is ~~intended~~applicable to ~~be used by~~ organizations seeking to understand and commit or contribute to a circular economy while contributing to sustainable development. These organizations can be either private or public, acting individually or collectively, regardless of type or size, and located in any jurisdiction, or position within a specific value chain or value network.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

~~For the purposes of this document, the following terms and definitions apply.~~

ISO and IEC maintain ~~terminological~~terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

~~NOTE See Annex A for an index of terms or designations for the different concepts defined in Clause 3.~~

~~3.2~~3.1 Terms related to a circular economy

3.1.1
circular economy
economic system (3.1.2) that uses a systemic approach to maintain a *circular flow of resources* (3.1.6), by recovering, retaining or adding to their *value* (3.1.7), while contributing to *sustainable development* (3.1.11)

Note 1 to entry: *Resources* (3.1.5) can be considered concerning both stocks and flows.

Note 2 to entry: The inflow of *virgin resources* (3.3.2) is kept as low as possible, and the circular flow of resources is kept as closed as possible to minimize *waste* (3.3.6), *losses* (3.3.7) and *releases* (3.3.8) from the economic system.

3.1.2
economic system
system (3.1.22) by which a society organizes and allocates *resources* (3.1.5)

Note 1 to entry: The economic system can vary depending upon the geographic region or governmental jurisdiction.

Note 2 to entry: This can include the regulation of resources and the production, use and disposal of these resources.

3.1.3
social system
system (3.1.22) by which human beings are expected to undertake different types of tasks in order to achieve common goals within a society

3.1.4
environmental system
systems (3.1.22) of the natural environment that interact, encompassing biotic and abiotic components

Note 1 to entry: In particular, this includes the atmosphere, *biosphere* (3.1.19), hydrosphere, cryosphere, pedosphere and lithosphere.

3.1.5
resource
asset from which a *solution* (3.2.1) is created or implemented

Note 1 to entry: Depending on the context, reference to ~~'resource'~~"resource" includes "raw material", "feedstock", "material" or "component".

Note 2 to entry: For the purpose of this document, asset refers to physical resources such as *natural resources* (3.3.1), *virgin resources* (3.3.2), *recoverable resources* (3.3.3) and *recovered resources* (3.3.5).

Note 3 to entry: Resource includes any energy type~~,~~ (e.g. the energy content or energy potential of materials~~.~~).

Note 4 to entry: Resources can be considered concerning both stocks and flows.

3.1.6
circular flow of resources
systematic cycling of the provision and use of *resources* (3.1.5) within multiple *technical* (3.1.20) or *biological cycles* (3.1.21)

Note 1 to entry: The biological and technical cycles represent loops into the complex *system* (3.1.22) of resource flows in the economy.

3.1.7
value
gain(s) or benefit(s) from satisfying needs and expectations, in relation to the use and ~~the~~ conservation of *resources* (3.1.5)

~~EXAMPLES: Revenues~~EXAMPLE Revenue, savings, productivity, sustainability, satisfaction, empowerment, engagement, experience, public health, trust.

Note 1 to entry: Value is relative to, and determined by the perception of, those *interested party(ies)* (3.4.2) able to capture it.

Note 2 to entry: Value can be financial or non-financial, e.g. social, environmental, ~~and~~ other gains or benefits.

Note 3 to entry: Value is dynamic over time.

[SOURCE: ISO 56000:2020, 3.7.6, modified — ~~Definition wording has been expanded to be more specific, one Example has been~~"gain(s) or benefit(s)" replaced "gains" and "use and the conservation of resources" replaced "resources used" in the definition. "public health" added~~, one new Note 3 to entry has been added, in Note 1 the reference to organizations has been deleted and '~~ to the example. "those interested party(ies) able to capture ~~it' added,~~it" replaced "the organization and ~~three former Notes~~ interested parties" in Note 1 to entry. Example added in Note 2 to entry ~~have been~~. Notes 3 to 5 to entry deleted. New Note 3 to entry added.]

3.1.8
recover value
process (3.5.5) to recuperate the *value* (3.1.7) of the object of consideration

3.1.9
retain value
process (3.5.5) to maintain the *value* (3.1.7) of the object of consideration

3.1.10
add value
process (3.5.5) to increase the *value* (3.1.7) of the object of consideration

3.1.11
sustainable development
development that meets the environmental, social and economic needs of the present without compromising the ability of future generations to meet their own needs

Note 1 to entry: Derived from the Brundtland Report[28]~~.[27]~~.

[SOURCE: ISO Guide 82:2019, 3.2]

3.1.12
resilience
ability to endure, resist, adapt to or recover from disruptive events or conditions, whether natural or anthropogenic

Note 1 to entry: Resilience of an *ecosystem* (3.1.17) relates to its ability to resist or rebuild itself after some form of disruption without shifting into a qualitatively different state.

3.1.13
principle
fundamental basis for decision-making or behaviour

[SOURCE: ISO 26000:2010, 2.14]

3.1.14
circular
aligned with the *principles* (3.1.13) for a *circular economy* (3.1.1)

Note 1 to entry: Objectives and goals for a circular economy can be defined with respect to the principles for a circular economy.

3.1.15
circularity
degree of alignment with the *principles* (3.1.13) for a *circular economy* (3.1.1)

3.1.16
environment
surroundings in which an *organization* (3.4.1) operates, including air, water, land, *natural resources* (3.3.1), flora, fauna, humans, and their interrelationships

Note 1 to entry: Surroundings can be described in terms of biodiversity, *ecosystems* (3.1.17), climate or other characteristics.

[SOURCE: ISO 14001:2015, 3.2.1 modified — ~~The original~~ Note 1 to entry ~~has been~~ deleted~~,~~ and Note 2 to entry ~~has been~~ renumbered ~~as Note 1 to entry~~accordingly.]

3.1.17
ecosystem
dynamic complex of communities of plants, animals and microorganisms and their non-living *environment* (3.1.16), interacting as a functional entity

[SOURCE: ISO 14050:2020, 3.2.~~4~~3]

3.1.18
technosphere
sphere or realm of human technological activity ~~that~~which results in a technologically modified *environment* (3.1.16)

[SOURCE: ISO 21930:2017, 3.8.4, modified — ~~The~~ Note 1 to entry ~~has been removed~~deleted.]

3.1.19
biosphere
part of the *environmental system* (3.1.4) that is capable of supporting life

[SOURCE: BSI 8001:2017, 2.7, modified~~— reference expanded to refer to~~ — "environmental system" added and ~~to remove "~~"in which living organisms exist~~.'~~]" deleted.]

3.1.20
technical cycle
cycle(s) within the *social system* (3.1.3) through which *resources* (3.1.5) are used, recovered, restored and utilized within existing or new *solutions* (3.2.1)

Note 1 to entry: Resources flow into and within a technical cycle, which involves activities ~~like~~such as sharing, maintenance, *reuse* (3.5.17), *repair* (3.5.16), *remanufacturing* (3.5.21) and *recycling* (3.5.24).

3.1.21
biological cycle
cycle(s) through which biological nutrients are utilized by living organisms and subsequently restored into or within the *biosphere* (3.1.19) in a way that rebuilds *ecosystem* (3.1.17)*resilience* (3.1.12) and natural capital and enables the regrowth of *renewable resources* (3.3.10)

Note 1 to entry: Such cycles can involve, at various stages, *cascading* (3.3.15), *composting* (3.3.18), *anaerobic digestion* (3.3.17) or the extraction of bio-chemicals.

Note 2 to entry: Natural capital refers to the renewable and *non-renewable* (3.3.7)*natural resources* (3.3.1) (e.g. plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits to people, including various ecosystem services such as producing oxygen, capturing carbon dioxide, purifying water, nutrient cycling, etc.

3.1.22
system
set of interrelated or interacting elements

[SOURCE: ISO 9000:2015, 3.5.1]

3.1.23
system in focus
system (3.1.22) that is defined by selected system boundaries and is the subject of a *circularity measurement* (3.6.4) and a *circularity assessment* (3.6.5)

Note 1 to entry: Four system levels are being used for measuring and assessing *circularity performance* (3.6.3): regional, ~~inter-organizational~~interorganizational, organizational and product level.