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Circular economy — Vocabulary, principles and guidance for implementation

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

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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.

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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 the planet to continue to provide for the needs of future generations.[27] 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 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 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 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 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[28].

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 the recovery of secondary materials — Principles and requirements*

ISO/TR 59031, *Circular economy — Performance-based approach — Analysis of case studies*
ISO/TR 59032, *Circular economy — Review of existing value networks*

Figure 1 — ISO 59000 family of standards

0.2 Relationship between this document, ISO 59010 and ISO 59020

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

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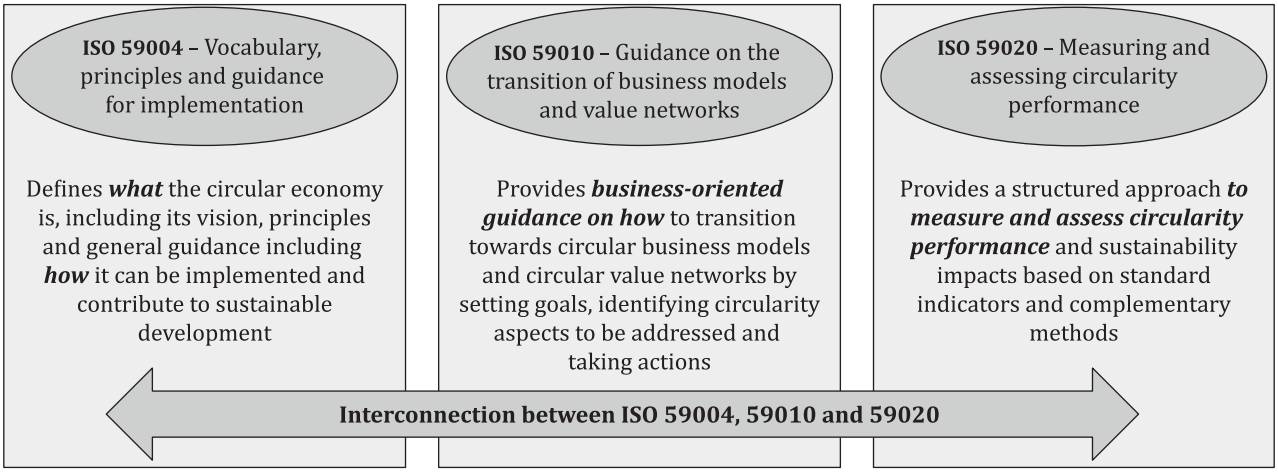

Figure 2 — Relationship between this document, ISO 59010 and ISO 59020

0.3 Purpose and the outline of this document

This document gives guidance 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).

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Circular economy — Vocabulary, principles and guidance for implementation

1 Scope

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

It is applicable to 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

ISO and IEC maintain 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/

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

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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" 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 conservation of *resources* (3.1.5)

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, other gains or benefits.

Note 3 to entry: Value is dynamic over time.

[SOURCE: ISO 56000:2020, 3.7.6, modified — "gain(s) or benefit(s)" replaced "gains" and "use and the conservation of resources" replaced "resources used" in the definition. "public health" added to the example. "those interested party(ies) able to capture it" replaced "the organization and interested parties" in Note 1 to entry. Example added in Note 2 to entry. 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

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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[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 — Note 1 to entry deleted and Note 2 to entry renumbered 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, 3.2.3]

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

[SOURCE: ISO 21930:2017, 3.8.4, modified — Note 1 to entry deleted.]

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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 — "environmental system" added and "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 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, interorganizational, organizational and product level.

3.2 Terms related to solutions

3.2.1
solution
product (3.2.2) or *service* (3.2.3), or a combination thereof, that fulfils a need of an *interested party* (3.4.2)

3.2.2
product
physical-based object designed for or utilized with a purpose

Note 1 to entry: A product can be, for example:

— goods of any type;

— hardware (e.g. engine mechanical part, spare parts, consumables);

— electrical or electronic hardware devices or components (e.g. computers, communication equipment and sensors);

— processed materials (e.g. lubricant, cement).

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3.2.3
service
activity designed or executed with a purpose

Note 1 to entry: Services have intangible elements. Provision of a service can involve, for example:

— an activity performed on a tangible *product* (3.2.2) supplied to a *customer* (3.4.3) (e.g. automobile to be repaired; the income statement needed to prepare a tax return);

— the creation of ambience for the customer (e.g. in hotels and restaurants).

Note 2 to entry: Knowledge transfer and financial management as well as digital software tools or programs and databases are considered as services.

3.2.4
life cycle
consecutive and interlinked stages in the life of a *solution* (3.2.1)

Note 1 to entry: The interlinked stages can include acquisition of *natural resources* (3.3.1), design, production, transportation or delivery, use, *reuse* (3.5.17), *remanufacturing* (3.5.21) and *recycling* (3.5.24).

Note 2 to entry: Within a *circular economy* (3.1.1), traditional linear life cycle understanding is transformed by the thinking that a life cycle can consist of several *end of use* (3.5.29) (e.g. multiple use cycles) and eventually ends at the *end of life* (3.5.30, 3.5.31).

3.2.5
life cycle perspective
life cycle thinking
consideration of the *circularity aspects* (3.6.1) relevant to a *solution* (3.2.1) during its *life cycle* (3.2.4) which includes consideration of the relevant environmental, social and economic impacts

Note 1 to entry: The main idea in applying a life cycle perspective is to improve the *circularity performance* (3.6.3) of a solution by considering its use of *resources* (3.1.5) and related emissions in relation to relevant environmental, social and economic impacts. This can facilitate links between the economic, social and environmental dimensions within an *organization* (3.4.1) and through its entire *value chain* (3.5.2).

Note 2 to entry: In measuring and assessing the circularity performance of a *system* (3.1.22), a life cycle perspective should be applied.

Note 3 to entry: This perspective should include all stages of *technical* (3.1.20) or *biological cycles* (3.1.21) over appropriate timescales that are related to that system.

3.3 Terms related to resources

3.3.1
natural resource
resource (3.1.5) occurring in nature

Note 1 to entry: Natural resources usually have not been subjected to any human-related processing or modification.

Note 2 to entry: Natural resources are acquired or extracted from the *environment* (3.1.16) or nature (the geosphere or *biosphere* (3.1.19)) into the *technosphere* (3.1.18) and emissions to air, water or land are released from the technosphere into the environment.

3.3.2
virgin resource
primary resource
natural resource (3.3.1) or energy that is used as a *resource* (3.1.5) for the first time as input in a *process* (3.5.5) or for creating a *solution* (3.2.1)

Note 1 to entry: Virgin resources can be either a *renewable resource* (3.3.10) or *non-renewable resource* (3.3.11).

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Note 2 to entry: Using virgin resources to produce a material does not result in that material being considered a virgin resource when first used. However, in this case, other terminology is used depending on the context, i.e. "virgin material" or "primary material".

3.3.3
recoverable resource
resource (3.1.5) that can be recovered and used again after it has already been processed or used

Note 1 to entry: Recovery can be undertaken to *recover* (3.1.8), *retain* (3.1.9) or a*dd value* (3.1.10).

Note 2 to entry: A recoverable resource can provide no *value* (3.1.7) and be considered *waste* (3.3.6).

3.3.4
non-recoverable resource
resource (3.1.5) that cannot be recovered and used again after it has been processed or used

Note 1 to entry: Resources can be non-recoverable at time due to technological, economical, environmental, social or regulatory infeasibility.

3.3.5
recovered resource
secondary resource
resource (3.1.5) that is obtained from one that has already been processed or used

Note 1 to entry: Recovery can be undertaken to *recover* (3.1.8), *retain* (3.1.9) or *add value* (3.1.10).

Note 2 to entry: A recovered resource can provide no *value* (3.1.7) to the *holder* (3.4.5) and be considered *waste* (3.3.6).

Note 3 to entry: Other terminology used, depending on the context, includes "secondary material."

3.3.6
waste
resource (3.1.5) that is no longer considered to be an asset as it, at the time, provides insufficient *value* (3.1.7) to the *holder* (3.4.5)

Note 1 to entry: The holder can choose to retain, discard or transfer the waste.

Note 2 to entry: Value can be assigned to waste as a result of a need from another *interested party* (3.4.2), at which point the resource is no longer considered waste.

Note 3 to entry: The assignment of value to waste as a resource is linked, in part, to the available technology (e.g. landfill mining).

Note 4 to entry: Some regulations require the holder to dispose of certain types of waste, while others assign value to waste.

Note 5 to entry: Because resources include the energy content or energy potential of materials, such energy, when liberated during a *process* (3.5.5) and not recovered for another use, can be considered a waste.

3.3.7
losses
unmanaged outflows of a *resource* (3.1.5) from the *system in focus* (3.1.23) that are not recovered

Note 1 to entry: For the purpose of measuring *circularity performance* (3.6.3), losses can be estimated.

Note 2 to entry: Losses can happen at any stage of the *life cycle* (3.2.4), such as wear and tear in the use stage (e.g. tire abrasion, microplastic).

3.3.8
releases
managed emissions to air and discharges to water or land from the *system in focus* (3.1.23)

Note 1 to entry: Releases can be solid, liquid or gaseous.

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Note 2 to entry: For the purpose of measuring *circularity performance* (3.6.3), releases are quantifiable but are not recovered at the time of emission or discharge.

Note 3 to entry: Releases can happen at any stage of the *life cycle* (3.2.4) (e.g. car emissions).

3.3.9
renewable energy
energy from a *renewable resource* (3.3.10)

3.3.10
renewable resource
resource (3.1.5) that can be naturally or artificially grown or replenished within a foreseeable time frame by processes found in nature

Note 1 to entry: Some renewable resources are inexhaustible (e.g. the sun) while others are capable of being exhausted but can be regrown or replenished indefinitely with proper stewardship in line with *sustainable development* (3.3.11).

3.3.11
non-renewable resource
resource (3.1.5) that exists in a finite or limited amount that cannot be naturally replenished within a foreseeable time frame

Note 1 to entry: Resources that are derived from activities that occur only in the *technosphere* (3.1.18) such as *recycling* (3.5.24) are not considered *renewable resources* (3.3.10).

[SOURCE: ISO 21930:2017, 3.6.3, modified — "finite or limited" replaced "fixed" and "within a foreseeable time frame" replaced "or cleansed on a human time scale" in the definition. "Resources that are derived from" added and "renewable resources" replaced "natural replenishment or cleansing" in Note 1 to entry. Notes 2 and 3 to entry deleted.]

3.3.12
biobased
bio-based
derived from *biomass* (3.3.14)

[SOURCE: ISO 16559:2022, 3.23, modified — "biobased" added as the preferred term.]

3.3.13
biobased resource
resource (3.1.5) derived from *biomass* (3.3.14)

Note 1 to entry: Biobased resources exclude any material embedded in geological formations or transformed to fossilized material.

Note 2 to entry: Biobased resources include, for example, trees, crops, grasses, tree litter, algae, microorganisms, animals and *wastes* (3.3.6) of biological origin, e.g. manure.

Note 3 to entry: Biobased resource focuses on the source of the material and not on the ability of the resource to cycle through the *technical* (3.1.20) or *biological cycles* (3.1.21).

3.3.14
biomass
material of biological origin, excluding material embedded in geological formations or transformed to fossilized material

Note 1 to entry: This includes organic material (both living and dead) from above and below ground, e.g. trees, crops, grasses, tree litter, algae, animals, and *waste* (3.3.6) of biological origin, e.g. manure.

[SOURCE: ISO 14021:2016, 3.1.1, modified — "and excluding peat" deleted in the definition.]

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3.3.15
cascading
repeated use of a *resource* (3.1.5) usually starting at a level of high *value* (3.1.7) with decreasing quantity and quality at each subsequent stage or cycle, depending on the *processes* (3.5.5) used

3.3.16
energy recovery
generation of useful energy through direct and controlled transformation of *recovered resources* (3.3.5)

Note 1 to entry: Forms of useful energy include usable heat and electricity.

Note 2 to entry: Energy recovery is often the final option for use of recovered resources.

Note 3 to entry: In the context of the *circular economy* (3.1.1), the generation of energy from *virgin resources* (3.3.2) is not a form of "energy recovery".

3.3.17
anaerobic digestion
controlled biological process where microorganisms break down organic material without oxygen, producing biogas, carbon dioxide and, normally, nutrient-rich digestate

3.3.18
composting
aerobic biological process usually carried out under controlled conditions, which converts organic material into a normally nutrient-rich, humus-like, material

3.4 Terms related to organizations and other interested parties

3.4.1
organization
person or group of people that has its own functions with responsibilities, authorities, and relationships to achieve its objectives

Note 1 to entry: The concept of organization includes, but is not limited to sole-trader, company, corporation, firm, enterprise, authority, partnership, charity or institution, or part or combination thereof, whether incorporated or not, public or private (e.g. foundation, union, association, agency, municipality, region, country, intergovernmental agencies).

Note 2 to entry: A group of organizations can also be considered as an organization that has, alone or collectively, their own objectives.

[SOURCE: ISO 14001:2015, 3.1.4, modified — Examples in Note 1 to entry added. Note 2 to entry added.]

3.4.2
interested party
stakeholder
person or *organization* (3.4.1) that can affect, be affected by, or perceive itself to be affected by a decision or activity

Note 1 to entry: To "perceive itself to be affected" means the perception has been made known to the organization.

[SOURCE: ISO 14001:2015, 3.1.6, modified — Admitted term "stakeholder" added. Example deleted.]

3.4.3
customer
organization (3.4.1) or individual member of the general public purchasing a *solution* (3.2.1) for commercial, private or public purposes

[SOURCE: ISO 26000:2010, 2.3, modified — "a solution" replaced "property, products or services".]

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3.4.4
user
organization (3.4.1) or individual member of the general public using a *solution* (3.2.1) for commercial, private or public purposes

[SOURCE: ISO 26000:2010, 2.3, modified — “user” replaced "customer" as the preferred term. “using a solution” replaced “purchasing property, products or services”.]

3.4.5
holder
organization (3.4.1), *customer* (3.4.3) or some other type of individual that possesses, carries or legally owns the object of consideration

3.5 Terms related to value creation models and design and development

3.5.1
value creation model
business model
organization’s (3.4.1) chosen *system* (3.1.22) of interconnected and interdependent decisions and activities that determines how it creates, delivers and captures *value* (3.1.7)

Note 1 to entry: A value creation model involves external *processes* (3.5.5) (e.g. transportation, take back) beyond those of the organization’s processes (e.g. education, financing) and the *solutions* (3.2.1) it provides.

Note 2 to entry: The value creation model can have a focus on the short, medium or long term, or some combination thereof.

[SOURCE: BSI 8001:2017, 2.8, modified — Admitted term “business model” added. “‘short, medium and long term” deleted in the definition. Note 1 to entry replaced by Notes 1 and 2 to entry.]

3.5.2
value chain
set of *organizations* (3.4.1) that provide a *solution* (3.2.1) that results in *value* (3.1.7) for them

3.5.3
value network
network of interlinked *value chains* (3.5.2) and *interested parties* (3.4.2)

3.5.4
sphere of influence
range or extent of political, contractual, economic or other relationships through which an *organization* (3.4.1) has the ability to affect the decisions or activities of other individuals or organizations

Note 1 to entry: The ability to influence does not, in itself, imply a responsibility to exercise influence.

[SOURCE: ISO 14006:2020, 3.1.8, modified — “other” added in the definition. Note 2 to entry deleted.]

3.5.5
process
set of interrelated or interacting activities that transforms inputs into outputs

[SOURCE: ISO 14044: 2006, 3.11]

3.5.6
framework
structure of *processes* (3.5.5) and specifications designed to support the accomplishment of a specific task

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3.5.7
requirement
need or expectation that is stated, generally implied or mandatory

Note 1 to entry: "Generally implied" means that it is custom or common practice for the *organization* (3.4.1) and *interested parties* (3.4.2) that the need or expectation under consideration is implied.

Note 2 to entry: A specified requirement is one that is stated, for example in documented information.

[SOURCE: ISO 14001:2015, 3.2.8, modified — "mandatory" replaced "obligatory". Note 3 to entry deleted.]

3.5.8
trade-off
decision-making actions that balance opposing *requirements* (3.5.7) and alternative *solutions* (3.2.1) on the basis of net benefit to *organizations* (3.4.1), *interested parties* (3.4.2), *ecosystems* (3.1.17) or society

[SOURCE: ISO 14006:2020, 3.4.11, modified — "balance opposing" replaced "select from various", and "organizations", "ecosystems" and "society" have been added.]

3.5.9
design and development
process (3.5.5) that transforms *requirements* (3.5.7) into a *solution* (3.2.1)

Note 1 to entry: Design and development usually follows a series of steps, i.e. starting with an initial idea, transforming the idea into a formal specification, through to the creation of a solution, its potential redesign and consideration of *end of life* (3.5.30, 3.5.31).

Note 2 to entry: Design and development can include taking a solution idea from planning to provision and review of the solution. It can include considerations on business strategies, marketing, research methods and design aspects that are used. It includes improvements or modifications of existing solutions.

[SOURCE: ISO 14006:2020, 3.2.1, modified — "solution" replaced all occurrences of "product" in the definition and in Notes to entry.]

3.5.10
linear economy
economic system (3.1.2) where *resources* (3.1.5) typically follow the pattern of extraction, production, use and disposal

3.5.11
ecodesign
environmentally conscious design
ECD
design for environment
DfE
green design
environmentally sustainable design
design and development (3.5.9) based on a *life cycle perspective* (3.2.5) aimed at supporting *sustainable development* (3.1.11)

3.5.12
design for circularity
DfC
design and development (3.5.9) based on the *circular economy* (3.1.1) *principles* (3.1.13)

Note 1 to entry: This field of design builds on and is related to *ecodesign* (3.5.11).

3.5.13
procurement
process (3.5.5) relating to the provision or sourcing of a *resource* (3.1.5) or *solution* (3.2.1)

Note 1 to entry: Sourcing is a part of the procurement process and includes planning, defining specifications and selecting suppliers.

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