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**Automated Solutions for  
Sustainable and Circular  
Construction and Demolition  
Waste Management**

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University of Salford

**Glossary of Terms for Circular Economy  
and waste management in Construction**

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## Glossary of terms

Term	Definition	Reference	Comments
<b>Accessibility</b>	Easy of reaching and using a service or facility	ISO 11620:2023	
<b>Actor</b>	Person, organization or organizational unit involved in a construction process	ISO 19650-1:2018	
<b>Adaptability</b>	Ability to changes or modifications suitable for a particular use	ISO 6707-3:2022	
<b>Adaptability of a building</b>	Building that is designed in such a way that, over time, it can be readily transformed to accommodate uses for which it was not originally conceived.	European Economic and Social Committee. Let's speak ...	
<b>Add value</b>	Process of increasing the value of the object of consideration (i.e., a resource, a product etc.)	ISO/DIS 59004	
<b>Alternative material</b>	Material which substitutes a primary material (see secondary material)	European Economic and social committee. Lets speak ...	
<b>Ancillary material</b>	Input material or product that is used by the unit process producing the product, but which does not constitute part of the product	ISO 14040:2006	

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<b>As-built drawing</b>	An as-built drawing is a drawing that the designer, engineer or contractor of a construction project creates after successfully completing a project.		
<b>Audit</b>	Systematic and independent process for obtaining evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled	ISO 14050:2020	
<b>Audit team</b>	One or more persons conducting an audit supported if needed by technical experts	ISO 14050:2020	
<b>Auditor</b>	Person who conduct an audit	ISO 14050:2020	
<b>Avoidable waste</b>	Materials, products or components that can be prevented from becoming waste, and it can either be prevented, reused or recycled	Zero Avoidable Waste in Construction (Construction Leadership Council, 2020)	
<b>Backfilling</b>	Any recovery operation where suitable non-hazardous waste is used for purposes of reclamation in excavated areas or for engineering purposes in landscaping. Waste used for backfilling must substitute non-waste materials, be suitable for the aforementioned purposes, and be limited to the amount strictly necessary to achieve those purposes	Article 3, Definitions, DIRECTIVE 2008/98/EC + DIRECTIVE (EU) 2018/851	Backfilling is a specific type or recovery operations, whereas waste regulations usually allow to use waste for backfilling without the necessity to reach end-of-waste. It can be also considered as an end-of-pipe solution.
<b>Bio-based</b>	Derived from biomass	ISO/DIS 59004	

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<b>Bio-based products</b>	They are wholly or partly derived from materials of biological origin (such as plants, animals, enzymes, and microorganisms, including bacteria, fungi and yeast). They do not include materials that are embedded in geological formations and/or fossilised. From products we use every day to cutting-edge innovations, bio-based products are revolutionising industries and paving the way for a more sustainable economy	European Commission ( <a href="https://single-market-economy.ec.europa.eu/sectors/biotechnology/bio-based-products_en">https://single-market-economy.ec.europa.eu/sectors/biotechnology/bio-based-products_en</a> )	
<b>Biomass</b>	Material of biological origin excluding material embedded in geological formations and material transformed to fossilized material and excluding peat	ISO 14050:2020; ISO/DIS 59004	
<b>Broker</b>	Any undertaking arranging the recovery or disposal of waste on behalf of others, including such brokers who do not take physical possession of the waste	Article 3, Definitions, DIRECTIVE 2008/98/EC	
<b>Building</b>	Construction work, that has the provision of shelter for its occupants or contents as one of its main purposes, usually partially or totally enclosed and designed to stand permanently in one place	ISO 6707-1:2020	
<b>Built environment</b>	Physical construction result intended to serve a function or user activity	EN ISO 12006-2:2020	

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<b>Building Information Modelling (BIM)</b>	Use of a shared digital representation of a built asset to facilitate design, construction and operation processes to form a reliable basis for decisions	EN ISO 19650-1:2018	BIM 3D models are used for visualizing the design and construction of an asset, while a digital twin enables virtual interaction with that asset.
<b>By-product</b>	<p>A substance or object is considered not to be waste, but to be a by-product if the following conditions are met: (I) further use of the substance or object is certain; (II) the substance or object can be used directly without any further processing other than normal industrial practice; (III) the substance or object is produced as an integral part of a production process; and (IV) further use is lawful</p> <p>Co-product from a process that is incidental or not intentionally produced and which cannot be avoided</p>	<p>Article 5, By-products, DIRECTIVE 2008/98/EC</p> <p>ISO 21930:2017</p>	By-products are not considered as waste.
<b>Certification</b>	Third-party attestation related to an object of conformity assessment, with the exception of accreditation	ISO 17000:2020	

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<b>Circular economy</b>	<p>An economic system whereby the value of products, materials and other resources in the economy is maintained for as long as possible, enhancing their efficient use in production and consumption, thereby reducing the environmental impact of their use, minimising waste and the release of hazardous substances at all stages of their life cycle, including through the application of the waste hierarchy</p> <p>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</p>	<p><a href="https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R0852&amp;from=EN">https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R0852&amp;from=EN</a></p> <p>ISO/DIS 59004</p>	
<b>Circular building</b>	<p>Development, use and reuse of buildings, areas and infrastructure without unnecessarily exhausting natural resources, polluting the living environment, and affecting ecosystems. Construction in a way that is economically sound and contributes to the well-being of humans and animals. Here and there, now and later</p>	<p>Transition Agenda for Circular Construction Economy of the Netherlands</p>	

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<b>Circularity</b>	<p>Activities which are defined on the right side of the Ellen McArthur Foundation butterfly diagram. Primary focus of these activities is on the technosphere. Circularity demands advances in technology and scientific research to discover new ways of reusing resources. Recyclable raw materials should be designed into a product right at the manufacturing stage so that they can be utilised after their use (see also sustainability definition)</p> <p>Degree of alignment with the principles for a circular economy</p>	<p>Ellen McArthur Foundation</p> <p>ISO/DIS 59004</p>	
<b>Client</b>	<p>Actor responsible for initiating a construction project and approving the brief</p>	<p>ISO 19650-1:2018</p>	
<b>Closed system loop</b>	<p>System by which products or resources are used and then recovered and turned into new products or recovered resources, without losing their inherent properties</p>	<p>ISO 59004</p>	
<b>Collection</b>	<p>The gathering of waste, including the preliminary sorting and preliminary storage of waste for the purposes of transport to a waste treatment facility</p>	<p>Article 3, Definitions, DIRECTIVE 2008/98/EC + DIRECTIVE (EU) 2018/851</p>	

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<b>Collection of waste</b>	Gathering of waste, including the preliminary sorting and preliminary storage of waste for the purposes of transport to a waste treatment facility	EU Construction and Demolition Waste Management Protocol (2016)	
<b>Common data environment (CDE)</b>	Agreed source of information for any given project or asset, for collecting, managing and disseminating each information container through a managed process	EN ISO 19650-1:2018	
<b>Completed phase</b>	Phase that the parties agree has been completed	ISO 6707-2:2017	
<b>Compliance obligation</b>	Legal requirement that an organization has to comply with or other requirement that an organization has to or chooses to comply with	ISO 14050:2020	
<b>Component</b>	Constituent part of a building (or other built asset) which is manufactured as an independent unit, subsystem or subassembly, that can be joined or blended with other elements to form a more complex item	Design Buildings Wiki	
<b>Construction activity</b>	Component process of construction process	EN ISO 12006-2:2020	

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<b>Construction material</b>	Material used in the construction industry to create buildings and structures, e.g. steel, timber, aggregates, plaster, concrete, plastic products etc. as well as manufactured products	European Economic and social committee. Lets speak ...	
<b>Construction process</b>	Process which uses construction resources to achieve construction results	EN ISO 12006-2:2020	
<b>Construction product</b>	Item manufactured or processed for incorporation in construction work	ISO 6707-1:2020	
<b>Construction service</b>	Activity that supports the construction works or subsequent maintenance	EN 15804:2012+A2:2019/AC:2021	
<b>Construction works</b>	Everything that is constructed or results from construction operations	ISO 6707-1:2020	
<b>Construction and demolition waste (CDW)</b>	Waste that results from construction and demolition, renovation or reconstruction activities in a general way. It also includes waste arising from minor do-it-yourself construction and demolition activities within private households	Article 3, Definitions, DIRECTIVE 2008/98/EC	
<b>Construction and demolition waste (CDW)</b>	Any waste generated in the activities of companies belonging to the construction sector and included 63 in category 17 of the European List of Wastes	EU Construction and Demolition Waste Management Protocol (2016)	

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<b>Contract</b>	Legally enforceable agreement to supply goods, carry out construction work and/or provide services	ISO 6707-2:2017	
<b>Contract</b>	Means the Contract Agreement, the Letter of Acceptance, the Letter of Tender, these Conditions, the Specification, the Drawings, the Schedules, and the further documents (if any) which are listed in the Contract Agreement or in the Letter of Acceptance	FIDIC	
<b>Contractor</b>	<p>Means the person(s) named as contractor in the Letter of Tender accepted by the Employer and the legal successors in title to this person(s)</p> <p>Anyone who directly employs or engages construction workers or manages construction work. Contractors include sub-contractors, any individual self-employed worker or business that carries out, manages or controls construction work. They must have the skills, knowledge, experience and, where relevant, the organisational capability to carry out the work safely and without risk to health</p>	<p>FIDIC</p> <p>Construction (Design and Management) Regulations 2015 (CDM 2015) (UK)</p>	

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<b>Co-processing</b>	The term is used when introducing alternative fuels and raw materials into a standard production process, rather than using conventional fuels and raw materials	EU Construction and Demolition Waste Management Protocol (2016)	
<b>Co-product</b>	Product coming from the same unit process or product system as one or more other products	ISO 14050:2020	
<b>Cost</b>	Monetary value of resources consumed to perform activities	ISO 14050:2020	
<b>Database</b>	Collection of electronically stored descriptive records or content units (including facts, texts, pictures, and sound) with a common user interface and software for the retrieval and manipulation of the data	ISO 11620:2023	The units or records are usually collected with a particular intent and are related to a defined topic. A database can be issued on CD-ROM, diskette, or other direct-access method, or as a computer file accessed via dial-up methods or via the Internet. Licensed databases are counted separately even if access to several licensed database products is affected through the same interface. A common interface providing access to a packet of serials or digital documents, usually offered by a publisher or vendor, is also to be counted as database. Additionally, the single serials or digital documents should be counted as serials or digital documents.

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<b>Dealer</b>	Means any undertaking which acts in the role of principal to purchase and subsequently sell waste, including such dealers who do not take physical possession of the waste	Article 3, Definitions, DIRECTIVE 2008/98/EC	
<b>Decommissioning</b>	<p>Process of shutting down a building and/or removing it from operation or use. Decommissioning may be followed by re-commissioning, repurposing or demolition. Common types of buildings that may be decommissioned include; power stations, oil rigs, factories, warehouses, public buildings and so on</p> <p>Activities that change a building or an assembled system (part of works) from an operational status to a non-operational status</p>	<p>Design Buildings Wiki</p> <p>International Atomic Energy Agency (IAEA)</p> <p>EN 15643:2021</p>	
<b>Deconstruction</b>	Means removal of building elements from a demolition site in order to maximize their recovery and reuse	Guidelines for the waste audits before demolition and renovation works of buildings, May 2018	
<b>Decontamination</b>	Reduction or removal of chemical agents	EU Construction and Demolition Waste Management Protocol (2016)	

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<b>Dematerialization</b>	Design strategy that prioritises lower material and resource inputs across all life cycle stages of a building, without adversely affecting the operational performance or intended function of the building	<a href="https://www.architectureanddesign.com.au/getmedia/9391de5b-1aad-408b-994a-9e6e421f7cce/Holcim-Designing-for-Dematerialisation.aspx?ext=.pdf">https://www.architectureanddesign.com.au/getmedia/9391de5b-1aad-408b-994a-9e6e421f7cce/Holcim-Designing-for-Dematerialisation.aspx?ext=.pdf</a>	
<b>Demolition</b>	<p>Process of dismantling, destroying, or knocking down building structures along with the materials used in the construction of the property</p> <p>The demolition of a building is the act of deliberately destroying it, often in order to build something else in its place</p>	<p><a href="https://safetyculture.com/topics/building-demolition/">https://safetyculture.com/topics/building-demolition/</a></p> <p><a href="https://collinsdictionary.com">https://collinsdictionary.com</a></p>	
<b>Demolition waste</b>	Waste debris from deconstruction of a building or structure	European Economic and social committee. Lets speak ...	
<b>Demountability</b>	Ability to be removed from its mounting or setting	ISO 6707-3:2022	
<b>Design criteria</b>	Set of conditions and requirements which must be met by architects when designing any building or urban space	European Economic and social committee. Lets speak ...	

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<b>Designer</b>	An organisation or individual whose work involves preparing or modifying designs for construction projects, or arranging for, or instructing, others to do this. Designers can be architects, consulting engineers and quantity surveyors, or anyone who specifies and alters designs as part of their work	Construction (Design and Management) Regulations 2015 (CDM 2015) (UK)	
<b>Design life</b>	Period of time that a building or structure must be able to function as envisaged without a need for a major renovation  Service life intended by the designer	European Economic and social committee. Lets speak ...  EN 15643:2021	
<b>Design process</b>	Construction process determining construction properties for the built environment before it is made physical	EN ISO 12006-2:2020	
<b>Design quality assessment</b>	Process which monitors all stages in the design of a building/structure and seeks to assist the client in determining whether or not the final building will be of a high quality	European Economic and social committee. Lets speak ...	

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<b>Design science research</b>	<p>Research paradigm focused on developing and evaluating innovative IT artefacts designed to address practical, real-world issues. The foundational principle is that knowledge and comprehension of a problem domain and its solution are acquired through the construction and application of the designed artefact</p>	<p>Hevner, A.R., Samir Chatterjee (2010) Service Design Research in Information Systems: Theory and Practice. Springer. New York &amp; London. ISBN 9781441956538</p>	
<b>Digital Twin</b>	<p>A digital twin is a virtual representation of an object or system designed to reflect a physical object accurately. It spans the object's lifecycle, is updated from real-time data and uses simulation, machine learning and reasoning to help make decisions.</p> <p>A digital twin is “a virtual representation of an object, a service process, a product, or anything else that can be digitized.”</p>	<p>Service Design Research in Information Systems : Theory and Practice</p>	<p>BIM 3D models are used for visualizing the design and construction of an asset, while a digital twin enables virtual interaction with that asset.</p>
<b>Disassembly</b>	<p>Ability to be taken apart at the end of its useful life in such a way that components and parts can be reused, recycled, recovered for energy</p>	<p>Springer: New York ; London, 2010; ISBN 9781441956538</p>	

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<b>Dismantling</b>	Careful deconstruction of building components for repair, re-use, re-purposing or recycling. Dismantling differs from deconstruction in that it can be undertaken as a means of conservation, maintenance and repair works, whereas deconstruction involves taking a building down, albeit in a careful way that aims to minimise waste and maximise re-use. Dismantling also differs from demolition in that it does not generally involve the clearance of an entire structure	Design Buildings Wiki	
<b>Disposal</b>	Any operation which is not recovery even where the operation has as a secondary consequence the reclamation of substances or energy	Article 3, Definitions, DIRECTIVE 2008/98/EC	Annex I Sets out a non-exhaustive list of disposal operations.
<b>Disposal cost</b>	Cost of removing or getting rid of refuse or unwanted materials left over from a manufacturing process	European Economic and social committee. Lets speak ...	

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<b>Downcycling/dowgrading</b>	<p>Phenomenon of quality reduction of materials reprocessed from waste relative to their original quality, where waste means any substance or object which the holder discards or intends or is required to discard. Downcycled materials count as recycled materials. One can distinguish between thermodynamic, functional, and economic downcycling</p>	<p>Helbig, C., Huether, J., Joachimsthaler, C., Lehmann, C., Raatz, S., Thorenz, A., Faulstich, M., Tuma, A. (2022) 'A terminology for downcycling'. Journal of Industrial Ecology, 26, pp. 1164-1174</p>	
<b>Drawings</b>	<p>Drawings of the designed works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Employer in accordance with the Contract</p> <p>The act of a person or thing that draws. a graphic representation by lines of an object or idea, as with a pencil; a delineation of form without reference to colour</p>	<p>FIDIC</p> <p><a href="http://www.dictionary.com">www.dictionary.com</a></p>	

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<b>Durability</b>	<p>Ability to maintain required technical performance throughout the service life, subject to specified maintenance under the influence of the foreseeable actions</p> <p>Power of resisting agents or influences which tend to cause changes, decay, or dissolution; lastingness</p>	<p>EN 15643:2021</p> <p>European Economic and social committee. Lets speak ...</p>	
<b>Ecodesign</b>	<p>Systematic approach that considers <i>environmental aspects</i> in <i>design and development</i> with the aim to reduce adverse <i>environmental impacts</i> throughout the <i>life cycle</i> of a <i>product</i></p> <p><i>Design and development based on life cycle thinking aimed at supporting sustainable development</i></p>	<p>ISO 14006:2020</p> <p>ISO/DIS 59004</p>	
<b>Eco-efficiency</b>	<p>Practice which involves increasing the productivity of natural resources</p> <p>Measure relating environmental performance of a product system to its product system value</p>	<p>European Economic and social committee. Lets speak ...</p>	
<b>Ecosystem</b>	<p>Dynamic complex of communities of plants, animals and microorganisms and their non-living environment, interacting as a functional entity</p>	<p>ISO/DIS 59004</p>	

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<b>Element</b>	The main components of a structure like a bridge (foundations, piers, deck) or a building (floors, walls and roofs)	Uniclass 2015; Design Buildings Wiki	
<b>Elementary flow</b>	Material or energy entering the system being studied that has been drawn from the <i>environment</i> without previous human <i>transformation</i> , or material or energy leaving the system being studied that is released into the environment without subsequent human transformation	ISO 14050:2020	
<b>End of life</b>	End of life (EOL), in the context of manufacturing and product lifecycles, is the final stages of a product's existence	www.techtarget.com	
<b>End-of-life cost</b>	Cost associated with the disposal, termination or replacement of an asset or service.	European Economic and social committee. Lets speak ...	
<b>End of use</b>	Point in time during the life cycle at which a product or resource is transferred by the holder to some other holder	ISO/DIS 59004	
<b>Energy recovery</b>	Recovery of energy from a process, including waste treatment process  Generation of useful energy through direct and controlled transformation of recovered resources	ISO 6707-3:2022; ISO 21930:2017  ISO/DIS 59004	Forms of useful energy include usable heat and electricity. Energy recovery is often the final option for use of recovered resources.

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<b>Environment</b>	Surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans, and their relationships	ISO/DIS 59004	
<b>Environmental aspect</b>	Element of an organisation's activities or products that interacts or can interact with the environment	ISO 14050:2020	
<b>Environmental burden</b>	Total impact on the environment of a construction product or project	European Economic and social committee. Lets speak ...	
<b>Environmental declaration</b>	One of three types of declarations: type I, based on third-party certification for specific goods and services; type II, based on self-declarations; and type III, based on life-cycle impacts and their assessment	European Economic and social committee. Lets speak ...	
<b>Environmental impact</b>	Change to the environment, whether adverse or beneficial, including possible consequences, wholly or partially resulting from an organisation's environmental aspects	ISO 14050:2020	
<b>Environmental indicator</b>	Sustainability indicator related to an environmental impact	ISO 21929-1:2011	

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<b>Environmental product declaration (EPD)</b>	<p>Standardized document informing about a product's environmental and human health impact. It's based on the ISO 14025 standard and the scientific footprinting method Life Cycle Assessment (LCA). The goal of an EPD is to inform and communicate with stakeholders about a product's environmental impact. Therefore, companies often use EPDs for commercial purposes</p>	<p>ISO 21930:2017</p>	<p>Further information for construction products and materials are given by CEN TC 350</p>
<b>Environmental profiling</b>	<p>Method used to capture in quantifiable terms the impact of a good or service on the environment.</p>	<p>European Economic and social committee. Lets speak ...</p>	
<b>Excavation waste</b>	<p>Means natural soil, earth, sand, gravel, asphalt, concrete and stone or any parts or mixtures thereof</p> <p>Means naturally occurring soil, stone, rock and similar materials (whether clean or contaminated) which have been excavated as a result of site preparation activities</p>	<p><a href="https://www.lawinsider.com/dictionary/">https://www.lawinsider.com/dictionary/</a></p>	

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<b>Estimated (predicted) service life</b>	Service life that a building or parts of a building would be expected to have in a set of specific in-use conditions, determined from reference service life data after taking into account any differences from the reference in-use conditions	ISO 15686-1:2011	
<b>Feasibility study</b>	A feasibility study is a detailed analysis that considers all of the critical aspects of a proposed project in order to determine the likelihood of it succeeding	ISO 6707-2:2017	
<b>Functional unit</b>	Quantified performance of a product system for use as a reference unit	ISO 14050:2020	
<b>Good</b>	Something that satisfies human wants or needs	ISO 14050:2020	
<b>Handover</b>	Step at which possession of the construction works is surrendered to the client upon completion with or without reservation	EN 15643:2021  European Economic and social committee. Lets speak ...	

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<b>Hazardous waste</b>	<p>waste which displays one or more of the hazardous properties listed in Annex III</p> <p>Waste that due to its (intrinsic) chemical - or other - properties poses a risk to the environment and/or human health. Wastes listed as hazardous in the European List of Waste are marked with an asterisk in the List of Waste</p>	<p>Article 3, Definitions, Directive 2008/98/EC</p> <p>Guidelines for the waste audits before demolition and renovation works of buildings, May 2018</p>	
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<b>Hazardous construction and demolition waste</b>	<p>debris that has hazardous properties and that may prove to be harmful to human health or the environment. This comprises contaminated soil and dredging spoil, materials and substances that may include adhesives, sealants and mastic (flammable, toxic or irritant), tar (toxic, carcinogenic), asbestos-based materials in the form of respirable fibre (toxic, carcinogenic), wood treated with fungicides, pesticides, etc. (toxic, ecotoxic, flammable), coatings of halogenated flame retardants (ecotoxic, toxic, carcinogenic), equipment with PCBs (ecotoxic, carcinogenic), mercury lighting (toxic, ecotoxic), systems with CFCs, insulation containing CFCs65 , containers for hazardous substances (solvents, paints, adhesives, etc.) and the packaging of likely contaminated waste</p>	<p>EU Construction and Demolition Waste Management Protocol (2016)</p>	
<b>Indicator</b>	<p>Quantitative, qualitative or binary variable that can be measured, calculated or described, representing the status of operations, management, conditions or impacts</p>	<p>ISO 14050; ISO 6707-3:2022</p>	

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<b>Industry 4.0</b>	Realization of the digital transformation of the field, delivering real-time decision making, enhanced productivity, flexibility and agility to revolutionize the way companies manufacture, improve and distribute their products	IBM (2022). What is industry 4.0? Ibm; IBM	
<b>Inert waste</b>	Waste that does not undergo any significant physical, chemical or biological transformations (for ex. concrete, bricks, masonry, tiles). Inert waste will not dissolve, burn or otherwise react physically or chemically, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health	EU Construction and Demolition Waste Management Protocol (2016)	
<b>Information and communication technologies (ICT)</b>	Encompasses all technologies for the capture, storage, retrieval, processing, display, representation, organization, management, security, transfer, and interchange of data and information	Computer Security Resource Centre. Glossary	
<b>Information management (IM)</b>	Business processes across the built environment sector in support of the management and production of information during the life cycle of built assets	ISO 19650-1:2018	

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<b>Information unit</b>	Single piece of information	ISO 6707-2:2017	
<b>Intermediate product</b>	Product that has undergone a partial processing and is used as raw material in a successive productive step	European Economic and social committee. Lets speak ...	
<b>Key performance indicator (KPI)</b>	Indicator of performance deemed by an organization to be significant and giving prominence and attention to certain aspects of operations, management, conditions or impacts.	ISO 14050:2020	

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<b>Landfill</b>	<p>Waste disposal site for the deposit of waste onto or into land under controlled or regulated conditions</p> <p>Waste disposal site for the deposit of the waste onto or into land (for instance underground), including: (1) internal waste disposal sites (for instance own waste disposal carried out by the producer of waste at the place of production), and (2) a permanent site (older than one year) which is used for temporary storage of waste, But excluding: (1) facilities where waste is unloaded in order to permit its preparation for further transport for recovery, treatment or disposal elsewhere, and (2) storage of waste prior to recovery or treatment for a period less than 3 years as a general rule, (3) storage of waste prior to disposal for a period less than 1 year</p>	<p>ISO 472:2013</p> <p>EU Construction and Demolition Waste Management Protocol (2016)</p>	
<b>Lean construction</b>	<p>Way to design production systems to minimise waste of materials, time, and effort in order to generate the maximum possible amount of value</p>	<p>European Economic and social committee. Lets speak ...</p>	

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Life cycle	Consecutive and interlinked stages from raw material acquisition or generation from natural resources to final disposal	ISO 14050:2020	
	Consecutive and interlinked stages of a product system, from raw material acquisition or generation from natural resources to final disposal	ISO 15643:2021	
Life cycle assessment (LCA)	Compilation and assessment of the inputs, outputs and the potential environmental impacts of a product system through its life cycle	ISO 14050:2020; EN 15643-1:2018	
	Compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its life cycle	ISO 14040:2006	
Life cycle cost	Cost of an <i>asset</i> or its parts throughout its <i>life cycle</i> , while fulfilling the performance requirements (compare to whole-life cost)	ISO 15686-5:2017; EN 15643-1:2018	
Life cycle impact category indicator	Quantifiable representation of an environmental issue of concern (impact category) to which life cycle inventory results may be assigned	European Economic and social committee. Lets speak ...	

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<b>Life cycle inventory analysis (LCI)</b>	Phase of a life cycle assessment involving the compilation and quantification of inputs and outputs for a product throughout its life cycle	ISO 14040:2006/ ISO 14050:2020	
<b>Life-span</b>	Actual period of time that a building continues to fulfil its original functions	European Economic and social committee. Lets speak ...	
<b>Linear economy</b>	Economic system where resources typically follow the pattern of extraction, production, use and disposal	ISO/DIS 59004	
<b>Local authority</b>	Public body given the authority by legislation or directives of a higher level of government to set general policies, plans or requirements	ISO 14050:2020	
<b>Longevity</b>	See 'Durability'		
<b>Main contractor</b>	See 'Principal contractor'		
<b>Maintenance</b>	Combination of all technical and associated administrative actions during an item's service life to retain a building / structure or an assembled system (part of works) in a state in which it can perform its required function	EN 15643:2021  European Economic and social committee. Lets speak ...	

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<b>Maintenance process</b>	Construction process preserving the function of, or operating, the built environment	EN ISO 12006-2:2020	
<b>Manufacturing</b>	Any industry that makes products from raw materials by the use of manual labour or machinery and that is usually carried out systematically with a division of labour. (See industry.) In a more limited sense, manufacturing denotes the fabrication or assembly of components into finished products on a fairly large scale	<a href="https://www.britannica.com/technology/">https://www.britannica.com/technology/</a>	
<b>Material (or product) databank</b>	A computer application that enables materials experts and product development teams to find, explore, and apply materials property data.	<a href="https://www.igi-global.com/dictionary/the-role-of-digital-libraries-in-teaching-materials-science-and-engineering/46876">https://www.igi-global.com/dictionary/the-role-of-digital-libraries-in-teaching-materials-science-and-engineering/46876</a>	
<b>Material flow</b>	Input or output of a material or group of materials	ISO 14050:2020	

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<b>Digital Material (Product) Passport</b>	<p>Digital document listing all the materials that are included in a product or construction during its life cycle in order to facilitate strategizing circularity decisions in supply chain management</p> <p>Digital Product Passports (DPP) are a tool for collecting and sharing product data throughout its entire lifecycle used to illustrate a product's sustainability, environmental and recyclability attributes.</p>	<p><a href="https://www.protokol.com/insights/digital-product-passport-complete-guide/">https://www.protokol.com/insights/digital-product-passport-complete-guide/</a></p>	
<b>Material recovery</b>	<p>Any recovery operation, other than energy recovery and the reprocessing into materials that are to be used as fuels or other means to generate energy. It includes, inter alia, preparing for re-use, recycling and backfilling (same concept as waste recovery except it excludes energy recovery operations)</p> <p>Recovery from previous use or from waste derived from one product system and used as input to another product system</p>	<p>Article 3, Definitions, European directive 2008/98/EC</p> <p>ISO 6707-3:2022</p>	
<b>Mixed construction and demolition waste</b>	<p>mixture of different fractions of C&amp;D waste</p>	<p>EU Construction and Demolition Waste Management Protocol (2016)</p>	

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<b>Natural resource</b>	Part of nature that provides benefits to humans or underpins human well-being  Raw material occurring in nature	ISO 14050:2020  ISO/DIS 59004	As a raw material, natural resources usually have not been subjected to any human related processing or modification. They can be either a renewable or non-renewable resource.
<b>Non-hazardous waste</b>	Means waste which is not covered by point 2 of Article 3  Non-hazardous waste means waste which is not classified as hazardous waste	Article 3, Definitions, Directive 2008/98/EC  <a href="https://www.eea.europa.eu/help/glossary/eea-glossary">https://www.eea.europa.eu/help/glossary/eea-glossary</a>	
<b>Non-renewable resource</b>	Resource that exists in a fixed amount that cannot be naturally replenished or cleansed on a human time scale  Resource that exists in a finite or limited amount that cannot be naturally regenerated within a foreseeable time frame	ISO 21930:2017  ISO/DIS 59004	
<b>Obsolescence</b>	Loss of ability of a product to perform satisfactorily due to the end of life cycle of the product or service	ISO 6707-3:2022	
<b>Organisation</b>	Person or group of people that has its own function with responsibilities, authorities and relationships to achieve its objectives	ISO 55000:2014	

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<b>Packaging</b>	Product that is used to protect or contain another product during transportation, storage, marketing or use	ISO 14050:2020	
<b>Performance</b>	Ability to fulfil required functions under intended use conditions or behaviour when in use	ISO 6707-1:2020	
<b>Permanent works</b>	Means the permanent works to be executed by the contractor under the contract	FIDIC	
<b>Plan of work</b>	Document that details principal stages in the design, construction work and maintenance of a project and identifies the main tasks and people	ISO 19650-2:2018	
<b>Post consumer recycled content</b>	Any material that was used by a consumer and then recycled for use in a new product	European Economic and social committee. Lets speak ...	

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<b>Pre-demolition audit</b>	<p>A preparatory activity with the purpose of: (1) collecting information about the qualities and quantities of the construction and demolition waste materials that will be released during the demolition, deconstruction or renovation works and (2) giving general and site-specific recommendations regarding the demolition process</p> <p>The demolition contractor carries out an advanced inspection of the demolition project and an inventory of the materials (hazardous and non-hazardous) to get insight into the nature, quantity and any contamination of the extracted demolition materials. An inventory is made of the risks to occupational safety and safety risks to the surroundings</p>	<p>EU Construction and Demolition Waste Management Protocol (2016)</p> <p>Guidelines for the waste audits before demolition and renovation works of buildings, May 2018</p>	
<b>Pre-design process</b>	<p>A process determining properties for the design process</p>	<p>ISO 6707-2:2017</p>	

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<b>Prepare for reuse</b>	Checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing (repair or cleaning of items which never became waste are not captured under this treatment category)	Article 3, Definitions, DIRECTIVE 2008/98/EC	Prepare for reuse is not the same as reuse (however, it is sometimes mentioned synonymously in EU documents). Precondition for 'preparing for re-use' is that the respective item was wasted; repair or cleaning of items which never became waste are not captured under this treatment category.
<b>Prevention</b>	measures taken before a substance, material or product has become waste, that reduce: (a) the quantity of waste, including through the re-use of products or the extension of the life span of products; (b) the adverse impacts of the generated waste on the environment and human health; or (c) the content of harmful substances in materials and products	Article 3, Definitions, DIRECTIVE 2008/98/EC	
<b>Primary data</b>	Quantified value of a unit process or an activity obtained from a direct measurement or a calculation based on direct measurements at the original source	ISO 14050:2020	

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<b>Primary material</b>	<p>Virgin materials, natural inorganic or organic substance, such as metallic ores, industrial minerals, construction materials (aggregates, sands, soils, wood) or energy fuels, used for the first time</p> <p>Material that came from nature and is in an unprocessed or minimally processed state</p>	<p>Study on the EU's list of Critical Raw Materials</p> <p>European Economic and social committee. Lets speak ...</p>	
<b>Primary resource</b>	Natural resource or energy that is used as a resource for the first time as input in a process or for creating a product	ISO/DIS 59004	
<b>Principal contractor</b>	The contractor with control over the construction phase of a project involving more than one contractor.	Construction (Design and Management) Regulations 2015 (CDM 2015) (UK)	
<b>Process</b>	Set of interrelated or interacting activities that transforms inputs into outputs	ISO/DIS 59004	
<b>Product</b>	<p>Any goods or service / construction product item manufactured or processed for incorporation in construction works</p> <p>Physical-based object designed for or utilized with a purpose</p>	<p>ISO 14050 / 6707-1:2020</p> <p>ISO/DIS 59004</p>	<p>Similar to component in WASTEie terminology.</p> <p>A product can be either: (a) goods of any type; (b) hardware (e.g. engine mechanical part, spare parts, consumables); (c) processed materials (e.g. lubricant). Intellectual, financial, or digital products are considered as services.</p>

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<b>Product category rules (PCR)</b>	Rules, requirements and guidelines for developing type III environmental declarations.	European Economic and social committee. Lets speak ...	
<b>Product environmental criteria</b>	Environmental factors and conditions for a certain product which, when met by the producer, allow for the affixing of a symbol/label certifying its compliance.	European Economic and social committee. Lets speak ...	
<b>Product flow</b>	Products entering from or leaving to another product system	ISO 14050:2020	
<b>Product function characteristic</b>	Attribute or characteristic in the performance and use of a product	ISO 14050:2020	
<b>Product specification</b>	Written statement of a product's required (or actual) characteristics documented in a manner that facilitates its procurement or production and acceptance	European Economic and social committee. Lets speak ...	
<b>Product system</b>	Collection of unit processes with elementary flows and product flows, performing one or more defined functions and which models the life cycle of a product	ISO 14050:2020	
<b>Product system value</b>	Worth or desirability ascribed to a product system	ISO 14050:2020	

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<b>Products manufacturer</b>	May contribute to the waste audit providing solutions and/or requirements for the reused/recycled materials and components	Guidelines for the waste audits before demolition and renovation works of buildings, May 2018	
<b>Property owner</b>	Person responsible for appointing an auditor to draw up a waste audit for the identification and classification of waste as well as preliminary planning of its handling	Guidelines for the waste audits before demolition and renovation works of buildings, May 2018	
<b>Raw material</b>	Primary or secondary material that is used to produce a product	ISO 14050:2020	
<b>Recover value</b>	Process of recuperating the value of the object of consideration (i.e., a resource)	ISO/DIS 59004	
<b>Recoverable resource</b>	Resource that can potentially be recovered and used again after it has already been processed or used	ISO/DIS 59004	
<b>Recovered material</b>	Material that has already been processed or used, then separated, diverted from previous use or removed from a waste stream in order to be recycled for usage as a product performing another function, reused for the same purpose or used to substitute <i>primary materials</i>	ISO 6707-3:2022	
<b>Recovered resource</b>	See secondary resource	ISO/DIS 59004	

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<b>Recovery</b>	Any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy. Annex II sets out a non-exhaustive list of recovery operations	Article 3, Definitions, DIRECTIVE 2008/98/EC	
<b>Recyclable</b>	Characteristic of a product, including packaging and associated components, that can be diverted from the waste stream through available processes and programmes, and can be collected, processed and returned to use in the form of raw materials	ISO 14050:2020	
<b>Recycled aggregate</b>	<p>Product of processing inert construction and demolition waste, asphalt planings and used railway ballasts into construction aggregates</p> <p>Recycled Aggregates is a term that describe crushed cement concrete or asphalt pavement from construction debris that is reused in other building projects</p>	<p>Mineral Products Association</p> <p><a href="https://www.buschsystems.com/blog/glossary-terms/">https://www.buschsystems.com/blog/glossary-terms/</a></p>	

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<b>Recycling</b>	<p>Any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations</p> <p>Process by which a discarded material is collected, sorted, processed and converted into raw materials which are then used in the production of new products</p> <p>Process where materials are collected, processed and re-manufactured into new products or use as a raw material substitute</p> <p>Activities to obtain recovered resources for use in a process or a product, excluding energy recovery</p>	<p>Article 3, Definitions, Directive 2008/98/EC</p> <p>European Economic and social committee. Lets speak ...</p> <p>Guidelines for the waste audits before demolition and renovation works of buildings, May 2018</p> <p>ISO/DIS 59004</p>	<p>Recycling does not include backfilling operations, and recycled materials are derived from end-of-waste.</p>
<b>Refurbish</b>	<p>Restore an item, during its expected service life, to a useful condition for the same purpose with at least similar quality and performance characteristics</p>	<p>ISO/DIS 59004</p>	

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<b>Refurbishment</b>	Modification and improvements to an existing building in order to bring it up to an acceptable condition	ISO 6707-1:2020; EN 15643-1:2018	
<b>Refuse-derived fuels</b>	Waste that is used entirely or to a large extent for the purpose of energy generation. Waste materials which are generally reusable as RDF include tyres, rubber, paper, textiles, exhausted oils, wood, plastics, industrial waste, hazardous waste and solid urban waste	EU Construction and Demolition Waste Management Protocol (2016)	
<b>Remanufacture</b>	Return an item to original condition from both a quality and performance perspective using an industrial process	ISO/DIS 59004	
<b>Remanufacturing</b>	Industrial process by which an item is returned to original condition from both quality and performance perspective	ISO/DIS 59004	
<b>Remediation</b>	Action or measure taken to lessen, clean-up, remove or mitigate the existence of hazardous materials existing on a property to such standards, specifications or requirements as may be required by statutes, rules or regulations	European Economic and social committee. Lets speak ...	

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<b>Renewable resource</b>	<p>Resource that is grown, naturally replenished or cleansed on a human time scale</p> <p>Resource that can be naturally or artificially grown or regenerated using processes found in nature within a foreseeable time frame</p>	<p>ISO 21930:2017</p> <p>ISO/DIS 59004</p>	
<b>Renovation</b>	<p>Work that involves the structural alteration of buildings, the substantial replacement of main services or finishes and/or the substantial changed use of floor space whilst at the same time including associated redecoration and repair works on the one hand and related new building on the other. Renovation covers all the work done to existing buildings as the four R's: renovation, rehabilitation, restoration and remodelling. Renovation is addressed from a broad perspective, including residential, historical and commercial buildings owned and managed by private/public companies or authorities</p>	<p>EU Construction and Demolition Waste Management Protocol (2016)</p>	
<b>Repair</b>	<p>Action to restore a product to a condition needed for the product to function according to its original purpose</p>	<p>ISO/DIS 59004</p>	<p>Actions can include renewal or replacement of worn, damaged, or degraded parts of the product</p>

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<b>Repurpose</b>	Adapt a product, or its component parts for use in a different function than it was originally intended for without making major modifications to its physical or chemical structure	ISO/DIS 59004	
<b>Repurposing</b>	Process by which a product, or its component parts are adapted for use in a different function than it was originally intended for without making major modifications to its physical or chemical structure	ISO/DIS 59004	
<b>Residual service life</b>	Predicted remaining service life of a building or structure partway through its use phase	European Economic and social committee. Lets speak ...	
<b>Residual waste</b>	Material left after any waste treatment process, including industrial, urban, agricultural, mining or other similar treatments	<a href="https://www.eea.europa.eu/help/glossary/eea-glossary">https://www.eea.europa.eu/help/glossary/eea-glossary</a>	
<b>Residue</b>	<p>Something that remains after a part is taken, separated, or designated or after the completion of a process</p> <p>Usually small amount of something that remains after a process has been completed or a thing has been removed</p>	<p><a href="https://www.merriam-webster.com/thesaurus">https://www.merriam-webster.com/thesaurus</a></p> <p><a href="https://www.britannica.com/technology/">https://www.britannica.com/technology/</a></p>	

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<b>Resilience</b>	Ability to endure, resist, adapt to, or recover from disruptive events or conditions, whether natural or anthropogenic	ISO/DIS 59004	
<b>Resource</b>	Asset from which a solution is created or implemented	ISO/DIS 59004	(1) Asset refers to physical resources such as natural, virgin, recoverable and recovered resources. (2) A resource can be either a renewable or non-renewable resource. (3) Resource includes any energy type, e.g., the energy content or energy potential of materials. (4) Resources can be considered concerning both stocks and flows. (5) Depending on the context, reference to 'resource' includes 'raw material', 'feedstock', 'material' or 'component'.
<b>Responsible materials sourcing / Responsible sourcing schema</b>	Holistic approach managing a product from the point at which a material is mined or harvested in its raw state through manufacture and processing, through use, reuse and recycling, until its final disposal as waste with no further value.	European Economic and social committee. Lets speak ...	
<b>Responsible sourcing (of materials)</b>	Sustainable approach to managing a product from the point at which its raw materials and energy are extracted or harvested in their raw state through manufacturing and processing	ISO 6707-3:2022	Responsible sourcing manages social, environmental and/or economic aspects. Responsible sourcing manages the supply chain.

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<b>Restoration</b>	The act of restoring or state of being restored, as to a former or original condition, place, etc.	<a href="https://www.collinsdictionary.com/">https://www.collinsdictionary.com/</a>	
<b>Retain value</b>	Process of maintaining the value of the object of consideration (i.e., a resource)	ISO/DIS 59004	
<b>Retrofitting</b>	To furnish (something, such as a computer, airplane, or building) with new or modified parts or equipment not available or considered necessary at the time of manufacture OR to install (new or modified parts or equipment) in something previously manufactured or constructed OR to adapt to a new purpose or need	<a href="https://www.merriam-webster.com/thesaurus">https://www.merriam-webster.com/thesaurus</a>	

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<b>Reuse</b>	<p>Any operation by which products or components that are not waste are used again for the same purpose for which they were conceived</p> <p>Using materials or building elements on more than one occasion, either for the same or for a different purpose, without the need for reprocessing</p> <p>Any operation through which products or components that are not waste are used again for the same purpose for which they were conceived or used for other purposes (without reprocessing)</p> <p>Use of a product after its initial use, for the same purpose for which it was originally designed</p>	<p>EU Construction and Demolition Waste Management Protocol (2016)</p> <p>Guidelines for the waste audits before demolition and renovation works of buildings, May 2018</p> <p>EN 15643-1:2010; Article 3, Definitions, DIRECTIVE 2008/98/EC</p> <p>ISO/DIS 59004</p>	
<b>Reverse logistics</b>	<p>Process of managing, collecting, and moving products from their current location after the end-of-use for the purpose of recovering or retaining value through proper handling</p>	<p>ISO/DIS 59004</p>	
<b>Reversible connection</b>	<p>connection that can be disconnected and/or disassembled for easy alterations and additions to structures</p>	<p>ISO 6707-3:2022</p>	<p>This is applicable to components, assemblies, modules or systems within a construction works.</p>

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<b>Scavenging</b>	Activity of identifying usable materials that takes place after demolition; in this context, particularly re-usable and recyclable materials	EU Construction and Demolition Waste Management Protocol (2016)	
<b>Secondary data</b>	Data that do not fulfil the requirements for primary data	ISO 14050:2020	
<b>Secondary material</b>	Material recovered from previous use or from waste which substitutes primary materials  Material which substitutes a primary material	EN 15643:2021  European Economic and social committee. Lets speak ...	
<b>Secondary raw material</b>	Materials that can be recycled and then injected back into the economy as new raw materials. SRMs are typically obtained either from production waste or from End-of-Life products, sent to recycling plants at the end of their lifespan	Study on the EU list of Critical Raw Materials	
<b>Secondary resource</b>	Resource that is obtained from a resource that has already been processed or used	ISO/DIS 59004	
<b>Selective deconstruction</b>	Means removal of materials from a demolition site in a pre-defined sequence in order to maximize recovery and recycling performance	Guidelines for the waste audits before demolition and renovation works of buildings, May 2018	

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<b>Selective demolition</b>	Sequencing the demolition activities to allow the separation and sorting of building materials	EU Construction and Demolition Waste Management Protocol (2016)	
<b>Separated collection</b>	Collection where a waste stream is kept separately by type and nature so as to facilitate a specific treatment	EU Construction and Demolition Waste Management Protocol (2016)	
<b>Service</b>	Activity designed or executed with a purpose	ISO/DIS 59004	Services have intangible elements. Provision of a service can involve, for example, the following: an activity performed on a tangible product supplied by a customer (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)
<b>Serviceability</b>	Capability of a facility, building or other constructed asset, or of an assembly, component or product	ISO 15686-10:2010	
<b>Service life</b>	<p>Period of time after installation during which a building or an assembled system meets or exceeds the performance requirements</p> <p>Period of time during which a product in use meets or exceeds the performance requirements</p>	<p>ISO 15686-1:2011</p> <p>ISO 14050:2020</p>	

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<b>Smart manufacturing</b>	See 'Industry 4.0'	IBM. (2022) What is Industry 4.0? Ibm; IBM	Industry 4.0 and Smart Manufacturing are synonyms
<b>Stage</b>	Distinct period in a project used as a management tool	ISO 6707-2:2017	
<b>Stockpiling location</b>	Platform for storing waste that can be moved	EU Construction and Demolition Waste Management Protocol (2016)	
<b>Stripping</b>	Activity of removing valuable materials from a site, installation or building that takes place before demolition	EU Construction and Demolition Waste Management Protocol (2016)	
<b>Subcontractor</b>	An individual or business firm contracting to perform part or all of another's contract	Merriam-Webster Dictionary	
<b>Supply chain</b>	Those involved, through upstream and downstream linkages, in activities delivering value in the form of a <i>product</i> to different <i>interested parties</i>	ISO 14050:2020	

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<b>Sustainability</b>	<p>All activities which ensure that human beings can co-exist with the natural world around them. This can involve scientific and technological invention as well as a careful practice to reduce the depletion of natural resources. In the Butterfly Diagram, defined by the Ellen Macarthur Foundation, sustainability involves all the activities on the left side. These are focused on the biosphere which means that all practices concern and involve natural resources. (see circularity definition)</p>	<p>Ellen McArthur Foundation</p>	
<b>Sustainable development</b>	<p>Development that meets the needs of the present without compromising the ability of future generations to meet their own needs</p>	<p>Brundtland Report (1987); ISO 14050:2020</p>	

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<p><b>System</b></p>	<p>Collection of components that go together to make an element or to carry out a function. For a pitched roof, the rafters, lining, tiles, ceiling boards, insulation and ceiling finish comprise a system, or a low temperature hot water heating system is formed from a boiler, pipework, tank, radiators, etc. A signal system for a railway has a number of components and products; and the scum removal system is part of a wastewater treatment entity</p> <p>The constituent parts of a building, including, but not limited to, structural systems, mechanical and electrical systems, façade, ceiling, floors and wall systems</p> <p>Collection and interconnection of all physical facilities and human interactions that are operated in a coordinated way to provide a particular service</p> <p>Set of interrelated or interacting elements</p>	<p>Uniclass 2015</p> <p>RIBA Plan of Works 2020</p> <p>PAS 2080:2023</p> <p>ISO/DIS 59004</p>	
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<b>System boundary</b>	Interface in the assessment between a building (or structure) and the environment or other product systems  Boundary based on a set of criteria specifying which unit processes are part of the system under study	EN 15643:2021  ISO 14050:2020	
<b>Temporary works</b>	All temporary works of every kind (other than Contractor's Equipment) required on site for the execution and completion of the permanent works and the remedying of any defects  Works undertaken during construction work or works to stabilize or protect an existing building or structure, neither works of which are intended or required to form part of the completed construction works	FIDIC  ISO 6707-2:2017	
<b>Testing body</b>	Organization providing an environment for testing, test implementation and means for performing and reporting on the testing	ISO 14050:2020	
<b>Testing plan</b>	Planning document detailing the principles, test methods, conditions, procedures and data quality required to carry out testing and to produce test data	ISO 14050:2020	

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<b>Testing report</b>	Document describing conditions and results of testing, and usually including a description of or reference to procedures	ISO 14050:2020	
<b>Traceability</b>	Ability to trace the history, application or location of that which is under consideration	ISO 6707-2:2017; ISO/DIS 59004	
<b>Treatment</b>	recovery or disposal operations, including preparation prior to recovery or disposal	Article 3, Definitions, DIRECTIVE 2008/98/EC	
<b>Unit process</b>	Smallest element considered in the life cycle inventory analysis for which input and output data are quantified	ISO 14050:2020	
<b>Unavoidable waste</b>	Waste that is considered unsuitable for further use, for example materials that are considered as hazardous such as asbestos (and asbestos contaminated materials), or material treated with persistent organic pollutants	Zero Avoidable Waste in Construction (Construction Leadership Council, 2020)	

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<b>Up-cycling</b>	<p>To recycle (something) in such a way that the resulting product is of a higher value than the original item: to create an object of greater value from (a discarded object of lesser value)</p> <p>Process of transforming by-products, waste materials, useless, or unwanted products into new materials or products perceived to be of greater quality, such as artistic value or environmental value</p>	<p><a href="https://www.merriam-webster.com/dictionary">https://www.merriam-webster.com/dictionary</a></p>	
<b>Upgradability</b>	<p>Characteristic of a product that allows its modules or parts to be separately upgraded or replaced without having to replace the entire product</p>	<p>ISO 14050:2020</p>	
<b>Useful life</b>	<p>Estimated amount of time during which an asset or facility will yield income or be useful</p>	<p>Merriam-Webster Dictionary</p>	
<b>Validation</b>	<p>Confirmation through the provision of objective evidence that the requirements for a specific intended use or application have been fulfilled</p>	<p>ISO 14050:2020</p>	
<b>Value</b>	<p>Gain/s or benefit/s from satisfying needs and expectations, in relation to the use and the conservation of resources</p>	<p>ISO/DIS 59004</p>	

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<b>Value chain</b>	Set of organizations that provide a solution that results in value for them	ISO/DIS 59004	
<b>Virgin resource</b>	Primary resource	ISO/DIS 59004	
<b>Waste</b>	<p>Any substance or object which the holder discards or intends or is required to discard</p> <p>Material, often considered unusable, left over from any manufacturing, industrial, agricultural or other human process</p> <p>Resource that is considered to not be an asset as it, at the time, provides no value to the holder</p>	<p>Article 3, Definitions, DIRECTIVE 2008/98/EC</p> <p>European Economic and social committee. Lets speak ...</p> <p>ISO/DIS 59004</p>	
<b>Waste audit</b>	Assessment of construction and demolition waste streams prior to demolition or renovation of buildings and infrastructures	Guidelines for the waste audits before demolition and renovation works of buildings, May 2018	
<b>Waste auditor</b>	Expert or the team of experts (auditors team) performing the waste audit. It can be represented by the building owner or consultant (e.g. an architect or structure engineer) acting on behalf of the owner	Guidelines for the waste audits before demolition and renovation works of buildings, May 2018	

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<b>Waste characterisation</b>	<p>Process by which the composition of different waste streams is analysed. Waste characterisation plays an important part in any treatment of waste which may occur.</p> <p>Waste characterization means finding out how much paper, glass, food waste, etc. is discarded in your waste stream. Waste characterization information helps in planning how to reduce waste, set up recycling programs, and conserve money and resources</p>	<p>Wikipedia</p> <p><a href="https://www2.calrecycle.ca.gov/WasteCharacterization/General">https://www2.calrecycle.ca.gov/WasteCharacterization/General</a></p>	
<b>Waste dumping</b>	<p>The disposal of solid wastes without environmental controls</p>	<p><a href="https://www.eea.europa.eu/help/glossary/eea-glossary/waste-dumping">https://www.eea.europa.eu/help/glossary/eea-glossary/waste-dumping</a></p>	
<b>Waste holder</b>	<p>Waste producer or the natural or legal person who is in possession of the waste</p>	<p>Article 3, Definitions, DIRECTIVE 2008/98/EC</p>	
<b>Waste inventory</b>	<p>Set of data from the waste audit. It comprises a list of materials and products, including quantities estimation, waste code, location and characteristics identified from desk study and field survey (geometry, properties, condition, etc.). Additional testing may be required and results should be attached</p>	<p>Guidelines for the waste audits before demolition and renovation works of buildings, May 2018</p>	

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<b>Waste management</b>	The collection, transport, recovery (including sorting), and disposal of waste, including the supervision of such operations and the after-care of disposal sites, and including actions taken as a dealer or broker	Article 3, Definitions, DIRECTIVE 2008/98/EC	
<b>Waste management plan</b>	Sets out the approach to demolition, the treatment and logistics of the materials identified in the pre-demolition audit	Guidelines for the waste audits before demolition and renovation works of buildings, May 2018	
<b>Waste manager</b>	Responsible for the appropriate management and disposal of the waste received from the waste holder or producer. The waste manager should also contribute to the traceability aspects of waste	Guidelines for the waste audits before demolition and renovation works of buildings, May 2018	
<b>Waste minimisation</b>	<p>The reduction of waste at source, (i.e. designing out waste) by understanding its root causes. and re-engineering current processes and practices to alleviate its generation</p> <p>Reducing waste on a construction site to ensure as little waste as possible goes to landfill</p>	<p>Osmani, M. (2012) Construction waste minimization in the UK: current pressures for change and approaches. Procedia Social and Behavioural Sciences 40, pp 37-40</p> <p><a href="https://www.businesswaste.co.uk/sectors/construction-waste-management/how-to-reduce-waste-in-construction/#:~:text=Reducing%20waste%20on%20a%20construction,%2Drelated%20accidents%20on%2Dsite">https://www.businesswaste.co.uk/sectors/construction-waste-management/how-to-reduce-waste-in-construction/#:~:text=Reducing%20waste%20on%20a%20construction,%2Drelated%20accidents%20on%2Dsite</a></p>	

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<b>Waste prevention</b>	Extension of the life span of products	DIRECTIVE 2008/98/EC	
<b>Waste producer(originator)</b>	<p>Anyone whose activities produce waste (original waste producer) or anyone who carries out pre-processing, mixing or other operations resulting in a change in the nature or composition of this waste</p> <p>Means anyone whose activities produce waste. The waste producer is the person or legal entity that executes the demolition/renovation work</p>	<p>Article 3, Definitions, DIRECTIVE 2008/98/EC</p> <p>Guidelines for the waste audits before demolition and renovation works of buildings, May 2018</p>	
<b>Waste recovery</b>	Any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy <sup>2</sup> . It includes preparing for re-use, recycling, backfilling, energy recovery and other operations which are listed in Annex II of the directive 2008/98/EC	DIRECTIVE 2008/98/EC	

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<b>Waste reduction</b>	<p>Reducing the amount of hazardous waste produced during construction projects to the minimum feasible degree; in turn reducing the impact of waste on the environment, and promoting sustainable development of the construction industry.</p> <p>The minimization of waste at its source to minimize the quantity required to be treated and disposed of, achieved usually through better product design and/or process management. Also called waste minimization</p>	<p>Liu, J., Yi, Y., Wang, X. (2020) Exploring factors influencing construction waste reduction: A structural equation modelling approach. Journal of Cleaner Production, 276, 123185</p> <p><a href="https://www.igi-global.com/dictionary">https://www.igi-global.com/dictionary</a></p>	
<b>Waste-to-energy</b>	<p>Any waste treatment process that creates energy in the form of electricity, heat or transport fuels (e.g. diesel) from a waste source</p> <p>Conversion of waste materials for which no recycling demand exists diverted from a landfill into usable heat, electricity, or fuel through a variety of processes, including combustion, gasification, pyrolysis, anaerobic digestion, and landfill gas recovery</p>	<p>World Energy Council (2013) World Energy Resources: Waste-to-energy. <a href="https://www.worldenergy.org/assets/images/imported/2013/10/WER_2013_7b_Waste_to_Energy.pdf">https://www.worldenergy.org/assets/images/imported/2013/10/WER_2013_7b_Waste_to_Energy.pdf</a></p> <p>ISO 6707-3:2022</p>	

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<b>Waste to energy</b>	<p>Conversion of <i>waste</i> materials for which no <i>recycling</i> demand exists diverted from a <i>landfill</i> into usable heat, electricity, or fuel through a variety of processes, including <i>combustion</i>, gasification, pyrolysis, anaerobic digestion, and <i>landfill gas</i> recovery</p> <p>Waste-to-energy scheme means incineration of waste with recovery of generated energy. Waste-to-energy schemes turn waste into steam or electricity to heat, cool, light and/or otherwise power homes and industry through the process of combustion. Just as coal, oil or natural gas is burned in boilers to generate electricity, waste is used as a fuel to generate power</p>	<p>ISO 6707-3:2022</p> <p><a href="https://www.eea.europa.eu/help/glossary/eea-glossary">https://www.eea.europa.eu/help/glossary/eea-glossary</a></p>	
<b>Waste transfer station</b>	<p>Any site, location, tract of land, installation, or building that is used or intended to be used primarily for the purpose of transferring solid wastes</p>	<p>EU Construction and Demolition Waste Management Protocol (2016)</p>	
<b>Waste treatment</b>	<p>Recovery or disposal operations, including preparation prior to recovery or disposal</p>	<p>EU Construction and Demolition Waste Management Protocol (2016)</p>	

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<b>Whole-life cost</b>	All significant and relevant initial and future costs and benefits of an <i>asset</i> , throughout its <i>life cycle</i> , while fulfilling the performance requirements (compare to life-cycle cost)	ISO 15686-5:2017	
<b>Zero waste</b>	Philosophy that encourages the design of resource life cycle so that waste is eliminated and all products are reused or recycled	ISO 6707-3:2022	

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