ELLEN MACARTHUR FOUNDATION

Circular economy glossary

Finding a common language — the circular economy glossary

In order to accelerate the transition to a circular economy, it is vital we speak with a common voice, using a common language and definitions that can be used by all.

This glossary is designed to increase understanding of the circular economy. It includes definitions for commonly-used terms such as recycle, reverse logistics, and finite resources. It also explains the difference between virgin, non-virgin, and renewable materials, biological and technical cycles, and reuse, refurbishment, and remanufacturing.

The terms in the glossary can be applied to any sector of the economy.

By establishing a common language, and defining terms that are often misunderstood, the aim is to make it easier for businesses, policymakers, and cities to align on what the circular economy is and how they can adopt truly circular models.

It can be used to aid understanding within organisations, facilitate collaboration and conversations with others, and in reports, strategies, and communications materials.

The circular economy glossary was created in collaboration with IKEA, one of our Strategic Partners.

> ***Engaging in complex topics such as the circular economy can be made easier and more accessible by finding a shared language that provides a common starting point for discussion, learning, and collaboration. Our ambition with the Foundation has been to level the playing field for the conversations and developments we are all undertaking in our efforts to transition into a circular economy mindset. We hope this will provide a solid reference point in the many aspects of anyone transitioning towards circularity.***
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> **Dominique Fularski,** Head of Communications, Circular Business Development, Inter IKEA Group

ANAEROBIC DIGESTION
Microbial breakdown of organic matter in the absence of oxygen.

In a circular economy, anaerobic digestion can be used to convert food by-products, sewage sludge, and other biodegradable materials into digestates (or 'biosolids') that can be used as soil enhancers and biogas.

BIOLOGICAL CYCLE
The processes - such as composting and anaerobic digestion - that together help to regenerate natural capital. The only materials suitable for these processes are those that can be safely returned to the biosphere.

CIRCULAR ECONOMY
A systems solution framework that tackles global challenges like climate change, biodiversity loss, waste, and pollution. It is based on three principles, driven by design: eliminate waste and pollution, circulate products and materials (at their highest value), and regenerate nature.

It is underpinned by a transition to renewable energy and materials. Transitioning to a circular economy entails decoupling economic activity from the consumption of finite resources. This represents a systemic shift that builds long-term resilience, generates business and economic opportunities, and provides environmental and societal benefits.

COMPOSTING
Microbial breakdown of organic matter in the presence of oxygen.

In a circular economy, composting can be used to convert food by-products and other biodegradeable materials into compost, which can be used as a soil enhancer.

DURABILITY
The ability of a product, component or material to remain functional and relevant when used as intended.

Durability often applies to the physical attributes of a product (its ability to resist damage and wear), though with some products durability can be technological (for example the ability of software to be upgraded many times), and it can be emotional (for example the ability of certain clothes to stay desirable over time).

FINITE MATERIALS
Materials that are non-renewable on timescales relevant to the economy, i.e. not geological timescales.

Examples include: metals and minerals; fossil forms of carbon such as oil, coal, and natural gas; and sand, rocks, and stones.

LIFESPAN/LIFETIME
The period of time from when a product is released for use after manufacture to the moment it becomes obsolete beyond recovery at product level.

LINEAR ECONOMY
An economy in which finite resources are extracted to make products that are used - generally not to their full potential - and then thrown away ('take-make-waste')

It is a wasteful and polluting system that degrades natural systems

MAINTAIN
Keep a product in its existing state of quality, functionally and/or cosmetically, to guard against failure or decline. It is a practice that retains the highest value of a product by extending its use period.

NON-VIRGIN MATERIALS
Materials that have been previously used.

This includes: materials in products that have been reused, refurbished or repaired; components that have been remanufactured; materials that have been recycled. Also referred to as secondary materials.

RECYCLABILITY
The ease with which a material can be recycled in practice and at scale.

RECYCLE
Transform a product or component into its basic materials or substances and reprocess them into new materials.

Embedded energy and value are lost in the process. In a circular economy, recycling is the last resort action.

REDISTRIBUTE
Divert a product from its intended market to another customer so it is used at high value instead of becoming waste.

For example, a supermarket can redistribute surplus edible food to a food-bank.

REFURBISH
Return a product to good working order. This can include repairing or replacing components, updating specifications, and improving cosmetic appearance.

REGENERATIVE PRODUCTION
Regenerative production provides food and materials in ways that support positive outcomes for nature, which include but are not limited to: healthy and stable soils, improved local biodiversity, improved air and water quality.

In agriculture, regenerative production schools of thought include agroecology, agroforestry, and conservation agriculture.

REMANUFACTURE
Re-engineer products and components to as-new condition with the same, or improved, level of performance as a newly manufactured one.

Remanufactured products or components are typically provided with a warranty that is equivalent to or better than that of the newly manufactured product

RENEWABLE ENERGY
Energy derived from resources that are not depleted on timescales relevant to the economy, i.e. not geological timescales.

Examples include: wind, solar, hydropower, hydrothermal, ocean (wave and tidal), geothermal, and biogas from anaerobic digestion.

RENEWABLE MATERIALS
Materials that are continually replenished at a rate equal to or greater than the rate of depletion.

Examples include: cotton, hemp, maize, wood, wool, leather, agricultural by-products, nitrogen, carbon dioxide, and sea salt. To fit in a circular economy such materials (where relevant) must be produced using regenerative production practices.

REPAIR
Operation by which a faulty or broken product or component is returned back to a usable state to fulfil its intended use.

REPAIRABILITY
The ease with which a product or component can be repaired.

REUSE
The repeated use of a product or component for its intended purpose without significant modification.

Small adjustments and cleaning of the component or product may be necessary to prepare for the next use.

REVERSE LOGISTICS
Supply chains dedicated to the reverse flow of products and materials for the purpose of maintenance, repair, reuse, refurbishment, remanufacture, recycling, or regenerating natural systems.

SHARING
The use of a product by multiple users. It is a practice that retains the highest value of a product by extending its use period.

TECHNICAL CYCLE
The processes that products and materials flow through in order to maintain their highest possible value at all times. Materials suitable for these processes are those that are not consumed during use - such as metals, plastics and wood.

In the technical cycle the opportunities to maintain and generate value come through retaining the greatest proportion of the energy and labour embedded in the product. This is achieved, in order of value, by: maintaining, prolonging, sharing; reusing and redistributing; refurbishing and remanufacturing; and recycling.

VIRGIN MATERIALS
Materials that have not yet been used in the economy.

These include both finite materials (e.g. iron ore mined from the ground) and renewable resources (e.g. newly produced cotton).

The Ellen MacArthur Foundation, an international charity, develops and promotes the circular economy in order to tackle some of the biggest challenges of our time, such as climate change, biodiversity loss, waste, and pollution.

We work with our network of private and public sector decision-makers, as well as academia, to build capacity, explore collaborative opportunities, and design and develop circular economy initiatives and solutions.

Increasingly based on renewable energy, a circular economy is driven by design to eliminate waste, circulate products and materials, and regenerate nature, to create resilience and prosperity for business, the environment, and society.

ELLEN MACARTHUR FOUNDATION

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