Certified Specialist Programme in Circular Economy Best Practices

Introduction to Circular Economy

Circular Economy (CE) is a model that seeks to redefine growth, focusing on positive society-wide benefits. It is built on three principles: designing out waste and pollution, keeping products and materials in use, and regenerating natural systems.

A key term in CE is regenerative. Regenerative systems are designed to regenerate and restore the natural resources they use. This is in contrast to traditional, linear economy models that extract resources, use them, and then dispose of them as waste. Regenerative systems prioritize the health of the whole system, including the people, plants, and animals that rely on it.

Another important concept in CE is closed-loop systems. Closed-loop systems aim to keep resources in use for as long as possible by recycling or repurposing them at the end of their initial use. This reduces the need for new raw materials and the associated environmental impacts. An example of a closed-loop system is a company that collects used plastic bottles, recycles them into new bottles, and then uses those bottles to make new products.

A critical aspect of CE is the idea of extended producer responsibility (EPR). EPR is a policy approach in which manufacturers are responsible for the entire lifecycle of their products, including disposal. This includes designing products to be easily disassembled and recycled, as well as taking back used products for recycling. EPR encourages manufacturers to consider the environmental impacts of their products throughout their entire lifecycle, rather than just during the production phase.

A related concept is product-as-a-service (PaaS). PaaS is a business model in which companies provide a product or service as a subscription, rather than selling the product outright. This allows companies to maintain ownership and control of the product, ensuring that it is properly maintained, repaired, and eventually recycled. An example of PaaS is a company that leases office equipment, such as printers and copiers, rather than selling them.

In a CE, waste is seen as a resource. Rather than viewing waste as something to be disposed of, CE sees it as an opportunity to recover valuable materials and keep them in use. This is often achieved through industrial symbiosis, in which the waste of one company becomes the input for another. An example of industrial symbiosis is a paper mill that uses waste heat from a nearby power plant to dry its paper.

Biomimicry is another key concept in CE. Biomimicry is the practice of designing products and systems that mimic nature's patterns and strategies. By learning from nature's time-tested designs, CE can create products and systems that are more sustainable and efficient. An example of biomimicry is the development

of self-healing materials that mimic the way that living organisms repair themselves.

CE also emphasizes the importance of collaboration and partnership throughout the value chain. By working together, organizations can create shared value and drive innovation. This can include partnerships between companies, governments, and non-governmental organizations (NGOs). An example of this is the development of a circular supply chain for textiles, in which brands, retailers, and suppliers work together to reduce waste and improve sustainability.

CE is not just about reducing waste and improving resource efficiency. It is also about creating new opportunities for economic growth and job creation. By transitioning to a CE, organizations can unlock new revenue streams and create new markets. For example, a company that specializes in recycling could expand its operations to include remanufacturing and refurbishing.

CE is also about creating a more equitable and just society. CE can help to reduce poverty and inequality by creating new opportunities for employment and entrepreneurship. By designing systems that are more inclusive and participatory, CE can help to build more resilient and sustainable communities.

However, CE also presents challenges and trade-offs. For example, transitioning to a CE may require significant upfront investments in new technologies and infrastructure. There may also be social and cultural barriers to overcome, such as resistance to change or lack of awareness about CE.

In conclusion, CE is a model that seeks to redefine growth and create positive society-wide benefits. It is built on three principles: designing out waste and pollution, keeping products and materials in use, and regenerating natural systems. CE is a complex and multifaceted concept that encompasses a wide range of practices and strategies. By embracing CE, organizations can create new opportunities for economic growth, job creation, and social equity, while also reducing waste and improving sustainability. However, CE also presents challenges and trade-offs, and will require collaboration and partnership throughout the value chain.