

Based on The FM Lexicon by Martin Pickard
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Zero Waste is a concept being pioneered by an increasing number of corporations, municipalities, and some provincial and national governments. It entails re-designing products and changing the way that waste is handled so that products last longer, materials are recycled, or, in the case of organics, composted.

Zero Waste means designing out pollution and waste at the start of the process, through better product design, clean production and sensitive material selection. If one is left with a problem at the end of the useful life of a product, process or service, then the point at which this problem was introduced must be re-designed, such that the problem is no longer within the process.

The immediate drivers behind the move for Zero Waste are environmental and are linked to the growing awareness of the dangers to human health of waste landfills and incinerators. Many landfill sites are major producers of methane and polluters of water tables. Incinerators are said to produce greenhouse gases and are a source of heavy metals, particulates and dioxins. By designing waste out of the system the adherents of Zero Waste aim to address the cause of such pollution.

Advocates of Zero Waste also claim that it will lighten the ever-growing pressure on the world's forests, soils, and mineral resources by making more with less. It is estimated that globally only 1% of materials are in use 6 months after their sale, with at least 32 kg of waste is produced for every kg of product on the shelf. Only 6% of materials extracted from the Earth are turned into durable goods – the other 94% become waste within months.

A structured approach to Zero Waste begins with a redesign of products and manufacturing processes. Doubling the life of a car saves the 15 tonnes of materials required to make a new one. Recycling paper gives wood fibres six lives rather than one. Increasing the productivity of resources in this way also leads to major savings in energy. Zero Waste can also play a central role in cutting CO₂ emissions and sequestering carbon in the soil.

The second area of focus is Extended producer responsibility (EPR) which is defined as the extension of the responsibility of producers for the entire product and packaging life-cycle, and especially for their take-back, recycling, and disposal. Manufacturers are held physically or financially responsible for products and packs when consumers are done with them.

Currently, most end-of-life management costs fall on local governments and consumers which reduces the incentive for companies to re-design or recycle their products. An EPR approach is said to create and optimise product recovery infrastructure, levelling the playing field among manufacturers and shifting the costs of recycling away from taxpayers to manufacturers.

Zero Waste is also said to have a further economic dividend as the redesign of production and increased recycling to eliminate waste stimulates a possible green industrial revolution. New materials and growth industries are already emerging from the new focus on sustainability, together with a growth in employment.

In Germany recycling already employs more people than telecommunications. In the United States it has overtaken the automotive industry in direct jobs. Governments that have embarked on policies to reduce waste in order to combat pollution and climate change, are claiming that zero waste is a key element in a post industrial economic strategy.

Facilities Management from A to Z



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The Scottish Government is a strong supporter of the Zero Waste approach and the Zero Waste Scotland website is an excellent source of resources and case studies that facilities managers may find useful.
www.zerowastescotland.org.uk