

Explain how a
company can
operationally manage
environmental issues



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Environmental concerns play an increasingly important role in product and process design processes' (Coulter, 1995 Companies are now starting to realise the consequences their operations are having on the environment, and as such, a number of environmentally conscious engineering efforts have been implemented to reduce these effects.

Environmental Engineering

' Environmental engineering is concerned with managing the fate, transport and control of contaminants in water supplies and discharges, air emissions and solid wastes' (Coulter, 1995: 3). The focus of environmental engineering is therefore to deal with waste products after pollutants have been generated and then develop appropriate technology to mitigate their impact, e. g. synthetic landfill liners to contain polluted water seepage. However, Coulter (1995: 4) criticises environmental engineering techniques for not addressing the primary cause, and simply transferring the problem elsewhere.

Pollution Prevention

' The concept of pollution prevention, as an alternative to treatment and disposal has been embraced by pioneering corporation and state level industry assistance programs' (Coulter, 1995: 4). The key aim is to eliminate pollutants from existing products and process technologies, and to introduce new equipment, technology and processes to improve manufacturing techniques and move towards ' zero carbon economies'. However, Coulter (1995: 4) also notes that ' the transition from pollution control to prevention has been hampered by limited information, technologies and capital, as well as by impediments in existing regulatory policies'.

Design For The Environment

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' Designing for the environment' acknowledges that whilst there may be negative environmental effects during a production life cycle, designers are conscious of this during the design stage. They can therefore incorporate operating constraints into the initial design phase of a product. Therefore negative environmental effects will be limited. For example, Aerial clothes tablets have now been designed to clean cloths at 30°C (as opposed to 40°C), which saves energy of the washing machine.

Life Cycle Design

Coulter (1995: 5) describes life cycle design as a ' cradle to grave approach, which provides the most complete environmental profile of goods and services'. It provides a holistic view of product design, manufacturing, consumer use and disposal. High emphasis is placed on the environment, and companies work towards achieving sustainable development techniques in ' green product design'.

Green Engineering

The US Congress Office of Technology Assessments acknowledges green design as ' introducing two general goals; waste prevention and better materials management'. Through a combination of these two processes, it is hoped environmental problems can be mitigated and prevented. However, a recent example of supermarket carrier bags adds scepticism to this approach. For example, Tesco have reduced the amount of polyethylene used to make their carrier bags. However, this has resulted in customers ' double bagging' to make their bags stronger.

Industrial Ecology

' The concern of industrial ecology ranges over many products from multiple manufacturers (Coulter, 1995: 5). It provides an integrated systems <https://assignbuster.com/explain-how-a-company-can-operationally-manage-environmental-issues/>

approach to managing the environmental effects of using energy, materials and capital in industrial ecosystem according to Richards and Fullerton (1994).

In conclusion, companies must develop integrated holistic sustainable approaches to reduce the negative effects industry and manufacturing can have on the environment. Pollution prevention, considerations of life cycle consequences of production and approaches that place sustainability at the centre of their business models are needed to minimise man's current environmental impact, and that of future generations.

References

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