

Design for a One Planet Economy

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One Planet Design

Densely populated mature nations of the West are consuming the bulk of world finite resources and energy. Increasingly China, India amongst others are growing massively and increasing the strain on these resources. If current trends continue, by 2050 humanity we will need a 2nd planet in order to satisfy our demands for energy, commodities and water. Design for a One Planet Economy requires companies to align themselves to macro economic objectives and design their businesses to deliver an **80 per cent cut by 2050 in climate changing emissions (CO₂)** from direct and indirect sources. The UK government's move towards a 'One Planet Economy' as part of the new UK Sustainable Development Framework, emphasises that 'a successful business is consonant with and operates within an economy that grows within the capacity of the planet's resources'.

Design for a One Planet Economy requires **delivering new products and services with lower environmental impacts** throughout the entire lifecycle. It also requires the **delivery of innovative and competitive new business models** and products with new design solutions. This program requires nothing short of major cultural and behavioural shifts-changes in our belief system. This, of course, is massively ambitious and has an evangelical tone. So be it.

A regulatory drive in reporting on carbon emissions will impact all companies across all sectors, not just direct emitters. Measuring the carbon footprint of a business provides a strong benchmark indicator across sectors, but is also instructive for setting goals within the innovation process.

Analysing carbon will demonstrate that companies with stronger environmental strategies have overall higher quality management teams. Estimates have shown significant downstream potential liabilities if companies are required to offset their emissions. Certain sectors could literally face costs mounting into billions of Euros. Leading companies are setting carbon reduction programmes across all operations yet many are still far behind. For companies where most of the tonnes of carbon dioxide (tCO₂e) emitted are from indirect sources there is an opportunity to reduce emissions through increasing energy efficiency and eco-design practices.

Giraffe's focus is on a design-led carbon reduction programme. All companies have a carbon footprint which is ***the emissions caused directly and indirectly by an organisation, individual, event, product or service***. A majority of emissions come directly from heat and transport and indirectly from utilities, manufacturing and using products and services throughout the lifecycle.

The process starts by establishing a baseline carbon figure. This accounts for the energy, water and waste associated with running the business. A number of approaches are taken to reducing this figure. The learning's from this analysis are factored into on-going company planning and future projects within the live design cycle. The success of innovation projects is measured against their consonance with the company's year on year carbon reduction targets, along with the typical commercial objectives. Where reduction is not possible Giraffe advises and manages companies on an appropriate offsetting mechanism. This is managed through Giraffe's One Planet Economy service. www.oneplaneeteconomy.com

Resource reduction is clearly the way forward. By this we mean that it much better to reduce the amount of materials, energy and associated emissions required in the first place rather than dealing with them at end of life or mitigating any responsibility by offsetting. This is clearly the best strategy for the environment, for business and for the bottom line.

Small changes can have a significant commercial and environmental benefits when aggregated across a business or entire sector. Recent carbon reduction projects by Giraffe have identified over £20 million in cost savings and over 50,000 (tCO₂e) along with a number of potential new business opportunities. The benefits of considering embodied CO₂ emissions associated with products and packaging are clear. One carbon-led redesign project undertaken by Giraffe looked at the company's packaging. The proposed redesign identified savings equivalent to offsetting the client's entire UK and Ireland retailing operations across 163 large stores.

This work leads to a significant change in processes and the culture of the businesses we work with which results in specific pledges such as:

- Implementing an environmental management system
- Developing systems of internal reporting to help monitor environmental performance
- Embedding environmental concerns when developing and changing business

activities, processes, products and services

- Engaging suppliers to implement environmental processes, policies and procedures in place
- Lifecycle assessment on innovation projects
- Setting annual CO₂ reduction targets across all business activities.

Innovation Techniques – Eco Dice™

Many scientists, policy makers and politicians, are, out of necessity, developing a better grasp of the environmental and ecological problems. Dr P.R. White of Proctor & Gamble stated that “Sustainable innovation means finding new ways to do new things, as well as new ways to do old things.” However, in order to achieve this we need innovation techniques that lead towards a new creative synthesis of innovation within the context of sustainability. The generic innovation process is well established. It can be seen as focussed converging activity. It underpins the activities of most professional sub groups. However, there seems to be something missing from the early parts of the innovation process. Where are the clear outcomes which are desirable, tangible and specific? Where are the visions and prototypes? We need clarity of perspectives and visions of a better future which are so clearly and convincingly rendered that everyone can make informed choices.

There are new forces and demands being brought to bear upon that generic process. The green imperative means that this well established process continues but there are now new criteria, new activities and new tools placed alongside.

In order to facilitate sustainable innovation we need experiential, visual, tactile design led techniques for exploring plausible ideas. Giraffe's Eco-dice™ technique acknowledges the 'distributed' nature of innovation between 'actors' across the entire business, including external sources such as University research laboratories and users.

There is a tendency to stick to the same old solutions and to what you know – for the obvious reason it is hard to stick to what you don't know. Creativity tools act as a catalyst to new combinations and connections. The Eco-dice™ is a generative technique facilitated in workshop sessions and has been used to great effect internationally with innovation teams in companies across all sectors.

The technique acknowledges two fundamental principles of creativity – constraints and randomness. Too often the environmental agenda is neglected within the

innovation management process. This technique incorporates sustainability criteria with mainstream considerations such as cost, market, user and time and so on. The target is a proposal, an idea, a diagram, a programme, for a design for a sustainable business, product or service which matches the dice parameters. All ideas generated by the Eco-Dice technique are assessed according to their 'sustainability credentials' which include resources, energy, water, waste, social ethical and product service systems (PSS).

Summary

Companies of all sizes have a lot of power to influence change. We mustn't be victims of our own narrowness and knowledge. We have to take some form of structural understanding of ecology and sustainability. The way forward is not to make us all ersatz scientists, but to give companies grounding in the basics of sustainability. This must be based on reasoned argument and sound science.

We realise that from a business perspective, there is little point making environmentally sensitive products and services if they are not commercially viable. Yet there are commercial benefits in being ahead of the game. For example, the ethical stance a company takes inevitably contributes to its brand. For some it is key to differentiating their offering. For these companies making a profit and philanthropy and not mutually exclusive. For others it is about improving efficiency.

New attitudes will pervade all strata of society. Businesses will operate according to new models. This is a simple choice because the alternative is that we slide, not with a bang but a whimper, into a morass of waste and toxicity. ***More than that, in the long term, economic, ethical and environmental targets do coincide – because no company no matter how adroit, can make money out of a poisoned population and a dead planet.***

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Giraffe was listed by *The Guardian* as one of the 10 brightest independent UK green businesses.

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