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## The Low Carbon Agenda

No.8 / September 2008

### Blimey O'Reilly!

I go on holiday for a couple of weeks and the economy goes into total meltdown. So does all this eco-stuff still matter?

Well, YES! More than ever, in fact.

Firstly, cutting carbon will cut costs - and with the high energy prices being a key part of the current problems, a low carbon economy would be a more stable economy. Secondly, no less than Sir Terry Leahy, CEO of Tesco, said this month "people's values do not change because the economy is going through a bumpy patch". If Tesco are pushing on with the Low Carbon Agenda, the rest of us should take heed.

And, in this edition we're looking at one of the most powerful ways of changing your carbon footprint - redesigning your product or service.

All the very best,

Gareth

**Gareth Kane, Terra Infirma Ltd**

[gareth@terrainfirma.co.uk](mailto:gareth@terrainfirma.co.uk)



### Why Redesign?

It has been estimated that 80% of the lifecycle environmental impact of a product is determined at the design stage. So by redesigning your product or service you can address almost all elements of your carbon footprint (scopes 1 - 4 in [Low Carbon Agenda issue 2](#)).

### Redesigning Products

To design a truly low carbon product, you must consider all phases of the product life cycle:

- Raw material extraction
- Manufacturing
- Distribution
- Use
- Disposal

In carbon terms, the carbon hotspots in the life cycle tend to be in raw material extraction as refining materials can take a huge amount of energy and, for products which consume energy like a car or a washing machine, the use phase.

Whether you are designing a pencil sharpener or a major chemical plant there are two basic low carbon design principles:

1. Use less stuff - materials, energy, water - for example:
  - Dematerialisation - design material out of the product

- Use energy efficient components - motors, bulbs, semiconductors etc
- Reduce friction, electrical and other forms of resistance
- Reduce carbon from distribution (shortening channels, using different modes of transport)

2. Use better stuff, for example:

- Use low embodied energy material (eg recycled or natural materials)
- Use low carbon forms of energy (renewable energy, waste heat)

## Low Carbon Services

It's a similar story for services - if you go back to the drawing board you can design the service to minimise its carbon footprint. For example it has been estimated that up to 80% of home deliveries fail, leading to added costs, added fuel consumption and frustrated customers. A low carbon delivery service could use a robust method of securing a parcel to the customer's home, or a network of neighbourhood contact points (eg stay at home parents or the retired) who would be paid to hold onto the goods for the customer.

## If you want to learn more...

Then come along to my '[Developing and Marketing Low Carbon Products](#)' seminar in Harrogate on 22 October 2008. The seminar is just one part of the all-day Low Carbon Innovation Exchange and I'm giving out a load of free goodies if you book via the link above.

## Low Carbon News

1. Terra Infirma has started publishing a set of free white papers, including:

- [A quick guide to carbon footprinting](#)
- [10 reasons why you MUST improve the environmental performance of your business](#)

2. The Energy Performance of Buildings Directive: From 1 October 2008 all properties (incl homes, commercial and public buildings) when bought, sold, built or rented will need an Energy Performance Certificate. Larger public buildings will also need to display an energy certificate.

3. This newsletter focusses on climate change mitigation (reducing carbon footprints). The flipside of mitigation is adaptation - preparing for the effects of climate change. The UK Govt has launched a [new adaptation website](#) for business and other organisations who will be directly affected (eg agriculture, tourism, insurance, construction).

## Tip of the Month

Zone heating and lighting systems so they can be adjusted to match shift patterns - there is no point in heating an entire factory just so one person can supervise weekend deliveries.

The small print:  
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