

# Sustainable Value

**Martin Charter**

Joint Coordinator, The Centre for Sustainable Design, UK

Martin Charter has held strategic planning, product development and marketing positions for Save & Prosper, Reed Exhibition Companies, the Creative Marketing Group, Greenleaf Publishing and The Earth Centre. He has over a decade of experience in 'business and environment' including publishing, consulting, training and research. He has an MBA from Aston University Business School and a postgraduate diploma in marketing. His publications include 'Greener Marketing' (Greenleaf Publishing, 1992), the forthcoming 'Greener Marketing 2' (Greenleaf Publishing, 1999), 'The Green Management Gurus' (Epsilon, 1996), 'Managing eco-design: a training solution' (The Centre for Sustainable Design, UK, 1997) and 'Environmental Management Websites' (Epsilon, 1996). He is currently the European Editor of 'The Journal of Corporate Environmental Strategy' (Elsevier, UK) and The Journal of Sustainable Product Design (The Centre for Sustainable Design, UK), and was the former editor of 'Greener Management International' (Greenleaf Publishing) and 'The Green Management Letter' (Euromangement, the Netherlands). His training and research interests include eco- and sustainable product innovation, business creativity and electronic publishing.

Martin Charter  
The Centre for Sustainable Design  
Faculty of Design  
The Surrey Institute of Art & Design  
Falkner Road  
Farnham  
Surrey  
GU9 7DS  
UK

Tel +44 (0)1252 892772  
Fax +44 (0)1252 892747  
email: mcharter@surrart.ac.uk

**Shell's recent experience with Brent Spar has highlighted the importance of societal sensitivity, alongside eco-efficiency, in the sustainable business debate. The 'soft agenda' is emerging but the issues are complex. This article presents some thoughts about this new agenda for sustainable product development and design (1). The issues relate not only to the physical product and service, but also the improvement of Sustainable Value and the reduction of negative sustainability impacts in the overall value creation process. This means considering not only economic and environmental issues, but also ethical and social implications in the delivery of products and services.**

## Balancing impacts and value

Every product or service has a sustainability impact. The aim of product developers should be to maximise the Sustainable Value embedded in the product, and minimise the negative impacts. Strictly speaking one cannot have a sustainable business or product, in an unsustainable world (2) but the company will have to define and understand its context, and explore strategies to maximise Sustainable Value. Each artifact or service should be designed to satisfy a human need. Traditional marketing focuses on the 'customer', however various stakeholders have a relationship with products or services, eg. suppliers have a social and economic stake in the process through employment and profitability. What individuals buy, in reality, is not only the function but also all the processes used to deliver that product or service. For example, if a consumer buys a solar powered calculator in the US, and the US company sources the product from a company in Sweden who purchases the components from an Indonesian company, whose factory has high environmental standards but employs child labour, but by employing children it allows a family of ten to live. These are some of the hugely complex relationships and issues involved in the process of delivering sustainable products or services or Sustainable Value.

*The problem with sustainability is that it has come to represent maintaining the status quo. It sounds like the objective is zero, ie. 'I'll be less bad today than I was yesterday'. The goal ought not to be 'less bad', but 'how good?', or 100% sustainability. The way to 100% sustainability is innovation.*

Professor William McDonough, University of Virginia, US.

## Opportunity focus

If one is going to influence this process it is essential to be aware of sustainability issues early in the product or service creation process ie. at the idea generation phase. Therefore if one provokes the process at its earliest stage by introducing sustainability or environmental issues then one has an opportunity to explore how the overall sum of the Sustainable Value (in the product and process) might be made greater than the negative impacts. However, it is a question of balance, with many of the considerations being highly judgemental. If one starts to incorporate environmental considerations at the evaluation phase then one has missed a chance to stimulate new ideas. The process is beyond eco-efficiency and 'Factor X' (3) thinking that focuses on primarily on materials and energy efficiency, but ignores ethical and social considerations.

The importance of 'soft' issues has been highlighted by Shell's Brent Spar and Ogoni experiences, and Monsanto's positioning of biotechnology as a sustainable solution. Existing in a 'CNN world' (4) means that companies are more exposed to societal scrutiny and those that ignore these issues, ignore them at their peril!

## Shell: six issues and dilemmas

- human rights
- climate change
- globalisation/MNCs
- politically sensitive regions
- industrial legacies
- renewable resources.

## Stakeholder orientation

A major issue in the creation of Sustainable Value will be the need to satisfy stakeholders (see Figure 1) in the process of the delivery of the functional unit through the product or service. For example, customers may be satisfied but if employees and suppliers are poorly treated, new ideas and improved productivity will not be generated, and the company may fail, therefore reducing 'quality of life' for stakeholders. Therefore it is essential to aim to improve the 'quality of life' of all stakeholders in the process.

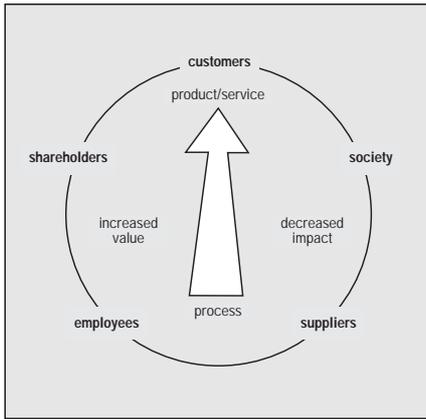


Figure 1: Sustainable Value

### The toolbox

Companies are starting to get more comfortable with eco- efficiency, but are not comfortable with the impact of the 'soft agenda'. The tools available to those in the product-development process reflect this, and are highly limited. The majority of tools revolve around Life Cycle Assessment (LCA), which is in effect an environmental evaluation device. Many existing LCA methodologies are starting to receive some criticism from business as being too time-consuming, costly and complex for use in the product development process. The demands at the level of eco-design are increasing focusing on simpler tools that enable decisions to be made, and don't slow the product development process. However, these tools are not designed for use in the idea generation phase and ignore the 'soft' issues.

### Systems view

Within the eco-efficiency paradigm, a model has been developed by Stevels, Brezet and Cramer (see Figure 2) that illustrates some of the complex issues of progressing from eco-design to (environmentally) sustainable design. It illustrates that the bigger the shift, the greater change that will be required and the greater need for multi-stakeholder part-

Level	Eco-design	Example	Time horizon
4	sustainability	?	0-30 years
3	product alternatives	LCD TV	0-10 years
2	green limits	'green TV'	0-5 years
1	improvements	current better TV	0-2 years

Source: Philips Consumer Electronics/Philips Centre for Manufacturing Technology

Figure 2: Levels of eco-design

nerships. For example, 'Factor 4' product innovations will require strong partnerships with suppliers of components, sub-assemblies or materials to reduce the mass of materials and energy used throughout each life cycle stage. 'Factor 10' products or services and those with greater intensity of Sustainable Value will require both customer ('business to business', intermediary and domestic) and supplier partnerships with significantly higher levels of education and involvement amongst each group in the value delivery process.

### Screening for sustainability

Part of the move towards the development of more sustainable products and services will be a process of understanding the sustainability impacts, and looking for opportunities to increase the overall Sustainable Value. After the idea generation phase, a 'Sustainability Screen' (see Figure 3) should be used that takes account of e3s considerations in the delivery of the product or service, at each stage of the life-cycle: extraction, manufacturing, transport, use and disposal – this is well beyond LCA! Adding in the 'soft issues' will mean balancing qualitative judgements, alongside quantitative measures used to determine economic and environmental criteria.

### Future

Shifting societal concerns are changing the sustainability agenda. Clearly, this means that there will be winners and losers, ie. those that produce cleaner products and those who don't! Part of the broader landscape will be how you manage the transition, particularly in relation to the move from products to services (dematerialisation). Understanding holistic sustainability impacts and increasing Sustainable Value will be a key challenge for product developers. •

### Sustainability Screen

#### Economic (e1)

- cost
- revenue
- corporate image

#### Environmental (e2)

- energy use
- materials use
- use of renewables

#### Ethical (e3)

- use of child labour
- links to oppressive regimes
- equal rights

#### Social (s)

- direct employment generated
- indirect employment generated
- quality of employment

Source: Martin Charter, The Centre for Sustainable Design, UK

Figure 3: Sustainability screen (e3s)

### References

- (1) Martin Charter in 'Design for Environmental Sustainability', Foresight, Office of Science and Technology, UK, May 1998
- (2) Martin Charter interviews Dr Brad Allenby, Journal of Sustainable Product Design, Issue 2, July 1997
- (3) Editorial, Martin Charter, Journal of Sustainable Product Design, Issue 2, July 1997
- (4) 'Profits and Principles – does there have to be a choice?', The Shell Report 1998