



# Sustainability

The role of standards

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**BSI**  
British Standards



## Executive summary

Trade has expanded across the globe rapidly since the 1970s, obscuring and lengthening supply chains. At the same time, the drive for further growth in developing and mature economies has intensified commercialization and resource pressure. Managers can no longer afford to ignore the crescendo of demands for transparency and social responsibility that have ensued, led by the sustainability movement.

Those that grapple with this issue are overwhelmed by the complexity and depth generated by the need to manage problems previously viewed as irrelevant to business or outside its direct control. The transparency expected from sustainable businesses entails rigorous definitions of where a supply chain begins and ends, and clarity on how its environmental and social impacts are measured. A sustainable business also has to redefine the values at its heart.

Standards play a crucial role in this new world. They focus on motivating management to develop more sustainable processes, products and services. They inform purchasing decisions by giving customers confidence that their suppliers have attained benchmark levels of sustainability. And finally, they play a crucial, fundamental role in encouraging innovation.

'Business as usual' is changing. When a bricklayer builds a house, the bricks are no longer viewed as merely bricks: rows of solid oblongs lining the foundations, whose cost is defined primarily by the price of the materials they contain. Increasingly, they also embody two relatively new management concepts – the product life cycle and sustainability.

It is not unusual now for managers to refer to the carbon or chemicals 'embedded' within the product. Only a trace of these elements may be physically identifiable inside it, but much more has been used or emitted way back down the supply chain. This includes the substantial labour employed to put the product together many thousands of miles away.

When a company adopts a sustainability policy, social conditions beyond the limits of its own four walls as well as distant material resources used across international time zones over several years, from production to end-of-life, are all packed into the product concept. This is the result of a profound change in corporate philosophy.

## What is sustainability?

Sustainability is a complex term sometimes subject to varying interpretations. The Brundtland Commission originally defined sustainable development in 1987 as "development that meets the needs of the present, without compromising the ability of future generations to meet their own needs".

BSI's overarching sustainability standard, BS 8900 *Guidance for managing sustainable development*, defines it as "an enduring, balanced approach to economic activity, environmental responsibility and social progress".

Many companies have gradually come to accept that their reputation and performance may suffer if they do not change, but sustainability is still poorly integrated into corporate activity. Accounts internalizing environmental and social costs that would have previously been excluded, social and environmental legislation, taxation, social and green branding, educational techniques and consultancy – these are all tools that can help transform a shoe from a functional item of throw-away footwear into a sustainable product.

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## Role of standards

Standards play a strong role in this new world. “Sustainability standards have a role to play in the middle ground between hard-line laws and educational tools,” says Professor David Jackman, a sustainability expert who played a major role in developing BS 8900. There are two ways to approach the encouragement of sustainability through standards.

The first is to develop standards that clearly focus on motivating management to develop more sustainable processes and products, and that are clearly promoted and identified as sustainability standards. Using different approaches, they either suggest or lay the ground rules for ways of thinking and behaving that help organizations internalize the intricate value of sustainability.

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The second, and complementary, route is to integrate sustainable values into the conventional standards that organizations are used to, while relying on the sustainability standards as a building block. “The challenge is to get everyone to apply, for instance, environmental thinking during the general development of standards. The sustainability standards provide a framework and guidance, and drive cross-cutting themes through the company so that not only the environmental manager is involved,” explains Simon Cordingley, a consultant in the field.

If the organization adopts the sustainability standards, each line manager’s viewpoint is influenced by social and environmental considerations, which then filter through the whole of that management function. That in turn generates a desire to improve the conventional standards in the same way.

## Sustainable processes and products

But before organizations can consider encouraging or promoting sustainability as a core value, they have to know what it is. BS 8900 addresses the fundamental problem of interpretation partly because the sustainability principle of inclusivity runs through the way in which it was developed.

Mr Jackman argues that the sheer number and range of organizations involved in the creation of BS 8900 – 60 in total, from many sectors – helps create a management standard with a robust, durable definition of sustainability that might not be acquired using other techniques for integrating this ethic. “Stakeholder engagement is built into the nature of an enduring approach and is the core of sustainability. It allows companies to work out the principles in as wide a dialogue as possible. This provides breadth of vision and solidity, and builds trust and confidence,” he asserts.

That is true of all sustainability standards: they give the customer confidence that a company has attained a certain level. Therefore, when using the standards as a benchmark to compare suppliers, the customer is more likely to eliminate those not using key standards.

BS 8900 does not prescribe a checklist against which companies are to be monitored. “It turns its back on the argument that audit and accountability are to be used as the only external safeguards. Engagement can work as well as an audit,” says Mr Jackman. Engaging the “hearts and minds” of the whole organization’s staff in sustainability, embedding the principles into its culture, would be the most successful outcome of the adoption of BS 8900 he believes.

At the centre of the standard is the suggestion that a company thinks through what it is trying to achieve, and it allows the company to become more mature in this respect as it goes along. After having done this, the executives move on to directing the organization to consider the four principles of inclusivity, integrity, stewardship and transparency in that context. For instance, BS 8900 suggests that managers ask themselves, alongside many other questions: “How do you ensure bribery, abuse, oppression and corruption are avoided?” in order to work out where they stand on integrity.

By embodying and defining sustainability, BS 8900 is thus a solid benchmark for executives looking for help on this issue. “It shifts away from the rhetoric and provides a firm way of achieving sustainable practices,” says Katherine Hunter, BSI’s head of market development for sustainability. “Many organizations recognize the need to operate in a more sustainable manner, but lack guidance on the practical way forward. The standard is about giving them the tools.”

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## CASE STUDY

### Long hop

The sight of a worn-out English park or playing field after a summer concert is a familiar one. Managers at Lord's Cricket Ground in London have decided to get a grip on the impact of the events it hosts. "Events are very ephemeral. There used to be a tendency to contract for three days and then move on, leading to an 'out of sight and out of mind' mentality," says Russell Seymour, special projects manager at the venue, which hosts international cricket matches, auctions, wine-tasting events, Shakespearean plays and conferences. Such short-termism is, of course, the hallmark of an unsustainable approach to management.

To correct the problem, Marylebone Cricket Club (MCC) decided to apply BS 8901 *Specification for a sustainable event management system*, the first offshoot of the umbrella standard BS 8900 and specifically tailored to events and/or venues. It was one of the first organizations to do so. In keeping with the spirit of BS 8900, BS 8901 is focused more on culture than on checking that certain tasks have been carried out. "It doesn't apply definite performance targets but you need to demonstrate that you are taking into consideration the impact of what you're doing and acting to reduce

those impacts. It's more about the system you put in place than meeting targets," explains Mr Seymour.

Developing the policy includes looking at what products the organization buys and their life cycle. "The standard highlights that you need to think about what happens before and after you use resources," says Mr Seymour. Procurement and transport are two of the biggest issues. Should MCC preferentially support fair trade products? How could it encourage more visitors to use public transport? These are the questions it is asking. Having gone through the process, the organization can self-declare or seek independent certification.

Mr Seymour concedes that the standard might not be absolutely necessary to develop a sustainable policy, alluding to companies such as Body Shop, which developed internal policies of their own and integrated them into their brand. Such companies, he argues, do this because they are market leaders. "Nowadays though, we're trying to make this the norm. You use the standard to develop a single coherent policy. It's something people can aspire to and it broadens out the practice," he comments.

## Environmental management

ISO 14001 *Environmental management systems* is one of the other core standards relevant to sustainability, although as part of the ISO 14000 series it focuses only on the environment. Introduced in the 1980s, ISO 14001 was probably the first standard to address environmental management and is now widely used. It is arguably more about operations than mission and strategy. Typical problems addressed include in-house waste, water use and legal compliance. Companies adopt the standard in order to develop an environmental policy, plan its implementation, check it, take any corrective action and then review it. The same procedure is employed across the organizational spectrum.

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Many executives feel that some of the problems commonly viewed as marginal in the 1980s and early 1990s – such as in-house office waste – are now dealt with. “The ISO 14001 shows competence to manage the issues, but says little about the issues themselves,” explains Miles Watkins of Aggregate Industries, a building materials company certified to ISO 14001. That is now changing. Today’s huge task is to start addressing the impact of the global supply chain by getting to the root of the product life cycle definition. The emphasis varies according to where in the supply chain a company stands. A lot of standardization is due to supply chain pressure. People recognize they need to do something to improve their credentials to customers.

Further upstream, corporations are facing several questions, including where and how the life cycle of the product begins and ends, as well as how its impact is calculated. For instance, different organizations work out how many tonnes of carbon dioxide are emitted during a transatlantic plane journey in different ways that need to be harmonized for carbon footprinting to be meaningful. “It depends on how you set the boundaries for a production system,” remarks standards expert Mr Cordingley. Carbon footprinting – stating the greenhouse gas emissions arising throughout a product’s lifetime – is the highest profile issue in this area. Mr Cordingley argues that two standards used in tandem could frame the outline of a carbon footprint successfully: ISO 14040 – the life cycle assessment standard – and ISO 14025 – a standard establishing the procedure for creating environmental declarations and labels.

Publicly available specification (PAS) 2050, an evolving document developed by BSI, with Defra and the Carbon Trust, builds on the foundations provided by ISO 14040 in order to provide a methodology for assessing the life cycle greenhouse gas emissions of products and services. “It contains a sensible and consistent way of measuring life cycle greenhouse gases. However PAS 2050 only focuses on one component of the wider sustainability agenda. It is important to consider greenhouse gas emissions within the wider context of other environmental and social impacts,” states Ms Hunter.

## CASE STUDY

### Wood for the trees

“Because a tree is grown in a forest doesn’t mean all trees are alike. Some might be contaminated,” states Gideon Richards, an expert leading on solid biofuels standards. “A tree grown on a short rotation coppice that covers coal slagheaps or using sewage sludge as a fertiliser will take up impurities. People need to know what is in the material they use [wood pellets] in order to match it to their boilers,” he says, by way of example.

Producers in the solid biofuels sector have not always been clear about their specifications, partly because this fuel was only introduced in the last 10 years after nearly a century of substitution by fossil fuels in Europe. Now power stations and district heating systems are major users but, until recently, did not always know precisely what they were buying and sometimes bought products that were ill-suited to their furnaces. Although people in different countries were using the same terms, in actuality they assumed a different moisture or calorific content in the product.

The re-introduction of the fuel led to some trading ambiguities in the early years, particularly since this development is motivated by sustainability policies – unlike a century ago. For the first time this means considering good practice in forest management as well as other environmental issues when developing the product.

The European Committee for Standardization (CEN), a European-wide organization that develops European standards (ENs), addressed the technical problems through two technical standards published in 2007. “These standards ensure everyone is talking a common language, so that people know what you should be getting, what is in the product and what is being offered. Without these standards we would not be trading internationally,” says Mr Richards.

Hence, the standards seek to eliminate flawed products (such as pellets produced from a contaminated plantation) from the market, while also allowing particular types of solid biomass to be matched to particular types of appliances. They provide consistency so that customers, investors, regulators and other stakeholders know exactly what they are dealing with. That confidence provides the foundations on which the market can grow.

The technical standards also demand full transparency, an essential feature of sustainability. “The fuel production shall be unambiguously traceable back over the whole chain,” according to the standard, which breaks products down into classifications such as pellets, exhausted olive cake and wood chips, and describes what the content of each type of product should be: for example, how much nitrogen wood chips should contain.

Work is underway to strengthen the trade further by developing a biomass sustainability standard that will complement the technical standards. Tenders could include both. The technical standards then provide the dimensions for the physical origin and characteristics of the product itself, while the biomass sustainability standard relates to the social, ethical and environmental conditions under which it was developed.

The sustainability standard addresses six themes, including greenhouse gas balance, land-use competition and social well-being. “People will need to demonstrate what the land use was prior to growing the fuel. Was the area deforested? Was it used for food? They will demonstrate it is grown with the agreement of the appropriate authority,” explains Mr Richards. This ensures that knowledge about important, previously externalized issues enters the biomass buyer’s awareness for the first time, in accordance with the essence of sustainability practice.

Mr Richards describes the standard as “a powerful tool that allows confidence in the marketplace”. In a new and controversial sector, this is a significant benefit.

## Innovative solutions

Sustainability standards do not merely breed an alternative attitude to management. Their very mission is to innovate and slam the door shut on the old, crumbling management attitudes that have no place in the 21st-century markets that are characterized by: an exponential increase in natural resource use; and the communications boom that has unleashed unprecedented public demand for corporate accountability and openness – conditions never previously experienced.

They innovate on three levels. First, they inform procurement professionals and consumers about the relative merits of alternative products in environmental and social terms – as in the case of more energy-efficient refrigerators or sustainable solid biomass.

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Second, government incentives have generated research and development on entirely new sustainable business lines, such as second-generation solar photovoltaic cells – for which the market development relies heavily on technical standards to frame it so that people know what they are buying and what it is used for.

Third, standards introduce previously ignored social and ethical values into organizational thinking. Without standards such as BS 8901 to frame the terms of reference, managers would find themselves mired in uncertainty and stuck in the past.

As the pressure to develop renewable sources of energy increases, for example, wave and tidal energy are regarded as a potentially important part of the energy mix. These technologies are in their relative infancy, but a series of standards are being developed to help them through their teething troubles and foster their growth into fully viable industries. The development of standards is expected to bring down the costs of this emergent technology and make marine energy competitive compared to other forms, both renewable and non-renewable.

John Griffiths, technical director of the European Marine Energy Centre in Orkney and a leading consultant in the wave and tidal energy industries, believes the arrival of standards is a crucial step in the innovative development of this promising field. “All grown-up industries have standards and all industries that aspire to grow up need standards,” he says. “The technologies are new and unproven, we haven’t got very much in the water and we badly need to. For that we need confidence from the financial and insurance sectors. You’ve got to have standards to get that confidence.”

Sustainability standards, then, break new ground. The product standards that reach down the supply chain and the technical standards that help develop new markets are clearly quite distinct from those that appeal to the mindset of the boardroom. Between them, a framework for sustainability can be developed.

## CASE STUDY

# New mulch for old

In its early days, the market for a particular product can be chaotic in nature. Different producers may be supplying items they believe to be identical but which actually have very different characteristics. That was the case for the organic compost market before 2002: a mess of diverging definitions of compost.

The situation frustrated some buyers in the horticultural and landscaping sectors because the quality of product would vary between suppliers and they did not know what to expect beforehand. They were more likely to depend on a single supplier whose product was consistent, but this in turn could put them at a commercial disadvantage. The lack of standards acted as an invisible market barrier because it obstructed the connections between buyers and a range of sellers that are essential to market development.

The waste organization WRAP dealt with the problem by developing a standard with BSI, *PAS 100 Specification for composted materials*, which enabled people to know what to expect when they bought organic compost, thereby encouraging further trade.

The standard allowed the innovative organic composting market to develop and challenge traditional composts without collapsing in its early days. “When a market is in its infancy, the problem is to bridge the gulf between the new product and full commercialization,” states Marcus Long, head of external affairs at BSI. “Standards, with the robust definitions they provide, drive through that innovation.” That is not just true for composting, but for the whole spectrum of revolutionary products generated by renewable resources and other sustainability policies.

## How BSI can help

Standards matter. They contribute at least £2.5bn each year to the UK economy and play a key role in enabling innovation, improving competitiveness, increasing reliability, ensuring safety, improving accessibility, controlling quality, managing risk and improving business performance.

As the world's first national standards body, BSI British Standards has a globally recognized reputation for independence, integrity and innovation. Part of the BSI Group operating in 86 markets worldwide, BSI British Standards serves the interests of a wide range of industry sectors, as well as government, consumers, employees and society overall, to make sure not just British but European and international standards are useful, relevant and authoritative.

BSI champions UK interests at home and abroad and is an incubator of many of the world's leading standards. It is the national gateway to all the European and worldwide standards bodies promoting fair trade, technology transfer, economic prosperity and security.

Several publications describe the benefits of using standardization to achieve broader organizational and national strategic objectives. Information about these is available from BSI British Standards.

To find out more about how BSI can help you, visit the website at [www.bsigroup.com](http://www.bsigroup.com) or email [britishstandards@bsigroup.com](mailto:britishstandards@bsigroup.com).

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