

# National Standardization Strategic Framework

OPEN  
INTERNATIONAL  
MARKETS

INCREASE  
MARKET  
CONFIDENCE

A PLATFORM  
FOR INNOVATION

CREATE  
COMPETITIVE  
ADVANTAGE

# Foreword

## Standards influence everything we do.

Standards, in one form or another, have always underpinned trade and business. Standards, including codes of practice and guides as well as formal standards, support compatibility and drive down costs through use of common parts, specifications and methods. They can also help open markets, create new industries and realise the potential of new technologies. Standards are so much a part of our daily routine that we use them without even being aware of doing so, and without giving thought to how they are created or the benefits they provide.

However, we cannot afford to go on taking standards for granted. The business world and society served by the standards infrastructure are changing rapidly. Global trade means that today's products are built with components sourced from around the world, which must fit together and perform as expected. Product life-cycles are becoming shorter and the pace of technological development is accelerating. Consumers are demanding ever-higher levels of safety, performance, reliability and sustainability. They are concerned that much needs to be done to improve services and standards have a part to play in meeting their expectations. All these developments mean that the role of standards is more important than ever. In this dynamic environment, the ability to harness the potential of standards is a source of competitive advantage. For all these reasons, now is a good time to take stock of the standards system and to ensure it meets the challenge of modern business and society.

Standards are developed through agreement, and reaching an agreement takes time. The increased pace of change makes time more scarce, and creates pressure for standards to be produced more quickly. So while traditional, formal standards remain extremely important in many areas such as construction and mechanical engineering, a fresh approach is needed to satisfy the new demands both of these established sectors and of younger industries like information technology. Indeed, infant technologies such as nanotechnology and biotechnology pose new questions about when and how standards should be used to help the process of building successful industries from advanced research.

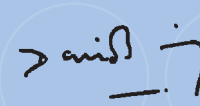
Other major economies have recognised the importance of standards for economic performance and are taking a strategic look at their standards systems. We must do likewise to remain competitive.

The extent of these changes creates great opportunities both for individual companies to gain competitive advantage and for countries to increase productivity. The National Standardization Strategic Framework (NSSF) is intended to help 'raise the game' across the UK, increasing the number of businesses which have standards on their strategic agenda, and helping to ensure that the standards system is flexible, responsive and efficient at national, European and international levels. It is being led jointly by DTI, BSI and CBI, but its success will largely depend on the decisions of businesses throughout the country. We will report annually on progress in implementing the NSSF, and adjust it in the light of experience.

THE NSSF WILL  
SHAPE THE FUTURE  
OF STANDARDS  
FOR THE UK



Digby Jones  
Director General CBI



Lord Sainsbury  
Minister for  
Science & Innovation, DTI



Sir David John  
Chairman BSI



CBI  
THE VOICE OF BUSINESS



dti



BSI

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*Available as separate document or at [www.nssf.info](http://www.nssf.info)*

THE ROLE OF  
STANDARDS IS  
MORE IMPORTANT  
THAN EVER

# Scope and Purpose

Standards are a fundamental building block for the economy and society. Basic standards such as weights and measures have existed since early civilisation and have always been a key to manufacturing and trade. Today, there are many types of standards and a variety of ways in which they are developed and used. Not only do standards underpin critical aspects of manufacturing and technological development, but they are increasingly applied to management, services and other areas of business and government including health, safety and the environment.

STANDARDS ARE AN IMPORTANT CONTRIBUTOR TO ECONOMIC PERFORMANCE

THE DYNAMIC BUSINESS AND TECHNOLOGICAL ENVIRONMENT DEMANDS RENEWED FOCUS ON STANDARDIZATION

Standards help to disseminate technologies and best practice and so are an important contributor to economic performance. It is estimated that in Germany around 1% point (ie about a third) of annual economic growth is due to standards based dissemination<sup>1</sup>. They are also an important source of information, facilitating knowledge transfer and providing a platform for innovation. Business today depends on standards to define key features of products and services affecting performance, safety, reliability and quality. Standards also define key features which can support compatibility between different producers. Standards inform and reassure customers and enable markets to work effectively. International standards can encourage trade and facilitate entry into global markets.

The NSSF addresses a broad definition of 'standards' encompassing technical specifications, codes of practice, codes of conduct, guidance, and specifications for services. Standards can be set in regulations or developed through formal processes provided by national standards bodies (NSBs). The British Standards Institution (BSI), is one of the world's largest and most influential NSBs. In some sectors, many standards are developed through informal processes such as industry consortia and private alliances. The Internet is an example of a product/service that has been developed outside the scope of formal standards bodies. The NSSF includes both formal and informal standardization.

'Standardization' is establishing and applying a set of agreed solutions intended for repeated application, directed at benefits for stakeholders and balancing their diverse interests. It is much more than the development of standards. The 'standardization system' encompasses the range of mechanisms, organisations and representatives that facilitate and participate in this activity. Effective standardization requires the effective involvement of all interested parties. The elements of the standardization system, when operating effectively, combine to produce a range of beneficial socio-economic outcomes.

Standardization is so far-reaching that it was necessary to consider the scope of the NSSF in order to avoid it becoming unwieldy. Therefore although conformity assessment (testing, certification and accreditation) is an integral part of the standardization system it is not addressed in the NSSF in its present form. The same is true for weights and measures which, like conformity assessment, raise complex issues beyond the scope of this document.

<sup>1</sup> *Economic benefits of standardization, published by DIN (German Institute for Standardization) 2000 ISBN 3-410-14860-4.*

## A MAJOR OPPORTUNITY TO RAISE THE PERFORMANCE OF THE STANDARDIZATION SYSTEM

### Why have a National Standardization Strategic Framework now?

The role of standardization in spreading innovation, improving markets and creating competitive opportunities, as well as underpinning regulation, is not widely understood at the strategic level in businesses and government. Different approaches to standardization have proliferated, without clear understanding of the benefits and disadvantages of each. Standardization has been operating effectively in certain industries but in many areas it has become taken for granted. The dynamic business and technological environment demands renewed focus on the role of standardization.

Poor standardization can create trade barriers instead of removing them, hinder innovation instead of building upon it, and confuse markets instead of creating confidence. It may also lead to inadequate consumer protection or support for regulation. Like other systems, the standardization system is likely to under perform if it is not maintained.

There is now a major opportunity to raise the performance of the standardization system, and to adapt it fully to modern needs. In addition the need to raise the base line for delivery of services is of increasing importance. The NSSF is a means of co-ordinating the efforts of all stakeholders in the system to harness the full potential of standardization.

### What is the National Standardization Strategic Framework?

The development of the NSSF is being led by the DTI, BSI and CBI, as representatives of major stakeholders in standardization in the UK. Together these organisations, working with partners in government, business and those representing various societal interests, have shaped a Strategic Framework to address the challenges and opportunities presented by standardization. It has two elements:

A **Strategic** element, which sets the direction for standardization in the UK.

A **Framework** element, which creates a structure for ongoing implementation.

These elements form the core of the NSSF, establishing the principles for a sustainable standardization strategy, taking the mission and vision through to practical implementation. The NSSF is a 'live' strategic framework, which will guide implementation activities in the future.

This document together with its fold-out summary sheet is intended to be self-contained and sufficient for most readers. An annex containing a more detailed list of projects and actions is published separately and is available with other supporting information on the NSSF website, [www.nssf.info](http://www.nssf.info). The annex will be updated regularly.

SECURING A STEP CHANGE IN THE UNDERSTANDING AND USE OF STANDARDS AND STANDARDIZATION

## Mission


The Mission for the NSSF is to secure a step change in the understanding and use of standards and standardization to the benefit of business, government and society.

## Vision

The Vision of the future for standardization in the UK:

- Standardization is used strategically by UK businesses to create competitive advantage, spread best practice, enter new markets and promote innovation.
- Standardization is used effectively to meet public policy, regulatory and societal objectives.
- Standardization is supported by an infrastructure that is co-ordinated, efficient and relevant to the different needs of its stakeholders.


This vision must be supported by stable and sustainable funding, as well as research and educational initiatives.




MAKING THE  
FRAMEWORK  
SERVE ITS USERS

## Approach to Measurement

The implementation of the NSSF will be continuously measured and monitored, at both the high and specific project level. The success of the NSSF will be measured by progress against the main objectives in each key area. Measures will address quantitative indicators such as: level of business engagement in standardization; market relevance of standards produced; level of standardization activity in emerging fields; value of new business opportunities generated through standardization initiatives; availability and uptake of standardization resources and government use of standardization in policy, regulation and procurement. Other measures may be more qualitative, such as whether recommendations are being implemented. Where possible, specific economic measures will be linked to objectives in the key areas. The existing evidence base for measuring the contribution of standardization to wider objectives is limited: improving it, is in itself, a key NSSF task.



USING STANDARDS  
TO SPREAD BEST  
PRACTICE, ENTER  
NEW MARKETS  
AND PROMOTE  
INNOVATION



INCREASING  
UNDERSTANDING  
AND DEPLOYMENT  
OF STANDARDIZATION  
BY UK BUSINESSES

# Key Areas

In order to achieve this vision, the NSSF highlights six key areas for attention: Business, Government, Infrastructure, Innovation, International, Awareness & Education. Within each area, an objective and a set of strategic directions will provide the impetus for action. Proposed actions are summarised within each area. A structured overview of these activities is included in the NSSF Summary Chart. More detailed explanations of these proposals are provided in the annex.

## 1 Business

### **Objective**

Increase understanding and deployment of standardization by UK businesses as a key lever to improve competitiveness and productivity at both technical and strategic levels.

### **Strategic Directions**

- a Identify and prioritise technologies, markets and industry sectors in which standardization can create opportunities for UK businesses.
- b Use standardization to open international markets, improve productivity, increase speed to market, generate competitive advantage, encourage innovation and enable cost-effective regulatory compliance.
- c Enable appropriate choice of formal and informal standardization options to meet business needs, taking account of differences in sector structure, product/service type, rate of technology change, duration of product cycle and needs at different stages of the cycle, as well as market structure.

### **Implementation**

Engaging business is the first step towards increasing the strategic use of standardization by businesses. Initial actions will establish a dialogue with businesses and representative organisations such as trade associations and professional institutions to improve understanding of priorities and share opportunities. This dialogue will inform business awareness activities including case studies, guidance and training on how to take advantage of the opportunities presented by standardization. A specific project will identify solutions to address the needs of small and medium size enterprises (SMEs) in regard to standardization, where their requirements differ from larger businesses. Beyond the initial phase it is expected that businesses themselves will generate new actions under the NSSF umbrella.

## 2 Government

### **Objective**

Provide a framework to facilitate UK business competitiveness and support societal interests; make more effective use of standardization by the public sector in policy, regulation and public procurement.

### **Strategic directions**

- a Increase co-ordination of public sector standardization activities as a complement to regulatory processes to reduce red-tape, minimise compliance costs, ensure health and safety, address consumer needs and enable more effective implementation.
- b Integrate standardization into key policy areas such as innovation and sustainability.
- c Maximise the use of standardization in public procurement to gain purchasing efficiencies, increasing public sector market opportunities for small and medium-size enterprises.

### **Implementation**

To increase the effective use of standards both in and by government, initial actions will clarify and co-ordinate public sector approaches to standardization, highlighting specific areas of opportunity. This activity will be supported by more coherent interaction between the NSB and government, helping raise awareness across government and deliver improvements.

A FRAMEWORK  
TO FACILITATE  
UK BUSINESS  
COMPETITIVENESS

### 3 Infrastructure

#### **Objective**

Develop a co-ordinated, effective, sustainably-funded standardization infrastructure which produces results that meet the needs of all stakeholders.

#### **Strategic directions**

- a Co-ordinate and manage all elements of the UK standardization infrastructure to be proactive in understanding and prioritising stakeholder needs; ensure coherence and eliminate duplication, optimising the use of limited resources, capabilities and contributions of individual participants.
- b Increase the capability of the UK standardization infrastructure, embracing emerging models of standardization, to deliver timely and relevant solutions to stakeholder needs.
- c Facilitate and promote consumer and societal involvement in standardization to ensure that standards reflect a balance of stakeholder needs.
- d Underpin the NSB and the other elements of the UK standardization infrastructure with stable and sustainable funding.

#### **Implementation**

Implementation efforts will improve co-ordination, aligning standardization activities with UK commercial interests and public policy objectives. This will be achieved by establishing a forum to improve communication about priorities, methods, resources and measurement. Initial projects will establish an approach to measurement for both the NSSF and the standardization system. Initiatives in this area will also improve the efficiency and market relevance of the NSB and deliver increased transparency of the standardization options available to stakeholders.

OPTIMISE THE USE  
OF STANDARDIZATION  
AS AN INTERNATIONAL  
GATEWAY

### 4 International

#### **Objective**

Optimise the use of standardization as an international gateway to achieve more open markets, reduced technical barriers to trade, UK trading advantage, technology transfer, and international development objectives.

#### **Strategic directions**

- a Understand the impact of other trading nations' standardization initiatives and position the UK to counter competitive threats and trade barriers.
- b Improve the effectiveness and efficiency of European and international standardization.
- c Promote UK and European standardization policy and principles.
- d Use the government's international infrastructure (trade contacts in embassies, consulates) to promote UK influence, transfer technology, and develop trade through standardization.
- e Provide targeted technical assistance to priority countries, including appropriate support to developing countries, in order to enhance relationships between these countries and the UK through knowledge and technology transfer.
- f Influence the development of European and international standards and standardization structures and practices in order to improve the terms of market access, reduce technical barriers to trade for UK products and services, whilst ensuring appropriate levels of safety and performance.

#### **Implementation**

Government and the NSB will work together, guided by foreign policy, trade policy and business dialogue, to create competitive advantage for UK businesses through standardization in priority international markets. Specific action will be delivered through both the government infrastructure and formal standards system. The NSB will focus on developing partnerships and identifying opportunities in priority countries. The government will establish a network of contacts to promote UK influence

DEVELOP A  
CO-ORDINATED  
AND EFFECTIVE UK  
STANDARDIZATION  
INFRASTRUCTURE



through standardization; for example, staff within British consulates and embassies should be trained to identify trade opportunities presented by standardization.

## 5 Innovation

### **Objective**

Promote innovation widely through the economy, harnessing standardization's capability to target and diffuse new technology, new processes, and new ways of working; manage intellectual property and gain market acceptance throughout the innovation lifecycle.

### **Strategic directions**

- a Apply standardization appropriately to new and emerging fields, encouraging the participation of innovators.
- b Maximise the commercial benefits of innovation through the co-ordinated use of patents, licensing, standards and other intellectual property management tools.
- c Apply standardization to facilitate the adoption and commercialisation of new technology, new processes, and new ways of working to support sustainable development and productivity policy objectives.

### **Implementation**

The implementation steps will identify priorities and address specific standards-related opportunities for innovation in the UK. The government and NSB will work together to produce policy and guidance that will help businesses maximise commercial benefits of innovation through co-ordinated use of patents, licensing, standards and other intellectual property management tools. In co-ordination with government innovation policy, the role of standardization in diffusing technical knowledge and best practice will be clarified.

TARGET AND DIFFUSE  
NEW TECHNOLOGY,  
NEW PROCESSES,  
AND NEW WAYS  
OF WORKING

RAISE  
UNDERSTANDING  
OF WHAT  
STANDARDIZATION  
IS AND DOES

## 6 Awareness & Education

### **Objective:**

Establish an awareness of standardization, an understanding of what it is and does; develop appropriate skills to use standards effectively and embed standardization in the skills and science base.

### **Strategic directions**

- a Increase the awareness of standards and standardization in order to enhance the use of standardization as a strategic tool for businesses and government, communicating to decision makers the role and benefits of standards and how to take advantage of standardization.
- b Promote access to and understanding of standardization activities and processes to current and future participants, minimising duplication across the infrastructure by establishing a first point of contact for standardization needs.
- c Integrate knowledge of standards into the policy of raising the skills base for business, and embed the concept of standardization in formal education curricula to ensure appropriate levels of understanding in future generations of users, developers of standards and consumers.

### **Implementation**

The NSB working with partners will develop and deliver an awareness and education strategy for standardization in the UK, co-ordinating specific initiatives aimed at businesses, government and society. Public relations and communications activities will build the case for standardization, positioning the issue with decision makers and establishing the NSB as a source of information. A research programme will refine and develop models for standardization at both macro and microeconomic levels, relating them to measurement and resource allocation.

# What Happens Now?

The NSSF has been shaped through public discussion. A series of discussion papers were circulated in August 2002 to stimulate debate. The issues raised in this process were the subject of workshops with stakeholder representatives in November and December 2002. Outputs from these activities were analysed and reflected in the draft NSSF document. Finally, further amendments were made in response to comments on the draft.

THE NSSF HAS  
BEEN SHAPED  
THROUGH  
PUBLIC  
DISCUSSION

Other information supporting the NSSF document, including a map of how standardization works and updates on implementation activities, are available on the NSSF website:<sup>2</sup> [www.nssf.info](http://www.nssf.info).

Within the key areas a number of proposals are already underway. Others will begin in the coming year. The NSSF will be monitored and reviewed regularly.

CONSIDER HOW  
STANDARDS  
CAN HELP YOU  
ACHIEVE YOUR AIMS

<sup>2</sup> The NSSF website contains the earlier discussion documents and will continue to be a source of information on the implementation of the NSSF.

The NSSF is intended to provide a direction and shape to changing use of standards. There is no need for individuals to wait for the projects set out in it to be implemented; the opportunity is already there to be proactive in considering how the right approach to standards can help you achieve your aims.

**FOR FURTHER  
INFORMATION VISIT  
[www.nssf.info](http://www.nssf.info)**



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