



## How standards can help government achieve its objectives



# BSI is the UK's National Standards Body

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We can help government achieve its policy objectives across many of its key policy areas.

## **BSI is working to:**

- Increase the UK's global influence
- Reduce barriers to trade
- Support innovation
- Achieve net zero
- Reduce burden on businesses by providing an alternative to regulation
- Support consumer rights and safety
- Improve business performance and resilience
- Enable digital transformation





# BSI and standards: a quick introduction

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## Who is BSI?

BSI is the British Standards Institution. We are the UK's National Standards Body (NSB) – a status granted by the UK government, and a purpose-led non-profit distributing Royal Charter organization.



## As the UK's National Standards Body, we:

- Bring together UK stakeholders to build consensus of “what good looks like” on any topic.
- Maintain the UK's national catalogue of national and international standards.
- Represent UK stakeholder interests in global standards organizations.
- Propose UK national standards as a basis for international good practice.

**Our status as the UK's National Standards Body is recognized in a Memorandum of Understanding with the UK government. This states that standardization supports government in delivering its policy ambitions – from promoting better regulation to encouraging innovation, increasing exports and protecting the environment.**

BSI standards range from informal guidance to independently verifiable requirements or specifications, that can build trust in markets. They support certification, market surveillance, measurement, accreditation and the international rules-based system upon which trade and regulations rest.



## What are standards?

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A standard sets out an agreed way of doing something – whether making a product, following a process, delivering a service or supplying materials.

**In short, it's a statement of what good looks like, and can therefore make things better, safer and more efficient.**

Standards come in many forms including: guides, codes of practice, specifications and supporting documents. They can cover a huge range of activities – from construction to nanotechnology, from energy management to health and safety, from cricket balls to toys.

BSI has over 60,000 British and international standards, so what you need may already exist. If not, we regularly develop new standards to fill a gap or meet a market need.

Standards play an important role in the regulatory framework. While regulation may be required to correct a market failure or to address an urgent consumer protection issue, voluntary standards offer a market-led opportunity that may provide better, faster and more flexible solutions to achieve government's policy objectives.

## How we make standards

**Standards are made by convening and capturing the knowledge of experts and stakeholders on the relevant subject-matter.**

This might be the businesses that use standards to make products or offer services; those that regulate the market; or end-users who have an interest in how a product or service works. They might come from businesses, trade associations, professional bodies, government departments and agencies, regulators, academia, unions, or consumer groups.

Anyone can suggest an idea for a new standard. BSI brings relevant stakeholders together to develop the standard, following our thorough, independent and inclusive process. These stakeholders develop drafts and then the standard goes to public consultation to seek further comment before a final version can be agreed.

All standards are subject to periodic review to ensure that they remain fit for purpose. **This process creates consensus-based standards that represent a dynamic, low-burden and stakeholder-led way of addressing policy issues.** It's what makes them so effective – and it gives them the legitimacy to be used as a trusted market-led solution.



# How we support government

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The Government and BSI agree that:

“Standardization is a key factor in support of a number of government policies, including competitiveness, innovation, reduction of trade barriers, fair trading and protection of consumer interests, environmental protection and public procurement

Standardization is increasingly important for the globalisation of commerce and the convergence of technologies and also for international trade.” –

The Memorandum of Understanding between the UK government and BSI

## Increasing the UK’s global influence

The UK is at the forefront of global standards-making. As the UK’s National Standards Body, we are able to lead the development of international standards that support the national interest and become adopted globally.

BSI is the UK member of the international standards bodies ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission), and the European regional standards bodies CEN and CENELEC. We ensure access for UK stakeholders to the international standards-making system. This ensures UK views are represented in developing the standards that drive and support domestic and global trade.

BSI is one of the most influential national standards bodies in the world and is among the top tier members of ISO.

Most of the world’s most widely-used business standards **originated as British Standards**, such as ISO 9001 for Quality Management, ISO 14001 for Environmental Management and ISO 27001 for Information Security.

Aligned with our influence in international standards organizations, BSI maintains a series of relationships with our counterpart NSBs and key stakeholders in markets of strategic interest, to encourage the adoption and implementation of standards used in the UK. This facilitates market access for UK-based firms.





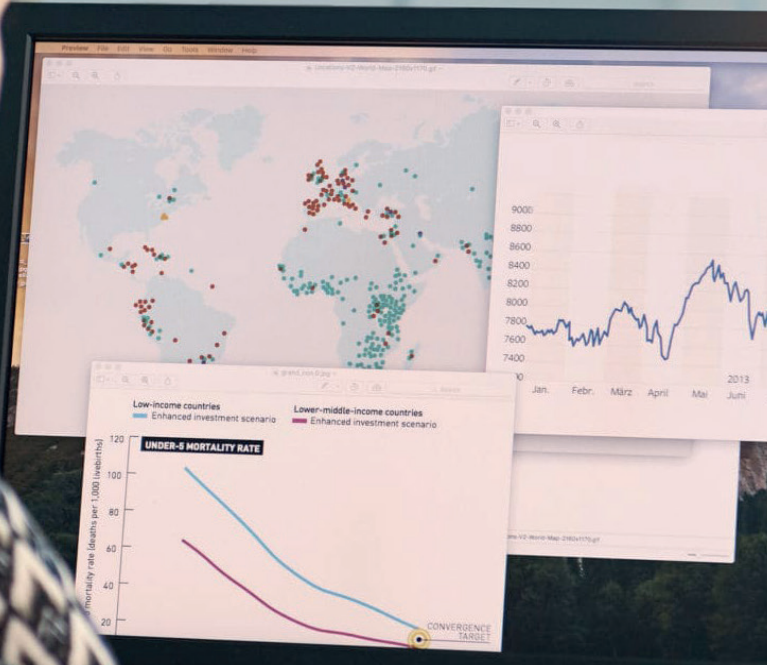
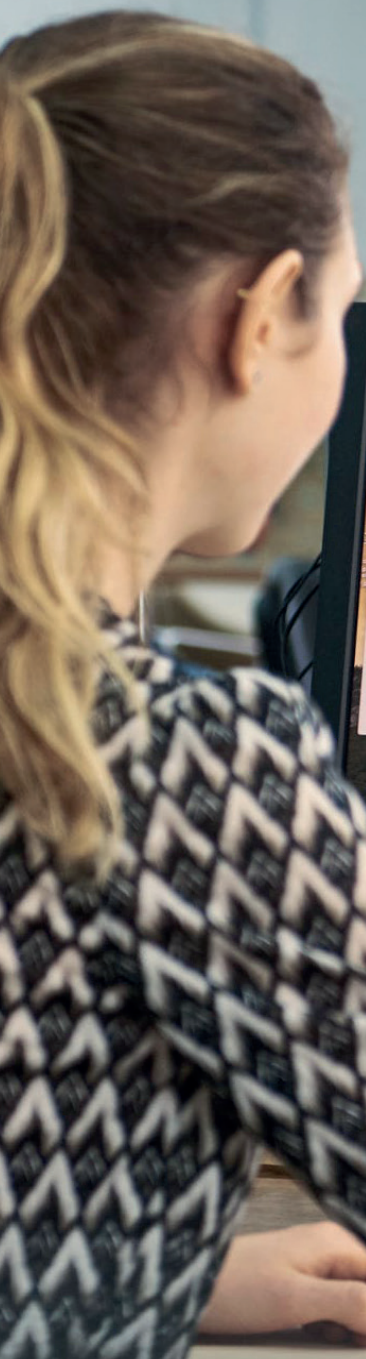
## The Commonwealth Standards Network

- In 2018 BSI launched the Commonwealth Standards Network (CSN), funded by UK Aid. The network supports trade, economic growth and prosperity throughout the Commonwealth by promoting increased awareness, development and use of international standards.
- The CSN aims to increase its 54 members' technical and institutional capacity to use and participate in the development of international standards via existing organizations such as ISO and IEC.
- The CSN is especially relevant to National Standards Bodies (NSBs) that are looking to boost their international trade capabilities.

## The UK is also leading the way on standards for many new and transformative developments.

### One example is Building Information Modelling:

- Construction is increasingly transforming into a data-driven activity, through innovations such as Building Information Modelling (BIM).
- The rapid adoption of these innovations has been in great part due to the government procurement models that have mandated the adoption of BIM as a condition of contract.
- The success of BIM was also due to the investment in market-led standards of good practice that were used across the supply chain.
- Increased data availability for the built environment has reinforced the original government strategy to enhance capability in this sector and allowed for further innovation from the foundation that BIM has established.
- These shared standards have enabled UK industry to access overseas infrastructure projects.





## Enhancing trade

Competitive access to global markets remains vital to the UK's success as a global trading nation.

**Standards play an important role in securing international market access.** They provide confidence to consumers and minimize non-tariff trade barriers, so that companies can do business faster and more effectively. **International standards are a 'passport to trade'.**

International standards underpin the global rules-based trading system (particularly in fulfilling the objectives of the WTO Technical Barriers to Trade Agreement) and are a key element in trade deals. **Standards are important to UK trade policy.**

BSI supports government by:

- Providing knowledge and experience of how developing and using standards can address barriers to trade to the benefit of UK businesses and consumers.
- Helping government make full use of international standards to meet its international obligations and expectations for trade and while strengthening UK's global influence.
- Maximizing UK impact and influence through our relationships with colleagues and counterparts across a global network of standards bodies.

# Supporting innovation

The development of standards can help an emerging technology ecosystem rally round the issues to promote successful commercialization of new products. They create a common framework for innovation and establish the 'rules of the game'. Standards define common vocabularies, establishing the essential characteristics of a product or service, and identify the best practice within the ecosystems that will deliver successful outcomes. This enables the pace of innovation to be accelerated and success will be much more likely.

BSI offers government an important lever in developing the conditions for impactful innovation and a way to embed innovation across all sectors and to influence globally.

Standards also help to de-risk investment in new technologies and accelerate their adoption by building confidence in their performance.

In this way, standards support the development of new markets in the UK and internationally. They also promote the consolidation of emerging supply chains; prevent the risk of technology lock-in; and help disseminate knowledge from large-scale R&D demonstrators and test beds.

As a result, standards reinforce the UK's global reputation for excellence in innovation and help create market leadership for UK companies.

BSI is at the global forefront of standardization in areas with the potential to transform the economy and our society – from automated vehicles to the circular economy, digital manufacturing, and energy smart appliances.

BSI's Flex Standards provide a new, flexible way to develop consensus-based good practice that dynamically adapts to keep pace with fast-changing markets. This provides support for continuous innovation for organizations and industries.

## Developing a roadmap for electric batteries

- BSI is leading the standards programme for the Faraday Battery Challenge (FBC), which is investing in research, innovation projects and scale-up facilities for batteries to be used for electrification.
- This will make the most of the growing batteries market, estimated to be worth £50bn across Europe by 2025.
- The BSI programme has developed good practice to support health, safety and environmental management and underpin consumer confidence in battery technology.
- These standards will be widely used by domestic innovators and help build international leadership for the UK.





## Responsible Innovation - PAS 440

- BSI developed PAS 440 in association with Innovate UK to support corporate governance for fast-moving areas of innovation.
- It provides the first national framework to help organizations to work through the demands of innovating in a responsible manner and demonstrating best practice.
- Creation of the standard was informed by extensive research undertaken by BSI with innovators from a range of technologies and sectors including AI and big data, life sciences, robotics and advanced materials.





## Achieving net zero

**The UK government has committed to a target of net zero greenhouse gas emissions by 2050. This is a huge challenge that will require changes right across the economy.**

BSI has a strong track record and range of standards that are helping organizations transition to net zero, including in areas such as greenhouse gas management, energy transition, biodiversity and sustainable finance.

Standards enable organizations to:

- Understand and measure their climate and wider environmental impact and reduce their emissions.
- Deploy renewable energy technologies.
- Demonstrate their sustainability credentials to customers, employees and stakeholders.
- Show their commitment to achieving the UN Sustainable Development Goals (SDGs).

## Energy smart appliances

- Energy smart appliances (ESAs) support a more flexible energy grid by enabling appliances, from washing machines to electric vehicle charge points, to respond to the available level of electricity.
- In turn this underpins higher use of renewable energy and contributes to the UK's net zero target.
- BSI has worked with the Department for Business, Energy and Industrial Strategy (BEIS), the Office for Zero Emissions Vehicles (OZEV) and industry to create two standards that enable the safe, secure and interoperable manufacture and use of ESAs.
- The standards also help to reinforce the UK's position at the forefront of thinking in this emerging area.

## Sustainable Finance

- BSI is rolling out a five-year Sustainable Finance Standardization Programme, designed and delivered with UK government and industry in support of the UK Green Finance Strategy and the global financial sector's SDG ambitions.
- The Programme aims to encourage the wider uptake of sustainable finance practices, behaviours, thinking, products and services, while helping organizations from the financial sector align themselves with the global UN Sustainable Development Goals (SDGs).

## Our 2050 World

- Launched at COP26, Our 2050 World is a global collaboration convened by BSI, ISO and the UN-backed Race to Zero campaign, and partner global standards bodies from Kenya, Canada, and Trinidad & Tobago.
- The initiative aims to accelerate the delivery of the Race to Zero using standards and enabling the planet to halve emissions by 2030 and achieve net zero by 2050 at the latest.

The initiative has three key aims:

- Provide clarity and consistency on net zero targets, measurement, and reporting.
- Make climate action easier with accessible and pragmatic guidance.
- Accelerate solution-orientated innovation with standards.



## Supporting regulation

**Standards are widely used as an alternative to regulation or to support regulation.** Standards are already helping to deliver policy across a wide range of areas, including technical product safety, good governance, climate change, energy, fair markets and public confidence.

Regulation can be appropriate when bringing about change: for example, to address market failures or set minimum requirements. But it can also be expensive to develop and enforce; be intrusive to business; and restrict innovation.

- Using standards can ease pressure on the legislative process and reduce costs for government.
- Standards can support outcomes-based regulation by providing information to help target government intervention where it's most needed.
- Because they're transparent and independent, standards have the necessary legitimacy and degree of market acceptance to be used as tools for policy delivery.





## Energy Savings Opportunity Scheme (ESOS)

- ESOS is an energy assessment scheme for organizations in the UK. The Environment Agency (EA) is the scheme administrator and it is regulated by all four environmental regulators across the UK (EA, Natural Resources Wales, NI Environment Agency and Scottish Environmental Protection Agency) alongside BEIS for offshore activities.
- Organizations that qualify for ESOS must carry out ESOS assessments every four years, covering audits of the energy used by their buildings, industrial processes and transport to identify cost-effective energy saving measures.
- Organizations and undertakings that qualify for ESOS but which are also fully covered by ISO 50001 for Energy Management do not need to carry out an assessment, and instead notify EA of their compliance via the standard.

Standards can support regulation in several ways:

- i) SELF-REGULATION – where an industry might develop its own code or practice and businesses voluntarily agree to meet certain standards
- ii) EARNED RECOGNITION – where companies that demonstrate compliance with standards may 'earn recognition' from regulators, who trust them to comply with their legal obligations. This enables regulators to reduce oversight and reduces the cost of regulation for both the business and the state.
- iii) CO-REGULATION – where government sets the top-level regulatory requirements in broad terms of performance and leaves the market to define how these general principles should be met in terms of technical solutions .

## Toy Safety

- The use of BS EN 71, the toy safety standard, can provide conformity to the regulations for toy safety (Toys (Safety) Regulations 2011).
- Using these standards gives a recognized "presumption of conformity" to essential requirements as set out in the regulation.
- Toys are one of a broad range of regulations governing product safety and conformity across many sectors, where some 3,000 standards can be used in this way for conformity.
- This is a form of co-regulation; where the standards are developed through usual BSI processes, and the relevant standards are then "designated" by government and listed on government websites in support of regulation.

## Protecting consumers

### Every day, standards make consumers' lives safer, fairer and better.

From children's toys to cars and mobile phones, they help to ensure that the products people use are safe, fit for purpose and high quality. They also help to protect consumer services such as health, finance and energy. In addition, standards have great potential to benefit consumers when they address important issues like safety, vulnerability, customer service, sustainability, and digital privacy and security.

BSI ensures that consumers are represented in standards development to make sure they address real problems faced by real people.

**BSI's Consumer and Public Interest Network (CPIN) represents the consumer voice in British Standards.**

It works closely with other consumer organizations in the UK and around the world to create standards that enhance consumer protection and minimize harm.

CPIN members are volunteers, trained in consumer issues, who represent UK consumers in standards development committees.

CPIN collaborates with consumer groups in the UK through the BSI Consumer Forum, as well as coordinating across the world, including ANEC, Consumers International and ISO COPOLCO, to raise consumer protection issues in European and international standards committees.

## Improving product recalls

- After an independent review found that product recalls were only 10-20% effective, BSI developed PAS 7100 which set out good practice for business and regulators, reducing the risk to harm to consumers.
- This proved a quick and effective way to raise awareness and improve processes.



## Protecting vulnerable consumers

- In 2010, consumer groups led the creation of British Standard BS 18477, that pioneered how to identify and tackle consumer vulnerability.
- The standard lays out good practice guidance to identify consumers in vulnerable situations, including those with physical and mental disabilities, or temporary challenges such as bereavement or redundancy.
- The British Standard is referred to by a number of regulatory bodies and organizations that are providing essential services to consumers – including those in the energy, water, telecommunications, healthcare and banking sectors.
- BS ISO 22458:2022 has now been published to supersede the British Standard, reflecting a growing global interest in this topic. By becoming an international standard and being globally adopted, consumers everywhere are protected.

# Supporting business

Standards are powerful drivers of innovation and productivity. They can make organizations more efficient, successful and sustainable. **Companies use standards to reduce risk, cut costs, win more business and grow more quickly.**

In uncertain economic times, standards help restore confidence by allowing businesses to demonstrate operational performance. They also provide prospective investors, partners, customers and stakeholders with benchmarks of recognized organizational quality.

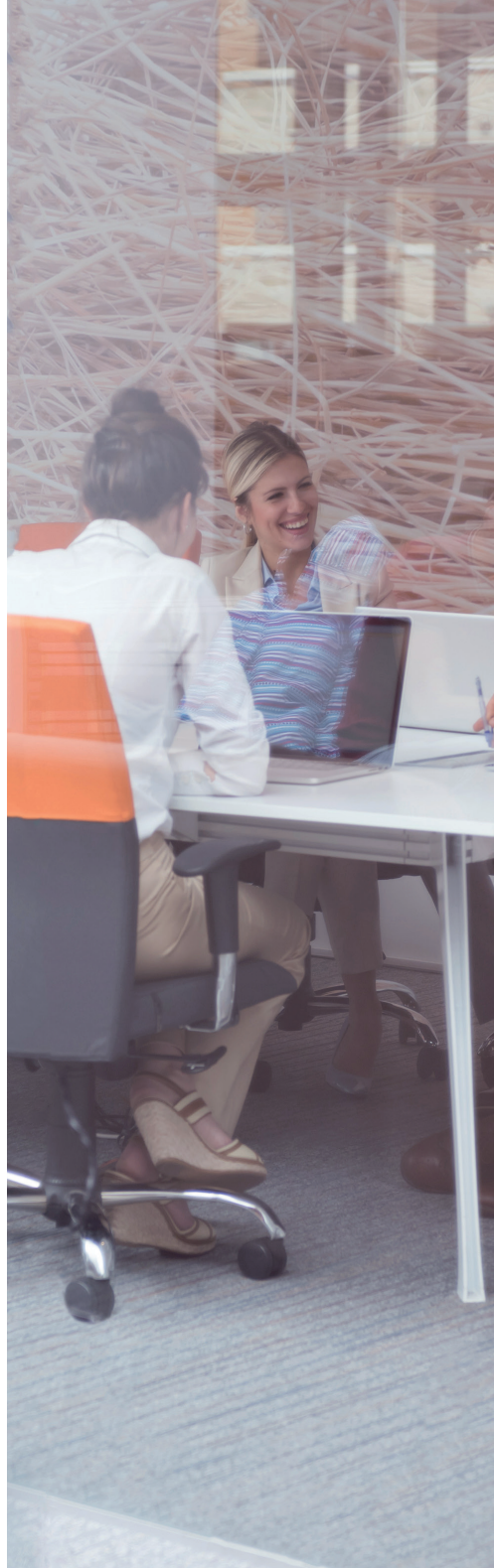
**All of this helps the economy as a whole.** An independent study by the Centre for Economic and Business Research in 2022 found that **23% of all UK GDP growth and 38% of all productivity growth since 2000 is attributable to standards. Standards have boosted the UK's annual GDP by £161bn since 2000.**

Standards help UK businesses to thrive on the global stage by being more productive, innovative, resilient and secure. They also help businesses to better serve their customers and to access global markets. Standards can do this for businesses of all sizes.

## Increasing business resilience

To survive and prosper long-term, businesses must be able to anticipate and adapt to both incremental change and sudden disruption. BSI standards that support businesses includes:

- **Business continuity standards** – such as ISO 22301, which helps businesses set up a management system to protect against and recover from disruptive incidents such as a fire, data breach or the illness of a key staff member.
- **Resilience standards** – such as ISO 22316, which helps organizations to evaluate the factors that contribute to resilience and supplies a framework for developing and implementing it.







**A 2022 study by the Centre for Economics and Business Research (CEBR) and associated survey found that:**

- The value of standards to the UK economy per year (over a 10-year period) is £8.8bn.
- Standards have boosted the UK's GDP by £161bn since 2000, with 23% of all UK GDP growth and 38% of all UK productivity growth over the same period attributable to standards.
- £5.4bn of additional UK exports per year can be attributed to standards (after five years), with 60% of SMEs and 77% of larger companies reporting that standards have increased their capacity to export.
- Firms of all sizes identify more benefits than costs from the use of standards: between 55% and 85% see standards as net beneficial.
- 81% of firms see standards as providing an ongoing boost to productivity.

# Digital transformation

Standards can help organizations harness the power of digitization. As digital technologies become commonplace standards play a fundamental role in improving data quality, enabling interoperability and minimizing security risks.

In addition, digital infrastructure has become indispensable to the functioning of society and the quality of life of its citizens. By embedding elements of standardization and best practice, there is an opportunity to reduce performance and security gaps, and build trust across stakeholder communities.

## Supporting cyber security and privacy

- Currently there are over 200 standards published around cyber security and privacy, including supplier relations and cloud computing.
- The dynamic and growing portfolio of standards reflect the cyber security sector, and the need for clear governance and principles for security.
- For example, ISO/IEC 27001 (Information security management) helps organizations manage and protect their information assets so that they remain safe and secure; the standard enables business to continually review and refine the way they mitigate risk.

## Digital twin

- A digital twin connects a real-world asset, like a train carriage, with its digital representation or 'twin'.
- A two-way flow of information between the two can support better decision making and outcomes, from where and when to invest in infrastructure through to helping make the trains run on time.
- BSI worked with the Centre for Digital Built Britain (CDBB) to set up a dedicated online community of practice, the "Digital Twin (DT) Hub" to identify, evaluate and prioritize common opportunities and challenges for organizations involved in digital twins.
- The DT Hub grew to a community of over 3,000 members and provides a dynamic environment to share existing good practice.
- It also led to the identification of priorities for 'agile', or flexible, standardization and the creation of a new BSI Flex standard as part of the National Digital Twin programme.

# Here to help government

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**As the UK's National Standards Body, we are here to help you tackle your strategic challenges and deliver your policy ambitions throughout the UK.**

Our knowledge and expertise are valuable assets for government. BSI can support you by acting as a independent convenor of the right stakeholders to assess priorities for standards development, develop strategies, facilitate consensus-building and encourage wider use of existing good practice. We do this by combining in-house capabilities, from research to standards development and advisory services, with external expertise from an extensive network of public and private sector connections.





... Inspiring trust for a more resilient world

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