



BSI Sustainability

How sustainability standards can drive and harness innovation

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BSI is part of an international and European standards landscape



International Organization for Standardization

167 National Standards Body members globally



International Electrotechnical Commission

80 members (National Committees) and 80 affiliates globally



International Telecommunications Union

Agency of the UN. Members are national governments and industry



Department for Culture Media & Sport



European Committee for Standardization



European Committee for Electrotechnical Standardization



CEN & CENELEC have 34 member countries (EU ×28, EFTA ×3, FYROM, Turkey, Serbia). Like UK, 24 countries have common CEN and CENELEC membership

European Telecommunications Standards Institute



Industry, government and NSBs



The case for standards – in a sustainable transition

Achieving a sustainable Net Zero Future by 2050 **necessitates unprecedented innovation across all sectors**. However, the introduction of new technologies is often hindered by investor & public skepticism, slow adoption rates, and concerns about interoperability, safety, and security. Furthermore, the prevalence of misleading “green” claims in the market, or “greenwashing”, obscures the real environmental benefits of products and services, making investment decisions challenging.

In recognition of these challenges, the UN Secretary General, in his opening address at COP26, underscored the importance of standards in clarifying and supporting organizational efforts to reduce emissions.

What we know / The case for standards

- **Standards are needed to support the transition to a Net Zero Future** – Standards ensure that new energy generation forms and technologies are not only interoperable but also safe and secure by design, facilitating the transition to a Net Zero Future.
- **Standards accelerate the adoption and mainstreaming of innovation needed for Net Zero** – Standards play a crucial role in de-risking investment and accelerating the adoption of new technologies through confidence in performance. However, standards often come in play in a later stage of the innovation process. Considering the role of standards at the start of an innovation process, including to road to international standardisation, can provide a head-start and possible competitive advantage
- **Consensus-based standards provide the rigour and credibility** – Consensus-based standards offer the necessary rigor and credibility to prevent greenwashing, providing a truthful representation of a product's or service's environmental impact.
- **Global reach and influence via the international standards infrastructure** – ISO – 167 countries - unparalleled influence in the real economy and uniquely positioned to drive positive environmental outcomes
- **First-Mover Advantage:** Early standardization allows innovators to define the playing field, facilitating a smoother and faster route to market, securing a first-mover advantage.



BSI Convenorship model

5) Wider implementation – Increase uptake

- Increased take up
- Legislation, regulation, standards.
- Internationalization - benefit UK plc
- Global Leadership

4) Consensus (and support) Industry, HMG, and wider stakeholders

- Industry and HMG reach consensus
- National Standards receive wider societal feedback
- For industry, by industry

1) Convene HMG and Industry

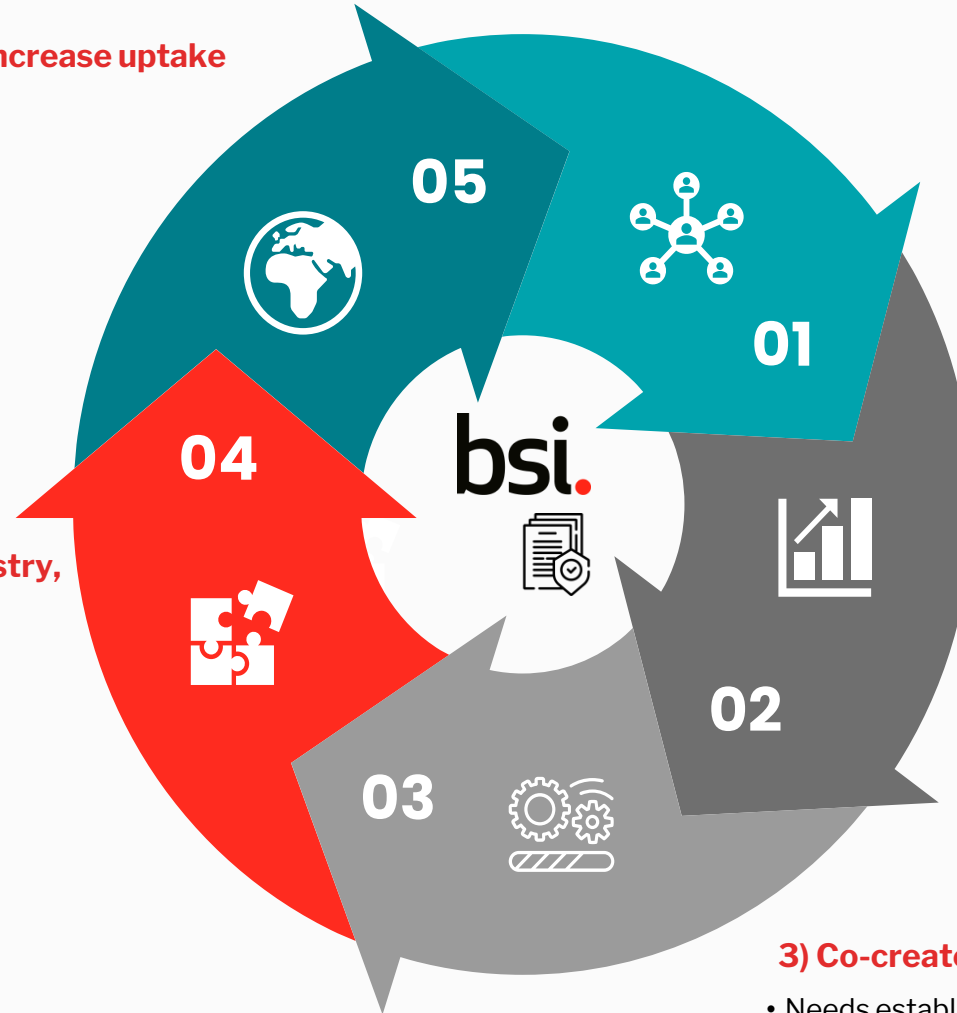
- BSI is separate of HMG and industry
- Neutral convenor of wide stakeholder base to address wider societal issues
- HMG – Industry - Regulators – Community Interest Groups – Academia etc

2) Identify if/ where standards, enable and accelerate

- Roadmap - created by industry and HMG
- Look globally
- Agreement on the most pressing issues and identification for standard needs/changes to standards

3) Co-create / coordinate – Programme

- Needs established by industry in support of policy outcomes – Net Zero
- Create standards that enable and accelerate towards Net Zero



How standards help sustainability – The road to Net-Zero

Energy Smart Appliances

Worked with DESNZ, OZEV and Industry to develop standards for Smart Appliances, including EV Chargepoints. Standard is now recommended as part of smart charging consultation.

Faraday battery challenge

Supported Innovate UK & Industry in the development of 3 standards for the health, safety and environmental considerations in battery manufacturing and use. Supported by future-looking Roadmap

Hydrogen

Working with DESNZ to support the development of a Green Hydrogen Standard - Hydrogen for Heat sponsored by BEIS and working with IGEM and EU Skills looking at hydrogen for heating as a decarbonisation pathway for domestic heat

Carbon Labelling

BEIS Office of Product Safety Standards (OPSS) have approached BSI to create an overarching standard for net zero in products in relation to the four R's: Reduce, Reuse, Recycle, and Renew.

Nature Investment Standards

Defra and BSI have embarked on a program to overcome barriers to investing in nature and the services it provides, including addressing the lack of standardised, transparent data. Enabling the scaling up of high integrity ecosystem markets that support the flow of private investment into nature (£1bn by 2030)

ICVCM

The Integrity Council for the Voluntary Carbon Market (Integrity Council) is an independent governance body for the voluntary carbon market. Its purpose is to ensure the voluntary carbon market accelerates a just transition to 1.5 °C.

Net Zero Guidelines

A common reference for collective efforts, offering a global basis for harmonizing, understanding, and planning for net zero for actors at the state, regional, city and organizational level.



Faraday Battery Challenge: standards programme

The Faraday Battery Challenge
There is growing demand for batteries for electrification, with the market estimated to be worth £5 billion in the UK and £10 billion in Europe by 2025. The Faraday Battery Challenge (FBC), funded by the UK Government and Innovate UK, supports research and innovation projects and new facilities to scale up and advance the production, use and recycling of batteries. It will lower carbon and air pollution in the UK, while creating new opportunities and industries.
Standards and best practice have a key role to play in the FBC, and in supporting the growth of the industry in the UK and internationally.

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Nature Investment Standards Programme

Integrity Principles For Nature Investment Standards

Proposed principles for discussion

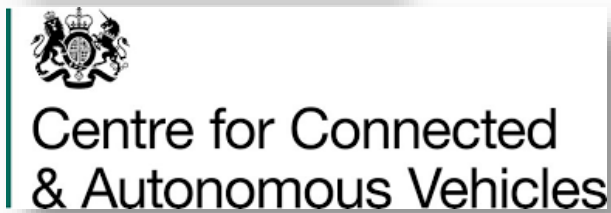


PAS 4444:2020
Hydrogen-fired gas appliances – Guide

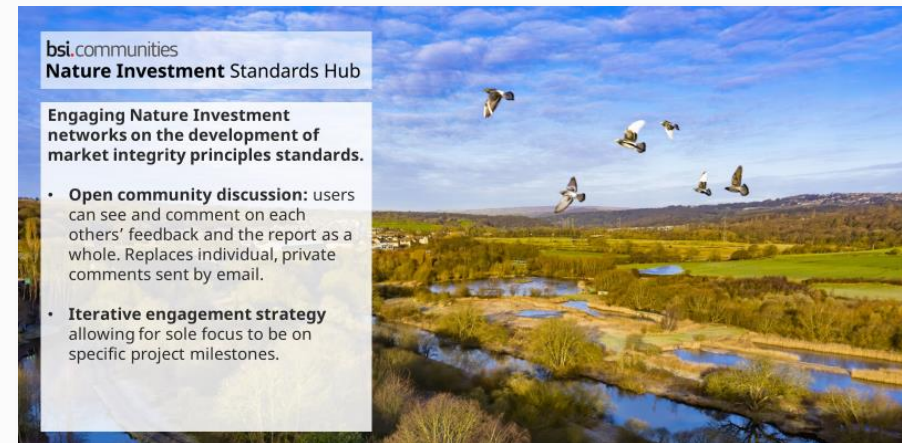
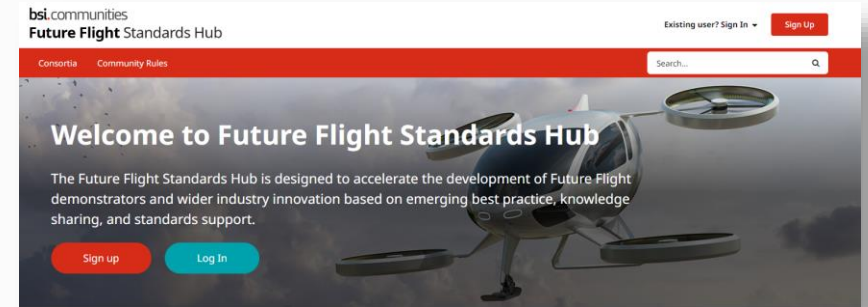
Hy4Heat Department for Business, Energy & Industrial Strategy bsi.

Standards for a Smart, Flexible Energy System

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bsi.communities



- Communities of Practice (CoPs) can support and work with industry, policymaker and innovators to address real industry issues.
- The CoP's can work as accelerators, utilising standards and BSI's access to experts and international infrastructure.
- Leverage the BSI expertise and access to the international infrastructure to solve problems, standardize good practice.
- Identify early areas for standardisation (globally), can help to create a first mover advantage
- Through structured Communities of Practice in innovating areas innovators can engage with thought leaders, researchers, and industry experts.

Key take aways for today

1 **Standards play a crucial role in de-risking investment and accelerating the adoption of new technologies** through confidence in performance. However, standards often come in play in a later stage of the innovation process. Considering the role of standards at the start of an innovation process, including to road to international standardisation, can provide a head-start and possible competitive advantage.

Our recommendation: include the role of standards at the start of your innovation process.

2 **We believe that convenorship and the CoP model serve as an invaluable platforms**, uniting industry professionals and stakeholders. By leveraging BSI's expertise, infrastructure, and convening capabilities, it can support innovation and innovators into the market and help them with a first mover advantage.

Our recommendation: convene different stakeholders in an early stage.

3 We believe that early standardisation and integration with the international standards system / international focus can provide a **first mover/early move advantage** .

Our recommendation: Think of standards early on in the process and reach out if we can be of help.

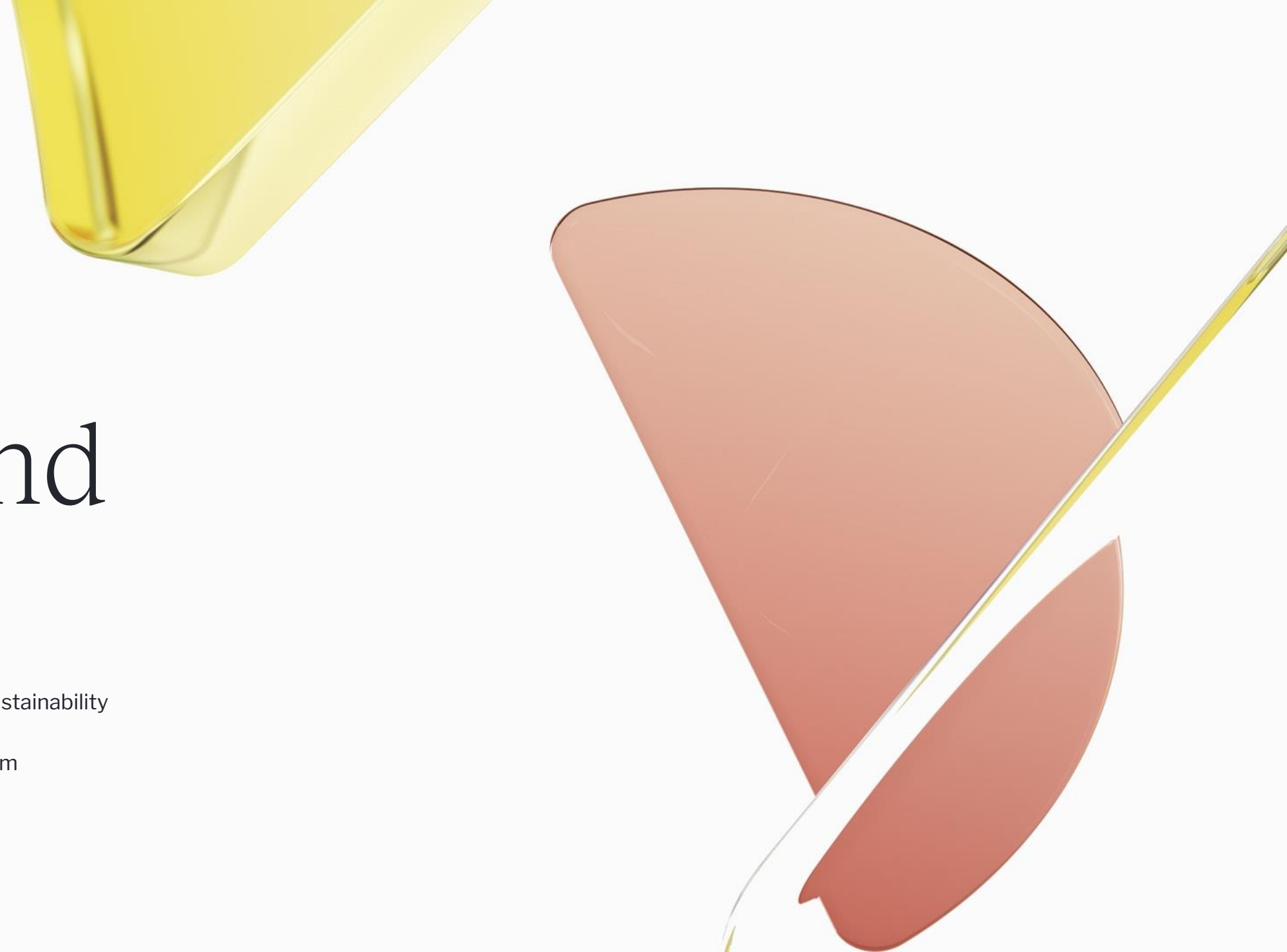


The End

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What are standards – who writes them

An agreed way of doing something, incorporating the distilled wisdom of people with expertise in their subject matter, who know the needs of the organizations they represent

Voluntary, market-led, needs-driven

Legitimacy through consensus and public consultation

Undergo systematic review to ensure their continuing validity

Can be supported through testing, certification, accreditation

Enable innovation (flexible, fast-track standards development models deployed)

Offer an alternative to regulation or can support compliance with regulation



Types of Standards

Specification

Sets out detailed requirements, to be satisfied by a product, material, process, service or system, and the procedures for checking conformity to these requirements.

Code of Practice

Gives recommendations for accepted good practice as followed by competent and conscientious practitioners, and which brings together the results of practical experience and acquired knowledge of ease of access and use of information.

Guide

Gives broad and general information about a subject, with background information where appropriate

Test Method

Sets out detailed procedure for performing an activity, e.g., measuring a quantity, testing a product, determining a characteristic and sets out a way of determining and presenting the results.