

Written evidence submitted by the British Standards Institution

Introduction

1. BSI is the UK's National Standards Body, incorporated by Royal Charter and responsible independently for preparing British Standards and for coordinating the input of UK experts to European and international standards committees. BSI operates in accordance with a Memorandum of Understanding with the UK Government. BSI represents the UK view on standards in Europe via the European Standards Organizations CEN and CENELEC and internationally via ISO and IEC. BSI is a member of ETSI (The European Telecommunications Standards Institute) and provides support to DCMS through their membership of ITU (the International Telecommunication Union).
2. As National Standards Body, BSI provides the infrastructure for over 13,000 experts, who are the voice of UK economic and social interests, to be influential in the international standards organisations. BSI has a public interest responsibility to develop and maintain the standards infrastructure to support UK emerging industries at home and internationally. BSI's robust standards development process requires open and full consultation with these stakeholders to build consensus-based outcomes.
3. BSI works closely with Innovate UK and many of the ISCF challenges. We will continue to build on our strong relationship with the UK's innovation infrastructure and towards best supporting the economic, societal and environment policy objectives. BSI would like to garner government support to inform the research and innovation community of the role standards can play in support of the Industrial Strategy. In addition, we would encourage strategic investment in standardization as part of government's innovation strategies going forward.

The role of standards within the innovation infrastructure

4. Consensus standards are formal documents that have captured collective expertise. Representatives of organizations that have an interest and expertise in a subject matter are brought together to develop a market-led solution of what 'good' looks like. The process of developing consensus standards involves all relevant stakeholders and is subject to public consultation. Moreover, consensus standards undergo systematic review to ensure their continuing validity. Standards can be supported through testing, certification and accreditation, and can be used to demonstrate compliance with regulations.
5. BSI is a partner of the UK's Quality Infrastructure (UKQI), alongside the UK Accreditation Service (UKAS) and the National Physical Laboratory (NPL). Other members of UKQI include the Intellectual Property Office (IPO) and the Office of Product Safety and Standards (OPSS). UKQI provides the UK with the standardization, accreditation, metrology and conformity assessment (testing, inspection and certification) that is required to support businesses to innovate and enable research to be commercialised.
6. In addition, BSI works closely with UKRI councils, but particularly with Innovate UK, to facilitate consensus building and the creation of standards to accelerate sectoral innovation and develop international leadership.

7. Standards are a cost-efficient way for good practice to be embedded across an entire sector. Consensus standards can create a “halo” effect that builds on direct funding to enable broader adoption of benefits across the wider national capability. In addition, there is value in aligning government horizon-scanning efforts with global standards foresight studies, so that there is a strategic approach in identifying areas of interest where there is a drive from UK stakeholders to shape and lead on new activities. Enhanced coordination and alignment are of paramount importance to successful global influence of standards that support UK interests.
8. BSI can be a key partner to government and UK Research & Innovation in defining the agenda for international collaboration and building the framework to administer the research and innovation strategic priorities. Standards should be systematically considered in emerging technology and sector strategies, research and innovation programmes, technology road-mapping, and public procurement initiatives.

Standards in support of regulation

9. Standards are tools that government can utilise with industry and other stakeholders in support of, or as an alternative to, regulation; this is particularly impactful in highly innovative or complex sectors. In addition, standards are increasingly used across a wide range of Government policy areas to support ‘outcome based’ regulation including technical product safety, good governance, climate change, energy, fair markets and public confidence.
10. While regulation may be required to correct a market failure or to address an urgent consumer protection issue, standards offer a market led opportunity that may provide better and more flexible solutions. Standards offer the opportunity to achieve government’s policy objectives and provide the flexibility not afforded by the regulatory process. For more information on this see *Standards and Accreditation: Tools for delivering better regulation*¹
11. BSI has been working closely with the Better Regulation Executive to develop a strategic approach to how government uses standards in support of legislation. The government’s recently published white paper on *Regulation for the Fourth Industrial Revolution*², notes standards as a valuable tool for policymakers to use alongside the future regulatory framework. As government shifts towards a more outcome-focused, flexible regulatory system that encourages innovation, standards can help provide clarity for business on how to achieve regulatory requirements.
12. Standards and standards development can be used to catalyse collaboration within industrial supply chains and raise customer intelligence, allowing markets to form.
13. Leading companies can use standards to supercharge their operation and products with pragmatic knowledge, taking research to innovation and innovation to impact. For example, standards developed by BSI and the UK Connected and Automated Vehicles eco-system, are supporting safe and innovative trials nationally in the UK and shaping global CAV standards development. This includes several series of live trials, such as Oxbotica’s autonomous vehicle trials on roads in Oxford.

BSI in support of the ISCF

14. BSI works closely with Innovate UK and many of the ISCF challenges on how best we can support the innovation infrastructure meet its economic, societal and environmental goals.

¹ <https://www.bsigroup.com/globalassets/documents/about-bsi/nsb/bsi-ministers-handbook-standards-and-accreditation-uk-en.pdf>

² <https://www.gov.uk/government/publications/regulation-for-the-fourth-industrial-revolution>

15. Standards are well represented in many ISCF challenges, including:

- The **Faraday Battery Challenge** where we are leading a standards programme with workshops and research into the current standards landscape, development of three standards linked to battery safety and a roadmap for future standards and standards uptake.
- The **Future Flight Challenge** where we are working to establish a position alongside the CAA and others in the “Knowledge Based Infrastructure” workstream proposition.
- **Manufacturing Made Smarter** where we work with leading edge companies to enable innovation in highly effective, flexible, and lower cost solutions through the development of higher levels of interoperability.

16. However, there is still a need to raise awareness and inform the research and innovation infrastructure of the role standards can play in harnessing collective innovation across the nation. We welcome any support from government and other partners in supporting the creation of diverse, knowledgeable communities to engage in standards development, furthering purposeful impact with their use (in the UK and internationally) and establishing best practise in cutting-edge sectors.

About BSI

BSI is the UK's National Standards Body, incorporated by Royal Charter and responsible independently for preparing British Standards and related publications and for coordinating the input of UK experts to European and international standards committees.

BSI has over 115 years of experience in serving the interest of a wide range of stakeholders including government, business and society. BSI represents the UK view on standards in Europe (via the European Standards Organizations CEN and CENELEC) and internationally (via ISO and IEC). BSI has a globally recognised reputation for independence, integrity and innovation ensuring standards are useful, relevant and authoritative.

BSI is appointed by government and responsible independently for maintaining the integrity of the national standards-making system not only for the benefit of UK industry and society but also to ensure that standards developed by UK experts meet international expectations of open consultation, stakeholder involvement and market relevance.

British Standards and UK implementations of CEN/CENELEC or ISO/IEC standards are all documents defining best practice, established by consensus. Each standard is kept current through a process of maintenance and review whereby it is updated, revised or withdrawn as necessary. Standards are designed to set out clear and unambiguous provisions and objectives. Although standards are voluntary and separate from legal and regulatory systems, they can be used to support or complement legislation.