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BSI Standards: Report to the Department for Business, Energy and Industrial Strategy

Use of BIS funding and NSB activity for the financial year
1 April 2015 to 31 March 2016





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1 Introduction

As the UK National Standards Body (NSB), BSI represents UK economic and societal interests at the European and international standards organizations (CEN, CENELEC, ETSI, ISO and IEC).

1.1 National Standards Body – an overview

We manage the national standards-making process, providing a service for organizations of all sizes and sectors to develop market-led voluntary consensus standards through open public consultation and full stakeholder engagement. Our relationship with Her Majesty's Government (HMG) is constituted through a memorandum of understanding (MOU)* that sets out our role as the NSB.

The importance of standards to the European Commission in supporting EU legislation is highlighted on the Growth area of its website: "Standardisation has played a leading role in creating the EU Single Market. Standards support market-based competition and help ensure the interoperability of complementary products and services. They reduce costs, improve safety, and enhance competition. Due to their role in protecting health, safety, security, and the environment, standards are important to the public. The EU has an active

standardisation policy that promotes standards as a way to better regulation and enhance the competitiveness of European industry.**

Active participation in European standards organizations safeguards UK interests by ensuring that standards used to demonstrate compliance with European Directives are acceptable to UK stakeholders.

This report focuses on our use of HMG funding, which comprised around 6 per cent of BSI Standards revenue during financial year 2015/16, and was prepared following the changes in the structure of government introduced in July 2016, which included a change of the name of the Department for Business, Innovation and Skills (BIS) to become the Department for Business, Energy and Industrial Strategy (BEIS).

* http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/16505/Memorandum_of_Understanding.pdf
** https://ec.europa.eu/growth/single-market/european-standards/policy_en

"With the support of BEIS, BSI continues to take a leading role in ensuring the national and global standards infrastructure meets the ongoing needs of UK business and industry in a changing world."

Scott Steedman CBE, Director of Standards, BSI





2 Main funding envelope

During 2015/16 we continued to implement our strategy of providing a clear market sector focus for our standardization work programme.

2.1 Introduction

Our strategy of providing a clear market focus enables timely and effective solutions tailored to the needs of businesses trading in the UK and overseas, while supporting associated UK Government priorities.

Our standards work continues to be more than 90 per cent self-funded. HMG funds activities in key areas of public policy interest and priority areas such as innovation.

Our standards-related activity met 2015/16 funding year objectives set by the annual funding agreement between the former Department for Business, Innovation & Skills (BIS), now the Department for Business, Energy and Industrial Strategy (BEIS) and BSI. This section summarises our activity during the year relating to funding agreed for our work as the UK NSB.



The overall allocation for the funding year 2015/16 was £4,060k. The full BIS contribution towards standards-related activities was used. Total expenditure on these activities exceeded the 2015/16 allocation. Our traditional fund-associated NSB activities were supplemented by Committee Member training, awareness-raising, higher education work and initiatives with other standards bodies that are developing a standards infrastructure.

2.2 Areas of activity supported

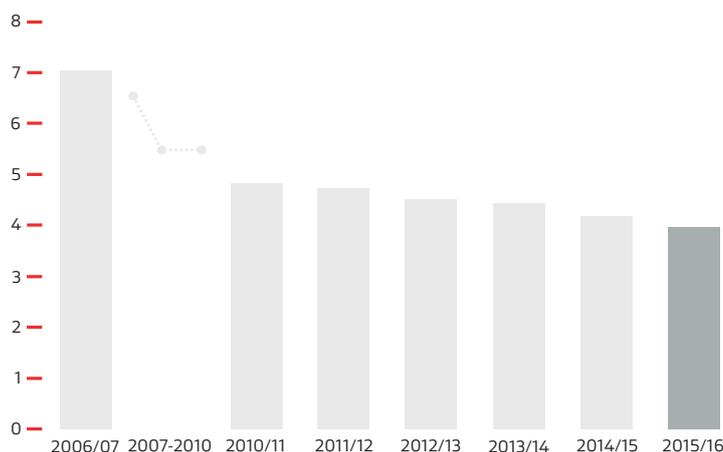
Funded activity falls into in three main areas:

Influence and leadership supports the infrastructure necessary for the UK to participate in European and international standardization. The fund includes a subscription fee that gives all HMG departments and their agencies a large discount when buying standards published by BSI.

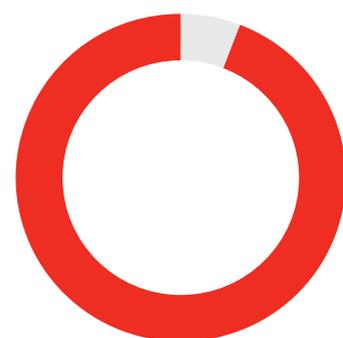
Support for standards development covers activities relating to developing standards content. Most of the total funding is made available for activities in areas that promote key HMG policies, such as competitiveness, innovation, reduction of trade barriers, protection of consumer interests, environmental protection and procurement.

BIS funding contributed towards full programme-management support for 134 UK standards technical committees in 2015/16. Their programmes overwhelmingly comprise European and international work, with only around 5 per cent national work. We continued to act as the gateway for UK parties to take part in international standardization, through our Committee Service Centre (CSC).

BIS main funding grant to BSI (£m)



BSI Standards revenue 2015



Revenue Source	Percentage	Amount (£)
BIS funding revenue	6%	£3,298,992
Other revenue	94%	£54,091,051

In 2015/16, BIS-funded UK standards technical committees, including those managed via our CSC, facilitated publication of 1,771 new and updated standards, with 906 withdrawn from circulation. Please refer to Appendix 5.1 for details of the committees supported and Appendix 5.2 for the subject areas of the standards published by these committees.

Support for participation in standardization enables UK experts to participate in European and international standards work by contributing towards their travel costs. Making sure that UK delegates attend overseas standards meetings is often key to ensuring that UK interests are represented when European and international standards are created or updated. This fund also helps ensure continued consumer participation in standardization by providing support towards travel to standards committee meetings as well as recruitment and training, for our network of consumer representatives.

During the year, BIS funding contributed to the travel costs of 2,701 trips to overseas European and international standardization meetings, made by experts participating on behalf of the UK.

2.3 Spend detail

	Original funding allocation (£k)	Agreed movement of funds up to 25% (£k)	Final funding allocation (£k)
Influence and leadership			
BSI membership for HMG	365	0	365
Contribution to membership of ISO/IEC/CEN/CENELEC	500	0	500
Total	865	0	865
Support for standards development			
General – NSB activity and public interest standards development (including staff travel)	1,231	11	1,231
Priority Areas standards development	810	0	810
Management fee	54	0	54
Total	2,095	11	2,161
Support for participation in standardization			
Assisted International Travel Scheme	1,017	0.4	1,018
Support for consumer participation in standardization	83	(0.4)	82
Total	1,100	0	1,100
Total funding	4,060	0	4,060

“The new standard developed by BSI and Cabinet Office will establish good practice across a range of disciplines for the first time and will help to turn smart working from an art into a science.”

John Manzoni, Chief Executive, Civil Service, regarding the launch of PAS 3000 ‘Smart Working’ in January 2016



2.4 Influence and leadership

BSI membership for HMG



Objectives

A central BSI membership agreement enables HMG

departments and agencies to access standards in a cost-effective manner, while enjoying other BSI membership benefits such as alerting, advisory and information services.

- Membership benefits to all government departments and agencies
- As the lead HMG department working with BSI, BIS has access to British Standards Online (BSOL) for department use only. Extensions to other HMG bodies are excluded
- BIS to work with BSI to agree activities to raise awareness of the membership services available to HMG departments and agencies

During the funding year 2015-16 all HMG departments and agencies were given access to BSI member services, including:

- 50 per cent off British Standards (including adopted European and international standards)
- 50 per cent off BSI's flagship online database product, BSOL
- Up to 10 per cent off international (ISO) and non-UK standards (e.g. DIN German standards)
- 50 per cent off many BSI conferences
- Free postage and packing when buying hard copy standards
- Where prepayment is not necessary, credit when purchasing standards
- Access to the Private List Updating Service (i.e. validation and tracking of a standards list provided by the member, with new versions sent automatically when updated)
- Expert help from the BSI Knowledge Centre, including advanced subject searches and fast identification of international equivalents from more than 200 standards organizations in 23 countries
- Sale of withdrawn British Standards

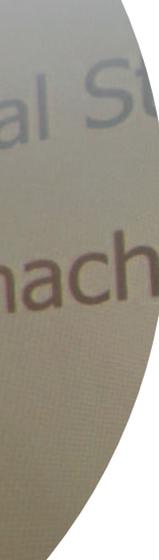
Scott Steedman CBE, BSI Director of Standards and Carol Sergeant CBE, Chair of the BSI Standards Policy and Strategy Committee presenting the award for International Standards Maker to UK expert and delegation leader Stuart MacConnacher at the Standards Forum and Awards in London, November 2015.

We continue to work with BIS (now BEIS) to promote standardization within government departments, and during the funding year supported BIS in meetings and follow-up actions from the cross-governmental Taking Standardization Forward (TSF) committee. During the funding year BIS took the decision to disband TSF with a view to changing the way their team and the BSI Standards team interact with other parts of BIS/government for maximum impact. Working with BIS, we have started a programme of outreach and development to other government departments.

As part of their membership, we continue to manage several government departments as key accounts, where our account managers work closely with HMG contacts to develop a productive relationship, ensuring individual department and agency requirements are met.

"The timely and focused development, and use, of standards can play a critical role in helping UK companies to develop new products and services, and in developing trade and economic growth. Deployed wisely, they help accelerate growth; but if done poorly they could impede progress. They are too important to be left to chance, so we really value our strategic partnership with BSI, working together to help ensure that businesses and researchers can leverage the power of standards in creating markets and accelerating their innovation activity."

Paul Mason, Interim Director, Emerging and Enabling Technologies, Innovate UK



Contribution to membership of ISO/IEC/CEN/CENELEC



Objectives

This fund supports UK obligations under European Regulation 1025/2012, which aims to prevent creation of new technical barriers to trade. The purpose of our activity is to:

- Ensure that we maintain an appropriate presence on key international and European committees and forums, to enable the UK to influence standards policy
- Ensure that UK obligations under European Regulation 1025/2012 have been fulfilled

BIS (now BEIS) makes a contribution to our membership of the international and European standards bodies (ISO, IEC, CEN and CENELEC), which represents direct support to the standards infrastructure. Our membership of these organizations enables the UK to maintain a standards infrastructure that is consistent with European standards policy, as required by the MoU between BSI and HMG.

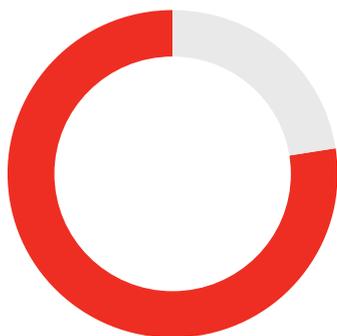
Membership of these organizations also opens gateways for international discussions, enabling UK stakeholders to participate in the development of international and European standards, while enabling the UK to influence at a high level the policies and strategies these organizations.

Under European Regulation 1025/2012, EU member states must give notification of any new national standards being developed. This year, 86 new British Standards projects were reported to CEN/CENELEC.

During the year BSI's Director of Standards, Dr Scott Steedman, continued his role as CEN Vice President (Policy). We participate in all key policy development committees of the international and European standards organizations, including administrative boards and technical boards. We also provide leadership by holding the secretariats of international standards committees in key areas for the UK such as energy management, sustainability, Building Information Management (BIM), risk management, anti-bribery and wave energy.

The BIS (now BEIS) contribution (£500,000) makes up approximately 23 per cent of our annual subscriptions to ISO, IEC, CEN and CENELEC.

Subscriptions to ISO/IEC/CEN/CENELEC



BIS contribution
23%
£500,000

BSI contribution
77%
£1,670,067

2.5 Support for standards development



Objectives

Support for our standards development programme including programme management support for eligible BSI committees meeting scheme criteria; access to international standardization provided for committees by our Committee Service Centre (CSC); BSI staff travel in support of standards development.

Implementation of the 2015/16 Priority Areas programme of work, as agreed with BIS in relation to HMG priorities/policies, including use of the Investment Case and One Page Project Plan templates for effective programme management and monitoring.

This funding contributes towards activities we undertake to meet UK formal standardization needs and facilitate UK participation in international standardization. These activities include:

- Support via named BSI staff as programme managers for eligible UK national committees and European/international committees (including where the UK holds the secretariat of the latter).
- Support via the BSI Committee Service Centre for some UK national committees, providing a gateway to interested UK parties for participation in European and international standardization.
- The Priority Areas programme: projects that support HMG policy priorities by drawing on a unique mix of BSI standards development activities (e.g. pilots, research, leadership positions, communication tools etc.).

Standards development programme

Under the standards development programme scheme rules, funding is applied to non-commercially viable UK standards development committees whose work supports HMG priorities in relation to:

- Government or public interest (i.e. regulation, consumer protection and safety)
- Standardization supporting Priority Areas (pre-competitive standardization supporting innovation, for example Innovate UK priorities)
- NSB international work programme (i.e. activities the NSB conducts to fulfil its core function on behalf of the UK).
- Specific/urgent industry standardization (i.e. promoting productivity or UK competitiveness in world markets through standardization that protects UK interests, exploits UK expertise and has a large impact on UK industry, including international secretariats)

Non-commercially viable UK committees are those where the use of resources (in the form of our staff supporting the UK committee and, where applicable, any corresponding BSI-run European or international secretariats) exceeds the average annual income generated by sales of standards assigned to that committee.



A review of the work programme and HMG priorities supported by UK committees and their corresponding UK-held secretariats is carried out each year to create a forecast of eligible committees. The review is integral to the overall BSI Standards market development planning process, through which each sector team analyses its overall standards pipeline and forecasts resources accordingly.

The use of our staff in support of UK committees (and corresponding BSI-run international secretariats where applicable) is monitored each quarter. At the end of the final quarter of the year, the actual resource employed during the funding year is determined and committees with a main HMG priority are confirmed and added to the initial forecast list or removed as appropriate.

The list of technical committees supported with a contribution from BIS Standards Development funding in the year is detailed in Appendix 5.1.

Spend summary

Category ²	Number of eligible committees	Chargeable days worked Apr 2015-Mar 2016	Funding requirement ¹
1. Government or public interest			
Regulation, consumer, protection, safety, etc.	60	1,059	£594k
2. Standardization supporting Priority Areas			
BSI Priority Areas programme ³			£304k
Priority Areas committees: Innovation, procurement, better regulation, sustainability, infrastructure	62	1,265	£710k
3. NSB international work programme (includes technical and sub-committees)	406	2,763	£1,550k
4. Specific/urgent industry standardization			
Productivity and UK competitiveness	12	198	£111k
Total Cost		5,285	£3,268k

1. The full cost of the support in the areas shown exceeds funding provided, with BSI covering the shortfall.
2. The total cost and days worked are assigned to one category only, although some committees are eligible in more than one.
3. Funding applied for Priority Areas projects relates to activity delivered in the year. The total value of projects committed to in the year was £350k.



At the end of the funding year 134 technical committees with a named BSI Programme Manager met the criteria for support from the Standards Development fund. The costs of supporting these committees and those managed via the BSI Committee Service Centre (CSC) exceeded the available BIS contribution.

Outputs of committees supported by BIS funding

During 2015/16 the 134 UK standards committees (with named BSI programme managers) that received BIS funding facilitated publication of 706 new and updated standards, and withdrew 225 from circulation.

A further 1065 standards were published and 681 withdrawn as a result of access to international standardization facilitated by the CSC. Please refer to Appendix 5.1 for details of the committees supported and Appendix 5.2 for a summary of the subject areas of the standards produced by these committees.

Priority Areas standards development programme

During the year we delivered a varied programme of standardization activity to support policy priorities and the innovation agenda, ranging from standards strategy and delivery work to awareness-raising activities. As previously, the cross-departmental Taking Standardization Forward (TSF) committee, managed by BIS, validated the Priority Areas programme. All 2015/16 project proposals put forward – including those that proposed funding for a repeated intervention – went through an investment case process.

British Electrotechnical Committee (BEC) President and BSI Standards Policy and Strategy Committee Member Geoff Young speaking at the Standards Forum and Awards in London, November 2015.

2015/16 Priority Areas programme highlights:

Strategic partnership with EPSRC Centre on Through-life Engineering Services – Year 4

This project followed on from three successful years of engagement with the EPSRC Centre on Through-life Engineering Services (TES), of a total of five planned years of collaboration. The Year 1 project provided an initial contribution towards understanding the terminology around TES, focussing on maintenance, repair and obsolescence management. During Year 2 an initial standards strategy for TES was developed and initial engagement activities with key stakeholders were carried out. In Year 3 key performance drivers for TES were established and a generic value map for TES developed. An extensive review of existing and planned standards was also conducted, which highlighted the potential for an overarching framework standard setting out best practice for engineering services.

In the Year 4 project in-depth industry interviews with major stakeholders were undertaken to test the capability elements suggested in the value map and to review how existing standards map into it. Two student projects at Cranfield University also supported the interviews in addressing how existing standards may relate to the value map.

In addition there was an opportunity to engage with new correspondents through parallel work, initiated by the TES Centre, to consider an initiative to develop a National Strategy in TES. The initial work has recommended that such a Strategy should be developed by industry and that it should include a Standards' Theme.

Broadening environmental stakeholder involvement - the UK Sustainability Network for Standardization (SNS)

In its second and final year, this project has successfully supported the inclusion of environmental stakeholder representation and consideration of environmental concerns across BSI committees, helping BSI to meet requirements for multi-stakeholder involvement of EU regulation 1025/2012 on European standardization and BS 0 A Standard for Standards – Principles of standardization. It has been undertaken by the Sustainability Network for Standardisation (SNS), an independent initiative launched in 2012 to facilitate systematic representation of environmental experts across the range of BSI technical committees and to build the capacity of the UK environmental sustainability sector to actively engage in BSI committees.

Main funding envelope continued

The 2015/16 Priority Areas budget was allocated to:

Reference number	Project title
INN15-01	Strategic relationship with EPSRC Centre for Innovative Manufacturing in Through-life Engineering Services, at Cranfield University: year four
INN15-02	Broadening environmental stakeholder involvement in standards – the UK Sustainability Network for Standardization (SNS) – first iteration
INN15-03	Priority Areas management
INN15-04	National and international secretariats for eligible Priority Areas committees
INN15-05	BS 8536-2 Briefing for design and construction: code of practice for asset management - document development
INN15-06	Big Data – research and standards roadmap
INN15-07	Fire sector strategic policy committee (FSH/O) – committee leadership
INN15-08	Fintech – research/standards mapping
INN15-09	Strategic relationship with EPSRC Centre for Innovative Manufacturing in Through-life Engineering Services, at Cranfield University: year five
INN15-10	Construction and Built Environment Policy and Strategy Committee (CB/-) – committee leadership
INN15-11	Smart manufacturing (Industry 4.0) - research
INN15-12	Resource management and the circular economy - pilots to improve draft of new standard
INN15-13	Security & surveillance - stakeholder engagement/communication
INN15-14	Broadening environmental stakeholder involvement in standards – the UK Sustainability Network for Standardization (SNS) – second iteration
INN15-15	The next generation of InfoComms protocols – stakeholder event
INN15-17	Non-financial reporting – research & stakeholder engagement

The project aimed to maintain capacity-building and expand environmental stakeholder interest by improved communication on the relevance of standards to environmental protection. It also aimed to facilitate effective contribution of environmental experts recruited to BSI committees by identifying internal barriers to the consideration of environmental concerns, and develop longer-term collaboration to establish best practice in environmental stakeholder participation. This was achieved over the duration of the project through engagement with BSI committee members, BSI staff and other relevant stakeholders. The knowledge garnered over the duration of this project has been beneficial to BSI, our stakeholders and the environment.

The project has been recognized by the European Commission as an exemplar of good practice and ECOS (the European equivalent of the SNS) is now working on a new project proposal to be submitted to DG Grow shortly. BSI is supportive of the ECOS bid and we hope this will be fully funded by January 2017. BSI continues to support and expand this important area of our work.

Big Data - research and standards roadmap

Big data is defined by technology research firm Gartner as 'high-volume, high-velocity and high-variety information assets that demand cost-effective, innovative forms of information processing for enhanced insight and decision making'. It is a rapidly growing area where HMG is looking to have UK leadership with substantial funding, most notably with the investment of £42m over 5 years to fund the Alan Turing Institute. Despite this there has been little standardization activity in the pipeline.



This project aimed to determine what the key areas requiring standardization are and who the key players are that BSI needs to engage with. The research project was completed in October and the final report was developed into an externally facing thought leadership piece. Our contacts at DCMS are supportive of the findings and have shared them in HMG. Subsequently BSI undertook workshops with approximately 30 attendees. This has refined the report findings into five potential areas which are demanded by the market. BSI is currently working with various stakeholders to determine the right standards vehicle to take these ideas forward.

Staff Travel Fund

An allowance for staff travel is available within the Support for Standards Development budget. It enables our staff to accompany UK committee members to meetings and provide guidance and support that enables technical experts and delegates to maximize their influence during overseas meetings, which ultimately benefits the UK. This funding continues to provide valuable support to UK committee members.

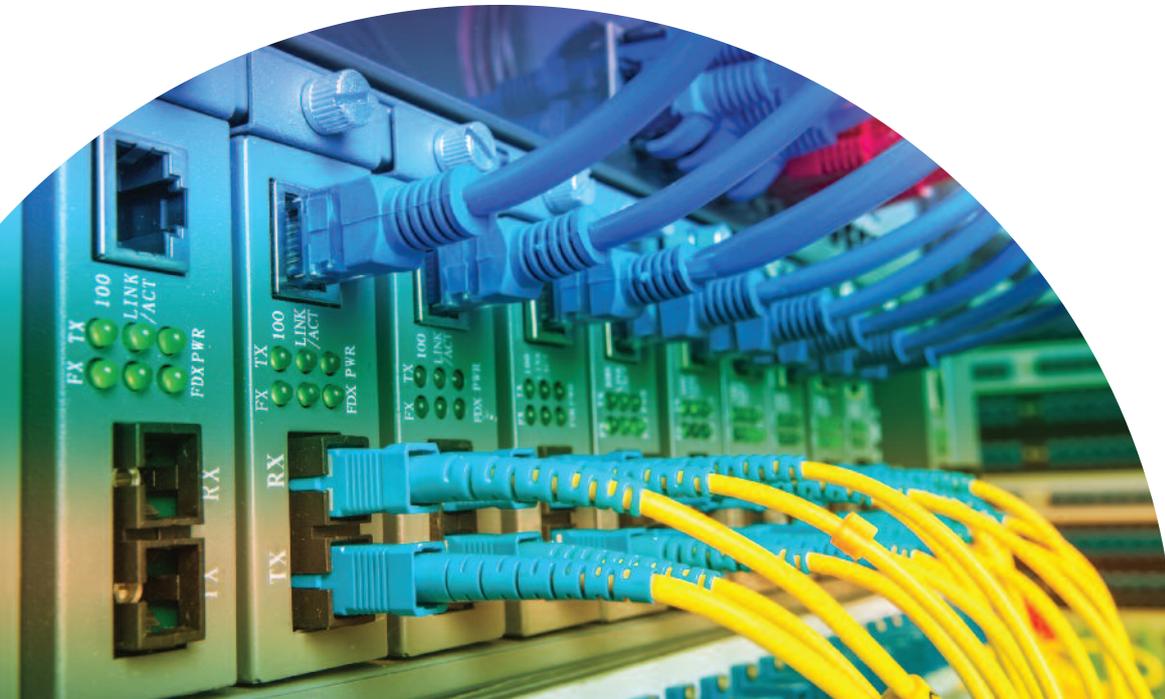
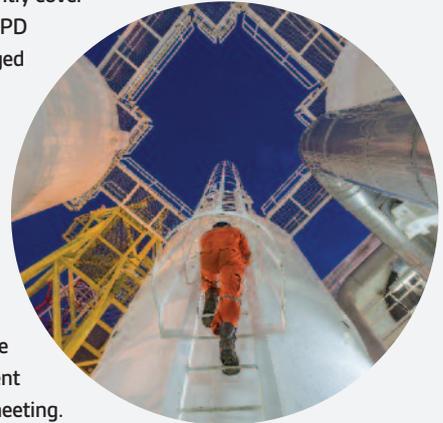


Case study



Pressure vessels

Lead Programme Manager Sarah Kelly travelled to Brussels to attend the first meeting of the newly created UK-led working group for titanium vessels (CEN/TC 54 Working Group (WG) 7), in order to support the UK Convenor and the UK delegation at the meeting. WG7 is creating a new part 11 of the European pressure vessels standards series, EN 13445. Essentially this involves converting the UK's titanium material supplement from the UK national code PD 5500 into a European Standard. By proposing elements of PD 5500 for inclusion in EN 13445, BSI and the UK national mirror committee (PVE/1) intend to help UK users make the transition from PD 5500 to the European standard. EN 13445 does not currently cover all the requirements for pressure vessels that PD 5500 contains. The WG7 meeting was arranged to coincide with the plenary meeting of CEN/TC 54, the technical committee for pressure vessels, which is also UK-led, in order to encourage and facilitate participation from European experts who would be attending the plenary meeting. Ms Kelly also attended the CEN/TC 54 plenary meeting the following day to support the UK delegation. New work on copper vessels, to be led by Germany, was approved for development by the Technical Committee at the Brussels meeting.





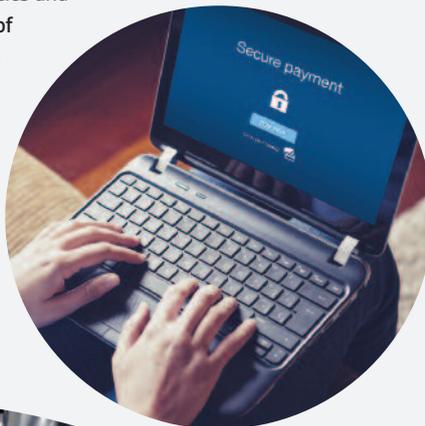
Case study



Security and Resilience

Lead Programme Manager David Adamson attended the Heads of Delegation meeting in Geneva for members of the newly established international committee on Security and Resilience, ISO/TC 292. This meeting required particular standardization expertise and experience to help shape the newly formed committee, which combined several technical committees covering security, fraud, community resilience, and continuity. ISO technical committees had not previously been combined, and BSI spent considerable time engaging with national stakeholders to develop the UK brief. As a result of UK input additional provisions were included in the TC's Standing Document, and the UK also secured a crucial appointment on the panel drafting the TC business plan. These successes have enabled the UK to gain considerable influence in this important area and to provide much needed expertise to its members.

Mr Adamson also attended the ISO/TC 292 meeting in Bali, ahead of which the UK had secured two of the six key subgroups in the TC on Community Resilience and Continuity and Resilience. He provided Secretary support for both of these groups (WG2 and WG5), as well as supporting the large UK delegation attending the six Working Group meetings, where he provided clarification and guidance on ISO policies and meeting tactics. He also assisted the UK Head of Delegation at the UN Agencies discussions and guided the UK delegation during the opening and closing plenary meetings. This ISO TC is responsible for areas that are critical to the UK including security, resilience and continuity, and BSI works closely with stakeholders, including the Cabinet Office's Civil Contingencies Secretariat, to help ensure that the ISO activities are in keeping with UK's expectations and needs.



2.6 Support for participation in standardization



Objectives

Financial support to UK delegates for meetings relating to international standardization through the Assisted International Travel Scheme (AITS)

- Continued management of AITS spend by allocating the fund across four phases. Projected spend against budget for each quarter monitored to prevent overspend
- Monitor use of the fund for 2015/16 to ensure maintenance of UK presence at core meetings
- Monitor use of the fund for 2015/16 to ensure it is used predominantly by SMEs

Assisted International Travel Scheme

The AITS fund supports UK participants in international standards work by contributing towards their travel costs. The presence of UK delegates at international standards meetings ensures UK interests are represented when international standards are created or updated. Without this assistance many experts and delegates would not be able to participate.

In 2015/16, AITS funding of £1,018k was awarded. The scheme supported 2,701 UK committee members attending international meetings in various roles throughout the funding year.

During 2015/16 the fund was used mainly by SMEs (in line with government priorities for SME access). Although this funding is crucial for smaller businesses that lack resources to attend, it also allows technical staff within larger companies to justify travel costs and time away from their employers.



Case study



Luminaires and lighting equipment

Since 1990 Andy Hughes has been working in IEC, CENELEC and BSI technical committees that are responsible for lighting products, and has just started to serve his third term as the chairman of the IEC SC34D committee responsible for international luminaire standards. A Senior

Manager at the lighting equipment manufacturer Zumtobel, Andy also works extensively inside the UK trade organization, Lighting Industry Association, where he is chairman of the association's Technical Board.

Andy commented, 'Active working in the arena of European and international standardization is a big commitment for any company to jump into and support, especially over the sustained periods of time that are necessary to be effective. Firstly the company has to accept and be committed to the fact that it is working for the "common good", to have stable and fair markets in its industry. If you enter this work with the aim to gain leverage for your own firm then you will not be successful. The availability of AITS funding to assist expert participation in standardization underpins the important message that this is a community activity with the successes of the work being shared. The AITS funding typically covers around 50% of travel expenses and for many industry experts this is a critical resource to ensure their participation, particularly through the financial ups and downs seen over time in most companies. The nature of our work is that it is led by international organizations such as IEC, so the need for worldwide involvement (and travel) is obvious, but does not come cheap.

'For the lighting industry the recent rapid technology change from traditional glass lamps to LED has caused a complete change for the design and manufacture of its products. New and updated standards for safety/performance have been needed urgently with a huge extra standardization resource being required to service this. For myself, travel and time to support the work in IEC has more than doubled during the last three years, but we seem to be doing a good job, and with some determination are keeping pace. From a personal perspective the availability of AITS has helped enormously to secure my own increased travel needs associated with this.'



Support for consumer participation in standardization



Objectives

Manage effective consumer and public interest (CPI) participation in standardization through their contributing innovative ideas and playing a key role in shaping standards

- Support for consumer participation in standardization (including assisted consumer travel)
- Organize Consumer & Public Interest Network (CPIN) meetings and training focussing on topics relevant to the consumer and public interest (at least two CPIN meetings and at least one at an appropriate external venue)
- Maintain awareness of standards. Arrange the preparation/revision of at least one publication and/or at least one relevant background research/specific project to ensure evidence base
- Maintain the number and relevance of individuals involved in the process to match CPIN priorities
- Ensure attendance of CPI representatives at UK and international standardization meetings in accordance with relevant areas of interest (at least 100 during the year)



Case study



Adhesives and sealants

Lorna Williams, Secretary of the British Adhesives & Sealants Association (BASA), commented, 'BASA heavily supports the relevant BSI (UK) mirror committee input into the CEN and ISO work by being actively involved in projects to introduce standards for member's products. Since the introduction of the Construction Products Directive (CPD) and its amendment into the Construction Products Regulation

(CPR), BASA's involvement has expanded considerably. The CPR has meant mandatory CE marking of any of our member's construction products covered by a harmonized European standard. It therefore becomes vital for BASA members to be involved in any amendments to the harmonized product standards and to actively participate in the CEN Technical Committees. It is important that BASA's voice to BSI, as one of the UK's inputs into the standardization process, is clear and that our work in the mirror committees can further the UK input into the standardization process. In addition to our active work relating to European Standards, it is also vital to remain active in the international standards work.

'In all these cases, finding a representative for the industry can be challenging. Many of the multinational members have centralized their technical resource outside of the UK over the last 10 years, and so this leaves the burden heavily sitting on our SME members. In addition to the time we ask our technical experts to give, there is also a real issue with the costs of participating in meetings outside of the UK. BASA as an association has very limited funds available to support members in this respect and the AITS fund to support experts and delegates, chairmen and convenors to overseas meetings is vital to BASA's ability to participate. Without a physical presence at the meetings, the UK risks losing its ability to positively influence the development of standards; we often see much of the decision making being made outside of the meetings themselves, so attendance is a vital part of the process.'



BSI Consumer & Public Interest staff and representatives with other Consumers International members at the CI briefing meeting, as part of the ISO-COPOLCO (Consumer Policy Committee) annual meeting week in Geneva, May 2015.

Consumer involvement in standardization

Throughout the year CPI representatives have been involved in 140 UK and international standards technical committee meetings and working groups. Here are some examples of areas that have benefited from consumer involvement (by CPIN priority):

- **Children's interests:** Children's luminaires, finger traps, fancy dress costumes
- **Inclusivity:** Accessibility of electrical appliances, buildings, use of electrical appliances by vulnerable persons
- **Data privacy:** Identification cards, payment cards and personal identification, payment methods, protecting consumers from financial harm
- **Services:** Bareboat charter hire, complaints handling, customer services, diving services, mobile payments, tattooing, volunteer tourism
- **Sustainability:** Environmental management, sanitary appliances
- **Wellbeing - product safety and behavioural risk:** e-cigarettes, fire extinguishers, ladders, nanotechnology, respiratory equipment, robots, self-assembly products, societal security and public information symbols



A closer look at some key examples:

Fancy dress costumes

Following the highly publicized incident in which a child was burned when her fancy dress costume caught fire, a standards group formed to consider the need to revise the relevant standard, EN 71-2 'Safety of toys - Flammability' (children's dressing-up costumes are classified as toys rather than clothes). The work is led by UK committee CW/15 'Safety of Toys' and includes experts from TCI/100 'Textiles and Clothing', along with other individual experts and various industry representatives. There are CPIN Consumer Reps on both committees. Tests to the current standard, organized by BIS and TSI, on 300 sample costumes, revealed a 10% failure rate, indicating non-compliance as a confounding problem. However, no other actual incidents of injury involving dressing-up costumes catching fire have so far been identified by the Royal Society for the Prevention of Accidents (RoSPA) or others. Requests to members of the European Committee on Safety of Toys (CEN TC/52) and a general request to EU member states also produced no incident data.

Although it could therefore be argued that in practice there is not a problem with the current standard, given that hundreds of thousands of costumes are sold, the retail sector take a different view. Costumes considered 'compliant' to EN 71-2 are in practice not fully tested, because of exemptions based upon amounts of material in the costume. Material orientation is not specifically addressed in the standard and there are no restrictions on materials that can be used. In addition, consumer perception is very important and many people will have been made aware of the incident.

In response, the British Retail Consortium (BRC) developed a new testing protocol that overcomes the exemption in EN 71-2 and addresses issues of materials and orientation. All members of the BRC agreed to the new protocol, but this is not a substitute for a revision to the standard. Not all committee members were convinced that the standard should be revised without more incident data. However, the committee consensus was that the standard should be reviewed, as there was reason to believe that the current requirements do not ensure full compliance with the EU Toy Safety Directive (TSD) in relation to flammability. This is a positive outcome for consumers, but it is clear that not all involved are convinced of the need for this standard to be improved. It was agreed that a small task group (including CPIN

Chair Christine Heemskerck) would prepare a report, with as much data as possible to support this argument. Fortunately, EN 71-2 is due to be balloted for review in July 2016, giving an opportunity to request changes, and the task group had 6 months to prepare the case.

Main funding envelope continued



Data privacy

The main gaps in standardization in terms of privacy are the need to address domestic privacy needs, being able to trace where consumer personal data has been used by third parties, and ensuring privacy in large data sets, by managing how identifiable an individual is. The ISO Consumer Policy Committee (COPOLCO) are establishing a consumer privacy group to look at these issues. There is also a new ISO work item proposal for online consent to data collection that is based on passing a large amount of information to consumers at the time of consent.

Two CPIN Consumer Reps attended a meeting in December 2015 to discuss PAS 17271 'Protecting consumers from financial harm' and ensure that both the technical data protection and services issues were covered. The meeting brought together expertise from the UK committees IST/12 'Financial services and Privacy', IDT/1/-/4 'Data protection' and SSM/1/-/1 'Fraud'. There are Consumer Reps on all of these. The Reps successfully argued for including the consumer goals in the agreed scope of the PAS.

The CPIN Consumer Rep for Biometrics and Privacy is involved in work in this area, which includes issues such as the impact of biometrics on children, privacy and security, particularly for online ID verification, border and law enforcement with mobile ID and, for major incident identification, the sharing of biometrics. Clear wayfinding signs are also needed, for example in airports, to indicate to the public that a facial image capture system/station lies ahead.

The Biometrics Institute is working towards a biometric trustmark. A study report will be circulated to the relevant committee when finished.

Increasing consumer awareness of standardization

Consumer focused leaflets have been prepared covering these areas:

- Living with dementia (A guide to PAS 1365: Code of practice for the recognition of dementia-friendly communities in England)
- Pest management (A guide to the British Standard for pest managers BS EN 16636)
- Consumer protection
- Children's play areas (A guide to standards for playground equipment and surfacing (BS EN 1176 series))

Policy, planning and informative meetings

Several meetings were organized by or attended by CPIN/CPIU during the year, including:

- **Citizens Advice conference:** A BSI stand was manned by CPIU staff and BSI sponsored one of the awards.
- **Chartered Trading Standards Institute (CTSI) conference:** This included a session by CPIU staff. Topics included: 'Will regulators become enablers, blockers or irrelevant?' and 'Is globalisation a threat or an opportunity?'
- **Workshop on approval schemes:** The Consumer Protection Partnership has highlighted the plethora of approval schemes that currently exist in the UK and lack of common agreement on what these schemes deliver for the consumer. In response, BSI commissioned the National Consumer Federation to explore the issue in a workshop hosted by BIS at their offices.
- **Summer and Winter All members' Meetings:** on the themes of 'Security and Consumers – From Design to Disaster' and Consumer Protection respectively.

- **COPOLCO:** BSI CPIU staff, the CPIN Chair and relevant Consumer Reps attended plenary meetings in May and November (Chairs Group meeting). The May Workshop theme was 'The connected consumer in 2020: empowerment through standards'.
- **Consumers International (CI):** BSI CPIU staff and the CPIN Chair attended and presented at the twentieth World Consumer Congress in Brasilia, attended by more than 700 delegates from all over the world. The theme for the four-day event was 'Unlocking Consumer Power: A new vision for the global marketplace'. Two key themes for standards were safe drinking water and second-hand goods. Next steps for BSI will be to hold further training sessions for the CPIU and BSI staff on the United Nations Guidelines for Consumer Protection.

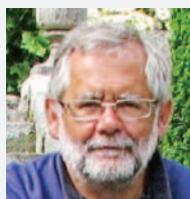
Continuous professional development

The following sessions were organized and facilitated by CPIU staff and two experienced consumer trainers.

- Two face-to-face sessions
- Four webinars, on the topics of services; privacy and security of personal data; 'How Trading Standards make use of standards' / 'Putting Standards into practice: the role of standards in court' and consumer vulnerability.



Case study



Consumer Representative

Brian Tranter joined the BSI Consumer & Public Interest Network in 2011. 'My background is in engineering. I worked for a large international company, involved in the creation of components for the aircraft and various other industries and am now retired. In engineering, standards are very important and, in addition to using them, I also had the opportunity to contribute to some that were related to my work. I found out about the CPI Network from the BSI website. Joining has given me the opportunity to use my experience of standards and get involved in the development of those that directly impact members of the public. The following are examples of such standards which I've worked on:

- IEC 60065, 'Audio, video and similar electronic apparatus – Safety requirements' is important for consumers, because equipment such as TVs must be safe for use in the home, where it can be left unattended or accessible to children. Current TVs now have thin screens that can be stood on edge or hung on the wall. This has the potential to create a real hazard in the home environment where, for example, a child may climb up to reach the controls, using the TV itself as a hand hold. Without a suitably designed stand or an adequately designed bracket and fixings the TV may topple or fall on the child causing injury. Load testing and stability testing safety requirements reduce the risk of such incidents.
- ISO 13482, 'Safety requirements for non-industrial robots – Non-medical personal care robots' – robot technology is rapidly advancing and robotic systems, once the preserve of industry, are increasingly found in domestic and other non-industrial applications. New robots will operate in close contact with the public – in personal care applications there will be close human-robot interaction and physical contact. Existing standards do not adequately cover their safe use in this more challenging environment. This new standard sets out to address these and other issues for existing robots and new systems being developed.

'Becoming a CPI Representative is both fulfilling and rewarding. It has given me the opportunity to participate in discussions on issues that affect people's lives and to make a positive contribution to those issues. Other attendees at committee meetings are specialists and experts in their fields so from a personal perspective each meeting is also an opportunity to learn something new.'

Brian sits on eight technical committees including robots and robotic devices; audio, video and multimedia systems and equipment; optical radiation safety and laser equipment; fairground and amusement park machinery and structures – safety.

3

Working in the UK national interest

During the funding year our international projects, education and committee member training functions continued to carry out work that benefits the UK.

We continue to support consumer and public interest in standards development by funding the BSI Consumer & Public Interest Unit (CPIU) and providing honoraria payments for our volunteer Consumer & Public Interest Coordinators.

We recruited our new Membership Development and Engagement Manager, who now has overall responsibility for committee member engagement within BSI. We continued our programme of Standards Forums for committee members, and held our second annual BSI Standards Awards in November 2015, aimed at honouring significant achievements and best practice among our expert community of volunteer committee members.

During the year, Dr Scott Steedman was re-elected to his role as Vice President (Policy) for CEN, continuing our record of holding leadership positions in the European and international standards organizations to ensure UK influence.

Working with donor agencies, we delivered a range of projects to support the standards and quality infrastructures in countries across the globe, including key trading partners, emerging economies and developing countries.

BSI continues to facilitate access for SMEs to both the standards development process and the development of standardization policy. In particular, our SME Forum continues to be utilized to seek feedback on important standardization related developments such as the Joint Initiative on Standardization and to promote and provide access to useful tools such as the new CEN & CENELEC e-learning tool for SMEs.

Additionally, BSI continues to lead and actively participate in the CEN & CENELEC SME Working Group, which has started work on its second phase of activities including improving links with trade associations and sharing best practice across European National Standards Bodies.



During the year our committee participation model project continued to progress ways to ensure better engagement with our stakeholders and to evaluate models for future participation in standards-making. This first stage of activity included telephone and online research with our nominating bodies, this will help inform our strategic plans to ensure consistent and effective engagement with those organizations.

3.1 Working with Government

In advance of the EU referendum, BSI submitted written evidence to the House of Commons Foreign Affairs Committee inquiry, 'Costs and benefits of EU membership for the UK's role in the world'. BSI's evidence pointed out that whilst a UK exit from the EU may not directly impact UK membership of the international and European standards organizations, it would have a major impact on UK business, industry and consumers with relation to Single Market rules that could have significant effects on standardization, in terms of the regulatory frameworks that rely on standards, the standards that support European law, and European policy on standardization.

BSI's Resident Twinning Advisor in Cairo, the Chairman of Egypt's national metrology institute, and the Chairman of Egypt's Industrial Control Authority at the launch of the BSI managed and EU funded *Trade & Domestic Market Enhancement Programme*.





Training on developing expertise in the accreditation of reference material in Mumbai in July 2015 under the BSI led EU funded project, "Capacity Building Initiative for Trade Development in India (CITD) - Lot 1: Food Safety and SPS, Technical Regulations and Standardization, and Support to Post Clearance Audit (PCA) in Customs".

We successfully applied for funding from Innovate UK and various parts of BIS and kicked off projects in innovative areas such as Digital Object Identifiers and Building Information Modelling (see section 4).

3.2 CEN, CENELEC and ETSI

In his role as Vice-President (Policy) of CEN, Dr Scott Steedman gave a presentation on TTIP (the Transatlantic Trade and Investment Partnership) and standards at the Conference of EURAS – the European Academy for Standardization – in Copenhagen. The event marked the launch of the CEN/CENELEC Education textbook and accompanying materials, which was the product of 18 months' work as part of a collaborative team of European NSBs, including BSI. This textbook promotes standards into education curricula.

BSI, supported by a working group from CEN and CENELEC members, led the writing of CEN-CENELEC Guide 30 on standards and regulation, which was confirmed during the June General Assemblies. The guide is designed to help policy makers (primarily the European Commission) to understand the relationship between standards and regulatory policy. We also continued to focus on the efficiency and effectiveness of CEN and CENELEC's working practices, working with other member countries to focus on this issue.

ETSI is the third of the European Standardization Organizations (those organizations authorized to use the EN designation) and specializes in ICT standards. Although BSI was already the UK national member of ETSI, full membership was agreed at the ETSI General Assembly in November 2015.

"The Director of Standards participated in the UK-China JETCO (Joint Economic and Trade Committee) meeting, the first time that standards had been included on the JETCO agenda."

Details of the European Commission Joint Initiative for European Standardization were announced in the Commission's Single Market Communication on 28 October. The EC hosted a first plenary meeting on 23 November. BSI joined the editorial committee, which met on a number of occasions early in 2016. The group included representatives of the EC, EFTA, ESOs, NSBs, Member States, industry federations and the Annex III organizations. The policy areas to be covered included Innovation, Focus Areas, Collaboration, International and Awareness. BSI worked extensively with BIS to ensure that the UK's views were adequately represented.

BSI started planning for the CEN-CENELEC General Assemblies (AG), which it will host in Edinburgh in June 2017.

BSI reported to CEN, CENELEC and ETSI under EU Regulation 1025/2012, covering transparency in national standards, use of ICT, and involvement of SMEs, environmental stakeholders, consumers and unions in national committees.

3.3 ISO, IEC and other international issues

BSI holds the secretariat for the development of two of ISO's most influential standards, ISO 9001 (Quality Management) and ISO 14001 (Environmental Management). Major revisions of both standards were published in September 2015, and considerable effort went into managing this work and into communicating about the changes to users of the standards and providers of certification services.

3.4 UK engagement

We continued to organize Standards Forum events around the country for BSI committee members, held in Sheffield (June) and London (November, together with BSI's Awards).

The Director of Standards participated in the UK-China JETCO (Joint Economic and Trade Committee) meeting on 25 February 2016 in Birmingham, the first time that standards had been included on the JETCO agenda. The meeting was jointly chaired by the former Secretary of State for Business, Innovation and Skills, Sajid Javid, and the Chinese Minister of Commerce, Mr Gao Hucheng.

BSI and the United Kingdom Accreditation Service (UKAS) held a joint reception at the House of Lords in June 2015 that was attended by some 170 civil servants and BSI/UKAS staff, and at which BSI, UKAS, NPL and NMRO launched the 'UK Quality Infrastructure' initiative, a coherent presentation of the UK's capabilities in standards, accreditation and measurement, the development of which had been funded in the prior year by BIS through its Collaborative Fund.

In June 2015, BSI published and launched the independent study on the benefits of standards to the UK economy, conducted and written by Cebr (the research itself had been funded from the previous year's BIS Collaborative Fund). The publication and launch (not funded by BIS) was marked by a planned marketing and publicity campaign, featuring published articles, social media alerts and national media coverage, together with a launch event. The study updated a previous report published by the then-DTI in 2005, and found that standards contribute significantly to UK productivity and GDP. It also featured results from interviews with 527 companies across seven key sectors on their use of standards.



The BSI research team for the economic benefits of standards research project

BSI and Innovate UK signed a partnership agreement in January 2016, to underline the importance of taking a strategic approach to standards in emerging technologies. Signed by Dr Ruth McKernan, CEO of Innovate UK, and Dr Scott Steedman, the agreement provides a framework for future cooperation between BSI and Innovate UK.

BSI continued to offer training to government departments through the Policy Profession initiative, and worked with UKAS to deliver bespoke training to officials from BIS and DEFRA during the year.

3.5 Education

Our Education Development Manager and others continue to promote standardization in UK higher education institutions.

Over the last 12 months we have been assessing our educational priorities and strategy. In discussion with many of our existing educational stakeholders, trade associations, professional bodies and HMG representatives, we have set about generating a new vision and set of deliverables for the educational and awareness raising work that we undertake. The educational and societal stakeholder strategy will be completed and delivery will begin during 2016. This will include, for the first time, a comprehensive digital engagement strategy that details our strategic approach to engaging with the widest possible range of societal stakeholders.

Our focus for educational activity is moving to an older cohort than previously:

- Postgraduate higher education providers and stakeholders
- Education departments at trade associations and professional bodies
- Business schools

During the summer of 2015 we employed an intern for three months to research the educational needs of over 499 UK trade associations and professional bodies. With a high response rate we have further solid evidence to inform our developing educational strategy.

Training on detection methods for mycotoxins in peanuts, Pune, India under the BSI led EU funded project, "Capacity Building Initiative for Trade Development in India (CITD) - Lot 1: Food Safety and SPS, Technical Regulations and Standardization, and Support to Post Clearance Audit (PCA) in Customs".





We held the fifth Young Engineering Professionals Conference at the Institute for Engineering and Technology (IET) in early 2016, hosted by BSI's Director of Standards Policy, who welcomed delegates from universities and industry. The theme was the future of engineering and the societal challenges posed by the issues of smart cities, transport and health, and energy efficiency. Three UK representatives were selected for the IEC Young Professionals Programme, to be held in Frankfurt in October 2016.

In partnership with other European standards bodies, in 2015 we created an education textbook on teaching standardization in the academic curricula, with a chapter written by BSI. Available in electronic format and hosted on the Danish Standards Foundation website, this resource has been well received by the European educational community, receiving over a thousand downloads over the last year. Over the next 12 months we will be contributing to the second volume of this publication, which will include additional teaching case studies, slides and multiple choice questions with contributions from additional UK universities.

The three award winners at the Young Engineering Professionals Conference

3.6 International projects

Our international projects team coordinates technical assistance and provides support for quality infrastructures in developing countries. Its role is to design, manage and implement projects to strengthen quality institutions worldwide.

While helping to improve fundamental market infrastructure throughout the world, the projects managed by the team also enhance the UK's influence worldwide. The improved infrastructures that result are often in fast-growing regions and our work helps to make markets more accessible to trade with the UK.

Below are some highlights of work carried out recently by our international projects team (a full list is provided in Appendix 5.3).

Support for the development of a modern system of standardization and technical regulations in Azerbaijan

Through the EU-funded twinning programme, the State Committee for Standardization, Metrology and Patent of the Republic of Azerbaijan (SCSMP) partnered with a consortium of the UK, French and Slovenian National Standards Bodies (BSI, ADETEF/AFNOR and SIQ respectively). The project enabled the sharing of knowledge and experience between partners to modernize the technical regulation and standardization system in Azerbaijan. The project aims to contribute to the sustainability of Azerbaijan's economic development and the country's access to world markets through an improved national standardization system. The main objective of the project is to support the SCSMP in the development of a standardization and regulatory system that complies with European requirements and the WTO Technical Barriers to Trade (TBT) Agreement.

“While helping to improve fundamental market infrastructure throughout the world, the projects also enhance the UK's influence worldwide.”



BSI International Projects: the fourth project steering committee meeting of the EC-funded project “Technical assistance: support to the modernization of Mongolia’s standardization system” in Ulaanbaatar, Mongolia, January 2016.

3.7 Committee member training

We deliver free training for those directly involved in the standards-making process. Two new courses have been added to the range in the past year, bringing the total number of titles to 15. They cover a broad range of technical and interpersonal subjects that aid new and established committee members in undertaking their roles. Our popular induction course now runs monthly owing to the increased demand generated by the information about it included in our ‘welcome’ packs, sent to all new UK Technical Committee members. For UK committee members acting as Convenors in international standardization, we offer a one-to-one advisory service for those needing guidance and support, and we have co-hosted events with other standards organizations, such as the two-day ISO course on international standardization procedures held at BSI’s London premises in April 2015.

Support to China’s Sustainable Trade and Investment System: EUCTP (2010-2015)

The overall objective of this project is to support China’s economic, trade and investment reform in line with its sustainable development path. Through this contract BSI is providing technical assistance to strengthen the design and implementation of trade and investment policy, legislation and regulation at central and provincial level. The project comprises five components: I: Services industry; II: Quality infrastructure/Technical Barriers to Trade; III: Agriculture and agro-food/sanitary and phytosanitary (SPS) measures; IV: Customs and trade-related regulatory systems; V: Horizontal issues and ad-hoc requests. BSI and CEN are managing delivery of Component II: Quality Infrastructure/Technical Barriers to Trade, which aims to:

1. Improve the legislative and regulatory framework for developing new and revising old technical regulations, standards, conformity assessment, market surveillance and accreditation systems, while strengthening compliance to standards and regulation.
2. Build capacity to support China’s quality infrastructure bodies, trade, sector and consumer associations, including establishing and strengthening partnerships/cooperation with international bodies and counterparts.



“Our popular induction course now runs monthly owing to increased demand.”

4 Other sources of funding

During the funding year we successfully applied for funding from other sources and kicked off projects in innovative areas such as Digital Object Identifiers (DOI) and Building Information Modelling (BIM).

4.1 Digitizing the construction sector

NBS, BSI and the Construction Products Association (CPA) have invited professionals from across the construction industry to participate in a major research project looking at the feasibility and usefulness of a Digital Object Identifier (DOI) for building products. Part funded by Innovate UK and launched on 1st October 2015, the research project aimed firstly to establish how a common identification system for construction products could benefit the industry, as well as defining what additional information is usefully held with a DOI. If shown to be beneficial to the industry, the later stages will build on this initial work to create a pilot system.

The project brings together the specific skills of the three organisations involved to utilise and build on the success of a scheme that is common across other sectors. The DOI system provides an infrastructure for the registration and use of persistent, interoperable identifiers, called DOIs, for use on digital networks. The DOI Foundation was launched in 1998 and over 114 million DOI names have been registered to date across many sectors. The first stage of the research project, which will run for two years in total, will involve in depth consultation with construction industry professionals including contractors and consultants as well as building product manufacturers, via a series of interviews and workshops.

“The project brings together the specific skills of the three organisations involved to utilize and build on the success of a scheme that is common across other sectors.”

Commenting on the project, Head of Research, Analysis & Forecasting at NBS Adrian Malleson said: ‘We see this project as an important element of the drive to create a digital construction industry; the objective is to create a system that will facilitate the permanent and unambiguous identification of construction products. The DOI system is used globally and is vital to achieve the growth in exports for UK construction firms, which is a key aspect of the Government’s strategy for the sector.’

‘The DOI for construction products must be a system that is of real use to the sector and we want input from as many people as possible.’

Anthony Burd, Head of Construction at BSI, said: ‘We are thrilled to be a main partner on this important project. Having been involved with the project from its inception, we are looking forward to further engaging with the construction industry to identify and understand what benefits a DOI system could bring to the entire sector. As the UK’s National Standards Body, we have been working closely with the industry for a number of years to help support digitization of the sector, in areas such as Building Information Modelling, and this project is seen as another potential part of that transition.’



4.2 Governance of innovative technologies

We worked with the Innogen Institute at the University of Edinburgh to explore a new approach to the governance of emerging technologies. Funded by the BIS Collaborative Fund and conducted between October 2015 and March 2016, this research developed an initial framework for conceptualizing the roles of standards, guidelines and regulations in the delivery of more proportionate and adaptive governance for innovative technologies to support decisions by companies, regulators and policymakers. The project drew insights from three cases studies: personalized medicine manufacturing for autologous cell therapies, industrial biotechnology/synthetic biology, and financial technology (FinTech). It recommended a staged approach in designing regulatory frameworks for disruptive innovations with novel value chains. Under such approach, an initial focus on consensus standards in the early stages of an emerging technology could then form the basis of a future regulatory system as experience is gained and the nature of the innovation is clarified.

“BIM is driving greater value at home and significant growth opportunities overseas, through improved delivery and operation of built assets.”

A follow-on project has since been selected to go forward as part of the 2016-17 Priority Areas standards development programme (see section 2.5). This will result in a tested mature framework that government and regulators can use to determine the best means of supporting innovation and growth in promising new technology areas whilst managing risk and ensuring safety and quality requirements.

4.3 Building Information Modelling – Level 2

The successful delivery of the Government Construction Strategy (GCS) BIM Level 2 objectives represents ‘an internationally unparalleled achievement on the journey towards the digitalization of the built environment sector’, says HMG BIM Task Group chairman Mark Bew MBE.

Published by the Cabinet Office on 31 May 2011, the GCS – as well as the Low Carbon Construction Innovation & Growth Team: Final Report by Paul Morrell – outlined the key target of reducing the cost of Government construction projects by 15-20%.

Critical to reaching these targets ahead of the 4 April 2016 deadline was that all central government departments achieved the milestone and now require tendering suppliers to demonstrate collaborative 3D BIM Level 2 maturity through defined and compliant information and data on projects.

With Government departments now committed to achieving BIM maturity – the outcome of the BIM Task Group’s four-year collaboration with industry, government client departments, private sector, institutions and academia – BIM is driving greater value at home and significant growth opportunities overseas, through improved delivery and operation of built assets. Achievement of the mandate has allowed the BIM Task Group, together with the Government Construction Board and the Client BIM Delivery Group, to reaffirm its unwavering commitment to encouraging, supporting and enabling full BIM adoption across the industry.

Technical Author Andy Lake speaking at the launch event for PAS 3000 ‘Smart Working’, a new code of practice developed for the Cabinet Office to help support organizations in the implementation of Smart Working principles.





This has been supported in the most recent Budget, which announced the development of the next generation of digital standards for the construction sector – BIM Level 3 – under the ‘Digital Built Britain’ Programme.

The £15m investment over three years is designed to maintain the UK’s global leadership in the use of this technology and will save owners of built assets billions of pounds per year in unnecessary costs, as well as setting the infrastructure for the smart built economy. Reflecting the industry’s ongoing transition from mobilization for BIM Level 2 to creating ‘business as usual’, the BIM Task Group also aimed to unveil a new website. Hosted and developed by BSI, the site will continue to evolve from launch, providing a common and clear point of reference for BIM documentation, standards and guidance created in partnership with the BIM Task Group. These documents will continue to be available free of charge in order to encourage all businesses, however large or small, to take part.

Mark Bew MBE commented: ‘To look at how far we have come in four short years is to understand how far we can and need to go in the next four and beyond. From a standing start, the UK is now leading the global race towards digitalization of the construction industry and we will not let it slip. The hard work starts here. BIM is now very much business as usual. Our Level 2 programme is driving efficiency and creating a competitive supply sector with our businesses in demand internationally.

‘BIM will become a required UK standard across the entire built environment and our message to all stakeholders is: join us and grasp this incredible opportunity to reduce cost and waste while driving productivity and competitiveness.

‘We have demonstrated that a partnership between government and industry can deliver dramatic changes in the sector. This has been made possible by having a clear shared plan and commitment – the challenge now is to embed these techniques across the whole of the market to grow capacity and become business as usual. ‘We have, at Level 2, improved the industry. BIM Level 3 and the realization of Digital Built Britain will create a new industry to service the challenges of the future.’

For more information visit www.bim-level2.org.

4.4 Tripartite conference

The UK, France and Germany meet each year in a Tripartite meeting organised by government with their standards and accreditation bodies and the European Commission. The 2016 meeting was hosted by the UK in Manchester, and in March this year BSI received grant funding from BIS in order to organize the meeting on their behalf. We will report on this in more detail in the next annual report.



Other sources of funding continued

4.5 Support and commissioning from other HMG bodies

Below is a list of projects we carried out during the year for other government bodies.

Government department	Work	Completed or open
Cabinet Office	PAS 3000, Smart working – Code of practice	Completed
CPNI	PAS 1192-5, Specification for security-minded building information modelling, digital built environments and smart asset management	Completed
CPNI	PAS 97:2012 revision, Specification for mail screening and security	Completed
HS2 Ltd	Tunnelling standardization workshop and revision of BS 8002:1994, BS 8004:1986 and BS 8081:1989	Completed
HS2 Ltd	PAS 8812, Temporary works – Application of European Standards in design – Guide	Completed
Innovate UK	PAS 246, Systematic design and manufacturing processes in synthetic biology using digital biological information – Guide	Completed
Innovate UK	PAS 277, Health and wellness apps – Quality criteria across the life cycle – Code of practice	Completed
Innovate UK	PAS 278, Principles for the provision of information and advice to help older people plan for independent living – Code of practice	Completed
Innovate UK	PD 6900, Environmental impact assessment for offshore renewable energy projects – Guide	Completed
European Marine Energy Centre (EMEC)	Fund BSI to run the secretariat of IEC/TC114 'Wave Energy' (new agreement for July 2013 – July 2016)	Open
Environment Agency	Fund BSI to run the secretariat of ISO/TC113/SC2 'Hydrometry - Notches, weirs and flumes'.	Open
CPNI	PAS 170:2014, Low energy impact test method for vehicle security barriers	Open
CPNI	Standards watch service	Open

Government department	Work	Completed or open
HS2 Ltd	PAS 8811, Code of practice for client procedures for temporary works	Open
HS2 Ltd	PAS 8810, Tunnel design – Design of concrete segmental tunnel linings – Code of practice	Open Open
HS2 Ltd	PAS 8820, Construction materials – Alkali-activated cementitious material – Specification	Open Open
The Green Construction Board	PAS 2080, Carbon management in infrastructure – Specification	Open
BIS (now BEIS)	License fee agreement to cover soft (pdf) copy downloads of 6 documents (BS 1192:2007, BS 1192-4:2014, BS 8536:2015, PAS 1192-2:2013, PAS 1192-3:2014, PAS 1192-5:2015) from the BSI website for a one year period	Open
CPNI	PAS 301, Civilian armoured vehicle – Automotive test methods	Open
CPNI	PAS 7010, specification for the secure destruction of sensitive and classified material	Open
BIS (now BEIS)	Revision of PAS 1192-2:2013, Specification for information management for the capital/delivery phase of construction projects using building information modelling	Open
BIS (now BEIS)	Revision of PAS 1192-3:2014, Specification for information management for the operational phase of assets using building information modelling	Open
BIS (now BEIS)	PAS 183, Smart cities – Guide to establishing a decision-making framework for sharing data and information services (Phase 1)	Open
BIS (now BEIS)	PAS 184, Smart cities – Developing project proposals for delivering smart smart city solutions – Guide (Phase 1)	Open
BIS (now BEIS)	Amendment No. 1 to PAS 91:2013, Construction prequalification questionnaires	Open
Digital Catapult	Personal data – Communication of how an organization uses personal data shared online – Specification	Open

5 Appendices

Appendix 5.1 List of BSI standards development committees

The table below lists the standards development committees run by BSI, grouped by subject area. Those that are marked with a ● are non-commercially viable committees whose work supports HMG priorities and which received a BIS funding contribution towards their running costs in 2015/16.

Subject area	Technical committee reference	Title	BIS contribution
Built Environment Design	B/562	Security of buildings	
Built Environment Design	CB/10	Design Advisory Committee	●
Built Environment Design	CB/500	Procurement	●
Built Environment Design	CB/501	Flood risk & watercourses	●
Built Environment Engineering	CB/40	Built environment engineering	●
Chemicals	AW/81	Common names for pesticides	
Chemicals	CII/26	Reagents	
Chemicals	CII/34	Methods of test for surface active agents	
Chemicals	CII/37	Fertilisers and related chemicals	
Chemicals	CII/61	Explosives for civil uses	
Chemicals	CII/63	Chemical spill control	
Chemicals	STI/1	Pigments	
Chemicals	STI/3	Paints, media and related products	
Chemicals	STI/34	Hot dip galvanized coatings	
Chemicals	CII/47	Pyrotechnic articles	
Chemicals	CII/59	Chemicals for drinking water treatment	
Chemicals	CII/60	Surface chemical analysis	
Chemicals	CII/62	Treatment of water for boilers	
Chemicals	STI/10	Test methods for paints	
Chemicals	STI/14	Colour measurement and schedules	
Chemicals	STI/21	Paint systems and surface preparation for metallic substrates	
Chemicals	STI/28	Paint systems for non-metallic substrates	
Chemicals	STI/33	Electrodeposited and related coatings	●
Chemicals	STI/36	Vitreous enamel coatings	
Chemicals	STI/40	Thermal spraying and thermally sprayed coatings	●
Construction	B/204	Structural design of low rise buildings	
Construction	B/3	Ad hoc co-ordination group for fibre reinforced cement products	
Construction	B/503	Sanitary appliances	
Construction	B/509	Road equipment	
Construction	B/511	Buildings mobile and temporary	
Construction	B/515	Wood preservation	
Construction	B/522	Structural bearings	
Construction	B/523	Prefabricated components of reinforced autoclaved aerated concrete and lightweight aggregate concrete with open structure	
Construction	B/539	Ceramic tiles and other rigid tiling	
Construction	B/544	Plastering, rendering, dry lining	
Construction	B/546	Flexible sheets for waterproofing and water vapour control	
Construction	B/547	Sealants for building and construction	
Construction	B/548	Suspended ceilings	
Construction	B/549	Agricultural buildings and structures	
Construction	B/550	Raised access floors	
Construction	B/552	Spectator facilities	
Construction	B/553	Geosynthetics	
Construction	B/554	Dimensions and Accuracy - Building construction	
Construction	CB/300	Screeds and in-situ floorings	

Subject area	Technical committee reference	Title	BIS contribution
Construction	CB/503	Drinking water and wastewater service levels	
Construction	CW/35	Wallcoverings	
Construction	GME/1	Preferred numbers	
Construction	GSE/4	Flue pipes and fittings for gas-fired appliances	
Construction	MHE/6	Hoists of builders' type	
Construction	PRI/3	Textile floor coverings	
Construction	PRI/60	Resilient and Laminate Floor Coverings	
Construction	PRI/70	Elastomeric seals for joints in pipework and pipelines	
Construction	PRI/81	Cork	
Construction	PRI/88	Plastics piping systems	
Construction	PSE/10	Iron pipes and fittings	
Construction	RHE/17	Testing of air conditioning units	
Construction	RHE/24	Heating systems and water based cooling systems in buildings	
Construction	RHE/28	Domestic solid mineral fuel appliances	
Construction	RHE/6	Air or space heaters or coolers without combustion	
Construction	RHE/9	Insulated underground pipelines	
Construction	B/201	Fences and gates	
Construction	B/208	Stairs and walkways	
Construction	B/209	General building codes	
Construction	B/213	Trees	
Construction	B/502	Aggregates	
Construction	B/504	Water supply	
Construction	B/505	Wastewater engineering	
Construction	B/506	Chimneys	●
Construction	B/507	Paving units and kerbs	
Construction	B/510	Road materials	
Construction	B/512	Ladders	●
Construction	B/513	Construction equipment and plant and site safety	●
Construction	B/514	Access and support equipment	
Construction	B/516	Cement and lime	
Construction	B/517	Concrete	
Construction	B/518	Structural timber	
Construction	B/519	Masonry and associated testing	●
Construction	B/520	Glass and glazing in building	
Construction	B/524	Precast concrete products	
Construction	B/525	Building and civil engineering structures	
Construction	B/526	Geotechnics	
Construction	B/538	Doors, windows, shutters, hardware and curtain walling	
Construction	B/540	Energy performance of materials components and buildings	●
Construction	B/541	Wood based panels	
Construction	B/542	Roofing and cladding products for discontinuous laying	
Construction	B/543	Round and sawn timber	
Construction	B/545	Natural stone	
Construction	B/555	Construction design, modelling and data exchange	●
Construction	B/557	Construction products - Assessment of dangerous substances	●
Construction	B/558	Sustainability of construction works	●
Construction	B/559	Access to buildings for disabled people	
Construction	B/560	Conservation of tangible cultural heritage	
Construction	B/564	Noise control on building sites	
Construction	CB/-	Construction & Built Environment Sector Policy and Strategy Committee	●
Construction	CB/-/5	CPD/CPR Policy	
Construction	CB/-/6	CEN Construction Sector Policy	

Subject area	Technical committee reference	Title	BIS contribution
Construction	CB/101	Service Life Planning	
Construction	CB/20	Structures advisory committee	●
Construction	CB/203	Design & execution of steel structures	
Construction	CB/30	Construction Products Advisory Committee	●
Construction	CB/502	Maritime works	
Construction	CB/60	Site operations advisory committee	
Construction	CB/70	Facilities management advisory committee	●
Construction	FMW/1	Facilities management	●
Construction	GSE/30	Gas installations (1st, 2nd and 3rd family gases)	
Construction	JPEL/64	Electrical installations of buildings - Joint committee	
Construction	MHE/3	Cranes and derricks	
Construction	MHE/4	Lifts, hoists and escalators	
Construction	PRI/57	Surfaces for sports areas	
Construction	RHE/2	Ventilation for buildings, heating and hot water services	●
Construction	CB/506	Water reuse	●
Consumer Goods	CPL/705	Weighing instruments	
Consumer Goods	CPW/36	Cinematography	
Consumer Goods	CPW/4	British standards for imaging	
Consumer Goods	CPW/42	Photography	
Consumer Goods	CW/11	Brushware	
Consumer Goods	CW/17	Cutlery and table holloware	
Consumer Goods	CW/217	Cosmetics	●
Consumer Goods	CW/29	Tableware	
Consumer Goods	CW/32	Matches and lighters	
Consumer Goods	CW/47	Materials in contact with food	
Consumer Goods	CW/51	Self service trolleys	
Consumer Goods	CW/9	Cooking and catering containers	
Consumer Goods	PAI/11	Methods of test for paper, board and pulps	
Consumer Goods	PRI/68	Hot water bottles	
Consumer Goods	STI/53	Specifications and test methods for jewellery and horology	
Consumer Goods	TCI/77	Ropes and cordage and fishing nets	
Consumer Goods	W/-	Consumer Products and Services Sector Policy and Strategy Committee	
Consumer Goods	CH/437	Electronic Cigarettes & E-liquids	●
Consumer Goods	CPL/116	Safety of motor-operated electric tools	●
Consumer Goods	CPL/59	Performance of household electrical appliances	●
Consumer Goods	CPL/61	Safety of household and similar electrical appliances	●
Consumer Goods	CPL/72	Electrical control devices for household equipment and appliances	●
Consumer Goods	CPW/172	Optics and Photonics	●
Consumer Goods	CW/15	Safety of toys	
Consumer Goods	FW/0	Furniture	
Consumer Goods	FW/6	Flammability performance and fire tests for furniture	
Consumer Goods	PAI/43	Graphic technology	●
Consumer Goods	PKW/0	Packaging	
Corporate Governance	CAR/1	Continuity and Resilience	
Corporate Governance	G/1	Governance	
Corporate Governance	G/2	Anti procurement fraud	
Corporate Governance	G/3	Anti bribery	
Corporate Governance	RM/1	Risk management	●
Corporate Governance	HCS/1	Human Capital	
Electrical Machinery and Components	GEL/1	Electrotechnical Terminology	
Electrical Machinery and Components	GEL/10	Fluids for electrotechnical applications	
Electrical Machinery and Components	GEL/107	Process management for avionics	

Subject area	Technical committee reference	Title	BIS contribution
Electrical Machinery and Components	GEL/109	Insulation co-ordination for low voltage equipment	
Electrical Machinery and Components	GEL/112	Evaluation and qualification of electrical insulating materials and systems	
Electrical Machinery and Components	GEL/28	Electrical Insulation Co-ordination	
Electrical Machinery and Components	GEL/603	Cathodic protection	
Electrical Machinery and Components	GEL/605	Pressure gauges and switches	
Electrical Machinery and Components	GEL/7	Overhead electrical conductors	
Electrical Machinery and Components	GEL/70	Protective enclosures of electrical apparatus	
Electrical Machinery and Components	L/-/90	Super Conductivity	
Electrical Machinery and Components	L/-/99	Miscellaneous Standards - Electrical	
Electrical Machinery and Components	PEL/85	Measuring equipment for electrical and electromagnetic quantities	
Electrical Machinery and Components	CPL/34	Lamps and Related Equipment	
Electrical Machinery and Components	EL/1	Light and lighting applications	
Electrical Machinery and Components	EPL/80	Maritime navigation and radiocommunication equipment and systems	●
Electrical Machinery and Components	GEL/101	Electrostatics	
Electrical Machinery and Components	GEL/104	Environmental conditions, classification and testing	
Electrical Machinery and Components	GEL/106	Human exposure to low frequency and high frequency electromagnetic radiation	
Electrical Machinery and Components	GEL/111	Electrotechnical environment committee	●
Electrical Machinery and Components	GEL/15	Solid electrical insulating materials	
Electrical Machinery and Components	GEL/20	Electric cables	
Electrical Machinery and Components	GEL/210	EMC - Policy committee	
Electrical Machinery and Components	GEL/3	Documentation and graphical symbols	
Electrical Machinery and Components	GEL/600	Earthing	
Electrical Machinery and Components	GEL/606	Qualification of electrical contractors	
Electrical Machinery and Components	GEL/65	Measurement and control	
Electrical Machinery and Components	GEL/81	Protection against lightning	
Electrical Machinery and Components	JPEL/18	Electrical installations of ships and of mobile and fixed offshore units	
Electrical Machinery and Components	PEL/121	Switchgear and Controlgear and their assemblies for low voltage	
Electrical Machinery and Components	PEL/14	Power transformers	●
Electrical Machinery and Components	PEL/17	Switchgear, controlgear, and HV-LV co-ordination	
Electrical Machinery and Components	PEL/2	Rotating electrical machinery	●
Electrical Machinery and Components	PEL/21	Secondary cells and batteries	●
Electrical Machinery and Components	PEL/23	Electrical accessories	
Electrical Machinery and Components	PEL/32	Fuses	●
Electrical Machinery and Components	PEL/38	Instrument transformers	
Electrical Machinery and Components	PEL/78	Tools for live working	●
Electrical Machinery and Components	PEL/96	Small transformers	
Electronics	EPL/103	Transmitting equipment for radio communication	
Electronics	EPL/29	Electroacoustics	
Electronics	EPL/40X	Capacitors and resistors for electronic equipment	
Electronics	EPL/46	Cables, wires and waveguides, radio frequency connectors and accessories for communication and signalling	
Electronics	EPL/47	Semiconductors	
Electronics	EPL/48	Electromechanical components and mechanical structures for electronic equipment	
Electronics	EPL/49	Piezoelectric devices for frequency control and selection	
Electronics	EPL/501	Electronic Assembly Technology	
Electronics	EPL/51	Transformers, inductors, magnetic components and ferrite materials	
Electronics	EPL/526	Road traffic control signals	
Electronics	EPL/87	Ultrasonics	
Electronics	EPL/94	General purpose relays and reed contact units	
Electronics	EPL/97	Aeronautical ground lighting	
Electronics	GEL/86	Fibre optics	

Subject area	Technical committee reference	Title	BIS contribution
Electronics	GEL/SB4	Infrastructure of telecommunications networks	
Electronics	AMT/9	Printed Electronics	
Electronics	EPL/100	Audio, video and multimedia systems and equipment	
Electronics	EPL/108	Safety of electronic equipment within the field of audio/video, information technology and communication technology	
Electronics	EPL/278	Intelligent transport systems	●
Electronics	EPL/66	Safety of measuring, control and laboratory equipment	
Electronics	EPL/76	Optical radiation safety and laser equipment	
Energy	GSE/2	Gas industry terms	
Energy	GSE/32	Gas governors	
Energy	GSE/33	Gas supply	
Energy	GSE/38	Installation and equipment for LNG	
Energy	GSE/40	Gas supply equipment for natural gas vehicles	
Energy	PEL/205	Mains signalling	
Energy	PEL/213	Cable management	
Energy	PEL/27	Electroheating	
Energy	PEL/33	Power capacitors	
Energy	PEL/36	Insulators for power systems	
Energy	PEL/37	Surge Arresters - High Voltage	
Energy	PEL/42	Testing techniques for high voltages and currents	
Energy	PEL/73	Short circuit currents	
Energy	PEL/95	Measuring relays and protection systems	
Energy	PEL/99	Erection and operation of power installations	
Energy	PSE/4	Identification of piping systems	
Energy	PSE/6	Hose clips	
Energy	PTI/16	Solid mineral fuels	
Energy	PTI/7	Lubricants and process fluids	
Energy	RHE/31	Calorific values of fuels; and thermographs	
Energy	CPL/35	Primary cells	
Energy	ESL/120	Electrical Energy Storage	
Energy	GEL/105	Fuel cell technologies	●
Energy	GEL/8	Systems Aspects for Electrical Energy Supply	●
Energy	GEL/82	Photovoltaic Energy Systems	●
Energy	GSE/-/4	To brief SFG_U and consider horizontal issues affecting gas utilization	
Energy	GSE/25	Gas Meters	●
Energy	L/13	Smart Grid policy	●
Energy	NCE/2	Radiation protection and measurement	
Energy	NCE/8	Instrumentation, Control & Electrical Systems of Nuclear Facilities	
Energy	NCE/9	Nuclear fuel cycle technology	
Energy	PEL/11	Overhead Lines	
Energy	PEL/114	Marine energy - Wave, tidal and other water current converters	●
Energy	PEL/13	Electricity Meters	●
Energy	PEL/22	Power electronics	
Energy	PEL/57	Power systems management and associated information exchange	●
Energy	PEL/88	Wind turbines	●
Energy	PEL/894	Remote Meter Reading	●
Energy	PSE/17	Materials and equipment for petroleum, petrochemical and natural gas industries	
Energy	PSE/265	Carbon Capture Transportation and Storage	●
Energy	PTI/12	Petroleum Measurement and Sampling	
Energy	PTI/13	Petroleum Testing and Terminology	
Energy	PTI/15	Natural Gas and Gas Analysis	
Energy	PTI/17	Solid biofuels	

Subject area	Technical committee reference	Title	BIS contribution
Energy	PTI/2	Liquid Fuels	●
Energy	PTI/20	Sustainability of bioenergy	
Energy	PVE/15	Storage Tanks for the Petroleum Industry	
Energy	PVE/19	LPG containers and their associated fittings	
Energy	SEM/1	Energy Management	●
Energy	SMG/1	Smart Meter Group	●
Environment/CSR	E/-	Engineering Sector Policy & Strategy Committee	
Environment/CSR	E/-/20	Power engineering steering committee	
Environment/CSR	BDY/1	Biodiversity management	
Environment/CSR	EH/1	Acoustics	
Environment/CSR	EH/2	Air quality	
Environment/CSR	EH/3	Water quality	●
Environment/CSR	EH/4	Soil quality	●
Environment/CSR	EH/5	Sludge characterization	●
Environment/CSR	EH/6	Effects of materials on water quality	
Environment/CSR	EH/7	Climate Change Strategy	
Environment/CSR	H/-/4	Environmental Testing Programmes	●
Environment/CSR	RHE/25	Solar Heating	
Environment/CSR	SDS/1	Sustainable development Co-ordination Committee	
Environment/CSR	SES/1	Environmental management	
Fire	FSH/1	Fire Safety Cables	
Fire	FSH/0	Strategic Policy Group for Fire Standardization	●
Fire	FSH/12	Fire detection and alarm systems	
Fire	FSH/14	Fire precautions in buildings	
Fire	FSH/16	Hazards to life from fire	●
Fire	FSH/17	Fire brigade equipment	●
Fire	FSH/18	Fixed fire fighting systems	●
Fire	FSH/19	Fire Precautions in Railway Vehicles	
Fire	FSH/2	Fire extinguishers	
Fire	FSH/21	Reaction to fire tests	●
Fire	FSH/22	Fire resistance tests	●
Fire	FSH/24	Fire safety engineering	
Fire	FSH/25	Smoke, heat control systems and components	●
Fire	FSH/9	Fire terminology	●
Fire	FSS/0	Fire safety and security systems	●
Fire	GEL/89	Fire hazard testing	●
Fire	PH/14	Firefighters' personal protective equipment	●
Fire	PH/4	Respiratory protection	●
Food and Drink, Agriculture	AGE/30	Irrigation and drainage equipment	
Food and Drink, Agriculture	AW/-/2	Food Technical Committee Chairmen	
Food and Drink, Agriculture	AW/1	Nursery stock	
Food and Drink, Agriculture	AW/10	Animal feeding stuffs	
Food and Drink, Agriculture	AW/100	Agriculture and food	
Food and Drink, Agriculture	AW/12	Sensory analysis	
Food and Drink, Agriculture	AW/15	Coffee	
Food and Drink, Agriculture	AW/17	Cleaning and disinfection of dairy equipment	
Food and Drink, Agriculture	AW/21	Fruit and vegetables juices	
Food and Drink, Agriculture	AW/22	Milk tankers	
Food and Drink, Agriculture	AW/234	Fisheries and Aquaculture	
Food and Drink, Agriculture	AW/24	Farm milk tanks	
Food and Drink, Agriculture	AW/275	Food analysis - Horizontal methods	
Food and Drink, Agriculture	AW/32	Milking machine installations	

Subject area	Technical committee reference	Title	BIS contribution
Food and Drink, Agriculture	AW/4	Cereals and pulses	
Food and Drink, Agriculture	AW/5	Chemical analysis of milk and milk products	
Food and Drink, Agriculture	AW/54	Essential oils	
Food and Drink, Agriculture	AW/6	Chemical analysis of meat and meat products	
Food and Drink, Agriculture	AW/9	Microbiology	
Food and Drink, Agriculture	CW/158	Beverage dispensing systems	
Food and Drink, Agriculture	AGE/15	Equipment for crop protection and application of liquid fertilizer	
Food and Drink, Agriculture	AGE/20	Powered lawn and garden equipment	
Food and Drink, Agriculture	AGE/29	Forestry machinery	
Food and Drink, Agriculture	AGE/32	Agricultural implements and trailers	
Food and Drink, Agriculture	AGE/6	Agricultural tractors and forestry machinery	
Food and Drink, Agriculture	AW/20	Topsoil, other growing media and turf	
Food and Drink, Agriculture	AW/307	Oilseeds, animal and vegetable fats and oils and their by-products	
Food and Drink, Agriculture	AW/40	Tobacco and tobacco products	
Food and Drink, Agriculture	AW/415	Sustainable and traceable cocoa	●
Food and Drink, Agriculture	AW/425	Halal Food	
Food and Drink, Agriculture	AW/8	Tea	
Food and Drink, Agriculture	AW/90	Quality systems for the food industry	
Food and Drink, Agriculture	AW/91	Allergens	
Health & Safety	GME/27	Safety in school workshops	
Health & Safety	MCE/23	Safety of metal producing mills	
Health & Safety	PH/1	Safety, protective and occupational footwear	
Health & Safety	PH/7	Hearing protectors	
Health & Safety	RHE/18	Refrigeration safety	
Health & Safety	RHE/21	Cryogenics safety	
Health & Safety	EXL/23	Explosion and fire precautions in industrial and chemical plant	
Health & Safety	EXL/31	Equipment for explosive atmospheres	
Health & Safety	FSM/1	Forensic Science Processes	●
Health & Safety	HCM/1	Health risk assessment of chemicals	
Health & Safety	HS/1	Occupational health and safety management	
Health & Safety	MCE/3	Safeguarding of machinery	
Health & Safety	PH/2	Eye protection	●
Health & Safety	PH/3	Protective clothing	
Health & Safety	PH/5	Personal Fall Protection	
Health & Safety	PH/6	Head protection	●
Health & Safety	PH/8	Graphical symbols	
Health & Safety	PH/9	Applied ergonomics	●
Health & Safety	RTS/1	ISO 39001 Road Traffic Safety Management systems	
Health & Safety	SME/32	Ships and marine technology - Steering committee	●
Healthcare	CH/106	Dentistry	
Healthcare	CH/150	Implants for surgery	●
Healthcare	CH/168	Prosthetics and orthotics	
Healthcare	CH/170	Surgical instruments	
Healthcare	CH/205	Non-active medical devices	
Healthcare	CH/84	Catheters and syringes	
Healthcare	CH/100	Healthcare and Medical Equipment	●
Healthcare	CH/101	Healthcare and medical equipment (National)	
Healthcare	CH/121	Anaesthetic and respiratory equipment	●
Healthcare	CH/157	Mechanical contraceptives	●
Healthcare	CH/172	Ophthalmic optics	●
Healthcare	CH/173	Assistive products for persons with disability	●
Healthcare	CH/194	Biological evaluation of medical devices	

Subject area	Technical committee reference	Title	BIS contribution
Healthcare	CH/198	Sterilization and Associated Equipment and Processes	
Healthcare	CH/210	Quality management and corresponding general aspects for medical devices	
Healthcare	CH/212	IVDs	
Healthcare	CH/216	Chemical disinfectants and antiseptics	
Healthcare	CH/239	Rescue systems	●
Healthcare	CH/240	First Aid Kits	
Healthcare	CH/403	Aesthetic Surgery and Aesthetic Non-Surgical Medical Services	●
Healthcare	CH/440	Adult social care	
Healthcare	CH/62	Electrical Equipment in Medical Practice	
Healthcare	RGM/1	Regenerative medicine	
ICT	AMT/5	Industrial architectures and integration frameworks	
ICT	AMT/7	Industrial communications: process measurement and control, including fieldbus	
ICT	IST/15	Software and systems engineering	
ICT	IST/15/-/9	Information technology asset management	
ICT	IST/3	IT Printers and Cartridges	
ICT	IST/31	Computer graphics, image processing and environmental data representation	●
ICT	IST/36	Geographic information	
ICT	IST/40	Data management and interchange	
ICT	IST/41	Document description and processing language	
ICT	TCT/2	Analogue telecommunication networks	
ICT	TCT/6	Digital networks	
ICT	AMT/-/2	Robots and robotic devices	●
ICT	AMT/-/4	Biomimetics	
ICT	AMT/4	Industrial data and manufacturing interfaces	●
ICT	AMT/8	Additive manufacturing	
ICT	ICT/-	Information and communications technology co-ordination and strategy committee	
ICT	ICT/-/1	Information systems co-ordination	●
ICT	ICT/-/2	Automated Manufacturing Technology Co-ordination ISO/TC184	
ICT	ICT/-/4	eBusiness	
ICT	ICT/-/5	European ICT Committee	
ICT	ICT/-/6	ICT Accessibility	●
ICT	ICT/-/7	Internet filtering	
ICT	IDT/1	Document Management Applications	
ICT	IDT/2	Information and documentation	
ICT	IOT/1	Internet of Things	●
ICT	IST/-/99	Participating IST members	
ICT	IST/12	Financial services	
ICT	IST/17	Cards and personal identification	
ICT	IST/33	IT - Security techniques	
ICT	IST/34	Automatic identification and data capture techniques	●
ICT	IST/35	Health informatics	
ICT	IST/37	Coding of picture, audio, multimedia and hypermedia information	●
ICT	IST/38	Cloud Computing and Distributed Platforms	●
ICT	IST/43	Information technology for learning, education and training	●
ICT	IST/44	Biometrics	●
ICT	IST/46	Sustainability for, and by IT	●
ICT	IST/5	Programming languages, their environments and system software interfaces	
ICT	IST/6	Data communications	●
ICT	IST/60	IT Service Management and IT Governance	
ICT	JTISC/-	Joint TickIT industry steering committee	
ICT	TCT/7	Telecommunications - Installation requirements	

Subject area	Technical committee reference	Title	BIS contribution
ICT	IST/70	Sensor Networks	●
Infrastructure	CB/50	Infrastructure	●
Lab Equip & Processes	LBI/16	Glass electrodes and pH scale	
Lab Equip & Processes	CII/9	Microbeam analysis	
Lab Equip & Processes	LBI/1	Laboratory safety and equipment	
Lab Equip & Processes	LBI/30	Cleanroom technology	
Materials	CII/24	Raw materials for the aluminium industry	
Materials	I/-	Miscellaneous standards materials and chemicals	
Materials	I/-/1	Safety of Candles and Related Products	
Materials	I/-/2	Brownfield developments	
Materials	I/-/99	SAP test data	
Materials	ISE/102	Methods of Chemical Analysis for Iron and Steel	
Materials	ISE/58	Iron ores	
Materials	ISE/65	Sintered metal components	
Materials	NFE/22	Lead and lead alloys	
Materials	NFE/27	Tin and tin alloys	
Materials	NFE/36	Copper lead and zinc ores and concentrates	
Materials	NFE/8	Zinc	
Materials	PRI/24	Testing of rigid and flexible cellular materials	
Materials	PRI/50	Raw materials (including latex) for use in the rubber industry	
Materials	PRI/52	Adhesives	
Materials	PRI/54	Vulcanised rubber compounds	
Materials	PRI/62	Static thermoplastics tanks	
Materials	PRI/71	Flexible cellular materials	
Materials	PRI/72	Rigid cellular materials	
Materials	PRI/73	Industrial rubber products	
Materials	PRI/75	Plastics and rubber film and sheets	
Materials	PRI/76	Laminated sheet for decorative purposes	
Materials	PRI/82	Thermoplastic materials	
Materials	RPI/1	Refractory products and materials	
Materials	RPI/13	Advanced technical ceramics	
Materials	TCI/33	Textile machinery	
Materials	BTI/1	Biotechnologies	
Materials	ISE/1	Iron and steel standards co-ordinating committee	
Materials	ISE/100	Steel, General Issues	
Materials	ISE/101	Test methods for metals	
Materials	ISE/103	Structural Steels Other Than Reinforcements	
Materials	ISE/104	Concrete Reinforcing and Pre-Stressing Steels	
Materials	ISE/105	Steels for Heat Treatment, Alloy Steels, Free-Cutting Steels and Stainless Steels	
Materials	ISE/106	Wire Rod and Wire	
Materials	ISE/107	Steels for Pressure Purposes	
Materials	ISE/108	Magnetic Alloys and Steels	
Materials	ISE/109	Coated and Uncoated Flat Products to be Used for Cold Forming	
Materials	ISE/110	Steel Tubes, and Iron and Steel Fittings	
Materials	ISE/111	Steel Castings and Forgings	
Materials	ISE/NFE/8	Corrosion of metals and alloys	
Materials	MI/1	Materials Industries Standards Co-ordination Committee	●
Materials	MI/2	Bio-based products	●
Materials	NFE/34	Copper and copper alloys	
Materials	NFE/35	Light metals and their alloys	
Materials	NTI/1	Nanotechnologies	●
Materials	PRI/-/1	GB Co-ordination for International work on plastics standards	●

Subject area	Technical committee reference	Title	BIS contribution
Materials	PRI/-/2	GB Co-ordination for International work on rubber standards	●
Materials	PRI/10	Terminology for rubbers and plastics	●
Materials	PRI/21	Testing of plastics	
Materials	PRI/22	Testing and analysis of rubber	
Materials	PRI/26	Burning behaviour of plastics and rubbers	●
Materials	PRI/42	Fibre reinforced thermosetting plastics and prepregs	
Materials	PRI/5	UK steering committee for CEN/TC 210 GRP tanks	
Materials	PRI/80	Welding thermoplastics	
Materials	PRI/89	Plastics recycling	
Materials	PRI/90	Rubber and rubber products - Environmental aspects	●
Materials	TCI/100	Co-ordination of activities in textiles and clothing	
Materials	TCI/24	Physical testing of textiles	
Materials	TCI/66	Apparel and interior textiles	●
Materials	TCI/69	Footwear, leather and coated fabrics	
Materials	TCI/80	Chemical testing of textiles	
Materials	TCI/81	Colour fastness and colour measurement of textiles	
Materials	TCI/82	Textiles care labelling, dry cleaning, domestic laundering and drying	
Materials	WEE/3	Welding of thermoplastic moulded components	
Mechanical Machinery & Components	GME/24	Grease guns and cartridges	
Mechanical Machinery & Components	GSE/19	Catering equipment (gas)	
Mechanical Machinery & Components	GSE/20	Non-domestic space heaters (gas)	
Mechanical Machinery & Components	GSE/24	Dedicated LPG appliances	
Mechanical Machinery & Components	GSE/26	Test gases	
Mechanical Machinery & Components	GSE/27	Automatic gas and oil burners	
Mechanical Machinery & Components	GSE/37	Gas fired sorption and laundering appliances	
Mechanical Machinery & Components	GSE/42	Gas fittings and connections including metal hose and hose assemblies	
Mechanical Machinery & Components	MCE/1	Chains and chain sprockets for power transmission and conveyors	
Mechanical Machinery & Components	MCE/10	Belts & Pulley Drive	
Mechanical Machinery & Components	MCE/12	Plain bearings	
Mechanical Machinery & Components	MCE/13	Steam turbines	
Mechanical Machinery & Components	MCE/14	RIC engines	
Mechanical Machinery & Components	MCE/15	Hydraulic turbines	
Mechanical Machinery & Components	MCE/16	Gas turbines	
Mechanical Machinery & Components	MCE/17	Fans	
Mechanical Machinery & Components	MCE/19	Centrifuges	
Mechanical Machinery & Components	MCE/20	Aerial ropeways	
Mechanical Machinery & Components	MCE/21	Filters for gases and liquids	
Mechanical Machinery & Components	MCE/22	Engines for road vehicles	
Mechanical Machinery & Components	MCE/5	Gears	
Mechanical Machinery & Components	MCE/7	Rolling bearings	
Mechanical Machinery & Components	MCE/8	Compressors, pneumatic tools, pneumatic machines and vacuum technology	
Mechanical Machinery & Components	MHE/1	Chains and fittings	
Mechanical Machinery & Components	MHE/14	Rail dependent storage and retrieval equipment - Safety	
Mechanical Machinery & Components	MHE/15	Textile slings	
Mechanical Machinery & Components	MHE/16	Load restraint assemblies	
Mechanical Machinery & Components	MHE/2	Wire ropes	
Mechanical Machinery & Components	MHE/7	Industrial trucks	
Mechanical Machinery & Components	MHE/8	Steel shelving, bins and lockers	
Mechanical Machinery & Components	MHE/9	Continuous mechanical handling equipment	
Mechanical Machinery & Components	MRE/1	Mining mechanical equipment and machinery	
Mechanical Machinery & Components	MRE/3	Mining electrical equipment	
Mechanical Machinery & Components	MTE/12	Tools for pressing and moulding	

Appendices continued

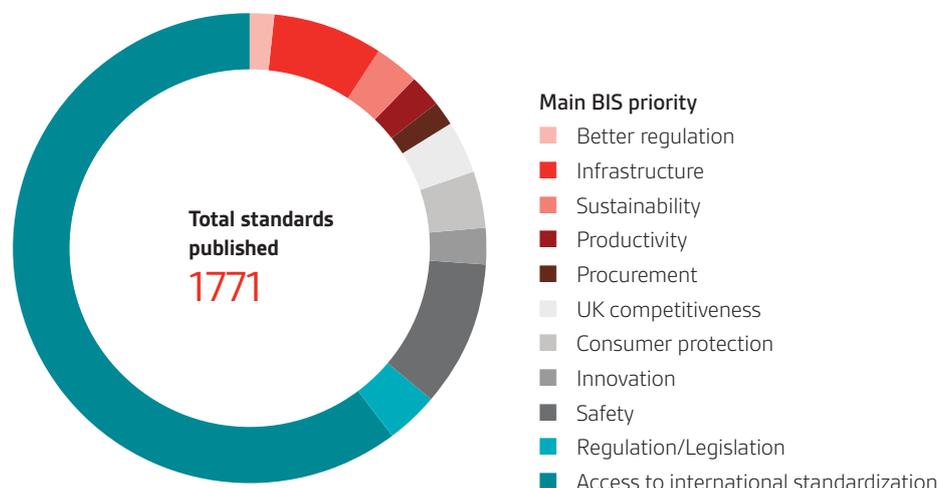
Subject area	Technical committee reference	Title	BIS contribution
Mechanical Machinery & Components	MTE/13	Grinding wheels, abrasive tools, paper and cloths, and powders	
Mechanical Machinery & Components	MTE/15	Hand tools	
Mechanical Machinery & Components	MTE/18	Tools tips and inserts for cutting applications	
Mechanical Machinery & Components	MTE/20	Power driven saws	
Mechanical Machinery & Components	MTE/21	Cartridge-operated fixing tools	
Mechanical Machinery & Components	MTE/23	Woodworking machines	
Mechanical Machinery & Components	PRI/67	Conveyor belts	
Mechanical Machinery & Components	PRI/69	Components and fluids for vehicle braking systems	
Mechanical Machinery & Components	PSE/1	Tubes for water well casing	
Mechanical Machinery & Components	PSE/14	Bellows assemblies	
Mechanical Machinery & Components	PVE/17	Air receivers - General	
Mechanical Machinery & Components	PVE/18	Cryogenic vessels	
Mechanical Machinery & Components	PVE/20	Cast iron and mild steel sectional tanks	
Mechanical Machinery & Components	PVE/393	Equipment for storage tanks and filling stations	
Mechanical Machinery & Components	RHE/12	Calorifiers	
Mechanical Machinery & Components	RHE/16	Performance requirements for control systems	
Mechanical Machinery & Components	RHE/19	Commercial refrigerated food cabinets (cold room and display cases)	
Mechanical Machinery & Components	RHE/22	Underfeed stokers	
Mechanical Machinery & Components	RHE/26	Pressure vessels for refrigerating systems	
Mechanical Machinery & Components	RHE/30	Heat exchangers	
Mechanical Machinery & Components	RHE/4	Testing of refrigerant compressors	
Mechanical Machinery & Components	RHE/7	Expansion vessels using an internal diaphragm	
Mechanical Machinery & Components	FME/9	Fasteners	
Mechanical Machinery & Components	GME/21	Mechanical vibration, shock and condition monitoring	●
Mechanical Machinery & Components	GSE/22	Safety and control devices for gas and oil burners and gas burning appliances	●
Mechanical Machinery & Components	GSE/29	Gas-fired central heating boilers (domestic and non-domestic) and domestic gas-fired water heaters	●
Mechanical Machinery & Components	GSE/35	Gas cooking appliances (domestic)	●
Mechanical Machinery & Components	GSE/36	Independent gas-fired space heaters	●
Mechanical Machinery & Components	MCE/11	Fluid seals and their housings	
Mechanical Machinery & Components	MCE/18	Fluid power systems and components	
Mechanical Machinery & Components	MCE/6	Pumps and pump testing	●
Mechanical Machinery & Components	MHE/12	Lifting Platforms	
Mechanical Machinery & Components	MHE/31	Automatic power operated pedestrian doors	
Mechanical Machinery & Components	MTE/1	Machine tools	
Mechanical Machinery & Components	PRI/66	Rubber and plastics tubing, hoses and hose assemblies	●
Mechanical Machinery & Components	PSE/15	Flanges	
Mechanical Machinery & Components	PSE/18	Industrial valves, steam traps, actuators and safety devices against excessive pressure	
Mechanical Machinery & Components	PVE/-/1	Pressure equipment briefing committee	
Mechanical Machinery & Components	PVE/1	Pressure Vessels	
Mechanical Machinery & Components	PVE/10	Piping systems	
Mechanical Machinery & Components	PVE/2	Water Tube And Shell Boilers	
Mechanical Machinery & Components	PVE/3	Gas containers	●
Mechanical Machinery & Components	RHE/10	Heating boilers	
Mechanical Machinery & Components	RHE/13	Oil burning equipment	
Mechanical Machinery & Components	TDW/4	Technical Product Realization	
Metrology	CPI/29	Humidity and temperature conditioning requirements	
Metrology	LBI/37	Particle characterization including sieving	
Metrology	CPI/113	Hydrometry	●
Metrology	CPI/30	Measurement of fluid flow in closed conduits	●
Metrology	LBI/50	Fine Bubble Technology (FBT)	

Subject area	Technical committee reference	Title	BIS contribution
Quality	MS/1	Work study and organization and methods	
Quality	SS/1	Statistical terminology and symbols	
Quality	SS/2	Statistical Interpretation of Data	●
Quality	SS/3	Application of statistical methods in standardisation	
Quality	SS/6	Precision of test methods	
Quality	SS/7	General metrology, quantities, units and symbols	
Quality	AUS/1	Revision of ISO 19011	
Quality	CAS/1	Conformity assessment	
Quality	DS/1	Dependability	
Quality	KMS/1	Knowledge management systems	
Quality	MS/2	Project, programme and portfolio management	
Quality	QS/1	Quality management and quality assurance procedures	
Quality	RMI/1	Reference Materials	
Quality	SS/4	Statistical Process Management	
Quality	SS/5	Acceptance sampling schemes	
Quality	TS/1	Terminology	
Safety	CW/1	Safety of child use and child care products	
Safety	SW/136	Sports, playground and other recreational equipment	●
Safety	SW/65	Children's playground equipment	
Security	SSM/1	Societal security management	●
Security	AMS/1	Asset management	
Security	DEF/1	Defence standardization	
Security	GW/1	Electronic security systems	
Security	GW/2	Secure storage of cash, valuables and data media	●
Security	GW/3	Private Security Management & Services	
Security	GW/8	Security Managements Systems in Complex Environments	
Services	FSW/1	Funeral services	
Services	S/-	Management Systems Sector Policy and Strategy Committee	
Services	SVS/18	Health and wellbeing services	
Services	SVS/4	Postal services	
Services	SVS/8	Community Services	
Services	DES/1	Design for All	
Services	IMS/1	Innovation management	●
Services	MS/6	Methodologies for business process improvement using statistical methods	
Services	SVS/-	Service standardization strategy group	
Services	SVS/0	Customer service - Fundamental principles	
Services	SVS/1	Business Services	
Services	SVS/11	Transport services	
Services	SVS/12	Brand Valuation Services	
Services	SVS/14	Pest management services	
Services	SVS/15	E-services	
Services	SVS/19	Personal and beauty care services	
Services	SVS/2	Tourism services	●
Services	SVS/20	Automotive Services	
Services	SVS/3	Market research	
Services	SVS/6	Financial services	●
Services	SVS/7	Property Services	
Services	SVS/9	Recruitment services	
Transport	ACE/00	Aerospace drafts	
Transport	ACE/12	Aerospace fasteners and fastening systems	
Transport	ACE/57	Air cargo and ground support equipment	
Transport	ACE/58	Environmental and operating conditions for aircraft equipment	

Subject area	Technical committee reference	Title	BIS contribution
Transport	ACE/6	Aerospace avionic electrical and fibre optic technology	
Transport	ACE/61	Metallic materials for aerospace purposes	
Transport	ACE/65	Non-metallic materials for aerospace purposes	
Transport	ACE/66	Aerospace electromagnetic compatibility	
Transport	ACE/69	Aerospace hydraulic systems, fluids and components	
Transport	AUE/1	Vehicle lighting and signalling	
Transport	AUE/13	Commercial and public service vehicles	
Transport	AUE/15	Safety related to vehicles	
Transport	AUE/9	Automobile details and accessories	
Transport	GME/25	Cycles	
Transport	TW/1	Freight containers and swap bodies	
Transport	ACE/1	International and European Aerospace Policy and Processes	
Transport	ACE/68	Space systems and operations	●
Transport	AUE/-/1	International work on road vehicles	●
Transport	AUE/12	Ergonomics (Road vehicles)	●
Transport	AUE/14	Motor cycles and mopeds	●
Transport	AUE/16	Data Communication (Road Vehicles)	●
Transport	AUE/17	Vehicle security	●
Transport	AUE/18	Tanks for the transport of dangerous goods	●
Transport	AUE/20	Vehicle on-board diagnostics, repair and maintenance information	●
Transport	AUE/3	Renovation of tyres for motor vehicles	
Transport	AUE/32	Electrical and electronic components and general system aspects (Road vehicles)	
Transport	AUE/4	Tyres and wheels for motor vehicles	●
Transport	AUE/7	Automobile occupant restraint systems	●
Transport	GEL/9	Railway Electrotechnical Applications	
Transport	GME/33	Small craft	●
Transport	PEL/69	Electric vehicles	●
Transport	RAE/1	Railway Applications	
Transport	RAE/2	Railway Applications - Track	
Transport	RAE/3	Railway Applications - Rolling Stock Products	
Transport	RAE/4	Railway Applications - Rolling stock systems	
Welding	WEE/28	Inert-gas arc welding	
Welding	WEE/29	Resistance welding	
Welding	WEE/42	Prefabrication Primers for Welding	
Welding	WEE/43	Welding of steel for concrete reinforcement	
Welding	WEE/45	Welding of stainless steel	
Welding	WEE/6	Electric arc welding equipment	
Welding	WEE/-/1	Briefing committee for welding	
Welding	WEE/1	Definitions and symbols for welding	
Welding	WEE/17	Metal-arc welding of steel	
Welding	WEE/18	Gas welding and cutting appliances	
Welding	WEE/19	Brazing and braze welding	
Welding	WEE/2	Destructive Testing of Welds	
Welding	WEE/21	Pipework welding	
Welding	WEE/36	Qualification of welding personnel and welding procedures	
Welding	WEE/37	Acceptance levels for flaws in welds	
Welding	WEE/39	Welding consumables	
Welding	WEE/40	Health and safety in welding	●
Welding	WEE/46	Non-destructive testing	

Appendix 5.2 Outputs of committees supported by Standards Development funding

The chart below shows the subject areas of the 706 published standards from the BIS-supported committees with named programme managers. In addition to this, 1065 standards were published as a result of the access to international standardization provided by BSI's Committee Service Centre.



Appendix 5.3 Technical assistance provided to developing countries

Work carried out by BSI's international projects team (see section 3.6).

Project Title	Status	Funded by	Description
Twinning contract with Azerbaijan: support for the development of a modern system of standardization and technical regulations	Closed in year	EC	The purpose of this BSI-led project is to support the State Committee for Standardization, Metrology and Patents of the Republic of Azerbaijan in the development of a standardization and regulatory system that complies with European requirements and meets requirements for implementation of the WTO Technical Barriers to Trade (TBT) Agreement.
Technical assistance: support to the Alignment of Technical Regulations and Enhancement of the quality infrastructure in Turkmenistan	Closed in year	EC	The objective is to support development of a 'business-enabling' environment by updating the approach to standards and technical regulations and quality infrastructure, improving the compatibility between Turkmen standards and technical regulations and international practices. Another key aim is to increase opportunities for market access for economic operators and further alignment of technical regulations to WTO standards. We are lead partner on this project, which provides technical assistance to Turkmenistan towards its further participation and integration in international quality infrastructure activities, through development of capacity and the adoption of modern systems and techniques of operation across Turkmenistan, and in the sectors of standardization, certification, metrology and accreditation.
Technical assistance: programme for supporting the production of basic grains for food security in Nicaragua (PAPSSAN)	Closed in year	EC	The aim is to develop the market for certified seeds at local and national level, supplying surplus certified seeds produced in other territories to meet demand in other regions, while improving food security. This will allow producers to buy fresh seed adapted to their local environmental conditions at the lowest possible prices. The project will strengthen and build the capacity of small and medium-sized producers in production, business development and processing, marketing, provision of equipment and access to services. It will also provide support and equipment to cooperatives and other organizations through financing investments in equipment and infrastructure required for the production, processing and marketing of seeds.

Appendices continued

Project Title	Status	Funded by	Description
Technical assistance: INOGATE Technical Secretariat and integrated programme in support of the Baku Initiative and the Eastern Partnership energy objectives	Closed in year	EC	The INOGATE Programme is an international energy cooperation initiative between the EU and partner countries Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Turkmenistan, Ukraine and Uzbekistan. The objective is to contribute to the progress of INOGATE partner countries to achieve the Baku Initiative and the Eastern Partnership objectives. The programme supports a reduction in dependency on fossil fuels and imports, improvement of the security of energy supply and climate change mitigation.
Technical assistance: capacity building for the Ministry of Industry and Trade within the Framework of the EU-Jordan ENP Action Plan	Closed in year	EC	Led by BSI, this project helps enhance the institutional capacity of the Jordanian Ministry of Industry and Trade and Services (MITS) in dealing with trade and industry development in Jordan following the revised EU-Jordan Action Plan, and is conducive to increased growth and job creation. The project's specific objective is to strengthen the ability of various MITS departments to address Jordan's economic challenges in their respective fields of competence.
Technical assistance: support to China's Sustainable Trade and Investment System	Ongoing	EC	<p>The overall objective is to support China's economic, trade and investment reform in line with its sustainable development path. The purpose is to provide technical assistance to strengthen the design and implementation of trade and investment policy, legislation and regulation at central and provincial level. BSI and CEN are managing delivery of Component II: Quality Infrastructure/Technical Barriers to Trade, which aims to:</p> <ol style="list-style-type: none"> 1. Improve the legislative and regulatory framework for developing new and revising old technical regulations, standards, conformity assessment, market surveillance and accreditation systems, while strengthening compliance to standards and regulation. 2. Build capacity to support China's quality infrastructure bodies, trade, sector and consumer associations, including establishing and strengthening partnerships/cooperation with international bodies and counterparts.
Twinning support to the Rwanda Standards Board to strengthen quality infrastructure and facilitate Rwandan businesses to export	Ongoing	TradeMark East Africa (TMEA)	Managed solely by BSI, this project seeks to assist the institutional development of the Rwanda Bureau of Standards by offering strategic support, while raising awareness in the nation's private sector of standards and increasing capacity building in this area.
Technical assistance: India Lot 1: Food Safety and SPS, Technical Regulations and Standardization, and Support to Post Clearance Audit (PCA) in Customs	Ongoing	EC	We are leading this Lot and contributing to the overall objective of the Capacity Building Initiative for Trade Development (CITD) – to support India in strengthening its capacity to achieve economic growth and sustainable development through further integration into the global trading system. The aim is to achieve this by increasing the safety and quality of products, while reducing costs and impediments to trade. The project addresses the need to enhance the capacity of India's trade-related regulatory institutions and enforcement systems to meet international standards and requirements, while helping India's trade-related training institutions strengthen their capacities.

Project Title	Status	Funded by	Description
Technical assistance: support to the modernization of Mongolia's standardization system	Ongoing	EC	BSI is the lead partner in this EuropeAid project to assist Mongolia in developing its standardization infrastructure. The specific objective is to support the Mongolian Government's initiative to adopt European principles, norms and standards relating to the free movement of goods through institutional capacity building. The project will provide technical assistance to the Mongolian authorities in modernizing and improving the Mongolian standardization system, notably through policy development, enacting legislative reform, standards setting and reinforcing the country's market surveillance and inspection regime. Such assistance will take the form of workshops, seminars, studies and study assignments.
Technical assistance to the EU-RGoC programme entitled 'Promotion of inclusive and sustainable growth in the agricultural sector: fisheries and livestock' in Cambodia	Ongoing	EC	The specific objective of this project is to trigger sustainable and inclusive socio-economic growth in Cambodia's fisheries and livestock sub-sectors, through support by government, civil society and development partners in line with programme-based approach principles. Results to be achieved include capacity building in the Ministry of Agriculture, Forestry and Fisheries on overall sector planning, monitoring and evaluation; review and recommendations concerning the agricultural sector (and sub-sector) strategies and policies development; and reinforcement of the sector's policy dialogue and aid coordination platform.
Twinning contract with Egypt: building the Capacity of the Egyptian National Institute of Standards in the field of Metrology	Started in year	EC	The overall objective of this BSI-led project is to support the performance of the Egyptian quality infrastructure within national reform priorities and in line with EU and international best practice. The project will contribute to legislative reform in metrology and to the strengthening of the institutional and technical capacity of the Egyptian National Institute of Standards in the field of Metrology.
Twinning contract with Egypt: support the Egyptian quality and regulatory environment in line with international best practice (EOS – Egyptian Organisation for Standardisation)	Started in year	EC	The objective of the project is to support the performance of the Egyptian quality infrastructure within national reform priorities and in line with the European and international best practice, with the aim of building capability towards signing Agreements on Conformity Assessment and Acceptance of industrial products (ACAA) with the EU, or international mutual recognition agreements. The purpose is to strengthen EOS, (the Egyptian Organisation for Standardisation) and improve its role in the regulatory framework governing the Egyptian quality infrastructure for the domain of technical regulations, standards and conformity assessment.
Technical assistance: enhancing capacity of sanitary and phytosanitary arrangements to facilitate trade in the Greater Mekong sub-region (Cambodia, China, Lao PDR, Myanmar, Thailand, Vietnam)	Started in year	ADB	This project aims to support the Asian Development Bank (ADB) and governments of the Greater Mekong sub-region in the delivery of three outputs: an analysis of sanitary and phytosanitary issues and cooperation between customs and SPS agencies in the countries of the region; capacity development and regional cooperation mechanisms; and a monitoring and evaluation framework.
GSO May 2016	Started and closed in year	GSO	BSI has been contracted by the GCC Standardization Organization (GSO) to deliver two training courses in the area of standardization for their member organisations.

Appendices continued

Project Title	Status	Funded by	Description
WIFO Market Surveillance year	Started in year	EC	The overall objective is to collect information on existing practices in the area of compliance assistance, compliance schemes and awareness raising campaigns, and to evaluate their overall effectiveness. The report will provide policy makers and other stakeholders with concrete examples of good practice to improve the market surveillance and enforcement of safety regulation relating to all non-food products sold in the European Union. These examples will enable EEA countries to implement, in their own national contexts, practices which have been shown to be successful.
Technical Assistance: Improvement of the Shared Industrial Infrastructure of the Pistachio Processing Sector in Turkey	Started in year	EC	The project will help the Pistachio Processing Facility (PPF) become operational as well as improving its capacity. Furthermore it will help improve the managerial capacities of local processors by providing targeted yet replicable business development services. The PPF is expected to set an example to the local processors that want to expand their businesses.
Technical Assistance: International accreditation of testing laboratories for medical products in Belarus	Started in year	EC	This project aims to improve the health care system and therefore the welfare of the Belarusian people by strengthening the quality assurance infrastructure and control of medicines. This project will help to ensure the quality, effectiveness and safety of medicines, implement the state medicines policy and, as a consequence, improve the quality of life of the population in the Republic of Belarus.
External Quality Assurance relating to the ROM (Results Oriented Monitoring) reviews of development cooperation projects and programmes	Started in year	EC	The purpose of this assignment is to help the EC verify the quality of the Results Oriented Monitoring (ROM) reviews implemented, and to recommend any changes required.
Technical Assistance: the Quality Infrastructure in the Western Balkans	Started in year	EC-EFTA	The objective of this project is to strengthen the capacity of quality infrastructure institutions in Albania, Bosnia & Herzegovina, the former Yugoslav Republic of Macedonia (FYROM), Montenegro, Serbia and Kosovo in order to facilitate their economic integration with the EU, starting from a regional harmonization. The project follows successful regional projects funded by the EU and implemented by CEN, which ran from 2004 to 2014.



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