



# Knowledge Services

**bsi.**

**Enabling sustainable transformation**

## Enabling sustainable transformation

BSI's Knowledge Services works with government and industry to convene stakeholders and tackle complex challenges by discovering, shaping and leveraging best practice. We support market transformation and enable sustainable growth for all. Our services include: research, standards development, and advisory services.

Whether you are looking for market analysis, insight to inform decision-making, or support to create and manage portfolios of good practice, our team can help you to achieve your objectives.

## What do our clients gain?

Our team can help you realize the benefits of best practice from strategy-building, to gaining stakeholder consensus and alignment, right through to shaping and leveraging standards. We can also help you gain a deeper understanding of the wider context of current and planned good practice, standards and regulations. This is based on our extensive experience ranging from product safety and security through to major government innovation programmes, for example for energy smart appliances and automated vehicles. We enable our clients to respond to some of today's biggest trends, from sustainability and climate change to digital transformation.

BSI is an independent and neutral convener of stakeholders. We have an extensive network of connections across governments, private companies, universities, and research centres. Combined with our own in-house expertise, this means we can tap into the knowledge and facilitate the collaboration needed to meet your specific needs.



# Realize the benefits of good practice

## ✔ **Build brand reputation:**

Protect your products, systems, data, people, and customers

## ✔ **Expand and grow:**

By leveraging knowledge and standards to build market leadership

## ✔ **Innovate:**

Increase confidence in your innovative products and services

## ✔ **Adapt and transform:**

Respond to market shocks and build a resilient organization fit for the future

## ✔ **Drive a cause:**

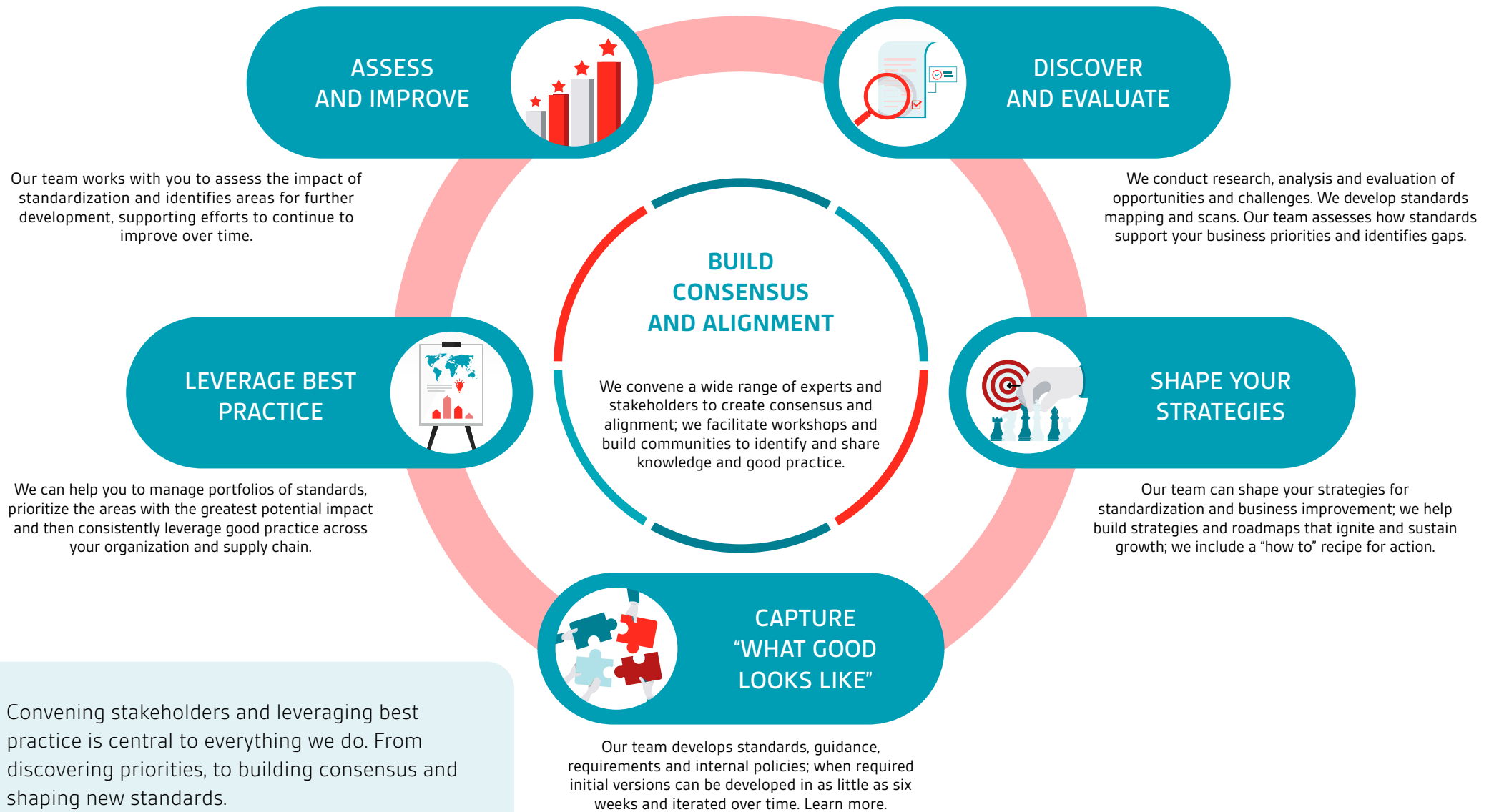
Drive a cause that creates a better marketplace, with a lasting impact

## ✔ **Pioneer:**

Be the first to develop an industry-wide process, framework or standard with us.



# Helping you leverage good practice at every stage



Convening stakeholders and leveraging best practice is central to everything we do. From discovering priorities, to building consensus and shaping new standards.

We can help you build tailored strategies to enable innovation, transformation and growth.

## A full list of our capabilities:

- ✔ Creating strategies for good practice and business improvement
- ✔ Conducting market research, benchmarking and analysis
- ✔ Standards research, scanning, landscaping and roadmaps
- ✔ Stakeholder analysis, engagement and consultation
- ✔ Building consensus and alignment
- ✔ Facilitating workshops, webinars and online discussions
- ✔ Development of standards and supporting guidelines, requirements and tools
- ✔ Writing policies, processes, and drafting capabilities
- ✔ Managing and optimizing standards portfolios
- ✔ Knowledge sharing including through communities of practice
- ✔ Impact assessments, quality reviews and tracking
- ✔ Programme management and support

See real-life examples of how we've helped our clients



# Digital twins

## Challenge – Enable a values-based approach to digital strategies in the built environment and ensure digital twins have purpose, maintain trust and function effectively

Objective - Create a “Digital Twin (DT) Hub” online community to foster the development and advancement of digital twins and evolve the view of ‘what good looks like’ and inform the need for future standards

‘Digital twins’ - virtual representations of physical assets and systems – are a promising technology for the built environment. But a lack of alignment on key concepts and approaches risked slowing adoption and reducing value. The Centre for Digital Built Britain (CDBB) wanted to provide an environment through a “DT Hub” community where key stakeholders could connect, agree priorities and share good practice.

### Building consensus and alignment

BSI worked with the CDBB to create the DT Hub, which:

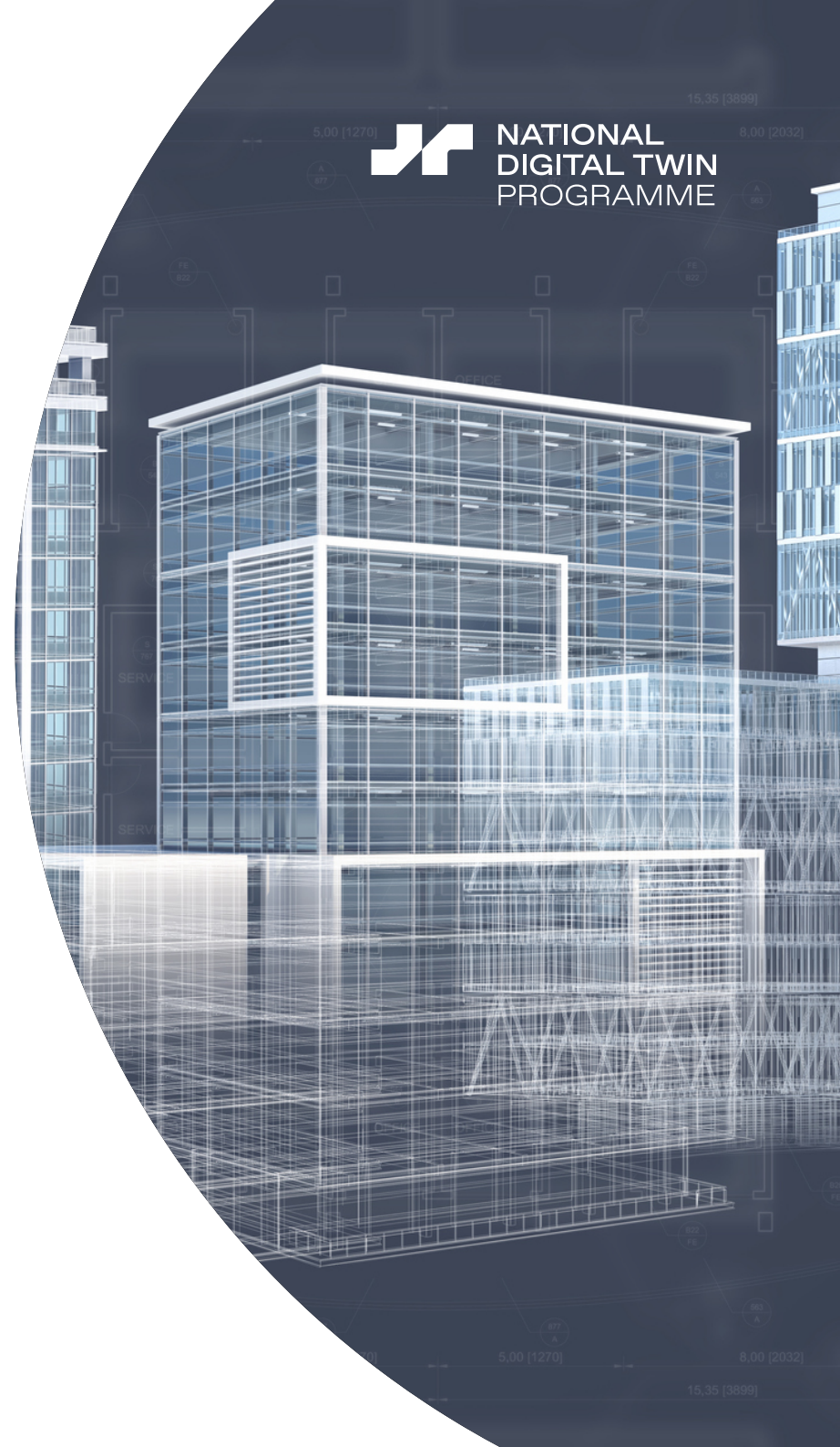
- Provided a platform to identify, evaluate and prioritize common opportunities and challenges for industry
- Created a dedicated online portal for the community with tailored content to spark collaboration around agreed themes
- Ran a series of webinars and online “jams” to develop thinking for each theme
- Generated insights and recommendations on digital twin concepts and definitions; skills and culture; and value and priority use cases

### Fostering collaboration to unlock value

The DT Hub fostered collaboration between major asset owners and other industry players. It now has over 3000 members. Connecting these stakeholders to agree good practice and to identify areas that unlock value is an essential step towards accelerating the benefits of digital twins in the built environment.



NATIONAL  
DIGITAL TWIN  
PROGRAMME



# Health and wellbeing

## Challenge – Create a credible solution and define best practice

Objective - Create a code of practice (PAS 3002) to improve psychological health and wellbeing

Employees now spend around a third of their lives at work. Depression and anxiety have a significant economic impact. The estimated cost to the global economy is US \$1 trillion per year in lost productivity.

Hitachi's challenge was to help organizations establish, promote, maintain and review the health and wellbeing of their workforce, which helped build trust within the workforce and increase productivity.

### Strong reputational benefits

This, in turn, has brought strong reputational benefits to their brand which are particularly important when recruiting and retaining talent.

The PAS standard presents five key principles to form the basis of an organization's approach:

- Capitalize on diversity and inclusion as an organizational strength
- Proactively support the physical and psychological health and wellbeing of the workforce
- Foster a work culture that offers strong, ethical relationships, and encourages learning
- Ensure jobs are designed to offer meaningful work
- Support good people management policies and practices



### Accelerating business growth and productivity

Hitachi has seen a large reduction of medical expenditure by implementing an approach included in the PAS as a best practice. This has clear links to both increased productivity and reduced sickness. Hitachi are also influencing workplace wellbeing amongst their global strategic partners by providing them with the PAS.

Find out more about creating a standard [here](#).

# Connected and automated vehicles

**Challenge – Gain public acceptance of connected and automated vehicles (CAVs) and integrate them with existing transport systems, despite a lack of common standards**

**Objective - Accelerate UK leadership in CAV technologies**

Connected and automated vehicles (CAVs) hold many potential benefits – from safer roads and less congestion, to improved productivity and social inclusion.

But there are barriers to CAV development. These include public concern about the technology, and the need to integrate CAVs with existing transport systems despite a lack of common standards.

The government's Centre for Connected and Autonomous Vehicles (CCAV) aims to make the UK a leader in CAV research and development. It partnered with BSI to deliver a programme of standards to support this.

## Expert research provides valuable insights

BSI's Research & Intelligence team conducted extensive research to provide a global map of CAV-related standards. They worked with technical experts to establish who was leading on standardization; to identify the priority areas for UK standards; and to discover where the UK could lead internationally.

By monitoring global standardization work through [BSI's Standards Watch](#) service, the team could keep CCAV abreast of the latest market insights.

## Becoming a global leader

BSI created a series of standards to address specific gaps in global standards with a focus on safety, operating environments and data. Providing a quick route to standardization, these standards (including PAS 1880, PAS 1881, PAS 1882, PAS 1883 and PAS 1884) will help to overcome barriers to CAV deployment, instil public confidence, and establish UK global leadership in CAV design and testing. We have also developed a new BSI Flex standard for an online CAV vocabulary, using a dynamic and iterative approach to agree good practice.

Read the full case study [here](#) or find out more about our research services [here](#).







# Industrial biotechnology and net zero

## Challenge – Reduce CO2 emissions faster in the biotechnology industry

### Objective - Create a strategic roadmap of standards and regulations for the biotechnology industry

Industrial biotechnology (IB) is a strategically important part of a vibrant UK economy. It's also a valuable one, with an estimated turnover of over £7 billion.

IB uses biological resources such as enzymes and plants to produce energy, chemicals and materials. This makes it a key enabler of decarbonization – and its transformative technologies are crucial to helping the UK reach net zero.

To harness IB to speed up the reduction of CO2 emissions, Innovate UK and the Industrial Biotechnology Leadership Forum asked BSI to develop a strategic roadmap for standards and regulations affecting IB in the UK.

To develop this roadmap, BSI carried out an extensive research programme:

- In-depth interviews with IB stakeholders and subject experts from over 50 organizations, representing a cross-section of sectors, technologies, maturity stages and domain expertise
- Research into existing standards and the regulatory landscape

### Driving the industry forward

Our team developed an insight-filled report that identified:

- The positive impacts the UK's IB activities could have on the UN Sustainable Development Goals
- The eight gaps creating barriers to IB innovation and commercial take-up in the UK
- A directional framework for addressing these gaps
- Which roadmap options to prioritize for the greatest impact
- Recommended action areas for standards and regulations, structured into four pathways, within an overarching strategic framework for IB development

### Driving a sustainable cause

By recommending standards and regulations, the roadmap in the BSI report helps to support innovation in the UK by giving confidence to researchers, manufacturers and consumers.

The in-depth research will inform the UK's approach to expanding IB and its contribution to CO2 reduction across the sectors. It will also help UK companies to play a major role in supporting a prosperous and environmentally sustainable future.

[Download the full report here](#)  
or [find out about our consultancy services here](#)

# Food and drink

## Challenge – Reduce consumer risk and build trust in refrigerated delivery services

### Objective - Become an international market leader by establishing refrigerated delivery best practice

There has been a rapid rise in demand for delivery of temperature-sensitive goods like fresh food. But the growing complexity of the supply chain increases the risk that goods will spoil – which can not only disappoint consumers but endanger them.

Japanese logistics company Yamato Holdings wanted to reduce these risks to build trust in the industry, grow the market and expand its business globally.

The fast-track standard PAS 1018 was created to define good practice in this fast-growing industry. It covers:

- Monitoring and improving the refrigerated delivery service, including parcel handling
- Transportation of chilled or frozen parcels in temperature-controlled vehicles via geographical routing systems
- Requirements for resources, equipment, operations, and communications
- Conditions for operation sites, work instructions, operational manuals and staff training

### Building customer trust and brand reputation

PAS 1018 has enabled the whole delivery industry to increase quality and consistency. It has helped service users to choose providers wisely and helped consumers to enjoy fresh products and stay safe.

### Becoming an international market leader

By showing leadership and driving forward the development of industry-wide good practice, Yamato has increased its international influence, strengthening its position in the global market.

Creating the PAS brought Yamato into contact with a range of experts across different countries. This expanded not only its network, but also its expertise.



Read the full case study [here](#) or find out more about creating a standard [here](#).



## Luxury brands and sustainability

### Challenge – Help luxury clients to build brand equity by meeting the highest sustainability standards

Objective - Develop a next-generation sustainability certification scheme that is rigorous and independent

The climate crisis and the Covid-19 pandemic have pushed sustainability to the top of the global agenda.

But luxury brands face complex challenges in ensuring sustainability throughout their supply chain. They also need to keep improving this to stay competitive. And as no two companies are identical, there are no one-size-fits-all solutions.

Positive Luxury engages the luxury industry with sustainability. It created the Butterfly Mark: an accredited certification for brands that meet the highest sustainability standards.

Sustainability is good for business as well as the planet, so Positive Luxury wanted to maximize its clients' impact over the next few crucial years. A key step was to revise the Butterfly Mark so it could help brands put sustainability strategy right at the heart of their organizations.

#### A scheme fit for the next generation

**BSI helped Positive Luxury develop this next-generation sustainability assessment. It included:**

- Categorization of sustainability issues relevant to the luxury sector
- Standardized questions focused on data to leverage best practices
- Robust scoring methodologies to ensure a required base level of performance
- Target levels of compliance for being awarded the Butterfly Mark

Key to the new framework was its customization, allowing each company to improve its sustainability in a way that works for them.

BSI's advisory service is also helping luxury brands to identify best practices and use them to improve their sustainability.

#### Building brand equity and financial health

The updated framework helps businesses develop and implement a tailored, progressive and action-oriented sustainability strategy – making it a valuable tool for building their reputation among consumers and boosting their bottom line.

#### Gaining the edge in sustainability

To simplify the sustainability journey, the new framework is updated every six months. So businesses can be confident that they're working with relevant data and able to set goals that will put them at the forefront of sustainability in luxury.

Read our Positive Luxury case study [here](#) or find out more about our [consultancy sustainability services](#)

## We asked our clients how we have helped them:



### Raise the benchmark

"We are delighted to have partnered with BSI to have undertaken the review of Scotland's employer-led apprenticeship development process. BSI have taken an innovative approach, bringing together elements from their existing standards and utilising a range of expertise from within their organization."

Jonathan Clark, Service Design and Innovation Director at Skills Development Scotland.

**Consultancy and Advisory:** Building a roadmap for Skills Development Scotland



### Uncovering valuable insights

"The outcomes of the research exceeded all our expectations, in the level of engagement achieved among companies that participated and also in the amount of useful information they contributed to helping define the scope of the standard and the next stages of its development."

Professor Joyce Tait, Co-director Innogen Institute, University of Edinburgh.

**Research and Intelligence:** Making decisions based on valuable insights within the innovation sector



### Build brand trust

"The work with BSI has been very beneficial in many ways. Addressing key relevant topics to my industry and fast tracking the provision of a standard has been most welcomed. The involvement of experts has given critical credibility to the standards published."

Dr. Bizhan Pourkomainian - Global Director of Food Safety, Restaurant & Distribution, McDonald's

**PAS 96:** Guide to protecting and defending food and drink from deliberate attack



### Drive innovation

"The standard has enabled us to develop further with customers and for them to trust us. It's a great message and tool to build that trust with customers. We can't put a number on it, but it's invaluable."

Hope Caton, Founder of Healthy Games, Developer of Cigbreak

**PAS 277:** Health and wellness apps. Quality criteria across the life cycle.



### Be heard

"A PAS enabled us to deliver standardization of a solution on a national platform. It's not something we think we could have done on our own. We've achieved a huge amount through doing it."

Emma Cottrell, Construction Waste Programme Manager, Constructing Excellence in Wales

**PAS 402:** Performance Reporting for Waste Management Organisations



### Transformation

"BSI used their understanding to develop a solution that not only met our brief, but also factored in how we worked; providing a bespoke solution that was readily accepted by the department. It was clear that a solution was being tailored to suit our needs, enabling us to confidently own, use, and maintain these documents going forward."

Quantity Surveyor, Cardiff City Council

**Consultancy and Advisory:** quickly transforming a tendering process

# About BSI

BSI is the business improvement and standards company that enables organizations to turn standards of best practice into habits of excellence, 'inspiring trust for a more resilient world'. For over a century BSI has driven best practice in organizations around the world. Working with over 77,500 clients across 195 countries, it is a truly global business with skills and experience across all sectors including automotive, aerospace, built environment, food and retail and healthcare. Through its expertise in Standards and Knowledge, Assurance Services, Regulatory Services and Consulting Services, BSI helps clients to improve their performance, grow sustainably, manage risk and ultimately become more resilient.

## About Knowledge Services

BSI's Knowledge Services provides tailored standards-centric services to help the private sector, governments, trade associations and governmental organizations tackle the strategic and operational challenges they face.

Our service gives you the right minds for the right solutions because we draw on relevant expertise from across BSI and from our vast network of experts. This gives you a multidisciplinary team that can address your specific needs – whether you need better standards management, new content development, insight and analysis, strategic advice, or transformation activities.

Our team is both independent and neutral. We bring together consultants, information specialists and researchers with quantitative and qualitative skills, and standards development experts.

To explore how good practice can help you become more resilient, transform and grow, get in touch with one of our team.

### Get in touch

Or visit [our website](#) for more information.



**British Standards Institution**

389, Chiswick High Road  
London W4 4AL  
United Kingdom

Contact form

[bsigroup.com](https://www.bsigroup.com)