The role of standards in a digital economy

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Key enablers for a Digital Economy

01 Evolving Cybersecurity & controls
How do we upkeep digital trust and remain vigilant in continuously fortifying organizations against fraud and cyberattacks?

Promoting safe and responsible use of emerging tech like AI, Quantum, 5G and Metaverse

02 Ubiquitous interconnectivity
Unlocking commercial opportunities and aid with informed decisions on carbon and environmental footprint through **safe high-quality data.**

Balancing rights and obligations of gatekeepers and intermediaries

03 Verification & Authentication
What is the trust framework for users to navigate the Digital Economy?

How do we ensure organisations have the tools to identify and rectify errors in a risk and liability framework? E.g. IoT, Ecommerce Chain of Custody

04 Quality infrastructure
How can BSI future proof and add more value to the way we convene?

International Alignment

How do we ensure ICT contributes towards accessibility, circular economy and sustainability?
Supporting initiatives to the Overarching Key Enablers

1. Evolving CS & Controls
   - For mature technology and critical impact in safety, quality, compatibility → Core Standardization + Promotion/Outreach

2. Ubiquitous interconnectivity
   - Extend the use of standards across sectoral application → Community of interest/practice + Industry programmes
   - Coordination of horizontal standards covering application sectors and specificity of topics → DSOC + ICT/1

3. Verification & Authentication
   - Flagship standards in Cybersecurity, Software resilience → Core NSB standardization +
   - International alignment → JTC. Governance + Global Alliance Network

4. Quality infrastructure
   - Building implementation capability → Training Resources (Toolkits, Solution packs) + Sector Workshops
Evolving with Technological Advancement

Emerging Areas
IEC/ISO JTC3 Quantum Technology
Chair: South Korea, Secretariat: BSI

Structure
SC1: Quantum Computing Technology
SC2: Quantum Communication
SC3: Quantum Metrology
SC4: Quantum sensors, detectors and imaging

WG: Terminology & Nomenclature

Deliverables
- Streamlining the development process
- Securing approval for scope and business plan
- Filling leadership and secretariat positions
- Conducting 2 plenaries (May & Oct)
- Exploring multilateral collaborations

Preparing the UK for an AI and Quantum-enabled future

Tech cannot be assessed in isolation but rather the amalgamation of cutting-edge technologies and data-driven processes:
- IoT
- AI
- Robotics
- Data driven processes

Measuring the value of standards can be done through:
- Downtime improvements
- Process and decision making efficiency
- Growth in bottom line
- Products
- Regulatory compliance

Consumer Engagement

Increase consumer participation across Digital

ISO Privacy by design

CEN CLC JTC21/ European level
- Environment sustainable AI
- AI-enhanced nudging
- AI trustworthiness characterisation
- Competence requirements for AI ethicist professionals

JTC1/SC42/ International level
- AI Controllability of automated AI systems
- AI treatment of unwanted bias in classification and regression machine learning tasks
- AI system impact assessment
- AI environmental sustainability
- AI guidance on addressing societal and ethical considerations
Evolving Areas of interconnectivity

**ARTIFICIAL INTELLIGENCE**
- Growing portfolio of >72 stds
- Supporting SMART pilot with 42001 (i.e. ChatGPT)
- Priming the market through opportunistic outreach and BSI Group campaigns
- ISO/IEC 42005 & 42006 coming
- Std Req's 2025 deadline to meet EU AIA

**CYBERSECURITY**
- Ongoing promotion with 27k series
- Differentiating 27k through industry events
- Privacy and Identity focus for 2024
- Cybersecurity in AI
- RED Directive

**QUANTUM TECHNOLOGY**
- Building our UK advisory group on quantum strategy and engagement
- Securing approval for the JTC3 business plan and structure to be developed
- Active national recruitment
- Supporting Sector with the QSN Pilot

**CYBER-PHYSICAL INFRASTRUCTURE**
- Relevant Domains: IoT, Digital Twin, Robotics, Autonomous Vehicles and Smart Manufacturing
- A coordinated workstream can be explored through DSOC

**DATA & DIGITAL INFRASTRUCTURE**
- End goal is to develop inter-sector guidance
- Verify the uptake of ISO/IEC data standards and promote
- Monitoring business opportunities wrt DPP

**Telecommunication Network**
- Telco Panel – exploratory
  - Collab with IEEE
  - ETSI Technical Board influencing (through Alice)
  - UKTIN standards and diversification working groups
  - SME outreach
## BSI Digital Standards Structure

<table>
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<tr>
<th>Internal &amp; External Insights</th>
<th>Standards Policy and Strategy Committee (SPSC)</th>
<th>Digital Strategic Advisory Group (DSAG)</th>
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<tbody>
<tr>
<td>Tactical Delivery</td>
<td>Digital Standards Optimisation Committee (DSOC) (National Standards-based solutions)</td>
<td>ICT/1, JTC 1 Coordination (ISO Governance and Processes)</td>
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<tr>
<td>Core Standards Development</td>
<td>Digital Committees (Both Digital First and Second Committees)</td>
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<tr>
<td>Community of Practice/Interest</td>
<td>Data Standards Hub (supports National Data Strategy Mission 1)</td>
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Digital First National Committees

Public

Digital

- Immersive Tech (IST/31)
- Artificial Intelligence (ART/1)
- Quantum (ICT/4)
- Cybersecurity and Privacy (IST/33)
- IT Service Management (IST/60)
- IT Governance

- Data Communications (IST/6)
- Autonomous systems (ICT/1/1/1)
- ICT Accessibility (ICT/2)
- Digital Twin (IOT/1)
- Construction design, modelling & data exchange (B/555)

- eCommerce (IST/47)
- Brain Computer Interface (BCT/1)
- Cloud computing (IST/38)
- Software Trustworthiness (PAS)
- Blockchain and DLT technology (DLT/1)
- Internet of Things (IOT/1)

- Telecomms (TCT/7)
- Software and Systems Engineering (IST/15)
- Financial Services (IST/12)
- Cards and devices for personal identification (IST/17)

Digital Manufacturing

- Additive Manufacturing (AMT/8)
- Industrial data and manufacturing (AMT/4)
- Measurement and Control (GEL/65)
Digital-Second National Committees

- Circular Economy (SCP/1/4)
- Intelligence Transport Systems (EPL/278)
- Transport Services (SVS/11)
- Electric Vehicles (PEL/69)
- Sharing Economy (SCP/1/10)
- Smart Cities (SDS/2)
- Biometrics (IST/44)
- Smart Energy Systems (L/13)
- Healthcare
- Agritech
- Building Info Modelling
- Robotics (AMT/10)
Thank you