

The role of standards in supporting the transition to a digital economy, and facilitating digital trade

Executive Summary of BSI Whitepaper

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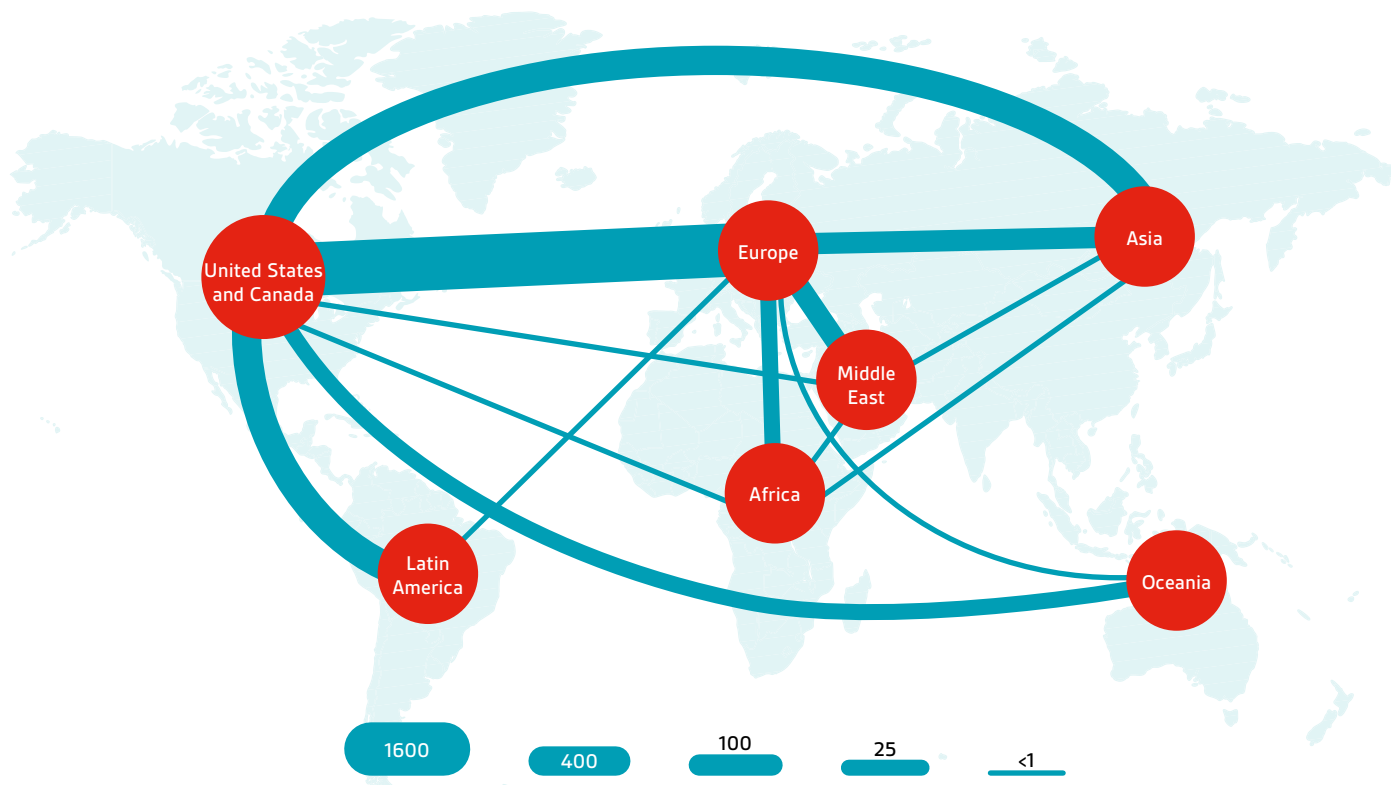


Context

The digitalisation of economies and wider society is growing apace, driven by an explosion in data/data transfer, brought about by the transformation of manufacturing processes, the use of IoT, and consumer use of global platforms for a wide range of services. The COVID-19 pandemic has accelerated this trend and raised the awareness of the value of digital technology. Although the same process is underway in the developing world, the rate of uptake of digital technology and transition to digital trade is much slower than in the OECD. This is widening the digital divide, and putting at risk their achievement of Sustainable Development Goals (SDGs).

There are concerns among development agencies at the growing gap that is emerging between the developed world and LDCs, particularly those in Africa. The danger is that developing countries will be by-passed by the new global digital economy.

Figure 1 Use of Inter-regional Bandwidth 2018 (Terabits per second)



Source: UNCTAD Digital Economy Report 2019

Challenge – Trust and Coordination

The WEF Global Risks report from 2020 revealed that a key concern of organizations operating in the digital space was the risk of cyberattack and information infrastructure breakdown. A key challenge for digital transformation is ensuring trust and developing a coordinated approach to the process.

In fact, there are a diverse set of challenges, including:

- Lack of clarity on how to develop a strategy to coordinate this enormous task and the skills in the public and private sectors to deliver it
- A significant infrastructure investment required, and the need for public-private-partnerships to resource it
- A need to foster digital innovation, while protecting citizens and ensuring widespread access
- No clear roadmap for SMEs to develop a proven capacity to deliver reliable digital services
- Concern in the public and private sectors related to system security, the interoperability of different systems, and data privacy

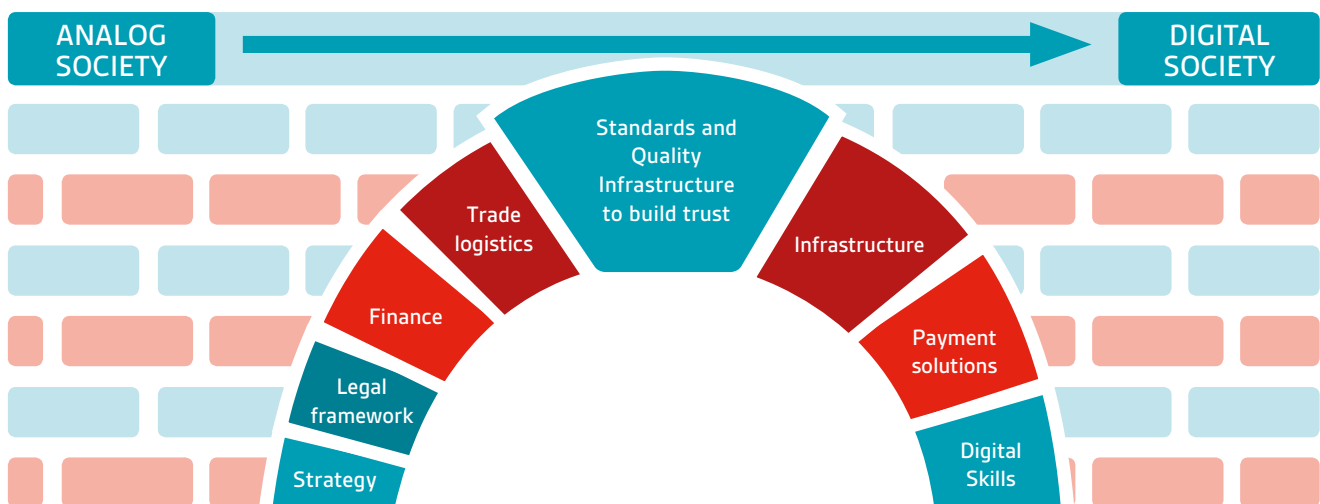
Systemic Approach

Digitalization requires a range of factors to combine for the transformational process to be successful. Analyses of digitalisation and dashboards typically examine performance in terms of: Technology, Skills, Regulation, and Uptake. UNCTAD, through its e-commerce assessment, has broadened this further and developed a framework of *seven themes* to enable e-commerce and digitalization in LDCs.

The BSI White paper has considered the different approaches to transformation, and draws the conclusion that, while necessary, the focus on legislation and regulation is not sufficient to tackle the key issue of trust, in a fast moving digital world. It proposes the inclusion of an *eighth theme*, namely “standards and quality infrastructure”. International standards, which are stakeholder driven and consensus based, are widely accepted as a powerful and practical tool, to accelerate change in business processes and customer relationships, and will build the necessary trust in the digital transformation.

In the UK and elsewhere in the developed world, international standards have played a key role to promote digitalisation and address concerns around cyber security, interoperability and privacy. We believe international standards, which build trust in innovative applications of new technology, are the missing keystone in the bridge to a digital society.

Figure 2 The bridge from an analog to a digital society



Source: BSI 2021

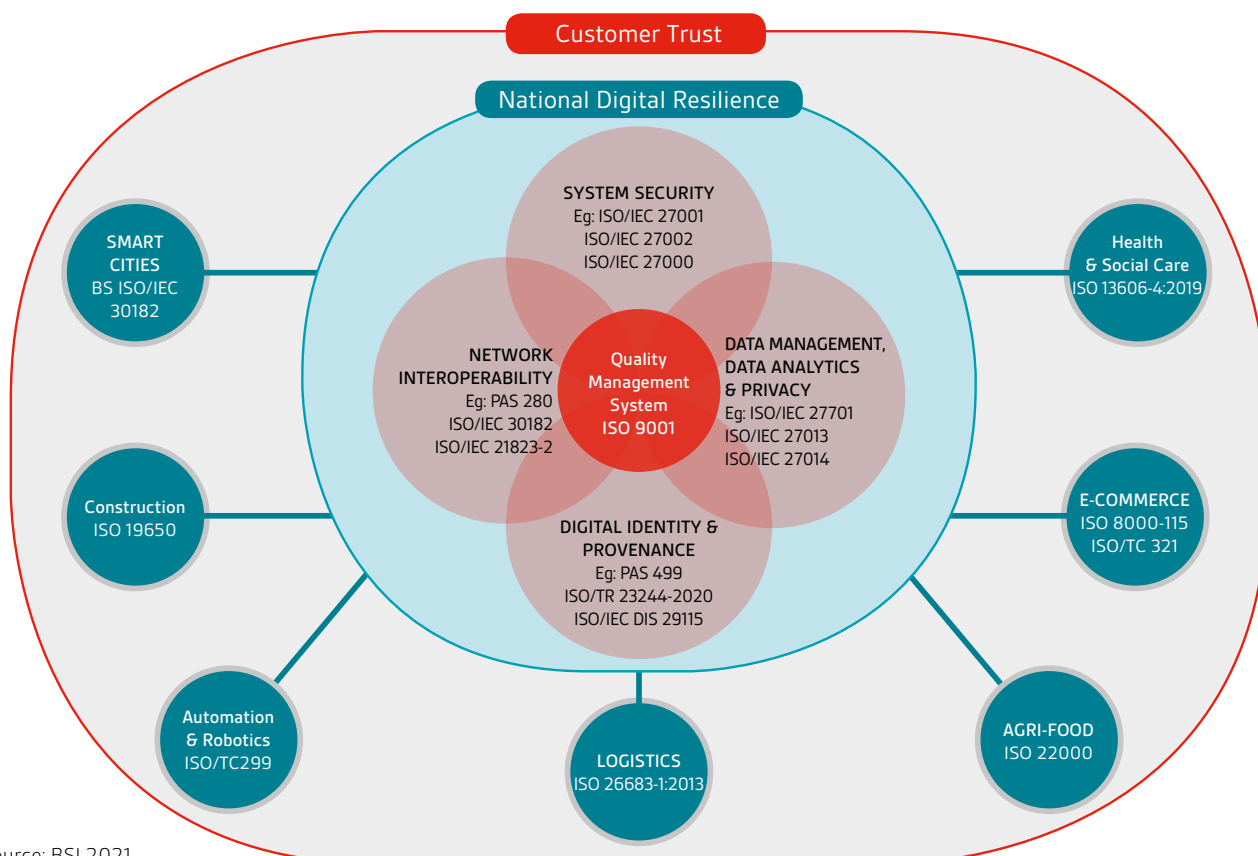
The Solution – Standards and Quality Infrastructure

In a world of rapidly evolving technology, digitalised global value chains, and growing digital trade, where small and medium sized enterprises (SMEs) are preponderant, agile processes to establish trust need to be a fundamental part of the solution. International standards and the QI system can provide customers with the assurance they need, particularly in four core digital areas:

- System security
- Identification and provenance
- Data management, data analytics and data sharing/privacy
- Interoperability of systems

The National Standards Body (NSB) has a key role to play in creating alignment of systems, by working closely with the public and private sector, at the national, regional and international level. However, preliminary research suggests that the uptake and market demand for such standards, in the Caribbean and Africa region, in the four core areas of digitization, has been virtually non-existent.

Figure 3 Digital Standards



Source: BSI 2021

The BSI White paper makes the following five broad suggestions/recommendations:

- 1 **A review of the role of the national quality infrastructure system, including standardization bodies and certification bodies, should be included in the UNCTAD assessments in promoting e-commerce in LDCs.** In evaluating the strength of the national e-commerce strategy, the institutions and the digital ecosystem in the target country, assessments should also examine how well NSBs are engaged in promoting digitalization, including how well they are linked at regional/international level, to avoid a proliferation of regional standards and certification.
 - 2 **Development of a digital toolkit based on international standards:** having analysed the smorgasbord of standards relating to digitalisation, the paper suggests a core set of standards covering the key areas: system security, interoperability, data management and privacy, and digital identity – to be agreed with with ISO, IEC, ITU and others – as a focus for supporting transformation. It would provide SMEs with a simplified entry point to the world of international standards and, ultimately, to global value chains by providing an outline of the important standards that qualify/help recognize SMEs as digitally mature and secure.
 - 3 **Development of international certification schemes:** subject to the views of INetQI, it also suggests the development of accredited international certification schemes to help SMEs qualify as a trusted digital enterprise enabling access to regional/global markets. This also reassure users that such offerings are tested regularly, to meet minimum quality/reliability requirements.
 - 4 **Using standards in government procurement policy:** In the digital economy, where there is a range of security risks, standards and trust marks provide an ability to manage risk appropriately, and government procurement policy can be a powerful policy tool to promote awareness and compliance.
- A digital toolkit pilot:** working in partnership with e-Trade4all, and INetQI, the value of this “UNCTAD Plus Standards” approach should be piloted/demonstrated in Africa and the Caribbean, where there is an enthusiasm to strengthen efforts to improve digitalisation in this way.
- 5

The Digitalization Toolkit

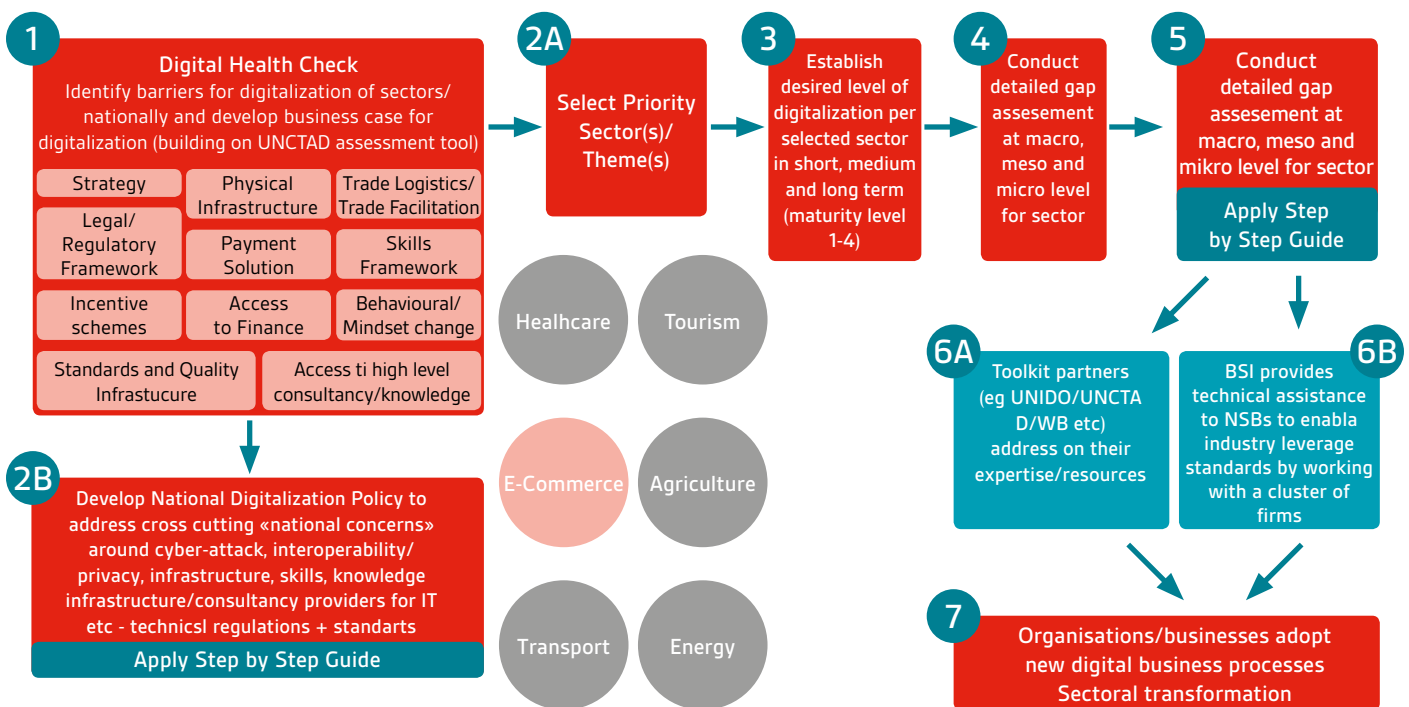
Development objective: to promote digitalisation through a holistic approach, by developing practical guidance and a variety of tools (based on standards) for government/policy makers, the private sector, and other stakeholders at the national and/or sectoral level.

The Toolkit: comprises three elements or tiers.

- 1 **A Policy Guide (the “macro” level, aimed at national governments):** Establishing national digital resilience. This would follow the UNCTAD model/analysis for e-commerce; in addition, it would outline good (governance) principles for developing an agile digitalization policy/strategy that would identify a more active role for the NSB and QI institutions.
- 2 **A Technical Framework (the “meso” level aimed at sectors or cities):** Supporting the transformation of sectors/value chains, or public services in a city. This would develop Guidance on how to introduce the power of networked digital technologies across supply chains, using mandatory (technical regulations/laws) complemented by voluntary tools such as standards.
- 3 **A Practical Guide (the “micro” level for individual organisations):** Achieving digital maturity/excellence for firms and organisations. This would support those organisations who aspire to be best in class, and who wish to operate in leading global markets or be recognised as world class.

The Process: : The proposed transformation model is depicted through a number of steps set out in Figure 4, and in the White paper:

Figure 4 Steps of proposed transformation model with a focus on standards



Source: BSI 2021

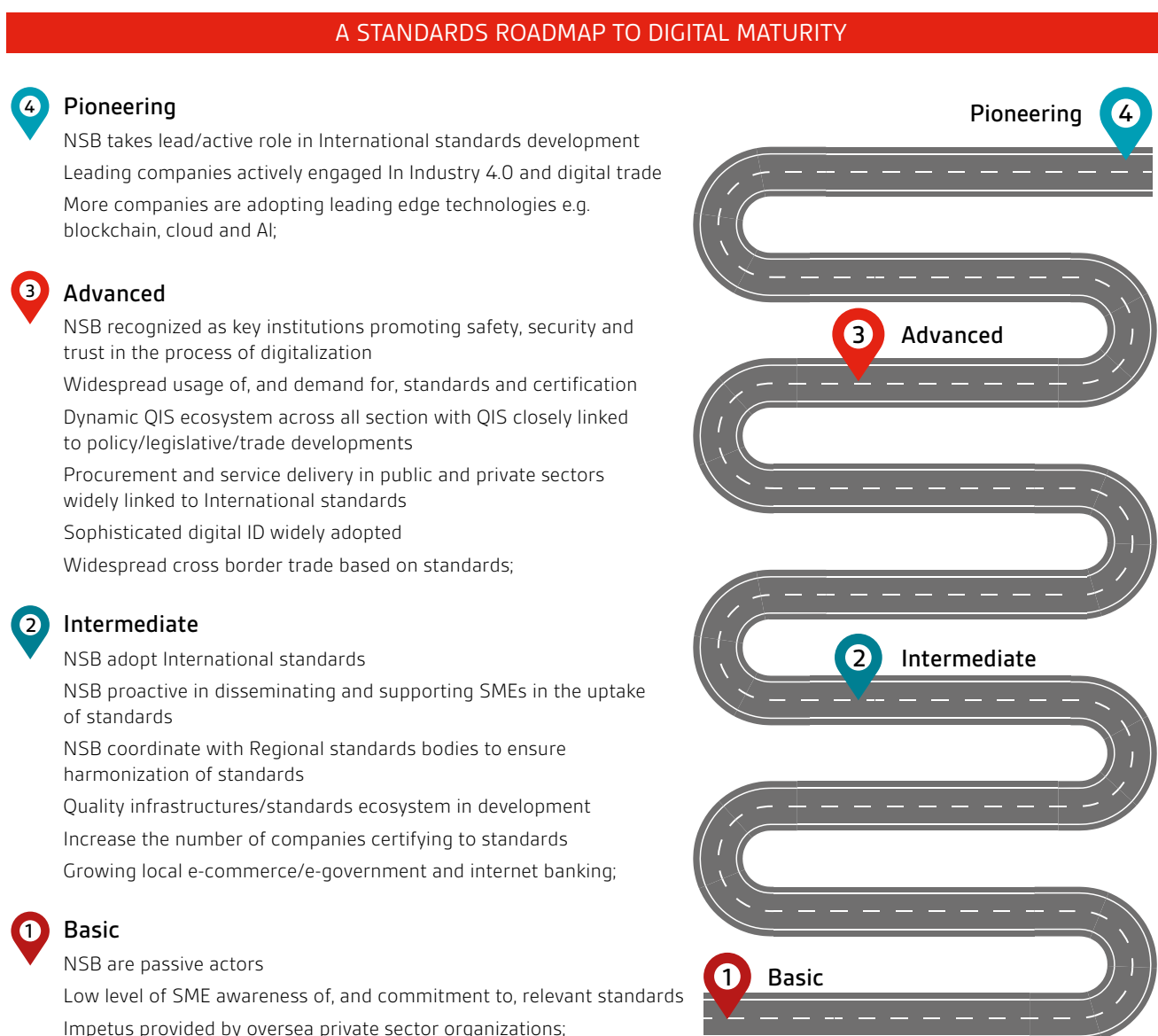
Partners

As the UNCTAD assessments demonstrate, digitalisation is multi-faceted, and a holistic, integrated approach is essential for success. Furthermore, the investment in infrastructure and complementary investments required are not insignificant, and it may be appropriate to develop public-private partnerships to deliver success. Success also depends upon international cooperation, which could be achieved through the **e-Trade 4 all** network as well as the International Network for Quality Infrastructure (INetQI).

The standards roadmap to digital maturity

The use of standards differs widely between countries and so the speed with which the standards ecosystem can be developed will also be different. The process will take time, but the aim should be to develop a programme to raise all LDCs to an intermediate status within the next three to five years, as part of a wider integrated approach to digitalization, including infrastructure and skills. However, we believe that the focus on quality and standards will provide the solid base for active participation in global value chains by SMEs, and it is this virtuous circle that will lead to more confidence in digital technologies, e-commerce, higher quality jobs and improved finance for SMEs.

Figure 8. A standards roadmap to digital maturity



Expected Outcomes

- Greater trust in digital services > **greater uptake by consumers**
- Greater acceptability + more open markets = more digital innovation > more dynamic economy > higher value added activities > **higher productivity**
- Higher levels of digital maturity > greater resilience and the foundation for improved sustainability and resource efficiency > **faster achievement of SDGs**

Way Forward

- 1 Development of Toolkit (3 months): BSI with partners
- 2 3 pilots to validate the toolkit (9 - 12 months): digitalization of sectors/cities:
 - 1 Engaging with national policy makers and key public-private stakeholders
 - 2 Building upon the UNCTAD Action Plans or, where necessary, prepare the national strategy
 - 3 Supporting NSBs to:
 - a. Participate actively in the international standards development process covering digitalization
 - b. Equip and empower NSBs through capacity building to engage effectively with government and private sector on digitalization standards implementation
 - c. Create national forums and technical committees for relevant digital standards/concerns
 - d. Ensure there is proper data collected on the role/impact of standards in relation to digitalization
 - 4 Providing technical assistance to 6 SMEs to demonstrate and champion the power of transformation within the target sector
 - 5 Assessment/evaluation: analysing short term results and lessons learned

To read the full White Paper, please click [here](#)

About BSI

BSI is a global thought leader championing business excellence, innovation and best practice. It has grown into an international research, advisory and regulatory organisation of over 3,500 staff in 80 global locations.

Whether by developing agile standards or offering quality management advisory services, BSI remains true to its original mission of 'making excellence a habit' in organizations all over the world.

International Projects - What we're here to do

BSI's International Projects (IP) division was formed with a specific goal – to help governments improve their trade policy-making processes, unlock prosperity and boost private sector competitiveness.

For over 20 years, we've been providing regular best-in-class expertise on trade promotion, regulatory compliance and export readiness on a range of aid-funded programmes in more than 100 countries.

The IP team is made up of a network of international consultants and project managers. They carry out a range of activities that includes providing policy advice and recommendations, training programmes, specialised seminars and workshops, and updating legislation and regulations.

For more information on International Projects team or on this whitepaper please contact us [here](#).

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