STANDARDS NATIONAL ACTION PLAN 2022-27

Bureau of Indian Standards

STANDARDS NATIONAL ACTION PLAN 2022-27

Bureau of Indian Standards

पीयूष गोयल
PIYUSH GOYAL

वाणिज्य एवं उद्योग,
उपभोक्ता मामले, खाद्य और सार्वजनिक
वितरण तथा वस्त्र मंत्री, भारत सरकार
**MINISTER OF COMMERCE & INDUSTRY,
CONSUMER AFFAIRS, FOOD & PUBLIC DISTRIBUTION AND
TEXTILES, GOVERNMENT OF INDIA**

आज़ादी का
अमृत महोत्सव

MESSAGE

I am delighted to learn that the Bureau of Indian Standards (BIS) has adopted a proactive approach in determining the national standardization needs and framed the Standards National Action Plan (SNAP) 2022 outlining a roadmap of future standardization in the country. It is also praiseworthy that while framing SNAP 2022, climate change and sustainability have been identified to be the primary drivers of future standardization.

Standardization helps countries create brand value for their products and services across the world. Therefore, standards can play a critical role in making quality products and help us realize Hon'ble Prime Minister Shri Narendra Modi's vision to create a developed India in the Amrit Kaal. Indian standards can also act as facilitators to industry and business in building a self-reliant India by ensuring the manufacturing of only those products and services that are benchmarked against the best standards in terms of quality, safety and reliability.

As the National Standards Body (NSB) and the custodian of standardization in the country, I am hopeful that BIS expands its frontiers to be able to influence and play a pioneering role internationally while also driving and leading international standardization work. The SNAP 2022 is a right step for identifying strategic initiatives and the national standardization priorities based on an assessment of various socio-economic considerations and national objectives.

I am confident that SNAP 2022 would enable BIS to not only carry out its role as an NSB in steering the national standardization efforts but would also lead to standards becoming a key enabler of India's economic aspirations. I would like to congratulate BIS for their efforts in framing this plan and wish SNAP 2022 a grand success.

Piyush Goyal
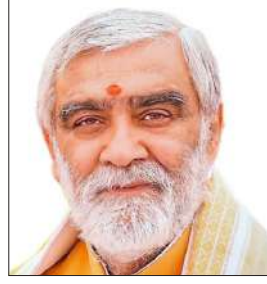
अश्विनी कुमार चौबे
Ashwini Kumar Choubey

राज्य मंत्री
पर्यावरण, वन और जलवायु परिवर्तन
उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण
भारत सरकार
MINISTER OF STATE
ENVIRONMENT, FORESTS & CLIMATE CHANGE
CONSUMER AFFAIRS, FOOD & PUBLIC DISTRIBUTION
GOVERNMENT OF INDIA

संदेश

मुझे यह जानकर अत्यंत हर्ष हो रहा है कि भारतीय मानक ब्यूरो ने मानकों की राष्ट्रीय कार्य योजना, SNAP 2022, की अवधारणा तैयार की है। यह विभिन्न पहलों और मानकीकरण प्राथमिकताओं के खाकों के माध्यम से राष्ट्रीय मानकीकरण कार्य के लिए भविष्य के रोडमैप को निर्धारित करती है।

मुझे यह जानकर भी खुशी हो रही है कि SNAP 2022 की परिकल्पना एक मजबूत मानकीकरण पारिस्थितिकी तंत्र बनाने के लिए की गई है जो भविष्य में तकनीकी और आर्थिक विकास से उत्पन्न होने वाली चुनौतियों का सामना करने और भारतीय उद्योग तथा व्यवसायों को मौजूदा तकनीकों तथा सर्वोत्तम रीतियों को अपनाने में सहायक होगा। यह वर्तमान प्रतिस्पर्धात्मक युग में भारतीय उत्पादों और सेवाओं को लाभकर बनाने में एवं नए बाजारों में प्रवेश करने में सक्षम बनाएगा। साथ ही यह भारत को विश्व स्तर पर एक गुणवत्तापूर्ण ब्रांड के रूप में स्थापित करने के योग्य बनाएगा।

श्रेष्ठम गुणवत्ता, सुरक्षा और विश्वसनीयता के मानदंडों के साथ उत्पादों तथा सेवाओं को वितरित करने के लिए भारतीय उद्योग में मजबूत विनिर्माण क्षमताओं को विकसित करने की दिशा में मानक एक महत्वपूर्ण प्रवर्तक होंगे। इसलिए, यह कार्य योजना आत्मनिर्भर भारत मिशन तथा भारत को एक विकसित अर्थव्यवस्था के रूप में उभारने में महत्वपूर्ण योगदान दे सकती है।

SNAP 2022, सतत विकास और जलवायु परिवर्तन से संबंधित पहलुओं के निराकरण में तथा हमारी वैश्विक प्रतिबद्धताओं को पूरा करने में भी सहायक होगा। साथ ही, यह सभी संबद्ध क्षेत्रों में आवश्यकतानुरूप मानकों के विकास के माध्यम से उपभोक्ता संरक्षण के हमारे अभियान को भी बढ़ावा देगा।

राष्ट्रीय मानकों के विकास को एक निश्चित दिशा प्रदान करने एवं विभिन्न राष्ट्रीय लक्ष्यों और उद्देश्यों को पूरा करने में महत्वपूर्ण भूमिका निभाने वाले इस प्रलेख को तैयार करने के लिए मैं भारतीय मानक ब्यूरो को बधाई देता हूं।

(अश्विनी कुमार चौबे)

कार्यालय :
कमरा नं. 173, कृषि भवन,
नई दिल्ली — 110001
दूरभाष : 011—23380630, 24621921
फैक्स : 011—23380632, 24695313

Office :
Room No. 173, Krishi Bhawan,
New Delhi - 110001
Tel. : 011-23380630, 24621921
Fax : 011-23380632, 24695313

निवास :
30, डॉ. एपीजे अब्दुल कलाम रोड,
नई दिल्ली — 110003
दूरभाष : 011—23794971
23017049

Residence :
30, Dr. APJ Abdul Kalam
Road, New Delhi - 110003
Tel. : 011-23794971
23017049

E-mail : mos.akc@gov.in

रोहित कुमार सिंह
भा प्र से
Rohit Kumar Singh
IAS

सचिव
भारत सरकार
उपभोक्ता मामले विभाग
Secretary
Government of India
Department of Consumer Affairs

MESSAGE

Standards have always been known to underpin industry, trade and business by helping to realize the potential new technologies, create new industries and open new markets. Standards have also impacted society at large by ensuring that the world around is safe and secure and that the products and services available are of the desired quality and reliability.

2.   The world around us is changing at a faster pace than ever before. New technologies are rapidly emerging, impact of climate change is increasingly felt, the need for sustainable development is progressively realized and consumers are ever more discerning now on issues of safety, performance, reliability, security and sustainability. All the above developments mean that the role of standards is more important that ever before. Standards also have the potential to bring in competitive advantage in the context of enhancing manufacturing capabilities and transforming India into a quality conscious country.

3.   BIS has the responsibility to lead and coordinate standardization activities in the country and meet the standardization needs and expectations across industries, government and consumers. The Standards National Action Plan, SNAP 2022 is a right direction in this regard. SNAP 2022 has been developed through extensive consultations with stakeholders and it is therefore expected that the strategic initiatives contained within its framework would enable standardization to be aligned with their requirements and simultaneously meet various national objectives while addressing priorities like climate action and sustainable development.

4.   I appreciate the efforts of BIS in providing the right impetus to standardization work in the country through the SNAP 2022.

24/11/2022
(Rohit Kumar Singh)

Place :   New Delhi
Date :   24th Nov 2022

JAGO GRAHAK JAGO

प्रमोद कुमार तिवारी, आई ए एस
PRAMOD KUMAR TIWARI, IAS
महानिदेशक
Director General

दूरभाष/Phone	: + 91-11-2323 7991, 2323 6980
फैक्स/Fax	: + 91-11-2323 5414
ई-मेल/E-mail	: dg@bis.gov.in
वैबसाईट/Website	: http://www.bis.gov.in

भारतीय मानक ब्यूरो
(भारत सरकार)
मानक भवन, 9, बहादुरशाह ज़फर मार्ग,
नई दिल्ली - 110 002
Bureau of Indian Standards
(Government of India)
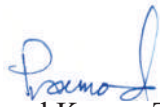Manak Bhawan, 9, Bahadur Shah Zafar Marg,
New Delhi - 110 002

MESSAGE

Bureau of Indian Standards has been leading the standardisation activities in the country for the past 75 years. As the National Standards Body as mandated by the BIS Act, 2016 and the custodian of the national standardisation system, BIS recognizes the value that standards can bring to the nation, its economy and society at large. The Standards National Action Plan (SNAP) is an endeavour to capture the new priorities and explore new opportunities for developing consensus based national standards. It considers the current socio-economic and national concerns and other critical issues that would need to be addressed when framing standards as well as the strategic approaches to be considered for advancing the standardisation goals.

In the process of developing this document large number of stakeholders and other interested parties, particularly the civil society were consulted. It was with their valuable insights and contributions that the document has evolved and thus reflects their diverse views and expectations.

Climate Change and sustainability are key global concerns and would be the overriding consideration when developing national standards on any subject. A broad range of aspects that could potentially help in addressing sustainability and climate change through standards would be an important feature of future standardisation work undertaken by BIS.

BIS is pleased to bring out this document that lays the path forward, presenting a clear and firm commitment of its national standardisation objectives and facilitating in creating a strong standards eco-system capable of meeting the future economic, social and technological challenges. We are confident of achieving the goals set in SNAP 2022 with the support and involvement of all stakeholders.

(Pramod Kumar Tiwari)

Content

About BIS

Bureau of Indian Standards (BIS), the National Standards Body (NSB) of India was established under the BIS Act, 1986 and came into existence on 1 April 1987 assuming the functions of the erstwhile Indian Standards Institution (ISI). The ISI came into being on 6 January 1947. The BIS Act, 2016 came into force on 12 October 2017 superseding BIS Act 1986. The BIS Act, 2016 provides for the establishment of a national standards body for the harmonious development of the activities of standardisation, conformity assessment and quality assurance of goods, articles, processes, systems and services and for matters connected therewith or incidental thereto.

BIS through its core activities of standardisation and conformity assessment, has been benefiting the national economy by providing safe, reliable and quality goods; minimising health hazards to consumers; protecting the environment, promoting exports and import substitutes; controlling over proliferation of varieties, etc. The standards and certification schemes of BIS apart from benefitting the consumers and industry also support various public policies especially in areas of product safety, consumer protection, food safety, environment protection, building & infrastructure development, etc.

BIS also represents India in international standards bodies like International Organisation for Standardisation (ISO) and via the Indian National Committee in the International Electrotechnical Commission (IEC) and participates actively in the international standardisation work undertaken in these bodies. BIS presents the national viewpoints on new areas taken up for international standardisation and on various draft international standards during the process of development of these standards so that the country's interest is protected and reflected in these standards. This also enables the BIS technical committees to consider adoption of the International Standards as Indian Standards, with or without modifications, in order to enable our products and services to integrate with global trade and commerce.

Standardisation System In India

01 BIS and its Mandate

02 Standard Setting Process of BIS

03 Standardisation by Other Bodies in India
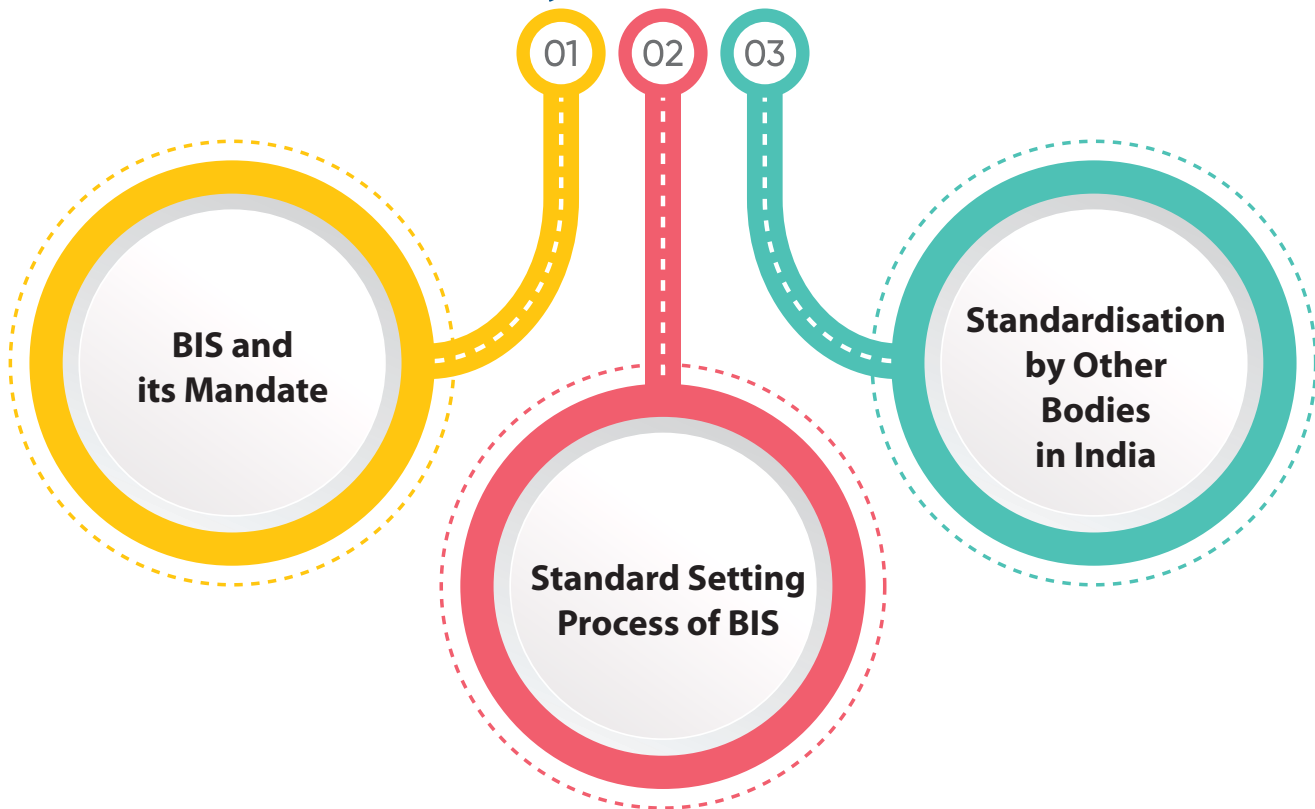
BIS and its Mandate

BIS operates under the framework of the BIS Act of 2016 and the Rules and Regulations framed thereunder. As mandated in the BIS Act,2016, BIS may establish, publish, review and promote the Indian Standards in relation to any product, process, system or service. BIS may also adopt as an Indian Standard any standard, established by any other institution in the country or abroad.

Standard Setting Process of BIS

The Indian Standards are developed by technical committees that are representative of various stakeholders having interest in the relevant subject of standardisation under the scope of such committees through a process of consultation so that views of all are given due consideration and a consensus is evolved in formulating a standard. The stakeholders involved in national standardisation can broadly be categorised as industry, consumers / users, technologists (R&D and scientific institutions, academia, individual subject experts, etc) and government departments/regulators.

The process of standards development of BIS is aligned with accepted international best practices that are based on the core principles of openness, transparency, impartiality and consensus. The process begins with the identification of the standardisation needs of the given sector or subject following which the development of the standard is taken up and planned by the relevant technical committee. Apart from consultation within the technical committees, draft standards are also open for public views/comments.

A standard by definition is a voluntary document and therefore its implementation is not compulsory unless compliance to it is mandated through a regulation/order or when it forms a part of a contract between the concerned parties.

Standardisation by Other Bodies in India

BIS formulates Indian Standards across various technology areas and in the service sector, except for some specific areas like drugs and pharmaceuticals, roads and bridges, railways and telecommunications. Apart from BIS there are other bodies that carry out domain specific standards development in their respective subject areas. Such standards are for sector specific applications or organisation specific use or for the purpose of regulating the relevant sector. A vast majority of these bodies that are developing domain specific standards are part of the Government system, and few of them are dedicated standardisation bodies. While in most cases the area of work of these bodies and BIS are explicit and there is conscious effort to avoid any overlap or duplication of work, there are however few cases where parallel work is taking place in BIS as well as such domain specific bodies such as in the areas of food safety and telecommunications.

As the NSB, it is the responsibility of BIS to ensure that there is absolute synergy and coherence in the standardisation work that is taking place across various bodies in the country and to avoid the possibility of any duplication, overlap or conflict in such work. Conflict or duplication of work is avoided where parallel standardisation work is taking place in BIS and other domain specific bodies through close coordination between BIS and the respective bodies. BIS is also consciously working towards an overall objective to ensure that there is only one standard nationally on any subject in the country

Context of Standards National Action Plan (SNAP)

Standardisation supports economic growth, enhances competitiveness and fosters technological developments. It is also a tool to influence public policies such as health and safety, protection of the environment and safeguard consumer interests. By ensuring a level playing field and defining common criteria of acceptance of goods, standards are also being used extensively as tools to support regulatory framework and to facilitate trade. Standards are therefore considered as key facilitators of all economic activities. Given the above, standards development has to be based on a strong foundation with systems that are aligned to meet the current and anticipated standardisation needs, prioritised and coordinated in such a manner so as to remain effective in addressing emerging issues.

Speaking on the occasion of 52nd World Standards day on 14 October 2022, Shri Piyush Goyal, Hon'ble Minister of Commerce & Industry, Consumer Affairs, Food and Public Distribution, and Textile, expatiated on the role of standards as a key factor in the country achieving the status of a developed country by the year 2047 while moving ahead, as underlined by Hon'ble Prime Minster in his Republic Day speech this year, from Swarajya to Suraj, and talked of five-point approach for BIS to become the benchmark for quality control, quality consciousness and quality assurance: (i) Act as a facilitator, not as a regulator, (ii) Follow the Zero Effect, Zero Defect approach, (iii) Be a pioneer in standard-setting instead of an adopter, (iv) Operate on the cutting edges of the policy and technology, and (v) expand and modernise the laboratories for the holistic development of quality infrastructure.

BIS has its task cut out in a world characterised by the brisk pace of change in technology and manufacturing processes and confronted with the mammoth challenge of striking a balance between the needs of development and concerns of climate change. Institutional preparedness to stay abreast of the disruptions triggered by the technological innovations and ever-evolving landscape of smart manufacturing practices is a key challenge to be negotiated. This requires a closer partnership among the policy-makers, standard-making body, industry and users, with each of them playing a pro-active role in agenda-setting and course-corrections. In an environment where start-ups are a significant player in imagining and implementing innovative solutions, standards cannot stay relevant without an organic and dynamic engagement with the start-up ecosystem.

There is a considerable body of evidence to suggest that those who control standards, control the economies. The importance of standards is recognised in the policy pronouncements of the government and has been emphasised by Hon'ble Minister as a guiding principle in charting out the roadmap for standardisation, in leveraging the inter-dependences of globalised economic order. As one of the largest economies of the world, India has to play a leading role in the international standardisation bodies and ensure that the national standards are suitably aligned with the international standards to pave the way for seamless integration with the global supply chains. This calls for augmenting the human resources with the required experience and expertise to participate at standardisation activities at ISO and IEC through greater involvement of the academia, industry and research bodies, and process reengineering to reduce the time lag in aligning the national standards with international ones.

India aspires to achieve the goal of net-zero carbon emission by the year 2070, and the updated Nationally Determined Contributions under the Paris Agreement lay down ambitious targets to be achieved. Hon'ble Prime Minister underlined the commitment of our country to the cause of sustainable development by giving the clarion call of Lifestyle for Environment in his Republic Day speech this year. The focus on circular economy is another dimension of this commitment. Standards have to be in step with the paradigm of sustainable
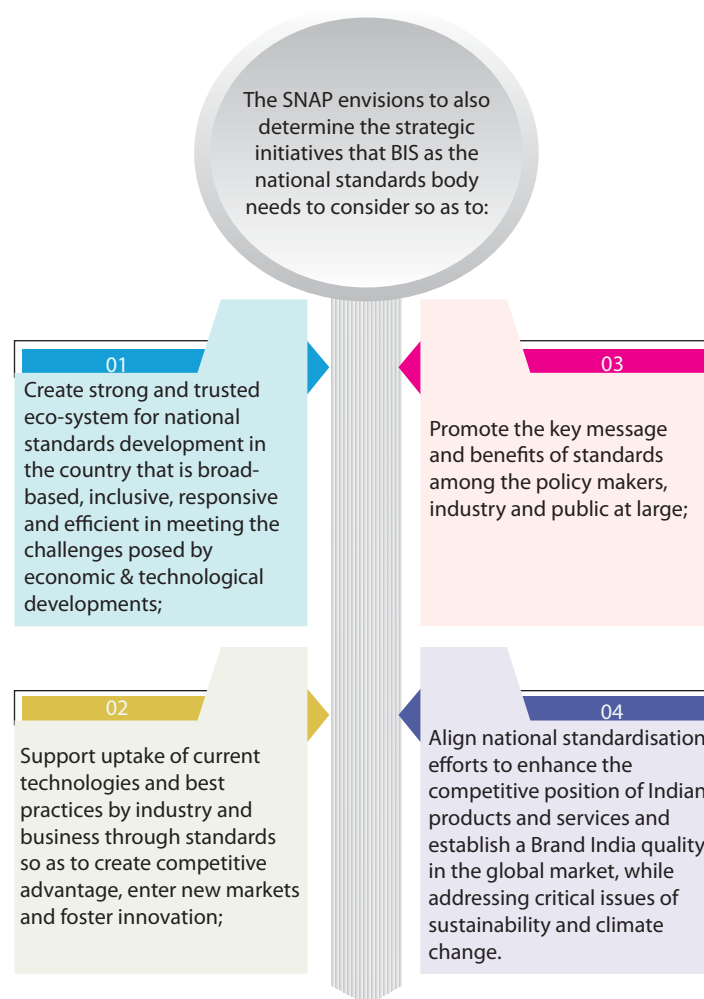
development. And it is a big challenge for BIS to ensure that the needs and concerns of sustainability are embedded in the formulation of new standard and revision of more than twenty- one thousand existing standards.

Importance of research-based approach and constant capacity-upgradation of the manpower engaged with the standardisation efforts need not be over-emphasised. Hon'ble Minister has laid stress on developing National Institute of Training on Standardisation (NITS) as a Centre of Excellence and BIS partnering with reputed institutions within and outside the country for the skill-upgradation and reskilling of the officers.

BIS Act 2016 places the onus of harmonising the standardisation activities in the country on BIS. It is imperative, therefore, to bring all the Standard Development Organisations in the country within the ambit of One Nation, One Standard. As not all of them might be following the WTO Code of Good Practices for standardisation and may not have the in-house expertise to train their work-force, BIS is required to provide them professional support and guidance and use the larger pool of experts created in the process.

Increasing the footprint of Indian Standards in other countries, developing countries in particular, is the need of the hour. BIS needs to engage in dialogue with the National Standard Bodies of these countries to promote Indian Standards with focus on the nature of trade relations with them. This will facilitate the Mutual Recognition Agreements (MRAs) as well as creation of a congenial environment for the Free Trade Agreements (FTAs).

SNAP 2019-22 also addressed many of the issues outlined above. It is with this context in mind that the present version of SNAP has been developed through the coordinated efforts of a large group of constituent stakeholders from the industry, government, scientific and R&D institutions, academia, consumer groups and civil society organizations and presents the standardisation vision of a broad cross-section of stakeholders.

The SNAP envisions to also determine the strategic initiatives that BIS as the national standards body needs to consider so as to:

01
Create strong and trusted eco-system for national standards development in the country that is broad-based, inclusive, responsive and efficient in meeting the challenges posed by economic & technological developments;

02
Support uptake of current technologies and best practices by industry and business through standards so as to create competitive advantage, enter new markets and foster innovation;

03
Promote the key message and benefits of standards among the policy makers, industry and public at large;

04
Align national standardisation efforts to enhance the competitive position of Indian products and services and establish a Brand India quality in the global market, while addressing critical issues of sustainability and climate change.

Accordingly, SNAP 2022 defines the standardisation vision and mission of BIS, identifies the strategic imperatives of BIS, draws an action plan towards addressing these through various initiatives, enumerates a set of transcending priorities in standardisation, identifies key standardisation topics/subjects that are to be taken up assigning the priorities, to be implemented in the next five years, i.e. 2022 to 2027. For all these initiatives and associated actions, the BIS technical committees would play a key role and serve as a guiding force.

The vision represents aspirations and desired future position of BIS as an efficient and vibrant standard making body.

Reckoned as the custodian of the national standardisation system and a National Standards Body of global repute, delivering benefits to the nation and Indian society.

VISION

The mission defines what BIS needs to do to achieve the standardisation vision.

Through a network of experts who are representative of all stakeholder interests, formulate Indian Standards that address national and market priorities, support sustainable development, health and safety, trade, public policy, and are highly regarded by the public.

MISSION

Drivers of Future Standardisation In India

Development of Indian Standards has to be supported by a system that is capable of responding quickly to the standardisations needs of the market and in addressing emerging national priorities. Looking ahead, BIS would continue with the efforts to encourage government, consumer bodies, professional organizations, industry, academia and other stakeholders to engage with BIS as partners and create standardisation solutions to support the national objectives. Key to such partnerships being their participation in standards making which require commitment of the stakeholders, particularly the government and industry.

In envisioning the role that BIS as an NSB has to play in so far as standardisation is concerned, it is essential to understand the various social, economic, environment and technology factors that would influence and define future standards making.

The following primary drivers of future standardisation have been identified where it is felt that standards will be relevant and have significant impact.

Economic growth and trade

01

04

02

Climate change and Sustainability

Public policy and Regulation

03

Digital Engineering and other Enabling Technologies
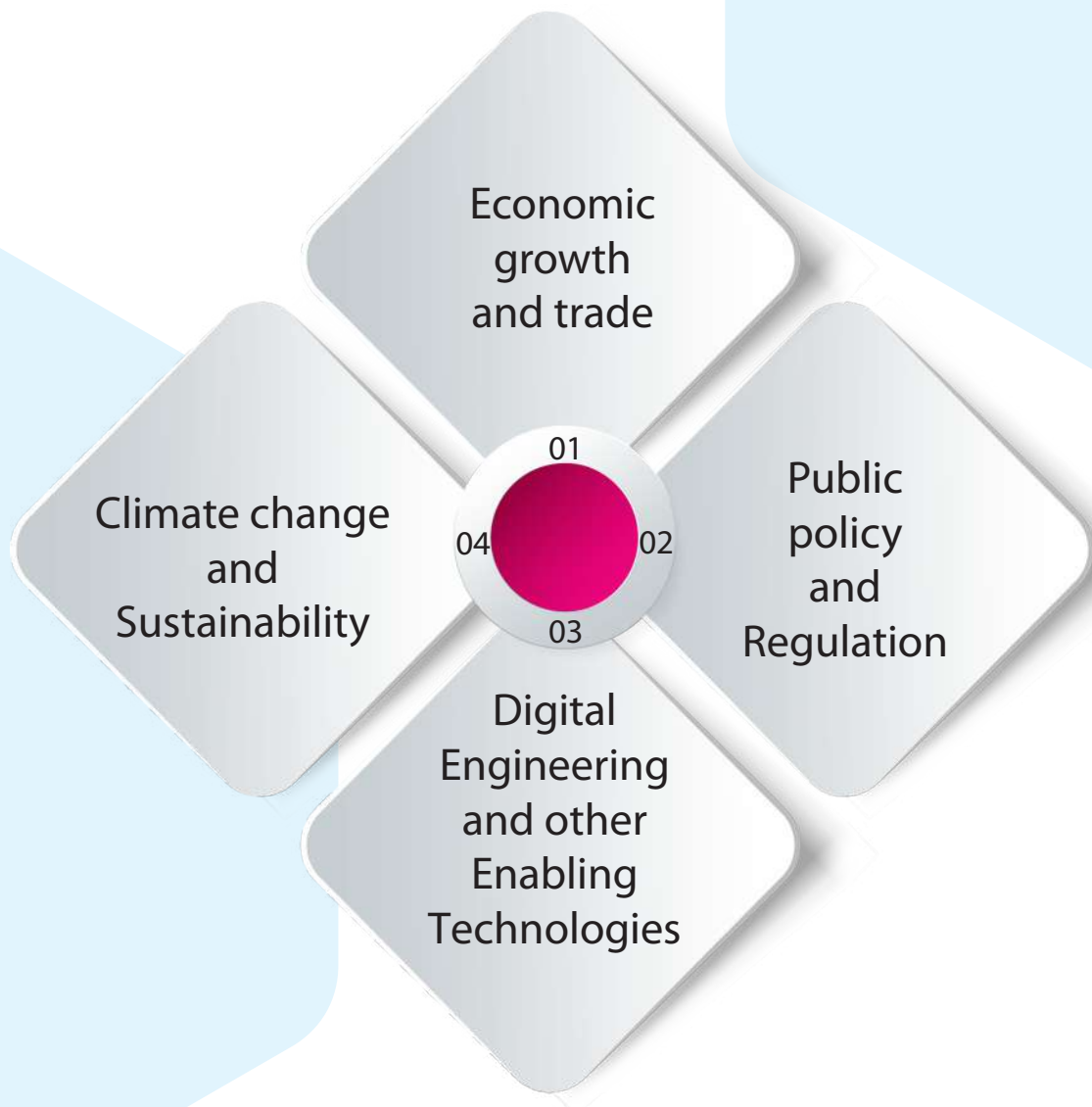
Economic Growth and Trade

India's economic progress and aspirations make it imperative for the country to have access to global markets, enhance its exports and become a significant contributor in world trade. Standards have long been known to impact trade in so much as to facilitate free movement of goods and services across international borders. However, standards of trading partners if not aligned has the potential to create technical barriers to trade. In the context of the above, alignment of national standards with global standards would, therefore, be a key element of future standardisation work of BIS.

As India endeavours to be self-reliant and a global manufacturing hub, the country would need to integrate with global supply chains, sourcing from across the world while being a preferred supplier in the global market. The key determinant in this effort would be to have the ability to build a Brand India quality of its goods and services that would have global reckoning. To build strong manufacturing capabilities, it would be important to support industry in uptake of new technologies and best industry practices, including in the MSMEs, thereby driving competitiveness and building market confidence through the ability of the industry to deliver on quality, reliability, safety and security, benchmarked against the best global norms. Standards would be a key enabler in building such capabilities in Indian industries and businesses.

The above considerations will create a demand for standards in many new areas and on different aspects, and the need for alignment with global standards where relevant. Standards will therefore be a key facilitator of all economic activities and significant contributor towards fulfilment of India's economic aspirations.

Public Policy and Regulation

There is an increasing understanding amongst the policy makers across government departments and agencies of the value and importance of standards in pursuing public policies. This has resulted in an increase in applying standards when implementing government policies, programmes, projects and in procurements. The administrative ministries in the government and regulatory bodies are in particular referencing standards when addressing issues of health, safety, security, environment and consumer protection.

There are innumerable opportunities where existing national standards can support the policy and regulatory objectives of the government. Simultaneously, there would be many instances where there would be the need for developing standards in new areas that may need to be regulated by the Government in future. Further, rapid application of emerging technologies, particularly digital technologies across sectors is creating a number of policy challenges and throwing unique regulatory requirements. This would create additional opportunities for standards to act as excellent basis for regulations in order to build an ecosystem of trust and confidence.

Digital Engineering and other Enabling Technologies

Emerging and enabling technologies have become all pervasive, integrating with other conventional technologies across various sectors. These technologies are influencing our lives more than ever before. Technologies like AI, machine learning, IoT, big data, cloud computing, quantum computing, additive manufacturing, telecommunication technologies and many others are driving almost everything that we do today. Digital technologies are impacting society in terms of enabling access of public services to wider cross-sections of society, providing better livelihood and in building a more inclusive society. By their very nature, these technologies generate a large volume of data resulting in issues of data governance and data privacy. Standards have been and would continue to be key facilitators in the integration of technologies and provide the mechanism for

building trust on a digital and data driven economy by ensuring interoperability, reliability, security and privacy.

In addition to the above, as an organization, BIS would also like to reap the benefits of technology and digitalise its standardisation processes thereby bringing in greater degree of openness and transparency in its operations and enabling standardisation processes to be more efficient and agile. Further, in line with future demands of the market, BIS would also have to deliver Indian Standards in digitised form and content that would enable the use of standards directly by machines being machine readable and interpretable. Digital technologies would also create opportunities for BIS to consider various innovative standardisation solutions where standards and its content can be provided as software.

Climate Change and Sustainability

Addressing the adverse impact of climate change and ensuring sustainability are key global concerns of the times. With the occurrence of climate related adversities and disruptions, increased instances of climate uncertainties and natural disasters, alarming pollution levels, loss in biodiversity, depleting natural resources and energy related crises reaching alarming proportions, these issues severely impact India as well. India also has global commitments to fulfil towards mitigating climate change impacts and in achieving the targets set under the UN Sustainable Development Goals (UN SDG) 2030.

Climate considerations, carbon emissions, carbon capture and storage, achieving carbon neutrality, net-zero, circular economy, resource efficiency, etc are some of the key issues that would drive the national standardisation work across various sectors of t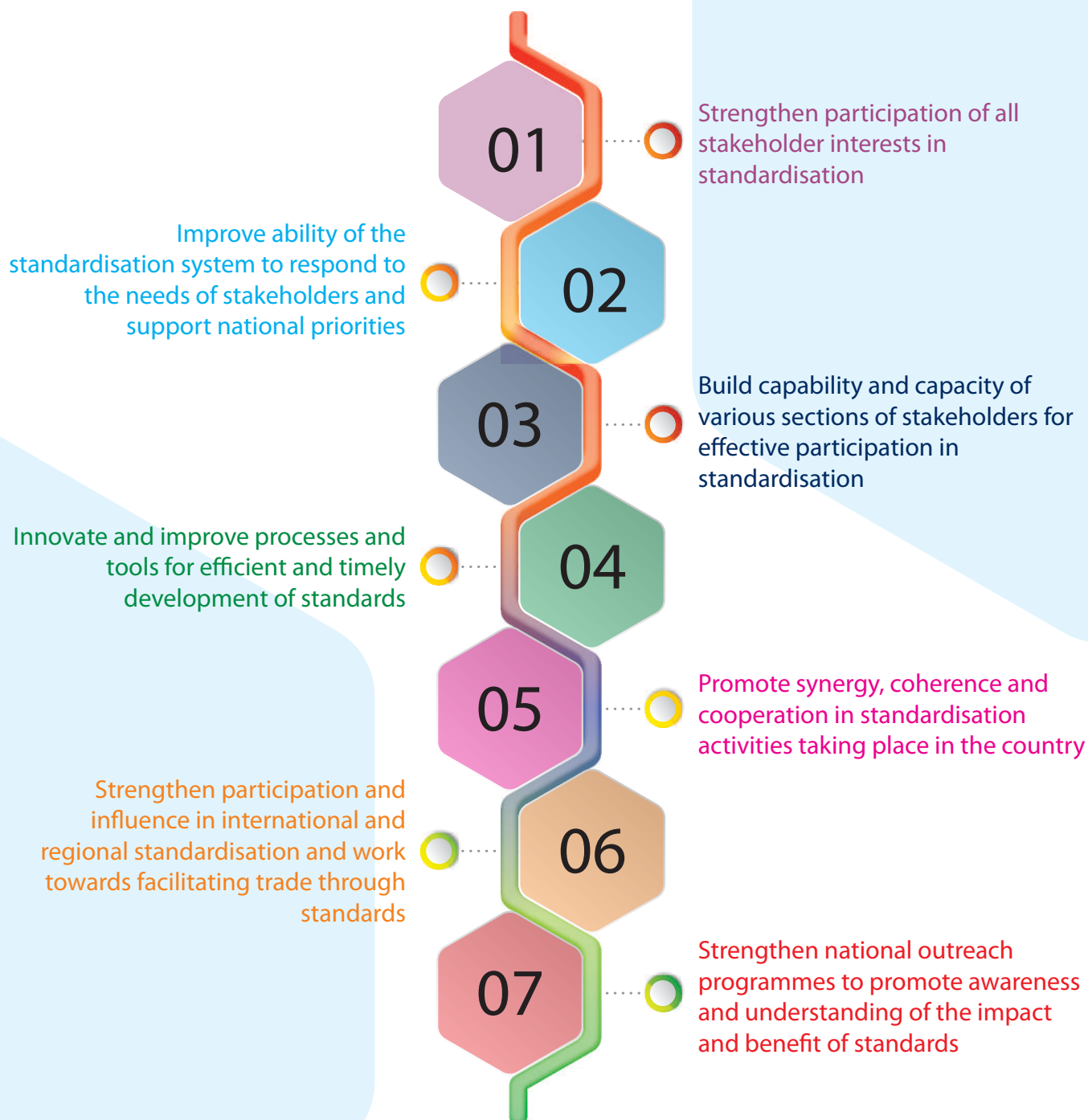he economy. The contribution of standards in addressing the UN SDGs is now an accepted fact and therefore sustainability and green growth would in parallel drive future national standardisation efforts. It would also be essential that standardisation takes a holistic approach when incorporating climate impact/sustainability considerations and address entire product life cycles. There would be the need to address aspects such as use, repair, maintenance, recycling, end of life criteria and disposal of products while developing standards. Engagement with relevant stakeholders on a continuous basis would be a key element in facilitating the efforts made to address sustainability and climate change in standards particularly when solutions are fast evolving with various technology interventions.

Addressing sustainability poses many challenges and will require a paradigm shift in the way standards are made. A standard supporting sustainability shall have to comprehensively address all the three facets of sustainability, namely environmental, social and economic. The manner in which sustainability issues are addressed will differ with the type of standard being developed such as a product standard or a process standard. While considering sustainability issues there is a need to tread with caution, ascertaining the trade-offs between different sustainability targets, the complexity and the cost of implementation of particular solutions. Such standards can enable access to the increasing global 'green' market through adoption of production processes in line with desirable environmental, social and economic objectives. At the same time, such standards could present new constraints and requirements on production processes and use of resources that can have a ripple effect, with both positive and negative unintended consequences.

The Strategic Imperatives

BIS would continue to pursue the strategic objectives set out in the previous version of the Standards National Action Plan so as to provide the right direction to the vision and mission set out here. In this regard, the following strategic imperatives have been embraced in SNAP 2022:

01 Strengthen participation of all stakeholder interests in standardisation

02 Improve ability of the standardisation system to respond to the needs of stakeholders and support national priorities

03 Build capability and capacity of various sections of stakeholders for effective participation in standardisation

04 Innovate and improve processes and tools for efficient and timely development of standards

05 Promote synergy, coherence and cooperation in standardisation activities taking place in the country

06 Strengthen participation and influence in international and regional standardisation and work towards facilitating trade through standards

07 Strengthen national outreach programmes to promote awareness and understanding of the impact and benefit of standards

The Transcending Priorities

BIS has identified a number of transcending priorities of national standards development that are arising from major global concerns, various technology enablers and other national socio-economic imperatives.

Sustainability

In keeping with India's commitment on the UN SDG 2030 and Paris Agreement on Climate Action, there will be specific focus in developing and updating standards so as to address these issues. Climate change mitigation and adaptation through reduction in carbon emissions, carbon foot-printing and life cycle analysis, carbon capture and storage, application of circular economy, ensuring resource efficiency, promoting alternate fuel technologies and renewable energy use, reducing embodied energy and improving thermal performance in buildings through building design and construction, etc would be some of the approaches / considerations in standards development.

A framework that can provide guidance to the technical committees on how sustainability issues are to be addressed in Indian Standards would be developed. Some of the UN SDGs that are considered to be important from standardisation perspective are Climate Action (SDG 13), Good Health and Wellbeing (SDG 3), Gender Equality (SDG 5), Clean Water and Sanitation (SDG 6), Affordable and Clean Energy (SDG 7), Responsible Consumption and Production (SDG 12), Industry, Innovation and Infrastructure (SDG 9) and Sustainable Cities and Communities (SDG 11), and are considered as high priority areas of work. A broad range of aspects that could potentially help in addressing sustainability and climate change through standards include the use of natural resources, ensuring energy efficiency and water efficiency, reducing wastes, use of waste and recyclable materials, reducing pollution in land, air and water, protection of natural habitats, protection of biodiversity, carbon neutrality and net-zero, carbon foot-printing and LCA, application of

technology and innovation around these issues, economic performance and development, addressing health and safety, social equity (including concerns like gender responsiveness and accessibility for persons with disabilities and the elderly), quality of life, etc.

Health, Safety and Security

Health, safety and well-being are always national priorities and are at the centre of various government initiatives and programmes aiming at social well-being and upliftment. Standards can support the implementation of such policies and programmes and therefore act as key enablers. Standardisation covering healthcare services, health informatics and medical devices, personal protection, occupational health and safety, public health, accessibility, elder care, etc would be of primary consideration. Consumer protection from the point of view of product or service quality, reliability and product related information and labelling as well as from security considerations in terms of cyber security and data privacy would also be amongst the many dimensions that would have to be addressed through standards.

Digital Economy & Advanced Technologies

Digitalisation presents a major change in how we live and interact as a society, and in how we work and carry out our businesses. Data generation and their conversion into innumerable digital solutions help industry and businesses to make informed decisions, be efficient and to develop innovative products and services. This digital transition however comes with associated costs and risks, and many of its applications have raised particular concerns related to issues of transparency, privacy and security. BIS has been working on addressing many of these issues and standardisation in this area would continue to be a priority in national standardisation efforts. Technologies like AI, ML, IoT, big data, additive manufacturing, block chain and DLT, quantum computing, etc and the application of these technologies in areas like smart manufacturing, smart cities, smart grid, smart agriculture, and many others, along with associated issues of cyber security and data protection, would be some of the major areas of future standardisation work.

Digital technologies are integrating with other traditional technology areas such as in building and construction, power distribution, transportation, agriculture, manufacturing & automation. This would call for extensive coordination and deeper exchanges not only between the sectoral experts and digital technology experts who are involved in development of standards but also among the various agencies and institutions administering policies

Service Sector

The service sector in India holds a major share of the country's GDP. This sector is also known to be a major contributor to the country's exports and creates a large number of employment opportunities. Recognising the importance of the service sector and its growth the Government provides various incentives to the sector and have also identified 12 Champion Sectors for focussed attention. These include sectors like health care, tourism, education, communications, transportation, information technology, banking, finance and management among others.

The availability of standards on services are few as compared to those available in the manufacturing and agriculture sectors when taking into account the relative share of each of these sectors to the national economy. It is felt that availability of standards would be one of the important interventions required to give impetus to sectors of the economy. BIS, accordingly, has established relevant technical committees, identified relevant expertise, carried out stakeholder consultations and is working on the development of standards across the champion sectors.

There is also a major shift in the manufacturing sector from employing traditional business models to an outcome based, product as a service model. The increasing servitisation of manufacturing while providing standardisation opportunities on new aspects would create different challenges in addressing standardisation needs of such business models.

Standardisation in the service sector would continue to be a focus area of work and will be accorded high priority. Service sector standardisation would need to cover few critical aspects:

➤ Development of cross-cutting horizontal standards as well as sector specific vertical standards.
➤ Development of standards defining service quality (including of product as a service) and for developing service infrastructure
➤ Development of standards defining the occupational role and skill levels in the sector
➤ Taking leadership in developing international standards that has the potential to facilitate trade in services.
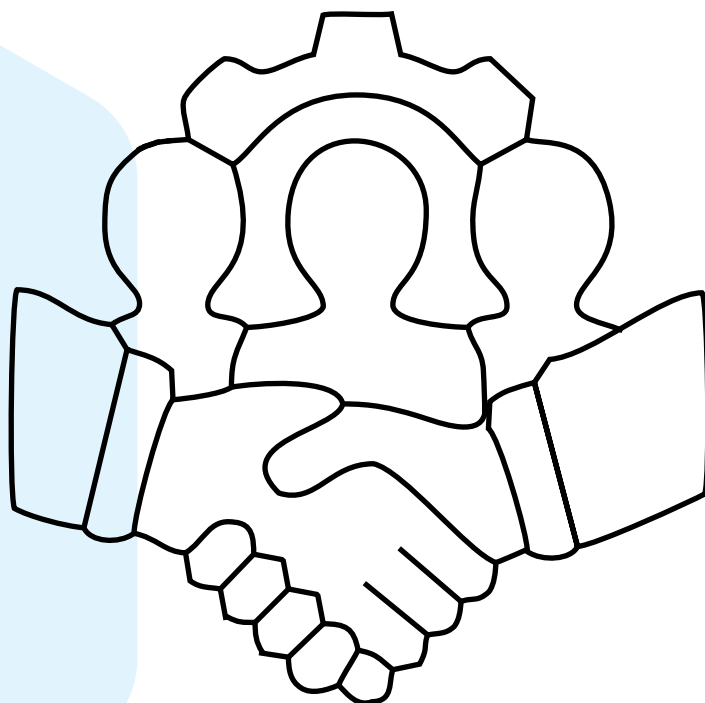
Initiatives on The Strategic Imperatives

BIS would take up various initiatives to address the strategic imperatives as given below:

Strengthen Participation of all Stakeholder Interests in Standardisation

Success of standardisation is heavily dependent on an extensive and effective consultation process involving subject experts from all parties concerned that have a stake in the subject of the standard being developed. It is therefore critical to onboard, engage with and obtain opinion of all such relevant interest groups when developing standards. BIS would continue to encourage the government, professional organizations, industry, consumers and other relevant stakeholders to engage with BIS for developing standards to support various national objectives. Awareness generation among the policy makers, professionals, consumers and civil society, including that of the next generation on the benefits and impact of standards as relevant to them and the importance of their participation in the process of standards development in light of the above would be pursued aggressively. BIS would also work on ways to identify where specific interests of various stakeholders are getting addressed in different standardisation projects and find mechanisms to facilitate flow of such information to them so that their interest is generated for participating in the standardisation work. It would also be necessary to encourage senior management of industries, businesses and academia to support and incentivise participation from their organizations / institutes in standardisation work so that there is sustained involvement, participation and contribution of relevant experts. BIS on its part would continue to work for ensuring involvement of the right expertise and in supporting and facilitating the participation of these experts.

Initiatives:

➤ Prepare an Annual Strategic Priority document highlighting the various measures being undertaken to address strategic imperatives and standardisation priorities.

➤ Convene Leadership Forums to inform national standardisation strategies and priorities to industry, government and other relevant stakeholders.

➤ Issue Weekly Standards Bulletin covering information on standardisation proposals considered as well as of standardisation projects that have been initiated, apart from information on standards published and withdrawn.

➤ Make public the international work programmes and the information about delegate attendance at ISO/IEC technical committee meetings.

➤ Seek expression of interest at the time of establishing new committees or taking up new areas of work / new subjects for standardisation, as may be necessary.

➤ Create a database of 'experts' for each technical committee, apart from the 'mailing list' of relevant stakeholders.

➤ Reorganise / restructure technical committees as necessary, so as to facilitate effective dealing of standardisation subjects by appropriate subject experts.

➤ Ensure diversity in technical committees including gender equality, while ensuring balance of representation in all areas of activity.

➤ Provide opportunities for industry representatives to take leadership of committees

➤ Encourage Standardisation Cells, professional bodies, R&D/scientific bodies to take up responsibility of developing base documents. Appropriate mechanisms to facilitate offloading of such work to capable entities would be considered.

➤ Explore possibilities of involving research scholars in standardisation projects.

➤ Encourage industry and academia to support, incentivise and institutionalise participation in standardisation in their respective organisations / institutes.

➤ Share positive updates on participation and contribution of members of technical committees with their nominating organisations.

➤ Develop suitable interactive platforms enabling stakeholders to provide inputs as well as interact and discuss amongst themselves on standards related issues (e.g. Discussion Forum/Expert Opinion Forum/ Forum for potential contributors/ Student engagement platform).

➤ Create a Knowledge / Resource Portal accessible to technical committees.

➤ Provide an improved sales portal and an improved search mechanism for standards on BIS portal/website.

➤ Enable interested stakeholders to follow the progress of a standard or its change in status and be notified of new proposals.

Improve Ability of the Standardisation System to Respond to the Needs of Stakeholders and Support National Priorities

In a technology driven and fast changing environment it is necessary to have mechanisms in place to proactively assess and capture the standardisation needs involving multiple stakeholder interfaces.

BIS would proactively work with the government, industry and professionals to identify standardisation areas and various issues that could potentially be addressed in standards and endeavour to provide such standardisation solutions in a timely manner, particularly those required to support public policy objectives around health, safety, environment, sustainability and climate change. BIS would also take conscious steps to make its processes more open so as to provide confidence in the system and encourage wider participation in standards development. Where necessary, BIS would spearhead necessary coordination and alignment between multiple departments/agencies administering multiple policies around a product or group of products relevant to standardisation subject(s) so as to ensure convergence of purpose and objectives.

BIS would further work for establishing mechanisms for regular interactions with sector specific innovators and start-ups in addition to R&D bodies in order to capture innovation and technology driven imperatives of standardisation.

Efforts would also be made to find mechanisms to enable objective assessment of the impact of existing standards and to utilise such feedback in reviewing and updating standards. Generation of scientific and research data that would form the basis of standardisation decisions would be encouraged. In identified cases, BIS would consider extending financial support in undertaking research and development that would lead to standardisation.

Initiatives:

➤ Make public an Annual Work Programme on standardisation subjects.

➤ Work for effective collaboration/coordination with policy makers and regulators in eliciting standardisation needs and for their early involvement in standards projects for ensuring synergy in decisions/responses/purposes.

➤ Strengthen the existing mechanisms for obtaining stakeholder inputs on standards under development or under review.

➤ Explore various options to seek feedback on implementation of standards with a structured approach.

➤ Improve upon the provisions for online submission of standardisation proposals and for submission of comments on draft and published standards.

➤ Develop suitable interactive platforms enabling stakeholders to provide inputs as well as interact and discuss amongst themselves on standards related issues (e.g. Discussion Forum/Expert Opinion Forum/ Forum for potential contributors/Student engagement platform).

➤ Encourage and support the generation of scientific and research data for standardisation purposes, including funding such activities in identified cases.

➤ Enable stakeholders who are interested to follow the progress of a standard or its change in status and be notified of new proposals

➤ Provide open access to information on standards development projects and their status with respect to targeted timelines.

➤ Coordinate with relevant Ministries/ Departments, trade bodies, export promotion agencies, etc on standards and trade facilitation.

Build Capability and Capacity of Various Sections of Stakeholders for Effective Participation in Standardisation

Those involved in BIS technical committees as well as those actively contributing to standardisation from outside should have a clear understanding of the standardisation processes (national and international) and their underlying principles such as openness, transparency, impartiality and consensus, effectiveness and relevance, coherence and performance-based standards. This would result in greater confidence amongst the participants on BIS processes and lead to a more involved participation from committee members/experts with better appreciation of one's roles and responsibilities in technical committees. In addition, those involved in drafting of standards should be equipped with necessary knowledge and be conversant with the norms on drafting standards covering the form, format, language and presentation of a standard. Where appropriate, experts should be encouraged to share, exchange and enhance their subject knowledge through seminars, symposiums and technical exchanges and exposure visits. All the above, would enable the generation of interest in standardisation amongst stakeholders and active involvement, and in effective participation of committee members and other stakeholders thereby bringing excellence in the standardisation work. BIS would work on various capacity building measures to achieve the above objectives.

Initiatives:

➤ Handhold Standardisation Cells in industry associations to build their capacity to effectively support standardisation work.

➤ Provide training to technical committee members to enhance their understanding of standardisation processes, their roles and responsibilities and in building necessary skills to effectively participate.

➤ Ensure induction training of newly appointed technical committee members including through online mode.

➤ Provide training to committee leadership on their roles and responsibilities, calibrated approaches to standardisation issues and develop necessary skills in manoeuvring deliberations towards an outcome.

➤ Conduct training programmes for Chairs, Conveners and Experts of international technical committees and arm them with necessary skill sets.

➤ Conduct workshops on drafting techniques for technical committee members, Standardisation Cells, Professional Bodies, R&D/Scientific Bodies.

➤ Provide opportunities for knowledge sharing and technical exchanges to technical committee experts.

Innovate and Improve Processes and Tools for Efficient and Timely Development of Standards

With rapid technological developments and social evolutions taking place both nationally and across the globe, it is increasingly a challenge for standards development to keep pace with the evolving changes and market needs. There is an ever-increasing need for updating and revising existing standards apart from taking up standardisation in new areas. Experts involved in standards development are hard pressed to devote time extensively for such activities and are looking for more flexible and convenient means of technology facilitated participation. Further, looking ahead, the next generation of standardisers would be more at ease with the use of technologies and would prefer working through digital modes and platforms.

Looking at the future, extensive digitisation of processes would be a key enabler for effective participation of technical committee members and for BIS to cater to the standardisation needs in a timely and efficient manner. Further, the integration of advanced and emerging technologies in various processes, particularly in manufacturing, has raised the need for standards to be available in a format that is more friendly to machines and an automated environment. The form and format of standards as conventionally known has already undergone changes and there would now be a need to have standards in a form that is machine readable and interpretable. BIS would be aggressively working to bring in further digitisation in its processes and to make standards available in digital form and content.

To enhance efficiency in its processes and deliver quality output, BIS would also apply project management techniques. This would include features such as prioritisation of work, annual action plans, measurement and monitoring parameters, key performance indicators, etc while also focussing on various process improvement initiatives to deliver error-free standards in an efficient and timely manner.

Initiatives:

➤ Develop an advanced digital platform having the following components:
  - Improved Standards Portal with online drafting tools and work progressively towards creating an online authoring platform.
  - Suitable interactive platforms, such as Discussion Forum/ Expert Opinion Forum/ Forum for potential contributors/Student engagement platform
  - Knowledge/Resource Portal.
  - Comprehensive standards database inclusive of archived/withdrawn standards and an improved search mechanism for standards.
  - Improved Sales Portal.

➤ Apply project management to standardisation work, including in publication of standards.

➤ Build capabilities in experts in technical committees for drafting standards following the drafting guidelines in IS 12 while ensuring the use of simple and gender-neutral language.

➤ Introduce measures that would facilitate better drafting of standards by technical committees and quality editing in publication (e.g. a checklist to help in drafting and editing standards based on IS 12 requirements)

➤ Build/enhance mediation capabilities and other soft skills to the leadership/key individuals and experts/member secretaries of technical committees.

➤ Work on making standards available in digital form and digital content.

➤ Strengthen the existing structures available for ensuring consistency in approach and a well-coordinated and coherent dealing of lateral issues in standardisation such as of climate change, sustainability, circular economy, accessibility, gender responsiveness, digital technologies, etc.

Promote Synergy, Coherence and Cooperation in standardisation Activities Taking Place in the Country

The need for coordination and collaboration between various organizations, institutions and agencies that are developing standards or are engaged in standardisation for voluntary application, regulatory purpose or organisational use, is ever increasing. This is more so in the wake of increase in convergence of technologies, particularly ICT. The administrative control and policy making in the government in one particular subject area may often involve multiple departments and bodies, including of regulatory functions, making such coordination all the more important from the point of coherent standards development. Perceived overlap in the realm of work of BIS and that of other domain specific standards making bodies or regulators/line ministries may lead to duplicity or conflict of work. All these have the potential to create confusion in the minds of the users of standards and hinder implementation.

Since BIS is the NSB and has the mandate to ensure harmonious standardisation activities in the country, effective structure and mechanisms have to be worked out by BIS to ensure complete synergy in standardisation activities happening across multiple bodies. BIS would take forward the initiative of 'One Nation One Standard' and the Scheme for Recognition of Standards Developing Organizations that has already been initiated and look at various other options/approaches to supplement this in order to ensure that there is only one standard available on any one particular subject nationally.

Initiatives:

➤ Evolve a national strategy and work for an overarching structure for co-ordinating standardisation activities in the country under BIS's leadership.

➤ Undertake regular and planned interactions with regulators and line ministries and create mechanisms to exchange information on standardisation work currently underway across various bodies.

➤ Conduct joint workshops with other Standards Developing Organizations in the country.

➤ Strengthen the Scheme for Recognition of Standards Developing Organizations for its effectiveness.

Strengthen Participation and Influence in International and Regional standardisation and work towards Facilitating Trade through Standards

With the integration of global economies, countries around the world are strategically positioning themselves in international standardisation so as to gain competitive edge and achieve economic benefits through standards. As standards and conformity assessment significantly influence global trade, countries are working on ways to effectively influence and drive international standards in their favour. India likewise would need to enhance its footprint in international standardisation. To achieve this, India would have to harness the skills and strengths to effectively participate in international standardisation, evolve national viewpoints on international standards under development, review the existing national standards against applicable international standards and make forays into new areas of work that are relevant to India from the point of international standardisation.

BIS is actively engaged in international standardisation activities, have over the years increased the level of participation and have also been making useful contributions. BIS so far has also been aligning the Indian Standards with international standards of ISO and IEC where appropriate, either identically or with India specific modifications. As a result, the share of Indian Standards that are adoptions of international standards have steadily grown over the years. BIS would continue with its active engagement in international and regional standardisation activities and work on increasing its participation and influence on international standards development further. Key areas of India's interest from trade and technology perspective would be identified in coordination with the Government and trade bodies for driving effective participation in international standardisation on a continuous basis. BIS would also identify potential areas that are of strategic interest to India for leading the standardisation work at international level. In all this BIS would facilitate effective participation of Indian experts.

Opportunities would also be explored for bilateral collaboration with National Standards Bodies (NSBs) of other countries and with Regional Standards Bodies that are of strategic importance to India from trade considerations. BIS would proactively engage with the government and other relevant entities to identify and evolve an action plan in this regard. BIS would also focus on increasing its outreach amongst other foreign standards bodies, especially NSBs of the developing world, to develop understanding of each other's standardisation systems and work programmes, share experiences, carry out technical exchanges between experts and conduct awareness and capacity building programmes in areas of mutual interest.

Initiatives:
➤ Identify and focus on projects where India can contribute and influence international standards development to ensure their wider global acceptance, including where India can offer standardisation solutions to the world and lead such projects.

➤ Prioritise participation in international standards projects and ensure more effective utilisation of funding provisions for participation of experts in international and regional meetings and in hosting of international/regional technical committee meetings.

➤ Review and strengthen the process of mobilising national opinion, commenting and voting on draft international standards.

➤ Explore collaboration opportunities with ISO and IEC and with other leading NSBs on emerging issues and other important areas of standardisation that are of interest.

➤ Engage with foreign sectoral standardisation bodies who have global acceptance for use of their standards as would be necessary.

➤ Strengthen engagement with MoU partner NSBs for mutual benefits.

Strengthen National Outreach Programmes to Promote Awareness and Understanding of the Impact and Benefit of Standards

Increasing awareness about standards and their impact amongst the relevant stakeholders is necessary for having increased implementation and application of standards. Increased use of standards has in turn the potential of generating feedback on the standards which may ultimately result in improvements in the standards and addressing gaps in standardisation. This creates a system that is vibrant and agile.

The broad objective of outreach programmes is to create awareness on standardisation, of what it is and what it does, and appropriate ways and skills for implementing standards. Outreach efforts should be designed so as to be appropriate to the targeted stakeholder group whether industry, policy makers, regulators, professionals, academia, students, consumers or civil society. While continuing with various standards promotion activities that are presently ongoing, learning from experiences and improving its discourse, BIS would all the while try and ensure consistency in messaging and communication. BIS would also look for innovative ways to raise the level of understanding of standards, targeting the young generation in particular. Where appropriate, BIS would engage with sections of the stakeholder community to join hands in spreading the message of standardisation.

Initiatives:

➢ Develop a communication strategy to reach out to a wider community of stakeholders such as PSUs, trade bodies, professional institutes and civil society, apart from industry and policy makers, in order to create awareness and encourage the use of standards.

➢ Undertake increased and innovative outreach efforts giving more visibility to current standardisation work, where appropriate in partnership with other bodies (in particular industry bodies, professional bodies, academic and R&D institutes), using the following modes, as suitable:
- short videos & podcasts
- regular social media posts
- news-letters, handouts, articles, case studies and other informative publications
- national level conferences
- workshops and seminars/webinars
- exposure visits to research institutes, industries and laboratories

➢ Develop implementation guidelines and explanatory handbooks on important standards.

➢ Provide an online platform for discussion/ clarification on standards with/by experts from relevant technical committees.

➢ Conduct training programmes for practicing engineers and work towards framing a Continuing Engineering Education Programme.

➢ Continue engagements with academic institutes, where applicable including through the standardisation Chairs.

➢ Pursue with the efforts for introduction of standards in technical education curriculum.

➢ Create engagement opportunities for young professionals and students so as to involve them in standardisation work (e.g. internship programme, young professionals programme, innovators/start-ups programme, projects through research scholars).

➢ Conduct surveys, collect data and build case studies for assessing/demonstrating the impact of standards and sharing implementation experiences.

Key standardisation Areas

Taking into account the outcome of various stakeholder consultations undertaken while framing the Standards National Action Plan 2022, inputs from the Strategic Road Maps of each of the Division Councils of BIS, the identified sectoral priorities and analysis of the national socio-economic requirements, key subject areas of national standardisation to be taken up by BIS in the next five years along with their priorities have been identified and given in **Annex A**.

Important sectors of the national economy were analysed on the basis of their contribution to national GDP and to trade and various policy level imperatives set by NITI Aayog and Central Ministries were examined to define sector-wise national economic priorities. To set the social priorities, a study of the NITI Aayog reports, various developmental programmes and policy directives of Central Ministries, world body reports on India and UN SDG 2030 was carried out along with the impact of these on various aspects like sustainability, health, safety, environment, security, population, employment, social empowerment and inclusivity, gender equality, consumer protection, etc. Based on the above, combined socio-economic priorities as applicable were then arrived at. The priority of a standardisation subject has been identified as high, medium and low and has been arrived at depending on socio-economic priority of the relevant sector and the transcending priority considerations as defined in this document.

Detailed work programmes would be prepared by the concerned technical committees elaborating the specific subjects from these identified standardisation areas. Where necessary and based on a comprehensive assessment by technical committees, other subjects of standardisation to supplement these would also be identified and progressively included in the work programme and executed through Annual Action Plans.

Implementation and Monitoring

The SNAP 2022 defines a time horizon of five years for implementation (i.e.2022 – 2027). The success of the strategies outlined in this document will heavily depend on the actions taken on the identified initiatives for which specific plans, activities and programmes would further have to evolve. An implementation plan for SNAP 2022 detailing the specific programmes and projects to address the strategic initiatives identified here along with measures to assess successes in achieving the objectives would be framed and monitored. Annual Action Plan on the standardisation subjects/areas would be framed and implemented. A framework to report progress of work periodically, the achievements and the course corrections necessary would also be ensured by BIS.

Structural Changes & Resource Provision

Development of the standards in the key subject areas identified under SNAP 2022 would rely on how the BIS technical committees are able to garner the required expert inputs and work on these subjects as well as the resources necessary, including human resources, that BIS would be able to provide to support the work. This would also have to be complemented with any need for structural changes in the system that may be necessary in terms of reorganizing some of the technical committees, redefining their scope and composition so that the committees have more concise and focussed domain of work, have the desired expertise available and remain lean but agile.

BIS would aggressively work towards meeting each of the strategic imperatives through the proposed initiatives and ensuing actions. For this adequate human resources as may be necessary shall be provided and supported with necessary policy interventions, implementation programmes and projects as may be required. In order to enhance its outreach and for propagating the message of standardisation, BIS would work for framing a communication strategy and ensure a uniform and consistent messaging. Creation of dedicated teams to effectively implement different outreach related initiatives such as a marketing and communication team, stakeholder engagement team and a capacity building team would be considered.

Conclusion

SNAP 2022 has been framed to provide the necessary direction and impetus to national standardisation in the backdrop of fast changing environment in which the standardisation system is presently operating. BIS would tread the course set by SNAP 2022 with the support and contribution of all entities of the national standardisation ecosystem. SNAP 2022 is envisioned to strengthen the standardisation system to meet the required standardisation needs of the market, paving the way for BIS to fulfil its responsibilities as the National Standards Body.

KEY standardisation AREAS

SECTOR	FIELD	SUBJECT AREA	PRIORITY
Agriculture	Agricultural Equipment and Machinery	Drones used in agriculture (Spraying, Yeild Estimation, Nutrient Application, Seeding and Irrigation)	High
		Use of Artificial Intelligence (AI) / Internet of Things (IoT) in agriculture, Block Chain in agriculture	High
		Test procedures for Potato Combine Harvester, Trash Multure, Trash Shredder, Sugarcane Ratoon Management Devices, Tractor Mounted Sprayers, Fertilizer Applicator for Sugarcane, Strip Till Drills, Roto Till Drills, Happy Seeder, Super SMS, Power Harrow (Rice Harrow), Rotary Plow/Puddler, Roto Cultivator, Heavy Duty Puddlers, Super Seeder, Self-Propelled Weeders, Self-Propelled Forage Harvester (3/4 Wheels), Ridger Tiller, Disc Mower, Electrostatic Sprayer, Soil Scanner and Pest Scanner	Medium
		Performance requirement and test methods for electrical tractors	Medium
		Performance requirement standards for alternate fuel and dual fuel use in tractors	Medium
		Testing procedure and performance parameters related to HST /CVT /IVT Transmissions	Medium
		Functional safety standard on agriculture machines	Medium
		Conversion of AIS published under CMVR and OECD standards into Indian Standards	Medium
	Agricultural Management	Guidelines for contract farming and commercial farming	Medium
		Guidelines for Hydroponic Farming	High
		Guidelines for Vertical Agriculture	Medium
	Agriculture Inputs	New pesticide formulations	Medium
		Bio- pesticides	High
		Botanical Pesticides	High
		Nano Fertilizer	Medium
		Bio-stimulants	Medium
		Label claim based innovative fertilizer formulations	Medium
		Chemically inert, environmentally safe, chelated micronutrients for use in agriculture	Medium

SECTOR	FIELD	SUBJECT AREA	PRIORITY
Audio Visual Services	Media and Entertainment Services	Cinema Theatres	Low
		Radio Stations	Low
		Event Management	Low
		Sound and Music in M&E Sector	Low
		New Media Services	Low
Basic Services	Basic Standards on Services	Service Classification	Low
		Service Communication	Low
		Service Contract	Low
		Service Monitoring	Low
		Service performance indicators and measurements	Low
		Customer expectation and perception measurement	Low
		Service use/Perception data analytics	Low
		Service Delivery Channels – Modes of communication / delivery/customer interaction	Low
		Service process risks	Low
		Service Level Agreements	Low
		Use of ICT in services	High
		Customer data security	High
		Human Resource – Specific skill/attributes requirements for services	Low
		Template for vertical services standards	Low
Building, Construction and Urban Development	Building Materials and Components	New and innovative building materials (including their test methods)	Medium
		New water proofing compounds and techniques	Medium
		New plastic piping materials	Medium
		Laboratory furniture	Low
		Clinker from alternate sources	Medium
		Performance based approach in doors and windows	Low
		Pervious concrete	Low
		Soil testing and test equipment	High
		Hand book on water proofing	Low
		Tactile Ground Surface Indicator (TGSI)	High
		Metal framing components	High
		Reinforcing and prestressing steel including fibre reinforced polymer bars and galvanized steel bars	High
		Water storage tanks	Medium
		Sewerage ancillary structures like manholes, gratings, etc.	Medium

SECTOR	FIELD	SUBJECT AREA	PRIORITY
Building, Construction and Urban Development	Building Materials and Components	Sanitary appliances and water fittings	High
		Updation of standards for lignocellulosic panel products	Low
	Construction Practices	Mechanization in construction (mechanized tunneling, trenchless technology)	Low
		Geophysical investigation including sonic logging and cross-hole seismic tomography	Low
		Ground improvement techniques	High
		Restoration and maintenance of stone masonry, heritage and other structures	Medium
		Safety during construction	Medium
		Safety in demolition	High
		Contract management	Medium
	Construction Technologies	Prefabricated construction including 3D printing, Prefabricated and Prefinished Volumetric Construction and Design for Manufacturing and Assembly	Medium
		Digital technologies in construction including Building Information Modelling	Medium
		Tensile fabric/membrane structures	Medium
		Pre-engineered building	High
	Fire Safety	Fire and life safety audit	High
		Fire safety in hospitals, hotels and shopping malls	High
		Fire safety in various manufacturing industries (e.g. pharmaceutical, electrical and electronics, automobile, etc)	High
		Inspection, testing and maintenance of fire protection systems	High
	Planning and Housing	Urban and rural habitat planning	Medium
		Development control rules	Medium
	Public Health Engineering	Updation of standards for public health engineering	Medium
	Structural Design and Safety	Assessment, rehabilitation and maintenance (structural health monitoring) of buildings and structures including seismic instrumentation and testing	Medium
		Safety of external building fabric impacted by wind borne debris	High

SECTOR	FIELD	SUBJECT AREA	PRIORITY
Building, Construction and Urban Development	Structural Design and Safety	Structural design using stainless steel	Low
		Updation of structural design codes (concrete, steel, cold-formed light gauge steel, tall buildings, shallow and pile foundations, transmission line towers and their foundation)	High
		Updation of standards relating to earthquake resistant design based upon revised Probabilistic Seismic Hazard Map (PSHM) of India	High
		Static and dynamic tests for pile foundations	Medium
		Foundation for solar PVs	Medium
		New foundation systems (for example combined piled raft system)	High
		Design of breakwater structures; components of ports and harbours	Medium
		Universal design for accessibility	High
		Guidelines on sustainable materials/solutions and green and net zero buildings	Medium
		Sustainable water supply and sanitation including non-sewered sanitation system	Medium
Business and Legal Services	Business Services	Security services	Medium
		Business Process Management	Medium
		Business consultants	Medium
		Ageing societies / Senior care	High
		Management consultancy	Medium
Chemicals and Petro-chemicals	Dyes and Dyestuff	Dyestuff	Medium
	Environmental labelling	Green labelling of soaps and detergents	High
	Inorganic chemicals	Speciality chemicals	Medium
	Printing Inks	Inks for sensitive applications like pharma/hygiene products/cosmetics /toys /diapers	Medium
		Eco-friendly inks	Medium
		Non-Intentionally Added Substances (NIAS) in inks	Low
		Positive list of constituents for inks	Low
	Surface Protection Coatings	Fluororesin based coatings	Low
		Fire retardant paint coatings	Low
		Nano composite material based paints	Low
		Coatings and varnishes	Medium
	Thermal insulation	New age thermal insulation materials	Medium

SECTOR	FIELD	SUBJECT AREA	PRIORITY
Construction and related Services	Construction and related Engineering Services	Geotechnical investigation services	Medium
		Project management services	Medium
		Valuation of immovable properties	Medium
		Construction and demolition waste management services.	High
		Conservation of heritage structures	Medium
		Facility management of buildings	Medium
		Structural design and proof checking consultancy services.	Medium
		Structural auditing, maintenance and retrofitting services	Medium
Education Services	Higher Educational, Skill Development and related Services	Coaching centre services	Medium
		Campus facilities and accommodation services	Medium
		Skill development services	Medium
	School Education and related Services	E- Learning services	Medium
		Foundational learning services	Medium
Electrical Appliances, Equipment and Lighting	Appliances	Washing machines	Medium
		Induction hobs	Medium
		Various fans and regulators (revision)	Medium
	Equipment	Welding Additive Equipment	Medium
	Luminaries	Ultra-Violet germicidal devices	High
		Grounded recessed luminaries	Medium
		Luminaries for specific application (e.g. swimming pool, clinical areas of hospitals, etc)	Medium
		Extra-Low-Voltage lighting systems for ELV light sources.	Medium
		National Lighting Code (revision)	High
		Drone lighting	Medium
		Guidelines for lighting specific locations (e.g. interior illumination, public thoroughfares, etc)	Medium
	Switchgear	LV switchgear & Controlgear	Medium
		DC switchgears	Medium
Electrical Energy and Power	Batteries	Secondary batteries - Reuse of secondary batteries	High
	Grid Integration	Interconnection and interoperability of Distributed Energy Resources	Medium
	Smart Grid	Cyber security (Security risk assessment and industrial automation and control system security)	High
	Transformers	Guidelines for repairing transformers	Medium
		Converter Transformers	Medium
		Transformer for solar application.	High

SECTOR	FIELD	SUBJECT AREA	PRIORITY
Electrical Energy and Power	Transformers	Voltage regulation distribution transformers.	Medium
		Transformer installation, commissioning and maintenance (revision)	Medium
Electronics	Electronics Products and Manufacturing	PCB	Medium
		Energy consumption rating	High
		Component manufacturing	High
		Semiconductor manufacturing	High
		Wearable devices	High
		E-waste management	High
Environment	Carbon Accounting	GHG emission estimation and Carbon Footprint of specific sectors	Medium
	Carbon Capture and Sequestration	Carbon capture, use and storage	Medium
	Circular Economy	Guidance for specific sectors on Circular Economy	High
	Environment Management	Guide for implementation of EMS	Medium
		EMS related tools.	Medium
	Environmental Rating	Product Category Rules	Medium
	Nuclear materials for peaceful application	Naturally occurring radioactive materials and contaminants in geological, biological and environmental matrices (water, soil, etc)	Medium
		Limits of radioactive materials	Medium
	Packaging - Sustainable packaging	Safe, secure and sustainable paper packaging	Medium
		LCA of packaging materials	Medium
	Waste Management	Guidelines on discharge effluents from various sources	Medium
		Guidelines on important discharge parameters	Medium
		Reuse/recycling of treated used water	Medium
		Residue management in treatment plants	Medium
		Zero Liquid Discharge	Medium
		Guidelines for discharge of emerging contaminants	Medium
		Discharge standards for sewage	Medium
	Water Quality	Safe drinking water for travel	Medium
		IoT based smart water quality monitoring and management	Medium
		Source water quality monitoring (Online)	Medium
		Water quality monitoring network	Medium
		Non-potable use of water	Medium
		Water standards – updating limits of radioactivity	Medium

SECTOR	FIELD	SUBJECT AREA	PRIORITY
Environmental and Related Services	Biodiversity	Biodiversity assessment	Medium
		Traditional knowledge including Ayush	Medium
		Biological invasive	Medium
		Sustainable forest management	Medium
		Ecosystem services and valuation	Low
		Protection of aquatic ecosystem	Medium
	Drinking Water Supply, Wastewater and Storm Water Systems & Services	Management of assets of water utility	High
		Emergency/Disaster management system in water utility	High
		Water loss investigations in drinking water supply system	High
		Provision for alternate water supply during crisis	High
	Environmental Services	Greenbelt development and management	Medium
		Assessment of environmental monitoring services	Medium
		Street and public facility cleaning services	Medium
		Forest fire management	Medium
Ferrous and Non-Ferrous Metals	Aluminium and Aluminium alloys	Aluminium stock	Medium
		Aluminium hard alloy plates, sheets and coils	Medium
	Feedstock for Iron	Feedstock for Iron	Medium
	Pipes, Tubes and Sections	Electric Fusion Welded stainless pipes for high temperature applications	Medium
		Stainless steel pipes and tubes for various applications	Medium
		Single wall copper and zinc coated steel refrigerator condenser tubes	Medium
		Pipes and tubes for transportation of Bio-PNG	High
		Steel sections for architectural applications	Medium
		Steel pipes and tubes for solar applications	High
		Fire resistant steel pipe and tubes	Medium
	Powder Metallurgy	Tungsten base heavy alloys	Medium
		Powder Additive Manufacturing (3D Printing)	Medium
		Un-notched Charpy Impact Test for powder metallurgy products	Low
		Molybdenum specific material for high temperature sintering furnace	Low
	Refractories	Carbon bricks refractories	Low
		Silica refractory ramming mass	Low
	Stainless Steel	Triply material for utensils	Medium
		Stainless steel structural steel	Medium
		Stainless steel ingots/billets/blooms for re-rolling	Medium
	Steel and Alloys Steels	Zn-Al-Mg coated steels	Medium
		Wear and abrasion resistant steel	Medium
		Hot rolled steels for Line Pipes	Medium
		Continuous Galvanizing Grade (CGG) Zinc alloys	Medium
		Induction tempered spring steel wire	Medium

SECTOR	FIELD	SUBJECT AREA	PRIORITY
Ferrous and Non-Ferrous Metals	Test Methods	Eddy current testing of steel wires	Low
		Test methods for mechanical property evaluation using miniature specimens at ambient and high temperature conditions under static and acyclic loading	Low
		Characterization of Intrinsic Threshold Stress Intensity Range	Low
		Gammatographic evaluation of integrity of shielding structures	Low
		Non-Destructive fineness confirmation of precious metal by ED-XRF	Medium
		Chemical analysis by instrumental methods	Medium
	Welding Electrodes	Flux cored (Tubular) electrodes and rods for Metal Arc Welding of stainless steel, Heat resisting steel and Low alloy steel	Medium
Financial Services	Banking and Financial Services	Interfaces of digital financial service providers	Medium
		Fintech services	Medium
		Insurance policy documents and declarations	Medium
Food and Food Processing	Food Analysis	Test method for identification of constituent oils in blended oil	Medium
		Methodology for manufacturing of biomolecules (in food and agriculture) using genetically modified microorganisms	Medium
		Test methods for detection of microplastics in food items	High
		Molecular based methods for food safety	Low
		Validation of rapid testing kits through specified criteria/ SoP for formulation of standards	Medium
	Food Processing Equipment and Machinery	Test code of equipment and machinery related to Cold Plasma Technology	Medium
		Horizontal standards on energy efficient food processing equipment and machinery	Medium
	Food Products	Minimally processed fruits and vegetables	Medium
		Traditional food products manufactured by MSME sector	Medium
		Emerging packaged waters in the form of alkaline water, black water, fortified water, copper+, sparkling water, flavoured water etc.	Medium
		Fortified foods/ Enriched foods	High
		Fish cutlet and fish momo	Medium
		Virgin coconut oil	Medium
		Coconut copra	Medium
		Preserved chapatti	Medium
		Ripening chamber for fruits	Medium
		3-D printed food products	Medium

SECTOR	FIELD	SUBJECT AREA	PRIORITY
Food & Food Processing	Food Quality Assurance	GMP/ Food safety guidelines for tea, coffee & cocoa	High
		Food fraud - Pre-emptive methodologies	Medium
Health and Safety	Chemical Hazard	Guidelines on chemical hazards	Medium
	Occupational Health and Safety	Hazard identification and Risk assessment	Medium
		Quantitative risk assessment for chemical industries	Medium
		Computer risk model assessment	Medium
Healthcare	Forensic Sciences	Protocol for examination of a victim and accused of sexual assault	Medium
		Autopsy table	Low
	Health Informatics	Remote care monitoring	Medium
		Randomized Clinical Trials (RCT) of software as device	Medium
		Digital therapeutics	Medium
		Gene, Genome, Proteonics, Epigenetics	Medium
		Aayush (Process and RCT)	Medium
	Hospital Equipment	Sterilization processes	Medium
	Hospital Planning and Management	Hand hygiene performance and compliance	Medium
		Collection and transport of samples by medical laboratories	Medium
		Maintenance management of medical devices	Medium
		Medical air-conditioning systems	Medium
	Medical Biotechnology	Nanoparticle characterization systems	Low
	Medical Devices	Anaesthetic and resuscitation equipment (respiratory gas monitors, voice prostheses)	High
		Rehabilitation appliances and equipment (Club foot braces, folding cane, therapeutic footwear, standing frame, spinal and ankle foot orthoses, pressure relief cushions)	High
		Medical diagnostic kits (general and disease specific diagnostics)	High
		Dentistry equipment (cements, spoons and bone cutters, diamond rotary cutters, scalers and excavators, intra oral camera)	High
		ENT Instruments (ossicular reconstruction prosthesis, VNG machine)	High
		Neurosurgery instruments (Digital Reaction Time Apparatus, Algometer)	High
		Obstetric instruments (menstrual cups, IUCD, Biomarkers for semen exposure)	High
		Ophthalmic instruments (glaucoma drainage devices, Microsurgical Keratome Blade, ocular prosthesis), AR/VR in ophthalmic diagnostics and therapy	High

SECTOR	FIELD	SUBJECT AREA	PRIORITY
Healthcare	Medical Devices	Orthopaedic instrument and implants (arthroscopy system, non-active surgical implants, osteosynthesis implants, metal intramedullary nailing systems)	High
		Surgical instrument and implants (surgical mesh implants for hernia, surgical ligation devices, liposuction devices used in plastic surgery, cryoablation for cancer therapy, robotic surgical devices, AR/VR for surgical planning, electrosurgical unit, surgical training devices)	High
		Cardiovascular equipment (cardiac occluders, pericardial patch)	High
	Medical Laboratory Instruments	Laboratory ware (glass and plastic)	Low
		Medical laboratory analytical equipment and culture preparation instrument	Low
		Medical laboratory furniture	Low
		Ultrapure water purification system	Low
	Veterinary Science	Planning considerations for veterinary hospital and clinics	Low
		Veterinary instrument (catheter, IV cannula, endometrial forceps)	Low
Information Technology	Digital Technologies	Artificial Intelligence	Medium
		Internet of Things	Medium
		Blockchain and DLT	Medium
		Big Data	Medium
		Geographic Information System	Medium
	ICT	Metaverse	Medium
		Smart cities ICT aspects	Medium
	IT Security Techniques	Data privacy	High
		Cyber security	High
		Mobile security guidelines	High
	IT Services	Data maturity assessment and data governance	Medium
		Trustworthiness	Medium
		Digitally delivered services	Medium
		Natural Language Processing	Medium
		RFID/ Geo-tagging	Medium
IT and IT Enabled Services	IT and IT Enabled Services	Cloud services	Medium
		Digital signature services	Medium
	Retail, E-commerce and E-payments Services	E-commerce - principles and guidelines for self-governance	Medium
		E- subscription	Medium
Jute and Jute Products	Jute	Jute and allied fibres (ramie, hemp, flax, sunn, sisal, banana etc) and their related products	Low
	Jute Products	Jute sacking bags for various applications	Low

SECTOR	FIELD	SUBJECT AREA	PRIORITY
Leather and Leather Products	Footwear	Standards on therapeutic footwear	High
	Leather Materials and Allied Products	Sustainable manufacture of leather	High
		Carbon Foot Print of leather and tanning materials	High
		Leather - vocabulary	Medium
		Shorter-term biodegradability test	High
Machinery, Engineering and Manufacturing	Abrasives	Safety requirements for coated abrasive products	High
		Safety requirements for super abrasive products	Medium
	Arms and Ammunitions	12 bore breech loading shot gun single and double barrel including semi-sutomatic and 12 bore pump action gun	Medium
		0.25" bore revolver/ pistol	High
	Conveyor Belts	Pipe conveyor belts	High
		Energy saving conveyor belts	Medium
		Light weight conveyors and flat conveyor belts	High
		Hybrid conveyor belts	High
	Fuel Related Products	Green energy generation and storage related equipment (e.g. green hydrogen, green ammonia, bio-diesel)	Medium
		Performance requirement standards for hydrogen fuel cell used in mobile machinery	High
		Performance requirement standards for alternate fuel and dual fuel use in mobile machinery	Medium
		Cryogenics container and its components	Medium
		Cryogenics operational requirements	Low
	Household Products	Lock cartridge	Medium
		Gas stoves of non-metallic body	Medium
		Gas hobs	Medium
		Burning appliances for clean and bio-based fuels	High
	Industrial Automation	Model-Based Standards Authoring	Medium
		Nuclear Digital Ecosystems	Medium
	Industrial Production	Anchor fastener	Medium
		Railway bearings	Medium
	Machine and Machine Tools	Hydraulic torque wrench	Medium
		Safety of press brakes	High
	Machinery	Safety of mobile machines working underground	High
		Adoption of functional safety standard for earth moving machines	Medium
		Paver machines	Medium

SECTOR	FIELD	SUBJECT AREA	PRIORITY
Machinery, Engineering and Manufacturing	Material Handling Equipment and Ropeways	Balance ropes in mines	Medium
		Electromagnetic examination of ferromagnetic steel wire rope	Medium
		Safety in rides	High
	Metal Cutting	Metal cutting bandsaw blades bimetallic	Low
	Metrology	Gas flow meters	Low
		Evaluation of uncertainties in fluid flow	Medium
	Pressure Vessels	Unfired Pressure Vessels Code (Revision)	Medium
	Printing Machinery	Colour printing machines - commissioning, operation and testing	Medium
		Digital printing machinery	Medium
	Pumps	Horizontal split case pumps	Medium
		Vertical turbine pumps	Medium
	Refrigeration and Air-conditioning	Cold chain equipment	Medium
	Robotics	Exoskeleton robots	Medium
		Legged robots including bipods	Medium
	Smart Manufacturing	Cyber-physically controlled smart machine tool systems	Medium
	Sports Goods	Protective equipment for sports	Medium
		Physical training equipment	Medium
	Toys	Toy safety standards	Medium
Management and Systems	Environmental Social Governance (ESG's)	Internal investigation	Medium
		Fraud Control Management Systems — Guidance for organizations responding to the risk of fraud	Medium
		Efficiency measurement	Medium
		Promotion and implementation of gender equality	Medium
		Performance indicator for Enviro-Economic-Social-Governance benefits and impact assessment for Environmental Social Governance (ESG's)	Medium
	Management Techniques	Facility management - Role in sustainability and resilience	Low
		Facility management - Existing performance management in facility management organizations – State of the industry	Medium
		Life Cycle Costing in procurement	Low
		Technology in facility management	Medium
		Asset Management - Guidance on the alignment of financial and non-financial functions	Medium
		Principles and guidelines for development and implementation of sustainable finance products and services	Medium
		Sustainable Human Resource Management	Low
		Guidelines for the application of ISO 9001 in policing organization	Medium
		Indicators/Template for impact assessment for SDGs	Low
		Rating for tourism city	Medium

SECTOR	FIELD	SUBJECT AREA	PRIORITY
Management and Systems	Risk and Resilience	Risk Maturity Model	Medium
		Cyber resilience	Medium
		Guideline for the implementation of IS/ISO 31000 amongst Indian industries	Medium
		Risk management for corporates	Medium
		Energy Resilience	Low
	Statistical Techniques	Quality of measurement results - Criteria for repeat/replicate testing	Low
		Guidelines on statistical software	Medium
		Data Ethics	Medium
Medical Value Travel Services	Health, Fitness and Sports Services	Yoga services	Low
		Gym services	Low
		Physical activity, sports and injury management	Medium
		Healthcare services	Low
	Medical Value Travel Services and Wellness Services	Medical value travel services	Low
		Wellness services	Low
Petroleum, Polymers and Related Products	Coal and Related Products	Ash fusion temperature for biomass	Medium
		Biomass for steelmaking	Medium
		Safety of solid biofuels	Medium
	Cosmetics	Horizontal Standards in Cosmetics	Medium
		Testing of cosmetics - Alternate methods	Medium
	Fragrance and Flavour	Synthetic menthol	Medium
	Petroleum and Related Products	New generation fuels – EBMS, E20, M15, H-CNG, B10, ATF	High
		Flash point of diesel, Methanol (M100) and MD95 fuel, motor gasoline - RON95, pyrolysis oils	High
		Categorization of products having similar specifications with customs department	Medium
		Lubricants based on trends in engine design/ hardware change, metallurgy change, regulations on emission norms, injection technology, after treatment devices (SCR, DPF, DOC, CatCon, Etc.), alternate fuels, and advancements in industrial lubricants, including dedicated lubricants, high performance lubricants	Medium
		Auto and industrial lubes and greases (revisions)	Medium
		Test methods of lubricants	Medium
		Additive label for lubricants	Medium
		Natural / Green lubricants	High
	Polymer - Rubber	Safe handling practices for the rubber raw materials	Medium
		Guidelines/Protocols/Good practices for packing, storing and handling of cup lump.	Medium
		Raw materials and identification of hazardous substances.	High
		EOLT (End of Life Tyres)	High

SECTOR	FIELD	SUBJECT AREA	PRIORITY
Petroleum, Polymers and Related Products	Polymer - Rubber	Recovered carbon black	High
		White/Latex reclaimed rubber	Medium
		Characterisation of polymer bound rubber chemicals	Medium
Textiles including Technical Textiles	Agrotech	Nets, mats and fabric for various agro applications	Medium
		Silage bags/grow bags & barrier packaging bags	Medium
		Coir root trainer pots	Medium
	Aquaculture	Polyester/nylon fish cage	Medium
	Buildtech	Gym services	Medium
		Fabrics for architectural applications	High
		Scaffolding nets	Medium
		Awning and canopies	Medium
		Inflatables	Medium
		Woven and nonwoven wall coverings	Medium
		Fabric for signage and hoarding	Low
	Clothtech	Laces and tapes of narrow fabrics/braids	Low
		Elastic narrow fabric	Low
		Labels and badges	Low
	Coir and Coir Products	Coir products for horticultural applications	Low
		Coir brushes	Medium
	Geotextiles	Geocomposite strips	High
		Woven and knitted geotextiles for all subgrade stabilisation	High
		Geosynthetics clay liners	Medium
		Drainage composites	High
		Rockfall protection nets	High
		GeotubesGeotextiles for bituminous layer	Medium
		Erosion control coir mat	High
		Textiles fabric impregnated with cement for erosion control	High
	Industrial Textiles	Fabrics and products of industrial applications (filters, pipes and hoses, belts and conveyors, webbings & slings, abrasive cloth, industrial wipes, etc)	Medium
	Manmade Fibre Yarns	Yarns and filaments of nylon and polyester	Low
	Medtech	Community mask and medical respirator	High
		Guidelines for reprocessing of healthcare textile	High
		Dressings, paddings and other products for surgical applications	High
		Dental floss	High
		Scrub suit/Patients clothing	High
		Products for maternity applications	High
		Burn sheet	High
		Products for orthopaedic applications	High
		Leukodepletion filter or textiles used for blood purification	High

SECTOR	FIELD	SUBJECT AREA	PRIORITY
Textiles including Technical Textiles	Mobiltech	Polyester tyre cord	Medium
		Fabrics, felts and other products for automobiles	Medium
	Oekotech	Test method for Volatile Halogenated Organics, Volatile Hydrocarbons (Nonhalogens)	Medium
		Test method for chlorinated organic carriers, Polycyclic Aromatic Hydrocarbons (PAHS)	Medium
		Indian green textile standards	High
	Packtech	Packs and bags of PP/HDPE for various applications	Medium
		Woven / nonwoven laminated or coated fabric, waterproof, rain gowns	Medium
	Physical Methods of Test	Smoothness test for fabrics	Low
	Protech	Clothing for defence personnel	High
		Clothing for other use	High
		Sleeping bags and rucksack	High
		Protective nets	Medium
	Ready Made Garments (Man-Made Apparel)	Kids wear safety requirements	High
		Apparels for women and girls	Medium
		Apparels for men and boys	Medium
		Various woven fabrics of nylon and polyester	Medium
		FR treated nonwoven fabric based disposable bed sheets, bed rolls, curtains and pillow covers for hotels, hospitals, railways and other travel industry	Medium
	Rope and Net	Helideck net	Low
	Silk and Silk Products	Grading of Eri and Muga silks	Medium
		Spun silk	Medium
	Speciality Fibre	Fibres and filaments of new age materials (aramid, basalt, carbon, pre-oxidized, glass, UHMWPE, etc)	Medium
	Sportech	Sport nets	Medium
		Fabrics for sports application	Medium
		Artificial sports turfs	Medium
		Conductive textiles/Smart textiles/E-textiles for different applications in sportech, medtech, protech and indutech etc.	Medium
	Textiles Floor covering	Woven and non-woven carpet backing cloth	High
		Artificial grass made of synthetic yarn for landscape	Low
	Textiles Machinery and Accessories	Carding (specifically metallic staves), drawing and spinning (e.g., Baxter Flyer)	Low
		Spare parts of jute machinery	Low
Tourism and Hospitality Services	Travel, Tourism and Hospitality Services	Sustainable tourism	Low
		Hospitality	Medium
Transport and Logistics Services	Supply Chain Management	Warehouse management	Low
		Logistics services for high value goods	Medium
	Transport Services	Cold chain logistics	Medium
		Transportation of dangerous goods	Medium

SECTOR	FIELD	SUBJECT AREA	PRIORITY
Transport and Logistics Services	Transport Services	Public transport services	Medium
		Cargo transportation services	Medium
		Packers and movers services	Medium
		Courier services	Medium
		Multimodal transportation services	Medium
Transportation including e-mobility	Aerospace	Aero engine components and testing	Medium
		Aircraft safety equipment/Sensors,	Medium
		Titanium fasteners used in aircraft	Medium
	Automobiles	Clean energy transition and integration in automobiles	High
		Fire mitigation requirements	High
		Green economy through recycled content, EPR, waste disposal and resource efficiency	High
		Airbags	High
		Child restraint system	High
	Bicycle	Aluminium alloy, carbon fibre and titanium bicycles	Medium
		E-bicycles	Medium
		Critical components of bicycles	Medium
	Drone	Drone	High
	Electromobility	EV Battery Swap	High
		Dual gun charging of heavy electric vehicles	High
		BMS for electric vehicles	High
		Cloud based charging system	High
		High capacity EV chargers	High
		Safety of EV charging charging infrastructure	High
		Safety of EV batteries	High
		Recycling of EV batteries and reuse of EV battery system in stationery storage	High
		Batteries including transportation of batteries	High
	Marine	Battery used for marine propulsion	Low
	Navigation	Navigation of aircraft to satellite	Low
	Packaging Logistics	Handling and storage of hazardous material	High
		Composite drum used In chemical industry	Medium
		Slip sheet	Medium
		Multi-model container for transportation of vehicle	Medium
	Road Safety	Safety installations (crash barriers, bollard's etc)	High
		Safety - Critical components of vehicles	High
	Transportation	Transportation of specially abled people	High
Water Resources	Coastal Zone Water Management	Control of salt water intrusion	High
		Preventions of coastal hazards	Medium
		Coastal erosion protection	Medium
		Anti-erosion works in coastal area	Medium
	Disaster Mitigation and Management	Glacial Lakes Outburst Floods	Medium
		Anti-erosion works on river course	Medium
		Design and construction of fuse plug to facilitate breaching	Medium
		Flood forecasting using real time reservoir Inflow	Medium
		Flood map of India	Medium
		River morphology and flood plain study	Medium

SECTOR	FIELD	SUBJECT AREA	PRIORITY
Water Resources	Environment Impact Assessment	Environment and social impact on river training works	Medium
		Climate resilient water security	Medium
		Assessment of environmental flow	Medium
		Conservation of aquatic ecosystems in reservoirs and lakes	Medium
	Ground Water	Aquifer storage and recovery techniques	Medium
		Guidelines for aquifer mapping	Medium
		Impact assessment techniques for artificial recharge structures	Medium
		Guidelines for surface runoff harvesting using small structures	Medium
		Ground water harvesting using unconventional measures	Medium
		Groundwater flow monitoring	Medium
	Hydro Structure Construction, Operation and Maintenance	standardisation on dams safety management, planning and rehabilitation	High
		Life Cycle Assessment of dams	High
		Sediment management and disposal	Medium
		Guidelines on performance of old or existing hydraulic structures	Medium
		Guidelines on treatment of defects in the foundation of masonry and concrete dam	Medium
		Optimization and simulation of reservoir operation	Medium
		Dam safety protocol and retrofitting	High
		Dam break analysis	High
		Roller compacted dams	Medium
		Rubber dams	Medium
		Adit gates design	Medium
		Ventilation of underground power houses	Medium
		Performance monitoring of hydraulic structures	Medium
		Piano key weirs	Medium
		Installation, maintenance and operation of instruments in tunnels	Low
		Standards on geological investigations in himalayan region	Low
	Water Resources Management	Efficient use of water resources	High
		Interlinking of rivers	High
		Standards on artificial ponds/ lakes	Medium
		Canal automation	Medium
		Water use efficiency	High
		Inland water transportation design	Medium
		Rejuvenation of traditional water resources	High
		Water audit	Medium
		Piped irrigation network	Medium
		Seepage losses in reservoirs	Medium
		Evaporation control in canals	Medium
		Integrated Watershed Management	Medium

Connect with us:

🐦 📷	/@IndianStandards
f ▶ in	/ Bureau of Indian Standards