

An Overview of Standardization Activity of BIS



J K Gupta, Head, Textiles
Bureau of Indian Standards

Points to be covered during the session

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- ▶ General Concepts
- ▶ Structure for Standard Development
- ▶ Stages of National Standard Development
- ▶ New Initiatives in Standard Development
- ▶ Integration of Standardization in Educational Curriculum

GENERAL CONCEPTS

STANDARD

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- ▶ Document, established by consensus and approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context.

NOTE – Standards should be based on the consolidated results of science, technology and experience, and aimed at the promotion of optimum community benefits.

(ISO GUIDE 2)

Importance of Standards

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- ▶ Facilitate safety, security, interoperability, traceability, quality and continual improvement of goods and services
- ▶ Protection of health and environment
- ▶ Basis for technical regulations and contracts
- ▶ Technology Transfer and Knowledge sharing
- ▶ Impact the economy of the country
- ▶ Trade balances, Growth, Productivity

STANDARDIZATION

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- ▶ **Activity of establishing with regard to actual or potential problems, provisions of common and repeated use, aimed at the achievement of the optimum degree of order in a given context.**

NOTE 1 – In particular, the activity consists of processes of formulating, issuing and implementing standards.

NOTE 2 – Important benefits of standardization are improvement of the suitability of products, processes and services for their intended purposes, prevention of barriers to trade and facilitation of technological cooperation.

(ISO GUIDE 2)

Types of Standards

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- ▶ Basic Standard ([IS 80000 \(Part 1\)](#))
- ▶ Terminology Standard ([IS 232](#))
- ▶ Testing Standard [[IS 1969 \(Part 1\)](#)]
- ▶ Product Standard ([IS 9755](#), [IS 15909](#))
- ▶ Process Standard ([IS 4926](#))
- ▶ Service Standard [[IS/ISO 22483](#), [IS/ISO 17679](#)]

(ISO GUIDE 2)

Basic considerations in evolving National Standards

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- ▶ Consensus Principle
- ▶ Involvement of all the relevant stakeholders
- ▶ Access to International Technology
- ▶ Research & Development
- ▶ Co-ordination with other Levels of Standardization

CONSENSUS

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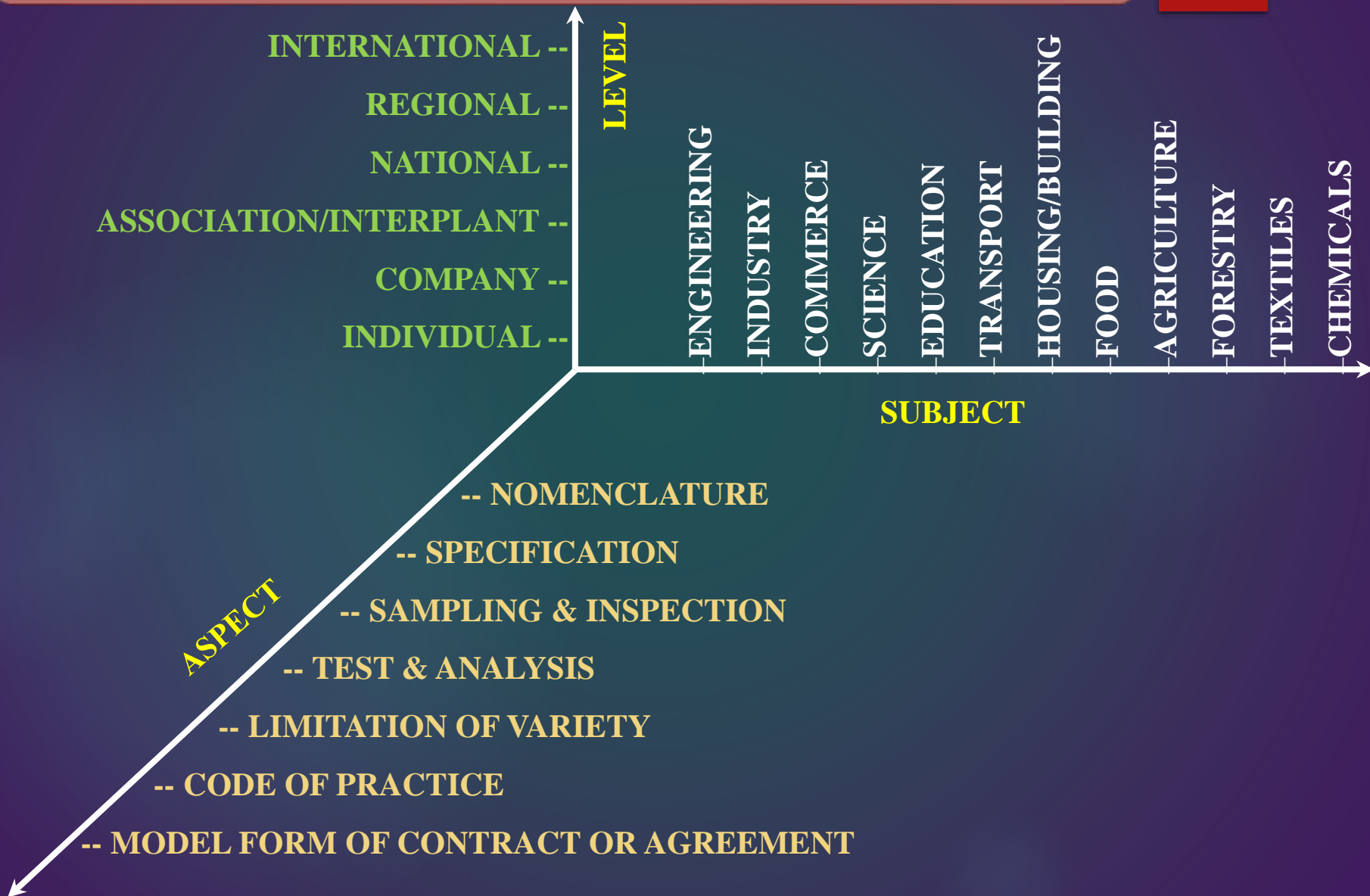
- ▶ General agreement, characterized by the **absence of sustained opposition** to substantial issues by any important part of the concerned interests and by a process that involves seeking the views of all parties concerned to take into account and to **reconcile any conflicting arguments**.

NOTE – Consensus need not imply unanimity.

(ISO GUIDE 2)

STANDARDIZATION SPACE

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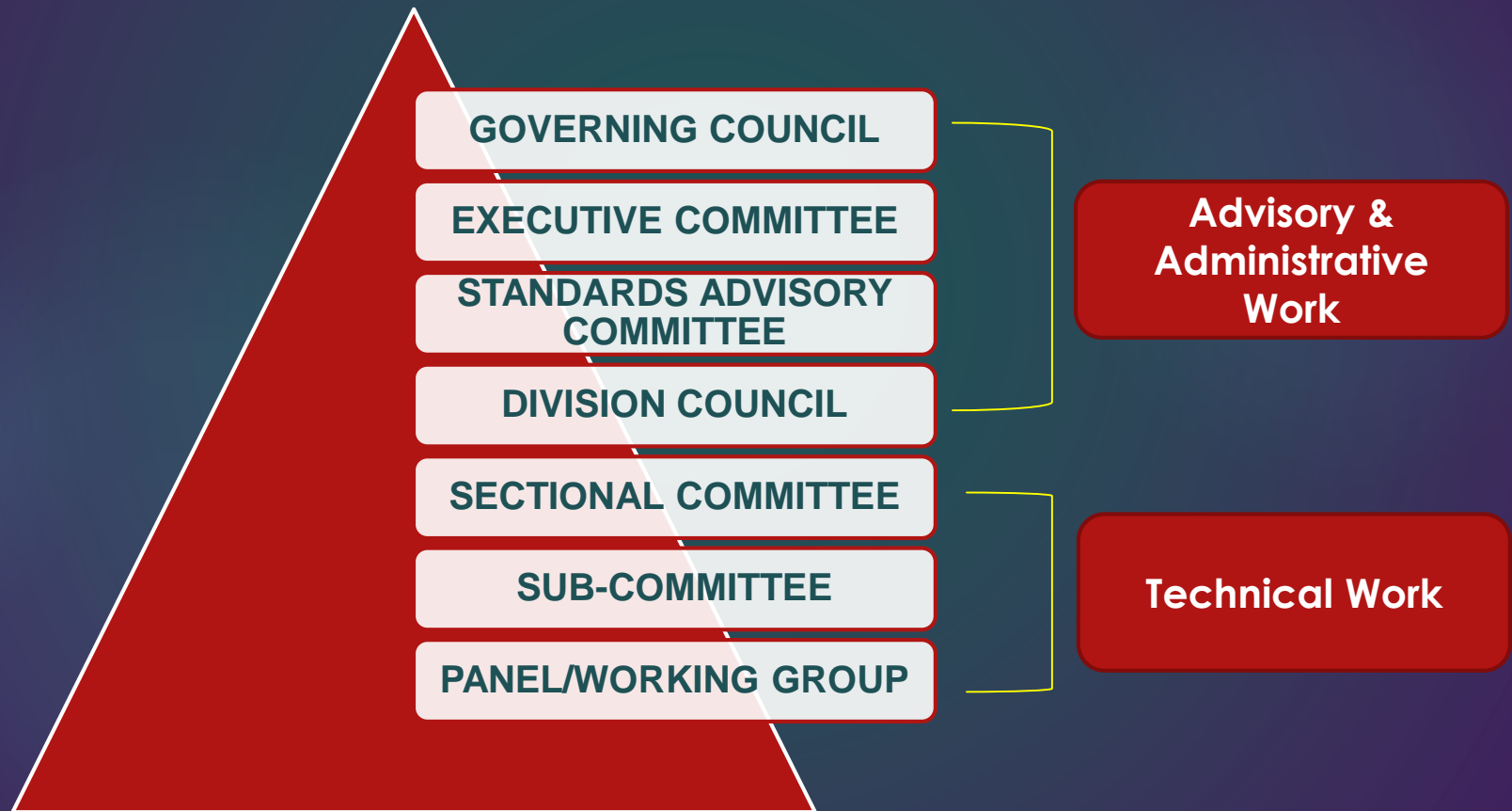
A STANDARD MUST BE

- **NEEDED**
- **TIMELY**
- **CURRENT**
- **ACCEPTABLE**
- **IMPLEMENTABLE**

STRUCTURE FOR STANDARDS DEVELOPMENT

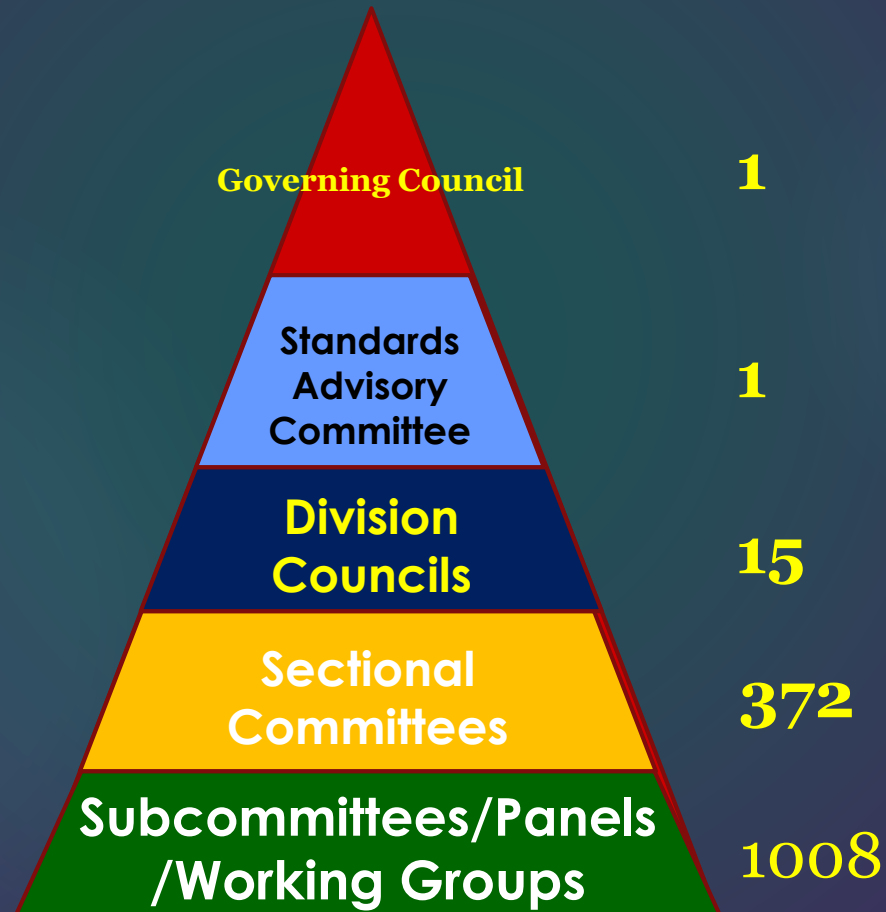
COMMITTEE STRUCTURE

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STANDARDIZATION STRUCTURE AT BIS

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DIVISION COUNCIL

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- Division Councils are set up by the Standards Advisory Committee in **defined areas of industries** and technologies for formulation of standards.
- These include concerned officers of the Bureau and representatives of various interests such as **consumers**, regulatory and other **Government bodies**, industry, **scientists**, technologists and **testing organizations**.
- At present there are **15** Division Councils in BIS.

DIVISION COUNCILS IN BIS

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- Chemical (CHD)
- Civil Engineering (CED)
- Electronics and Information Technology (LITD)
- Electro-technical (ETD)
- Food and Agriculture (FAD)
- Management and Systems (MSD)
- Mechanical Engineering (MED)
- Medical Equipment and Hospital Planning (MHD)
- Metallurgical Engineering (MTD)
- Petrochemical, Coal & Related Products (PCD)
- Production and General Engineering (PGD)
- Service Sector (SSD)
- Textiles (TXD)
- Transport Engineering (TED)
- Water Resources (WRD)

FUNCTIONS OF DIVISION COUNCIL

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- Advise on the subject areas to be taken up for formulation of standards in their respective areas keeping in view the national needs and priorities;
- Set up Sectional Committees within their areas, define their scopes, appoint their Chairmen and members and coordinate their activities;
- Approve proposals for work, decide which proposals should be taken up and direct the Sectional Committee(s) concerned to undertake the approved work and to determine the priority to be assigned to the work.
- Advise on matters relating to research and development needed for the establishment of standards or their revisions;

FUNCTIONS OF DIVISION COUNCIL

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continued.....

- **Study the work of international organizations** and their committees in standards formulation as related to the area of work of the Division Council and **recommend** on the extent and manner of **participation** in standardization activities at the international level;
- Advise on **implementation** of established standards;
- Receive and deal with activity reports and to make **recommendations** thereon **to the Governing Council** concerning matters in which the decision of the Governing Council is necessary;
- Carry out such **tasks** as may be **specifically** referred to it by the Governing Council /Standards Advisory Committee.

SECTIONAL COMMITTEE

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▶ Sectional committees are **appointed by divisional councils** or if necessary by the **Governing Council** for the preparation of a particular standard or group of standards.

▶ Members from

- Manufacturers/industry associations
- Users/consumers
- Regulatory & government departments
- Scientists & technologists
- Testing organizations
- Academic institutions
- Consultants

An officer from BIS is the **Member Secretary**

May co-opt Experts to assist in work

- ✓ Balance of interests
- ✓ Periodic review
- ✓ Predominance of consumer interests

Technical Committees under TXDC

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- 1 Physical Methods of Test, TXD 01
- 2 Jute & Jute Products, TXD 03
- 3 Wool & Wool Products including floor coverings, TXD 04
- 4 Chemical Methods of Test, TXD 05
- 5 Textile Speciality Chemicals and Dyestuffs, TXD 07
- 6 Handloom & Khadi, TXD 08
- 7 Cordage, TXD 09**
- 8 Hosiery, TXD 10
- 9 Textile Materials for Aeronautical and Related Products, TXD 13
- 10 Textile Machinery , TXD 14
- 11 Textile Materials for Marine/ Fishing Purposes, TXD 18**
- 12 Made-up Textiles including Ready Made Garments, TXD 20

T Technical Committees under TXDCI

Committees

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- 13 Textile Materials Made from Polyolefins, TXD 23**
- 14 Coir & Coir Products, TXD 25
- 15 Silk & Silk Products, TXD 28
- 16 Geo synthetics, TXD 30**
- 17 Man-Made Fibres, Cotton & their Products, TXD 31
- 18 Textiles Protective Clothings, TXD 32**
- 19 Industrial Fabrics, TXD 33**
- 20 Technical Textiles for Buildtech Applications, TXD 34**
- 21 Technical Textiles for Agrotech Applications, TXD 35**
- 22 Technical Textiles for Medtech Applications, TXD 36**
- 23 Technical Textiles for Sporttech Applications, TXD 37**
- 24 Technical Textiles for Mebiltech Applications, TXD 38**
- 25 Technical Textiles for Clothtech Applications, TXD 39**
- 26 Composites and Speciality Fibres, TXD 40**

OVERVIEW OF TEXTILE DEPARTMENTS

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- Indian Standards published-1435
- Product standards- 709
- Method of test- 492
- Terminology - 60
- Code of practice – 61
- Dimensions, safety & Others- 113
- Standards on Technical Textiles – About 500
- Product under certification- 59
- Number of licence granted- About 800
- Total Number of Sectional Committees- 26

SUBCOMMITTEE

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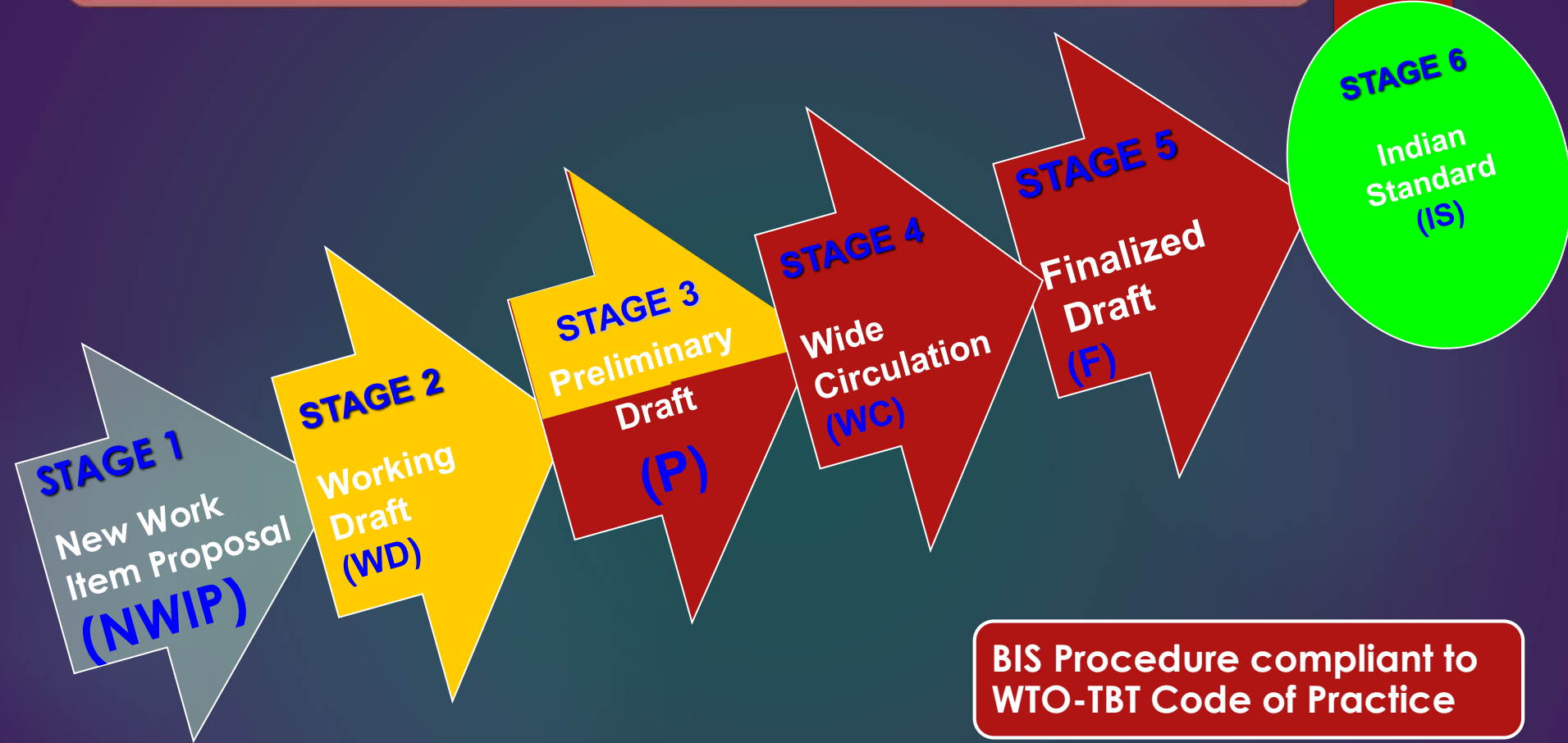
- ▶ Subcommittees are set up by Sectional Committees to attend to a specific group of tasks.
- ▶ Subcommittee's work is to be approved by the Sectional Committee.
- ▶ Convener of the Subcommittee is appointed by the Sectional Committee.

- ▶ Panels are set up to look after **specific and time bound** tasks.
- ▶ **Convener** of the Panel is appointed by the parent body which constitutes it.
- ▶ Panel reports to the Sectional Committee or Subcommittee.

STAGES OF STANDARD DEVELOPMENT

PROCESS OF STANDARDS DEVELOPMENT AT NATIONAL LEVEL

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Stage 2-3: Building consensus among panel/ committee members

Stage 4-5: Building national consensus

PROJECT DESCRIPTION AND ACCEPTANCE

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- ▶ A project is any **work intended to lead to** issue of a **new**, amended or **revised** national standard.
- ▶ Project shall be undertaken **only if it is accepted** by Sectional Committee. **Concurrence** of the concerned Division Council is necessary.

- ▶ The **Secretariat** of Sectional Committee or Sub-committee is responsible for the **management of all projects** in the programme of work including **monitoring** of their progress.

- ▶ The Programme of Work of a Sectional Committee comprises **all projects allocated** to the Sectional Committee including **maintenance** of published standards.

Project Approach

- ▶ Project Stages
 - Proposal Stage
 - Preparatory Stage
 - Committee Stage
 - Approval Stage
 - Publication Stage

► Requests may come from

- Government / Ministry
- Consumer Organization / User
- Industry / Industry Association
- Professional Bodies
- Technologists
- Members of Bureau
- Members of BIS Technical Committee
- BIS Standardization module

PROFORMA FOR PROPOSING NEW SUBJECTS FOR NATIONAL STANDARDIZATION

1	Proposer Name & Complete Contact Details including Phone no and Email ID.	
2	Proposed Title of the standard (<i>Indicate whether the standard required is for product specification/methods of test/code of practice and define the subject in brief</i>)	
3	Scope of the proposed standard (<i>Define the limits to be considered</i>)	
4	Purpose and Justification	
5	Likely users of standards and their inputs	
6	Any related standard/series of standard/system standard required to make this subject standard complete	
7	When the final Standard would be required (<i>any time limit</i>)	
8	Any specific problem being faced without this standard	
9	Bearing with Govt legislation regulation, etc	
10	Name and address of manufacturers/implementing industries/purchasing organization/component supplier/raw material supplier, if any	
11	Status of the industry in the country	
12	Remarks	

http://www.bis.org.in/sf/Proforma_for_new_subject.pdf

11	Status of the industry in the country	
12	Availability of test facilities in the country	
13	Whether related to variety reduction, export, health, safety consumer protection, mass consumption, energy conservation, technology transfer, technology upgradation, protection of environment & other national priorities.	
14	Relevant supportive document/ <i>other national/international standards, company standard, technical & research papers, etc if any (Please give reference or attach a copy)</i>	
15	R&D work done in India	
16	Any foreign collaboration (give details)	
17	Liaison with any organisation(s)	
18	Preparatory work: a) whether draft attached b) whether outline attached and draft can be prepared c) no draft possible, if so, why ?	
19	Whether this project can be funded by your organization or can it be sponsored by industry/ association/professional bodies/ministry? If yes, to what extent?	
20	Whether your organisation would be interested to opt for BIS Standard Mark once the standard is published?	

Dated:

Signature:

Note:

- i) *It is desirable that information is provided by the proposer for all items of the proforma; in any case information against item 1 to 5 must be provided.*
- ii) *Write 'NA' wherever not applicable.*
- iii) *Add separate sheet to elaborate.*

Filled-in form may be mailed to : [Chief\(standardization\)](#)

PROPOSAL STAGE

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- ▶ Source to indicate **significance**, scope and **support** in committee work in a particular format.
- While approving the subject priority shall be fixed as one, two or three based on guidelines.
- ▶ Indigenous/Adoption
 1. **Priority I – 9 months/6 Months**
 2. **Priority II – 18 months/9 Months**
 3. **Priority III – 24 months/18 Months**
- ▶ Associated document - **New Work Item Proposal** (NWIP)

PREPARATORY STAGE

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- ▶ Covers preparation of a draft as per general principles and framework
- ▶ Associated Document : Working Draft (WD)
- ▶ Standard drafting
- ▶ A separate list shall be maintained for such work items which shall be included in the Programme of Work when it reaches the stage of committee draft (P Draft),
- ▶ P Draft so prepared shall be allotted a document number (TXD XXXXX) through Manakonline.

COMMITTEE STAGE

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- ▶ Associated Document - Preliminary Draft

(P Draft) - shall be circulated to all members of the Sectional Committee and concerned Sub-committee/Panel for comments.

- ▶ Last date for sending comments to be not less than three weeks.
- ▶ Time schedule for a project shall start from P Draft stage.

Review of Comments on P-draft

- ▶ The Sectional Committee (or Subcommittee) reviews all comments on the draft standard and decides regarding approval.

FORMAT FOR SENDING COMMENTS ON BIS DOCUMENTS

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Doc. No.: _____ TITLE: _____

LAST DATE OF COMMENTS: _____

NAME OF THE COMMENTATOR/ORGANIZATION: _____

Sl. No.	Clause/Sub-clause/para/table/fig. No. commented	Commentator/ Organization/ Abbreviation	Type of Comments (General/Editorial/ Technical)	Justification	Proposed change

APPROVAL STAGE

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- ▶ Proposed draft when approved by Sectional Committee for wide circulation becomes a **draft standard for public comments**.
- ▶ Associated document : **Wide circulation draft (WC)**
- ▶ The period of circulation shall be determined by the committee and is **normally of two months** and shall **not be less than one month**.
- ▶ **Comments** received are **compiled** and put up to the Sectional Committee.
- ▶ Sectional Committee considers the comments and **decides** regarding the same for **finalizing** the draft.

Distribution and Mailing List

a) The distribution of a draft Indian Standard is given below:

- i) Key producers
- ii) Key consumers
- iii) Key technologists
- ii) Licensees and recognized testing laboratories
- iii) Central and State Government departments likely to be interested
- iv) Members of the Sectional Committee
- v) Members of the concerned sub-committee(s) and Panel(s)
- vi) Members of the Division Council which have appointed the Sectional Committee
- vii) Members of the other Sectional Committees), Sub-committee(s) and Panel(s) with whom liaison felt necessary
- viii) Other National Standard bodies with whom exchange arrangements have been approved by BIS.
- ix) Technical Departments, IR&TIS, Central Marks Department, Regional and Branch Offices of BIS
- x) Draft to be put on BIS website
- xi) Nodal Officer for the standard

- ▶ The draft approved/finalized by the Sectional Committee that is, **Finalized Draft** (F-Draft) is processed for printing after its adoption by the Division Council.
- ▶ The stage covers the preparation for publication of the Indian Standard which is responsibility of the Secretariat.
- ▶ Associated Document - **National Standard** (IS/SP)

Project Stage

- ▶ Proposal Stage
- ▶ Preparatory Stage
- ▶ Committee Stage
- ▶ Approval Stage
- ▶ Publication Stage

Associated Document

- ▶ New Work Item Proposal
- ▶ Working Draft
- ▶ Preliminary Draft
- ▶ Wide Circulation Draft
- ▶ National Standard

FORMULATION PROCESS

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- ▶ Receipt of proposal
- ▶ Establishment of need
- ▶ Meeting of technical committee
- ▶ Preparation of working/preliminary draft standard
- ▶ Circulation of working / preliminary draft
- ▶ Meeting of technical committee
- ▶ Approval of draft for wide circulation
- ▶ Wide circulation of the draft
- ▶ Meeting of technical committee
- ▶ Finalization of the draft

FORMULATION PROCESS

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contd...

- ▶ Preparation of finalized copy
- ▶ Approval of the F-copy (by the chairman of technical committee)
- ▶ Adoption of F-copy (by the chairman of the division council)
- ▶ Processing of F-copy for publishing
- ▶ Editing/proof checking
- ▶ Published standard
- ▶ Gazette notification of standard
- ▶ Status of standard (voluntary/mandatory)
- ▶ Publicity/seminars & conferences
- ▶ Review of standard (every 5 years)
- ▶ Amendment / revision / withdrawal of standard

TIME SCHEDULE FOR FORMULATION OF STANDARDS

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6-24 MONTHS

Category	Indigenous	Adoption
Priority I	9	6
Priority II	18	9
Priority III	24	18

TIME SCHEDULE FOR FORMULATION OF STANDARDS (Contd..)

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STANDARDS DEVELOPMENT TIME NORMS ADOPTED BY STANDARDS BODIES OF VARIOUS COUNTRIES & ISO

S.No	Country	Standards Body	Timeline (in months)
1.	India	Bureau of Indian Standards (BIS)	6-24
2.	South Africa	South African Bureau of Standards (SABS)	12-24*
3.	Germany	Deutsches Institut für Normung (DIN)	24-36*
4.	Australia	Standards Australia (SA)	8-48*
5.	United Kingdom	British Standards Institution (BSI)	18-24*
6.	Europe	European Committee for Standardization & European Committee for Electrotechnical Standardization (CEN-CENELAC)	Max. 27 months
7.	Japan	Japanese Industrial Standards Committee (JISC)	12-36*
8.	ISO – International Organization for Standardization		24-36*

TYPICAL CONTENTS OF INDIAN STANDARD SPECIFICATION

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- ▶ Foreword
- ▶ Scope
- ▶ References
- ▶ Terminology
- ▶ Classification
- ▶ Manufacture
- ▶ Requirements (Chemical/ Physical/ Mechanical)
- ▶ Testing
- ▶ Sampling and Inspection
- ▶ Packaging
- ▶ Marking

Digitization of Standardization Activity in BIS (MANAKONLINE.IN)



- Online Commenting: Drafts & Standards
- Online Proposals of New Subjects.

NEW INITIATIVES IN STANDARDS DEVELOPMENT

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REVIEW OF STANDARDS

- Process Redesigned - Action Research based approach

WEBINARS WITH STAKEHOLDERS

- Improving Engagement, Facilitating Participation

ENGAGEMENT OF CONSULTANTS

- Effective & Timely Addressment of Complex Areas

R&D INSTITUTIONS

- Involving 216 Research organizations recognized by Science Technology Department

STRATEGIC ROADMAP of DCs

- Aligning Standardization with Needs & Trends

Access to Standards

- Indigenous standards are freely downloadable

NEW INITIATIVES IN STANDARDS DEVELOPMENT

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CREATION OF STANDARDIZATION CELLS

- Enhance stakeholder involvement in standardization

MoUs WITH EMINENT INSTITUTES

- IITs (Delhi, Bombay, Madras, Kanpur, Roorkee), IIMs (Trichy, Lucknow), HBTU Kanpur, NITRA, NLU

ONE NATION ONE STANDARD

- Scheme for recognition of SDOs launched

R&D IN STANDARDS DEVELOPMENT

- Focus on R&D in standardization and Action Research Projects

INTEGRATION OF STANDARDIZATION IN EDUCATIONAL CURRICULUM

- Awareness generation in students & equipping future professionals in application of standards in their professional life

EDUCATIONAL UTILIZATION OF STANDARDS

Integration of Standardization in Educational Curriculum (Key Benefits)

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- ▶ Standards education in academic curricula would help to familiarize students with relevant standards applicable to their future profession and an understanding of the strategic benefits and challenges of standardization.
- ▶ Selection of appropriate tools, concepts, models and theories by implementing standards.
- ▶ Helps in increasing the competency of individuals seeking to participate in the standards making process.
- ▶ In the medium and long run, enhanced knowledge and skill about standardization through education will help India to gain a competitive edge over other countries

THANKS FOR YOUR KIND ATTENTION

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