BADAN STANDARDISASI NASIONAL

Standard for Sustainable Development and Better Life

Standardization of Information Security, Cybersecurity and Privacy Protection in Indonesia

Denny Kusuma Hendraningrat, M.Eng.

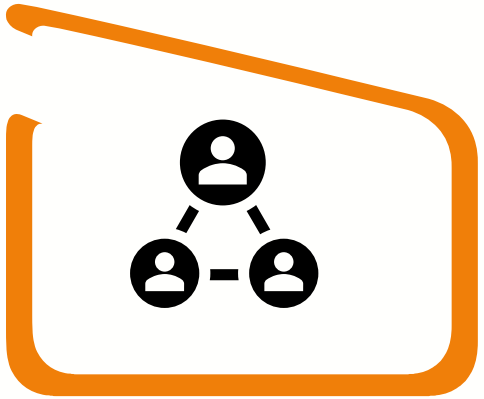
Directorate of Standards Development for Mechanics, Energy, Infrastructure, and Information Technology

7 October 2025

BADAN STANDARDISASI NASIONAL

Understanding The Situation

Why do we need the standardization and conformity assessment system ?



Using tools of standard which are resulted from the ***consensus*** *amongst all stakeholders concerned and* ***adoption*** *of the relevant international standard*

Core pillars in the Quality Infrastructure Systems to ***overcome the technical barrier to trade*** *in accessing global market and protecting society and environmental*

Confidence for mutual acceptance of competency and results of its conformity assessment system through ***internationally recognized trace-ability system*** *of conformity assessment and measurement*

Good Standardization Practices are part of Good Regulatory Practices in addressing the ***Good Governance and Compliance issues*** *and also risks mitigation*

STANDARDIZATION

The process of planning, formulating, establishing, implementing, enforcing, maintaining, and supervising the Standards which is carried out in an orderly manner and in collaboration with all Stakeholders

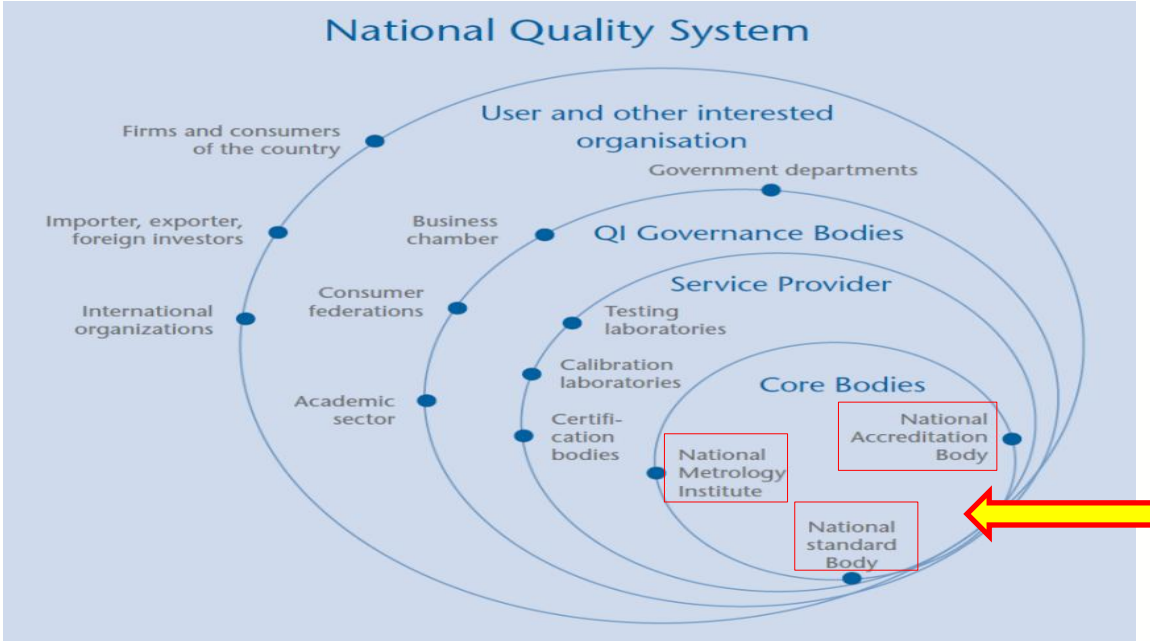
KAN Komite Akreditasi Nasional

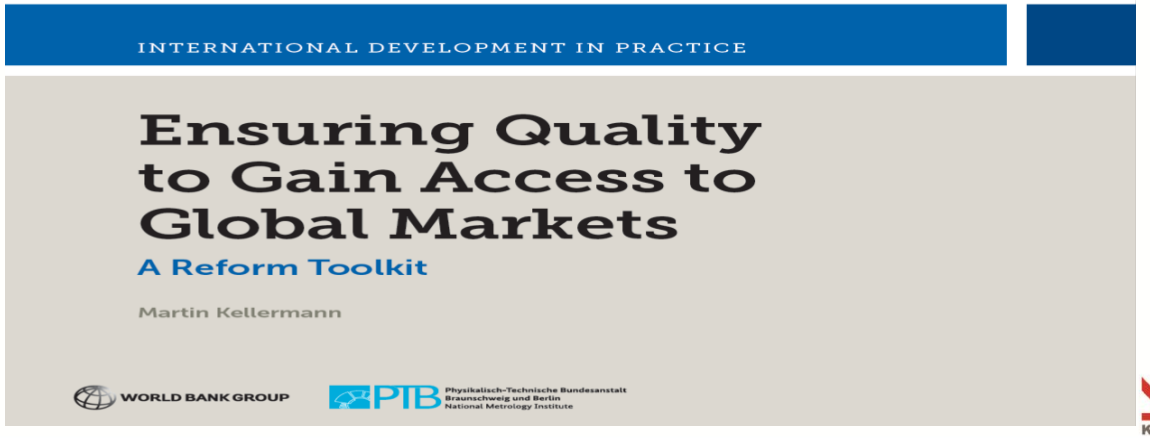
International Framework on Quality Infrastructure System

For the World Bank Group to achieve its twin goals of ending extreme poverty and boosting shared prosperity, the benefits of trade must be extended to all countries. But many countries lack the necessary infrastructure to meet the quality standards for entering global markets, because participation in world trade increasingly requires that suppliers comply with standards, technical regulations, and sanitary and phytosanitary measures. To overcome these technical barriers to trade in the most efficient and cost-effective way and to reap the benefits of trade, a functioning quality infrastructure (QI) ecosystem is crucial.

The QI ecosystem can be understood as comprising the organizations (public and private), policies, and relevant legal and regulatory frameworks and practices needed to support and enhance the quality, safety, and environmental soundness of goods, services, and processes.[1] The QI ecosystem is required for the effective operation of domestic markets, and its international recognition is important to enable access to foreign markets. It is a critical element in promoting and sustaining economic development as well as environmental and social well-being, and it relies on metrology, standardization, accreditation, and conformity assessment (which comprises testing, inspection, and system or product certification). For a further general introduction to QI and its definition, see module 3: Standards.

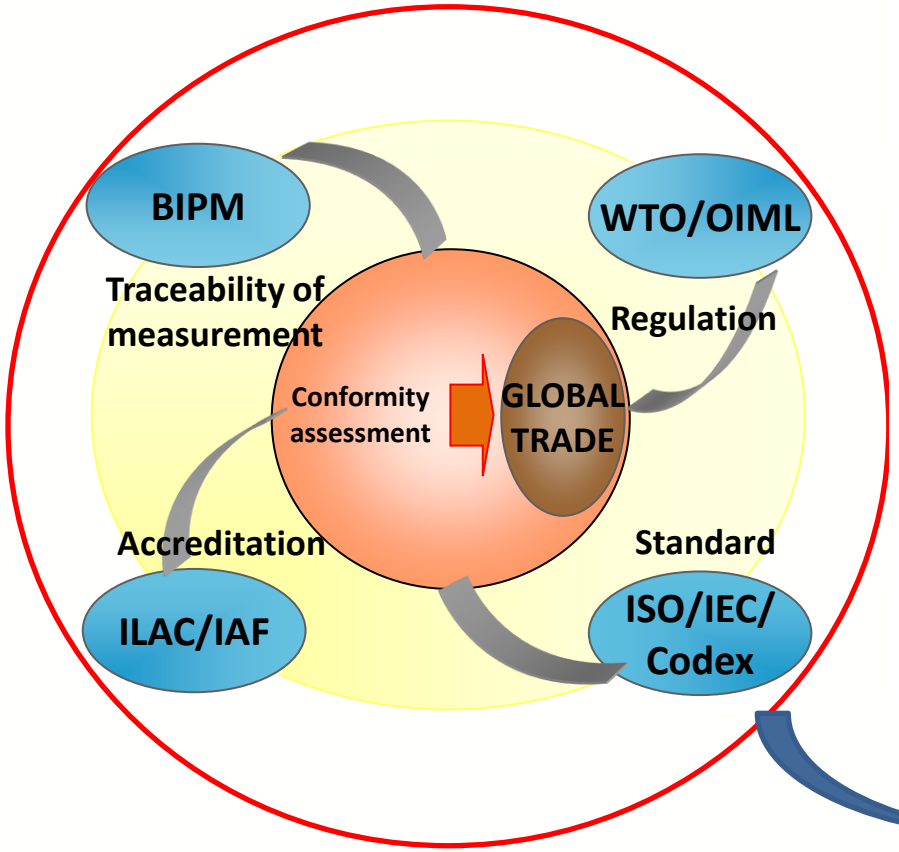
(*) world bank group, 2019



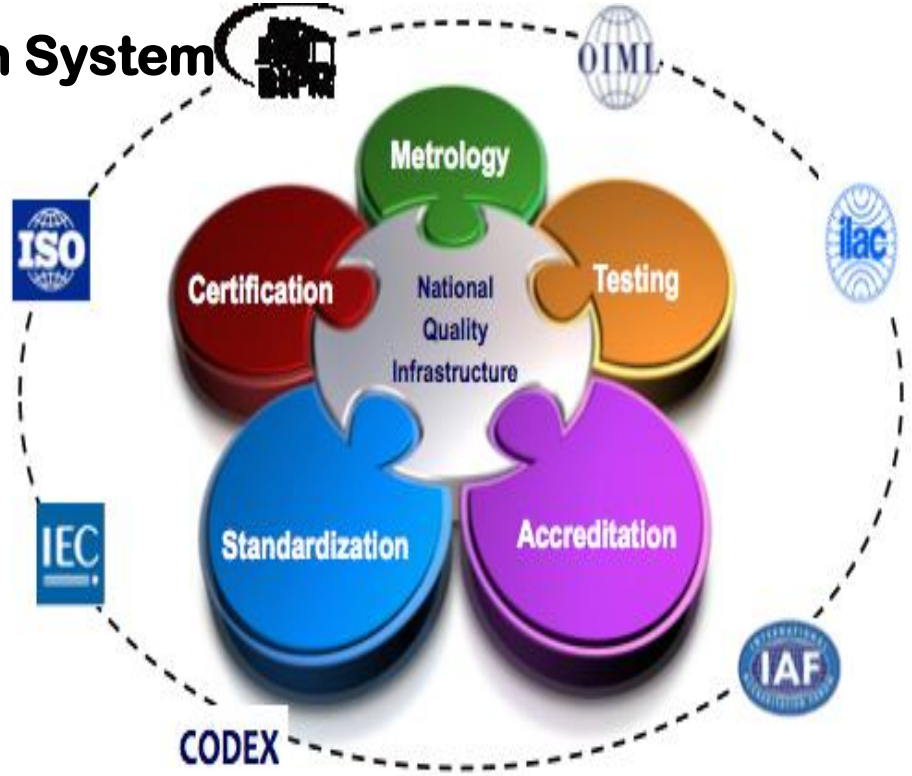


International Framework on Quality Infrastructure System (2)

Global Standardization System



United Nations Industrial Development Organization (UNIDO), 2010

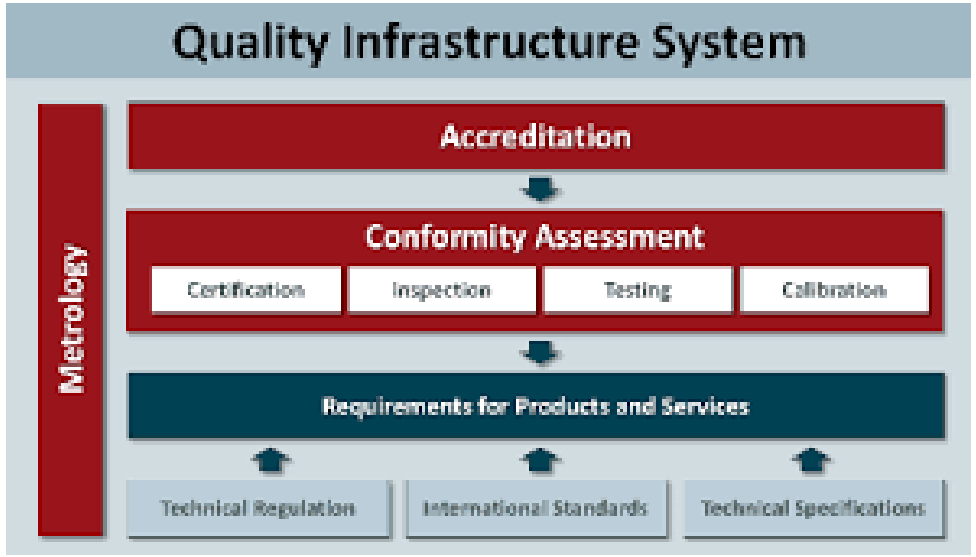


International toward using an approach of STRACAP (*Standards, Technical Regulations and Conformity Assessment Procedures*)

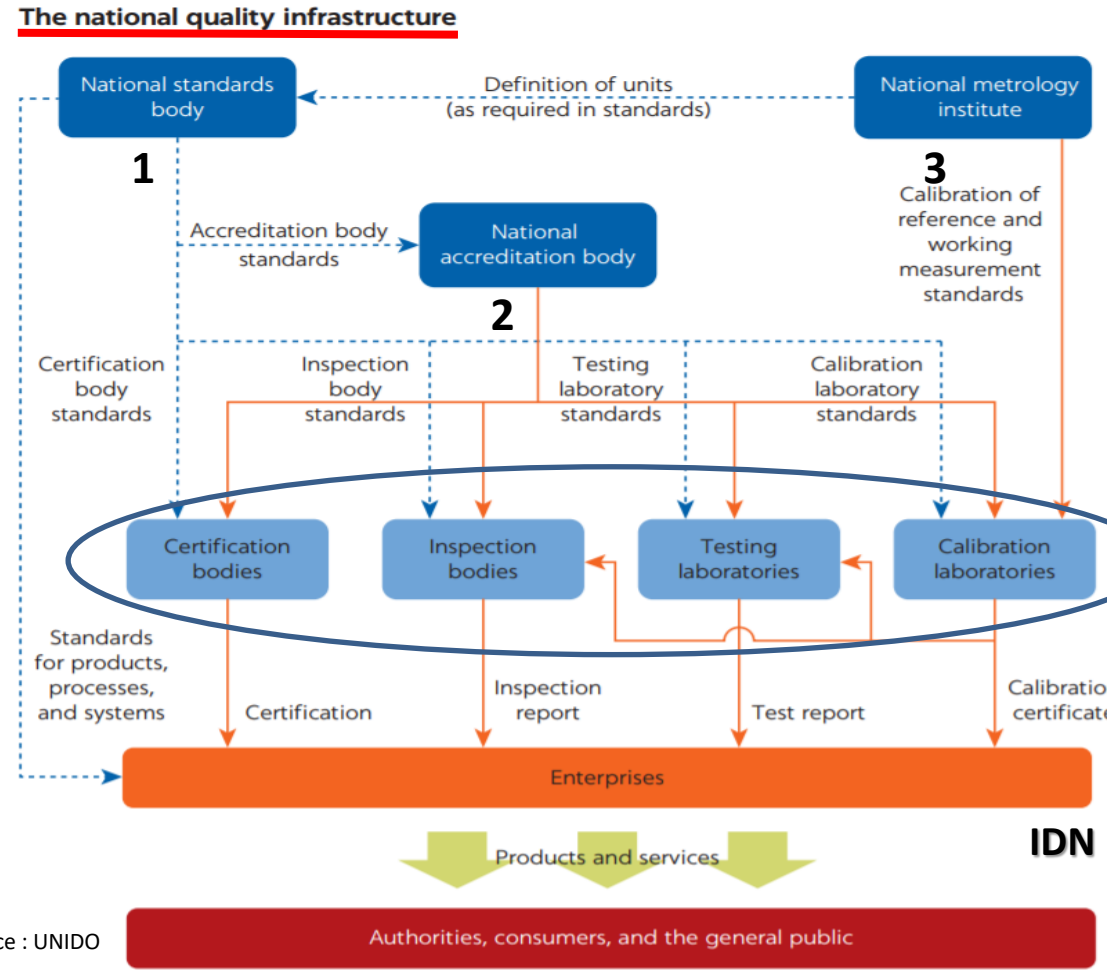
WTO based on **"STRACAP" approach:**

1. **S**tandards :
   - **Refer to the International Standard**
   - Harmonized National Standard
   - National Standard based on Local-National Uniqueness (National Differences)
2. **T**echnical **R**egulation
   - **Based on Standard**
   - Conformity Assessment approach
   - Good Regulatory Practices
3. **C**onformity **A**ssessment **P**rocedure
   - International Accreditation Organization
   - **Recognition through MRA/MLA arrangement**
   - Metrology and traceability of measurement

International Framework on Quality Infrastructure System (3)



"The system ..... Comprising the organizations (public and private) together with the policies, relevant legal and regulatory framework, and practices needed to support and enhance the quality, safety and environmental soundness of goods, services and processes.



Source : UNIDO

Tasks dan duties of **BSN** are acting as:

1. NSB
2. NAB
3. NMI

Possible Approach Model

(1+2+3) + 4

IDN

(1+3+4) + 2

(1+2) + 3 + 4

(1+4) + 2 + 3

Source: ROAD MAP FOR QUALITY. Guidelines for the Review of the Standardization, Quality Management, Accreditation and Metrology (SQAM) Infrastructure at National Level (2004)

International Framework on Quality Infrastructure System (4)

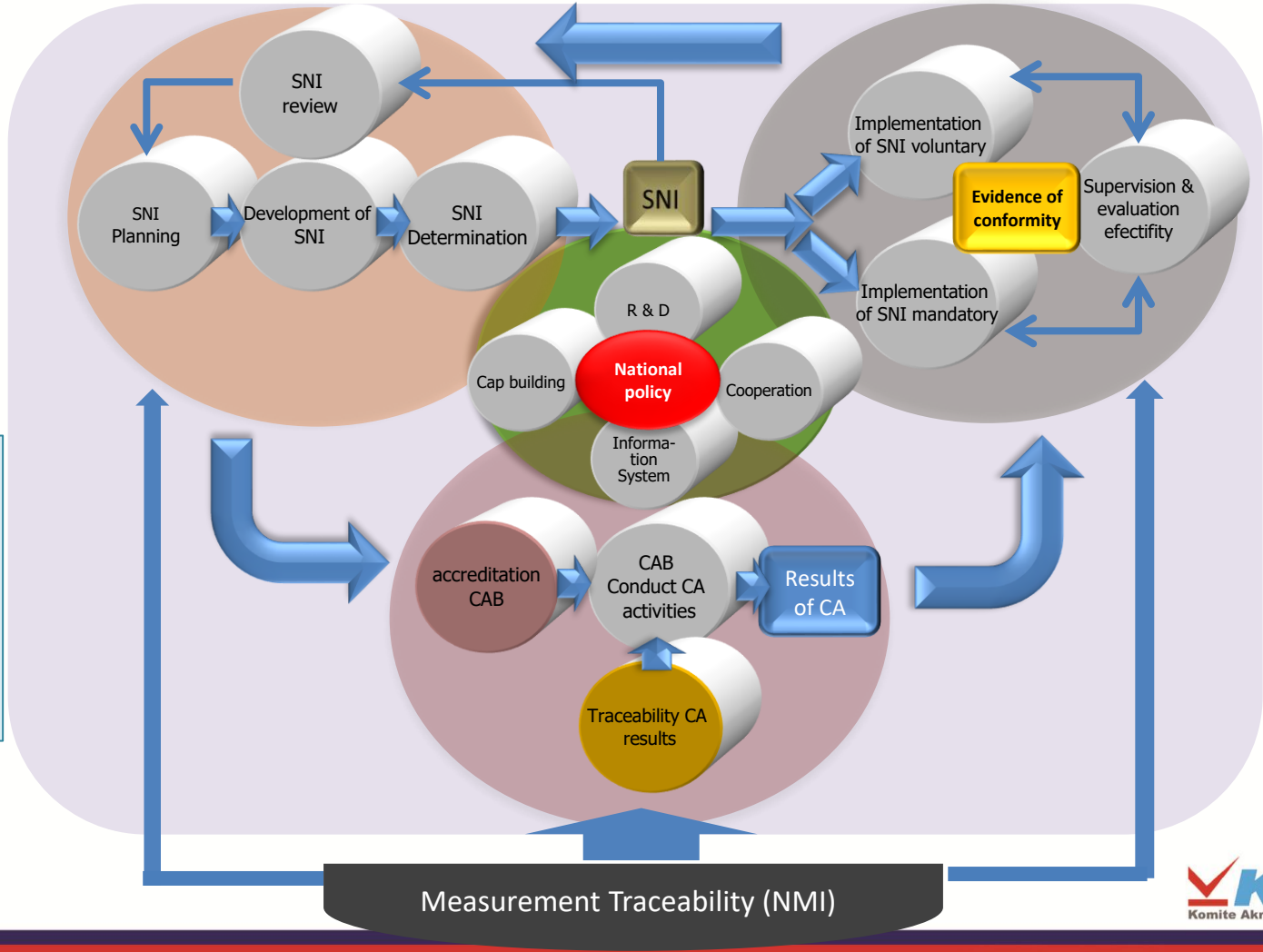
OUTLINE STANDARDIZATION AND CONFORMITY ASSESSMENT

(Indonesian Law No. 20 Year 2014 and Govn.Regulation No. 34/2018)

Clause 4
Law 20/2014 :
Standardization and Conformity Assessment applied to:
- Product,
- Service,
- System,
- Process, and
- Person.

Part Two Clause 4 SubClause (1) Gov Reg 34/2018

SNI is planned and developed to describe technical requirements, qualification, and/or competency which are dealt with **Product, Service, System, Process,** and **Person**.



NOTE:

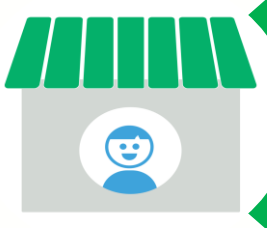
SNI : Standar Nasional Indonesia
CA : Conformity Assessment
CAB : Conf. Assessment Body

Legal Basis and Objectives of Standardization

Law No. 20 of 2014 "Standardization and Conformity Assessment"

Government Regulation No. 34 of 2018 "Standardization and Conformity Assessment System"

Improving **quality assurance, production efficiency, national competitiveness, healthy** and **transparent business competition** in **trade, business certainty**, and the **capabilities of Business Actors**, as well as **technological innovation** capabilities;



Increasing protection for **consumers, business actors, workers**, and **other communities**, as well as **the state**, both in terms of **safety, security, health,** and **preservation of environmental functions**;

Increasing certainty, smoothness and **efficiency** of **trade transactions** of goods and/or services domestically and abroad.

Contribution of Standards to Economy Growth

Country	Indonesia	Canada	France	Germany	Nordic	UK	UK
Publication year	2023	2007	2009	2000	2018	2005	2015
Analysis period	1994-2019	1981-2004	1950-2007	1961-1990	1976-2016	1948-2002	1921-2013
Estimated function	Labour productivity	Labour productivity	GDP	GDP	Labour productivity	Labour productivity	Labour productivity
Elasticity of stock of standards	0.16	0.36	0.12	0.07	0.11	0.05	0.11
Share of labour productivity growth	21.2%	17.0%	27.1%	30.1%	39.5%	13.0%	37.4%
Growth rate of GDP, % p.a.	6.5%	2.7%	3.4%	3.3%	2.5%	2.5%	2.4%
Contribution of standards to GDP growth, % points	0.9%	0.3%	0.8%	0.9%	0.7%	0.3%	0.7%
Share of GDP growth	14.5%	9.2%	23.5%	27.4%	28.0%	11.0%	28.4%

SOURCE: The Economic Impact of Standards in Indonesia: a CEBR report for ISO, July 2023

CEBR: Center for Economic and Business Reseach

Quality Infrastructure Index

The Indonesia Quality Infrastructure Index for Sustainable Development

(UNIDO Survey Results 2024 in 155 Countries)

Table - QI4SD index scores for countries in XL group

Country	Region	Rank	Index	Standards	Conformity	Metrology	Accreditation	Policy
China	East Asia & Pacific	1	94	88	92	96	94	100
France	Europe & Central Asia	2	89	83	81	92	100	91
Germany	Europe & Central Asia	3	85	85	83	100	100	57
United States	North America	4	85	72	78	90	100	
United Kingdom	Europe & Central Asia	5	82	85	70	92	100	62
Japan	East Asia & Pacific	6	81	84	50	94	94	
South Korea	East Asia & Pacific	7	79	82	56	83	96	
Italy	Europe & Central Asia	8	78	84	71	77	100	58
India	South Asia	9	75	70	57	65	100	84
Australia	East Asia & Pacific	10	75	50	61	81	94	86
Netherlands	Europe & Central Asia	11	74	77	38	81	100	
Spain	Europe & Central Asia	12	74	78	61	63	100	66
Canada	North America	13	71	61	34	73	92	96
Turkey	Europe & Central Asia	14	71	55	55	64	100	79
Brazil	Latin America & Caribbean	15	67	47	54	66	88	81
Saudi Arabia	Middle East & North Africa	16	64	54	49	44	79	95
Mexico	Latin America & Caribbean	17	64	46	61	54	94	
Indonesia	East Asia & Pacific	18	61	38	31	39	96	100
Russia	Europe & Central Asia	19	60	78	16	90	46	70

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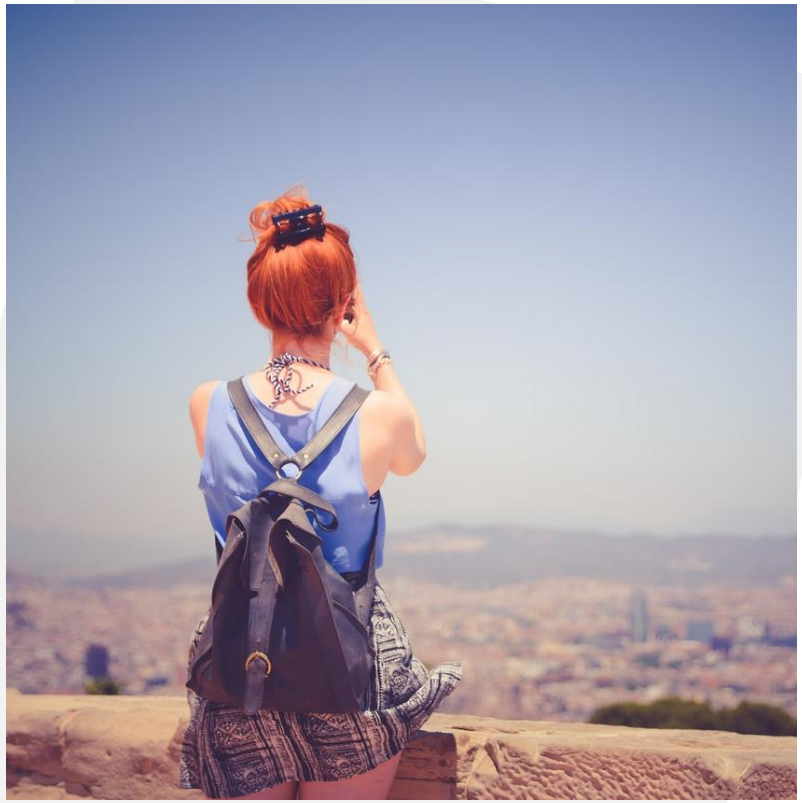

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POSSIBLE APPROACH

Good Regulatory Practices

Principles of Good Governance

Role of Standardization in Good Governance

Good policy-making practice

1. Registration vs. supervision
2. Risk based approach
3. Supervision procedures for the system
4. Business bureaucratic process

Good standardization practice

1. Resource approach
2. Professional based
3. Delegation to third parties
4. Creating new businesses/jobs
5. Strengthening public trust

Good Regulatory Practices - GRP

Standard vs Regulation

Standards serve as market reference/requirement

Trade-off Supply-Demand

1st – Industry Standards

2nd - National Standards

3rd – International Standards

Voluntary

Market Reference

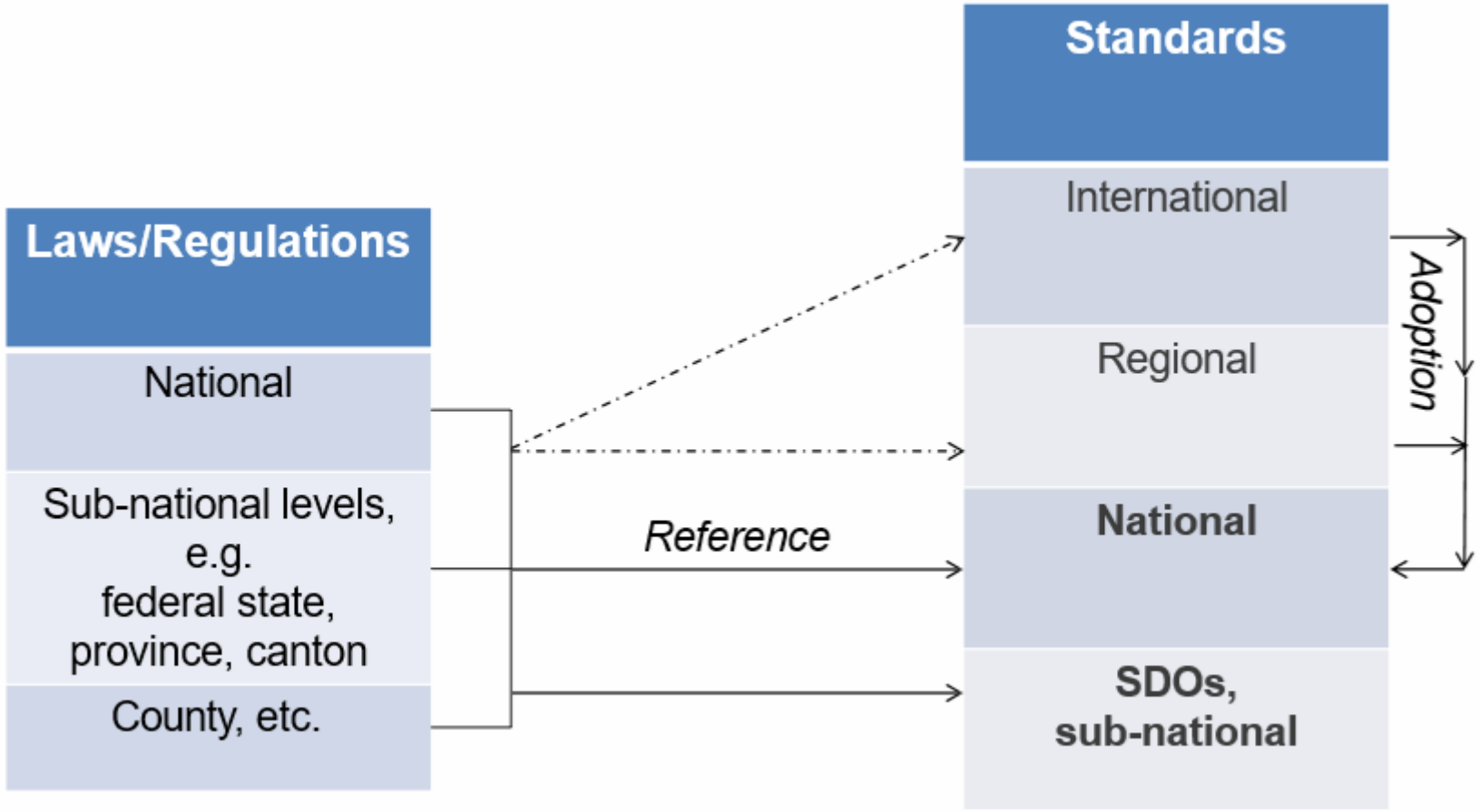
MARKET

Market requirements

Mandatory/compulsary

4th – Technical Regulation

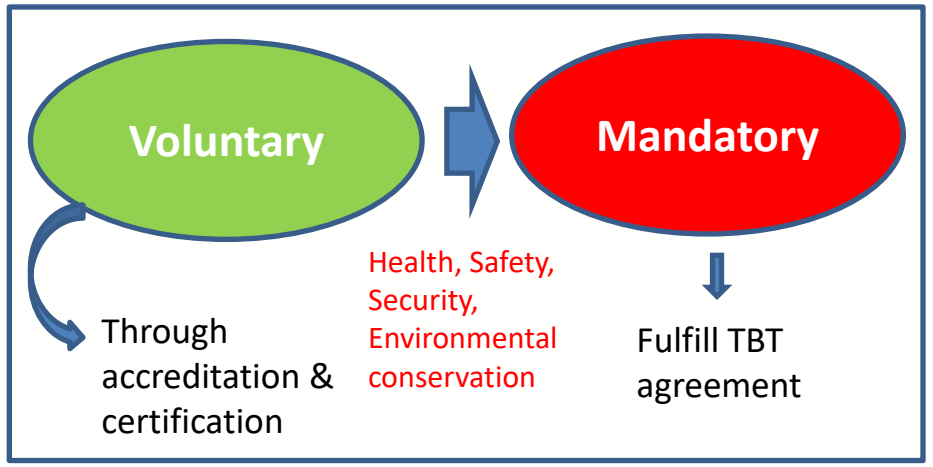
Standards-based Regulation

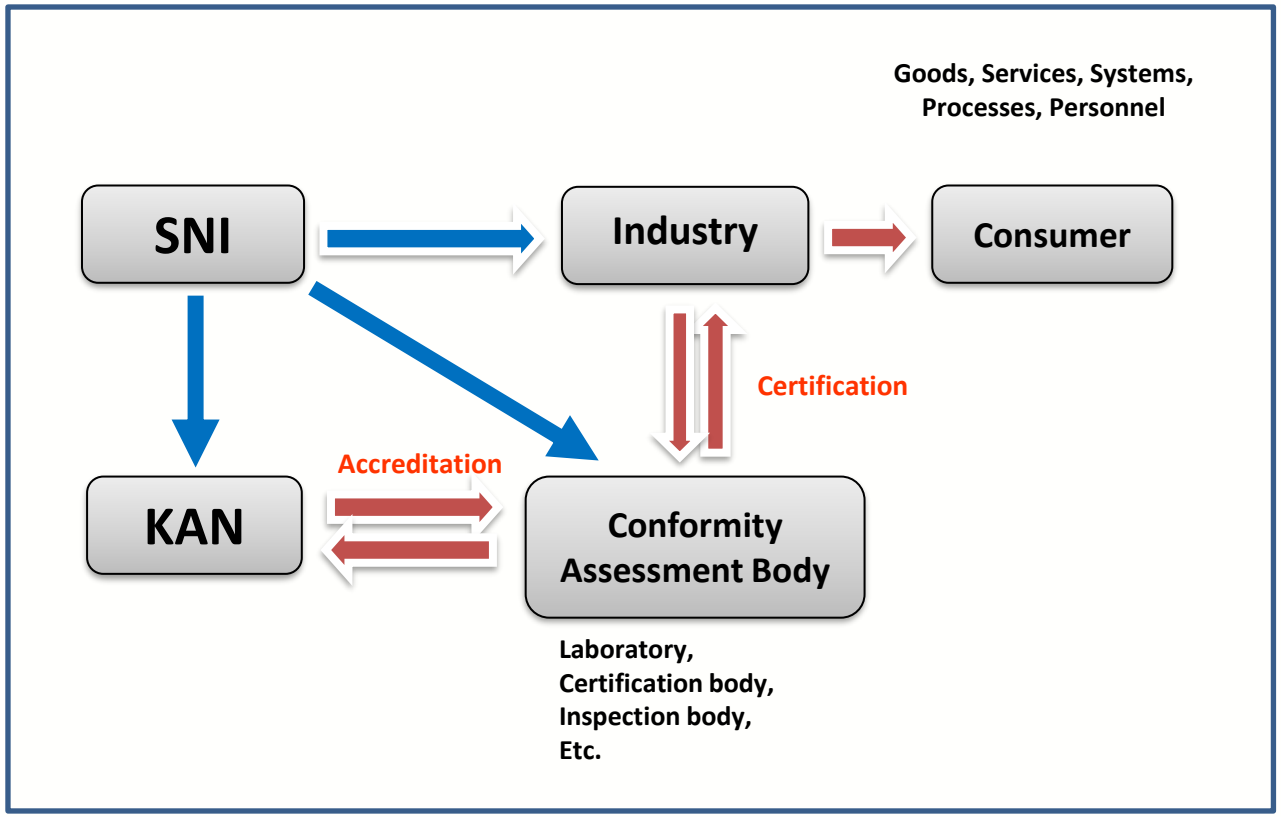


Standards are mostly referenced as national or sub-national standards (which includes international/regional standards **after their adoption**)

Source: Reinhard Weissinger, 2020 “Standardization and Sustainability”, University of Geneva

Standard Implementation Policy





NUMBER OF REGULATED STANDARDS

No	Sector	Number of regulated standards
1	Industry	138
2	Energy and mineral resources	88
3	Agriculture	6
4	Marine and fishery	2
5	Transportation	9
6	Construction	44
7	Trade	22
8	Information Technology	5
9	Cybersecurity	5
10	Geospatial	5

NUMBER OF INDUSTRIES GUIDED BY BSN TO IMPLEMENT SNI

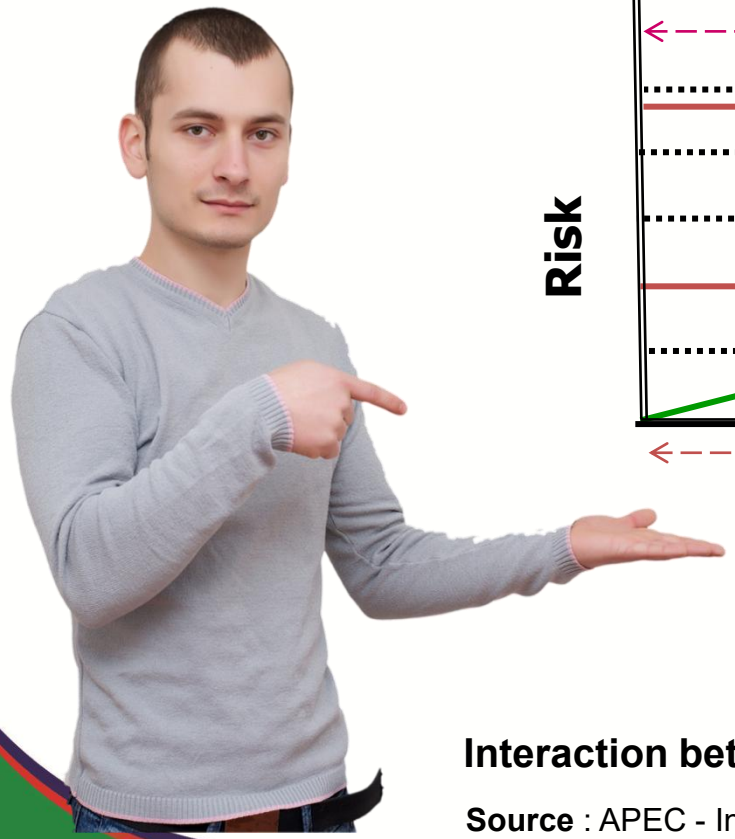
No	Criteria	Total
1	MSMEs	923
2	Big Companies	37
3	Organizations	154

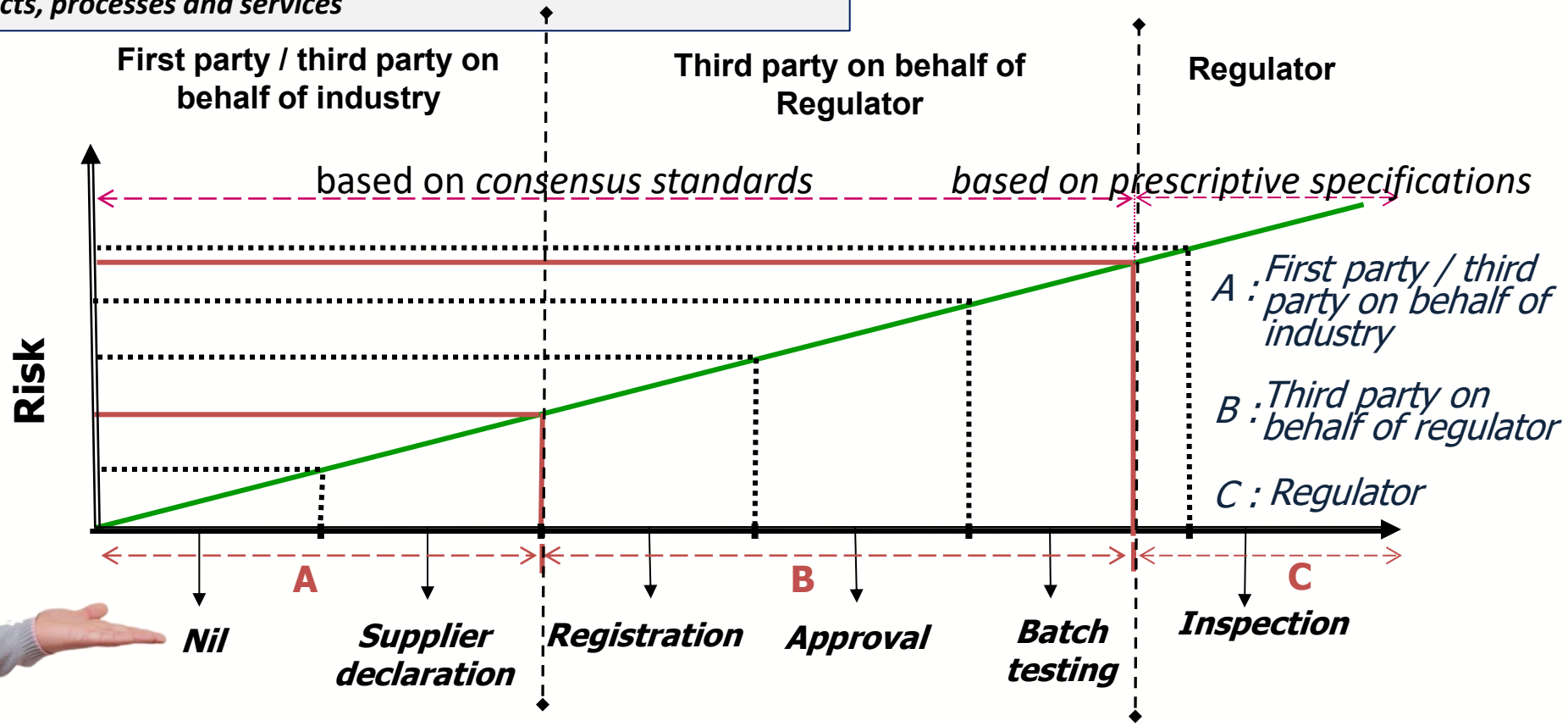
Note: Until September 2025
Source: www.bsn.go.id
pembimbingansni.bsn.go.id

Risk-based Conformity Assessment

Risk based approach in the Good Regulatory Practices

pre-market approval of products, processes and services





Interaction between risk with standard/requirements, conformity assessment procedure and its actor

Source : APEC - Information Notes On Good Regulatory Practice, 2000

International Acceptance of Conformity Assessment

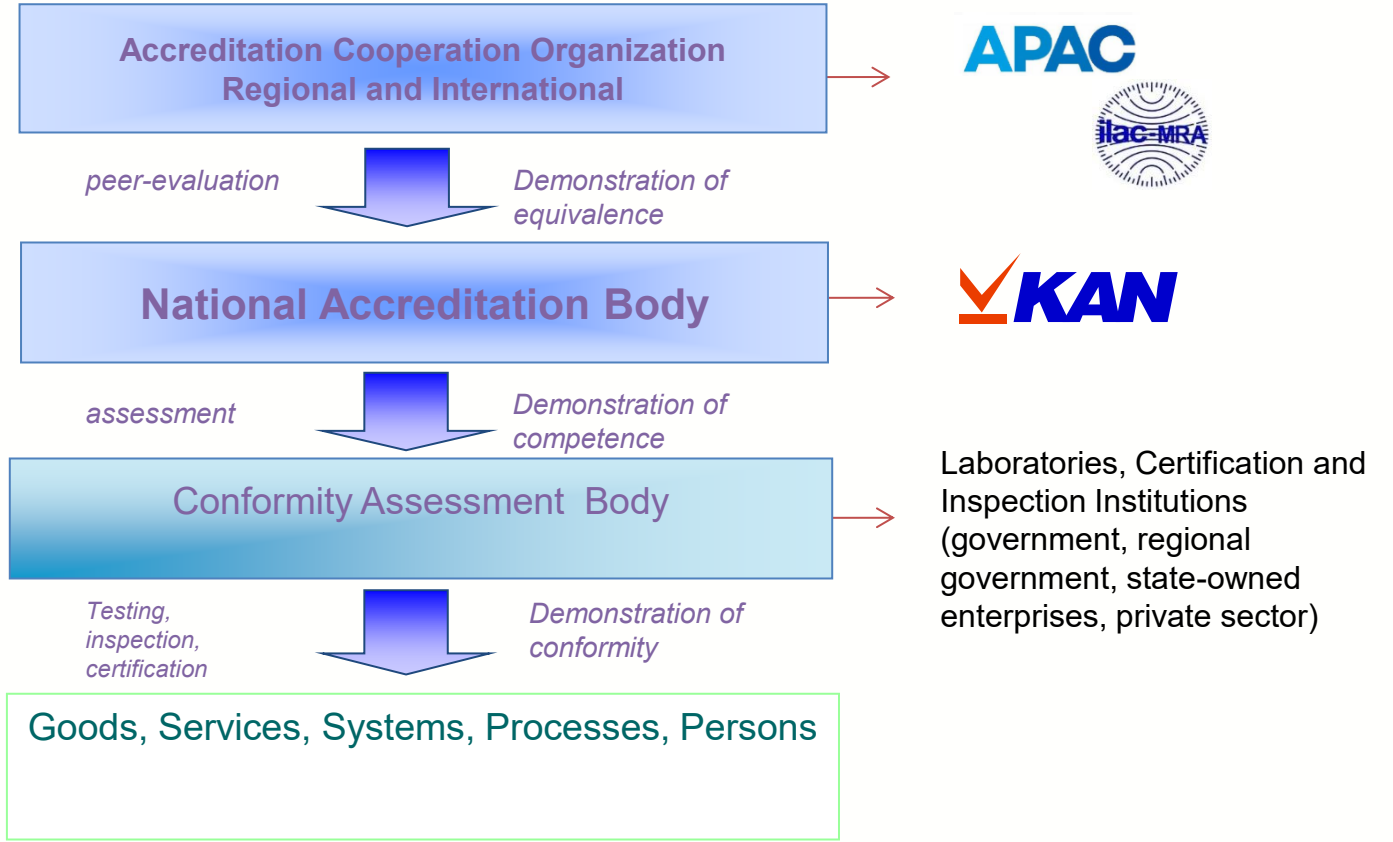
Global Trust Chain of CERTIFICATES

ISO/IEC 17040
(peer-evaluation, peer-assessment)

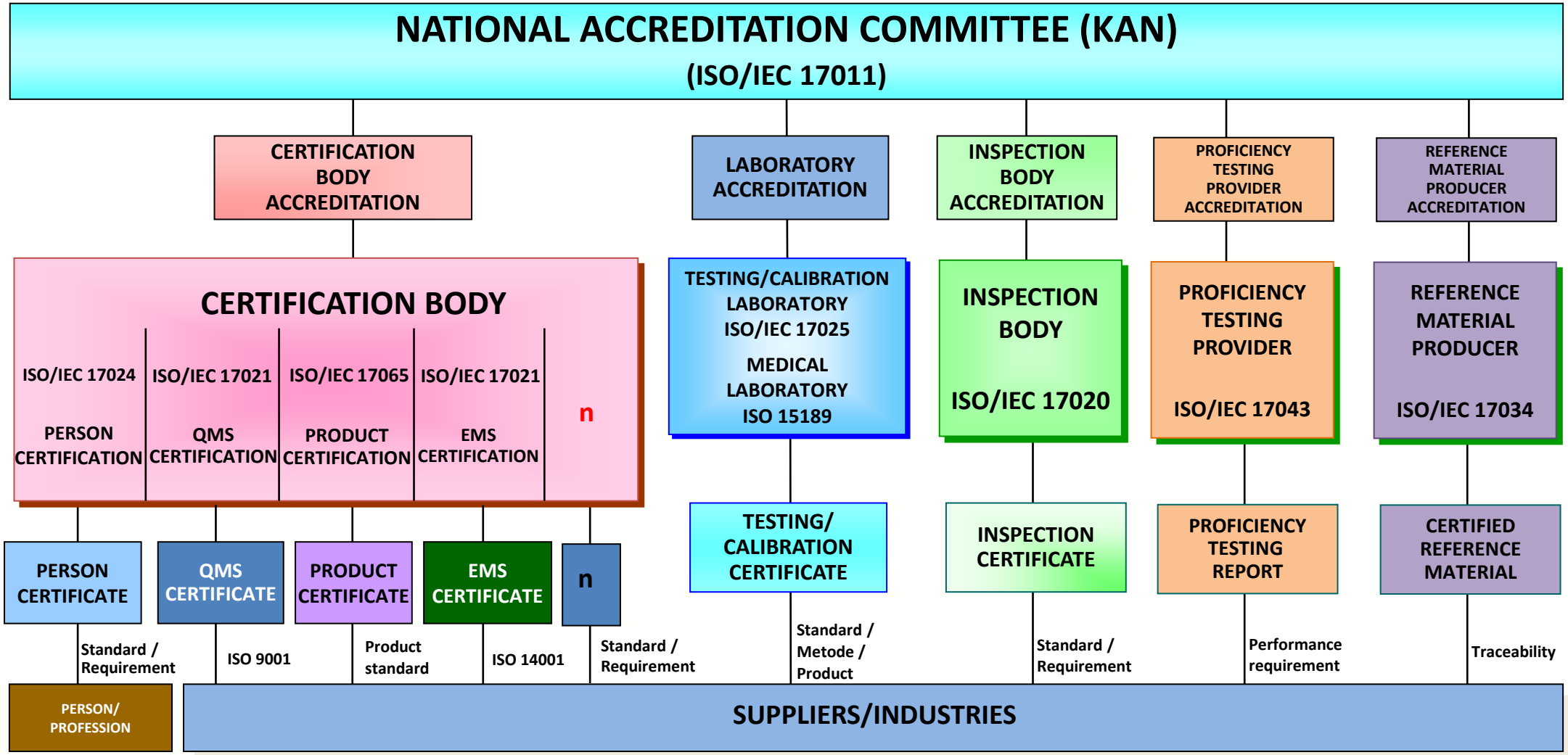
ISO/IEC 17011
*(**accreditation**)*

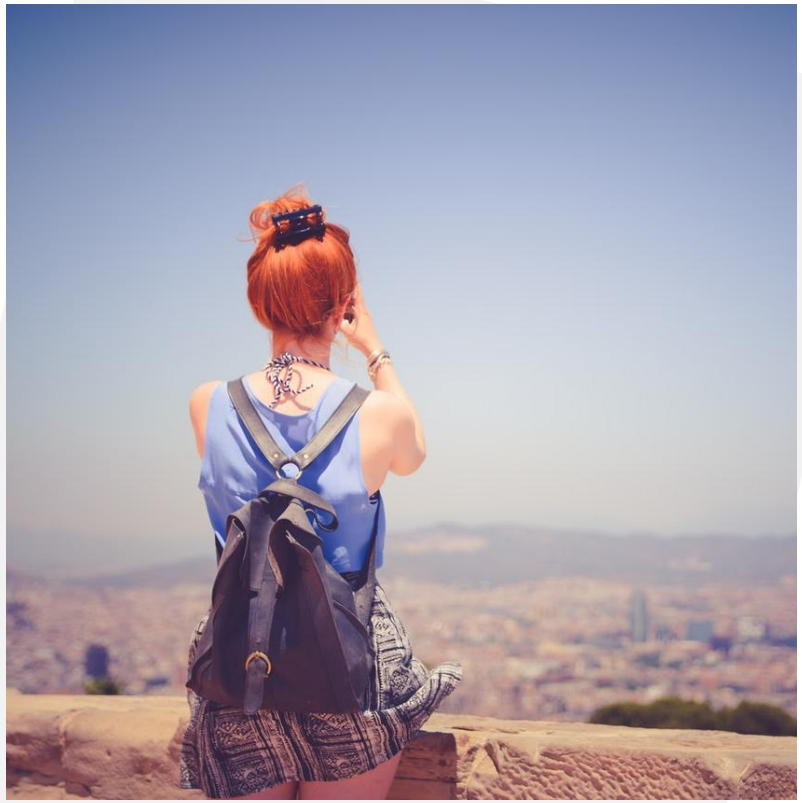
ISO/IEC 17020 (inspection);
ISO/IEC 17021 (audit and certification of management system)
ISO/IEC 17024 (certification of person);
ISO/IEC 17025 (calibration, testing);
***ISO/IEC 17065** (products, processes, services)*

Management system standards (ISO 9001; 22001; 27001; 28001; 50001, 21001 etc); product, process, service, personal competency standards



Accreditation System and Conformity Assessment Process





UPDATES STATUS:
Recent Cyber-Security Standards

INTERNATIONAL STANDARDIZATION

ISO/IEC JTC 1/SC 27
Information security, cybersecurity and privacy protection

252
Published ISO standards

76
ISO standards under development

55
Participating members

37
Observing members

Participating Members [53]

Country/Territory ↑	Acronym
Australia	SA
Austria	ASI
Belgium	NBN
Brazil	ABNT
Finland	SFS
France	AFNOR
Germany	DIN
Iceland	IST
India	BIS
Indonesia	BSN

SUSTAINABLE DEVELOPMENT GOALS

This committee contributes with 45 standards to the following Sustainable Development Goals:

3 4 5 8 9 10 11 12 13 16

Cybersecurity Standardization Policy In Asean

ASEAN DIGITAL ECONOMY FRAMEWORK AGREEMENT (DEFA)

The parties shall work towards harmonizing legal frameworks on technology-neutral, objective, open, transparent, and interoperable cybersecurity standards, taking into consideration the framework of international standard setting organisations where relevant.

ASEAN CYBERSECURITY COOPERATION STRATEGY (2021 – 2025)

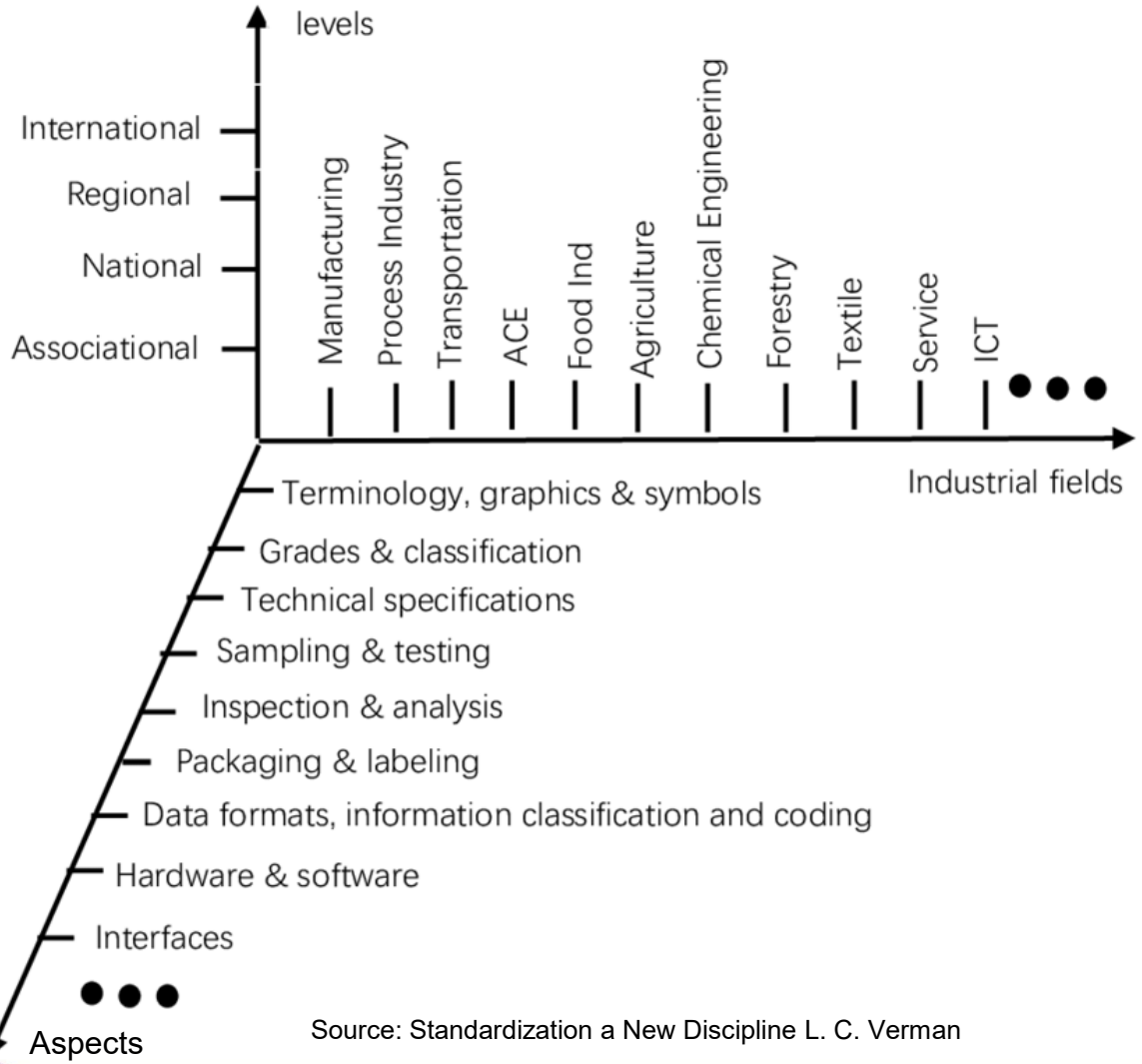
(1) Advancing Cyber Readiness Cooperation;
(2) Strengthening Regional Cyber Policy Coordination;
(3) Enhancing Trust in Cyberspace;
(4) Regional Capacity Building; and
(5) International Cooperation

ASEAN CONSULTATIVE COMMITTEE FOR STANDARDS AND QUALITY (ACCSQ)

ACCSQ establishes comprehensive policies of STRACAP (Standards, Technical Regulations, and Conformity Assessment Procedures), supports the development of Quality Infrastructure, and establishes sectoral & regulatory mechanisms in all priority sectors

Eliminate Technical Barrier to Trade

National Standard Development Policy in Indonesia



Source: Standardization a New Discipline L. C. Verman

BSN Regulation No. 8 Year 2022

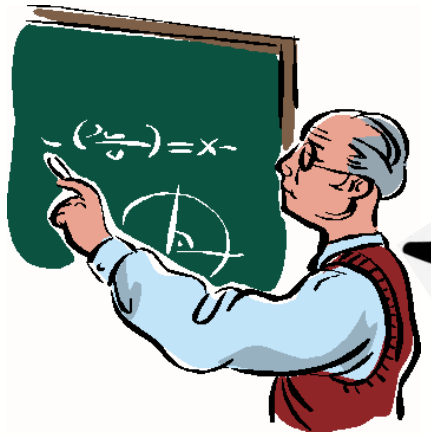
(1) In case, there is an **International Standard** or a **Standard published by another Standards development organization, then:**
   a. SNI is formulated by **adopting International Standards**, or
   b. SNI is formulated by **modifying International Standards**.

(2) **For national interests**, SNI **can be** formulated **through homegrown standards** with refer to **International Standards**

National Technnical Committee

GOVERNMENT

INDUSTRY



EXPERT

CONSENSUS BY STAKEHOLDERS

CONSUMER

TC 35-04 Information Security, Cybersecurity and Privacy Protection

Technical Committee 35-04

WG 1	WG 2	WG 3	WG 4	WG 5
Information security management systems	Cryptography and security mechanisms	Security evaluation, testing and specification	Security controls and services	Identity management and privacy technologies

Number of active SNI until 2025

114 SNIs

→ Online Standards Access
https://akses-sni.bsn.go.id

→ Online SNI Services
https://pesta.bsn.go.id

Note: updated September 2025

GENERAL REQUIREMENTS FOR ACCREDITATION AND CONFORMITY ASSESSMENT BODIES

General Requirements for Accreditation:

- KAN U-01 Rev 2 CAB Accreditation Terms and Conditions
- KAN U-02 Rev.02 Finding Categories
- KAN U-03 Rev 2 Use of KAN Accreditation Symbols
- KAN U-04 Rev 2 Use of the Joint Marks ILAC MRA and IAF MLA by Accredited CAB
- KAN U-05 CAB accreditation - Multi-locations
- KAN U-06 Policy on Traceability
- KAN U-07 KAN Policy for NMI
- KAN U-08 Rev 2 Proficiency Testing Policy

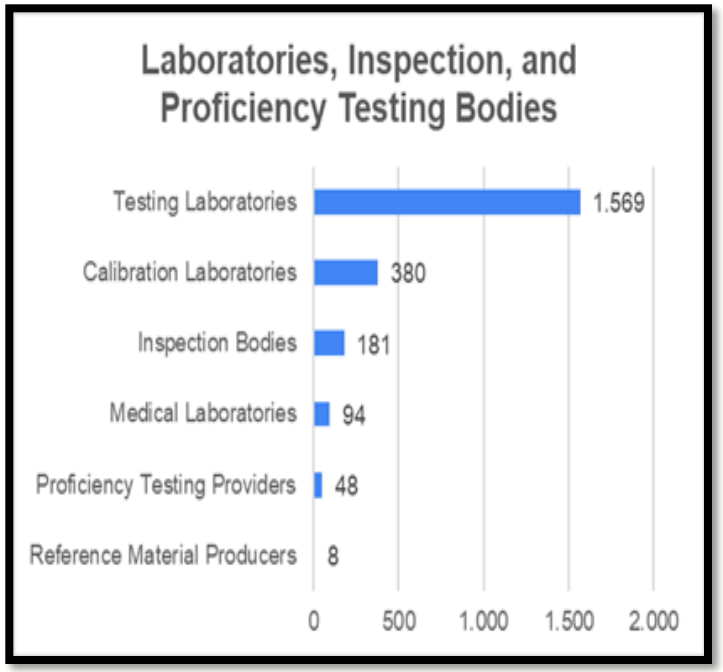
National Accreditation Website

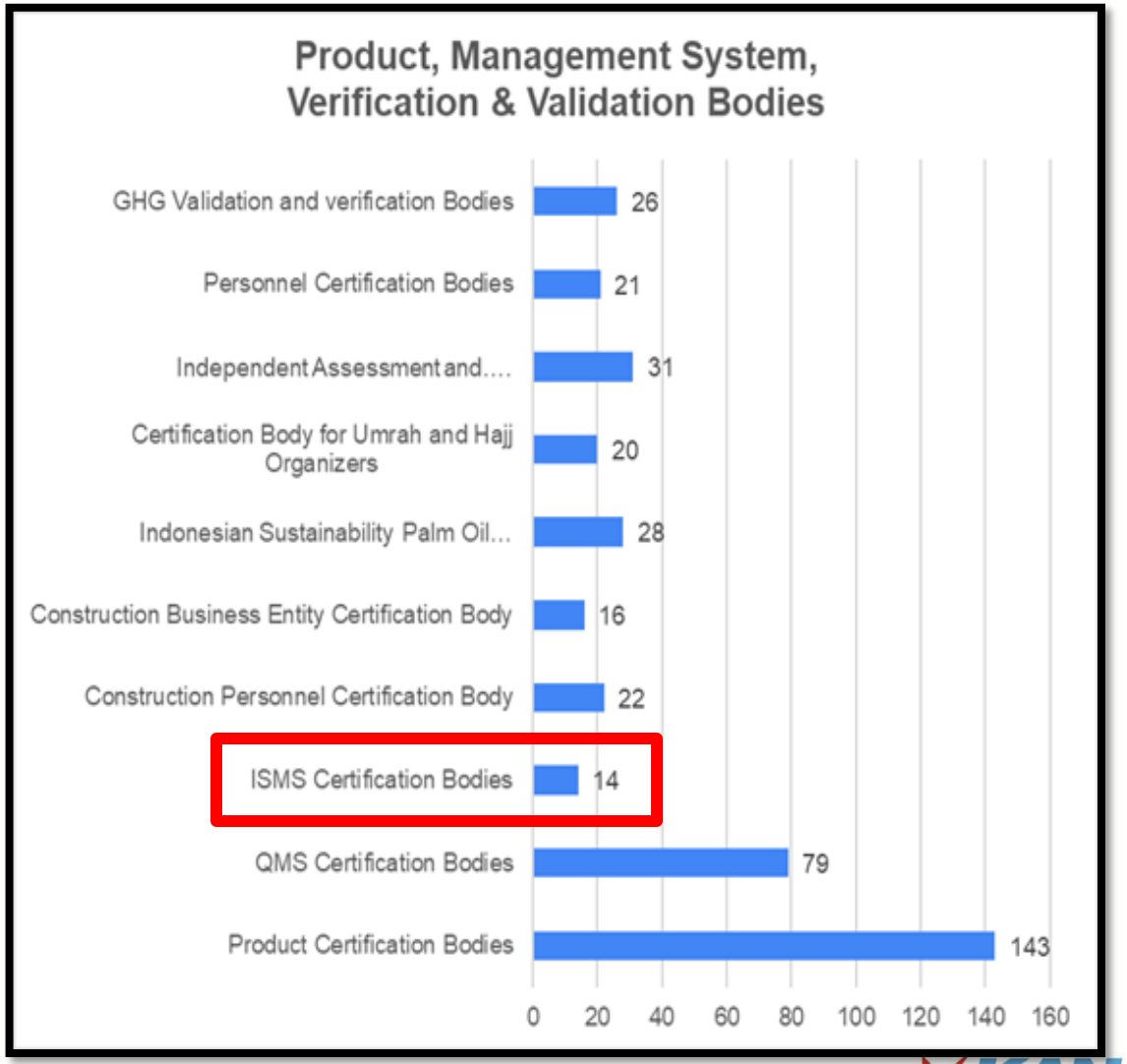
https://kan.or.id

Accreditation Service Website

https://layanan.kan.or.id/register

Note: updated September 2025





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THANK YOU

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