

Compendium of Best Practices of Quality Infrastructure (QI) in APEC Economies

APEC Sub-Committee on Standards and Conformance

July 2026



**Asia-Pacific
Economic Cooperation**



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Contents

Overview	1
Acknowledgement	1
List of Acronyms	2
1. Introduction	8
2. Project Implementation	9
2.1 Policy Dialogue	9
2.2 Outcomes of the Policy Dialogue	9
2.3 Survey on QI in APEC Economies and Results	10
2.4 Organisational arrangements of QI in APEC Economies	10
2.4.1 General Observations	10
2.4.2 Integration of QI Institutions and Arrangements for Coordination	10
2.4.3 Standards Development	11
2.4.4 Metrology (Scientific, Legal and Industrial)	13
2.4.5 Accreditation of Conformity Assessment Bodies	14
2.4.6 Market Surveillance	16
2.4.7 Technical Regulations	16
2.5 Summary of Quality Infrastructure in APEC Economies	17
2.5.1 AUSTRALIA	17
2.5.2 BRUNEI DARUSSALAM	22
2.5.3 CANADA	23
2.5.4 CHILE	26
2.5.5 PEOPLE'S REPUBLIC OF CHINA	27
2.5.6 HONG KONG, CHINA	28
2.5.7 INDONESIA	29
2.5.8 JAPAN	31
2.5.9 REPUBLIC OF KOREA	33
2.5.10 MALAYSIA	35
2.5.11 MEXICO	37
2.5.12 NEW ZEALAND	39
2.5.13 PAPUA NEW GUINEA	41
2.5.14 PERU	42
2.5.15 THE PHILIPPINES	44
2.5.16 RUSSIA	46
2.5.17 SINGAPORE	47
2.5.18 CHINESE TAIPEI	50

2.5.19	THAILAND	51
2.5.20	UNITED STATES	53
2.5.21	VIET NAM	55
3.	Conference of Best Practices of QI in APEC Economies	58
3.1	Theme 1: QI Governance, Strategy and Human Resource Development	58
3.1.1	“Australia's Standards and Conformance Infrastructure” by Mr James JANISSEN (Australia)	58
3.1.2	“Implementation of the Law on Quality Infrastructure in Indonesia” by Mr Yulianti Heru KUSSUMA PUTRA (Indonesia)	62
3.1.3	“Overview of QI & Governance Considerations” by Ms Natalie COHEN (OECD)	65
3.2	Theme 2: Enhancing Service Deliver to All Stakeholders	67
3.2.1	“Development of National Standards of Canada (NSC)” by Mr Muhammad AASHIR (Canada)	67
3.2.2	“Indonesia’s Policy on Standardisation Strategy” by Mr Andri GANDHI (Indonesia)	71
3.2.3	“Deliver Standards as Market Needs – Japan’s Practice” by Mr Mitsuo MATSUMOTO (Japan)	73
3.3	Theme 3: QI and Technical Regulations	76
3.3.1	“The Management Mechanism and Development Procedures of Mandatory Standards in China” by Ms Yali WANG (China)	76
3.3.2	“Designating Inspection and Conformity Assessment Bodies for JIS Certification Mark” by Mr Sho ONISHI (Japan)	80
3.3.3	“Chinese Taipei’s Product Inspection Schemes in the Context of Quality Infrastructure” by Mr Kuan-Lin LIU (Chinese Taipei)	83
3.4	Theme 4: New and Emerging Technologies	87
3.4.1	“The Urge for Standardization in Quantum Technology” by Mr Mingrui ZHENG (China)	87
3.4.2	“Large Language Model Certification for Artificial Intelligence” by Mr. Louis KAO, Taiwan Accreditation Foundation (Chinese Taipei)	91
4	Conclusions and Recommendations	96
	ANNEXES	99
	Annex 1: Questionnaire on Quality Infrastructure of APEC Economies	99
	Annex 2: Conference Agenda	103
	Annex 3: Matrix of QI Institutions in APEC Economies	105
	Annex 4: Post-Conference Survey: Best Practices of Quality Infrastructure (QI) in APEC Economies	119

Overview

The quality infrastructure (QI) is a system comprising the public and private organisations, policies, relevant legal and regulatory frameworks, and practices needed to support and enhance the quality, safety and environmental soundness of goods, services, and processes. It is made up of metrology, standardization, accreditation, conformity assessment, and market surveillance. All these components of the QI must act synergistically with each other to maximize the benefits for an economy.

However, there is no ready-made or “one size fits all” QI that will effectively meet the needs of every economy. QI systems are constituted at the domestic level, and the evolution of these systems responds to the domestic context, needs and specificities. International trends in trade and development also shape an economy’s QI system. International institutions, such as the International Trade Centre (ITC) of the World Trade Organization (WTO) and other members of the Global Network of Quality Infrastructure (INetQI), promote the exchange of experiences between economies. Although each economy needs to develop its own quality infrastructure, the practices and policies of other economies can be inspiring and helpful.

This project intends to provide a platform for sharing experiences and best practices among APEC member economies in implementing their QI and ensuring that it functions to better fulfil their respective needs and objectives. The platform also intends to provide an opportunity for economies to share their experience of how their QI system works with or without any dedicated policy to govern it.

This compendium compiles information on QI in APEC member economies and draws on discussions from the policy dialogue and conference conducted. It includes examples of best practices of implementation of quality infrastructure discussed in the conference and initiatives related to the governance of quality infrastructure in different APEC economies that can be utilised as a reference. It highlights the governance of QI in different APEC economies, as well as challenges of governing their QI. The compendium proposes recommendations regarding initiatives that can be considered by APEC member economies to improve quality infrastructure and strengthen the network between its components, as well as the ways forward for QI to facilitate trade among APEC economies. This document serves as a reference material for APEC member economies to consider different approaches in the governance of QI and to decide on initiatives that work best for their QI. It may also complement the training materials provided by international and regional QI institutions such as [ISO](#), [IEC](#), [BIPM](#), [OIML](#), [Global ACI](#), the SRBs, etc. by providing an overview of QI in APEC.

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List of Acronyms

Acronym	Full Name
AAC Analitica	Association of Analytical Centers (Russia)
A*STAR	Agency for Science, Technology and Research (Singapore)
A2LA	American Association for Laboratory Accreditation
ACB	Accreditation of Certification Bodies Scheme
ACCC	Australian Competition and Consumer Commission
ACCSQ	ASEAN Consultative Committee for Standards and Quality
ACCSQ WG1	ACCSQ Working Group on Standards
ACCSQ WG2	ACCSQ Working Group on Conformity Assessment
ACCSQ WG3	ACCSQ Working Group on Legal Metrology
ACFS	National Bureau of Agricultural Commodity and Food Standards (Thailand)
AIHA LAP	AIHA Laboratory Accreditation Programs, LLC
AIST	National Institute of Advanced Industrial Science and Technology (Japan)
ANAB	ANSI National Accreditation Board (USA)
ANCE	Standardization and Certification Association (Mexico) / Asociación de Normalización y Certificación, S.A. de C.V.
ANSI	American National Standards Institute
ANSTO	Australian Nuclear Science & Technology Organization
AOSC	Accreditation Office for Standards Conformity Assessment Capacity (Viet Nam)
APAC	Asia Pacific Accreditation Cooperation
APEC	Asia-Pacific Economic Cooperation
APLMF	Asia-Pacific Legal Metrology Forum
APMP	Asia Pacific Metrology Programme
ARPANSA	Australian Radiation Protection and Nuclear Safety Agency
ASNITE	Accreditation System of the National Institute of Technology and Evaluation (Japan)
ATIA	Australian Technical Infrastructure Alliance
AVVB	Accreditation of Validation and Verification Bodies Scheme
BDSAC	Brunei Darussalam Standards and Accreditation Centre
BIPM	International Bureau of Weights and Measures
BLA-DSS	Bureau of Laboratory Accreditation, Department of Science Service (Thailand)
BLQS-DMSc	Bureau of Laboratory Quality Standards, Department of Medical Sciences (Thailand)
BoA	Bureau of Accreditation (Viet Nam)
BPJPH	Halal Product Assurance Organizing Body (Indonesia) / Badan Penyelenggara Jaminan Produk Halal
BPS	Bureau of Philippine Standards
BRIDGE	Better Regulation in the Digital Age (OECD initiative)

Acronym	Full Name
BSMI	Bureau of Standards, Metrology and Inspection (Chinese Taipei)
BSN	National Standardization Agency of Indonesia / Badan Standardisasi Nasional
CAB	Conformity Assessment Body
CAICT	China Academy of Information and Communications Technology
CALA	Canadian Association for Laboratory Accreditation
CANACERO	National Chamber of the Iron and Steel Industry (Mexico) / Camara Nacional de la Industria del Hierro y del Acero
CBWM	Central Bureau of Weights and Measures (Department of Internal Trade, Thailand)
CCC	Compulsory Product Certification (China)
CENAM	National Metrology Centre (Mexico) / Centro Nacional de Metrología
CGPM	General Conference on Weights and Measures
CGSR	Consumer Protection (Consumer Goods Safety Requirements) Regulations (Singapore)
CIML	International Committee of Legal Metrology
CIPM	International Committee for Weights and Measures
CIPM MRA	CIPM Mutual Recognition Arrangement
CIS	Commonwealth of Independent States
CNAS	China National Accreditation Service for Conformity Assessment
CNCA	Certification and Accreditation Administration of China
CNIC	National Quality Infrastructure Commission (Mexico) / Comisión Nacional de Infraestructura de la Calidad
CNIS	China National Institute of Standardization
CNS (Canada)	Standards of Canada
CNS (Chinese Taipei)	Standards of Chinese Taipei
COFOCALEC	Council for the Promotion of the Quality of Milk and its derivatives, AC (Mexico) / Consejo para el fomento de la calidad de la leche y sus derivados, A.C
COPANT	Pan American Standards Commission
CPSC	Consumer Product Safety Commission (USA)
CPSR	Consumer Protection (Safety Requirements) Regulations (Singapore)
CSIRO	Commonwealth Scientific and Industrial Research Organisation (Australia)
DGN	General Bureau of Standards (Mexico) / Dirección General de Normas
DI	Designated Institute
DISR	Department of Science, Industry and Research (Australia)
DSM	Department of Standards Malaysia
EASC	Euro-Asian Council for Standardization, Metrology and Certification
EMA	Mexican Accreditation Entity / Entidad Mexicana de Acreditación

Acronym	Full Name
EnterpriseSG	Enterprise Singapore
FAO	Food and Agriculture Organization of the United Nations
FRDC	Fisheries Research and Development Corporation (Australia)
Global ACI	Global Accreditation Cooperation Incorporated
GLP	Good Laboratory Practice
GLP CP	Good Laboratory Practice Compliance Programme
GOST	Go'sudarstvennyy Standart / Government Standard
GOST R	Government Standard of Russia
GRP	Good Regulatory Practice
HKAS	Hong Kong Accreditation Service (Hong Kong, China)
HKCAS	Hong Kong Certification Body Accreditation Scheme (Hong Kong, China)
HKIAS	Hong Kong Inspection Body Accreditation Scheme (Hong Kong, China)
HOKLAS	Hong Kong Laboratory Accreditation Scheme (Hong Kong, China)
HSA	Health Sciences Authority (Singapore)
HSIT	The Halal Standard Institute of Thailand
IAAC	Inter-American Accreditation Cooperation
IAJapan	International Accreditation Japan
IAF	International Accreditation Forum
IANZ	International Accreditation New Zealand
IAS	International Accreditation Service Inc.
IEC	International Electrotechnical Commission
ILAC	International Laboratory Accreditation Cooperation
IMNC/ IMEEC	Mexican Institute for Standardization and Certification, AC / Instituto Mexicano de Normalización y Certificación, A.C.
INACAL	National Quality Institute (Peru) / Instituto Nacional de Calidad
INECC	National Institute of Ecology and Climate Change (Mexico) / Instituto Nacional de Ecología y Cambio Climático
ININ	National Institute for Nuclear Research (Mexico) / Instituto Nacional de Investigaciones Nucleares
INN	National Standardization Institute of Chile
INNTEX	National Institute of Textile Standardization, AC (Mexico) / Instituto Nacional de Normalización Textil
ISO	International Organization for Standardization
ISMS-AC	Information Security Management System Conformity Assessment Centre (Japan)
ITC	Innovation and Technology Commission of Hong Kong, China
JAB	Japan Accreditation Board for Conformity Assessment
JAC	Japan Accreditation Council
JASAFF	Japan Accreditation Service for Agriculture, Forestry and Fisheries
JASANZ	Joint Accreditation System of Australia and New Zealand
JEMIC	Japan Electric Meters Inspection Corporation

Acronym	Full Name
JISC	Japanese Industrial Standards Committee
JIS	Japanese Industrial Standards
JNLA	Japan National Laboratory Accreditation
JSA	Japan Standards Association
KAN	National Accreditation Body of Indonesia / Komite Akreditasi Nasional (Indonesia)
KAB	Korea Accreditation Board (for management system certification bodies)
KAS	Korea Accreditation System (for product certification bodies)
KC	Korea Certification Mark (for products)
KATS	Korean Agency for Technology and Standards (National Standards Body of Korea)
KOLAS	Korea Laboratory Accreditation Scheme
KRISS	Korea Research Institute of Standards and Science
KS	Korean Industrial Standard
KSA	Korea Standards Association (an affiliate body of KATS)
KTC	Korea Testing and Certification
KTL	Korea Testing Laboratory
KTR	Korea Testing and Research Institute
LLM	Large Language Model
MAAC, A.C.	Mexicana de Acreditación (Mexico) (accreditation of management system certification bodies)
MAFF	Ministry of Agriculture, Forestry and Fisheries (Japan)
MBIE	Ministry of Business, Innovation and Employment (New Zealand)
METI	Ministry of Economy, Trade and Industry (Japan)
MIBAS	Malaysia Inspection Bodies Accreditation Scheme
MITI	Ministry of Investment, Trade and Industry (Malaysia)
MLA	Multilateral Agreement
MLAP	Measurement Laboratory Accreditation Programme (Japan)
MRA	Mutual Recognition Arrangement
MSL	Measurement Standards Laboratory (New Zealand)
MyPTP	Malaysia Proficiency Testing Providers Accreditation Scheme
NAB	National Accreditation Body
NAC	National Accreditation Council (Thailand)
NATA	National Association of Testing Authorities (Australia)
NIMT	National Institute of Metrology Thailand
NISIT	National Institute of Standards and Industrial Technology (Papua New Guinea)
NITE	National Institute of Technology and Evaluation (Japan)
NMC	National Metrology Centre (Singapore)
NMI (general)	National Metrology Institute
NMI (Australia)	National Metrology Institute (Australia)

Acronym	Full Name
NMIM	National Metrology Institute Malaysia
NMIJ	National Metrology Institute of Japan
NML	National Metrology Laboratory (the Philippines)
NORMEX	Mexican Society for Standardization and Certification / Sociedad Mexicana de Normalización y Certificación, S.C.
NRC	National Research Council of Canada
NSB	National Standards Body
NSTDA	National Science and Technology Development Agency (Thailand)
NVLAP	National Voluntary Laboratory Accreditation Programme (USA)
NYCE	Standardization and Certification (Mexico) / Normalización y Certificación, S.C
OECD	Organisation for Economic Co-operation and Development
OIC	Organization of Islamic Cooperation
OIML	International Organization of Legal Metrology
ONNCCE	National Body for Standardization and Certification of Construction and Building, SC (Mexico) / Organismo Nacional de Normalización y Certificación de la Construcción y Edificación, S.C.
OWM	NIST Office of Weights and Measures (USA)
PAB	Philippine Accreditation Bureau
PASC	Pacific Area Standards Congress
PHLAS	Primary Healthcare Laboratories Accreditation Scheme
PIF	Pacific Islands Forum
PISC	Pacific Islands Standards Committee
PJLA Inc.	Perry Johnson Laboratory Accreditation Inc. (USA)
PNGLAS	Papua New Guinea Laboratory Accreditation Scheme
PQII	Pacific Quality Infrastructure Initiative
PROFECO	Federal Consumer Protection Agency (Mexico) / Procuraduría Federal del Consumidor
PSABD	Brunei Darussalam Standards and Accreditation Centre / Pusat Standard dan Akreditasi Brunei Darussalam
QCVN	Viet Nam Technical Regulation
QI	Quality Infrastructure
Q&A	Questions and Answers
RISSB	Rail Industry Safety and Standards Board (Australia)
RLMO	Regional Legal Metrology Organisation
RMO	Regional Metrology Organisation
SAC (Singapore)	Singapore Accreditation Council
SAC (China)	Standardization Administration of China
SAMM	Skim Akreditasi Makmal Malaysia / Malaysia Laboratories Accreditation Scheme
SAMR	State Administration for Market Regulation (China)

Acronym	Full Name
SCC	Standards Council of Canada
SCL	Standards and Calibration Laboratory of Hong Kong, China
SCSC	Sub-Committee on Standards and Conformance
SDO	Standards Development Organization
SI	International System of Units
SIM	Sistema Interamericano de Metrologia / Inter-American Metrology System
SNC	National Quality System (Peru) / Sistema Nacional para la Calidad
SMIIC	Standards and Metrology Institute for Islamic Countries
SMIIC AC	SMIIC Accreditation Council
SMIIC MC	SMIIC Metrology Council
SMIIC SMC	SMIIC Standardization Management Council
SNI	Indonesian National Standard / Standard Nasional Indonesia
SRBs	Specialist Regional Bodies
STAMEQ	Commission for Standards, Metrology and Quality of Viet Nam
TAF	Taiwan Accreditation Foundation
TBT	Technical Barriers to Trade
TCVN	Viet Nam Standard
TIS	Thai Industrial Standard
TISI	Thai Industrial Standards Institute
UAF	United Accreditation Foundation
UL	Underwriters Laboratories
UVM	Metrological Verification Unit (Peru) / Unidad de Verificación Metrológica
VACI	Viet Nam Institute of Accreditation
VIAS	Viet Nam Inspection Body Accreditation Scheme
VICAS	Viet Nam Certification Accreditation Scheme
VILAS	Viet Nam Laboratory Accreditation Scheme
VILAS-MED	Viet Nam Accreditation Scheme for Medical Testing Laboratory
VIPAS	Viet Nam Proficiency Testing Providers Accreditation Scheme
VIRAS	Viet Nam Reference Materials Producers Accreditation Scheme
VLAC	Voluntary EMC Laboratory Accreditation Centre Inc. (Japan)
VMI	Viet Nam Metrology Institute
VSACCC, LLC	Voluntary System of Accreditation and Confirmation of Compliance (Russia)
VSQI	Viet Nam Standards and Quality Institute
WMO	Weights and Measures Office of the Competition and Consumer Commission of Singapore (CCS)
WTO	World Trade Organization

1. Introduction

The quality infrastructure (QI) of an economy provides critical support to trade, economic development, technical regulation and services that ensure quality, safety, health, and consumer and environmental protection. A robust QI system comprises components of metrology, standardization, conformity assessment, accreditation, and market surveillance working in a coordinated manner to stimulate industrial development, productivity, trade competitiveness and innovation within the economy. The establishment of an effective QI increases market efficiency by supporting quality assurance services and helping to ensure effective and efficient implementation of technical regulations and enable greater integration of the APEC economies into the regional and international trading system.

Typically, QI systems comprise a mix of public and private organizations, policies, and relevant legal and regulatory frameworks. APEC member economies have a varied developmental history and have developed their own unique solutions to provide metrology, standardization, conformity assessment, accreditation and market surveillance services to serve their needs. International developments such as the World Trade Organization (WTO) Technical Barriers to Trade (TBT) and Sanitary and Phytosanitary (SPS) agreements have additionally shaped the development of QI both internationally and within individual APEC economies. The QI infrastructure in APEC economies are well connected through the [Specialist Regional Bodies](#) (SRBs) for standards, [metrology](#) and accreditation which are in turn linked to the counterpart global institutions through a network of recognition and cooperation arrangements. The SRBs are [Pacific Area Standards Congress \(PASC\)](#), [Asia Pacific Accreditation Cooperation \(APAC\)](#), [Asia Pacific Metrology Programme \(APMP\)](#) and [Asia-Pacific Legal Metrology Forum \(APLMF\)](#).

This project was aimed at providing an opportunity for the sharing of experiences and best practices on the implementation of QI through a Virtual Policy Dialogue held on 3 October 2024, and a Conference on Best Practices on Quality Infrastructure in APEC Economies that was held virtually on 20 and 21 January 2026.

2. Project Implementation

2.1 Policy Dialogue

A two-hour policy dialogue was held virtually on 3 October 2024 as a prelude to the conference. The discussions during the dialogue focused primarily on APEC economies' expectations for the conference as well as comments and additional inputs from the economies on the topics to highlight. It also served as a forum to get consensus on the conference agenda as part of the final preparations.

Agenda of the policy dialogue:

- i. Proposed themes guiding the Conference;
- ii. Content, format and organisation of the conference;
- iii. Discussion on draft Questionnaire and Summary of QI in APEC economies;
- iv. Discussion on the compendium of best practices; and
- v. Summary of discussions and recommendations.

2.2 Outcomes of the Policy Dialogue

The discussions during the Policy Dialogue resulted in the following decisions on the conference and progressing the project:

- i. Four themes (Annex 1) were identified for the conference. These themes reflect the common elements of Quality Infrastructure in APEC economies. The presentations and discussions would address best practices in each thematic area:
 - Theme 1 - QI Governance, Strategy and Human Resource Development
 - Theme 2 - Enhancing Service Delivery to All Stakeholders
 - Theme 3 - QI and Technical Regulations
 - Theme 4 - New and Emerging Technologies
- ii. It was planned that the conference would be organized in the following manner:
 - APEC member economies, and SRBs will be invited to volunteer to share experiences on their respective best practices for QI as implemented.
 - The results of the survey on APEC Infrastructure and responses to the questionnaire on QI in APEC economies will be shared.
 - There should be three to four presentations from APEC member economies that are related to each of the 4 themes.
 - A question and answer (Q&A) session following presentations on each theme.
- iii. Compendium of Best Practices should be compiled and documented. It was proposed that the compendium contain:
 - Summary of the QI in APEC member economies
 - Best practices as presented by the speakers at the conference,
 - Conclusions and recommendations from the project.

2.3 Survey on QI in APEC Economies and Results

A pre-conference questionnaire (Annex 2) was circulated to confirm the data in the summary of QI and will provide the context for identifying the best practices in an APEC economy. As part of the preconference preparations, a preliminary summary of QI infrastructure in APEC was developed based on publicly available information. Each member economy was requested to verify and make the appropriate corrections in case of errors and omissions. This summary was subsequently updated and is in Annex 6. It was updated based on responses received from Australia; Canada; China; Hong Kong, China; Papua New Guinea; Peru; Singapore and Thailand up to 31 December 2025.

2.4 Organisational arrangements of QI in APEC Economies

2.4.1 General Observations

- There are as many models of the QI as there are APEC economies.
- QI institutions are predominantly public (government) institutions in APEC with some exceptions. The highest involvement of the private sector is in the accreditation element.
- Standards, metrology, conformity assessment and accreditation bodies within the QI have developed as independent entities over the past decades with the development of international trade practices and technical advances. APEC economies have developed their own unique solutions, ranging from informal arrangements to establishing legislation, to address the need for enhancing coordination and linkages between the inter-dependent elements of the QI.

2.4.2 Integration of QI Institutions and Arrangements for Coordination

The data indicates diverse practices aimed at enhancing the level of integration of the elements of the QI. The level of integration is highest in APEC economies where domestic laws have defined the QI as a whole. In other economies, individual legislative instruments have been enacted to define each element of the QI.

APEC economies that have established laws and institutions that govern the overall QI are Chile; Mexico; New Zealand; Peru and Russia. Other economies have established mechanisms to enable some form of coordination. The Australian Technical Infrastructure Alliance (ATIA), an organisation jointly established by the key players involved in standards, metrology and accreditation of conformity assessment bodies in the economy, undertakes this role. Other economies have resorted to a range of measures for this purpose. These measures include establishing an Order on the National Quality Infrastructure in Brunei Darussalam (BD), establishing the State Administration for Market Regulation (SAMR) in China (PRC), designating special agencies for this role such as the Innovation and Technology Commission (ITC) in Hong Kong, China (HKC), Badan Standardisasi Nasional (BSN) in Indonesia (INA), Ministry of Economy, Trade and Industry (METI) in Japan (JPN), Korean Agency for Technology and Standards (KATS) in Korea (ROK), the Standards Executive in New Zealand and Joint Accreditation Services Australia New Zealand (JASANZ) (NZ) and the Bureau of Standards, Metrology and Inspection (BSMI) in Chinese Taipei. Other economies did not appear to have defined formal arrangements for coordination.

2.4.3 Standards Development

The standards element of the QI in APEC economies have the following features:

- All except two of the National Standards Bodies (NSBs) are government institutions. The two exceptions are the US NSB, American National Standards Institute (ANSI) and the Australian NSB, Standards Australia.
- All APEC member economies except one publish national standards. Hong Kong, China (HKC) does not publish its own standards but relies on international and other external standards for regulation and trade.
- Most APEC economies combine standards development with one or more functions of the QI within the same institution. These other functions include metrology, accreditation, conformity assessment, elements of technical regulation and market surveillance. The clear exception is Australia and New Zealand where Standards Australia and Standards New Zealand are solely responsible for standardization.
- There is a trend in standards development activity to partner, either wholly or in specific sectors, with external organisations, with a centralised agency playing the coordinating role. Six (6) economies were noted to have established arrangements for designating or otherwise recognizing Standards Development Organisations (SDOs). These are Australia; Canada; Japan; Republic of Korea; Singapore and the United States. The degree of authority assigned to these SDOs is noted to be varied. Canada was noted to provide to the ability to some SDOs that have met specified criteria to self-declare the standards that they develop as National Standards of Canada (NSC), while Australia, through Standards Australia, accredits external SDOs to develop Australian Standards (AS) where they meet defined governance and technical requirements.
- In several APEC economies, the same parent organisations are responsible for developing standards and technical regulations. Such arrangements are observed in Mexico; New Zealand; the Philippines; Russia and Viet Nam, with variations in the implementation.

The Pacific Area Standards Congress (PASC) is one of the APEC SRBs which is an independent and voluntary organisation of Pacific Rim National Standards Bodies. PASC has 25 member economies and four Working Groups that convene to share expertise and resources on separate strategic areas of standardisation in the region. As of 2026, eighteen (18) APEC economies (excluding Brunei Darussalam; Chile and Chinese Taipei) are members of PASC. PASC's primary role is to support the region's engagement in the international standardisation system for the advancement of economic, societal, and environmental well-being.

Besides PASC, there are also other international and regional organisations of standards bodies in which APEC economies are also members of, such as the ASEAN Consultative Committee for Standards and Quality (ACCSQ), the Pan American Standards Commission (COPANT), the Pacific Islands Standards Committee (PISC) and the Standards and Metrology Institute for Islamic Countries (SMIIC).

[ACCSQ](#) is the primary body responsible for eliminating technical barriers to trade (TBT) across Southeast Asia by harmonizing standards, regulations, and conformity assessment procedures. Out of eleven (11) ASEAN Member States, seven (7) APEC economies are members of ACCSQ as of 2026, namely Brunei Darussalam; Indonesia; Malaysia; the Philippines; Singapore; Thailand and Viet Nam. The ACCSQ has established product working groups for identified priority sectors in ASEAN, which are automotive, electrical and electronics, prepared foodstuff, rubber-based products, building and construction, digital trade, medical devices, pharmaceuticals, cosmetics, traditional medicines and health supplements. Working groups on standards, conformity assessment, and legal metrology are also in place to develop policies that cuts across product sectors for elimination of TBT. ACCSQ Working Group on Standards (ACCSQ WG1) coordinates the harmonisation of standards among ASEAN Member States to align with international standards and/or each other's national standards.

[COPANT](#) has supported the consolidation of National Standards Bodies throughout the Pan American region and has promoted the adoption and harmonization of standards that facilitate trade, innovation, and quality of life in the Americas. It has been a space for technical cooperation, coordination with international organizations and capacity building for its members, promoting training initiatives, best practices and regulatory convergence. Out of thirty-one (31) Pan-American economies, Canada; Chile; Mexico; Peru and the United States are five (5) APEC economies that are members of COPANT as of 2026.

[PISC](#) is an emerging regional standards body, established under the auspices of the Pacific Islands Forum (PIF) as part of the broader Pacific Quality Infrastructure Initiative (PQII). As of 2026, eighteen (18) PIF members have joined the PISC including three (3) APEC economies, namely Australia; New Zealand and Papua New Guinea. Its core purpose is to strengthen regional coordination on standards and conformance by providing a mechanism for Pacific Island economies to develop, harmonise, adopt, and promote technical standards that reflect regional priorities and conditions.

[SMIIC](#) is an institute developing necessary mechanisms for the Organization of Islamic Cooperation (OIC) members which aims at setting new standards in the Member States and eliminating technical barriers to trade consequently increasing the trade among them. It also aims to establish conformity assessment schemes for the purpose of expediting exchange of materials, manufactured goods and products among Member States beginning with mutual recognition of certificates. SMIIC also seeks for achieving uniformity in metrology, laboratory testing and standardization activities among Member States and ensuring education and training and providing technical assistance to the OIC Members in the domain of standardization and metrology. [SMIIC Standardization Management Council \(SMC\)](#) is the organ assigned the task of development of OIC/SMIIC standards in cooperation with Member States. SMIIC SMC coordinates and oversees the performance of the Technical Committees (TCs). Malaysia and Indonesia are members of SMIIC while Russia and Thailand are observers in SMIIC as of 2026.

2.4.4 Metrology (Scientific, Legal and Industrial)

The responsibility for domestic metrology functions (scientific and legal) of all APEC economies is undertaken by governmental bodies. Industrial metrology which covers the provision of calibration and verification services to the manufacturing and production sector, is usually provided by accredited calibration laboratories, with a large number in the private sector. In ten (10) APEC economies, responsibility for both scientific and legal metrology lies in the same authority, whilst in eleven (11) economies, these functions are carried out by separate authorities. The ten economies where the same authority is responsible for both functions are Australia; Brunei Darussalam; Japan; Papua New Guinea; Peru; the Philippines; Chinese Taipei and the United States. The economies where separate bodies are responsible for these functions are Canada; Chile; China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Mexico; Russia; Singapore; Thailand; and Viet Nam. Several economies have appointed designated institutes (agencies responsible for specific peak metrology capabilities). Examples for this Australia for ionising radiation, Japan for AC power, and Canada for measurement of pressurised natural gas flow. One (1) economy (Chile) has chosen to confine the government's role to coordination and has established a network of metrology laboratories to be responsible for technical functions of scientific metrology.

There are linkages between APEC economies and Regional Metrology Organizations (RMOs) as well as Regional Legal Metrology Organizations (RLMOs) covering the APEC region. Many APEC economies are also members of Asia-Pacific Metrology Programme (APMP) through either full or associate membership. Nearly all APEC economies are members of the Asia-Pacific Legal Metrology Forum (APLMF) through full or corresponding membership.

As well as its core Technical Committees in each measurement field, APMP has established multi-disciplinary Focus Groups covering Clean Water, Climate Change and Clean Air, Digital Transformation, Energy Efficiency, Food Safety, Medical Metrology, and, most recently, Semiconductors. As of 2026, thirty-three (33) organizations across sixteen (16) APEC economies (excluding Canada; Chile; Mexico; Peru and the United States) are Full Members of APMP. While not being a Full Member, one organization in the United States is an Associate Member of APMP.

Similarly, APLMF has active working groups in Goods Packed by Measure, Metrological Control Systems, Weighing Instruments, OIML Certification System, Quality Measurement of Agricultural Products, and Utility Measures. As of 2026, eighteen (18) APEC economies (excluding Chile; Mexico and Russia) are Full Members of APLMF. While not being a Full Member, Russia is a Corresponding Member of APLMF.

Collectively, APMP and APLMF provide an interface through which NMIs in the region contribute to the international measurement system, reduce TBTs, and respond to local challenges and needs.

Other international and regional metrology organisations which some APEC economies are members of include [Inter-American Metrology System \(SIM\)](#) and ACCSQ Working Group on Legal Metrology (ACCSQ WG3) and SMIIC Metrology Council (SMIIC MC).

SIM's mission is to promote and support an integrated measurement infrastructure in the Americas, which enables each member's National Metrology Institutes (NMIs) to stimulate innovation, competitiveness, trade, consumer safety and sustainable development by

effectively participating in the international metrology community. As of 2026, members of SIM include organisations in Canada; Chile; Mexico; Peru and the United States.

ACCSQ WG3 focuses on harmonization of weights and measures in ASEAN Member States to ensure the accuracy and uniformity of measurement instruments (like scales and fuel dispensers) used in trade and consumer protection.

[SMIC MC](#) acts as the operational organ for cooperation between metrology authorities from OIC Member States. This cooperation involves activities in the field of scientific, legal and industrial metrology.

2.4.5 Accreditation of Conformity Assessment Bodies

Most APEC economies' accreditation bodies are government institutions. Some economies have appointed non-government bodies while others have a mixed system of government and non-government bodies providing accreditation services. Eight (8) APEC economies have single National Accreditation Bodies (NABs) that cover the accreditation of laboratories, certification bodies, inspection bodies and validation and verification bodies. These are Brunei Darussalam; Chile; China; Hong Kong, China; Indonesia; Malaysia; and Papua New Guinea; Peru; the Philippines; Singapore and Chinese Taipei. The remaining economies have multiple accreditation bodies. These are Australia; Canada; Japan; Republic of Korea; Mexico; New Zealand; Russia; Thailand; the United States and Viet Nam. In economies that have multiple accreditation bodies, these bodies usually specialise in specific types of accreditation services and in the sectors that they serve. However, in some economies, such as in the United States, there is an overlap both in the types of services and the sectors covered resulting in a degree of competition. Another distinguishing feature is the separation of laboratory accreditation services from the accreditation of certification activities. Most accreditation bodies provide accreditation services for laboratories and certification, inspection, and validation and verification bodies. However, there are several bodies, especially in APEC economies that have multiple accreditation bodies that offer services only to laboratories or serve specific disciplines of conformity assessment.

APEC recognizes the Asia Pacific Accreditation Cooperation (APAC) as one of four APEC SRBs that support the work of the APEC SCSC. APAC was established on 1 January 2019 by the amalgamation of two former regional accreditation cooperations – the Asia Pacific Laboratory Accreditation Cooperation (APLAC) and the Pacific Accreditation Cooperation (PAC). APAC is the regional accreditation cooperation for the Asia Pacific region and is recognised by the International Accreditation Forum (IAF) and the International Laboratory Accreditation Cooperation (ILAC).

APAC's primary role is to manage and expand a mutual recognition arrangement (MRA) among accreditation bodies in the Asia Pacific region. The MRA facilitates the acceptance of conformity assessment results (e.g. test reports, test certificates, inspection reports, and certification) across the region and with other regions around the world. Conformity assessment results that are produced by conformity assessment bodies (CABs) that have been accredited by one APAC MRA signatory are accepted by all the other APAC MRA signatories. This mutual recognition and acceptance of conformity assessment results reduces the need to undertake duplicate testing, inspection or certification, thus saving time and money, increasing economic efficiency and facilitating international trade.

As of 2026, forty-one (41) organizations across seventeen (17) APEC member economies (excluding Brunei Darussalam; Chile; Papua New Guinea and Peru) have become Full Members of the Asia Pacific Accreditation Forum (APAC), one of APEC SRBs. One (1) organization in Papua New Guinea; 1 organization in Russia and two (2) organizations in the United States are Associate Members in APAC, whereas 2 organizations in Australia; 1 organization in Brunei Darussalam; 2 organizations in the Republic of Korea; 2 organizations in Russia; 1 organization in Chinese Taipei and 1 organization in Thailand are APAC Affiliates.

Other international and regional accreditation forums which some APEC economies are members of include Inter-American Accreditation Cooperation (IAAC), ACCSQ Working Group on Conformity Assessment (ACCSQ WG2) and SMIIC Accreditation Council (SMIIC AC).

[IAAC](#) is a regional association of accreditation bodies and other organizations interested in conformity assessment in the Americas. Its mission is to promote cooperation between accreditation bodies and interested parties in the Americas, focused on the development of conformity assessment structures to achieve the improvement of products, processes and services. IAAC members include organizations in Canada; Chile; Mexico; Peru and the United States.

[SMIIC AC](#) is the organ carrying out activities aimed at the establishment of an accreditation scheme in the OIC Member States. It is responsible for supporting actions for establishing a sound accreditation system OIC-wide and raise awareness of accreditation concept within the Member States.

ACCSQ WG2 is made up of the National Accreditation Bodies of ASEAN Member States which evaluates the capability the conformity assessment bodies in the member states to ensure competency and mutual acceptance of conformity assessment results.

2.4.6 Market Surveillance

Market Surveillance systems extend beyond the QI as the surveillance activities also cover societal concerns on issues not linked to standards, metrology, conformity assessment such as to check against various types of deceptive practices, false claims, or non-conformance with various regulations. The link between the QI and market surveillance is most significant when standards are referenced in regulation and third-party conformity assessment is leveraged on by regulatory authorities. A number of APEC economies have empowered institutions within the QI to conduct market surveillance. Examples for this include Malaysia where regulators have appointed a conformity assessment body to implement regulations and similar arrangements are in place in Japan. Some APEC economies have centralised market surveillance. Examples are practices in China; Korea; the Philippines; and Chinese Taipei. In other economies (such as in Australia; Mexico; New Zealand and the United States), centralised agencies outside the QI take on the coordinating role for a broad spectrum of general consumer safety related market surveillance. This is often supplemented by specific surveillance activities undertaken by specialist regulatory agencies. In such cases too there is often a reliance on third party conformity assessment bodies to support market surveillance, such as in Japan and in Malaysia.

2.4.7 Technical Regulations

Technical regulations are mandatory requirements specified by economies that include provisions that are beyond the scopes of QI institutions. Besides technical requirements that may be based on standards and implemented through conformity assessment procedures, these include administrative measures, prohibitions and rules covering various aspects of products life cycle. These requirements are usually beyond the scope of authority of most QI institutions. However, it should be noted that in some APEC economies, certain QI institutions act as regulatory authorities to implement technical regulation within their scope of technical expertise. As there is an interdependence between QI institutions and regulatory authorities, several APEC economies (China; Japan; Republic of Korea; Mexico; the Philippines; Russia; Chinese Taipei; and Thailand) have defined formal links and relationships between the two. In other economies, the coordination and relationships between the QI institutions and the regulators appear to have developed organically and have been dependent on specific situations within the economies.

2.5 Summary of Quality Infrastructure in APEC Economies

Introductory Note

This summary of QI in APEC economies is intended to be included in this compendium at the conclusion of this project. The content has been compiled by the Department of Standards Malaysia as the Project Overseer and based on a survey of information available in the public domain and additional information provided by APEC member economies upon review of the draft version. APEC SCSC focal points were requested to review the content of the draft for accuracy and confirm the content prior to publication of this compendium upon conclusion of the conference.

2.5.1 AUSTRALIA

Australia's QI comprises of the National Measurement Institute, Australia (NMI) which is responsible for scientific and trade related measurement; Standards Australia, the economy's standards development body; the National Association of Testing Authorities (NATA), the economy's accreditor of conformity assessment bodies involved in testing and calibration and other areas; and the Joint Accreditation System of Australia and New Zealand (JASANZ) that accredits certification bodies, inspection bodies and validation and verification bodies to conformity assessment schemes.

The four core bodies, JASANZ, NATA, NMI and SA have established the Australian Technical Infrastructure Alliance (ATIA) to collaborate and coordinate Australia's Quality Infrastructure for metrology, standards, accreditation, and conformity assessment.

The Australian government has signed memoranda of understanding with Standards Australia, NMI, NATA and JASANZ to define Government's policy relationship with these organizations. NMI is part of the Department of Industry, Science and Resources (DISR) of the government. JASANZ is a body jointly established by the governments of Australia and New Zealand by an agreement (Treaty). The latter was part of a broad range of policy initiatives between the two economies that commenced in the 1980s and culminated in the signing in 1996 of the Trans-Tasman Mutual Recognition Arrangement (TTMRA) between New Zealand, all state/territories of Australia, and the Australian Commonwealth. A major outcome of the TTMRA was the use of binational adoptions of international standards, through 'AS/NZS' designation, and from which harmonised conformity assessment schemes can be achieved. The impetus for the TTMRA was to address regulatory impediments to trade in the form of differing standards, duplicative testing and certification requirements, and differing regulatory requirements for registered occupations.

A. STANDARDS

Standards Australia

Standards Australia is an independent, non-government organisation recognised by the Australian Government as Australia's peak standards organisation. It is supported by the Australian Government to meet Australia's need for contemporary, internationally aligned standards and related services.

The work of Standards Australia enhances Australia's economic efficiency, international competitiveness, innovation and community trust, and contributes to a safe, resilient and sustainable society.

Standards Australia's processes are open, transparent and consensus based. This unbiased standards development process ensures that all competing interests are considered. Standards Australia works with international and Specialist Regional Bodies and the government on issues of conformance and assessment. Standards Australia's roles are recognised in its MoU with the Australian Government.

The organisation operates as a public company. More than 80 of Australia's leading industry, government and consumer organisations form the membership of the Standards Australia, supporting its governance and representing key stakeholder interests. The role of the organisation is to facilitate and manage the development, adoption and maintenance of Australian Standards and other related solutions (including Handbooks, Guides, Technical Specifications and Technical Reports) through a consensus-based process.

Australia looks to adopt international standards to the maximum extent possible. Only in the absence of an appropriate existing International Standard, and after an assessment that the proposed Standard will not be anti-competitive, will a committee proceed to prepare a draft for a new Australian Standard. Draft standards are then made available for public comment.

DISR and Standards Australia work together to ensure Australia's views are considered in the development of international standards and their subsequent adoption as Australian standards. While Standards Australia supports the development and adoption of standards, it is not part of the government and is not responsible for enforcing compliance or certification regarding standards.

Standards Australia is responsible for the accreditation of Standards Development Organisations (SDOs) through the Standards Development and Accreditation Committee, ensuring they meet defined governance and quality requirements to develop Australian Standards. Its primary role in this context is to encourage and accredit organisations to develop Australian standards of credibility and integrity for the net benefit of the Australian community.

Standards Australia is a founding and leading member of the Pacific Area Standards Congress (PASC) and has supported the establishment and ongoing development of the Pacific Islands Standards Committee (PISC), the Pacific Island economies regional standards body. Standards Australia also collaborates closely with the government in the standards and conformance activities of APEC, the ASEAN - Australia - New Zealand Free Trade Agreement (AANZFTA), the Regional Comprehensive Economic Partnership (RCEP), the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), and the Pacific Agreement on Closer Economic Relations Plus (PACER Plus), as well as through

bilateral free trade agreements, supporting alignment, market access and regional standards cooperation.

In Australia, standards can either be voluntary or mandatory. Compliance with Australian standards is only legally required if they are referenced in regulation, legislation or in a contract. Standards Australia has a catalogue of approximately 6,000 Australian standards, one third of which are referenced in Australian, State or Territory regulations (mandatory standards).

Examples of mandatory Australian standards include [electrical safety](#), [consumer product safety standards](#) and [building and plumbing standards](#). A detailed list of current mandatory product standards can be found on the Product Safety Australia [website](#).

B. METROLOGY

National Measurement Institute, Australia

NMI is responsible for the administration of the [National Measurement Act](#) and advising the Australian Government on measurement issues.

It is a division of the Department of Industry, Science and Resources, and is accountable to the Minister for Industry and Science. NMI's Chief Metrologist has functions conferred under the [National Measurement Act](#).

NMI realises, develops, maintains, and disseminates Australia's peak measurement standards for physical, chemical and biological measurements. It also conducts world-class research into new measurement techniques and is responsible for Australia's legal metrology framework.

NMI has a role in supporting international metrology via its signatory role in the two inter-governmental treaties of measurement: The Convention of the Metre and the OIML. NMI fulfils Australia's responsibilities under both treaties, providing expert representation in peak scientific committees and supporting activities of the CIPM and the technical committees in legal metrology established under the OIML.

On behalf of Australia, NMI participates in the international frameworks established under these treaties, the Mutual Recognition Arrangement of the International Committee for Weights and Measures (CIPM MRA) and the OIML Certification System (CS). This ensures Australia's measurement standards are comparable to those of Australia's major trading partners.

NMI supports Australia's other standards and conformance organisations by contributing measurement expertise in relevant activities. For example, their experts work with NATA in the accreditation of laboratories and proficiency testing. NMI experts are also members of Australia's delegations to the international standards setting committees of the ISO, IEC and the ITU, on behalf of Standards Australia.

This body administers Australia's trade measurement laws and regulates measuring instruments like petrol bowsers and supermarket scales to help protect consumers. This benefits Australians by providing a regulatory framework that ensures measurement-based transactions are fair and accurate. Australia's trade measurement transactions are estimated to be worth more than AUD1.4 trillion each year. NMI has a domestic network of [trade measurement inspectors](#) who audit businesses to assess their trade measurement regulatory

compliance. They take appropriate action where breaches of the law occur. NMI also issues licences to third parties, commonly known as [servicing licensees](#), who help to ensure businesses are using accurate and compliant measuring instruments.

C. LABORATORY ACCREDITATION (TESTING & CALIBRATION LABORATORIES)

National Association of Testing Authorities (NATA)

The National Association of Testing Authorities is recognised as Australia's domestic authority for the accreditation of testing laboratories and related activities.

The Australian Government recognises NATA's authority in the accreditation of laboratories, inspection bodies, and related services through a Memorandum of Understanding. NATA is also recognised as the economy's compliance monitoring authority for facilities performing activities in accordance with the OECD's [Principles of Good Laboratory Practice](#).

NATA's accreditation activities interface with the broader technical infrastructure. Many NATA accreditations utilise standards prepared by Standards Australia **and ISO** as the basis for testing, measurement and inspection activities. NATA's accreditation of calibration facilities supports the role of the NMI in facilitating the dissemination of Australia's measurement standards. NATA's laboratory accreditation activities also provide confidence in the testing and measurement data used in various certification systems accredited by JAS-ANZ.

NATA's competence as an accreditation provider is recognised through its full member status as a signatory to Global Accreditation Cooperation Incorporated (Global ACI) and Asia Pacific Accreditation Cooperation (APAC) Mutual Recognition Arrangements.

NATA is governed by a board drawn from accredited facilities and government, industry and professional body stakeholders. Its accreditation activities are supported by technical advisory committees. Members of these committees have current and relevant scientific, engineering or technical knowledge of specific activities for which NATA offers accreditation. Members are also drawn from accredited facilities, professional bodies, academic institutions, regulators and other stakeholders.

NATA accreditation provides formal recognition that a conformity assessment body is competent to carry out specific tasks. The core of NATA accreditation is the third party, objective, peer assessment process at a scientific and technical level that provides assurance of the facility's capability to produce reliable data on which sound decisions can be made. NATA has access to nearly 3000 technical experts who volunteer their time to accompany NATA's scientific staff to evaluate the technical competence of applicants and accredited facilities.

NATA provides accreditation for facilities performing activities in:

- Biobanking
- Calibration and testing
- Human pathology testing
- Inspection
- Medical imaging
- Proficiency testing schemes
- Reference material
- Sleep disorder services

D. ACCREDITATION OF CERTIFICATION BODIES

Joint Accreditation System of Australia and New Zealand (JAS-ANZ)

The Joint Accreditation System of Australia and New Zealand was established via Treaty in 1991 by the Australian and New Zealand governments. Its role is to strengthen the trading relationship between the two economies, and internationally with their partners.

The [JASANZ Treaty](#) (since updated in 1998) established the Governing Board, Technical Advisory Council and Accreditation Review Board.

JASANZ activities are structured around five distinct disciplines: management systems certification, product/process/service certification, personnel certification, inspection (non-laboratory), and validation and verification of claims including for greenhouse gas.

Under these five disciplines, JASANZ recognises over 120 public and proprietary schemes that have been developed by or in conjunction with public authorities and industry groups. Over 130 certification and inspection bodies are accredited, with the largest number concentrated in management systems. JASANZ accredited certificates are issued in over 130 economies to address the need for authoritative evidence of conformity.

A high proportion of JASANZ's effort centres on five areas of economic and social activity:

- Business Processes and Innovation
- Health and Human Services
- Food and Biological Systems
- Product Performance and Safety
- Environmental Management

A key role for JASANZ is establishing international arrangements with other economies to accept one another's attestations such as certificates and statements of conformity in inspection reports, removing a technical barrier to trade. An important mechanism for this is membership in international organisations which provide the framework of Multi-Lateral Recognition Arrangements (MLAs) and MRAs under which signatories will recognise each other's accredited certificates and inspection reports.

JASANZ is an active member of international accreditation organisations including Global ACI and the corresponding relevant regional body, Asia Pacific Accreditation Cooperation (APAC). In addition, JASANZ is appointed by the AU National Committee for the IEC, Standards Australia, as the AU Member Body for the IEC CA Systems, IECEE, IECQ, IECEx, and IECRE, which oversee agreement groups of Certification Bodies and Test Laboratories undertaking conformity assessment in electrotechnical fields. Formal cooperation arrangements exist between the IEC CA Systems, Global ACI, and their mutual peak technical standards committee, CASCO (Committee on Conformity Assessment, CASCO).

This collaboration improves international consensus on the content, rigour, and interoperability of conformity assessment schemes, and reduces the potential for re-certification or re-inspection of goods and services between regulatory jurisdictions of Australia and New Zealand, and the wider region.

E. MARKET SURVEILLANCE

The responsibility for market surveillance is distributed across several government agencies. responsible for monitoring and regulating the safety of different types of products. Product safety regulation for general consumer products is a shared responsibility between the Australian Competition and Consumer Commission (ACCC) and the states and territories agencies. The ACCC has an oversight and coordinating role.

2.5.2 BRUNEI DARUSSALAM

Brunei Darussalam Standards and Accreditation Centre (BDSAC) in the Ministry of Finance and economy, Brunei Darussalam is the main body responsible for the quality infrastructure. It has the roles of leading, facilitating and promoting the development of standards and conformance activities, regulating and carrying out inspection and calibration services in accordance to Weights and Measures and serving as the “National Inquiry Point” in matters related to WTO Technical Barrier to Trade (WTO).

A. STANDARDISATION

Pusat Standard dan Akreditasi Brunei Darussalam (PSABD) [also known as the Brunei Darussalam Standards and Accreditation Centre (BDSAC)] under the Ministry of Finance and Economy facilitates and coordinates the development of National and International Standards with the support of the National Standards Committee and the National Standards Council. Brunei Darussalam is a correspondent member of ISO and participates in the IEC Affiliate Member programme.

B. METROLOGY

The Measurement Standards Laboratory under the Ministry of Finance and Economy, Brunei Darussalam plays the role as the National Metrology Institute (NMI) and is responsible for the establishment and maintenance of Brunei Darussalam’s highest metrology reference standards traceable to the International System of Units (SI).

The Weights and Measures Unit, which is under the Industry and Business Ecosystem Division the Ministry of Finance and Economy, is the authority responsible for enforcing the Weights and Measures Act 1983 which focuses on domestic trade measurements. Legal metrology in other fields are enforced by different authorities such as the Healthcare Technology Department, Road Transport Department, Royal Customs and Excise, Department of Electrical Services, Department of Land Survey, Authority of Building and Construction Industry, Department of Water Services, Department of Scientific Services, Energy Down Stream Division and Agriculture & Agrifood Department.

C. ACCREDITATION

Pusat Standard dan Akreditasi Brunei Darussalam (PSABD), which also serves as the National Accreditation Body, provides and promotes accreditation services to conformity assessment bodies operating in Brunei Darussalam. It is an Affiliate Member of APAC. PSABD offers accreditation under its Management System Accreditation Scheme, Laboratory Accreditation Scheme, and Inspection Bodies Accreditation Scheme.

D. MARKET SURVEILLANCE

The responsibility for Market Surveillance is distributed across designated regulatory agencies.

2.5.3 CANADA

In Canada, there is no formal or centralized body responsible for maintaining and coordinating the Quality Infrastructure. The elements of Canada's QI, i.e. metrology, conformity assessment, accreditation, and standards development, are fulfilled independently through various federal bodies and non-governmental organizations. These include the National Metrology Institute at the National Research Council of Canada (NRC), the legal metrology laboratories at Measurement Canada, and the domestic standardization and accreditation services at the Standards Council of Canada, as well as several Global ACI, ILAC, IAF, and APAC recognized non-governmental accreditation organizations and the accredited conformity assessment bodies.

A. STANDARDISATION

Canada has a decentralized domestic standards system, which includes the Standards Council of Canada (SCC); standards development organizations (SDOs); conformity assessment bodies (CABs); federal, provincial/territorial, and municipal authorities; industry; non-governmental organizations; and technical experts. The Standards Council of Canada (SCC) is a federal Crown corporation established by the *Standards Council of Canada Act* in 1970 to promote efficient and effective voluntary standardization in Canada.

SCC does not develop standards itself. Instead, SCC accredits organizations that are engaged in standards development and maintains a public record of those accredited Standards Development Organisations (SDOs).

SCC has accredited several SDOs to develop "National Standards of Canada" or NSC. The public listing of these SDOs is [available online](#).

SCC-accredited SDOs submit their standards to SCC for evaluation against the criteria of an NSC. Since 2017, SCC-accredited SDOs have been able to apply to SCC for self-declaration status, which allows them to self-declare compliance with SCC requirements for the publication of their standards as NSCs. This means that, for SDOs that have obtained self-declaration status, SCC does not have to review and approve its standards prior to their publication as NSCs.

SCC represents Canada in both ISO and IEC and is a regional member of the Forum of the IEC National Committees of the Americas (FINCA), the Pacific Area Standards Congress (PASC), Comisión Panamericana de Normas Técnicas (COPANT), and Association Réseau Normalisation et Francophonie (RNF). SCC works domestically, including with industry, to advance new technologies and strengthen value chains through standardization and focuses on several areas of work, including agriculture, climate and sustainability, diversity and inclusion, digital technology, global market access, and transportation.

B. ACCREDITATION

Accreditation in Canada is distributed amongst several accreditation bodies, including government, private and not-for-profit organizations.

As part of the central level of government, the Standards Council of Canada (SCC) offers accreditation programmes for: certification of persons (ISO/IEC 17024), good laboratory practices (OECD Principles of Good Laboratory Practice), inspection bodies (ISO/IEC 17020), management systems (ISO/IEC 17021-1), medical testing laboratories (ISO 15189), product, process, and service (ISO/IEC 17065), proficiency testing providers (ISO/IEC 17043), reference material producers (ISO 17034), testing and calibration laboratories (ISO/IEC 17025), verification and validation (ISO/IEC 17029, ISO 14065, ISO 14066), and accreditation of SDOs.

Accreditation programmes are also offered by:

- Accreditation Canada Diagnostics (AC Diagnostics) for medical laboratories (ISO 15189);
- Canadian Association for Laboratory Accreditation Inc. (CALA) for testing and calibration laboratories (ISO/IEC 17025);
- College of Physicians and Surgeons of British Columbia (CPSBC) for medical laboratories (ISO 15189);
- Committee on Accreditation for Evaluation of Quality (CAEQ) for product certification (ISO/IEC 17065).

The accreditation of calibration laboratories (ISO/IEC 17025) is the shared responsibility of the National Research Council of Canada (NRC) Calibration Laboratory Assessment Service (CLAS) and an accreditation body—either the Canadian Association for Laboratory Accreditation (CALA) or the Standards Council of Canada (SCC).

At the international level, Canadian accreditation bodies are signatories of the following:

- Full members of [Global ACI](#)
- Full members of the [APAC MRA](#)
- Full members of the [ILAC MRA](#)
- Full member of the [IAF MLA](#)

C. METROLOGY

Scientific Metrology

The National Research Council of Canada (NRC) is a Departmental Corporation as listed in Schedule II of the Financial Administration Act of the Government of Canada. It was established in 1916. NRC's mandate is set out in the *National Research Council Act*. It is currently operating under the *Department of Innovation, Science and Economic Development Canada*.

Canada is a signatory to the Metre Convention and NRC, as the National Metrology Institute, enacts the responsibilities. The NRC is responsible for Canada's primary standards of physical and chemical measurements as formally established by Orders in Council, the *National Research Council Act* and the *Weights and Measures Act*. Responsibilities given to the NRC through these two acts are currently housed in the Metrology Research Centre (aka NRC Metrology).

The NRC Metrology is the signatory of the International Committee for Weights and Measures (CIPM) Mutual Recognition Arrangement (MRA), representing Canada as the National Metrology Institute (NMI), with designated institute TransCanada Calibrations Ltd (TCC) for measurement of pressurised natural gas flow.

In its role as the economy's domestic measurement standards laboratory, the NRC Metrology represents Canada on the CIPM consultative committees and on the committees of its Regional Metrology Organization, the Inter-American Metrology System (SIM), as well as Calibration related committees at the ILAC, and the Inter-American Accreditation Cooperation (IAAC).

The IAAC, SIM, and COPANT are all members of the Quality Infrastructure Council of the Americas (QICA).

Industrial Metrology

Industrial Metrology takes place across Canadian Industry, supported by government and non-government Calibration Laboratories accredited to ISO/IEC 17025.

Legal Metrology

Measurement Canada, an agency of the *Department of Innovation, Science and Economic Development Canada* is responsible for ensuring accuracy in the selling of measured goods, developing and enforcing the laws related to measurement accuracy, approving and inspecting measuring devices and investigating complaints of suspected inaccurate measurement. Legal requirements for traceability are set in the *Weights and Measures Act*, the *Electricity and Gas Inspection Act* and the *National Research Council Act* and the following regulations

- Weights and Measures Regulations.
- Electricity and Gas Inspection Regulations
- Consumer Packaging and Labelling Regulations

D. CONFORMITY ASSESSMENT

Conformity assessment procedures to ensure compliance with technical regulations are generally specified in each technical regulation. Canada can accept first-, second- or third-party conformity assessments, depending on the product. The type of certification accepted also depends on factors such as risks and the particular characteristics of the sector. For example, Measurement Canada ensures conformity assessment to legal metrology regulation through its own inspectorate as well as through an Authorized Service Provider program. This program authorizes organizations to inspect and certify devices pursuant to the *Electricity and Gas Inspection Act* and the *Weights and Measures Act*, under strict conditions.

E. MARKET SURVEILLANCE

The responsibility for market surveillance is maintained by Measurement Canada as the designated regulatory agency. Beyond metrology, other government organizations also contribute to Canada's approach to market surveillance, namely post-market surveillance.

2.5.4 CHILE

The Quality Infrastructure in Chile is centrally coordinated by Instituto Nacional de Normalización División de Normas (INN) (National Standardization Institute). It oversees standardisation, metrology, and accreditation. INN is a non-profit foundation, set up by an agency of the Chilean government, the Economic Development Agency (CORFO).

It is governed by a Council made up of seven members, from the public and private sectors, appointed by CORFO.

A. STANDARDISATION

Chile's national standards are developed by the Standards Division of INN. INN represents Chile in regional and international standardisation.

It has a unique process for selecting and initiating new standards developments. This process requires the initiator to submit a proposal to INN and, upon acceptance, enter into a contract to pay INN the costs for developing the standard.

B. METROLOGY

Metrology in Chile is regulated by Supreme Decree No. 215 of 2009 which recognizes the INN as the coordinating and supervising body of the designated laboratories and members of the National Metrology Network (RNM). INN coordinates the RNM and represents Chile at the international and regional levels - General Conference on Weights and Measures (CGPM), International Bureau of Weights and Measures (BIPM) and Inter-American Metrology System (SIM).

Chile has a distributed network of Metrology Laboratories designated by the Ministry of Economy, Development and Reconstruction coordinated centrally by INN.

C. ACCREDITATION:

The Accreditation Division of INN manages Chile's Accreditation System. This is a voluntary accreditation service in which several regulatory agencies define requirements to authorize and recognize certification bodies, inspection bodies and laboratories. INN represents Chile in international and regional accreditation organisations and recognition agreements.

D. CONFORMITY ASSESSMENT

In most cases, conformity assessment is the responsibility of bodies accredited by the INN, although in some cases, the ministry or government authority that issued the technical regulation carries out the verification using its own facilities.

E. MARKET SURVEILLANCE

This is a distributed function across respective regulatory agencies.

2.5.5 PEOPLE'S REPUBLIC OF CHINA

The State Administration for Market Regulation (SAMR), a ministerial-level administration under the State Council, oversees and coordinates the Quality Infrastructure for China. It is responsible for implementing laws related to quality, standardization, measurement, certification, accreditation, and market supervision.

A. STANDARDISATION

The National Standardization Administration of China (SAC) is authorized to undertake unified management, supervision and overall coordination of standardization work in China, which mainly includes 1) the management of mandatory national standards as well as voluntary national standards and the economy's Technical Committees; 2) the management of sector standards, local standards, association standards and enterprise standards; and 3) the management of standardized scientific research as well as the implementation, publicity and promotion of standards. In addition, SAC represents China to join ISO, IEC, PASC and other international and regional standardization organizations, carries out bilateral and multilateral cooperation in standardization, and promotes the adoption of international standards. The specific work of the SAC is undertaken by Standards Innovative Management Department and Standards Technical Management Department of SAMR.

The China National Institute of Standardization (CNIS) is affiliated to SAMR and provides an all-round technical support of SAC's relevant management functions. CNIS is the economy's leading domestic standardization research body, and a non-profit R&D institution. CNIS is committed to research on standardization strategies, general theories, principles, methodologies, and standard systems.

B. METROLOGY

The Department of Metrology of SAMR is the central government body responsible for overseeing the metrology-related activities in China. The National Institute of Metrology (NIM) is affiliated to SAMR and fulfils the responsibilities of the economy's metrological needs. SAMR represents China in international metrology organizations like OIML and BIPM and regional metrology organizations APLMF and APMP.

C. ACCREDITATION

The China National Accreditation Service for Conformity Assessment (CNAS), an affiliated body, is the economy's accreditation body and represents China in regional and international accreditation bodies and participants of recognition agreements.

D. CONFORMITY ASSESSMENT

The Department of Certification and the Accreditation, and the Department of Testing and Inspection of SAMR, also designated as National Certification and Accreditation Administration of China (CNCA), are responsible for policies and coordination related to certification, accreditation, testing, and inspection. This includes the responsibility for the general administration and implementation of the compulsory product certification system (CCC mark) and the voluntary certification schemes. The CCC scheme is implemented by CNCA designated certification bodies.

E. MARKET SURVEILLANCE

The responsibility for market surveillance is distributed across several government agencies.

2.5.6 HONG KONG, CHINA

The Innovation and Technology Commission (ITC) is the main body responsible for Hong Kong, China's Quality Infrastructure and fulfils the economy's functions of Standards, Accreditation and Metrology. The Hong Kong Accreditation Service (HKAS) and the Standards and Calibration Laboratory (SCL), which operate under the Quality Services Division of the ITC, serve as the economy's accreditation body and as the focal point for metrology respectively. ITC provides secretariat support to the Hong Kong Council for Testing and Certification (HKCTC) which is a body that advises the Government on the overall development strategies for the testing and certification sectors.

A. STANDARDISATION

Hong Kong, China has no central body for the development of standards or laws for regulating standards. Regulatory authorities reference relevant international or other standards as necessary in technical regulations as needed. The ITC promotes the use of internationally accepted standards. Some professional associations or institutions in Hong Kong, China

develop voluntary standards, which are based on the needs or concerns identified by the industry and consumers.

B. METROLOGY

The Standards and Calibration Laboratory (SCL) is the custodian of physical metrology reference standards in Hong Kong, China. The SCL provides accredited calibration services to users of measurement standards and measuring instruments to ensure measurement accuracy and metrological traceability to the International System of Units (SI). Hong Kong, China is an associate member of the General Conference on Weights and Measures (CGPM) of the Metre Convention and the SCL is a signatory to the Mutual Recognition Arrangement (MRA) drawn up by the International Committee for Weights and Measures (CIPM).

C. ACCREDITATION

Hong Kong Accreditation Service (HKAS) provides accreditation for conformity assessment bodies located in Hong Kong, China, through the Hong Kong Laboratory Accreditation Scheme (HOKLAS), Hong Kong Certification Body Accreditation Scheme (HKCAS) and Hong Kong Inspection Body Accreditation Scheme (HKIAS) respectively. HKAS represents Hong Kong, China in regional and international organisations and recognition agreements.

D. CONFORMITY ASSESSMENT

Conformity assessment activities are undertaken by government departments, public organisations and service providers from the private sector. Competence is demonstrated through third party accreditation provided by HKAS. Mandatory conformity assessment is required on fire service installation and equipment, dangerous goods, builders' lifts, tower working platforms, lifts, escalators, and telecommunications equipment.

E. MARKET SURVEILLANCE

The market surveillance is distributed across regulatory agencies

2.5.7 INDONESIA

Badan Standardisasi Nasional (BSN), a central government institution, is responsible for coordinating and facilitating Quality Infrastructure activities related to standardization, metrology and conformity assessment in Indonesia. BSN is also the contact point for cooperation with international standard-setting bodies and is the enquiry point and notification body responsible for the implementation of the WTO TBT Agreement. It has established the "National Policy on Standardization Strategy 2015-2025". This policy provides guidance for technical regulations, voluntary standards and related activities for the economy's development.

A. STANDARDISATION

The Committee for Standard Development Policy (KKPS) is responsible for standards development policy recommendations on the National Program for Standard Development. The KKPS consists of experts and representatives from government/regulators, and consumer and producer associations. Technical committees (TCs) within specific ministries are responsible for drafting standards within their respective spheres of competence; the technical committee chairs and secretariats are appointed by the BSN. TCs comprise representatives from government, consumer associations, experts and industry.

B. METROLOGY

Indonesian Primary Standards are maintained by the Directorate of Metrology and Indonesian Science Institute. These laboratories are coordinated by BSN. Legal Metrology is managed by the Directorate of Metrology, Directorate General of Consumer Protection and Trade Compliance, Ministry of Trade. The agency implements the Legal Metrology Act No. 2, 1981 specifies the legal units, pattern/type approval, verification, pre-packaged products, the sanction and the surveillance of measuring instruments.

C. ACCREDITATION

The National Accreditation Body (Komite Akreditasi Nasional (KAN)) is responsible for accrediting conformity assessment bodies (CABs), including laboratories, inspection bodies and certification bodies. Where Indonesian Standards (SNIs) are mandatory, conformity assessment is undertaken by KAN-accredited CBs, designated by the respective regulators. The KAN is a signatory of the International Laboratory Accreditation Cooperation (ILAC) and Asia Pacific Accreditation Cooperation (APAC) mutual recognition agreements (MRAs), and the International Accreditation Forum (IAF) multilateral recognition agreements (MLAs).

D. CONFORMITY ASSESSMENT

A network of accredited test laboratories, calibration laboratories, medical laboratories, and proficiency testing providers, inspection bodies; product certification bodies; quality management certification bodies; environmental management certification bodies; accredited anti-bribery certification bodies; information security management certification bodies; energy management certification bodies; and food safety management certification bodies has been established. Where SNIs are mandatory, conformity assessment is undertaken by KAN-accredited CBs, designated by the respective regulators.

E. MARKET SURVEILLANCE

The Directorate of Supervision of Circulated Goods and Services, within the Ministry of Trade (MoT) carries out market surveillance in the domestic market. For specific technical regulations, market surveillance is the responsibility of the institution which is designated in the related technical regulation. These designated institutions coordinate their activities with the MoT and comply with the MoT rules on market surveillance procedures.

2.5.8 JAPAN

The Ministry of Economy, Trade and Industry (METI) is responsible for administering Japan's laws that define its quality infrastructure. These include the Industrial Standardization Act 1949 for Standards and conformity assessment, the Measurement Act 1992 for metrology, Electrical Appliances and Materials Safety Act 1961 for electrical safety and Consumer Product Safety Act 1973 for consumer safety and market surveillance. Standards, accreditation and conformity assessment in the food and agricultural sectors is managed by the Ministry of Agriculture Forestry and Fisheries (MAFF) as provided in the Act on Japanese Agricultural Standards 1950. Additionally, a number of private sector organisations supplement the public organisation of the QI. These are:

- Japan Standards Association (JSA) which publishes the Economy's Standards, provides training on standards, operates a certification scheme for quality management system, and a scheme for registration of auditors and operates a certification programme for quality control personnel (QC Certification)
- Japan Accreditation Board for Conformity Assessment (JAB) accredits third-party conformity assessment schemes
- Voluntary EMC Laboratory Accreditation Centre INC (VLAC) accredits testing laboratories

A. STANDARDISATION

Japanese Industrial Standards Committee (JISC) is Japan's standardisation body. and is responsible for development/revision of Japanese Industrial Standards, and the JIS Mark Certification Scheme. Additionally, it provides advice to the government on the promotion of industrial standardisation and the development of the QI. The Japan Standards Association is (JSA) responsible for publishing JIS Standards and provides training on standardisation. MAFF is responsible for the development of standards in the fields of food, agriculture and fisheries.

B. METROLOGY

The National Metrology Institute of Japan (NMIJ), is part of the National Institute of Advanced Industrial Science and Technology (AIST). NMIJ undertakes the development and dissemination of measurement standards, promotion of measurement standards utilization, development of measurement technologies related to measurement standards, legal metrology work and training of experts. It covers engineering, physical, material, and chemical measurement standards. It also covers development of measurement and analytical instrumentation. It coordinates international activities on metrology standards as the economy's representative. The Japan Electric Meters Inspection Corporation (JEMIC) has been appointed to provide verification and inspection of electricity meters used for tariff or certification purposes and related type approval services.

C. ACCREDITATION

The National Institute of Technology and Evaluation (NITE), an Agency engaged in administrative execution under METI oversees the following accreditation programmes:

- Japan National Laboratory Accreditation (JNLA), an accreditation scheme for testing laboratories conducting tests based on the Japanese Industrial Standards
- Measurement Laboratory Accreditation Programme (MLAP) which is the accreditation of the micro-measurement of ultra-micro substances more precisely and to ensure the reliability of measurement certificates.
- Accreditation System of the National Institute of Technology and Evaluation (ASNITE) is an accreditation scheme for calibration and testing laboratories, reference material producers, and product certification bodies, which is not covered by JCSS, JNLA, and MLAP.
- International Accreditation Japan (IA Japan), accredits testing laboratories, calibration laboratories, product certification bodies and reference material producers according to the respective international standards. The Japan Calibration Service System (JCSS), the accreditation system of calibration laboratories, is part of IA Japan.
- Information Security Management System Conformity Assessment Centre (ISMS-AC) which accredits CBs providing certification of the following systems: ISMS, ITSMS, BCMS and CSMS.

The Food and Agriculture Materials Inspections Centre which is an agency under the Ministry of Agriculture, Forestry and Fisheries (MAFF) operates the accreditation system for the food, agriculture, fisheries and forestry sector designated as the Japan Accreditation Service for Agriculture, Forestry and Fisheries (JASAFF).

Japan Accreditation Board for Conformity Assessment (JAB). JAB is a private sector body that accredits third-party conformity assessment bodies. It covers product certification bodies, management system certification bodies and Verification & Validation bodies.

Voluntary EMC Laboratory Accreditation Centre INC (VLAC) accredits testing laboratories to ISO/IEC 17025.

In response to a recommendation of the Japan Industrial Standards Committee (JISC) in 2005, the Japan Accreditation Council (JAC) was launched. The purpose of this council is to contribute to increase the reliability of all conformity assessment systems in Japan, by means of a) sharing the experience of accreditation among accreditation bodies, b) improving technical competence of accreditation bodies, and c) cooperating to promote accreditation systems to the market.

D. CONFORMITY ASSESSMENT

An extensive network of accredited conformity assessment bodies has been established. The JIS Mark Certification Scheme is operated by 24 JIS Mark accredited certification bodies. Additionally, conformity assessment is undertaken in accordance with the Electrical Appliances and Materials Safety Act, the Act on the Securing of Safety and the Optimization of Transaction of Liquefied Petroleum Gas, and the Gas Business Act.

The METI has designated inspection bodies (domestic and foreign) under the Consumer Product Safety Act, the Electrical Appliance and Material Safety Act, the Securing of Safety and Optimization of Transaction of Liquefied Petroleum Gas, and 2 under the Gas Utility Industry Law to conduct inspections.

E. MARKET SURVEILLANCE

Market Surveillance is distributed to specific government agencies as specified in safety legislation with METI responsible for overall coordination of four acts on product safety: Electrical Appliances and Materials Safety Act, Gas Business Act, Act on the Securing of Safety and the Optimization of Transaction of Liquefied Petroleum Gas and the Consumer Product Safety Act. Market surveillance for food, pharmaceuticals, and transport equipment is managed by the respective ministries.

2.5.9 REPUBLIC OF KOREA

The Korean Agency for Technology and Standards (KATS) is in charge of planning and coordinating the economy's standards policy. KATS is the NSB in Korea overseeing various activities, such as development of Korean Standards (KS); control of quality and safety of consumer products; operation of legal metrology system. The Korea Standards Association (KSA) provides supporting services to KATS. Additionally, several private bodies perform standardization-related tasks in the fields of communications and broadcasting. KATS operates the Korea Laboratory Accreditation Scheme (KOLAS), which accredits testing, calibration, and medical testing laboratories, as well as the Korea Accreditation System (KAS), which accredits product certification bodies.

A. STANDARDISATION

The Industrial Standardization Act of 1961 and the Framework Act on National Standards of 1999 requires the state to establish a system of economy's standards.

Korean Agency for Technology and Standards (KATS) develops, manages, and implements Korean Industrial Standards (KS), based on the *Framework Act on National Standards* and the *Industrial Standardization Act*, jointly with other ministries. KATS is responsible for participation in international standardisation. KATS has progressively been transferring its standards development role to KSA and other private and public organisations as designated Cooperating Organizations for Standards Development (COSD). The Korea Standards Association (KSA), a KATS affiliate body with public- and private-sector membership, provides services (standardization, standards, certification, and training).

B. METROLOGY

The legal basis of the metrology in Korea are the Measures Act of 1961 and the Framework Act on National Standards of 1999. Korea Research Institute of Standards and Science (KRISS) which is responsible for metrology in the economy for Korea, is the CIPM MRA signatory for Korea. Legal metrology in the Republic of Korea is under the purview of the

Korean Agency for Technology and Standards (KATS). KATS has the responsibility for the type approval, but has delegated the authority to the Korea Testing Certification (KTC). KTC carries out this responsibility by examining the designs of measuring instruments and testing sample instruments.

KRISS also supports industrial metrology by calibration and testing of industrial measuring instruments, and the dissemination of certified reference materials. In addition, private calibration laboratories provide services in industrial metrology. The calibration laboratories prove their technical competence through accreditation by KOLAS.

C. ACCREDITATION

The Korea Accreditation Board (KAB) is a non-profit organisation responsible for the accreditation of management system certification bodies. The Korea Accreditation Board is a signatory of APAC MRA and IAF MLA only for CB accreditation.

Korea Laboratory Accreditation Scheme (KOLAS) is an organization of KATS of the Ministry of Trade, Industry and Energy that accredits calibration, inspection, standard reference material production, medical testing, proficiency test operation, product certification, biological resources, and verification & validation organizations. It is a signatory of both the ILAC MRA (calibration and testing laboratories, medical testing laboratories, reference material production and providers of proficiency testing) and the IAF MLA (for product certification and GLOBAL G.A.P.).

D. CONFORMITY ASSESSMENT

There is an extensive range of accredited conformity assessment bodies in Korea offering an extensive range of services.

Korea maintains a single integrated certification mark, the Korea Certification (KC) mark, which has been fully implemented since January 2011. The KC mark and the corresponding KC certificate are valid for 730 different products, such as automotive parts, machines, and many electronic products. This certification mark confirms that the product meets the relevant Korean Safety Standard, called K Standard. The major certification bodies that are accredited and permitted to conduct product testing & audits and issue certificates are:

- Korea Testing Laboratory (KTL)
- Korea Testing and Research Institute (KTR)
- Korea Testing and Certification (KTC)

E. MARKET SURVEILLANCE

KATS has the responsibility for market surveillance in ensuring product safety under the: Framework Act on Product Safety, Special Act for Child Product Safety Controls, Quality Management and Industrial Product Safety Control Act, and Electrical Appliances Safety Control Act.

2.5.10 MALAYSIA

Overview

The Malaysian Quality Infrastructure comprises of:

- Department of Standards Malaysia (DSM). This is a department under the Ministry of Investment, Trade and Industry (MITI) and its role defined by the Standards of Malaysia Act 1996 (Act 549). It is responsible for standards and accreditation of conformity assessment bodies.
- National Metrology Institute of Malaysia (NMIM) which manages the National Measurement Standards Laboratory (NMSL) with stated functions and powers under the National Measurement System Act 2007 (Act 675) and oversees the development of the economy's metrology system. NMIM is currently part of SIRIM Berhad, a government owned corporation.
- Ministry of Domestic Trade and Costs of Living (KPDN) Enforcement Division, enforces the Weights and Measures Act 1972 (Act 71) and specifies legal requirements for all weights and measures used for domestic trade. It provides verification services for all weighing and all measuring instruments used for trade in Malaysia. It is additionally responsible for market surveillance for consumer protection.
- Agencies of the government responsible for market surveillance in their respective competencies
- Accredited conformity assessment bodies providing an extensive range of conformity assessment services.

A. STANDARDISATION

The Department of Standards Malaysia (DSM) is responsible for standardization. DSM manages the development and maintenance of Malaysian Standards. Malaysian Standards are available to all parties for routine use on a voluntary basis. These standards however become mandatory when referenced in technical regulations. DSM organises Malaysia's representation in international standardisation organisations including ISO, IEC and SMIC, as well as regional standardization organisations including ACCSQ and PASC.

B. METROLOGY

Scientific and Industrial Metrology

NMIM operates as a unit under SIRIM Berhad fulfilling the functions as the economy's metrology institute. It has the role of disseminating the traceability of measurement to the economy based on the International System of Units (SI System). NMIM has the responsibility in ensuring the economy's metrology infrastructure meets and complies with the global measurement standards. It also provides calibration services and type approval of measuring instruments. The Malaysian Nuclear Agency and the Department of Chemistry Malaysia have been designated institutes to support NMIM in the nuclear and chemical fields respectively.

NMIM represents Malaysia in international and regional metrology organisations. It is a member of the Metre Convention (International Bureau of Weights and Measures (BIPM), the International Organization of Legal Metrology (OIML), Asia Pacific Metrology Programme (APMP) and the Asia-Pacific Legal Metrology Forum (APLMF). NMIM is a signatory to the mutual recognition arrangement managed by the International Committee for Weights and Measures (CIPM-MRA).

Legal Metrology

Legal Metrology in Malaysia is managed by NMIM and several other authorities that operate under other laws. The Ministry of Domestic Trade and Cost of Living as provided in the Weights and Measures Act 1972; enforces legal requirements for all weights and measures used for domestic trade and provides verification services for all weighing and all measuring instruments used for trade in Malaysia. It has appointed two organisations, the Metrology Corporation Malaysia Sdn. Bhd. (MCM) and De Metrology Sdn. Bhd. to provide the verification services to businesses and industry.

C. ACCREDITATION

The Standards of Malaysia Act 549, 1996 established DSM as the National Accreditation Body (NAB). Additionally, DSM is designated as Compliance Monitoring Authority (CMA) by the Cabinet to implement the OECD GLP compliance programme for recognition of compliance testing facilities conducting non-clinical safety studies on chemical products. DSM implements accreditation programmes for testing laboratories, calibration laboratories, medical testing laboratories, inspection bodies, proficiency testing providers, certification bodies for management systems certification, product certification and personnel certification DSM additionally conducts accreditation programmes for validation and verification bodies. The accreditation programmes include the following:

- Skim Akreditasi Makmal Malaysia / Malaysia Laboratories Accreditation Scheme (SAMM)
- Accreditation of Certification Bodies Scheme (ACB)
- Malaysia Inspection Bodies Accreditation Scheme (MIBAS)
- Good Laboratory Practices Compliance Programme (GLP CP)
- Malaysia Proficiency Testing Provider Accreditation Scheme (MyPTP)
- Accreditation of Validation and Verification Bodies Scheme (AVVB)
- Primary Healthcare Laboratories Accreditation Scheme (PHLAS)

D. CONFORMITY ASSESSMENT

An extensive network of accredited conformity assessment bodies providing a range of services including those for testing, medical testing, calibration, certification, inspection, and non-clinical health and environmental safety studies, has been established through DSM accreditation programmes. These services support the regulated sector where technical regulations require conformity assessment and also the conformity assessment needs of businesses and industry. A list of conformity assessment bodies accredited by DSM can be accessed via [DSM's CAB Directory online](#).

E. MARKET SURVEILLANCE

Market surveillance for consumer safety is undertaken by the Enforcement Division of the Ministry of Domestic Trade and Cost of Living. Other regulatory agencies conduct market surveillance directly or rely on accredited conformity assessment bodies within the QI to conduct market surveillance and support premarket approvals on their behalf.

2.5.11 MEXICO

Mexico established a new law “Law on Quality Infrastructure (LIC)” in 2020 replacing the Federal Law on Metrology and Standardization, to define the economy’s quality infrastructure system. It provides the basis for standardization, technical regulation, harmonization, accreditation, conformity assessment and metrology activities within Mexico. The National Quality Infrastructure Commission (CNIC) and the General Bureau of Standards (DGN) of the Ministry of the Economy (SE) are responsible for the implementation of the LIC. DGN, as the economy’s standards body, represents Mexico in international standardisation. The Mexican Quality Infrastructure System covers both technical regulations and voluntary standardisation and conformity assessment.

The National Quality Infrastructure Commission is responsible for directing and coordinating the Quality Infrastructure System. It is led by a President, and consists of the Technical Council and a Secretariat.

Preparation of technical regulations (referred to as official Mexican Standards) is undertaken by agencies or entities of the Federal Public Administration with relevant powers and supported by sector specific Standardization Advisory Committees.

A. STANDARDISATION

The Dirección General de Normas (DGN) (or the General Bureau of Standards in English) of the Ministry of Economy of México, is the Mexican regulatory agency that leads public policy actions to strengthen the National Quality Infrastructure System and is the designated National Standards Body.

Preparation of (voluntary) standards is the responsibility of National Standardization Organizations, which are legal entities with registration or authorization from the Ministry of Economy.

List of Mexico’s National Standardization Organizations:

- Mexican Society for Standardization and Certification SC (NORMEX)
- Mexican Institute of Standardization and Certification, AC (IMNC)
- Standardization and Certification Association, AC (ANCE)
- National Institute of Textile Standardization, AC (INNTEX)
- National Body for Standardization and Certification of Construction and Building, SC (ONNCCE)
- Standardization and Certification, SC (NYCE)
- Council for the Promotion of the Quality of Milk and its derivatives, AC (COFOCALEC)
- National Chamber of the Iron and Steel Industry (CANACERO)

- Underwriters Laboratories, INC (UL)

B. METROLOGY

Metrology services are provided by Designated Metrology Institutes authorized by the Ministry of Economy who establish the economy's measurement standards in addition to providing metrological services.

National Metrology Center (CENAM) is the economy's reference laboratory for measurements. (CENAM) together with the Designated Metrology Institutes, are responsible for the development, conservation and improvement of the economy's measurement standards. National Institute for Nuclear Research (ININ) is a designated metrology institute for nuclear science and technology.

C. ACCREDITATION

Accreditation of Conformity Assessment Bodies is provided by legal entities authorized by the Ministry of Economy. These are:

- Mexican Accreditation Entity, AC (ema)
- Mexican Accreditation, MAAC, AC (MAAC)
- SIAAC International Accreditation Society, AC

Mexican Accreditation Entity, AC (ema) and Mexican Accreditation, MAAC, AC (MAAC) are signatories of the IAF MLA.

D. CONFORMITY ASSESSMENT

Conformity assessment is provided by Conformity Assessment Bodies which are legal entities accredited and approved to provide conformity assessment services for goods, products, processes and services for official Mexican Standards (technical regulations) and voluntary standards. Only bodies that are accredited with an accreditation entity may operate as conformity assessment bodies. Conformity assessment procedures are prepared by the Standardization Authorities for both official and voluntary standards.

E. MARKET SURVEILLANCE

Procuraduría Federal del Consumidor, (PROFECO) is the main body responsible for market surveillance. Additionally, market surveillance is conducted by a number of sectoral regulators.

2.5.12 NEW ZEALAND

The Quality Infrastructure of New Zealand consists of:

- Standards New Zealand is New Zealand's national standards body. It manages the development, maintenance, adoption, and publication of industry standards and other standards-related products and services, including New Zealand, joint Australian/New Zealand, and international standards. Standard New Zealand's processes are based on requirements under the Standards and Accreditation Act 2015. Whilst statutorily independent Standards New Zealand resides within the Ministry of Business Innovation & Employment, a central government economic development agency.
- International Accreditation New Zealand, (IANZ) is the operating arm of the Accreditation Council and is the economy's accreditation body for testing and calibration laboratories, radiology services, inspection bodies, proficiency testing providers and reference material producers.
- Joint Accreditation System of Australia and New Zealand, (JASANZ) accredits conformity assessment certification bodies that undertake determination activities under the CASCO Toolbox methodologies (e.g. audit, inspection, verification) and issue attestations (e.g. certificates) for management systems, and products/processes/services, claims (e.g. carbon claims, other ESG claims) and personnel certification. In addition, JASANZ serves as the National Member Body for the IEC CA Systems IECCE, IECEx and IECQ.
- Measurement Standards Laboratory of New Zealand (MSL) is New Zealand's metrology institute that is responsible for maintaining the economy's measurement standards traceable to the International System of Units, and for supporting international confidence in New Zealand's measurement system.
- Trading Standards within the Ministry of Business, Innovation and Employment (MBIE) is responsible for legal metrology in trade measurement (accurate weights and measures for trade) as well as consumer product safety and fuel quality monitoring, under the Weights and Measures Act 1987.
- Standards, Accreditation and Metrology Group (SAM) is a forum for information sharing, collaboration and coordination of actions between standards and conformance agencies. SAM members are representatives from New Zealand's quality infrastructure organisations. SAM is administered by the Ministry of Business Innovation & Employment, a government economic development organisation that holds regulatory stewardship responsibilities over New Zealand quality infrastructure including standards and conformance system.
- Standards New Zealand and Standards Australia have a long-standing Trans-Tasman standards development partnership and have been developing joint Australian and New Zealand standards for approximately forty years. Some two thousand joint Trans-Tasman Australia/New Zealand Standards help support a one-economic market objective between Australia and New Zealand and support the interoperability of products, services and workforces between the two markets/economies.

A. STANDARDISATION

The National Standards Body of New Zealand is Standards New Zealand which manages the development, maintenance, adoption, and publication of industry standards and other standards-related products and services, including New Zealand, joint Australian/New Zealand, and international standards. It has been in operation since 1932 and has sat, as a business unit within the Ministry of Business, Innovation and Employment (MBIE), since 2016. Standards New Zealand is statutorily independent and operates on a full cost recovery user-pays basis, without any direct government funding. The New Zealand Standards Approval Board, established under the 2015 Act, is not a governance board, rather carries responsibility for approving standards development committee members and New Zealand Standards for publication, including joint Australian / New Zealand Standards and adoptions of international standards. The board is statutorily independent to Standards New Zealand, it was created along with a statutorily independent role the New Zealand Standards Executive, in practice operationally delivered by Standards New Zealand, to ensure independence from central government and politicians in relation to New Zealand standards development. Standards New Zealand also carries responsibility for participation and representation in international forums, systems and institutions, including holding economy membership to ISO, IEC, PASC, PISC and others.

B. METROLOGY

The Measurement Standards Act 1992 and the Weights and Measures Act 1987 both administered by the Ministry of Business, Innovation and Employment provide the main requirements for metrology.

Scientific & Industrial Metrology

MSL is New Zealand's metrology institute and is responsible for ensuring New Zealand's units of measurement are consistent with the International System of Units, the SI. MSL additionally provides calibration services for a range of purposes including enforcement, health, trade, safety, food production, environmental monitoring, transport and manufacturing. MSL is the New Zealand signatory of the CIPM MRA. MSL participates in metrology activities in the Asia-Pacific region, particularly as an active member of the Asia Pacific Metrology Programme and in Organisation International de Métrologie Légale (OIML).

Legal Metrology

Trading Standards, an operational unit within MBIE, is responsible for the administration and enforcement of the Weights and Measures Act 1987. It reports to the Minister of Commerce and Consumer Affairs on operational issues. Trading Standards administers and enforces New Zealand's system of trade measurement (legal metrology), ensuring that weighing and measuring equipment and the quantity in packaged goods is accurate. The Weights and Measures Act provides for the system of weights and measurements to be used in trade. The Act sets down a number of fundamental rights for consumers and those involved in trading goods by weight, measurement or number.

C. ACCREDITATION

Accreditation is provided by government-owned International Accreditation New Zealand (IANZ) and by the Joint Accreditation Service of Australia and New Zealand (JASANZ), which is also endorsed by the government. Accreditation of certification bodies and inspection bodies is provided by JASANZ. JASANZ is signatory to the IAF MLA for person, product, management system certification bodies and the ILAC MRA for inspection bodies. IANZ offers accreditation of testing laboratories (ISO/IEC 17025 and ISO 15189), calibration laboratories (ISO/IEC 17025), inspection bodies (ISO/IEC 17020), proficiency testing providers (ISO/IEC 17043), reference materials producers (ISO 17034). IANZ is a signatory of the ILAC MRA for its full scope of activities.

D. CONFORMITY ASSESSMENT

MBIE is responsible for overseeing New Zealand's conformance infrastructure and providing advice to the Government on related policy and regulation, including reducing unnecessary technical barriers to trade.

New Zealand has a network of accredited conformity assessment organisations providing an extensive range of services to all sectors of the economy. These services support both voluntary standards and regulatory compliance and are underpinned by mutual recognition arrangements with key trading partners.

E. MARKET SURVEILLANCE

Market surveillance for Consumer Protection, is coordinated by the Consumer Protection and Standards branch of MBIE, primarily through Trading Standards, with support from other regulators operating within their statutory mandates. In addition, several other government agencies conduct market surveillance within their prescribed authority.

2.5.13 PAPUA NEW GUINEA

The National Institute of Standards and Industrial Technology or NISIT was established under an act of parliament titled National Institute of Standards and Industrial Technology Act 1993. NISIT comprises all the elements of a National Quality Infrastructure for Papua New Guinea (PNG). It is responsible for all the standardisation and conformity assessment activities in Papua New Guinea. NISIT represents the economy in relevant international and regional organisations for standards, metrology and accreditation.

A. STANDARDISATION

The National Institute of Standards and Industrial Technology, under the Standards Development Division, is the National Standards Body for PNG. The Standards Development Division is responsible for the development, publication and maintenance of PNG's national standards. PNG standards are developed through established technical committees of representatives from the government, industry, consumer associations, experts and

academia. All PNG Standards are voluntary when developed until and unless called up in legally binding documents. To date, there are over 900 PNG standards, majority of which are adoptions from international, regional and standards bodies of other economies.

NISIT represents PNG at the international level in ISO where it has correspondent member status and at the regional level in the Pacific Area Standards Congress (PASC).

B. METROLOGY

The Metrology Division of NISIT is designated as the National Metrology Institute of Papua New Guinea. It is responsible for the establishment, development, of the Papua New Guinea economy's metrology infrastructure for the scientific, legal and industrial branches of metrology. NISIT represents Papua New Guinea in both the Asia Pacific Metrology Programme (APMP) and the Asia Pacific Legal Metrology Forum (APLMF).

C. ACCREDITATION

The accreditation division within NISIT is responsible for the accreditation of testing and calibration laboratories, and certification bodies. PNG recognizes certificates issued from signatories of the ILAC MRA. The Papua New Guinea Laboratory Accreditation Scheme (PNGLAS) is an associate member of both APAC and ILAC.

D. CONFORMITY ASSESSMENT

Conformity assessment in Papua New Guinea is carried out by any accredited Conformity Assessment Body. Captured in the NISIT organisational structure is the Certification Division, which is the only domestically owned Conformity Assessment Body in Papua New Guinea.

E. MARKET SURVEILLANCE

The National Institute of Standards and Industrial Technology (NISIT) conducts its own market surveillance/research in relation to the Quality Infrastructure services that it provides for Papua New Guinea. In addition, outside of the QI, market surveillance is conducted by other authorised government agencies and organisations in the private sector.

2.5.14 PERU

The Law No. 30224 of 11 July 2014 has established the National Quality System (SNC) and the National Quality Institute (INACAL). According to this law, the SNC comprises the National Quality Council (CONACAL) and INACAL, along with their technical and standing committees, and the public and private entities that make up the quality infrastructure. CONOCAL is a coordinating body on quality issues, attached to the Ministry of Production (PRODUCE), consisting of representatives from both the public and the private sectors.

The National Quality Institute (INACAL) is a specialized technical public body, attached to PRODUCE, with legal status under public law. Its main general functions are to:

- operate the National Quality System (SNC);
- prepare the National Quality Policy (PNC) proposal for approval by CONACAL;
- manage, promote and monitor implementation of the PNC;
- regulate and set rules on standardization, accreditation and metrology issues; and
- administer and manage standardization, metrology and accreditation.

Peru has a National Quality Policy (D.S 006-2024-PRODUCE) that is an instrument for the use of the services of QI in technical regulations, conformity assessment and market surveillance.

The SNC harmonizes sectoral quality policies, as well as those of the different levels of government for standardization, accreditation, metrology and conformity assessment activities.

A. STANDARDISATION

Standardization activities are the responsibility of INACAL. INACAL's Directorate of Standardization is responsible for standardization activities. The Directorate's main function is to promote the development and approval of Peruvian technical standards (NTPs) for all economic sectors. INACAL represents Peru in international and regional standards bodies. Peru as a member of the Andean Community (CAN) uses Andean technical standards (NTAs) that are harmonized in the Andean technical standardization committees. These are voluntary and are the main reference both in intra-community trade and in trade with third economies. INACAL publishes "List of Technical Standards cited in Mandatory Regulations", on its website indicating the number of the NTP and the technical regulation (RT) that makes it mandatory

B. METROLOGY

The INACAL Directorate of Metrology is the technically and functionally autonomous authority tasked with administering metrology policy and management. The Directorate has custody of and maintains economy's measurement standards, and provides calibration and verification services. In the field of legal metrology, it evaluates and recognizes authorized bodies called Metrological Verification Units (UVMs), which are tasked with verifying instruments subject to metrological control, such as water, gas and electricity meters; scales; clinical thermometers; and sphygmomanometers. In addition, the Directorate of Metrology prepares Peruvian Metrological Standards (NMPs) on the measurement instruments used in commercial transactions and in the fields of health and safety. Andean Metrology Network (RAM) is to harmonize the economy's metrology systems to make member economies' standards and calibration systems traceable at the Andean level.

C. ACCREDITATION

INACAL is responsible for the accreditation of conformity assessment bodies (CABs) in Peru, with its Directorate of Accreditation administering accreditation policy and management.

At the Andean Community level, accreditation is performed in the framework of the Andean Network of National Accreditation Bodies, which accredit applicants after evaluating their technical competency to carry out specific conformity assessment activities. There is also an

agreement on the recognition of certificates of conformity for regulated products in CAN member economies.

D. CONFORMITY ASSESSMENT

Conformity assessment in Peru is performed by CABs accredited by INACAL or by an accreditation body that has signed a recognition agreement with any of the accredited institutions, or else by CABs authorized or recognized by the corresponding regulatory authority within the Andean Community.

INACAL is a signatory of both the IAF MLA (for product and management systems certification) and the ILAC MRA (for testing, calibration and inspection).

E. MARKET SURVEILLANCE

Market surveillance is conducted by designated regulatory bodies in order to confirm compliance with technical regulations (RT). The regulated products are required to be certified by specialized public or private institutions designated by the ministries responsible for the technical regulation.

2.5.15 THE PHILIPPINES

Overview

The main institutions in the Quality Infrastructure of the Philippines are:

- the Bureau of Philippine Standards (BPS) - economy's standards body,
- the National Metrology Laboratory of the Philippines (NML) and
- the Philippines Accreditation Bureau (PAB).

BPS was established under the Standards Law (RA 4109). BPS additionally provides product certification and testing services. BPS implements two Mandatory Product Certification Schemes: (i) the Philippine Standard (PS) Quality and/or Safety Certification Mark Licensing Scheme and the (ii) Import Commodity Clearance (ICC) Certification Scheme. Regulated products that are not allowed to be distributed in the Philippines' market without the necessary PS or ICC marks.

BPS and PAB are agencies under the Department of Trade and Industry. The NML is an agency under the Department of Science and Technology (DOST) of the government of the Philippines.

A. STANDARDISATION

The Bureau of Philippine Standards (BPS) serves as the National Standards Body (NSB) and is mandated to develop, promulgate, and implement standards for all products in the Philippines, to promote standardization activities in the economy, and to ensure the

manufacture, production, and distribution of quality products for the protection of the consumer.

The Standards Development Division of BPS:

- Formulates the economy's standards development policies, in consultation with relevant government agencies and other stakeholders;
- Formulates Philippine National Standards (PNS) for consumer protection and trade facilitation through the conduct of regular review of these standards for possible revision/updating to align with developments in trade and latest technology; and
- Coordinates the economy's standardization activities in the economy to avoid duplication of work by various government regulatory agencies and harmonization of standards and technical regulations with international standards.

B. METROLOGY

Metrology is governed by the law "RA 9236 - *An Act Establishing A National Measurement Infrastructure System (NMIS) For Standards and Measurements, and for Other Purposes*". The National Metrology Laboratory of the Philippines (NML), under DOST serves as the custodian of the economy's measurement standards as the appointed economy's metrology institute. The NML also represents the interests of the Philippines in scientific and legal metrology regionally and internationally.

The NML is a signatory to the CIPM MRA with designated laboratory Standards and Testing Division, Industrial Technology Development Institute (STD-ITDI) for chemical metrology.

Legal requirements for measurements are implemented by regulatory agencies within the scope of authority.

C. ACCREDITATION

The Philippines Accreditation Bureau (PAB), under the Department of Trade and Industry, is the economy's accreditation body. It has the mandate to accredit testing and calibration laboratories, and bodies providing other forms of conformity assessment. PAB is a signatory of the APAC MRA for the accreditation of CABs in the following areas: Testing and Calibration (ISO/IEC 17025), Certification - Management Systems (ISO/IEC 17021-1), Product Certification (ISO/IEC 17065), Inspection (ISO/IEC 17020) and Medical Testing (ISO 15189) and the IAF MLA for Management Systems Certification (ISO/IEC 17021-1) and Product Certification (ISO/IEC 17065).

D. CONFORMITY ASSESSMENT

The Standards Conformity Division (SCD) of BPS operates and implements mandatory Product Certification Schemes (PCS) for both locally produced and imported products covered by standards. These are the Philippine Standard (PS) Certification Mark Scheme and the Import Commodity Clearance (ICC) Certification Scheme. BPS maintains lists of Qualified Auditors and Recognized Auditing & Inspection Bodies to facilitate the implementation of the PS and ICC schemes. Additionally, an extensive network of accredited conformity assessment

bodies provides testing, calibration, certification, inspection and verification services to all sectors of the economy.

E. MARKET SURVEILLANCE

BPS prepares market surveillance and monitoring policies for mandatory standards on products affecting life, health and safety as mandated by RA 7394, the *Consumer Act of the Philippines* which declares that it is the duty of the State to develop and provide safety and quality standards for consumer products, including performance or use-oriented standards, codes of practice and methods of tests.

2.5.16 RUSSIA

The Russian system for the quality infrastructure and technical regulation is governed by Law No. 184-FZ of 27 December 2002 (amended on 6 April 2016). The Federal Technical Regulation and Metrology Agency (Rosstandart) is the main institution responsible for the economy's Quality infrastructure including technical regulation, standards and conformity assessment. Rosstandart also serves as the supervising authority for legal metrology, conformity assessment, and enforcement of technical regulations.

The responsibility for metrology is assigned to the Department of Metrology, State Control and Supervision within Rosstandart.

Rosstandart maintains a unified register of registered voluntary certification systems

- The Scientific and Technical Center for Industrial Safety (later transformed into JSC Scientific and Technical Center Industrial Safety)
- Voluntary system of accreditation and confirmation of compliance (VSACCC, LLC)

Russia is one of the ten (10) member states of the [Euro-Asian Council for Standardization, Metrology and Certification \(EASC\)](#), which is an intergovernmental body of the development and coordination of priority orientations and joint activities in technical regulations, standardisation, metrology, accreditation and conformity assessment across the Commonwealth of Independent States (CIS) and associated Eurasian economies. EASC oversees the adoption of interstate GOST standards across the region.

A. STANDARDISATION

Rosstandart is the economy's designated standardization body. GOST R is the Russian system of technical regulations and quality standards. Other than EASC, Rosstandart also represents Russia in international and regional standards setting organizations, such as the International Organization for Standards (ISO), the International Electrotechnical Commission (IEC), and in regional bodies including, the Pacific Area Standards Congress (PASC), and as an observer in the Standards and Metrology Institute for Islamic Countries (SMIIC).

B. METROLOGY

The Federal Agency on Technical Regulating and Metrology (Rosstandart) is the federal executive body responsible for providing services, administration in the field of technical regulation and metrology. The Federal Agency on Technical Regulating and Metrology (Rosstandart) carries out the licensing of activity with respect to manufacture and maintenance of measurement instrumentation and also implements the functions on the state metrological control and supervision. The responsibility for metrology is distributed to the two divisions within Rosstandart; the Division of applied metrology and the Division of legal metrology.

C. ACCREDITATION

The Federal Accreditation Service (Rosaccreditation) in the Ministry of Economic Development is a federal executive body that exercises the functions of the economy's accreditation body. Additionally, the following bodies provide accreditation services:

- Scientific and Technical Center an organization in the Russian Federal Service for Environmental, Technological and Nuclear Supervision
- Association of Analytical Centers (AAC Analitica)
- Voluntary system of accreditation and confirmation of compliance (VSACCC, LLC) (Accreditation of Laboratories)

Rosaccreditation represents Russia in relevant international initiatives, including the International Laboratory Accreditation Cooperation (ILAC), the International Accreditation Forum, the Asia Pacific Accreditation Cooperation (APAC), and the EASC.

D. CONFORMITY ASSESSMENT

A network of accredited conformity assessment bodies supports mandatory conformity assessment as well as voluntary conformity assessment.

E. MARKET SURVEILLANCE

The Federal Agency on Technical Regulating and Metrology (Rosstandart) controls and supervises the compliance of mandatory requirements of state standards and technical regulations.

2.5.17 SINGAPORE

Enterprise Singapore (EnterpriseSG), an economic development agency of the economy's Government, champions enterprise development and supports the growth of Singapore as a hub for global trading and start-ups. As Singapore's national standards and accreditation body, EnterpriseSG oversees Singapore's Quality Infrastructure and builds trust in Singapore's products and services through quality and standards.

EnterpriseSG's work encompasses developing and promoting standards and accreditation programmes, accrediting Testing, Inspection and Certification (TIC) bodies, and developing a

robust domestic quality infrastructure that empowers businesses to build trust for consumers. The agency also represents the economy in relevant regional and international fora.

A. STANDARDISATION

As the national standards body, Enterprise Singapore oversees the Singapore Standardisation Programme through an industry-led Singapore Standards Council (SSC). Enterprise Singapore and SSC collaborate with key stakeholders including industry, professional bodies and government agencies to develop, promote and review national standards. EnterpriseSG has appointed a number of Standards Development Organisations (SDOs) to manage some of the Standards Committees under SSC. The following SDOs have been appointed to manage one or more Standards Committees:

- Duke-NUS Centre of Regulatory Excellence (CoRE): Biomedical and Health Standards Committee
- The Institution of Engineers, Singapore (IES): Building and Construction Standards Committee and Transportation Standards Committee
- Nanyang Polytechnic (NYP): Food Standards Committee
- Singapore Chemical Industry Council (SCIC): Chemical Standards Committee and Environment and Resources Standards Committee
- Singapore Manufacturing Federation (SMF): Manufacturing Standards Committee and Safety and Quality Standards Committee
- Energy Research Institute @ Nanyang Technological University (NTU): Electrical and Electronic Standards Committee
- Infocomm Media Development Authority (IMDA): Information Technology Standards Committee.

Enterprise Singapore and SSC represents Singapore in regional and international standardisation activities.

B. METROLOGY

The National Metrology Centre (NMC) of the Agency for Science, Technology and Research (A*STAR) is Singapore's National Metrology Institute (NMI) responsible for scientific and industrial metrology. NMC develops, maintains, and disseminates the economy's primary measurement standards and participates in international comparisons to establish global equivalence and international acceptance of Singapore's measurement capabilities.

The Health Sciences Authority (HSA) is Singapore's Designated Institute (DI) for metrology in chemistry related to human health, supporting domestic measurement needs in this specialised domain.

NMC and HSA represent Singapore in regional and international metrology organisations. Singapore is a member of the Metre Convention, with NMC representing Singapore at the General Conference on Weights and Measures (CGPM) serving as a signatory to the Mutual Recognition Arrangement administered by the International Committee for Weights and Measures (CIPM MRA). Both NMC and HSA are members of the Asia Pacific Metrology Programme (APMP).

The Weights and Measures Office (WMO) of the Competition and Consumer Commission of Singapore (CCS) oversees legal metrology, safeguarding the interests of consumers and

businesses by ensuring a uniform and accurate system of weights and measures in Singapore.

Under the Weights and Measures Act, specified weighing and measuring instruments used for trade must be registered in accordance with international standards, verified for accuracy, and affixed with the ACCURACY Label. The WMO ensures that the declared net quantity stated in products or product labels of pre-packaged goods are accurate and conducts market surveillance, inspections and investigations to ensure fair trade measurement practices are upheld.

C. ACCREDITATION

The Singapore Accreditation Council (SAC), managed by EnterpriseSG, is the economy's accreditation body overseeing the Singapore Accreditation Programme. SAC maintains the integrity and impartiality of conformity assessment practices, which includes accreditation of a comprehensive range of conformity assessment bodies like testing and calibration laboratories, medical laboratories, certification bodies for management systems, products and persons, proficiency testing providers, validation and verification bodies.

SAC is also the economy's Good Laboratory Practice (GLP) Compliance Monitoring Authority, registering test facilities that conduct GLP studies for chemical, medical devices, and pharmaceutical products. Through these activities, SAC builds global trust in Singapore's products and services by strengthening the economy's technical infrastructure for conformity assessments and forging Mutual Recognition Arrangements (MRAs) with our economic partners. SAC represents the economy in regional and international accreditation organisations and is a signatory to 35 regional and international MRAs including the International Accreditation Forum (IAF), the International Laboratory Accreditation Cooperation (ILAC), Asia Pacific Accreditation Cooperation (APAC) and Organisation for Economic Co-operation and Development (OECD) Mutual Acceptance of Data for GLP.

The MRAs signed by SAC provide Singapore companies with easier access to over 100 economies. This reduces barriers to trade by allowing goods and services to move freely across borders without the need for further testing, inspection or certification by the importing economy. The MRAs signed by SAC serve as a global passport for Singapore enterprises, helping companies gain acceptance in overseas markets.

D. CONFORMITY ASSESSMENT

EnterpriseSG, through SAC, manages and promotes accreditation schemes and registration programmes by performing these functions. The SAC works closely with regulators and industry players to ensure conformity assessment activities are conducted based on risk considerations and meet international standards. Conformity assessments are supported by a network of accredited conformity assessment bodies.

E. MARKET SURVEILLANCE

Market Surveillance is undertaken by various government regulatory agencies for their respective areas. E.g. Consumer Product Safety Office under Competition and Consumer Commission of Singapore is responsible for market surveillance under the Consumer

Protection (Safety Requirements) Regulations (CPSR) and the Consumer Protection (Consumer Goods Safety Requirements) Regulations (CGSR), which safeguard consumers from unsafe consumer goods.

2.5.18 CHINESE TAIPEI

The Bureau of Standards, Metrology and Inspection (BSMI), under the Ministry of Economic Affairs (MOEA) anchors the quality infrastructure in the economy. It is the designated competent authority to enforce the Standards, Commodity Inspection, and Weights and Measures laws and implements programs for standardization, metrology, and consumer product safety. It is also the WTO enquiry point/notification authority for TBT issues.

A. STANDARDISATION

The Standards Division of BSMI is responsible for the development and compilation of the economy's standards (CNS). Use of CNS is voluntary unless referenced in a technical regulation as being mandatory. When a need for establishing a technical regulation arises, suitable existing local and international standards are reviewed for referencing in the technical regulation. International standards are used, fully or partially, as a basis for drafting its standards. The BSMI may also adopt related international standards that already exist when these are technically appropriate and applicable.

B. METROLOGY

The Metrology Administration Division and the Metrology Technology Division Technical of BSMI oversees the metrology in Chinese Taipei. This includes Scientific Metrology, the National Measurements Standards Laboratories, and administers the Weights and Measures Act which provides the regulatory basis for the BSMI in conducting its activities in the field of legal metrology.

C. ACCREDITATION

The Taiwan Accreditation Foundation (TAF) is established as the economy's accreditation (body and represents Chinese Taipei in regional (APAC) and international (ILAC and IAF) organisations and recognition agreements. TAF is a signatory to the ILAC MRA for accreditation of calibration, testing and medical testing laboratories, inspection bodies, proficiency testing providers and reference material producers. TAF is also signatory to the IAF MLA for the accreditation of bodies certifying persons, management systems and products and Verification & Validation Bodies.

D. CONFORMITY ASSESSMENT

BSMI provides voluntary certification and testing services. BSMI implements two voluntary product certification programmes: the CNS Mark Certification (CNS Mark) System, which is granted to products that comply with relevant CNS standards; and the Voluntary Product Certification (VPC) System, which is used mainly for products with emerging technology and

for innovative products. The main difference between the two systems is that the VPC System can be used to certify products that comply with relevant international standards where CNS standards have not yet been developed.

E. MARKET SURVEILLANCE

Products subject to technical regulations are required to be inspected as per the economy's Commodity Inspection Act and its regulations before they are imported or placed on the market. BSMI oversees inspection and testing; it maintains a programme consisting of pre-market inspection, batch-by-batch inspection, monitoring inspection, registration of product certification (RPC), and declaration of conformity (DoC). BSMI also undertakes post-market surveillance based on a risk assessment system to ensure the safety of regulated products. The BSMI adopts an annual plan to undertake market surveillance and identify products of high risk, and specifies principles for conducting surveillance activities, including market checks, sampling tests, special projects, and monitoring of products sold online.

2.5.19 THAILAND

Overview

The Quality Infrastructure in Thailand is defined by a set of Acts for standardisation, metrology, legal metrology, industrial product standards, agricultural and food standards, accreditation and conformity assessment. The Thai Industrial Standards Institute (TISI) established under the Industrial Product Standards Act manages standardisation and conformity assessment as prescribed in the National Standardization Act. The latter Act additionally defines accreditation which is implemented by other agencies, each responsible for a defined sector. The National Institute of Metrology (Thailand), under the Ministry of Science and Technology, is responsible for the implementation of metrology, whereas the Central Bureau of Weights and Measures (CBWM) which is under the Ministry of Commerce, is the economy's legal metrology authority. The National Science and Technology Development Agency (NSTDA) is a coordinating body for the quality infrastructure in Thailand.

A. STANDARDISATION

TISI develops Thai Industrial Standards (TIS). Thai Standards are developed according to the government policies intended for both voluntary use and for mandatory application. The categories of products that are subject to compulsory standards are as follows: civil and construction materials; consumer products; electrical/electronic engineering; fluid engineering; food; heat transfer engineering; medical, science; paints, colours, and varnishes; mechanical engineering and vehicles; and chemicals. TISI is a member of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) and represents Thailand in regional standards bodies.

The Halal Standard Institute of Thailand (HSIT) is the primary agency responsible for establishing, researching, and developing halal food and product standards in the economy. Operating under the governance of the Central Islamic Council of Thailand (CICOT), HSIT

ensures that Thailand's halal certification aligns strictly with Islamic law and international quality standards. HSIT represents Thailand as an observer in SMIIC.

B. METROLOGY

Scientific and Industrial Metrology

The National Meteorological System Act has established the National Institute of Metrology Thailand (NIMT) as the custodian of the economy's standards of measurement. It is entrusted by law to establish, develop, and maintain the domestic measurement standards, in all disciplines, and to disseminate their accuracy and standards and norms, to measurement activities carried out in the economy. It has also been tasked to promote metrology related professions.

Legal Metrology is governed by the Measurements Act. The Central Bureau of Weights and Measures (CBWM) under the Department of Internal Trade, is the economy's legal metrology authority of Thailand, accountable to the Ministry of Commerce. CBWM is responsible to ensure the traceability of reference standards used in the field of legal metrology to the economy's standards. There are now 28 local weights and measures offices spread throughout the economy and 4 regional weights and measures centres. In CBWM's office and local weights and measures offices.

C. ACCREDITATION

Accreditation in Thailand is operated under the National Standardization Act B with a network that consists of 4 organisations with defined scopes:

- National Standardization Council (NSC) – for Certification Body, Inspection Body, Testing Laboratory and Calibration Laboratory
- Department of Medical Sciences (DMSc) – for testing laboratories, medical testing laboratories and reference material producers
- The National Bureau of Agricultural Commodity and Food Standards (ACFS) – for certification and inspection bodies in the food and agricultural sector
- Bureau of Laboratory Accreditation, Department of Science Services (DSS) – for testing laboratories, proficiency testing providers and reference material producers

All 4 bodies are members of APAC and party to recognition arrangements. NSC and ACFS are signatories to the IAF MLA while NSC, ACFS, DMSc and DSS are signatories to the ILAC MRA.

D. CONFORMITY ASSESSMENT

Thailand has a comprehensive network of accredited conformity assessment bodies.

TISI operates 2 types of product certification schemes for mandatory and voluntary certification. These are distinguished by differing marks -the voluntary certification mark and the mandatory certification mark.

E. MARKET SURVEILLANCE

Market surveillance is conducted by TISI and the NSC ACFS, DMSc, DSS, as per legal responsibilities for different aspects of technical regulations and standards. Products subject to compulsory standards must comply with the standard and show the mandatory certification mark.

2.5.20 UNITED STATES

Overview

The National Institute of Standards and Technology (NIST), a bureau of the U.S. Department of Commerce, serves as the U.S. government's focal point for quality infrastructure. NIST's portfolio of measurement, standards, and legal metrology services supports measurement traceability, enables quality assurance, and coordinates documentary standards. Additionally, NIST:

- provides calibration services.
- administers the National Voluntary Laboratory Accreditation Program (NVLAP).
- administers the standards.gov website that provides information about the use of documentary standards and conformity assessment activities in the U.S. government.
- Develops and supplies Standard Reference Materials.
- Manages and maintains the Standards Incorporated by Reference database that provides details on standards incorporated into regulations thereby making them mandatory.
- Supports U.S. government agencies on standards and the QI through technical expertise and guidance.

A. STANDARDISATION

The American National Standards Institute (ANSI) is a private, non-profit organization that administers and coordinates the U.S. voluntary standards and conformity assessment system. It represents the United States at the International Organization for Standardization (ISO), and, through its U.S. National Committee, ANSI coordinates the U.S. engagement in the International Electrotechnical Commission (IEC). The development of standards is undertaken by independent standards developing organisations (SDOs), many of which adhere to the *ANSI Essential Requirements* and are accredited by ANSI to develop American National Standards (ANS) related to products, processes, services, systems, or personnel. As of January 2026, there were 235 ANSI-accredited standards developers (ASDs). Industry, consortia, and private-sector groups complement the roles of NIST, ANSI, and ANSI-accredited SDOs, working together to develop standards. ANSI has established a subsidiary (*ANSI National Accreditation Board (ANAB)*) that provides accreditation and training services for a wide range of industry-specific conformity assessment programs.

B. METROLOGY

NIST is a non-regulatory agency of the US Department of Commerce. NIST realises, develops, maintains, and disseminates measurement standards for physical, chemical and biological measurements. It also conducts world-class research into new measurement techniques and is responsible for the United States legal metrology framework.

NIST has key roles in supporting international metrology via its signatory role in the two inter-governmental treaties of measurement: The Convention of the Metre and the International Organization of Legal Metrology (OIML). NIST is the National Metrology Institute of the US and is an original signatory to the Meter Convention and the subsequent International Committee on Weights and Measures (CIPM) Mutual recognition Arrangement (MRA) which is the framework through which National Metrology Institutes (NMIs) demonstrate the international equivalence of their measurement standards and the measurement services they provide to their customers.

NIST fulfils the United States' responsibilities under both treaties, providing expert representation in peak scientific committees and supporting activities of the CIPM, the technical committees in legal metrology established under the OIML, and participates at the level of the International Committee of Legal Metrology (CML), which is the technical and administrative oversight body of OIML.

On behalf of the United States and given authority via the US State Department, NIST participates in the international frameworks established under these treaties, the Mutual Recognition Arrangement of the International Committee for Weights and Measures (CIPM MRA) and the technical matters of OIML. This ensures measurement standards of the United States are comparable to those of our major trading partners. NIST maintains reference standards directly traceable to the International System of Units (SI) and conducts related measurement research. The NIST Office of Weights and Measures (OWM) is responsible for legal metrology.

C. ACCREDITATION

Conformity assessment accreditation services in the economy are provided by a number of accreditation bodies as listed below:

1. ANSI National Accreditation Board (ANAB) – IAF MLA, ILAC MRA
2. United Accreditation Foundation (UAF) – IAF MLA
3. Pennsylvania Accreditation Center Inc. (PAC) – APAC (Assoc. Member)
4. National Voluntary Laboratory Accreditation Program (NVLAP) – ILAC MRA
5. NAC National Accreditation Center LLC (NAC) – ILAC MRA
6. IOAS Inc. – IAF MLA
7. International Accreditation Service Inc. (IAS) – IAF MLA, ILAC MRA
8. Perry Johnson Laboratory Accreditation Inc. (PJLA Inc) – ILAC MRA
9. American Association for Laboratory Accreditation (A2LA) - IAF MLA, ILAC MRA
10. AIHA Laboratory Accreditation Programs, LLC (AIHA LAP) – ILAC MRA

11. Accreditation Board of America, LLC (ABA) -APAC (Assoc. Member)

D. CONFORMITY ASSESSMENT

NIST coordinates government conformity assessment activities across the federal government and with the private sector. The U.S. conformity assessment system utilizes a variety of mechanisms depending on the product and assessed risk. Standards and technical regulations that rely on supplier's self-declaration are also supported largely through product-liability laws. Conformity assessment services are provided by an extensive network of accredited conformity assessment bodies.

E. MARKET SURVEILLANCE

The US has a distributed system for the assessment of conformity to a technical regulation. This assessment may be done by a federal government agency, state or local governments, or an independent conformity assessment body, where the Government provides official recognition through accreditation or similar measures. The Consumer Product Safety Commission (CPSC) is responsible for surveillance of many types of consumer products. Several types of consumer products are covered by other federal agencies in accordance with their mission and program objectives.

2.5.21 VIET NAM

Overview

The Quality Infrastructure of Viet Nam is mainly established and managed by the Directorate for Standards, Metrology, and Quality (STAMEQ) under the Ministry of Science and Technology (MOST). The role of STAMEQ is provided in the 2006 Law on Standards and Technical Regulations. STAMEQ has the responsibility for advising the Government and MOST on the state management in the fields of standardization, metrology and quality.

Subsidiary bodies under the STAMEQ are responsible for standards development, metrology, conformity assessment, quality system certification, product certification, accreditation of testing and calibration laboratories, supervision of quality requirements for goods, and matters related to standards and technical regulations. This is supplemented by two other accreditation bodies Viet Nam Institute of Accreditation (VACI) and Accreditation Office for Standards Conformity Assessment Capacity (AOSC).

A. STANDARDISATION

The Commission for Standards, Metrology and Quality of Viet Nam (STAMEQ) is the economy's National Standards Body. Standards (TCVNs) are prepared by committees under various agencies and organisations with the support and coordination of the Viet Nam Standards and Quality Institute (VSQI).

The VSQI also provides support for the development of technical regulations (QCVNs), which are developed by committees composed of government agencies and experts.

Several ministries are engaged in the development of standards, technical regulations, conformity assessment procedures, and other measures. These include the MOST, Ministries of: Industry and Trade; Agriculture and Rural Development; Information and Communication; Natural Resources and Environment; Transport; Health; Education and Training; Labour, Invalids and Social Affairs; Finance; Culture, Sports and Tourism, National Defence; Public Security and Construction. MOST is responsible for coordinating the publication of the economy's standards (TCVNs) and technical regulations (QCVNs). STAMEQ represents Viet Nam in ISO and IEC.

B. METROLOGY

The Viet Nam Metrology Institute (VMI), a division of STAMEQ, has the overall mandate to oversee all aspects of metrology in Viet Nam under the Viet Nam Metrology Law. It is responsible for maintaining the economy's measurement standards, providing measurement services to all sectors, conducting type approval for measuring instruments, conducting research, enforcing legal requirements for measurements and participation in regional and international organisations.

Under the metrology law, measuring devices are classified into two groups. They are either controlled to meet international requirements (Group 1) or controlled to meet the requirements of its Directorate for Standards and Quality, one of the agencies responsible for measuring devices, including measuring instruments used for regulation, trade, consumer rights, health care and environmental protection (Group 2). VMI has appointed organisations to verify and/or calibrate Group 2 measuring devices.

The Viet Nam Laboratory Accreditation Scheme (VILAS) is the economy's accreditation body established under Directorate for Standards and Quality (STAMEQ) to evaluate the technical and operational competence of laboratories to perform calibration and to accredit them. Viet Nam is a member of OIML and an associate member of BIPM. The Viet Nam Metrology Institute (VMI) is the signatory to the CIPM MRA.

C. ACCREDITATION

The Viet Nam Bureau of Accreditation (BoA) under STAMEQ operates the following accreditation schemes:

- Viet Nam Laboratory Accreditation Scheme (VILAS)
- Viet Nam Certification Accreditation Scheme (VICAS)
- Viet Nam Inspection Body Accreditation Scheme (VIAS)
- Viet Nam Accreditation Scheme for Medical Testing Laboratory (VILAS-MED)
- Viet Nam Proficiency Testing Providers Accreditation Scheme (VIPAS)
- Viet Nam Reference Materials Producers Accreditation Scheme (VIRAS)

In addition to the above, 2 other private sector accreditation bodies provide accreditation services:

- Viet Nam Institute of Accreditation (VACI) –inspection bodies and testing and calibration laboratories.

- Accreditation Office for Standards Conformity Assessment Capacity (AOCS)
Established under the Viet Nam Union of Science and Technology Associations, AOCS provides accreditation of calibration laboratories, testing laboratories and medical testing laboratories.

D. MARKET SURVEILLANCE

The Market Surveillance agency under the Ministry of Industry and Trade is responsible for market surveillance. Those products and goods which, under usual conditions of transportation, storage, preservation and use for proper purposes, may cause harm to humans, animals, plants, assets or the environment, are controlled on the basis of relevant technical regulations from the competent state agencies, which specify the method and procedures for conformity assessment.

Several Ministries are responsible for the quality control of goods under their responsibility, and for issuing lists of goods potential safety issues and subject to conformity assessment through mandatory certification, quality inspection, and testing.

3. Conference of Best Practices of QI in APEC Economies

The conference was held as a virtual event on 20 and 21 January 2026, organised by the Department of Standards Malaysia. The conference programme is in Annex 4.

It was divided into four thematic sessions which addressed a selection of related practices. In each of the sessions, speakers presented on identified good practices related to the theme. The topic selected reflected the economy's experience with the QI practice that the economy wishes to share with other APEC economies.

At the end of each session of presentations, the panel of speakers, facilitated by a moderator, took questions and comments from the floor and engaged in discussions with the participants. These discussions were intended to contribute to the understanding of the issues and further exchange of ideas.

This section contains the summary of presentations on best practices on the four themes as shared by APEC member economies and a record of the responses to questions posed by participants at the end of each session.

3.1 Theme 1: QI Governance, Strategy and Human Resource Development

There is a substantial diversity in the legislation defining QI infrastructure in APEC member economies. This in turn has resulted in different types of organisational arrangements and the governance of the QI institutions. The objective of this session is to exchange views on the paths adopted by APEC economies and the associated development of strategies and resource development programmes.

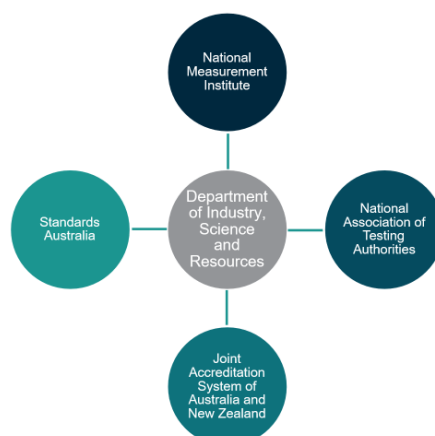
3.1.1 “Australia's Standards and Conformance Infrastructure” by Mr James JANISSEN (Australia)

In an increasingly globalised and digitised economy, standards, measurement and conformity assessment underpin the safety, reliability and quality of goods and services.

Australia's standards and conformance system provides the technical foundation for commerce and regulation by enabling trusted measurements, clear technical requirements, and confidence in claims of conformity. It supports everyday economic activity—from consumer transactions to complex global supply chains—while helping Australian industry trade internationally and whilst ensuring public safety and consumer interests.

The **Department of Industry, Science and Resources (DISR)** holds the Commonwealth's relationship with Australia's Technical Infrastructure Alliance (ATIA), which comprises four core institutions: Standards Australia, the National Measurement Institute (NMI), the National Association of Testing Authorities (NATA), and the Joint Accreditation System of Australia and New Zealand (JASANZ). Together, these bodies deliver measurement, standards development, accreditation and conformity assessment functions that align Australia with international best practice.

The Australian Framework



Standards Australia is the recognised, non-government peak body responsible for the development and adoption of Australian standards and facilitating Australia's participation in international standards development. It develops a wide range of product, process, management system and services standards and represents Australia internationally as the member of ISO and IEC. Through this role, Standards Australia supports economic efficiency, innovation, regulatory coherence and Australia's integration into global markets.

NATA and JASANZ are Australia's accreditation bodies.

NATA is the domestic authority for laboratory accreditation and the peak body for inspection accreditation, accrediting organisations that perform testing, measurement and inspection across all sectors. Its peer-based, technically focused assessment process provides confidence in the competence of accredited facilities and supports international acceptance of test results.

JASANZ, established by treaty between Australia and New Zealand, accredits certification bodies across management systems, products, food, health, environmental and emerging sectors. Neither body certifies products or services directly; instead, they accredit those that do.

Both NATA and JASANZ participate in international peer-evaluation arrangements such as Global ACI, and the Asia-Pacific Accreditation Cooperation (APAC), ensuring Australian conformity assessment outcomes are recognised internationally. This recognition reduces duplication, supports mutual recognition, lowers costs for exporters and improves time-to-market for Australian industry.

NMI, a division of DISR, is responsible under the National Measurement Act 1960 for Australia's top-level physical, chemical, biological and legal metrology infrastructure. It maintains Australia's primary standards for SI units and delivers calibration, reference materials and specialised measurement services. NMI manages the domestic trade measurement system, ensuring that measurements used in trade (such as fuel dispensers and retail scales) are accurate, reliable and internationally accepted, supporting economic activity valued at hundreds of billions of dollars annually.

Government involvement in standards and conformance is driven by Australia's obligations under the WTO Technical Barriers to Trade (TBT) Agreement and the principle that regulators should rely on trusted international standards and conformity assessment outcomes wherever possible.

DISR provides policy oversight, administers Memoranda of Understanding and funding arrangements with Standards Australia and NATA, and represents Australia internationally through free trade agreements, mutual recognition arrangements and active participation in APEC and AANZFTA standards and conformance activities.

Collectively, Australia's standards and conformance infrastructure delivers trusted technical outcomes that support regulation, trade, innovation and consumer confidence, while strengthening Australia's integration with regional and global markets.

Q&A following the presentation by Mr James JANISSEN

Question 1: Where do the standards development agencies other than Standards Australia fit in the slide on Australian framework?

Response to Question 1: Standards Australia is Australia's peak standards development agency, but it can also accredit other standards development organizations to develop Australian Standards. There are also other specialist standards development bodies in other fields such as Food Standards Australia New Zealand, which is a body separate from Standards Australia, which develops standards as well in areas such as food safety and things like that. The market sorts itself out in terms of niche areas that require focus from standards development organizations.

Question 2: JASANZ also accredits inspection bodies, similar to NATA? How is the demarcation between their scopes established?

Response to Question 2: NATA focuses on the accreditation of laboratories and technical facilities whereas JASANZ focuses more on the accreditation of certification, inspection (non-laboratory), and verification/validation bodies. Anything lab focused tends to seek NATA accreditation whereas JASANZ is more general, accrediting certifiers.

Question 3: Has there been any R&D established to develop standards in Australia?

Response to Question 3: The government invests heavily in research and development but there is no formal R&D established around standards development at this stage. What we do is work closely around our science institutions. We have an organization called CSIRO which is innovation-focussed. They invest heavily in R&D. We work with them to create an environment that facilitates innovation. Part of that is getting an idea of the latest measurements and the latest standards to support standards development. Through our MoU with Standards Australia, we also encourage innovation and digitisation to improve cost and access to standards.

Question 4: Does Australia have any formalised platforms for the interaction of regulators with QI agencies under your department, especially for the purpose of market surveillance?

Response to Question 4: To my knowledge, we do not have a formal platform. We tend to rely on communication on an as-needed basis. We have our MoUs; regulators are invited to standards committees to provide their inputs. We also try and ensure that standards development is industry-focused and consensus-based and is only liaised into regulations when and where it is needed. When that happens, our department (DISR) tends to work closely with regulators to make sure they are informed about how standards fit into the ecosystem and how they can engage QI stakeholders to make sure that the regulations reflect best practice QI. I believe there is the handbook as well that I referenced in my presentation. The Commonwealth Government is producing a guide of best practices for regulators to use Australian and International Standards and work constructively with QI organizations that already exist. In terms of market surveillance, this is primarily managed by the Australian Competition and Consumer Commission (ACCC) in Australia.

Question 5: How does the Australia Technical Infrastructure Alliance (ATIA) operationalise and how are regulators across different sectors aware of their roles especially in policy development process?

Response to Question 5: In terms of how the ATIA operationalizes, when there is a shared objective, the government trusts them to liaise among themselves. They are very efficient; they are industry-led and industry-focused. We very rarely intervene. What we do is host forums to bring everyone together to share economy-wide priorities and let them know of areas and opportunities we can support them through our QI, or where regulators can support our federal objectives. In these instances, we do brief them and bring them together to talk about a shared way forward, and then we come up with a plan from there.

Normally the issues from accreditation might be very different from the issues from certification and metrology. They are not always working on the same subject matter so bringing the ATIA together isn't always necessary. But when they do, they tend to work very efficiently and, when they need government intervention, that is when we do lean in.

3.1.2 “Implementation of the Law on Quality Infrastructure in Indonesia” by Mr Yuliandri Heru KUSSUMA PUTRA (Indonesia)

Quality Infrastructure Laws in Indonesia

Prior to 2014, Indonesia's legal framework for quality infrastructure operated under a Lex Specialis system. The regulation that specifically regulate about standardization as one of the pillars of quality infrastructure was Government Regulation (Peraturan Pemerintah) Number 102/2000 on National Standardization. Based on Indonesian regulation system and hierarchy, Government Regulation is in 4th place after constitution, MPR decree, and law.

The landscape underwent a major modernization starting in 2014 with the enactment of Law Number 20/2014 on Standardization and Conformity Assessment. It is a specific law related to quality infrastructure that regulate standardization, conformity assessment, accreditation, and metrology activities in Indonesia.

This pivotal legal shift transformed the economy's infrastructure in two primary ways:

- i. **Creation of a Centralized National Standard:** The 2014 law officially established the Standard Nasional Indonesia (SNI), which serves as the central, unified National Standard for Indonesia.
- ii. **Development of an Interconnected Legal Network:** Rather than functioning as isolated, specialized regulations, Law Number 20/2014 was designed to act as an anchor that cooperates with more than 20 other laws related to quality infrastructure (QI).

Indonesia has several other laws that some of the norms of which also regulate quality infrastructure. These laws such as Law Number 8/1981 on Legal Metrology, Law Number 8/1999 on Consumer Protection, Law Number 3/2014 on Industry, Law Number 7/2014 on Trade, and Law Number 33/2014 on Halal Product Assurance.

The enforcement and continuous strengthening of quality infrastructure in Indonesia rely on dedicated bodies. The primary organizations driving this system include Badan Standardisasi Nasional (BSN) and Komite Akreditasi Nasional (KAN).

The BSN acts as the central coordinator for quality policies and technical standard development. Its responsibilities include managing government policies, the entire SNI lifecycle (planning, formulation, and maintenance), and capacity building for Conformity Assessment Bodies (CAB). Furthermore, BSN ensures international scientific metrology traceability through BIPM, manages voluntary SNI marking, and fosters broad inter-agency cooperation to monitor standard effectiveness.

A specialized and vital layer of Indonesia's QI is KAN, which focuses specifically on the formal recognition of technical competence. KAN's primary role is the accreditation of various CABs, including certification bodies, inspection bodies, and testing/calibration laboratories. By providing this rigorous oversight, KAN ensures that the results provided by these laboratories and bodies are reliable and internationally recognized,

The final tier of the QI implementation involves technical ministries, non-ministerial agencies, and local governments, which handle the regulatory and enforcement aspects of the system. These entities are responsible for managing compulsory SNI requirements and mandatory marking, conducting market surveillance, and executing law enforcement actions. They also contribute to the evolution of the system by proposing new SNI themes, conducting specific conformity assessments, and overseeing legal metrology to ensure fairness in trade and consumer protection.

Indonesia has identified three strategic areas to strengthen its quality infrastructure; regulation, institutional capacity and policies. Future efforts will focus on revising Law Number 20/2014 and its derivative regulations to remain current with global trends. Institutionally, the focus is on strengthening BSN's positioning and internal capacity building, while policy improvements will focus on deepening inter-agency cooperation to ensure a unified approach to quality across all sectors.

Q&A following the presentation by Mr Yuliandri Heru KUSSUMA PUTRA

Question 1: Does the scope of SNI development include halal standards?

Response to Question 1: We do have SNI standards on halal. We have two or three halal-related SNI standards. As I mentioned in my presentation, under one of the articles in Law #33 (2014), Badan Penyelenggara Jaminan Produk Halal (BPJPH) [Halal Product Assurance Organizing Body] have a role in stipulating standards, but when it comes to implementation of the article, they have to cooperate with BSN to produce the standards. The end products of the standards development process are SNI standards. I need to search but from my recollection, in our database we have two or three halal-related SNI standards.

Question 2: Does Indonesia have a formalised platform for coordination between the QI implementors? How does Indonesia manage the interrelations between their QI institutions?

Response to Question 2: We do have a platform that consists of government ministries and non-ministry government agencies, whereby annual meetings are conducted to discuss the implementation of QI in Indonesia. However, one of the problems is that we are not able to reach the local (provincial) governments. In the Indonesian system of governance, we have two levels/types of government, the first being the central government and the other being the local/provincial governments. The local governments are spread over a wide area because of the geography of Indonesia, from Papua in the south to Aceh in the north, thus making it difficult to reach the local governments in the cities or provinces. Although we have the forum at the economy level, there is still a need for more coordination between the different QI implementation agencies because they tend to have their own points of view.

Question 3: Indonesia has a very comprehensive legislation framework on QI, do all the ministries/non-ministries/local governments use one single SNI marking?

Response to Question 3: Yes, the same SNI Mark is used as long as the SNI standard is used, if the central government or local government makes reference to the SNI standard in its regulations. The agencies/ministries cannot be forced to make reference only to SNI standards in their regulations. The Ministry of Environment and Forestry in the last administration used its own standards for wood and wood-related products. The Ministry did not use SNI standards; as such, the certified products did not carry SNI marks.

Question 4: That means BSN develop SNI standards related to halal, but the marking is not SNI marking?

Response to Question 4: The SNI Mark is not used on halal products. The law states that Badan Penyelenggara Jaminan Produk Halal (BPJPH or Halal Product Assurance Organizing Body in English) needs to coordinate with BSN to produce halal standards but the producers and importers are not using those standards yet. As they are not using the SNI standards, they are not using the SNI Mark on their products.

Question 5: About the SNI mark, what about the product liability? Is it under the Government of Indonesia?

Response to Question 5: The SNI Mark is under the government of Indonesia through BSN. The SNI Mark is owned by BSN and has been registered with the Director-General of Intellectual Property under the Ministry of Law. As such, BSN is the owner of the trademark and the copyright for the mark.

3.1.3 “Overview of QI & Governance Considerations” by Ms Natalie COHEN (OECD)

The Quality Infrastructure System and its Components

The system of standards, assurance, and measurement that underpins policy delivery and trade operability is known as Quality Infrastructure (QI). QI functions through the collaboration of public and private sector bodies and is structurally defined by four key pillars: standards that develop a consensus on what good looks like, conformity assessment to verify those standards are being met, accreditation to ensure assessment bodies are impartial and competent, and metrology to provide consistent underlying measurement. By establishing these pillars, businesses can effectively demonstrate that they meet requirements, which ultimately increase consumer confidence in the reliability of their products and services.

Quality Infrastructure as an Essential Part of the Regulatory Cycle

QI plays an indispensable role throughout the regulatory cycle, from identifying public policy issues to regulatory implementation and ex-post reviews. QI bodies provide crucial market surveillance intelligence, help anticipate the costs of services needed to implement regulations, and assess the economic impact of conformity assessment. Furthermore, metrology research and data sharing between QI bodies and government entities act as powerful drivers for policy innovation. This ecosystem helps ensure that abstract values and ethical principles are tangibly translated into practical, outcome-focused standards and regulations.

Integrating Standards into Regulation

Depending on the specific regulatory approach, standardizations can be woven into general regulation in three primary ways to help facilitate compliance. The European Union AI Act serves as a recent example of a governance framework attempting to combine these different regulatory forms.

Methods of Integrating Standards into Regulation

- i. **Direct incorporation:** Standards are explicitly referenced in the regulation, making them a mandatory method for compliance.
- ii. **Presumption of compliance:** Standards are highly recommended; following them creates a legal presumption that overarching regulatory goals are met.
- iii. **Voluntary use:** Standards serve as an entirely optional method for meeting regulatory objectives or voluntary commitments without explicit inclusion in the regulation.

QI Setups and Governance Optimization

Because institutional arrangements vary widely, there is no universal model for QI setup. QI bodies can be integrated into the government, or they may exist as independent public or private structures depending on the specific legal and political culture of an economy. Instead of pursuing a one-size-fits-all model, governments are advised to build high-level quality policies grounded in domestic needs. A key objective is to explicitly embed QI roles into the delivery of broader policy priorities, requiring anticipating what specific QI services and

investments are needed to scale specific industries, boost trade, or achieve complex goals like Net Zero.

Coordination Mechanisms and Practical Implementation

To future-proof an economy's infrastructure, it is critical to implement formal and effective coordination mechanisms between the government and QI bodies early in the regulatory design process. Because QI bodies possess deep scientific and technological expertise, their early involvement can spark regulatory innovation and even provide voluntary standards as an alternative to entirely new technical regulations. Optimizing this system heavily relies on transparent data sharing across market surveillance and enforcement activities.

The OECD provides a five-step checklist to help economies create an effective QI system as follows;

Step 1: Identifying the key actors involved in both QI and regulation.

Step 2: Determining if these key actors share common policy objectives.

Step 3: Analysing the current interactions between QI and regulatory actors.

Step 4: Designing improved, more integrated coordination between QI and regulation.

Step 5: Implementing, monitoring, and reforming these interactions to consistently drive better regulatory outcomes.

Moving forward, as experts in both regulation and QI, the OECD's Regulatory Policy Division may engage in advisory work with economies to review and ultimately enhance their QI system.

Q&A following the presentation by Ms Natalie COHEN

None.

3.2 Theme 2: Enhancing Service Deliver to All Stakeholders

The effectiveness of QI infrastructure institutions depends on the organisational arrangements and processes adopted to deliver their services. APEC member economies have developed unique and interesting arrangements to ensure speed, optimisation of use of resources, and quality of services.

3.2.1 “Development of National Standards of Canada (NSC)” by Mr Muhammad AASHIR (Canada)

Introduction

This presentation provides a comprehensive overview of the development, governance, and application of National Standards of Canada (NSC), explaining the role of the Standards Council of Canada (SCC). The report covers SCC's mandate, the NSC development process, key principles, and the integration of voluntary standards into Canadian regulation.

Overview of the Standards Council of Canada (SCC)

- **Establishment and Mandate:** SCC was established by the Canada's Parliament through the *Standards Council of Canada Act* and operates within the Innovation, Science, and Economic Development Canada portfolio.
- **Primary Goal:** Its mandate is to promote effective and efficient voluntary standardization in Canada. The SCC is not a regulatory body.

Roles as Canada's National Standards Body

- SCC facilitates the participation of over 2,600 Canadian technical experts in international standardization (ISO and IEC).
- Canada holds 18 ISO and 2 IEC secretariats, and over 390 leadership roles in technical committees (including chairs, convenors and project leaders).
- SCC is active in regional and international networks, including:
 - National Committees of the Americas (FINCA)
 - Pan American Standards Commission (COPANT)
 - Pacific Area Standards Congress (PASC)
 - Le réseau normalisation et Francophonie (RNF)
 - Commonwealth Standards Network (CSN)

Roles as Canada's National Accreditation Body

- SCC accredits a wide range of organizations, including:
 - Management systems certification bodies
 - Product, process, and service certification bodies
 - Inspection bodies
 - Greenhouse gas validation/verification bodies
 - Standards development organizations (SDOs)

- Testing and calibration laboratories
 - Medical testing laboratories
 - Proficiency testing providers
 - Good laboratory practices facilities
- Information on each program (including overview, scope, accredited bodies, Requirements & Guidance, etc.) is available online: <https://scc-ccn.ca/accreditation>

Development of National Standards of Canada (NSC)

- **Process Overview:**
 - SCC does not develop standards directly; instead, it accredits SDOs to develop, publish, and maintain NSCs.
 - SCC-accredited SDOs may also adopt ISO and IEC standards as NSCs.
 - All NSCs are voluntary, but may be referenced in regulation.
 - Notices of Intent for new standards are published in SCC's Centralized Notification System to support system coordination, transparency, and prevent duplication.
- **Key Principles of NSCs**, include **consensus, the avoidance of duplication, consideration to the impact of trade, balance of stakeholders and relevance, transparency, and bilingual availability.**

NSC Catalogue and Trends

- **Active National Standards:**
 - The number of active national standards under SCC oversight is 3,491 as of March 2025.
 - There is a trend toward increased adoption of international standards, with the proportion of adopted standards rising from 46.1% to 65.6% over recent years.
- **Sector Distribution (ICS Classification):**
 - Electronics, IT, and telecommunications: 36.6% (domestic), 60% (adopted)
 - Engineering technologies: 22.6% (domestic), 14.5% (adopted)
 - Health, safety, and environment: 16.4% (domestic), 12.9% (adopted)
 - Other sectors include construction, materials, special technologies, transport, and agriculture.

NSC Self-Declaration Status

- **Streamlined Publication:**
 - Since 2017, and under conditions, SCC-accredited SDOs can self-declare compliance with SCC requirements for the development of NSCs, expediting the publication process.
 - Criteria for self-declaration and its maintenance were updated in 2019.

Continuous Innovation in Requirements & Guidance (R&Gs)

- **Recent Revisions:**
 - New requirements relate to gender-responsiveness, consideration of ISO and IEC guides, and system coordination.

- Updated requirements address technical committee approval, maintenance, and collaboration to avoid duplication.

Voluntary Standards and Technical Regulation

- **Incorporation by Reference:**
 - Voluntary standards, including NSCs and international standards, can be incorporated by reference into Canadian regulations, giving them binding legal effect.
 - As of March 2025, there were 1,535 references to standards in 143 federal regulations.
 - Regulators have flexibility in choosing which voluntary standards to reference.

Conclusion

SCC plays a central role in Canada's standardization system, ensuring that NSCs are developed through accredited organizations, guided by principles of consensus, transparency, and relevance. The integration of voluntary standards into regulation and the continuous evolution of requirements ensure that Canadian standards remain robust, inclusive, and reflect international best practices.

Q&A following the presentation by Mr Muhammad AASHIR

Question 1: Regarding the SDOs accredited by SCC, are the SDOs categorized by each industrial sector (construction, food, and chemical) or can they be done in multiple sectors depending on their technical aspects?

Response to Question 1: SCC's accredited SDOs are not limited to any single industry sector. SDOs are accredited based on their competence, governance and standards development processes. SCC-accredited SDOs may develop standards across multiple sectors or technical domains so long as they comply with SCC's Requirements and Guidelines (RGs).

Question 2: What does R&G stand for?

Response to Question 2: R&G stands for "Requirements & Guidance". NSCs are developed, maintained, and published according to the Requirements & Guidance for the Accreditation of Standards Development Organizations. This document, and additional details, about the accreditation of SDOs are publicly available on SCC's website: [Standards Development Organizations | Standards Council of Canada](#).

Question 3: How are SDOs funded? How is oversight effectively done? Do these accredited SDOs receive any funding from the government?

Response to Question 3: Most SDOs that are accredited by SCC are private bodies that are not part of government. These SDOs have different funding models and are funded through their own revenue streams, which may include membership fees, sales of standards, industry contributions, and project funding. Some SDOs may receive project-based government grants or contracts to develop standards in priority areas but this is not a feature of SCC accreditation.

Question 4: Are there regular changes to the list of SDO bodies accredited under SCC or are these accredited SDOs considered 'long-term' SDOs under SCC? How long is their term per accreditation cycle?

Response to Question 4: As for the accreditation cycle duration, it is three years. During the cycle, SDOs remain accredited with on-going oversight to verify that they continue to comply with the relevant R&G and any other requirements. During the three years between initial accreditation and reaccreditation and between each reaccreditation, there are annual surveillance activities at the SDOs' head office, with these taking place roughly once every twelve months. These surveillance activities are designed to confirm that the SDOs continue to meet the requirements of the R&G. In the third year, SCC conducts a reaccreditation assessment to where all requirements will be reviewed and verified.

The accreditation of SDOs attests to their competence to carry out the development and maintenance of published standards against a set of requirements. SCC requirements are in line with accepted international standards best practices derived from the World Trade Organization's Technical Barriers to Trade Agreement Annex 3 provisions and ISO/IEC Guide 59: Code of Good Practice for Standardization.

Question 5: Is there a centralised repository of NSCs developed by these SDOs available to the public?

Response to Question 5: SCC's website includes a catalogue of standards that have been published and withdrawn over time. This includes lists of ISO and IEC standards as well as NSCs. The text of the standards is not available. In addition, SCC-accredited SDOs are required to each have a work programme that lists the standards it is currently preparing and the standards which it has adopted.

SCC also maintains an online service where you can search for standards and purchase these published standards.

SCC-accredited SDOs have to provide public notice to announce the standards they are developing. This Centralized Notification System (CNS) includes notices of all new standards development projects, including the adoption of ISO and IEC international standards.

3.2.2 “Indonesia’s Policy on Standardisation Strategy” by Mr Andri GANDHI (Indonesia)

Introduction to BSN and Its Roles

The National Standardization Agency of Indonesia (BSN) serves as the economy’s National Standard Body, National Accreditation Body, and National Metrology Institute. Established under Law No. 20 of 2014 and Government Regulation No. 34 of 2018, BSN is responsible for developing the Indonesian National Standard (SNI), representing Indonesia in international standardization forums, and accrediting conformity assessment bodies. With its headquarters in Jakarta and several regional offices, BSN plays a central role in ensuring quality, safety, and competitiveness across Indonesian products and services.

Objectives of Standardization and Conformity Assessment (SCA)

Indonesia’s SCA framework aims to improve quality assurance, production efficiency, and business competitiveness, while also protecting consumers, workers, and the broader community. SCA is positioned as a key instrument for facilitating both domestic and international trade, fostering fair competition, and supporting occupational health and safety.

National Quality Infrastructure (NQI)

Indonesia’s NQI is an integrated institutional framework that encompasses metrology, standardization, technical regulations, conformity assessment, accreditation, and market surveillance. The QI4SD Index, which measures the readiness of an economy’s quality infrastructure, placed Indonesia 28th out of 155 economies in 2024, with a score of 60.7, reflecting significant progress in supporting sustainable development goals.

SNI Implementation and Legal Framework

SNI standards can be voluntary or mandatory, with mandatory standards enforced through ministerial regulations for reasons such as safety and environmental protection. Compliance is monitored through certification and the use of the SNI Mark, with legal consequences for non-compliance. The system ensures that products and services meet domestic and international quality benchmarks.

SNI Statistical Overview

As of November 2025, there are 10,029 active SNI standards, covering sectors such as agriculture and food technology (20%), construction (25%), health, safety and environment (11%), electronics and IT (5%), and materials technology (16%). This broad coverage demonstrates Indonesia’s commitment to comprehensive quality assurance across key industries.

Regulation and Oversight of SNI

Multiple ministries and agencies regulate SNI implementation, with the Ministry of Industry overseeing the largest number (130 SNIs), followed by the Ministry of Energy and Mineral

Resources (88), and others. In total, 312 SNIs are regulated across various sectors, ensuring sector-specific quality and safety standards are maintained.

Supervision and Enforcement

Supervision of mandatory SNI regulations is conducted by designated officers from relevant ministries, who perform periodic, special, and integrated inspections. These activities include documentation review, production process inspection, sample testing, and market surveillance. Suspected violations trigger investigations and enforcement actions, ensuring compliance and consumer protection.

National Standardization System and Stakeholder Involvement

Indonesia's standardization and conformity assessment system is governed by Act No. 20/2014, covering a wide range of fields such as trade, industry, consumer protection, science, technology, environment, and more. The system involves multiple stakeholders, including government, industry, and consumer representatives, to ensure standards are relevant and effective.

Macroeconomic Targets and Strategic Vision

Indonesia aims to achieve a Gross National Income per capita of USD7,400–7,670 by 2029, requiring annual economic growth of 5.6%–6.1%. The government emphasizes that quality is key to competitiveness and productivity, both domestically and globally, and that enhancing productivity is essential for producing high-value products.

BSN Vision, Mission, and Strategic Directions (2025–2029)

BSN's vision is to realize a robust National Quality Infrastructure for an advanced Indonesia by 2045. Its mission includes strengthening the policy framework for SNI, aligning with international standards, and promoting efficient governance. Strategic objectives focus on enhancing competitiveness, improving quality of life, expanding standards availability, strengthening conformity assessment and accreditation, supporting exports, and improving organizational management. These strategies are designed to ensure that standardization and conformity assessment contribute significantly to Indonesia's economic growth and global standing.

Q&A following the presentation by Mr Andri GANDHI

None.

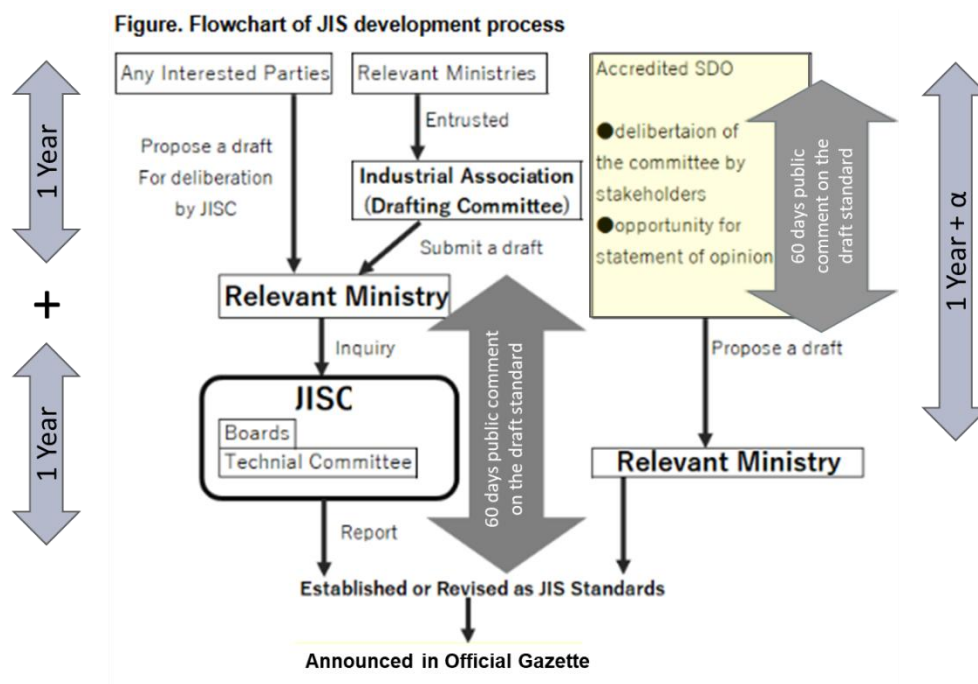
3.2.3 “Deliver Standards as Market Needs – Japan’s Practice” by Mr Mitsuo MATSUMOTO (Japan)

Problems of Standardization Process

Mr. Matsumoto introduced the measures that Japan has taken recently to develop a suitable Quality Infrastructure (QI) to supply standards at the most appropriate time when the market needs them. He pointed out four major problems of standardization, namely, 1) development time, 2) seeds identification, 3) support for SMEs, and 4) human resources. As measures to deal with those problems, he explained about introduction of “accredited SDO (Standards Development Organization) scheme” (for Problem 1), “new-market creation standardization scheme” (for Problem 2), and “standardization partnership scheme” (for Problem 3), and “standardization experts’ database (STANDirectory)” (for Problem 4).

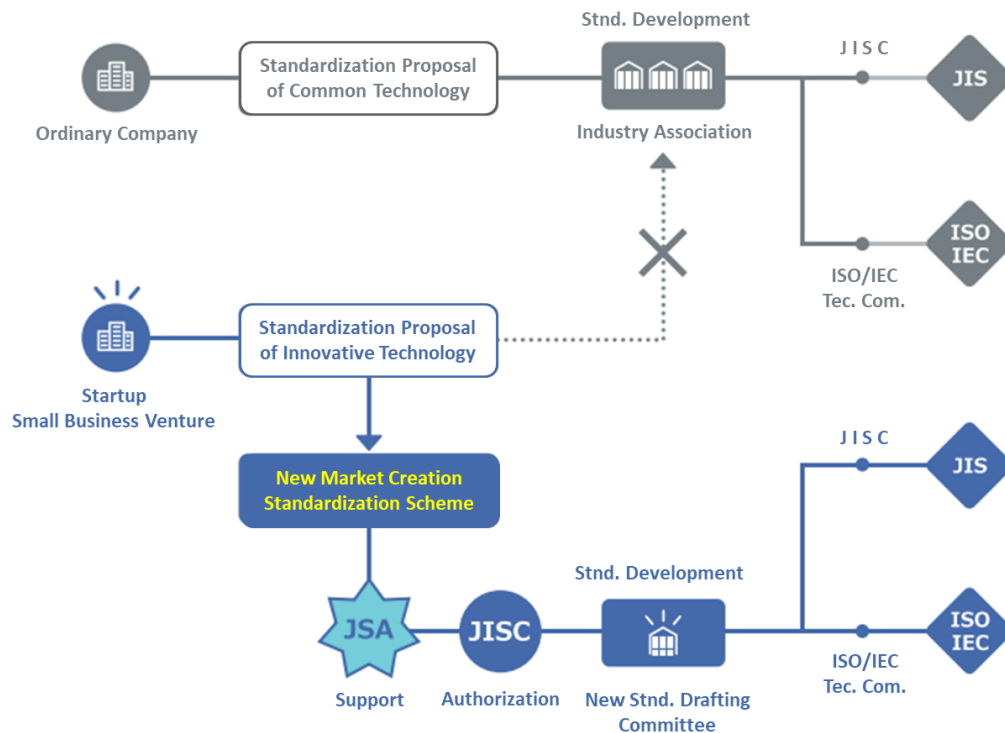
Introduction of Accredited SDO Scheme

The accredited SDO scheme was introduced to shorten the time required for standards development and two SDOs have been accredited so far. The recent total number of JIS standards is approximately 11,000, while JIS standards under the scopes of the two SDOs currently account for around 35%. JISC (Japanese Industrial Standards Committee) is aiming for this ratio to reach about 70% over the next five years.



New Market Creation Standardization Scheme

To identify the seeds for new standards, so called New-market Creation Standardization Scheme was introduced. The scheme was created to identify overlooked standardization seeds of start-ups or small business ventures. They can use the scheme to directly develop JIS standards or ISO/IEC standards for their innovative technologies or products.

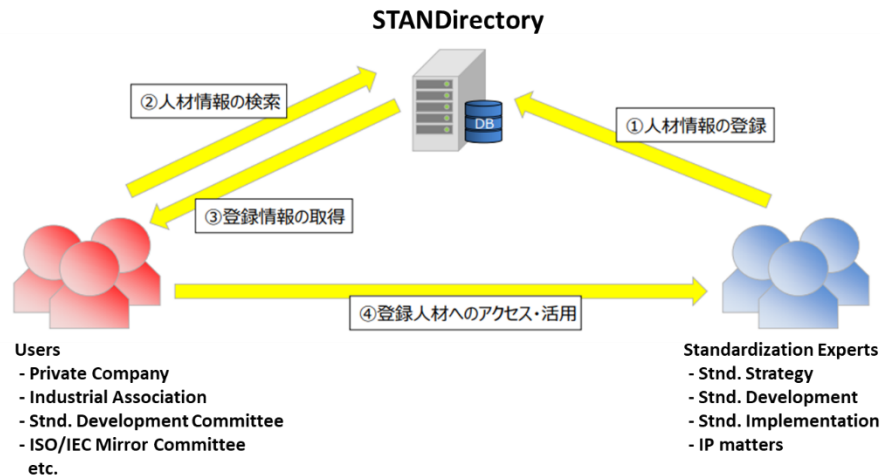


Standardization Partnership Scheme

The purpose of the Standardization Partnership Scheme is to help MSMEs to participate in standardization activities while discovering standardization seeds possessed by MSMEs through the Partner Organizations. There are currently 197 Partner Organizations throughout Japan, who are regularly interacting in various ways with MSMEs to support their business activities.

Standards Experts Database (STANDirectory)

STANDirectory is a database in which various standardization experts are registered. Users who need those personnel, such as private companies, industry associations, standards development committees, or ISO/IEC mirror committees, can search the database to find the necessary standardization experts and contact them directly, thereby obtaining support for their own standardization activities. Currently, more than 160 experts are registered.



In addition, Mr. Matsumoto also mentioned about importance of demonstrating the economic benefits of standardization with some case studies, as well as combination of IP (Intellectual Property) tools with standardization activities to develop so called “Open & Close Strategy” to enhance competitiveness of products and services in the market.

Q&A following the presentation by Mr Mitsuo MATSUMOTO

Question 1: Regarding the STANDirectory of Japan practise that allows the user to contact the expert, do your experts receive any compensation?

Response to Question 1: There is no specific mechanism for compensation that is stipulated in that scheme. As such, it is totally up to the organization that approaches the expert and the specific expert, whether they enter into any contract to get some form of compensation. So, I understand that it is totally up to them. I hope that my understanding is correct; if not, I will provide you with the correct answer later after I confirm it.

Question 2: Does Japan already have a success model for application of intellectual property (IP) in standards development? If not yet, at what stage is the progress currently in? What are the challenges in introducing the application of IP into standards development form of contract

Response to Question 2: Yes, there are several successful models of the application of IP in standards development. The Blue Ray standard is one example. Another is the QR Code which was developed by a Japanese company. They have incorporated IP matters in the development of QR Code standards.

The challenge is how to let the people who are interested in IP matters understand the importance of standards as well. Those people who have been living in the IP arena have been doing business only with IPs, like patents or trademarks. As such, they do not have enough knowledge about the importance of standardization. As such, the challenge is to make them understand that standards are also a useful business tool. It is for this reason that Japan has amended the patent law so that patent attorneys can also facilitate such understanding among those business people who have been doing business with the IP arena

3.3 Theme 3: QI and Technical Regulations

Standards have a strong link with technical regulations, and the QI has a major role in the development and implementation of technical regulation mainly with regard to safety, health, environment and other aspects of serving public interests. APEC member economies have developed coordination various forms of mechanisms for coordination between QI institutions and regulators.

3.3.1 “The Management Mechanism and Development Procedures of Mandatory Standards in China” by Ms Yali WANG (China)

Overall introduction of Mandatory standards in China

The State Administration for Market Regulation (National Standardization Administration) undertakes unified management, supervision and overall coordination of standardization work in China, and represents China to join the ISO, the IEC and other international and regional standardization organizations.

Mandatory standards are one of the main forms of technical regulations in China, formulated to safeguard personal health and property safety, domestic security, ecological environment safety, and meet the basic needs of economic and social management.

Mandatory standards must be strictly implemented, and products that fail to meet mandatory standards are prohibited from production, sale, and import. Till now, SAMR/ SAC has issued 2000+ mandatory standards, mainly related to seed and agricultural product safety, industrial product safety, service safety, environmental protection, safety production, public safety and other fields. In addition, there are mandatory standards for food safety issued by the National Health Commission, as well as mandatory standards for engineering construction issued by the Ministry of Housing and Urban-Rural Development.

Management mechanism and development procedures

China's mandatory standard management system is adopting unified management and division of responsibility.

The development of mandatory standards comprises eight procedures including project proposal, project approval, drafting, soliciting opinions, external notification, technical review, numbering, and approval for publication.

The SAC is responsible for the general management of domestic standardization work, which comprising project approval, numbering, and external notification of mandatory standards.

The relevant administrative departments under the State Council are responsible for project proposal, organizing the drafting, soliciting opinions, and conducting technical reviews of

mandatory standards in accordance with their responsibility. Mandatory standards are approved or authorized for publication by the State Council.

1. Project proposal

The relevant administrative departments of the State Council to propose mandatory standard projects to the SAC.

2. Project approval

The SAC shall review mandatory standard projects in accordance with requirements, and shall publicly solicit opinions on mandatory standard projects for not be less than 30 days.

3. Drafting

The drafting department can entrust relevant TC to undertake the drafting work. For those who have not formed a TC, the drafting department shall establish a drafting expert group.

4. Soliciting opinions

The drafting department will publicly solicit opinions from the society through the department's portal website and the National Standard Information Public Service Platform on the draft of mandatory standards, with the draft, preparation instructions, and the implementation transition period. At the same time, solicit opinions from relevant administrative departments. The period of soliciting public opinions is generally not less than 60 days.

5. External notification

When soliciting opinions, we conduct external notifications. As for mandatory standards which are developed without adopting international standards or inconsistent with technical requirements of relevant international standards, and which are with significant impacts on other WTO members, the drafting department shall submit the draft mandatory standard for comment and the notification form (in both Chinese and English) to the SAC. The SAC shall make a notification as required by the WTO, and provide the feedback of received opinions.

6. Technical review

The drafting department entrusts relevant standardization technical committees or establishes review expert groups to conduct technical review of mandatory standards, focusing on the scientificity, rational, and coordination with other mandatory standards.

7. Numbering

The drafting department shall form a draft for approval based on the technical review opinions and submit it to the SAC for unified numbering. The number of mandatory standards consists of the mandatory standard code GB, sequence number, and year number, for example GB 46847—2025.

8. Approval for publication

The SAMR and the SAC approve the publication of mandatory standards under the authorization of the State Council.

Relationship between Mandatory Standards and Voluntary Standards

Mandatory standards define minimum safety and quality requirements. Voluntary (recommended) standards must not fall below these technical thresholds and often provide supplementary support for implementing mandatory provisions.

Q&A following the presentation by Ms Yali WANG

Question 1: Besides ISO and IEC, does SAC represent China in any other international standardisation organisations like ITU? Or does SAMR represent China in those other organisations?

Response to Question 1: In China's engagement with the ITU, the Ministry of Industry and Information Technology (MIIT) serves as the competent government authority, while the China Academy of Information and Communications Technology (CAICT) acts as mirror committee.

Question 2: Do you know about Codex and OIML? Which bodies represent China in those organizations?

Response to Question 2: SAMR also represents China in OIML as the unified management of metrology also falls under the responsibility of SAMR; The National Codex Committee of China is responsible for organizing and coordinating China's participation in the work of Codex, under the supervision of the National Health Commission of China.

Question 3: Beyond technical conformity, how do Chinese Industrial Standards ensure real compliance with environmental and safety regulations, rather than treating them as secondary or external obligations?

Response to Question 3: In China, standards consist of mandatory standards and recommended standards. For environmental protection, safety and other critical issues, there are corresponding mandatory standards in place to serve as the fundamental and enforceable basis.

We also have some other measures. This requires a proactive and integrated approach. For example, we have holistic regulatory monitoring. We establish a dedicated team or process to continually monitor updates in environmental and safety regulations at the local, economy-wide and international levels. This covers not only current laws but also changes and emerging trends. We regularly conduct risk-based assessments that go beyond the compliance checklists. We evaluate potential impacts on the ecosystem, water resources, air quality and community health, integrating the planning into operational standards and we also encourage stakeholder's engagement.

Question 4: In China, which authority is responsible for certification and market surveillance? Is this managed by the central authority, or by local governments? And are these bodies under SAMR, similar to the role of SAC in standardization?

Response to Question 4: In China, the State Administration for Market Regulation (SAMR) is the central authority responsible for overall certification management and market surveillance, with the Certification and Accreditation Administration of China (CNCA) (operating under SAMR) as its specialized executive body for certification and accreditation oversight. CNAS is the economy's accreditation body authorized by CNCA. CNAS accredits certification bodies, laboratories, and inspection institutions to ensure their technical competence and impartiality.

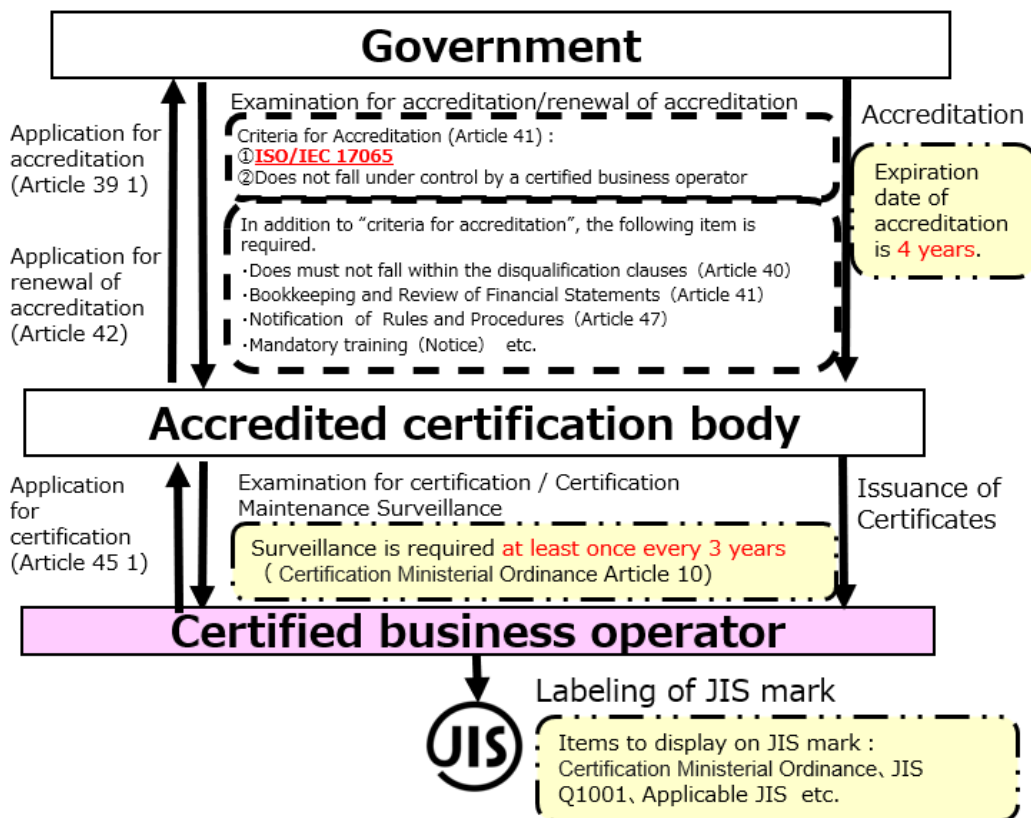
3.3.2 “Designating Inspection and Conformity Assessment Bodies for JIS Certification Mark” by Mr Sho ONISHI (Japan)

Overview of the JIS Mark Certification Scheme

The JIS Mark Certification Scheme is a reliable voluntary third-party certification system established under the Industrial Standardization Act of Japan. The Act provides the legal foundation for both the establishment of Japanese Industrial Standards (JIS) and the operation of conformity assessment systems, including the JIS Mark Certification Scheme and the JNLA (Japan National Laboratory Accreditation) system. The competent minister is responsible for overseeing the scheme to ensure its consistency and credibility.

Structure and Scope of the Scheme

JIS Mark certification is conducted by certification bodies accredited by the government (the competent minister). Certified business operators are allowed to affix the JIS Mark to their products based on demonstrated conformity with applicable JIS and the implementation of an appropriate quality management system. The scope of the scheme covers mineral or industrial products, processing technology, electronic or magnetic records, and services. However, currently, no accredited certification body provides certification for services.



JIS Mark Certification Scheme

Accreditation Requirements for Certification Bodies

Accredited certification bodies must comply with ISO/IEC 17065 and satisfy legal requirements under the Industrial Standardization Act. Accreditation is granted for a four-year period and must be renewed through reassessment. In accordance with the Acts and Notices, certification bodies are also required to maintain proper financial management, establish internal rules and procedures, and conduct mandatory training for personnel involved in certification activities.

Certification and Assessment Methods

Certification under the JIS Mark certification scheme is based on a combination of product testing and assessment of the quality management system. Product testing is performed under the control of the accredited certification body, using randomly sampled test specimens to confirm conformity with JIS. Quality management system assessments focus on whether manufacturing, inspection, and quality control activities are conducted in accordance with JIS, and JIS Q 9001 (aligned with ISO 9001) may be used in examination of quality management.

Quality Control and Organizational Responsibility

Certified business operators are required to establish internal standards covering inspection, process control, storage, and record keeping. In addition, they must appoint a quality control manager. The quality control manager plays a critical role by approving conformity with JIS and authorizing shipment of certified products, thereby ensuring that non-conforming products are not placed on the market with the JIS Mark.

Current Status and International Use

As of the end of March 2025, there are 22 accredited certification bodies and 8,050 JIS Mark certifications. While domestic certifications have gradually decreased in recent years, foreign certifications have shown an increasing trend, indicating growing international utilization of the JIS Mark certification scheme.

Ensuring the Reliability of the Scheme

The reliability of the JIS Mark Certification Scheme is maintained through regular surveillance conducted at least once every three years, as well as temporary surveillance when necessary. Temporary surveillance may be triggered by factors such as JIS revisions, changes to production sites or quality management systems, or information indicating possible nonconformity. If nonconformity is identified, corrective actions, suspension, withdrawal of certification, or other legal measures may be applied to maintain trust in the scheme.

Conclusion

The JIS Mark Certification Scheme is a legally based yet voluntary system that supports reliable conformity assessment through rigorous accreditation and surveillance mechanisms. By requiring certified business operators to establish effective quality management systems, the scheme enables the continuous production and supply of JIS-compliant products and contributes to quality assurance and fair trade both domestically and internationally.

Q&A following the presentation by Mr Sho ONISHI

Question 1: What are the products covered by JIS mark? What are the products covered under the JIS Mark Certification Scheme?

Response to Question 1: JIS Mark certification scheme is applicable to industrial products such as textile, electronic devices and others which are covered by a broad range of product standards.

Question 2: Are there any sectors not covered JIS Mark Certification Scheme?

Response to Question 2: JIS Mark Certification Scheme is intended for industrial products. Management system certification to standards such as ISO 9001 (Q9001 certification) is not covered by the JIS Mark Certification Scheme.

Question 3: Is there any other mark covering those sectors not covered by the JIS mark?

Response to Question 3: A product may carry other marks apart from the JIS Mark if such marks are applicable to the product.

Question 4: In the JIS Mark system from Japan, which organization is responsible for accrediting the certification bodies?

Response to Question 4: Generally, certification bodies are assessed by government staff directly.

Question 5: Why are no services certified so far under JIS mark certification scheme?

Response to Question 5: JIS Mark Certification Scheme is a voluntary certification scheme. There is no requirement for all business operators to obtain certification at the moment.

3.3.3 “Chinese Taipei’s Product Inspection Schemes in the Context of Quality Infrastructure” by Mr Kuan-Lin LIU (Chinese Taipei)

BSMI is the Chinese Taipei’s authority responsible for standardization, metrology and consumer product safety. BSMI’s role covers developing the economy’s standards, establishing and maintaining the metrology system (including legal and scientific metrology), regulating and monitoring safety of products, mainly industrial and consumer products; developing commodity labelling rules and requirements and supervising Chinese Taipei’s accreditation body (TAF).

Legal Framework for Product Inspection

The Commodity Inspection Act is the legal framework for product inspection in Chinese Taipei. Article 5 of the Act specifies that commodity inspection shall be conducted through four schemes, namely batch-by-batch inspection, monitoring inspection, registration of product certification, and declaration of conformity. Inspection schemes applicable to different commodities shall be designated and made known to the public by the BSMI per public notice. The presentation elaborated on the application of each of the schemes and the related conformity assessment procedures.

Conformity Assessment Procedures for Inspection Scheme

“Batch-by-batch inspection” and “monitoring inspection” are applicable to each batch of imported products and to batches of products due for shipment. The related conformity assessment procedures are inspection of each batch or random selection of batches.

“Registration of Product Certification” is applicable during the design or manufacturing phase of products. The related conformity assessment procedures are Type Test, Declaration of Conformity to Type, Quality Management Certification and Factory Inspection.

“Declaration of conformity” is applicable prior to products being placed on the market. This scheme requires submission of the relevant products for laboratory testing followed by the issuance of a signed “Declaration of conformity”.

	Application	Conformity Assessment Procedures
Batch-by-Batch Inspection Monitoring Inspection	Each batch • Imported • before shipping from the production sites	• Batch Inspection • Randomly Selected Batch Inspection
Registration of Product Certification	During Design or Manufacturing Phase	• Type Test • Declaration of Conformity to Type • Quality Management Certification • Factory Inspection
Declaration of Conformity	Prior to Placing Products on the Market	• Submit product for lab testing • Sign Declaration of Conformity

Legal Basis for Designation of Conformity Assessment Bodies for Product Inspection

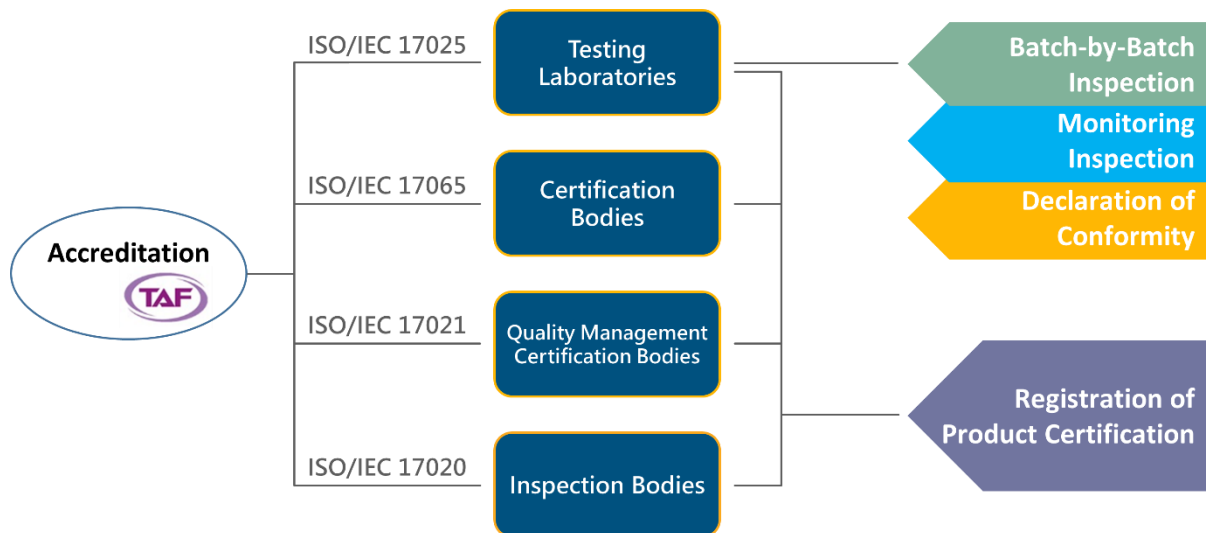
The requirements for the designation of conformity assessment bodies to perform activities to support the implementation of the various schemes are specified in regulations and directions established by BSMI.

Article 4 of “Regulations Governing Recognition of Designated Testing Laboratories for Commodity Inspection” requires designated testing laboratories for commodity inspection to be accredited by a domestic accreditation body that is signatory of the ILAC MRA.

Article 3 of “Directions Governing Recognition of Factory Inspection Bodies” requires that designated factory inspection bodies to be accredited by Chinese Taipei’s accreditation body TAF that is a signatory to the ILAC MRA or IAF MLA.

Article 3 of “Directions for Recognition of Quality Management System Certification Bodies” requires designated quality management system certification bodies to be accredited either by TAF or by any accreditation body that is a signatory of the IAF MLA or APAC MRA.

Article 5 of “Regulations Governing Commission of Commodity Inspection Operations” requires designated product certification bodies to have accreditation granted by the TAF for the relevant commodity fields.

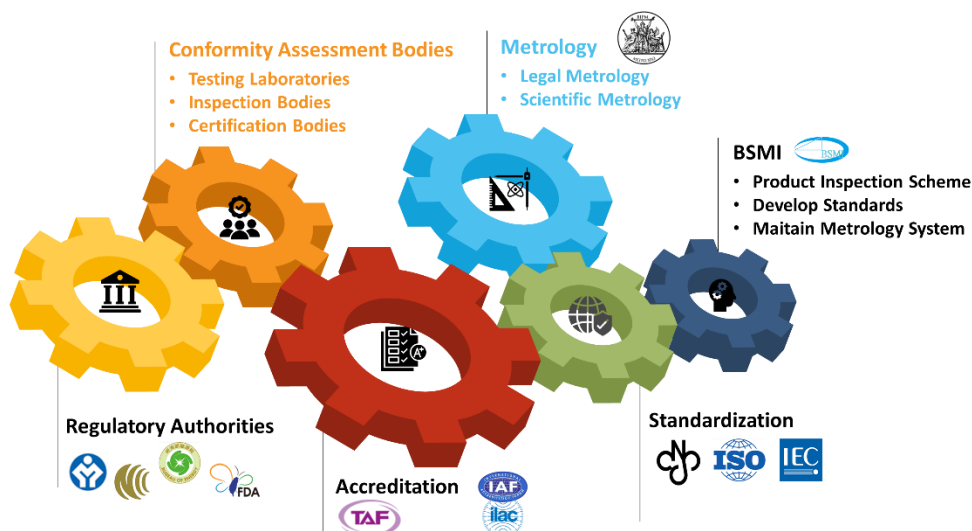


Article 16 of “Regulations Governing the Recognition of Designated Laboratory for Measuring Instrument” requires such calibration laboratories to have ISO 17025 accreditation granted by a domestic accreditation body that is signatory of the ILAC MRA.

Article 2 of “Regulations Governing Commissioned Metrology Activities” requires designated verification bodies to be accredited according to ISO 17025 by a domestic accreditation body who is the signatory of the ILAC MRA.

Evolution of QI – Case of Electric Vehicle Charging Equipment

A case study was presented on the evolution of QI to support the certification of electric vehicle (EV) charging equipment. These included the development of relevant standards in 2029, enhancing competence and domestic testing capacity among CABs, the introduction of voluntary safety certification and implementation of mandatory metrology verification (to ensure accuracy of the electricity charged) in January 2023 and the implementation of mandatory inspection of such equipment covering product safety and electromagnetic compatibility, cybersecurity and consumer protection.



Q&A following the presentation by Mr Kuan-Lin LIU

Question 1: How is the relationship between BSMI and TAF is structured? Does TAF report to BSMI?

Response to Question 1: Taiwan Accreditation Foundation (TAF), which is the accreditation body of Chinese Taipei, is a private foundation – a private organization. The Bureau of Standards, Metrology and Inspection (BSMI) supervises TAF and BSMI's management team are also board members of TAF to ensure close cooperation between the two organizations and also to ensure that BSMI's policy goals can be implemented smoothly. So, I think that is a quick answer to the first question.

Question 2: Is there a formal platform for the Chinese Taipei QI bodies to provide QI services advice to policymakers and regulators?

Response to Question 2: There is no platform for QI promotion, but BSMI was established in 1999 and has served as the core for Chinese Taipei's QI for over two decades, and in this sense other authorities are very familiar with BSMI's function with respect to / regarding our experience in regulatory cooperation and coordination and I think the first key element is standards development. So, when establishing national standards, we will always invite relevant government agencies to participate in our technical committees. This enables the authorities to develop standards that meet their needs and allows them to use our standards in their technical regulations, thereby ensuring regulatory consistency and coherence. Effective regulatory coordination relies on close communication among governmental agencies and, at the moment, the horizontal coordination among agencies in Chinese Taipei functions smoothly which in turn strengthens the overall effectiveness of the QI in Chinese Taipei.

3.4 Theme 4: New and Emerging Technologies

The prominent new and emerging technologies include digital technologies, AI, alternate energy, biotechnologies, quantum IT and smart manufacturing. These create a need for new standards and conformity assessment to facilitate the adoption of these technologies.

3.4.1 “The Urge for Standardization in Quantum Technology” by Mr Mingrui ZHENG (China)

Quantum Technology Landscape

The 2022 Nobel Prize in Physics was awarded to Aspect, Clauser, and Zeilinger for pioneering work in quantum information science — experiments with entangled photons and violation of Bell inequalities.

The field has evolved from foundational quantum mechanics into three major technology pillars: quantum communication, quantum computation, and quantum metrology (precision measurement).

Intrinsic randomness from Bell inequality violations enables device-independent quantum random number generation (DI-QRNG), with applications in cryptography, AI, and numerical modelling.

Quantum Communication & QKD

Quantum Key Distribution (QKD) enables theoretically unhackable encryption, rooted in the BB84 protocol (Bennett & Brassard, 1984) and entanglement-based approaches (Ekert, 1991).

China's QKD network which exceeds 10,000 km in length, spans 19 provinces and 20+ cities, with 6 satellite ground stations interconnected with the Micius and Jinan-1 satellites.

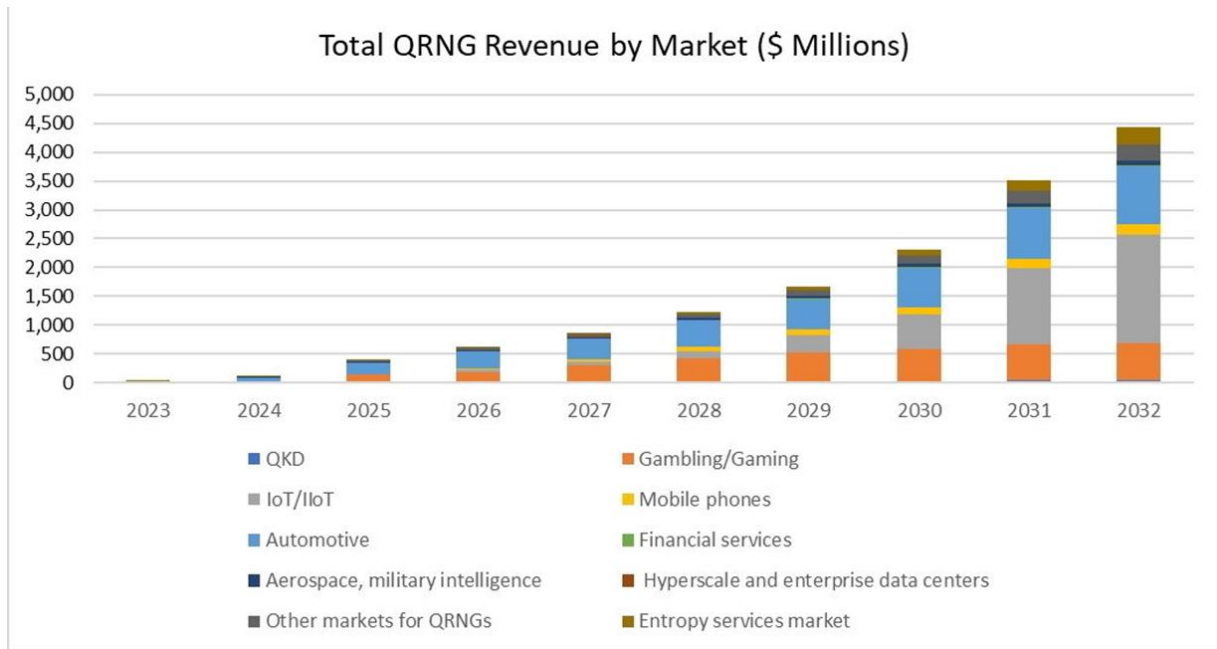
Global QKD networks are expanding: Cambridge (2019), Tokyo (2011), Republic of Korea (2022), plus ongoing projects like EuroQCI, MadQCI, and the USA Quantum Corridor.

Quantum Random Number Generators (QRNG)

QRNG market is projected to reach USD1.2 billion by 2028 and USD4.4 billion by 2032, evolving from casino/military roots into mobile, IoT, and automotive applications.

Samsung and China Mobile are among early commercial adopters integrating QRNG into consumer devices.

Standardization gaps persist in device specifications, protocols, calibration procedures, side-channel attacks, and health testing.



Quantum Computing

The field follows a three-milestone roadmap: quantum computational advantage (beating classical supercomputers), quantum simulation of complex systems, and universal programmable quantum computation via error correction.

Multiple hardware approaches are being pursued: trapped ions, solid states, topological qubits, atomic arrays, ultra-cold atoms, and coherent Ising machines.

The current standardization focus is on benchmarking of hardware/software, supply chain, and service platforms for the Noisy Intermediate-Scale Quantum (NISQ) phase.

Quantum Metrology & Precision Measurement

The 2018 redefinition of SI units was grounded in quantum principles, with the second defined via caesium-133 atomic transitions

Emerging quantum sensors include atomic gravimeters, optical clocks, quantum gyroscopes, quantum lidar, magnetometers, and single photon sources.

Global optical clock networks via satellite-ground time-frequency links promise advances in general relativity tests, dark matter searches, and precision navigation.

Standardization as a Bridge

Standardization plays four key roles: unifying technical language, lowering transformation thresholds, focusing investment resources, and balancing innovation with collaboration.

The presentation argues standardization is the critical bridge between academia and industry for quantum technology commercialization.

Global Standardization Efforts & IEC/ISO JTC 3

A detailed timeline traces quantum standardization from IEEE's 2016 software-defined quantum communication project through ETSI ISG-QKD (2008, 9 specifications released), ITU-T (30+ QKD standards since 2018), and ISO/IEC JTC 1 WG14 (2020).

IEC/ISO JTC 3 was established in December 2023, chaired by Haeseong Lee from the Republic of Korea, with 32 participating members and 10 observer nations.

JTC 3 now operates 7 working groups covering sensors, computing supply chain, computing benchmarking, QRNG, enabling technologies, computing terminology, and quantum communication — plus project teams on quantum computing overview and quantum photonics vocabulary.

The 5th plenary meeting is scheduled for May 25–28, 2026 in Jinan, China

APEC Collaboration Prospects

The presentation proposes four pillars for APEC collaboration within JTC 3: sharing resource pools, establishing joint working groups, aligning standardization roadmaps, and exchanging talent.

The closing message — "Multiple Bodies, One Quantum Force" — emphasizes unified international effort.

Key Takeaways

Quantum technology is transitioning from the laboratory to market across communication, computing, and sensing — standardization is the critical enabler for commercialization and interoperability

China has built the world's largest QKD infrastructure and is actively leading standardization efforts, particularly in QRNG and quantum communication within JTC 3.

IEC/ISO JTC 3 is rapidly scaling, having grown from 5 ad hoc groups to 7 working groups in under two years, with active projects spanning hardware benchmarking, sensor evaluation, and QRNG specifications

APEC-level coordination is positioned as the next frontier for harmonizing quantum standards across economies.

The QRNG market represents the nearest-term mass-market quantum opportunity at USD4.4 billion projected by 2032.

Q&A following the presentation by Mr Mingrui ZHENG

Question 1: We are now aware that standardisation in quantum technology is currently ongoing, how about the progress of conformity assessment in quantum technology?

Response to Question 1: Conformity assessment is still too premature and underdeveloped for quantum technology. The characterisation of the quantum field by TC 3 is still in progress. The benchmark standards for quantum computing are currently being formulated. There are no plans for conformity assessment at this stage. Relevant work may be carried out in more mature sub-fields such as quantum communication and precision measurement in the future.

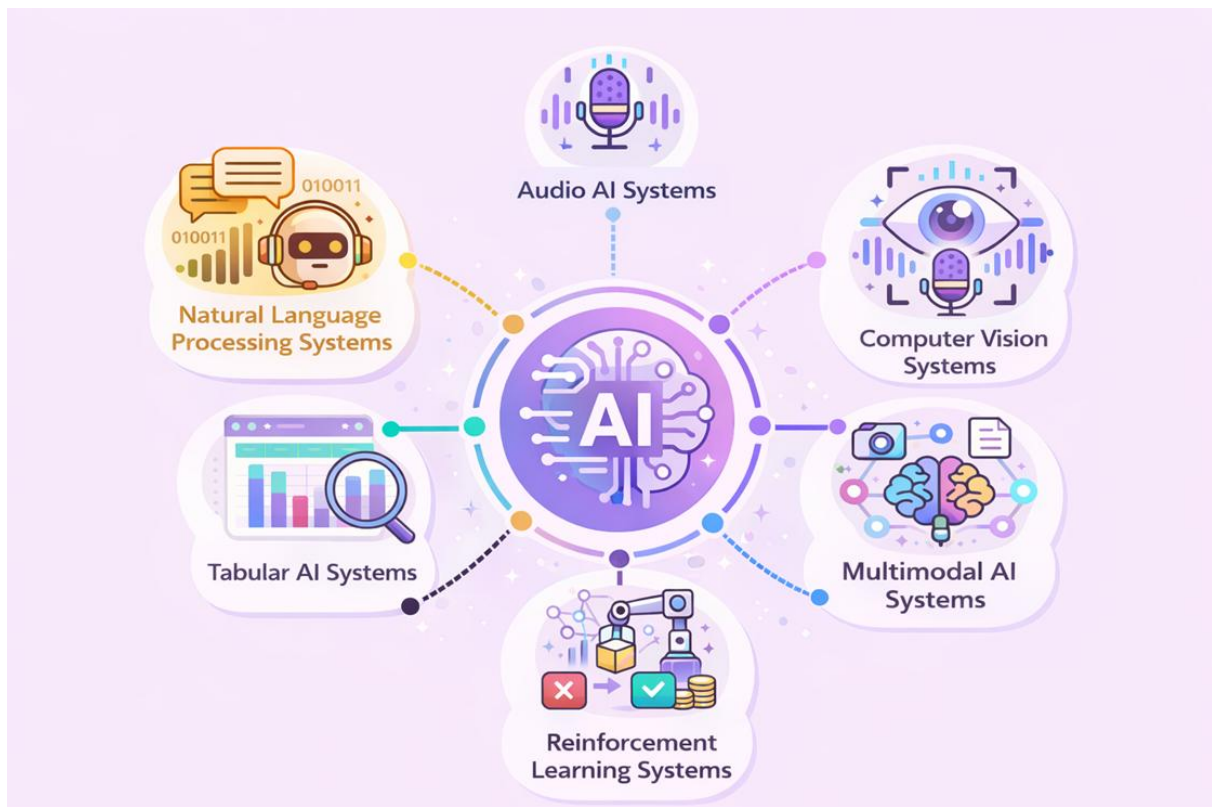
3.4.2 “Large Language Model Certification for Artificial Intelligence” by Mr. Louis KAO, Taiwan Accreditation Foundation (Chinese Taipei)

The presentation by Mr. Louis Kao elaborated on TAF’s experience in developing a certification programme for language models developed for Artificial Intelligence (AI). It elaborated on:

- Applicable definitions for AI and conformity requirements
- Types of AI Systems that currently available
- Significance of trust in AI and challenges
- Roles of regulators for AI in Chinese Taipei
- The principles process, technical criteria, evaluation methods, parties involved for development of the accreditation system
- Steps towards implementation of AI accreditation

Foundational Concepts

The presentation opens by establishing key definitions drawn from ISO/IEC standards — covering AI systems (ISO/IEC 22989:2022), conformity assessment (ISO/IEC 17000:2020), and specified requirements. It then maps the landscape of AI system categories (NLP, computer vision, audio, multimodal, etc.) based on Hugging Face's task classification, giving context for why language models are a priority evaluation target.



*Based on the Hugging Face task classification

The Trust Gap and Testing Challenges

Language model outputs are inherently non-deterministic and affected by model versions, inference settings, and system configurations (e.g., RAG), making establishing consistent evaluation approaches remains challenging.

Standardized testing methods are still under development worldwide, creating a gap between the pace of LM deployment and the maturity of evaluation infrastructure.

The current landscape contrasts AI recommendations/tools (increasingly deployed in public services and industry) with the quality infrastructure needed to support them — standards bodies, certification bodies, and accreditation frameworks.

With the increasing adoption of artificial intelligence (AI) systems in Chinese Taipei, evaluation practices are currently largely conducted by developers or users, with limited third-party conformity assessment frameworks.

To address this gap, Chinese Taipei is promoting standardized testing methodologies within its Quality Infrastructure (QI) system to enhance the verifiability, comparability, and acceptability of language model (LM) evaluation results. The initiative focuses on Natural Language Processing (NLP) systems as a starting point.

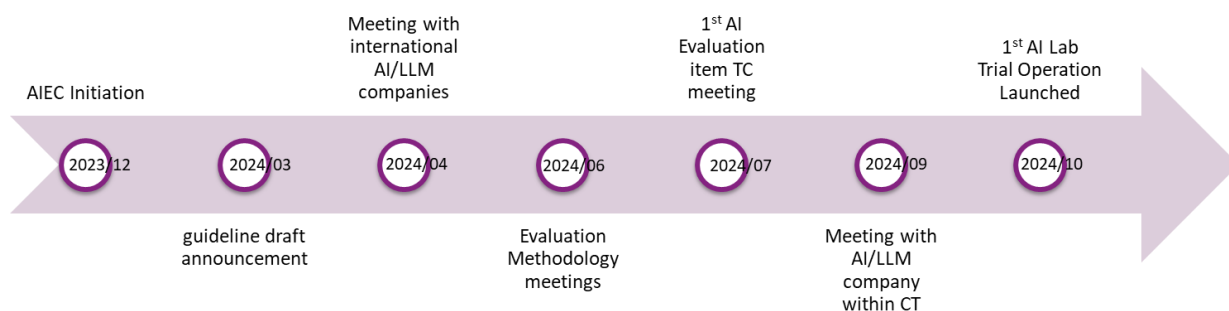
Regulatory Framework: MODA & AIEC

The Ministry of Digital Affairs (MODA) established the Artificial Intelligence Evaluation Center (AIEC) to develop evaluation frameworks and assessment systems.

Primary objective: Foster AI development while ensuring appropriate and trustworthy application of AI technologies.

A Steering Committee sets strategic direction, while a Technical Review Panel provides methodological expertise.

Key milestones span from late 2023 through mid-2024, covering the center's formation and initial regulatory directives.



Draft Evaluation Guidelines and Technical Criteria

Draft Guidelines for Evaluating AI Products and Systems are voluntary, covering scope, terminology, risk identification, and 10 evaluation items across risk management, third-party assessment, and continuous monitoring.

Draft technical criteria specific to LLMs are a first for language models in Traditional Chinese applications, encompassing 5 auto-evaluation and 5 human evaluation items, plus a certification scheme for inappropriate content and social bias.

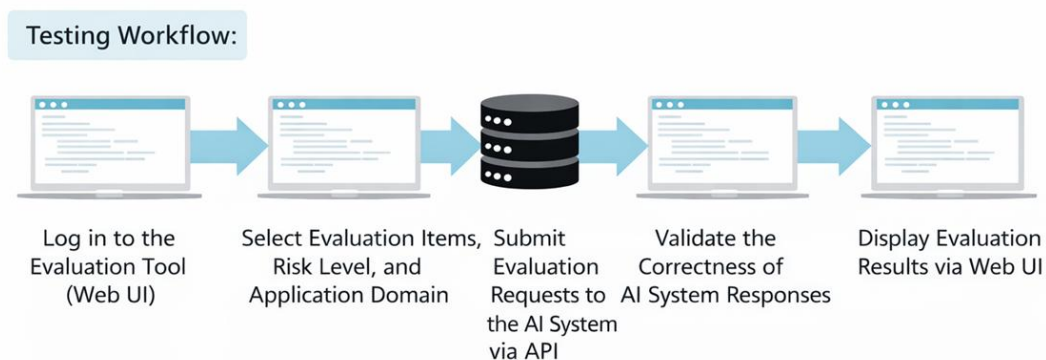
Auto/semi-auto evaluation covers fairness, accuracy, reliability, privacy, and security.

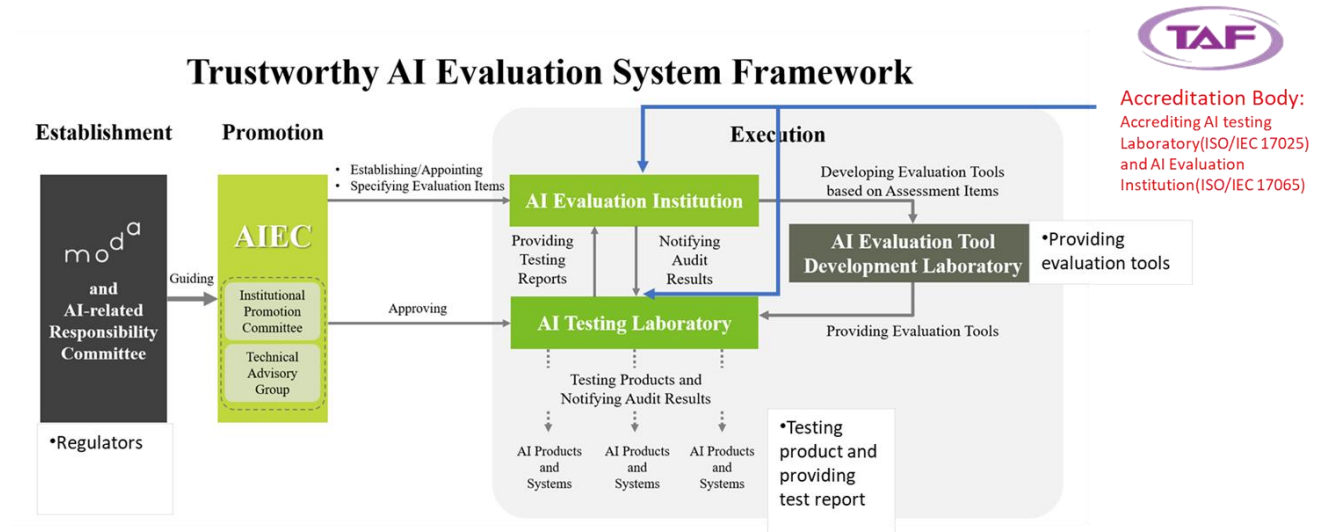
Human evaluation addresses safety, explainability, resilience, transparency, and accountability.

Methodology and Reference Standards

The evaluation methodology draws from NIST AI RMF, ISO 24028, the EU AI Act, and the EU Ethics Guidelines for Trustworthy AI.

A localized AI question bank in Traditional Chinese supports automated LLM evaluation, with a structured pipeline from dataset selection through scoring and reporting.



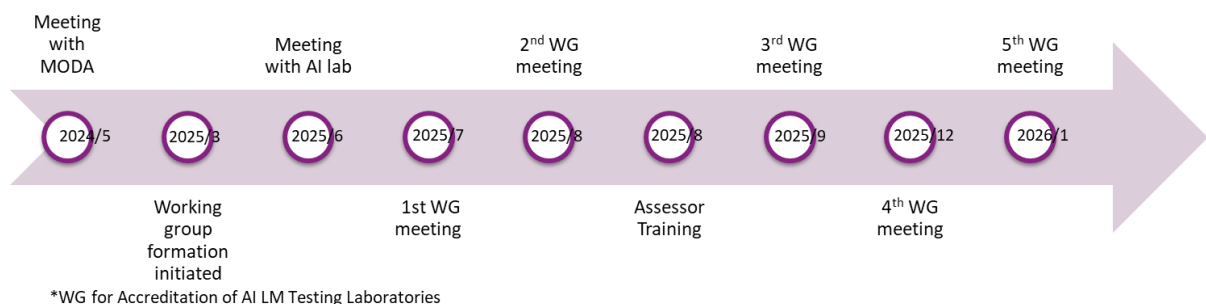


Accreditation Roadmap

The AI product evaluation system in Chinese Taipei follows a Trustworthy AI Evaluation System Framework — from regulation through evaluation benchmarks, testing laboratories, and product certification.

The Taiwan Accreditation Foundation (TAF) will continue stakeholder engagement through working groups. In the future, TAF plans to provide accreditation services for AI LM testing laboratories in accordance with ISO/IEC 17025, strengthening third-party evaluation capacity.

TAF's accreditation milestones (in progress): recruiting AI experts and assessors in 2025 Q2, forming a working group in Q3, launching assessor training, and targeting 2026 to provide accreditation services for AI LM testing laboratories and 2027 for LM product certification bodies.



Key Takeaways

Chinese Taipei is building a comprehensive, standards-based AI evaluation ecosystem — from ISO-aligned definitions through regulatory authority, evaluation criteria, and accreditation infrastructure.

Language models are the initial priority, with evaluation criteria tailored to the unique challenges of non-deterministic outputs and Traditional Chinese language contexts.

The 2025–2027 roadmap is ambitious but structured, moving from expert recruitment and working groups to full accreditation services for both testing labs and certification bodies.

International alignment is a core design principle — the framework references NIST, ISO, and EU standards to ensure interoperability with global AI governance efforts.

Q&A following the presentation by Mr Louis KAO

Question 1: How does QI give advantage to these new technologies such as quantum technology and artificial intelligence?

Response to Question 1: For now, the tests of language models are mostly carried out by the users or the developers themselves. It might lack consistency or credibility and cannot be easily compared to each other. So, under the quality infrastructure, I believe it will enhance the consistency of the test results.

4 Conclusions and Recommendations

4.1 Conclusions

1. APEC economies have made considerable progress in developing their QI in compliance with the global systems of standards, metrology, accreditation and conformity assessment that support agreements established by WTO. APEC economies are active participants of global recognition arrangements for accreditation, metrology and standards that are administered by global QI organisations. The QI institutions in APEC Economies participate in global QI bodies including BIPM and OIML (in the area of metrology), ISO and IEC (in the area of standards) and IAF and ILAC which were recently merged and renamed as Global Accreditation Cooperation Incorporated (in the area of accreditation), and the corresponding regional bodies APMP and APLMF (for metrology), APAC (for accreditation) and PASC (for standards).
2. The survey of the QI of APEC Economies revealed that there are several models for the QI. Typical QI in APEC Economies comprises a varied mix of government and private sector bodies. The institutional arrangements within the QI models range from those which have core institutions with integrated QI functions and those that have a distributed system with standards, metrology, accreditation, market surveillance, technical regulation distributed into several institutions. These arrangements have evolved in APEC economies independently in alignment with domestic economic, social and environmental factors and legal systems. Several of the conference speakers emphasised the need for governments of Member Economies to take on a coordinating role and provide overall direction for the development of the QI. This coordination and direction setting are applicable to both government institutions and those established as entities outside government and designated as part of the Economies' QI.
3. Three economies (Australia; Canada and Japan) elaborated on their approaches to widen the involvement of stakeholders in standards development. This was achieved through the identification and recognition of independent standards development organisations or SDOs which are not part of the main standards body. The work of these SDOs was however coordinated by a main standards body. The Standards Council of Canada has taken the SDO process a step further in empowering SDOs by permitting qualified SDOs to self-declare National Standards of Canada under controlled conditions.
4. The innovation in Japan where patent attorneys are involved in the standardisation process where patents are incorporated in standards was notable. This practice supports companies that are involved in new technologies and facilitates the wider adoption of new technologies, while promoting and protecting patent holders' interests. This approach can potentially strengthen standards for new technologies and their application, bringing benefits to industry and users of the standards.
5. Indonesia and Japan elaborated on their product certification systems. In both economies, a single certification mark is used when products are certified to the Economy's standards. i.e. the SNI mark in Indonesia and the JIS mark in Japan. An

economy-wide system is established that enables the same mark to be applied on certified products irrespective of the certification body responsible. This avoids multiple marks issued by different certification bodies and enables easy identification of certified products by consumers and other parties.

6. An interesting feature of the implementation of the National Policy on Standardization Strategy was the linking of QI with overall economic growth. The growth in delivery of conformity assessment services within the economy was identified as an indicator for the contribution from QI to the overall economic growth and competitiveness. As conformity assessment relies on standards and other supporting parts of the QI, this measure could be a useful indicator on the effectiveness of QI and its contribution to economic growth.
7. The conference has achieved its objectives of facilitating the exchange of information on current practices in quality infrastructure and the sharing of several new initiatives implemented by APEC Economies as indicated by respondents to the post conference survey. Some respondents confirmed that the conference highlighted the significance of QI systems to APEC Economies in supporting trade and developing regulatory alignment.

4.2 Recommendations

1. The strong involvement in global QI organisations provides a technical basis accepted by all APEC economies that serves to facilitate trade and support implementation of trade agreements. This provides a strong foundation that APEC economies should leverage on for future economic cooperation and collaboration.
2. Synthesizing the reviewed QI models, APEC surveys and presentation shared, it is evident that QI services are an essential support for trade and technical regulation in all APEC economies. As such, governments of APEC economies could play a more active role in ensuring that a competent, coordinated and effective quality infrastructure is available to support domestic and international trade, enable functioning of trade agreements and implementation of technical regulation.
3. The arrangements for coordinating and leveraging on Standards Development Organisations (SDOs) can bring tangible benefits to APEC Economies by increasing the efficiency and effectiveness of the standards development process and the reach of standardisation.
4. Being leaders in several new and emerging technologies, and noting the examples shared, APEC economies have an excellent opportunity to collaborate actively in the field of both standards development and in the development in conformity assessment services for mutual gain and to support trade.
5. The establishment of a publicly available database of standards experts was noteworthy innovation shared by Japan. This database supports standardisation at all levels (company, organisation, domestic and international). Standards developers and other parties can conveniently identify and locate experts whenever the need arises by emulating this mechanism.

6. The wide application of QI in all stages of product life cycle and its wide reach in the economy and in regulation was well illustrated in the presentations. The presentation by China which shared the development of standards for quantum technologies in early development stages of this new technology. Standardisation was noted to support the global development of the technology, fostering collaboration through the standardisation of terminology, methods of measurements and communications. APEC Economies can take note of the benefits of early application of standardisation in the development of new technologies.
7. The application of conformity assessment to support new technologies was highlighted in the presentation on AI certification and accreditation by Chinese Taipei. In this case, this methodology was being applied to the development of the Large Language Model used in AI applications. There is a need for assurance and confidence building when any new technology is introduced. Conformity assessment provides a structured process of independently evaluating, testing, and verifying that products and services meet specific, predefined requirements. Trade among APEC Economies can be facilitated by the adoption of harmonised conformity assessment procedures for new technologies.

ANNEXES

Annex 1: Questionnaire on Quality Infrastructure of APEC Economies

Part 1: Basic Information on the Quality Infrastructure

The questionnaire is based on the understanding that the **Quality Infrastructure (QI)** consists of the institutions, legislation and processes for delivering services on metrology, standardization, accreditation, conformity assessment, and market surveillance to all stakeholders in the APEC member's economy.

This part of the questionnaire will provide the context for identifying the best practices in a particular economy. The main institutions in APEC economies have been identified in the annexed *Summary of QI in APEC member economies* and in a matrix. Each member economy is requested to verify and make the appropriate corrections in case of are errors or include information omitted.

1	Legislation, Governance and Organization	
A	QI legislation and the description of the role, powers, governance, and functions of: i. Metrology (scientific, industrial and legal) ii. Standardization iii. Accreditation iv. Conformity Assessment v. Market surveillance	<i>Is the description in the summary and the matrix of QI institutions correctly recorded? If incorrect please indicate corrections as required in the accompanying summary and matrix and return to project overseer.</i>
		i. yes/no
		ii. yes/no
		iii. yes/no
		iv. yes/no
		v. yes/no
B	Coordination mechanism or coordinating body for the QI in the economy?	Yes/No If yes, please name the body/mechanism: Reference:
C	QI strategy or policy documents for the QI as a whole or for specific components.	Are there policy or strategy documents in the public domain? If yes please provide the references to these. Yes/No References:
2	Metrology	

A	Are there any good practices in Metrology that the economy may wish to share with other APEC economies?	If yes, please indicate the topic.
3	Standards	
	Are there any good practices in Standards that the economy may wish to share with other APEC economies?	If yes, please indicate the topic.
4	Accreditation	
A	Are there any good practices in Accreditation that the economy may wish to share with other APEC economies?	If yes, please indicate the topic.
5	Conformity assessment	
	Are there any good practices in Conformity Assessment that the economy may wish to share with other APEC economies?	If yes, please indicate the topic.
6	Market Surveillance	
	Are there any good practices in Market Surveillance that the economy may wish to share with other APEC economies?	If yes, please indicate the topic.

Part 2: Information on Practices adopted in the Quality Infrastructure

The good practices are classified into the following categories to facilitate identification of practices that have delivered good results in APEC economies:

1. Governance, legislation, organization policy development, strategy and planning
2. Inter-component and inter-institutional coordination
3. Innovation and adoption of new technologies
4. Funding for QI infrastructure and operations
5. Supporting regulatory agencies including through adoption of GRP
6. Supporting sustainable development
7. Human capital development
8. Supporting trade, investment and industry in existing and new technical areas
9. Other practices not included in classifications above

Questions in this part are targeted towards obtaining information on the best practices adopted within each of the identified themes that APEC economies may wish to share. The questionnaire will aid in the identification of best practices that could be shared in the Conference tentatively scheduled over 3 days and documented in the Compendium of Best Practices of QI on the conclusion of the Conference.

1	Are there any good practices in the overall governance, legislation, policy development, strategy and planning of the QI that the economy may wish to share with other APEC economies?	If yes, please indicate the topic.
2	Are there any good practices in the Inter-component and inter institutional coordination of the QI that the economy may wish to share with other APEC economies?	If yes, please indicate the topic.
3	Are there any good practices within the QI, in the adoption of, or in responding to new and emerging technologies that the economy may wish to share with other APEC economies?	If yes, please indicate the topic.
4	Are there any good practices in the funding for QI infrastructure and operations that the economy may wish to share with other APEC economies?	If yes, please indicate the topic.
5	Are there any good practices in QI support for technical regulation including through adoption of GRP that the economy may wish to share with other APEC economies?	If yes, please indicate the topic.
6	Are there any good practice in QI support for Sustainable Development that the economy may wish to share with other APEC economies?	If yes, please indicate the topic.
7	Are there any good practice in QI support for Human Capital Development that the economy may wish to share with other APEC economies?	If yes, please indicate the topic.
8	Are there any good practice in QI support for supporting trade, investment and industry in existing	If yes, please indicate the topic.

	and new technical areas that the economy may wish to share with other APEC economies?	
9	Are there any good practices within the QI in areas not included in classifications above that economy may wish to share with other APEC economies?	If yes, please indicate the topic.

Annex 2: Conference Agenda

20 January 2026 (GMT+8)

TIME (GMT +8)	AGENDA ITEMS
0830-0900	Registration
0900-0930	• Welcoming remarks by Mr. SEE Chee Kong, Director-General of the Department of Standards MALAYSIA • Project Background by the Project Overseer: Ms. Nor Latifah HUSSIN, Department of Standards MALAYSIA • Presentation of study report by Project Consultant: Mr. Rajinder Raj SUD
0930-1030	Presentations on Theme 1: QI Governance, Strategy & Human Resource Development 1. “Operation of the Australian Technical Infrastructure Alliance (ATIA) in Enhancing Australia’s Quality Infrastructure” by James JANISSEN, Department of Industry, Science and Resources – AUSTRALIA 2. “Implementation of the Laws in QI in Indonesia” by Mr. Yuliandri Heru KUSSUMA PUTRA, National Standardization Agency of Indonesia (BSN) – INDONESIA 3. “Interconnectedness of QI and Regulatory Systems” by Ms. Natalie COHEN, Organisation for Economic Co-operation and Development (OECD)
1030-1100	Panel Discussion with Speakers of Theme 1 + Q&A Moderator: Mr. Rajinder Raj SUD, Project Consultant
1100-1200	Presentations on Theme 2: Enhancing Service Delivery to All Stakeholders 1. “Innovation in SCC’s SDO System: Self-Declaration of National Standards” by Muhammad AASHIR, Standards Council of Canada (SCC) – CANADA 2. “Deliver Standards as Market Needs – Japan’s Practice” by Mr. Mitsuo MATSUMOTO, Japan Intellectual Property Standards (JIPS) Co. Ltd. – JAPAN 3. “Indonesia’s Policy on Standardisation Strategy” by Mr. Andri GANDHI, National Standardization Agency of Indonesia (BSN) – INDONESIA
1200-1230	Panel Discussion with Speakers of Theme 2 + Q&A Moderator: Mr. Parama Iswara Subramaniam, Project Consultant

21 January 2026 (GMT+8)

TIME (GMT +8)	AGENDA ITEMS
0830-0900	Registration
0900-1000	Presentations on Theme 3: QI and Technical Regulations 1. “The Management Mechanism and Development Procedures of Mandatory Standards in China” by Ms. Yali WANG, China National Institute of Standardization (CNIS) – CHINA 2. “Designating Inspection and Conformity Assessment Bodies for JIS Certification Mark” by Mr. Sho ONISHI, International Accreditation Japan (IAJapan) – JAPAN 3. “Commodity Inspection Act: Integrating Regulation and Quality Infrastructure” by Mr. Kuan-Lin LIU, Bureau of Standards, Metrology and Inspection (BSMI) – CHINESE TAIPEI
1000-1030	Panel Discussion with Speakers of Theme 3 + Q&A Moderator: Mr. Rajinder Raj Sud, Project Consultant
1030-1130	Presentations on Theme 4: New and Emerging Technologies 1. “International Standardisation in Quantum IT” by Mr. Mingrui ZHENG, Jinan Institute of Quantum Technology (JIQT) – CHINA 2. “Large Language Model Certification for Artificial Intelligence” by Mr. Louis KAO, Taiwan Accreditation Foundation (TAF) – CHINESE TAIPEI
1130-1200	Panel Discussion with Speakers of Theme 4 + Q&A Moderator: Mr. Parama Iswara Subramaniam, Project Consultant
1200-1215	Closing Remarks

Annex 3: Matrix of QI Institutions in APEC Economies

No.	Economy	Standards Body	Metrology (NML)	Metrology (Legal)	Accreditation & Conformity Assessment	Market Surveillance	Coordinating Body or Arrangements
1	Australia	Standards Australia Standards Australia has accredited 5 SDOs • Responsible Wood • Communications Alliance • Fisheries Research and Development Corporation (FRDC) • Pharmacy Guild of Australia • Rail Industry Safety and Standards Board (RISSB)	National Measurement Institute & designated institutes • Australian Nuclear Science & Technology Organisation (ANSTO) • Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)	National Measurement Institute	1. National Association of Testing Authorities 2. Joint Accreditation System of Australia and New Zealand 3. Extensive network of accredited CABs	This is distributed across several government agencies. Product safety regulation for general consumer products is a shared responsibility between the Australian Competition and Consumer Commission (ACCC) and the states and territories agencies	Australian Technical Infrastructure Alliance Australian Organisation for Quality Ltd (AOQ),
2	Brunei Darussalam	Pusat Standard dan Akreditasi Brunei Darussalam (PSABD)	Measurement Standards Laboratory, Brunei Darussalam (under	Weights and Measures Unit (under the Industry and	Pusat Standard dan Akreditasi Brunei Darussalam (PSABD)	This is distributed across several	BD is establishing a National Measurement Order and a National Standards Order

No.	Economy	Standards Body	Metrology (NML)	Metrology (Legal)	Accreditation & Conformity Assessment	Market Surveillance	Coordinating Body or Arrangements
			the Industry and Business Ecosystem Division, Ministry of Finance and Economy , Negara Brunei Darussalam)	Business Ecosystem Division, Ministry of Finance and Economy , Negara Brunei Darussalam)	Network of accredited CABs.	government agencies.	that will define the National Quality Infrastructure.
3	Canada	Standards Council of Canada (SCC), which accredits Standards Development Organisations (SDOs)	National Research Council (NRC), Metrology Research Centre	Measurement Canada, an agency of <i>Department of Innovation, Science and Economic Development Canada</i>	1. Signatories to Global ACI, ILAC MRA, IAF MLA, and the APAC MRA. 2. Extensive network of accredited CABs	Market Surveillance is a distributed across regulatory agencies.	Distributed across departments and agencies of the Government of Canada.
4	Chile	Instituto Nacional de Normalización (INN)	National Metrology Network (RNM) (Under INN)	Chile does not appear to have a central legal Metrology institute	Sistema Nacional de Acreditación (National Accreditation System) (under INN)	This is a distributed function across respective regulatory agencies.	The Quality Infrastructure in Chile is centrally coordinated by Instituto Nacional de Normalización División de Normas (INN)
5	People's Republic of China	Standardization Administration of China (SAC)	National Institute of Metrology	General Administration of Quality Supervision, Inspection and Quarantine	• China National Accreditation Service for Conformity Assessment (CNAS)	Law Enforcement and Inspection Bureau of the SAMR. This includes the	State Administration for Market Regulation (SAMR) oversees and coordinates the Quality Infrastructure for China.

No.	Economy	Standards Body	Metrology (NML)	Metrology (Legal)	Accreditation & Conformity Assessment	Market Surveillance	Coordinating Body or Arrangements
					Extensive network of accredited CABs	mandatory product certification scheme (CCC mark)	
6	Hong Kong, China	Innovation and Technology Commission (ITC HKSAR)	Standards and Calibration Laboratory,	Hong Kong Customs and Excise Department	Hong Kong Accreditation Service (HKAS) Extensive network of accredited CAB	Market surveillance is distributed across regulatory agencies	Quality Services Division under the ITC of HKSAR Government
7	Indonesia	Badan Standardisasi Nasional (BSN)	Directorate for National Measurement Standards, National Standardization Agency of Indonesia	Directorate of Metrology Directorate General of Consumer Protection and Trade Compliance, Ministry of Trade	Komite Akreditasi Nasional (KAN) (under BSN) Extensive network of accredited CABs	The Directorate of Supervision of Circulated Goods and Services, in MoT carries out market surveillance in the domestic market. For specific technical regulations, market surveillance is	BSN is responsible for coordinating and facilitating all activities related to standardization and conformity assessment in Indonesia.

No.	Economy	Standards Body	Metrology (NML)	Metrology (Legal)	Accreditation & Conformity Assessment	Market Surveillance	Coordinating Body or Arrangements
						the responsibility of specific designated institutions.	
8	Japan	Japanese Industrial Standards Committee (JISC) in coordination with Japan Standards Association is (JSA) responsible for publishing JIS Standards and provides training on standardisation MAFF is responsible for the development of standards in the fields of food, agriculture and fisheries.	National Metrology Institute of Japan (NMIJ), (Part of National Institute of Advanced Industrial Science and Technology (AIST)) and designated institutes: -Chemicals Evaluation and Research Institute (CERI) -Japan Electric Meters Inspection Corporation (JEMIC) -National Institute of Information and Communications Technology (NICT)	National Metrology Institute of Japan (NMIJ), (Part of National Institute of Advanced Industrial Science and Technology (AIST)) The Japan Electric Meters Inspection Corporation (JEMIC) has been appointed to provide verification and inspection of electricity meters used for tariff or certification purposes and related type	1. International Accreditation Japan (IA Japan) 2. ISMS Accreditation Center (ISMS-AC) 3. Japan Accreditation Board (JAB) 4. Japan Accreditation Service for agriculture, forestry and fisheries (JASaff) 5. Voluntary EMC Laboratory Accreditation Center (VLAC) Extensive network of accredited CABs	Market Surveillance is distributed to specific government agencies as specified in safety legislation with METI responsible for overall coordination of four acts on product safety:	Ministry of Economy, Trade and Industry (METI) is responsible for administering Japan's laws (Industrial Standardization Act 1949) for Standards and conformity assessment, for metrology (Measurement Act 1992), market surveillance for electrical safety (Electrical Appliances and Materials and consumer safety (Consumer Product Safety Act 1973)

No.	Economy	Standards Body	Metrology (NML)	Metrology (Legal)	Accreditation & Conformity Assessment	Market Surveillance	Coordinating Body or Arrangements
				approval services.			
9	Republic of Korea	Korean Agency for Technology and Standards (KATS) - NSB - supported by Korea Standards Association (KSA) designated Cooperating Organizations for Standards Development (COSD)	Korea Research Institute of Standards and Science (KRISS) is the Reference Laboratory.	Korean Agency for Technology and Standards (KATS) Korea Testing Certification (KTC) is responsible for examining the designs of measuring instruments and testing sample instruments and issuing type approval certificates.	1. Korea Accreditation Board (KAB) 2. Korea Laboratory Accreditation Scheme (KOLAS) Extensive network of accredited CABs	KATS has the responsibility for market surveillance in ensuring product safety under the: Framework Act on Product Safety, Special Act for Child Product Safety Controls, Quality Management and Industrial Product Safety Control Act, and Electrical Appliances Safety Control Act.	Korean Agency for Technology and Standards (KATS) is in charge of planning and coordinating national standards policy and other aspects of the QI.
10	Malaysia	Department of Standards Malaysia (DSM)	National Metrology Institute of Malaysia (NMIM)	National Metrology Institute of Malaysia	Department of Standards Malaysia (DSM)	Distributed across regulatory agencies,	

No.	Economy	Standards Body	Metrology (NML)	Metrology (Legal)	Accreditation & Conformity Assessment	Market Surveillance	Coordinating Body or Arrangements
			and designated institutes: - Department of Chemistry Malaysia - Malaysian Nuclear Agency	Ministry of Domestic Trade and Cost of Living	Extensive network of accredited CABs	consumer protection is undertaken by the Ministry of Domestic Trade and Cost of Living	
11	Mexico	Direccion General de Normas (DGN)	National Metrology Center/Centro Nacional de Metrología (CENAM) and designated Institutes: - Instituto Nacional de Investigaciones Nuclear (ININ), - Instituto Nacional de Ecología y Cambio Climático (INECC)	Direccion General de Normas Sistema Nacional de Calibracion	1. Entidad Mexicana de Acreditación, (EMA Mexican accreditation entity, AC) 2. Mexicana de Acreditación (MAAC, A.C.)	Procuraduría Federal del Consumidor, (PROFECO) is the main body responsible for market surveillance. Additionally, market surveillance is conducted by a number of sectoral regulators	The National Commission for Quality Infrastructure (CNIC) and the General Bureau of Standards (Direccion General de Normas / DGN) of the Ministry of the Economy (SE) are responsible for the implementation of the LIC
12	New Zealand	Standards New Zealand (SNZ)	Measurement Standards Laboratory, New Zealand (MSL)	Trading Standards (Ministry of Business	International Accreditation New Zealand (IANZ)	Market surveillance for Consumer Protection, is	New Zealand Standards Executive is additionally responsible for overseeing New Zealand's conformance

No.	Economy	Standards Body	Metrology (NML)	Metrology (Legal)	Accreditation & Conformity Assessment	Market Surveillance	Coordinating Body or Arrangements
				Innovation and Employment)	Joint Accreditation System of Australia and New Zealand, (JASANZ) & network of accredited Conformity Assessment Bodies.	coordinated by the Consumer Protection and Standards branch of MBIE. In addition, several other government agencies conduct market surveillance within their prescribed authority	infrastructure and providing advice to the Government on related policy
13	Papua New Guinea	National Institute of Standards and Industrial Technology	Metrology Division, National Institute of Standards & Industrial Technology,	Metrology Division, National Institute of Standards & Industrial Technology,	Papua New Guinea Laboratory Accreditation Scheme (PONGLAS) (National Institute of Standards and Industrial Technology)		National Institute of Standards and Industrial Technology (NISIT)
14	Peru	Instituto Nacional de Calidad (INACAL)	Instituto Nacional de Calidad (INACAL)	Instituto Nacional de Calidad (INACAL)	Instituto Nacional de Calidad (INACAL) Directorate of Accreditation in INACAL.	Market surveillance is conducted by designated	INACAL is an institution in charge of QI within the framework of Standardization, Accreditation and Metrology.

No.	Economy	Standards Body	Metrology (NML)	Metrology (Legal)	Accreditation & Conformity Assessment	Market Surveillance	Coordinating Body or Arrangements
					Network of accredited conformity assessment bodies.	regulatory bodies	
15	The Philippines	Bureau of Philippine Standards (BPS) of the Department of Trade and Industry (DTI-BPS)	National Metrology Laboratory (Department of Science and Technology) Designated for chemical metrology - Standards and Testing Division, Industrial Technology Development Institute (STD-ITDI)	Industrial Technology Development Institute (Department of Science and Technology)	Philippine Accreditation Bureau (PAB). A network of accredited conformity assessment bodies provides testing, calibration, certification, inspection and verification services to all sectors of the economy	BPS prepares market surveillance and monitoring policies for mandatory standards. BPS operates and implements mandatory Product Certification Schemes (PCS) for both locally produced and imported products covered by standards - Philippine Standard (PS) Certification Mark Scheme and the Import	

No.	Economy	Standards Body	Metrology (NML)	Metrology (Legal)	Accreditation & Conformity Assessment	Market Surveillance	Coordinating Body or Arrangements
						Commodity Clearance (ICC) Certification Scheme	
16	Russia	The Federal Agency for Technical Regulation and Metrology (Rosstandart)	Federal Agency on Technical Regulating and Metrology (Rosstandart) Division of applied metrology and state metrology service.	• Federal Agency on Technical Regulating and Metrology (Rosstandart) • Division of legal metrology	• Association of Analytical Centers (AAC Analitica) • Federal Service for Accreditation (RusAccreditation) • Scientific and Technical Center an organization in the Russian Federal Service for Environmental, Technological and Nuclear Supervision • Voluntary system of accreditation and confirmation of compliance (VSACCC, LLC) (Accreditation of Laboratories)	Federal Agency on Technical Regulating and Metrology (Rosstandart) controls and supervises the compliance of mandatory requirements of state standards and technical regulations	Federal Agency on Technical Regulating and Metrology

No.	Economy	Standards Body	Metrology (NML)	Metrology (Legal)	Accreditation & Conformity Assessment	Market Surveillance	Coordinating Body or Arrangements
17	Singapore	Singapore Standards Council, Enterprise Singapore (EnterpriseSG)	National Metrology Centre (NMC) of the Agency for Science, Technology and Research (A*STAR) as the National Metrology Institute (NMI) and Health Sciences Authority (HSA) as a Designated Institute (DI) for metrology in chemistry related to human health	Weights and Measures Office (WMO) under Competition and Consumer Commission of Singapore (CCS)	Singapore Accreditation Council, Enterprise Singapore (EnterpriseSG)	By various government regulatory agencies for their respective areas. E.g. Consumer Product Safety Office under Competition and Consumer Commission of Singapore is responsible for market surveillance under the Consumer Protection (Safety Requirements) Regulations (CPSR) and the Consumer Protection (Consumer Goods Safety Requirements)	Enterprise Singapore (EnterpriseSG), an economic agency of the Singapore Government, champions enterprise development and supports the growth of Singapore as a hub for global trading and startups. As the national standards and accreditation body, EnterpriseSG also oversees Singapore's Quality Infrastructure and builds trust in Singapore's products and services through quality and standards

No.	Economy	Standards Body	Metrology (NML)	Metrology (Legal)	Accreditation & Conformity Assessment	Market Surveillance	Coordinating Body or Arrangements
						Regulations (CGSR)	
18	Chinese Taipei	Bureau of Standards, Metrology and Inspection (BSMI)	Metrology Administration Division and the Metrology Technology Division Technical of BSMI oversees metrology.	Metrology Administration Division and the Metrology Technology Division Technical of BSMI oversees metrology.	Taiwan Accreditation Foundation (TAF)	BSMI oversees inspection and testing; it maintains four kinds of pre-market inspection schemes: batch-by-batch inspection, monitoring inspection, registration of product certification (RPC), and declaration of conformity (DoC)	Bureau of Standards, Metrology and Inspection (BSMI), under the MOEA, is the competent authority to enforce the Standards, Commodity Inspection, and Weights and Measures Acts. It continues to be responsible for standardization, metrology, and consumer product safety
19	Thailand	Thai Industrial Standards Institute (TISI)	National Institute of Metrology (Thailand)	Department of Internal Trade	1. Bureau of Laboratory Accreditation, Department of Science Service (BLA-DSS)	Market surveillance is conducted by TISI and the NSC ACFS, DMSc, DSS, as per legal	National Science and Technology Development Agency (NSTDA) are a coordinating body in Thailand. The website is https://www.nstda.or.th/en/

No.	Economy	Standards Body	Metrology (NML)	Metrology (Legal)	Accreditation & Conformity Assessment	Market Surveillance	Coordinating Body or Arrangements
					2. Bureau of Laboratory Quality Standards, Department of Medical Sciences (BLQS-DMSc) 3. National Bureau of Agricultural Commodity and Food Standards (ACFS) 4. National Standardization Council (NSC)	responsibilities for different aspects of technical regulations and standards.	
20	United States	American Standards Institute (ANSI)	National Institute of Science and Technology, Physical Measurement Laboratory	National Institute of Standards and Technology (NIST), Office of Weights and Measures	Accreditation of SDOs: ANSI Accreditation of Conformity Assessment Bodies: 1. AIHA Laboratory Accreditation	Consumer Product Safety Commission (CPSC) is responsible for surveillance of safety of many types of consumer products. Several Other types of	NIST

No.	Economy	Standards Body	Metrology (NML)	Metrology (Legal)	Accreditation & Conformity Assessment	Market Surveillance	Coordinating Body or Arrangements
					Programs, LLC (AIHA LAP) 2. American Association for Laboratory Accreditation (A2LA) 3. ANSI National Accreditation Board (ANAB) 4. International Accreditation Service Inc. (IAS) 5. IOAS Inc. 6. National Voluntary Laboratory Accreditation Program (NVLAP) 7. Perry Johnson Laboratory Accreditation Inc. (PJLA Inc) 8. United Accreditation	consumer products are covered by other federal agencies.	

No.	Economy	Standards Body	Metrology (NML)	Metrology (Legal)	Accreditation & Conformity Assessment	Market Surveillance	Coordinating Body or Arrangements
					Foundation (UAF)		
21	Viet Nam	Viet Nam Standards and Quality Institute (VSQI) in the Commission for Standards, Metrology and Quality of Viet Nam (STAMEQ)	Viet Nam Metrology Institute (VMI)	Commission for Standards, Metrology and Quality of Viet Nam (STAMEQ)	Accreditation Office for Standards Conformity Assessment Capacity (AOSC) Bureau of Accreditation (BoA) Viet Nam Institute of Accreditation (VACI) Network of accredited conformity assessment bodies.	Distributed across regulatory agencies.	The Ministry of Science and Technology (MOST) is responsible for coordinating and the publication of national standards (TCVN) and the and technical regulations (QCVN)

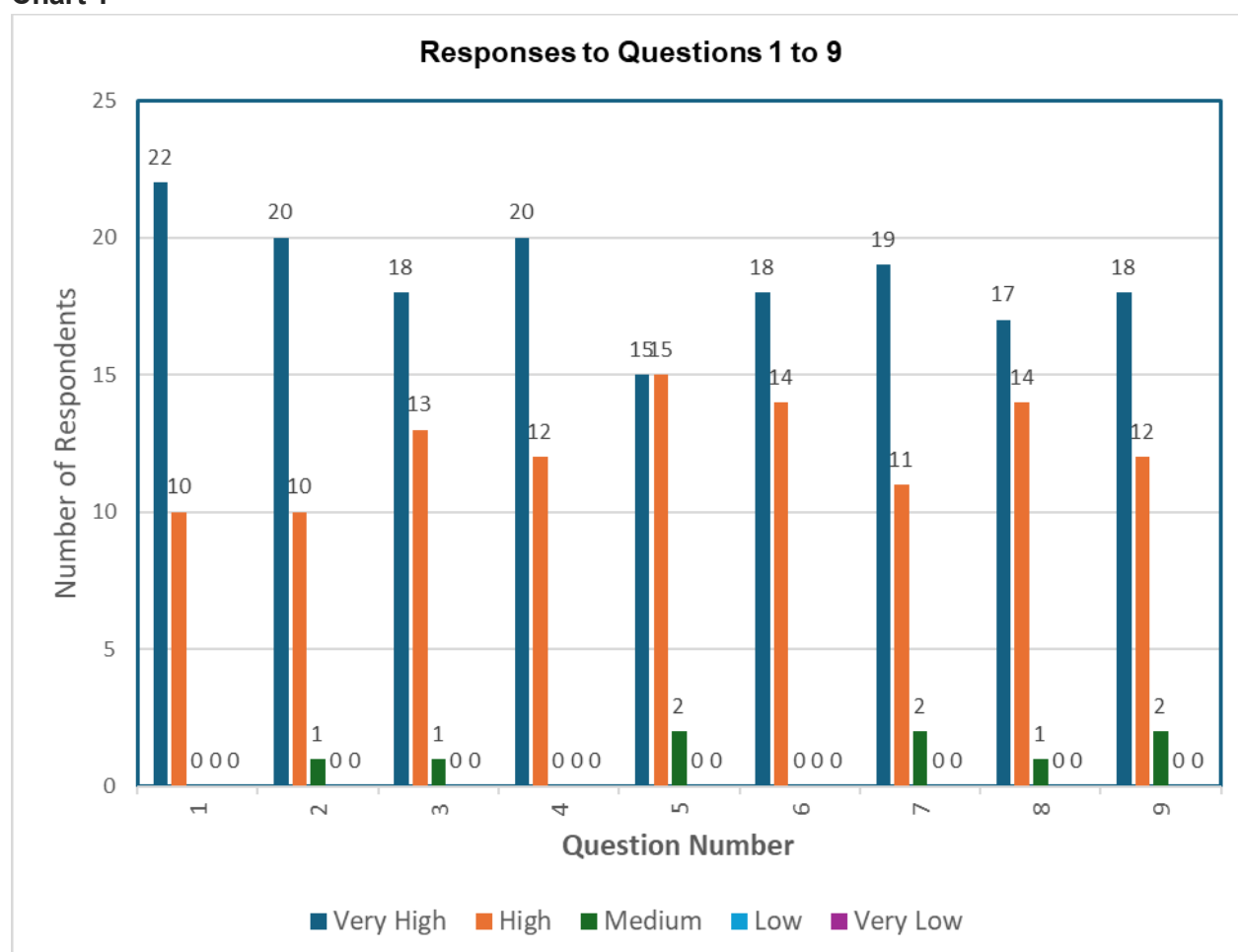
Annex 4: Post-Conference Survey: Best Practices of Quality Infrastructure (QI) in APEC Economies

Thirty-two (32) participants responded to the survey. A Summary of Responses to Questionnaire is as below:

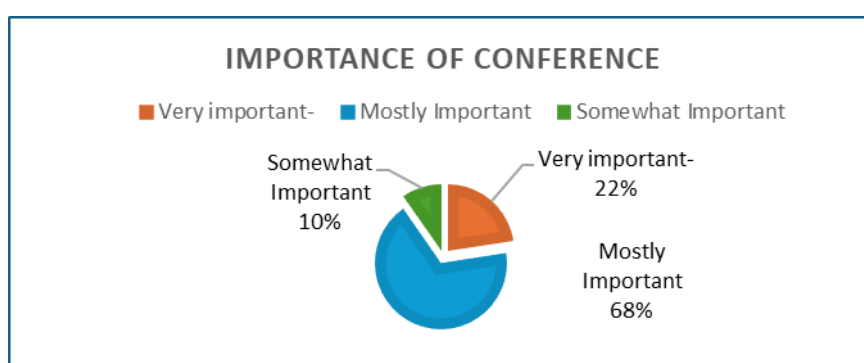
Questions:

1. The objectives of the conference were clearly defined.
2. The conference achieved its intended objectives.
3. The agenda items and topics covered are relevant.
4. The selection of the themes for the conference is appropriate.
5. The content was well organized and easy to follow.
6. The presenters conveyed their best practices effectively.
7. The time allotted for the presentations was sufficient.
8. The materials distributed were useful.
9. The preparatory arrangements were appropriate.

Chart 1



10. How relevant was this conference to you and your economy?



Responses to Question 10

11. Explain your answer to Question 10 above.

Summary of responses to Question 11:

- To ensure that the economy adopts the correct model such that trade, especially international trade is not hindered.
- Aided understanding of QI in other APEC economies
- The conference enhanced my understanding of international standards, cross-agency coordination, and the role of QI
- The conference provided valuable insights into how robust QI systems support effective project delivery, regulatory compliance, and risk management in construction and infrastructure projects
- Provided valuable information in strengthening our economy's QI and good sharing of information.
- Provided models for developing quality infrastructure

12. In your view, what were the conference's results/achievements?

Summary of responses to Question 12:

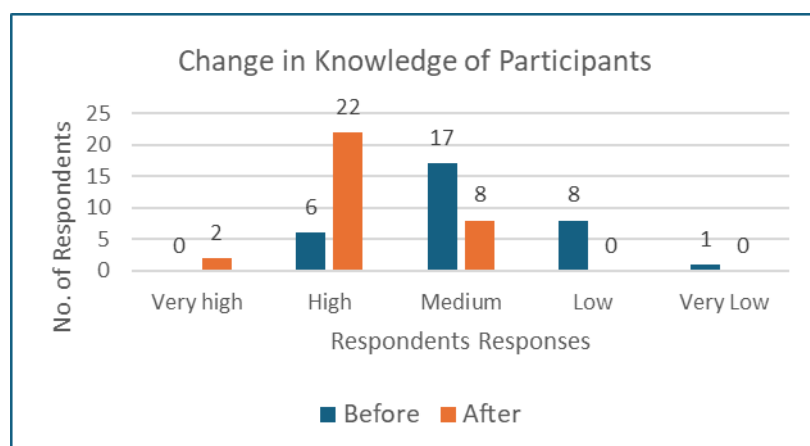
- The conference successfully highlighted best practices in establishing and strengthening domestic QI systems across APEC economies
- The conference provides information related to QI in every economy and that information provide learning material to enhance QI
- Support for integrating international best practices into economies
- Sharing of some excellent practices by relevant experts and knowledge sharing on regulatory coherence and international alignment of standards
- Increased awareness to a very technical subject to the government officials about how standards and conformance is practiced in other APEC economies
- The conference helped me understand the benefits of effective QI.
- The exchange of best practices and practical experiences among member economies, which provided clear examples of how effective QI systems contribute to trade facilitation, regulatory coherence, and improved market access.

13. What new skills and knowledge did you gain from this conference?

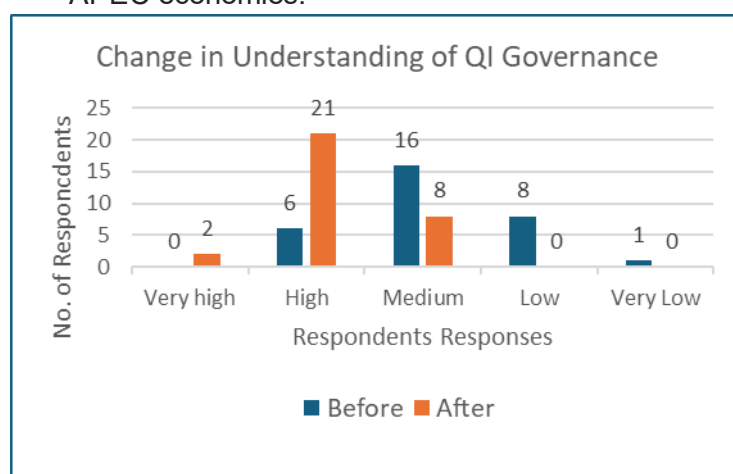
Summary of responses to Question 13:

- Information and understanding on how other economies manage their QI
- A clear picture of how metrology, standards, accreditation, and conformity assessment function as an integrated system to support trade, innovation, and consumer protection
- Deeper Understanding of Integrated QI Governance and coordination of the elements
- Knowledge on different models of QI across APEC economies
- Improved understanding of regional best practices, strategic trends, and collaborative approaches relevant to my work
- Practical insights into how Quality Infrastructure can be effectively integrated to support trade, regulatory alignment across the Asia-Pacific Economic Cooperation (APEC) economies

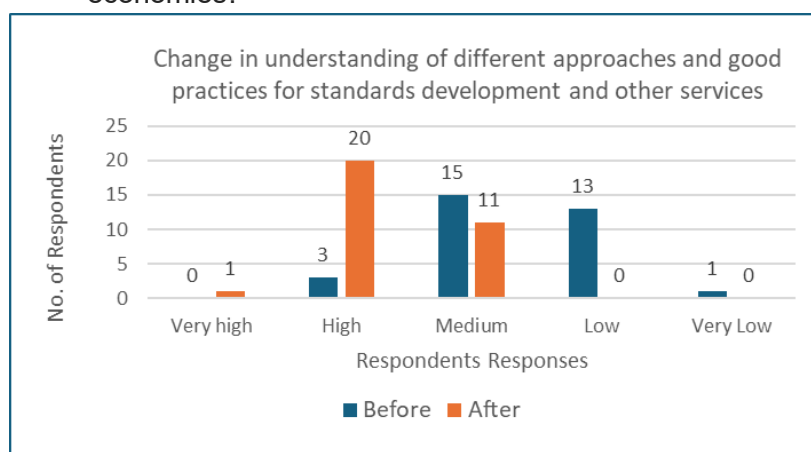
14. For **Theme 1**, please rate your knowledge of the different components/functions/institutions that make up the QI ecosystem. i.e. standards, metrology (legal, scientific, industrial), conformity assessment (inspection, testing and certification) and accreditation.



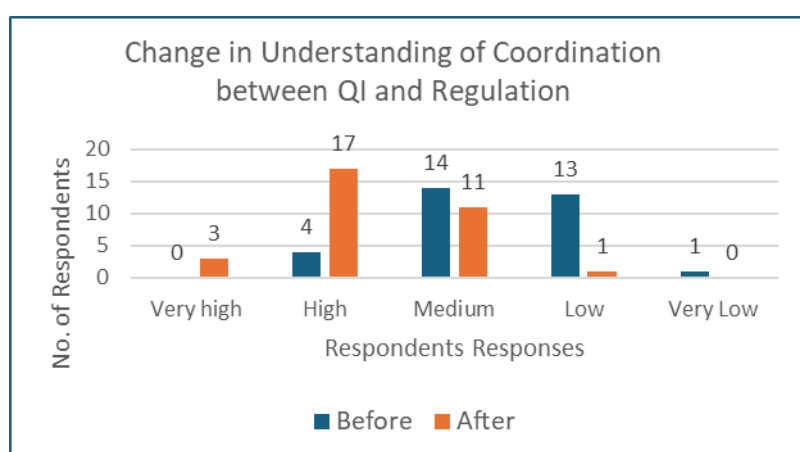
15. For **Theme 1**, please rate your understanding of the diversity of QI governance structures in APEC economies.



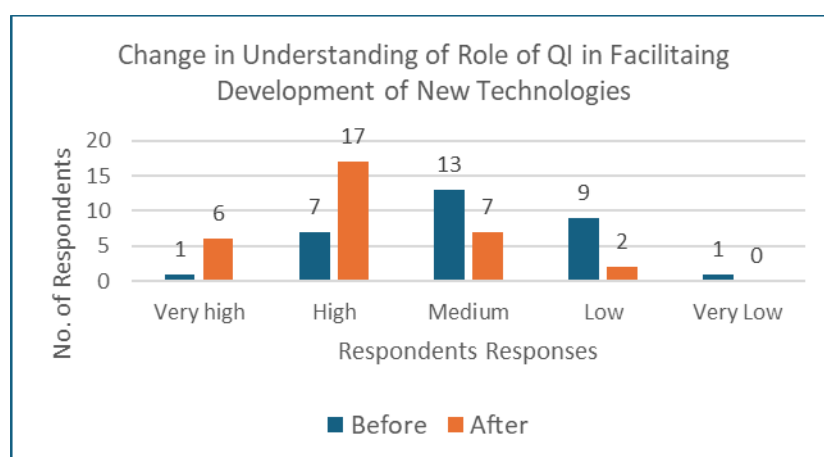
16. For **Theme 2**, please rate your understanding of the differences in approaches adopted and good practices of standards development, and in other QI services adopted by APEC economies.



17. For **Theme 3**, please rate your understanding of the methods adopted and benefits of enabling coordination between regulatory authorities and QI institutions for effective implementation and enforcement of regulations.



18. For **Theme 4**, please rate your understanding of the importance of the role of QI (standards, metrology, conformity assessment and accreditation) in facilitating the development and market acceptance, and where needed, in the regulation, of new and emerging technologies.



19. How will you apply the conference's content and knowledge gained at your workplace? Please provide examples (e.g. develop new policy initiatives, organise trainings, develop work plans/strategies, draft regulations, develop new procedures/tools etc.).

Summary of Responses to Question 19

- Sharing the information, organising internal knowledge-sharing sessions and training
- Draft a policy brief on establishing an accredited SDO scheme
- Exploring opportunities to apply the content and knowledge gained from the conference share with colleagues
- The conference content will be applied to the development of AI-related evaluation and accreditation frameworks
- Review and strengthen existing procedures related to materials testing, inspection, and certification in projects
- Develop new policy initiatives and strategy
- Support in translating regional QI best practices into organisational strategies
- Strengthen Quality Infrastructure (QI) development and international cooperation
- Develop a domestic roadmap for integrating voluntary standards into technical regulations.
- Propose a cross-agency working group on QI and regulatory coordination.

20. What needs to be done next by APEC? Are there plans to link the project's outcomes to subsequent collective actions by fora or individual actions by economies?

Summary of Responses to Question 20

- APEC should continue this by continuing to hold seminars either virtually or in person
- Share the report when ready that highlights good practices
- Hold further knowledge-sharing activities to have a more in-depth learning on the topic.
- APEC could initiate targeted capacity-building programs
- Collect the follow-up actions being conducted by APEC economies after the conference.
- Create a platform or repository of best practices and case studies accessible to member economies
- Studying and setting the guidelines for best practise of quality infrastructure, Develop a Regional QI Best Practices Compendium
- Establish Thematic Working Groups on selected focus areas
- Establish a formal APEC working group on QI for emerging technologies
- Develop a mutual recognition arrangement (MRA) framework for AI and quantum technology certification

21. How could this project have been improved? Please provide comments on how to improve the project, if relevant.

Summary of Responses to Question 21:

- It is preferable to do so in person so that participants can exchange views on the situation in a economy on best practices.
- Future projects could incorporate monitoring and impact evaluation components
- Include more sector-specific case studies (e.g., agriculture, fisheries) to make discussions more practical

- Providing pre-conference materials or background papers
- Establishing an online platform or database for technology interests, available innovations, and partnership opportunities would support continuous collaboration beyond the project period.
- Inclusion of a dedicated session on QI financing and sustainability.
- Incorporating more interactive elements.