



Asia-Pacific  
Economic Cooperation



# **GUIDANCE**

## **ON STRENGTHENING GOOD GOVERNANCE ON THE IMPLEMENTATION OF STANDARDIZATION AND CONFORMITY ASSESSMENT FOR APEC ECONOMIES**

APEC Sub-Committee on Standards and Conformance

January 2025





**Asia-Pacific  
Economic Cooperation**

# **Guidance on Strengthening Good Governance on the Implementation of Standardization and Conformity Assessment for APEC Economies**

**APEC Sub-Committee on Standards and Conformance**

**January 2025**

APEC Project: SCSC 02 2023T

Produced by  
National Standardization Agency of Indonesia

For  
Asia-Pacific Economic Cooperation Secretariat  
35 Heng Mui Keng Terrace  
Singapore 119616  
Tel: (65) 68919 600  
Fax: (65) 68919 690  
Email: [info@apec.org](mailto:info@apec.org)  
Website: [www.apec.org](http://www.apec.org)

© 2025 APEC Secretariat

APEC#225-CT-03.1

## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY</b>	<b>1</b>
<b>I. INTRODUCTION</b>	<b>2</b>
1. Background	2
2. Objective	4
<b>II. GOVERNANCE PRINCIPLES OF STANDARDIZATION AND CONFORMITY ASSESSMENT</b>	<b>5</b>
A. Commitment to Integrity and Regulation	5
B. Risk Management	5
C. Competence	5
D. Coherence	5
E. Dimensions of development	6
F. Comprehensive stakeholder openness, engagement and active role	6
<b>III. GOVERNANCE OF STANDARDIZATION AND CONFORMITY ASSESSMENT</b>	<b>7</b>
1. Standard Development	7
A. Standards Development Policy	7
B. Standards Development Process	8
2. Standard Implementation	11
A. Standard Implementation Policy	11
B. Voluntary Implementation	12
C. Mandatory Implementation	13
3. Conformity Assessment and Measurement Traceability	15
A. Conformity Assessment Policy and Measurement Traceability	15
B. Conformity Assessment Body Accredited by National Accreditation Body	16
C. Conformity Assessment Body Development	17
D. Mutual Recognition/MRA	17
E. Measurement Traceability	17
F. Participation in Collaborative Platforms and/or Collective Organizations	18
4. Learning and Growth	19
A. Human Resources Related to Standardization and Conformity Assessment	19
B. Organization Related to Standardization and Conformity Assessment	20
C. Information System Related to Standardization and Conformity Assessment	20
<b>IV. METHODOLOGY</b>	<b>21</b>
<b>ANNEX A</b>	<b>22</b>
<b>ANNEX B</b>	<b>24</b>
<b>TERMINOLOGY</b>	<b>25</b>
<b>BIBLIOGRAPHY</b>	<b>26</b>

## **EXECUTIVE SUMMARY**

The guidance provides a framework for evaluating the implementation of Standardization and Conformity Assessment (SCA) governance in organizations in APEC economies. Its objective is to enhance competitiveness, protect public interests, and support sustainable development through key principles, four elements' criteria, and a maturity evaluation model. Integrity and compliance, risk management, competence, coherence with international standards, developmental impact, and transparency with stakeholder engagement are the principles of the implementation good governance of SCA. The criteria for assessing SCA governance encompass the components of standards development, standards implementation, conformity assessment and measurement traceability, as well as continuous learning and growth.

The evaluation of good governance in the implementation of SCA involves organizations that have a role within the scope of quality infrastructure. Evaluation was conducted by using quantitative assessment tools for each indicator. The result of the evaluation is described in the radar diagram and index maturity based on 4 levels that correspond from no planning yet to continual improvement of good governance on the implementation of SCA. This APEC publication can be used as a reference in identifying and mapping programs to enhance good governance on the implementation of SCA as well as strengthening the Quality Infrastructure in APEC economies.

## I. INTRODUCTION

### 1. Background

The social, economic, and environmental challenges facing the global community are growing. The United Nations' Sustainable Development Goals (SDGs) provide an ambitious framework for international cooperation to address these issues and pursue a sustainable future through equitable economic growth, human well-being, and environmental preservation. The SDGs represent both an opportunity and a commitment to build healthier, more resilient communities and foster greener, more inclusive economies. By enabling open and fair international trade, promoting innovation and technological progress, and building trust through high-quality, consensus-based standards, the International Organization for Standardization (ISO) plays a crucial role in advancing these development goals.

ISO standards can significantly benefit developing economies by promoting sound regulatory practices and effective public policy. Private sector companies leverage these standards to ensure their processes, products, and services are compatible, interchangeable, and interoperable. Standardization guarantees that products and services are high-quality, safe, and environmentally friendly, greatly benefiting consumers. To fully realize these advantages, it is essential for developing economies to have the knowledge and resources to propose new work items and actively engage in all stages of ISO standard development. ISO recognizes that many of its developing members require capacity-building support to maximize the use of ISO standards in advancing the SDGs and in helping their governments meet broader development objectives.

The term "good operating practice" originates in strategic management and extends to areas like good manufacturing procedures, good clinical practices, good laboratory practices, good agricultural practices, and, more recently, Good Standardization Practices (GSP). By definition, GSP represents the optimal approach to developing and disseminating standards. This publication aims to provide guidance to APEC member economies, particularly developing economies, on performing the core activities needed to efficiently and effectively establish mechanism for standards and conformity assessment. Standardization, metrology, and conformity assessment constitute the three primary pillars of quality infrastructure.

Standardization and conformity assessment also play critical roles in supporting trade, public health and safety, environmental protection, and sustainable development in contemporary society. This guideline outlines the key elements of good governance necessary for effective implementation of standardization and conformance assessment.

The objectives of Standardization and Conformity Assessment are as follows:

- a. To enhance quality assurance, production efficiency, competitiveness, fair and transparent business competition, business certainty, the capabilities of business players, and technological innovation;
- b. To increase protections for consumers, business players, workers, and other communities, as well as focusing on safety, security, health, and environmental protection; and
- c. To improve certainty and efficiency in trade transactions involving goods and services.

The 2014 APEC Secretariat Report indicates that certain technical regulations developed and implemented in several APEC economies do not fully align with Good Regulatory Practices (GRP), particularly in the application of Regulatory Impact Analysis (RIA), which may contribute to technical barriers to trade. According to the report, APEC economies face several challenges in implementing GRP, including inadequate institutional support, limited capacity among human resource personnel, insufficient stakeholder knowledge and acceptance of RIA, a scarcity of reliable data, and a lack of coherence in integrating RIA within GRP frameworks.

The role of standardization, technical regulation and conformity assessment has become increasingly critical in trade policy, with Standards, Technical Regulations, and Conformity Assessment Procedures (STRACAP) now functioning as significant Non-Tariff Measures (NTMs) in global trade. This shift in trade regulation requires governments to prioritize the safety, quality, authenticity, and transparency of products and services to enhance competitiveness and foster economy growth. Over the past two decades, tariff reductions through global and regional trade agreements have provided greater opportunities for global trade expansion. In this context, it is essential for governments to establish policies on standards and conformity assessment that align with internationally recognized systems. Such alignment improves the ability of business players to access international markets, strengthens domestic markets and safeguards public health, safety, security and environmental protection. Protecting consumers from substandard goods remains a central focus for the government, particularly given that APEC economies represent a substantial share of the global market.

To strengthen economic resilience for quality and equitable growth, government organizations play a key role in ensuring the quality of both exported and domestically marketed products. Implementing standards is essential for providing quality assurance and improving production efficiency, thereby enhancing economic competitiveness. Standardization and conformity assessment serve as crucial tools for improving quality, boosting production efficiency, facilitating trade transactions, and fostering fair and transparent business competition. Consequently, policies on standardization and conformity assessment are essential and should be adopted as strategic programs by government entities at both central and local levels.

Standardization involves the development and application of standards, while conformity



assessment entails verifying the implementation of these standards through certification, testing, and inspection conducted by conformity assessment bodies accredited by the National Accreditation Body (NAB). Improving product quality through standardization can lead to the production of competitive goods that stimulate economic growth, bolster economic resilience, and improve public welfare.

The standardization and conformity assessment system as a horizontal system, utilized by various ministries and institutions according to the specific regulations and needs of each sector. This system encompasses calibration, testing, and certification services performed by both government and private entities, serving a wide range of stakeholders for domestic and international purposes. The framework of the domestic standardization and conformity assessment system, in the form of laws, regulations and institutional arrangements at the appropriate level, defines the roles, positions, and relationships among stakeholders, as well as the interactions between stakeholders and users. This structure ensures that standardization and conformity assessment can effectively fulfill their intended roles and objectives.

The development of guideline for implementing GRP governance, based on study of the effectiveness of each GRP element within government organizations, is expected to address longstanding challenges that have hindered GRP adoption in formulating technical regulations. This guideline aims to strengthen the pillars of quality infrastructure to support the production of competitive products, thereby driving economic activity, enhancing economic resilience, and improving public welfare.

## **2. Objective**

Government organizations, particularly in APEC economies, implement Standardization and Conformity Assessment (SCA) governance comprehensively to strengthen quality infrastructure institutions, enhancing competitiveness and ensuring the protection of health, safety, security and environmental preservation, all aimed at creating a just and prosperous society.

To evaluate the effectiveness of SCA provisions, assessments of SCA implementation within government organizations, aligned with established SCA guideline, are essential. This assessment will provide the basis for continuous improvement in SCA governance practices.

This evaluation process will support and promote the effective implementation of Quality Infrastructure (QI) – including standards, metrology, accreditation, and conformity assessment – across APEC economies. Additionally, it will foster collaboration between domestic and local government initiatives, ensuring that all APEC economies have access to QI that supports progress towards the 2030 Sustainable Development Goals, meets economies-specific needs, is internationally recognized, and contributes to the global standardization landscape.

## **II. GOVERNANCE PRINCIPLES OF STANDARDIZATION AND CONFORMITY ASSESSMENT**

In implementing policies related to standardization and conformity assessment, governments must prioritize the core principles of good governance within the standardization and conformity assessment framework in the public sector.

### **A. Commitment to integrity and regulation**

Governments hold the responsibility to use resources effectively and efficiently to serve the public interest while adhering to legal requirements. Maintaining integrity and a commitment to ethical values and legal compliance in resource use are essential at all levels of the organization.

The principles of standards and conformity assessment should be embedded throughout the government organizations and serve as a foundation for policymaking. Government organizations must commit to legal and regulatory compliance, upholding the values of standards and conformity assessment to achieve good governance. Non-discriminatory, impartial, and independent laws and regulations foster robust communities and organizations while minimizing conflicts of interest.

### **B. Risk management**

Government organizations must manage risks associated with SCA-related activities to prevent and mitigate any factors that could impede the achievement of organizational goals and objectives.

### **C. Competence**

Organization structure and effective leadership are essential for government organizations to achieve desired outcomes efficiently. The development of individual capabilities and human resources is the organization's most critical asset, enabling sustainable growth and operational effectiveness.

### **D. Coherence**

Policies related to standardization and conformity assessment must be aligned and harmonious with international standards and international agreements to support trade. These policies should accommodate economic interests to enhance market access and competitiveness, while also protecting health, safety, security and environmental preservation.

## **E. Dimensions of development**

Government organizations must ensure that SCA policies generate benefits and outcomes within the scope of their authority and available resources. It is essential to assess the economic, social and environmental impacts of these policies in alignment development goals. Therefore, in policy formulation, it is crucial to consider the perspectives of all stakeholders, particularly those directly impacted by these policies.

## **F. Comprehensive openness, involvement and active role of stakeholders**

Government policies are developed for the public's benefit, so it is essential for government organizations to create open channels for communication and consultation that ensure effective involvement of the public, service users, and other stakeholders.

Transparency should encompass all aspects of policy development, including plans, decisions, actions, resource allocation, and policy outcomes. Governments must disclose the criteria, rationale and considerations underlying policy decisions, along with the anticipated impacts and consequences. Openness also includes sharing information on security matters that may affect international relations, as well as maintaining confidentiality where necessary, especially concerning the private sector.

Government organizations should ensure that policies engage the public and are subject to transparent consultation processes. They should implement procedures for gathering and evaluating community input through various mechanisms, such as surveys, online platforms, and direct feedback from regular meetings with stakeholders. Policies should clearly outline how community feedback will influence decision-making, and organizations should communicate the results of these decisions back to the public.

To improve services and accountability, government organizations are expected to actively engage and collaborate with stakeholders. Effective governance requires that goals, objectives, and expected outcomes are clearly defined for each stakeholder. This process includes establishing a clear division of responsibilities, securing appropriate funding, implementing robust systems, and monitoring associated risks.

### **III. GOVERNANCE OF STANDARDIZATION AND CONFORMITY ASSESSMENT**

Standardization encompasses the process of planning, formulating, establishing, developing, implementing, enforcing, maintaining, and overseeing standards in a systematic manner, with collaboration from all relevant stakeholders. Conformity assessment, on the other hand, involves evaluating whether goods, services, systems, processes, or personnel meet the established reference requirements. SCA Governance refers to the set of processes, policies and rules that guide the direction, management and control of SCA activities within an organization. It also includes the relationship among stakeholders and the organization's management objectives.

The criteria for assessing SCA governance encompass the components of standards development, standards implementation, conformity assessment and measurement traceability, as well as continuous learning and growth.

#### **1. Standard Development**

The Technical Barrier to Trade (TBT) Committee has established six key principles for developing standards in accordance with Good Regulatory Practices (GRP). These principles include transparency, openness, impartiality, consensus, effectiveness, relevance, coherence, and a development dimension. These guiding principles are outlined in the "Decision of the Committee on Principles for the Development of International Standards, Guides, and Recommendations" under Articles 2, 3, and Annex 3 of the WTO TBT Agreement. In addition to these principles, the International Organization for Standardization (ISO) has identified three additional principles critical to the standard development process: stakeholder involvement, due process, and the practical implementation of standards. The integration of these principles ensures that standards are developed in a manner that fosters fair trade and aligns with international best practices.

#### **A. Standard Development Policy**

The policy for developing standards is shaped by both International and domestic economic objectives. APEC economies are encouraged to align their standardization efforts with key programs, such as the Domestic Medium-Term Development Plan, international and regional agreements, and other economic policies. The overarching goal is to establish standards that promote economic growth, protect the interests of stakeholders, and support sustainable development. Policy considerations include the needs of stakeholders, global trade trends, and alignment with Sustainable Development Goals (SDGs). The formulation of these policies involves a comprehensive needs analysis to ensure they reflect the interests of all relevant parties, including businesses, consumers, academia and

governmental agencies.

Establishing a policy for standards development can provide an opportunity for deeper involvement in the creation of International standard, domestic standard development programs, technical committee activities, the standards development policy committee, and the implementation of development guideline.

## **B. Standards Development Process**

The standards development process of one APEC economy is described below as an example. It should be noted that each APEC economy have its own standards development process.

A standard is formulated by a technical committee established by an authorized organization responsible for standard development and proposed by the relevant government agency. The technical committee typically consists of stakeholders representing various sectors, including business players and related associations, consumers and related associations, government representatives, experts and academics, ensuring that no single stakeholder dominates the process. The management of the technical committee is overseen by the Technical Committee Secretariat, and the performance of these technical committees is evaluated annually by the authorized organization (usually National Standardization Agency as technical committee secretariat).

The purpose of standard development is to enhance the quality and productivity of goods and services, while safeguarding health, safety, security and environmental protection. Therefore, identifying stakeholders' needs during the standard development process is essential. Scientific studies are often required to support standard development, as they strengthen the foundation for determining quality requirements while considering the readiness of the quality infrastructure.

The standard development program is proposed by stakeholders through technical committees and takes the form of the Program for Standard Formulation. Before this program is established, it must be disseminated via a website to engage stakeholders and gather broad input. Once established by authorized organization, the technical committee formulates the standard based on Program for Standard Formulation, in line with its duties and responsibilities. The selection of standards development is determined by several factors, including:

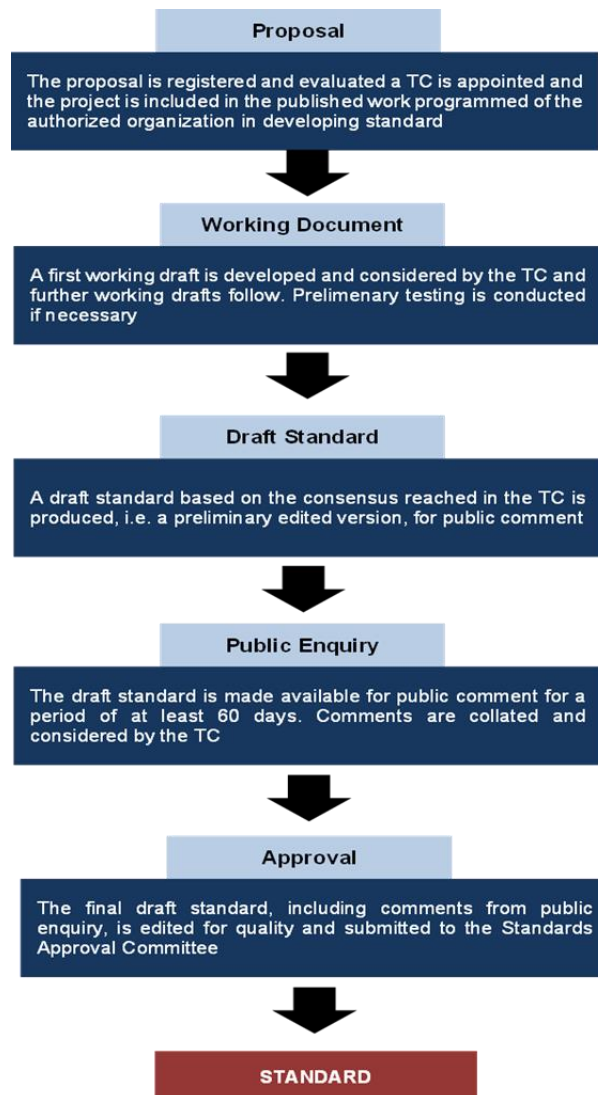
- a. The level of urgency;
- b. The primary beneficiaries of the proposed standard;
- c. The benefits of the standard in terms of security, safety, health and environmental

- protection, economic growth, and enhanced competitiveness;
- d. Whether the standard is required for regulatory purposes;
  - e. Stakeholder support;
  - f. The availability of conformity assessment bodies that can support standard implementation;
  - g. The potential overlap with other technical committees' areas of expertise.

Standards may be formulated either by adopting international standards or through independent formulation based on research conducted by relevant parties. Therefore, scientific support is crucial for determining the parameters and requirements of standards. The standard formulation process is conducted transparently, openly, objectively, efficiently, and with consensus, taking into account the interests of small and medium-sized enterprises (SMEs).

The stages of standard formulation include drafting, technical meetings, consensus meetings, opinion polls (public enquiry), and final ratification (approval). During the drafting phase, the government organization, as the technical committee, identifies available conceptors and ensures diverse stakeholder representation (including regulators, industry/associations, consumers, and experts/academics). Drafting is carried out by the technical committee, which assigns conceptors to develop the draft standard. These conceptors, who may be individuals or working groups, are appointed by the chairman of technical committee or the Technical Committee Secretariat.

Standard formulation takes place through both in-person and virtual meetings. Stakeholders can provide feedback on the draft standard during the opinion poll stage, which is conducted using an IT-based system. Once finalized, the standard is published by the authorized organization responsible for its development.



**Figure 1.** Steps of standards development process

(Source: Adapted from ISO Publication on Good Standardization Practices, and ISO/IEC Directives)

After the standard is established, it is essential to periodically review it to ensure its alignment with economy-wide interests, evolving market needs, and advancements in science, innovation, and technology. This review assesses the standard’s feasibility and relevance, ensuring its continued availability and applicability. Standards should be reviewed at least once every 5 (five) years or as needed. This review process may be initiated by the authorized organization responsible for standard development, the Technical Committee, and/or related stakeholders, with the authorized organization assigning the Technical Committee to conduct review.

The outcomes of this review may include abolition, revision or amendment, or re-establishment of the standard. Involving relevant organizations in this process is crucial to confirm that the standard aligns with their policies and interests. Furthermore, public consultations should be conducted to ensure that stakeholder interests and the capacity of standard implementation infrastructure are fully considered.

To ensure that standards are developed in alignment with their intended objectives, the following guidelines are used as a references in standard development activities:

- a. ISO Guidance for National Standard Bodies
- b. Guidance on new work
- c. ISO Publication on Good Standardization Practices
- d. ISO/IEC Directives related on standard development

In addition to the standard formulation stage, stakeholders are encouraged to participate in the development of international standards. Such involvement is critical in defining the position of APEC economies, particularly regarding the development of international standards.

Enhancing market access and ensuring that standard requirements are accessible to stakeholders across APEC economies are key priorities. Participation in international standards development occurs through relevant technical committees, adhering to guidelines established by Regional or International Standards Organizations. This engagement may include proposing domestic standards for adoption as international standards in forums such as the *Codex Alimentarius Commission*, the *International Organization for Standardization* (ISO), and *International Electrotechnical Commission* (IEC), as well as participating in associated technical committees. The development of international standards and guidelines follows the procedures set by these Regional or International Standards Organizations.

## **2. Standard Implementation**

### **A. Standard Implementation Policy**

Policies governing the implementation of Standardization and Conformity Assessment (SCA) established by an Organization are essential for guiding SCA activities within government and ensuring their broader application in society. In formulating this policy, government organizations consider relevant domestic programs and interests, including:

- a. Domestic Medium-Term Development Plan
- b. International and Regional Agreements;



- c. Regulations related to Standardization and Conformity Assessment;
- d. Stakeholder Needs;
- e. Other Domestic Interests;
- f. Global Trade Developments
- g. Sustainable Development Goals (SDGs); and
- h. Regional flagship products.

Government organizations may establish policies for standards and conformity assessment in forms such as:

- a. Mandatory enforcement of standards,
- b. Mandatory enforcement of selected parameters within standards,
- c. Enforcement of technical requirements based on conformity assessment,
- d. Implementation of conformity assessment as a basis for fulfilling regulatory requirements,
- e. Advocacy for voluntary implementation of standards,
- f. Support for business players in implementing standards,
- g. Facilitation of Conformity Assessment Bodies (CABs), and
- h. Promotion of public awareness regarding the importance of standards.

These policies help create a framework where standards and conformity assessment contribute to domestic development objectives, enhance market access, and align with international best practices.

## **B. Voluntary Implementation**

The TBT WTO Agreement recognizes that standards are fundamentally voluntary, whereas technical regulations are mandatory. In practice, standardization and conformity assessment have become essential tools to ensure quality assurance and production efficiency, thereby contributing to competitiveness. Consistent with the TBT WTO agreement, standards established by the authorized standard development organization are voluntary. Stakeholders can adopt these standards to enhance quality or meet market demands, such as consumer requirements or government procurement specifications.

The government bears the responsibility of ensuring that business, including small and medium enterprises (SMEs), meet standard requirements. This includes supporting the development of conformity assessment infrastructure essential for the application of standards. Government organizations play a pivotal role in preparing such infrastructure, encompassing business and conformity assessment institutions.

The government fosters compliance by engaging with business players and the community through consultation, education, training and promoting a culture of standardization and

conformity assessment. Additionally, the government ensures that conformity assessment processes are not burdensome, particularly for SMEs. Facilitating conformity assessment for SMEs is critical to removing barriers to implementation.

To verify the application of standards, the authorized standard development organization establishes a conformity assessment scheme. This scheme encompasses processes such as selection, determination, review, and attestation, and is applied by conformity assessment institutions to evaluate products, processes, services, or management systems based on standards.

The competence of conformity assessment institutions is validated through accreditation by the National Accreditation Body (NAB). In urgent cases, the authorized organization may designate a competent Conformity Assessment Body (CAB) with a similar scope for relevant products, processes, services, or systems.

Compliance with standards is demonstrated through licenses or marks issued according to applicable laws and regulations. Such regulations provide clarity and consistency in implementation, preventing confusion and disputes. The organization or institution owning the mark authorized its use by businesses if their product, process, service, or system meets the standard, as certified by the CAB.

To ensure the intended outcomes of standard implementation and maintain its integrity, the authorized body in the field of SCA collaborates with central and regional government organizations to oversee compliance. Supervision mechanisms are implemented in alignment with applicable laws and regulations, with coordination among relevant ministries and institutions responsible for market oversight.

### **C. Technical Regulation based on Standard (Mandatory Implementation)**

When standards address critical concerns such as health, safety, security and environmental protection or for security, government organizations may adopt standard into technical regulations, making their application mandatory. The decision to enforce standards compulsorily is preceded by a regulatory impact analysis to ensure the regulations address the intended issues and effectively achieve goals related to health, safety, security and environmental protection, or domestic interests.

Government organizations implementing mandatory standards must adhere to Good Regulatory Practices (GRP) as stipulated in the WTO TBT Agreement and applicable across APEC economies.

Conformity assessment ensures that goods, services, systems, processes or people meet

the requirements outlined in:

- a. Standards developed by the authorized standard-setting organization.
- b. Technical regulations mandating the application of some or all parameters of one or more standards.
- c. Technical requirements that refer to other standards or provisions aligning with the intended objectives.

The competence of the conformity assessment institution is proven by accreditation carried out by National Accreditation Body (NAB) and / or government organization can appoint both NAB-accredited and unaccredited CABs that have competence with a similar scope for related products, processes, services, management systems.

Organizations propose mandatory standard implementation plans through the Domestic Program which will be published and determined by authorized organization. the Domestic Program publication aims to ensure *stakeholder* involvement from the planning stage. In addition to this, to inform business players to prepare for the fulfillment of standard that will be mandatory.

The organization formulates technical regulations by taking into account the readiness of business players, conformity assessment infrastructure including facilities and infrastructure for the implementation of supervision. In the formulation process, public consultation must be carried out to fulfill the principle of transparency and the provisions of the relevant laws and regulations.

As stipulated in the WTO Technical Barrier to Trade (TBT) agreement, notification obligations are carried out on:

- Draft technical regulations so as to provide opportunities for WTO members and the public to respond and also to adjust to the regulations to be established. Once established, technical regulations must be published and informed to WTO members.
- Technical regulations that have been established in case of urgency in terms of national security protection.

The technical regulations for mandatory implementation that have been established are published for the public and relevant stakeholders to easily implement. Periodically, the established regulations must be evaluated in accordance with the validity of standard, related conformity assessment schemes and domestic interests. In supporting the implementation of SCA-based technical regulations, Government Organizations need to identify the needs and availability of facilities and infrastructure to facilitate the implementation of these technical regulations. Facilitation can be incentives for business players, technical assistance, mapping and improving CAB competencies, etc.

In ensuring compliance with these regulations, supervision is carried out by organizations that have authority in accordance with the relevant scope, including the supervision of goods in circulation. It is expected that the organization coordinates with related parties so that there is no overlap in supervision. Organizations provide facilities and infrastructure in the implementation of supervision so as to achieve goals and supervision is carried out effectively.

### **3. Conformity assessment and Measurement traceability**

#### **A. Conformity Assessment (CA) Policy and Measurement Traceability**

Policies related to conformity assessment and measurement traceability are developed by taking into account the identification of conformity assessment needs in facilitating compliance with standards or domestic standards, reference requirements, and technical regulations. Organizations must identify conformity assessment and measurement traceability to ensure that stakeholder interests are accommodated and to determine the appropriate conformity assessment methods based on the risk associated with the product or object under assessment.

In formulating these policies, organizations should consider domestic priorities as outlined in the Domestic Medium-Term Development Plan, international agreements, and other domestic interests. Additionally, organizations must ensure that their conformity assessment and measurement traceability policies adhere to the principle of transparency, thereby aligning with international rules and agreements, including the principle of non-discrimination against conformity assessment provisions for both imported and domestic products.

Moreover, the organization should establish policies that mandate a sound economic analysis (such as needs assessment, cost-benefit analysis, etc.) to support informed decision-making in the development of new schemes or infrastructure. There should also be a policy in place to operate based on a comprehensive business plan, encompassing human resources, financial management, logistics, marketing, and other aspects, to ensure the organization's sustainability. Evidence of this may include financial statements showing profitability, capacity utilization, and financial performance metrics such as return on investment (ROI) or profit and loss accounts. Additionally, the organization must have policies addressing the needs of diverse beneficiary groups, including women's empowerment and gender equality

## **B. Use of Conformity Assessment Body (CAB) accredited by National Accreditation Body (NAB)**

To ensure that a conformity assessment result is accepted and trusted in the community, the activity must be carried out by an accredited conformity assessment body so that it has the competence to carry out conformity assessment activities. Conformity assessment bodies include laboratories, certification bodies and inspection bodies. Accreditation according to the SCA Law is a series of formal recognition activities by NAB, which states that a Body has the competence and right to carry out conformity assessment. The reference requirements for conformity assessment activities are Domestic Standards, technical requirements, qualifications, and competencies that refer to other standards, provisions stipulated in the acceptability of conformity assessment results and other standards or reference requirements necessary for domestic interests. The organization in determining the conformity assessment method considers product risk. The organization determines the conformity assessment method based on the requirements of international standards related to conformity assessment to ensure the capacity of the NAB so that it can facilitate the proof of compliance with the requirements of technical regulations or other requirements used in product reference in the market. For this reason, organizations in developing schemes use NAB accreditation as the basis for designating or assigning NABs in carrying out conformity proof activities. In addition, organizations can use the conformity assessment scheme developed by Standardization Agency as a reference and reference for implementing domestic standard. The scheme of conformity assessment accreditation requirements is generally described as follows:

- In testing activities, testing laboratories use test methods to perform tests on received samples and report data. The test results are used to determine whether the tested goods demonstrate conformity to the specified requirements.
- ISO/IEC 17025 specifies general requirements for the competence of testing laboratories to perform tests and/or calibrations as well as how each is performed using standardized or non-standardized methods. ISO/IEC 17025 is used to demonstrate that testing and calibration laboratories are competent and capable of producing valid results. This will help to increase confidence in the testing process in the laboratory.
- In inspection activities, inspection bodies use inspection methods to assess the design or performance of products and/or installations to determine conformity with requirements and produce inspection reports. ISO/IEC 17020 is an accreditation requirement for inspection bodies to ensure the competence of inspection bodies in conducting conformity assessment activities.

Certification can provide a higher level of trust as third-party certification decisions are required to be impartial and free from commercial, financial or other pressures that could compromise impartiality. Certification is conducted for products, processes, services, personnel and management systems. Accreditation requirements for certification bodies use the reference basis of ISO/IEC 17025, ISO/IEC 17065, ISO/IEC 17024 and ISO/IEC 17021.

The organization in determining the conformity assessment scheme conducts a risk assessment so that the decision to choose the conformity assessment method can facilitate an effective and efficient conformity proof process

### **C. CAB Development**

To ensure the ease of implementation of standards, the availability of conformity assessment body is very important in achieving the effectiveness of conformity assessment implementation. For this reason, it is necessary to develop CABs accredited by NAB to facilitate the fulfillment of requirements set or adopted by organizations. CAB development can be carried out by guiding the readiness of CABs to be accredited by ensuring the priority distribution of CABs in each APEC economy. This is to optimize resources in the implementation of conformity assessment.

### **D. Mutual Recognition/MRA**

To ensure the acceptability of conformity assessment results, mutual recognition of accreditation and certification schemes carried out by accreditation bodies in international forums related to accreditation is required. For this reason, organizations in establishing product acceptance policies must be based on mutual recognition cooperation to ensure harmonization of reference standards and conformity assessment methods so as to increase the level of confidence in the quality of products circulating in the market. The policy of using mutual recognition cooperation must pay attention to the principle of reciprocity and take into account domestic interests and international obligations. For this reason, the organization uses domestic and foreign CABs based on mutual recognition and/or mutual acceptance schemes.

### **E. Measurement Traceability**

To ensure the acceptability of conformity assessment results, the measurements conducted during these activities must comply with international standards, ensuring that the results are internationally recognized. International recognition of measurement results is reflected in the global acknowledgment of an economy's measurement and calibration capabilities, typically represented by a domestic agency responsible for managing the economy's measurement standards. Such recognition is achieved through active

participation in regional and international metrological organizations, involvement in proficiency testing schemes, and comparative tests that assess the economy's measurement and calibration capabilities.

This recognition is further reinforced by the implementation of a robust metrology laboratory quality management system, such as ISO/IEC 17025, and the signing of Mutual Recognition Agreements (CIPM-MRA) for measurement and calibration capabilities. Reliable, traceable, and highly accurate measurements are crucial to ensuring product quality, fostering trust, acceptance, and market recognition.

Competitiveness and sustainable innovation depend on precise and traceable measurement results, which are essential not only in traditional areas of physical measurement but also in chemical analysis, advanced materials, material properties, and emerging fields like nano-metrology and biotechnology. These new areas require the development of novel measurement technologies. Additionally, the widespread application of information technology, including fully automated, remotely controlled, and monitored measuring systems, necessitates innovative approaches.

To support this, the government must ensure that regulations include requirements for traceability and measurement uncertainty to guarantee measurement accuracy. Furthermore, the organization should also participate in accredited proficiency testing schemes, adopt policies for the use of Certified Reference Materials (CRM), ensure regular calibration and maintenance of measuring instruments, and demonstrate traceability through the use of patents from metrological institutes to maintain an unbroken chain of comparisons.

#### **F. Participation in Collaborative Platforms and/or Collective Organizations**

Participation in collaborative platforms and collective organizations is a crucial indicator of an organization's commitment to staying aligned with best practices and standards at the economy-level, regional, and international levels. This participation ensures that the organization is not only informed about the latest developments in conformity assessment and measurement traceability but also actively contributes to the advancement of these fields.

To assess this indicator, organizations should demonstrate the following:

- a. **Membership in Representative Bodies:** The organization should be a member of relevant domestic, regional, or international bodies that represent interests in conformity assessment and measurement traceability. This membership allows the organization to stay connected with the broader community and access essential resources and information.

- b. **Active Participation in Forums and Meetings:** The organization should regularly attend and actively engage in forums, meetings, or conferences related to conformity assessment and measurement traceability. Active participation includes contributing to discussions, sharing insights, and collaborating with other members to shape the direction of industry standards and practices.
- c. **Engagement in Collective Initiatives:** The organization should be involved in collective initiatives, either by proposing new ideas or by implementing collaborative projects. This engagement demonstrates a proactive approach to innovation and improvement within the industry, ensuring that the organization plays a role in shaping future standards and methodologies.

By actively participating in these collaborative platforms and collective organizations, the organization enhances its capability to deliver reliable and recognized conformity assessment results while also contributing to the continuous improvement of measurement traceability standards on a global scale.

#### **4. Learning and Growth**

*The learning and growth* pillar aims to ensure that the organization has the ability and management to create and improve benefits for the organization. This pillar emphasizes efforts to build and maintain organizational excellence in the long term, including in the implementation of SCA governance. In this pillar, there are 3 main components, namely human resource capabilities, organizational capabilities, and information system capabilities.

##### **A. Human Resources (HR) related to Standardization and conformity assessment**

To ensure that the organization can continuously implement standardization and conformity assessment governance and value the organization, it is essential that human resources are competent. This competency can be developed through a gap analysis. Additionally, besides internal support, funding could alternatively be sought from international organizations

Organizations must also ensure that the competencies and expertise of their HR in the field of SCA are effectively utilized in the implementation of SCA governance, while also conducting continuous evaluation. Actively involving HR in programs and activities related to the implementation of SCA governance not only provides a platform for HR to channel their competencies and expertise, but also ensures that the organization gain reciprocal benefits from the expertise possessed by HR.



## **B. Organization related to Standardization and Conformity Assessment**

In addition to HR factors, organizations must also establish a supportive system, work environment and commitment to facilitate the implementation of SCA governance in the organization and ensure its smooth execution. This includes ensuring that there is commitment and organizational values that promote the successful implementation of SCA governance. Key elements include internal cooperation, awareness of the importance of standards and conformity assessment,– effective leadership to guide SCA governance and alignment between the organization's goals and the objectives of SCA governance.

Furthermore, Organizations need to provide program support, adequate budgets, and facilities to conduct research and studies in the field of SCA, as well as implement the findings in their SCA governance practices. Based on these research/study outcome, organization can also introduce new innovations in the implementation of the implementation of SCA governance, ensuring that these innovations align with the organization objectives.

## **C. Information System related to Standardization and Conformity Assessment**

The last aspect of the learning and growth pillar, addresses the capability of the organization's technology and information systems to encourage the achievement of the implementation of SCA governance. Organizations need to ensure that their technology and information systems are of high quality and able to provide the necessary information services to stakeholders. These system should also have the capacity to reach a wide range of stakeholders and include information related to standards or domestic standards, Conformity Assessment and the management of SCA implementation within the organization.

To foster continuous improvements, the organization should regularly monitor and evaluate the performance of its information systems to ensure they meet the evolving information needs of stakeholders.

#### IV. METHODOLOGY

This methodology is designed for economies evaluating the implementation of SCA governance using assessment tools in Annex A, which form in a separate part of the guidelines.

The assessment tool, available as a Microsoft Excel spreadsheet, provides APEC economies with a mechanism to consider their organization and its governance, assess their own Quality Infrastructure (QI) (Standardization and conformity assessment). In conducting this evaluation, each economy identifies authorized organizations in field of SCA to conduct socialization and assistance to organizations involved in QI activities in filling out the assessment tool (Questionnaire). The evaluation result is a value that describes the maturity of SCA in each APEC economy. This guide and assessment tool can be used to conduct SCA governance maturity assessments at the domestic and regional levels.

For the domestic level, each APEC economy can assess its maturity level through self-assessment, then each APEC economy can assess the maturity level for local organizations that implement SPK governance. APEC economies verify the completion of the assessment tool by local organizations by considering evidence or implementation that has been carried out.

Internationally, this assessment tool can be used by international organizations such as the APEC secretariat in mapping the availability and maturity level of the implementation of SCA governance in its member economies.

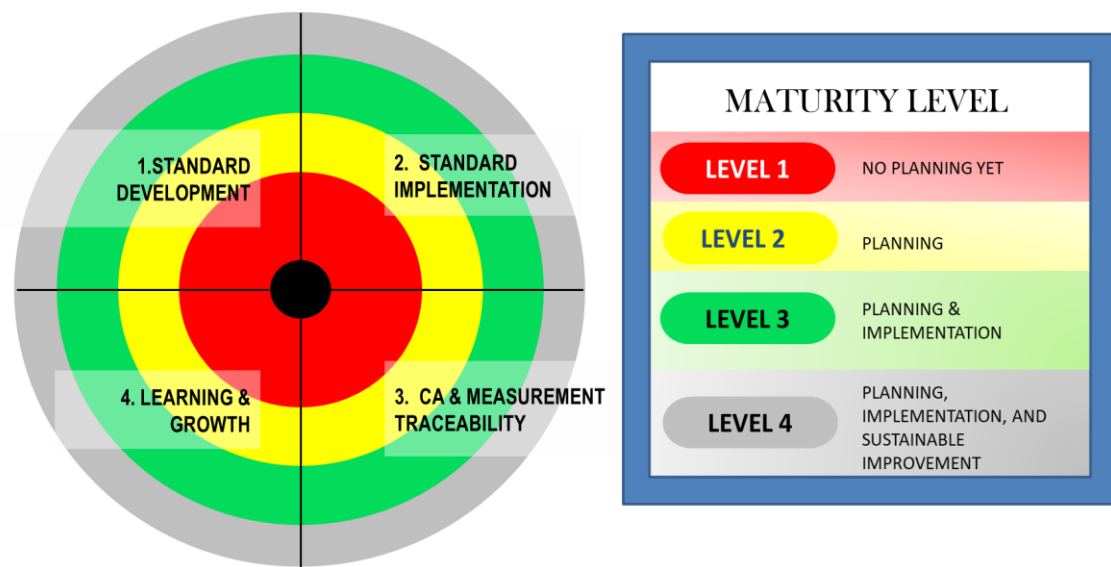
**Object:** The evaluation was aimed at all economies especially APEC Economies for both economy-wide and local governments, and involved relevant organizations in the Quality Infrastructure field.

**Variable:** Each economy faces its own realities in terms of the economic and trade situation, needs and expectations and the role it plays in the regional and international community. However, they have in common the provision of QI (standardization and conformity assessment). The QI elements used as the basis for the maturity level calculation consist of the following standard development, standard implementation, conformity assessment and measurement traceability, and learning and growth.

## ANNEX A

### Using Assessment Tool

To evaluate the effectiveness of implementing each element of standardization and conformity assessment within government organizations, the SCA governance criteria include the components of standards development, standards implementation, conformity assessment and measurement traceability, and learning and growth. The model for assessing SCA governance maturity is illustrated in Figure A-1.



**Figure A-1.** SCA governance maturity assessment approach model

For each milestones, a series of questions must be answered descriptively and scored based on the organization's level of compliance. These scores are aggregated for each milestone, allowing the construction of radar diagram that indicates how well the organization complies with SCA governance standards. These radar diagrams serve as a valuable visual tool for management and other governance entities to assess progress toward achieving effective and efficient SCA maturity within organization.

The evaluation of SCA governance implementation in all economies, particularly in APEC economies at both economy and local levels, includes relevant organizations in the Quality Infrastructure field, is determined by a maturity level consisting of 4 levels corresponding to a range of cumulative values as follows:

Level	Value Range	Maturity Level
I	$0 \leq \text{Value} < 1$	No planning yet
II	$1 \leq \text{Value} \leq 1.8$	Planning
III	$1.8 < \text{Value} \leq 2.5$	Planning and Implementation
IV	$2.5 < \text{Value} \leq 3.0$	Planning, Implementation, and Continuous Improvement

The assessment of each indicator is given a score of 0/1/2/3 based on the scoring remarks (assessment tool). Aggregate scores should be calculated to at least one decimal place to allow for a meaningful depiction in the radar diagram. However, the quantitative analysis is a very coarse one, and the aggregate scores should not be taken as absolutes. They provide a quick reference as to the current state and future development of the authorized organization related to SCA. This tool does not replace a proper assessment of processes such as would be undertaken, for example, to determine compliance with ISO 9001, or other in-depth management-system assessment techniques.

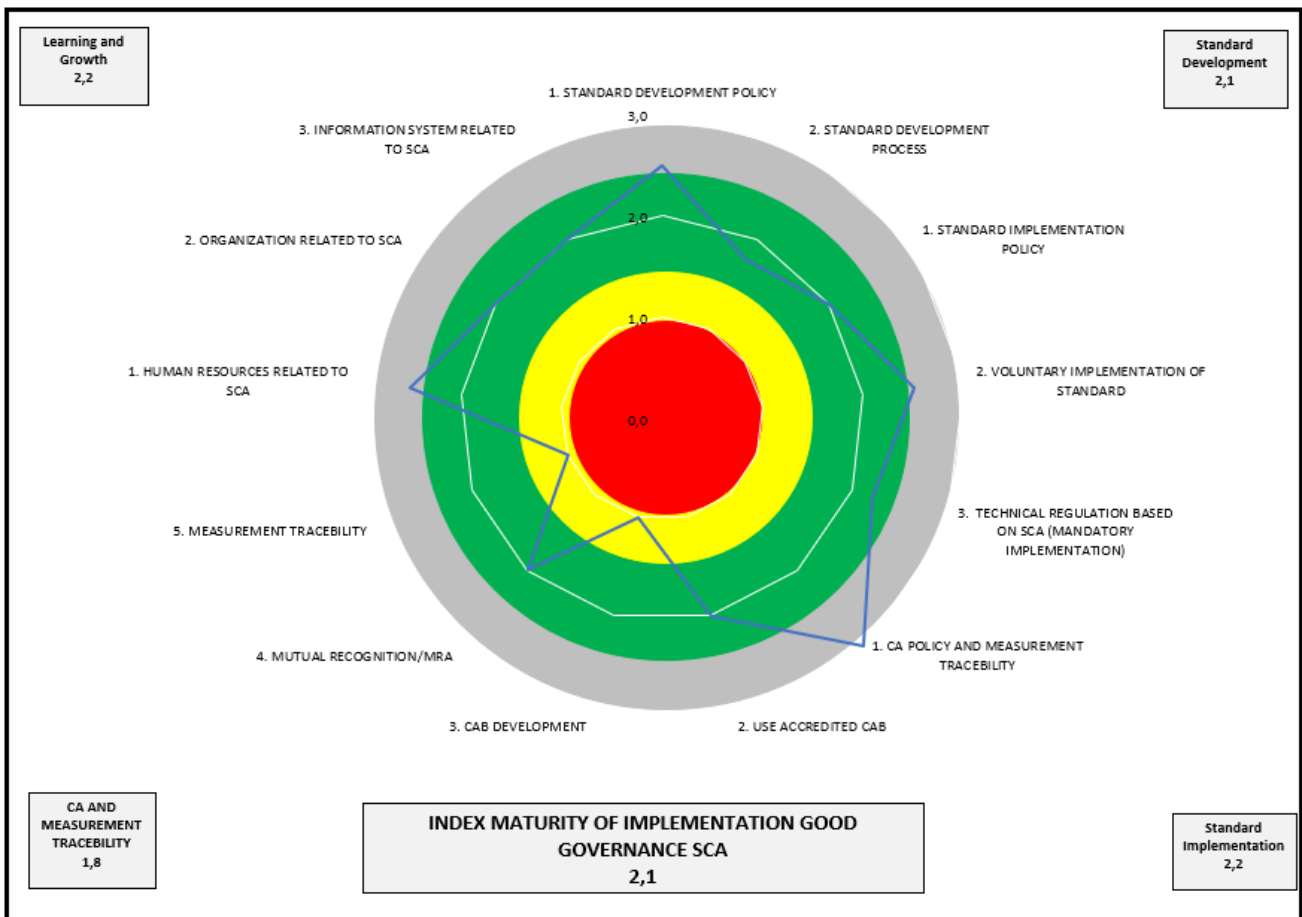
In the example radar diagram in Figure A-1 the series 1 could constitute the assessment of the first year, and series 2 that of the second year, showing the progress that has been achieved. The segments denoting the nine value-chain areas are indicated by green (support activities) and yellow (core activities) segments. This is a further visual help for the authorized organization related to SCA to determine which of the value chain areas require attention.

## ANNEX B

### Example for Using Assessment Tool

#### EVALUATION ON IMPLEMENTATION OF GOOD GOVERNANCE IN STANDARDIZATION AND CONFORMITY ASSESSMENT

Elements	Elements Score	Criteria	Criteria Scores	Maturity
1. STANDARD DEVELOPMENT	2,1	1. STANDARD DEVELOPMENT POLICY	2,5	2,1
		2. STANDARD DEVELOPMENT PROCESS	1,8	
2. STANDARD IMPLEMENTATION	2,2	1. STANDARD IMPLEMENTATION POLICY	2,0	
		2. VOLUNTARY IMPLEMENTATION OF STANDARD	2,5	
		3. TECHNICAL REGULATION BASED ON SCA (MANDATORY IMPLEMENTATION)	2,2	
3. CONFORMITY ASSESSMENT AND MEASUREMENT TRACEABILITY	1,8	1. CA POLICY AND MEASUREMENT TRACEABILITY	3,0	
		2. USE ACCREDITED CAB	2,0	
		3. CAB DEVELOPMENT	1,0	
		4. MUTUAL RECOGNITION/MRA	2,0	
		5. MEASUREMENT TRACEABILITY	1,0	
4. LEARNING AND GROWTH	2,2	1. HUMAN RESOURCES RELATED TO SCA	2,5	
		2. ORGANIZATION RELATED TO SCA	2,0	
		3. INFORMATION SYSTEM RELATED TO SCA	2,0	



## TERMINOLOGY

Standard (ISO/IEC Guide 2:2004)	:	A documented agreement that establishes technical specifications, requirements, or other criteria to ensure that products, materials, processes, and services are fit for their purpose.
Conformity Assessment (ISO/IEC 17000)	:	Demonstration that specified requirements relating to a product, process, system, person or body are fulfilled
Conformity Assessment Body (ISO/IEC 17000)	:	Body that performs conformity assessment services
Accreditation Body (ISO/IEC 17000)	:	Authoritative body that performs accreditation

## **BIBLIOGRAPHY**

APEC Sub Committee on Standards and Conformance. 2010. Standardization: Fundamentals, Impact, and Business Strategy

ISO PRACTICES. 2019. ISO Publication on Good Standardization Practices.

ISO STRATEGY. 2021. ISO Action Plan for Developing Countries 2021-2025.

ISO 18091:2019, Quality management systems, Guidelines for the application of ISO 9001 in local government

ISO 9004:2018, Quality management – quality of an organization – Guidance to achieve sustained success

UNIDO. 2017. Quality Infrastructure of the Americas Strategic Roadmap – United Nations Industrial Development Organization (UNIDO))

APEC Project: SCSC 02 2023T

Produced by:  
National Standardization Agency of Indonesia

For  
Asia-Pacific Economic Cooperation Secretariat  
35 Heng Mui Keng Terrace  
Singapore 119616  
Tel: (65) 68919 600  
Fax: (65) 68919 690  
Email: [info@apec.org](mailto:info@apec.org)  
Website: [www.apec.org](http://www.apec.org)

© 2025 APEC Secretariat

APEC#225-CT-03.1