



Asia-Pacific  
Economic Cooperation

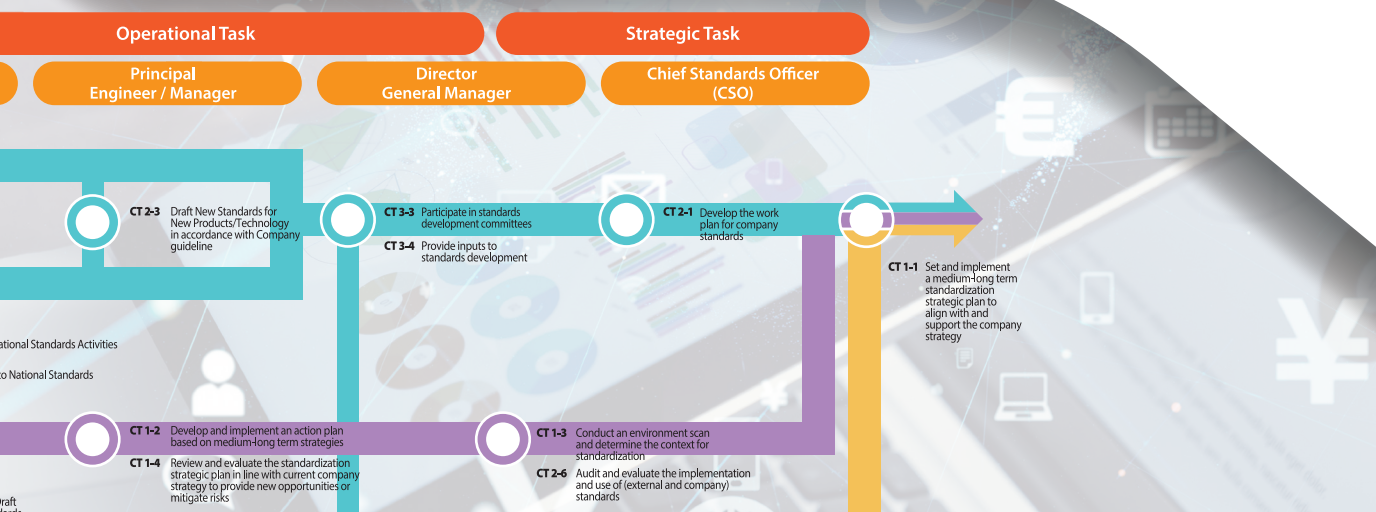
APEC SCSC Education Guideline 6  
Inspiring Next Generation of Standards Professional Development - Phase 2

# Career Roadmap and Competence Requirements for Standards Professionals

**Part 1. In Companies**

**Part 2. In Standards-related Organizations**

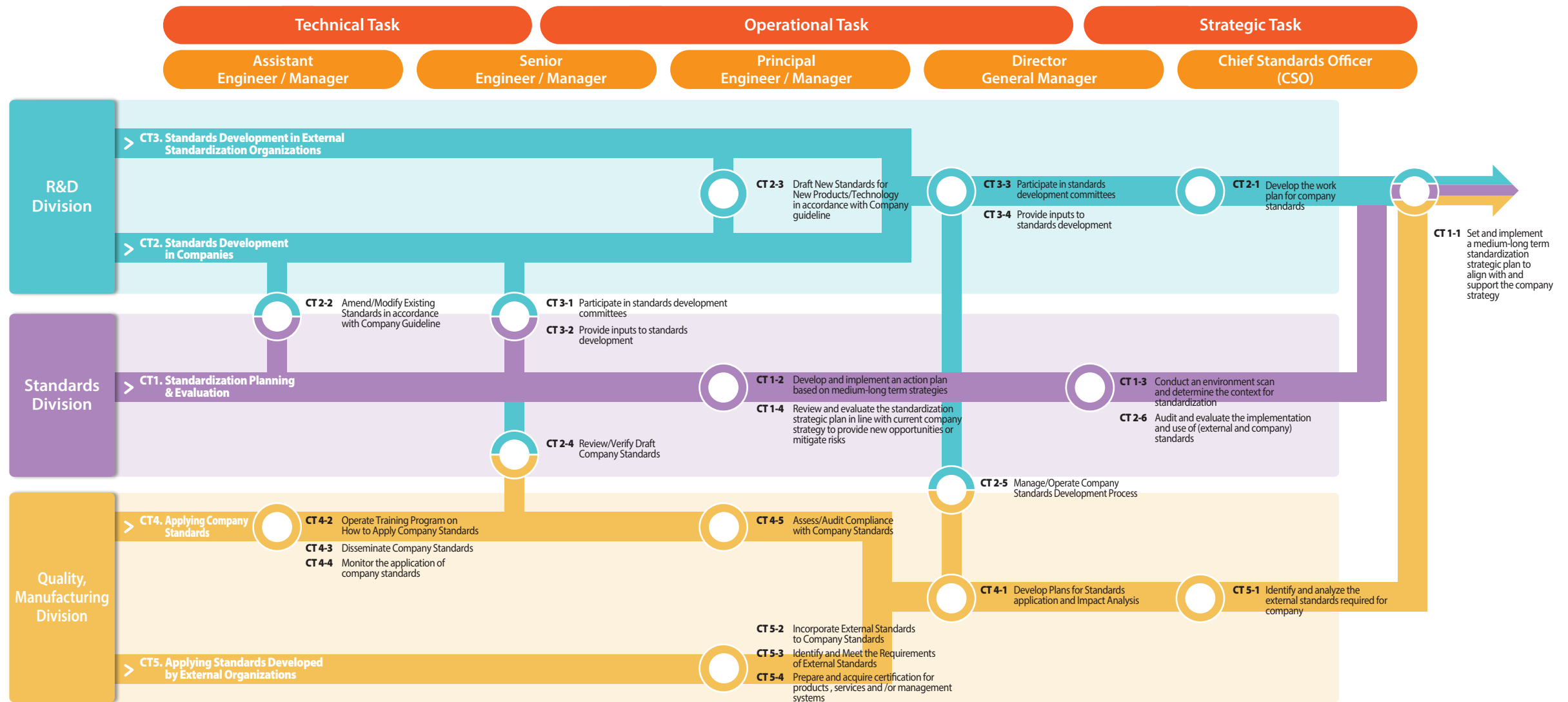
*APEC Sub-Committee on Standards and Conformance (SCSC)  
August 2019*



# Part 1. In Companies

## 1.1 Career Roadmap

CT : Task in Companies



· NOTE The tasks of standards professionals in different companies can vary depending on what these professionals actually perform during their standardization activities

**CT1 - Standardization Planning and Evaluation**

- CT 1-1** Set and implement a medium-long term standardization strategic plan to align with and support the company strategy
- CT 1-2** Develop and implement an action plan based on medium-long term strategies
- CT 1-3** Conduct an environment scan and determine the context for standardization
- CT 1-4** Review and evaluate the standardization strategic plan in line with current company strategy to provide new opportunities or mitigate risks

**CT2 - Standards Development in Companies**

- CT 2-1** Develop the work plan for company standards
- CT 2-2** Amend/modify the existing standards in accordance with company guideline
- CT 2-3** Draft new standards for new products and new technology in accordance with company guideline
- CT 2-4** Review, verify and validate the draft of company standards
- CT 2-5** Manage and operate the company standards development process
- CT 2-6** Audit and evaluate the implementation and use of (external and company) standards

**CT3 - Standards Development in External Standardization Organizations**

- CT 3-1** (National/Domestic) Participate in standards development committees
- CT 3-2** (National/Domestic) Provide inputs to standards development
- CT 3-3** (International/Foreign) Participate In standards development committees
- CT 3-4** (International/Foreign) Provide inputs to standards development

**CT4 - Applying Company Standards**

- CT 4-1** Develop plans for standards application and impact analysis
- CT 4-2** Operate training program on how to apply company standards
- CT 4-3** Disseminate company standards
- CT 4-4** Monitor the application of company standards
- CT 4-5** Assess or audit the compliance with company standards

**CT5 - Applying Standards Developed by External Organizations**

- CT 5-1** Identify and analyze the external standards required for company
- CT 5-2** Incorporate the external standards to the company standards
- CT 5-3** Identify and meet the requirements of external standards
- CT 5-4** Prepare and acquire certification for products, services and/or management systems

# 1.2 Competence Requirements

## In Common

Standards professionals should have the competence to conduct and support standardization activities at the company level based on their profile or assigned tasks so as to achieve the objectives of their companies.

They do not have to be technical experts about the company's products, services and processes, but should have sufficient knowledge about these areas to understand how these may benefit from standards and standardization, and carry out the applicable standardization tasks.

The competence of standards professionals can be defined using required or recommended technical and non-technical knowledge, managerial and operational skills, and personal attributes and/or attitudes.

Knowledge	Skills	Attributes
Technical knowledge in a specified sector (K1)	Ability to judge whether standard(s) needs to be newly established or revised (S3)	Collaborative/Cooperative/ Synergic(A5)
Knowledge of existing standards/technical regulations in a specified sector(K2)	Ability to establish standardization strategy aligned with a company strategy (S1)	Accurate/ Precise/ Meticulous (A1)
Knowledge of the company standardization principles (K3)	Ability to develop technical/engineering standards (S5)	Analytical/ Logical/ Systematic (A3)
Knowledge of external standards related to products and technology (K14)	Ability of performance measurement and analysis for standardization (S2)	Adaptable/ Adjustable/ Flexible/Versatile (A2)

## CT1. Standardization Planning and Evaluation

Task 1 "Standardization Planning and Evaluation" may include, but is not limited to, the following sub-tasks or processes:

- CT1-1 Set and implement a medium-long term standardization strategic plan to align with and support the company strategy
- CT1-2 Develop and implement an action plan based on medium-long term strategies
- CT1-3 Conduct an environment scan and determine the context for standardization
- CT1-4 Review and evaluate the standardization strategic plan in line with current company strategy to provide new opportunities or mitigate risks

Competence required or recommended for the Task 1 "Standardization Planning and Evaluation" can be defined with knowledge, skills and attributes

Knowledge	Skills	Attributes
Knowledge of process and procedure for standards development (K10)	Ability to measure the effectiveness and/or efficiency of standards (S8)	Globally minded (able to work with people worldwide) (A11)
Knowledge of methods for standard/technology analysis and needs analysis (K6)	Ability to develop management system standards (S6)	Decisive (able to reach timely conclusions) (A8)
Knowledge of methodologies/methods for strategy development (K4)	Ability to teach and explain company standards (S11)	Results-oriented/Willing to improve and/or learn (A18)
Knowledge of process and methods to establish standardization plans (K7)	Ability to derive agreement of proposed standards (S9)	Attentive/ Good-listening (A4)
Knowledge of conformity assessment (testing, inspection and certification) (K17)	Language skills (S16)	Responsible/ Accountable (A17)
	Ability to identify standards needs from standardization environment analysis (S4)	

## CT2. Standards Development in Companies

Task 2 "Standards Development in Companies" may include, but is not limited to, the following sub-tasks or processes:

- CT2-1 Develop the work plan for company standards
- CT2-2 Amend/modify the existing standards in accordance with company guideline
- CT2-3 Draft new standards for new products and new technology in accordance with company guideline
- CT2-4 Review, verify and validate the draft of company standards
- CT2-5 Manage and operate the company standards development process
- CT2-6 Audit and evaluate the implementation and use of (external and company) standards

Competence required or recommended for the Task 2 "Standards Development in Companies" can be defined with knowledge, skills and attributes.

Knowledge	Skills	Attributes
Knowledge of process and methods to establish standardization plans (K7)	Ability to develop management standards (S6)	Globally minded (able to work with people worldwide) (A11)
Knowledge of process and procedure for standards development (K10)	Ability to derive agreement of proposed standards (S9)	Responsible/ Accountable (A17)
Knowledge of international standardization activities and related organizations (K11)	Ability to identify standards needs from standardization environment analysis (S4)	Attentive/ Good-listening (A4)
Knowledge of drafting rules for company standards (K9)	Ability to measure the effectiveness and/or efficiency of standards (S8)	Decisive (able to reach timely conclusions) (A8)
Knowledge of methodologies/methods for strategy development (K4)	Ability to check on the justification of standards (S7)	Diplomatic (A9)
Knowledge of statistical methods (K16)	Ability to teach and explain company standards (S11)	

## CT3. Standards Development in External Standardization Organizations

Task 3 "Standards Development in External Standardization Organizations" may include, but is not limited to, the following sub-tasks or processes:

- CT3-1 (National/Domestic) Participate in standards development committees
- CT3-2 (National/Domestic) Provide inputs to standards development
- CT3-3 (International/Foreign) Participate In standards development committees
- CT3-4 (International/Foreign) Provide inputs to standards development

Competence recommended for the Task 3 "Standards Development in External Standards Organizations" can be defined with knowledge, skills and attributes.

Knowledge	Skills	Attributes
Knowledge of process and procedure for standards development (K10)	Language skill (S16)	Globally minded (able to work with people worldwide) (A11)
Knowledge of international standardization activities and related organizations (K11)	Ability to derive agreement of proposed standards (S9)	Attentive/ Good-listening (A4)
Knowledge of process and methods to establish standardization plans (K7)	Ability to check on the justification of standards (S7)	Open-minded (A14)
Knowledge of methodologies/methods for strategy development (K4)	Ability to develop management standards (S6)	Results-oriented/Willing to improve and/or learn (A18)
Knowledge of methods for standard/technology analysis and needs survey (K6)	Ability to measure the effectiveness and/or efficiency of standards (S8)	Diplomatic (A9)
Knowledge of metrology (K18)	Ability to identify standards needs from standardization environment analysis (S4)	Courteous/Well-mannered/Polite/Respectful(A6)
		Friendly/Outgoing/ Curious(A10)
		Perceptive /Insightful / Incisive (A16)

## CT4. Applying Company Standards

Task 4 "Applying Company Standards" may include, but is not limited to, the following sub-tasks or processes:

- CT4-1 Develop plans for standards application and impact analysis
- CT4-2 Operate training program on how to apply company standards
- CT4-3 Disseminate company standards
- CT4-4 Monitor the application of company standards
- CT4-5 Assess or audit the compliance with company standards

Competence required or recommended for the Task 4 "Applying Company Standards" can be defined with knowledge, skills and attributes.

Knowledge	Skills	Attributes
Knowledge of the company standardization system (K8)	Ability to teach and explain company standards (S11)	Responsible/ Accountable (A17)
Knowledge of validation methods for company standards (K13)	Ability to measure the effectiveness and/or efficiency of standards (S8)	Attentive/ Good-listening (A4)
Knowledge of requirements and process for certification (K15)	Ability to take action for performance assessment (S14)	Results-oriented/ Willing to improve and/or learn (A18)
Knowledge of conformity assessment (testing, inspection, certification) (K17)	Ability to prepare and respond to certification audit (S13)	Decisive (able to reach timely conclusions) (A8)
Knowledge of methodologies for performance management (K5)	Ability to check on the justification of standards (S7)	Open-minded (A14)
Knowledge of process and methods for impact analysis of standards application (K12)	Ability to undertake impact analysis for company standards (S10)	Culturally broad-minded/ Non-discriminatory/ Unprejudiced (A7)
		Self-reliant/Self-directed (A19)
		Strong-willed/Persistent (A20)

## CT5. Applying Standards Developed by External Organizations

Task 5 "Applying Standards Developed by External Organizations" may include, but is not limited to, the following sub-tasks or processes:

- CT5-1 Identify and analyze the external standards required for company
- CT5-2 Incorporate the external standards to the company standards
- CT5-3 Identify and meet the requirements of external standards
- CT5-4 Prepare and acquire certification for products, services and/or management systems

Competence required or recommended for the Task 5 "Applying Standards Developed by External Organizations" can be defined with knowledge, skills and attributes.

Knowledge	Skills	Attributes
Knowledge of requirements and process for certification (K15)	Ability to prepare and respond to certification audit (S13)	Responsible/ Accountable (A17)
Knowledge of conformity assessment (testing, inspection and certification) (K17)	Ability to measure the effectiveness and/or efficiency of standards (S8)	Globally minded (able to work with people worldwide) (A11)
Knowledge of process and methods to establish standardization plans (K7)	Ability to check on the justification of standards (S7)	Decisive (able to reach timely conclusions) (A8)
Knowledge of the company standardization system (K8)	Language skills (S16)	Attentive/ Good-listening (A4)
Knowledge of international standardization activities and related organizations (K11)	Ability to take action for non-conformity (S15)	Open-minded (A14)
Knowledge of process and methods for impact analysis of standards application (K12)	Skills to search and purchase external standards (S12)	Intellectual/ Fast-learning (A12)
Knowledge of validation methods for company standards (K13)		Observant/Eagle-eyed (A13)
		Patient/Uncomplaining/Tolerant (A15)

# 1.3 Competence Requirements

## Recommended Knowledge

No	Knowledge	Description
K1	Technical knowledge in a specified sector	Standards professionals should have basic technical and/or professional knowledge of a specific industry or a related field, at a level sufficient to understand the added value of standards and standardization, and to be able to carry out the applicable standardization tasks.
K2	Knowledge of existing standards/technical regulations in a specified sector	Standards professionals should have knowledge of relevant existing standards and/or technical regulations in a specified sector. EXAMPLE Examples of searching/browsing ISO international standards is Online Browsing Platform (OBP) at <a href="https://www.iso.org/obp">https://www.iso.org/obp</a> .
K3	Knowledge of the company standardization principles	Standards professionals should understand the principles and how to develop and apply company standards appropriately to the whole process of developing and manufacturing products and services. For the terms and definitions of standardization, see ISO/IEC Guide 2, Standardization and related activities — General vocabulary.
K4	Knowledge of methodologies/methods for strategy development	Standards professionals should possess a basic understanding of strategic management and have basic knowledge about benefits and costs of standardization. Standards professionals should understand how standardization may contribute to business and society, and have knowledge about how to integrate standardization into other managerial areas such as product and service portfolio management, marketing management, production management, purchase management, human resources management, quality management, environmental management, and occupational health and safety management. Standards professionals should possess a basic understanding of methodologies/methods associated with the strategy development process and be able to provide appropriate advice.
K5	Knowledge of methodologies for performance management	Standards professionals should possess knowledge of those managers and employees who are working together to plan, monitor and review an employee's work objectives and overall contributions to the organization.
K6	Knowledge of methods for standard/technology analysis and needs analysis	Standards professionals should have knowledge of the various methods for standards and how to conduct technology and related needs analysis
K7	Knowledge of process and methods to establish standardization plans	Standards professionals should possess a basic knowledge of process and methods on how to establish standardization plan(s) based on company standardization strategies.
K8	Knowledge of the company standardization system	Standards professionals should have substantial knowledge of the company standardization system consisting of the following: - types of standards, - structure and/or hierarchy of standards, - processes/procedures of establishment, revision and withdrawal of standards, - validation of standards, - application of standards, - training on standards, - compliance with standards, etc.
K9	Knowledge of drafting rules for company standards	Standards professionals should have substantial knowledge of principles and rules for the type, structure and drafting of company standards.
K10	Knowledge of process and procedure for standards development	Standards professionals should possess a basic understanding of the rules and procedures associated with standards development and be able to provide appropriate advice.
K11	Knowledge of international standardization activities and related organizations	Standards professionals should possess a broad range of practical knowledge for how international standards are proposed, developed, voted, and published.
K12	Knowledge of process and methods for impact analysis of standards application	Standards professionals should have knowledge of the process and methods how to conduct impact analysis when applying standards.
K13	Knowledge of validation methods for company standards	Standards professionals should have knowledge of methods for review, verification and/or validation of company standards for the products, services, processes and management systems.
K14	Knowledge of external standards related to products and technology	Standards professionals should have good knowledge of external standards related to products and technology.
K15	Knowledge of requirements and process for certification	Standards professionals should have good knowledge of the requirements and process for certification. Standards professionals should have good knowledge of product certification and management system certification.
K16	Knowledge of statistical methods	Standards professionals should have knowledge of statistical methods/techniques that can be applied extensively in the field of standardization.
K17	Knowledge of conformity assessment (testing, inspection and certification)	Standards professionals should have a good knowledge of testing, inspection, certification (products, management systems, persons) and accreditation. For the term and definition of conformity assessment, see ISO/IEC 17000, Conformity assessment - Vocabulary and general principles.
K18	Knowledge of metrology	Standards professionals should have basic understanding of metrology (e.g. quantities and units) referencing measurements. For explanations and examples of quantities and units, see ISO/IEC Directives, Part 2, Annex B (Quantities and units). For the terms and definitions of metrology, see ISO/IEC Guide 99, International vocabulary of metrology - Basic and general concepts and associated terms



## Recommended Skills

No	Skills	Description
S1	Ability to establish standardization strategy aligned with a company strategy	Standards professionals should be able to understand company's strategy and business environment, and establish its standardization strategy in such a way as to strengthen national and global competitiveness of the affiliated company. Standards professionals should be able to write a standardization strategy for the company and to add standardization elements to the overall company strategy. Standardization professionals should be able to communicate the strategic relevance of standardization in a convincing way.
S2	Ability of performance measurement and analysis for standardization	Standards professionals should be able to measure and analyze the performance of standards development and application.
S3	Ability to judge whether standard(s) needs to be newly established or revised	Standards professionals should be able to analyze technological and environmental changes of industry, and take appropriate decisions of the necessity to develop and revise standards based on the knowledge of relevant existing standards and/or technical regulations in a specified sector.
S4	Ability to identify standards needs from standardization environment analysis	Standards professionals should be able to identify and prioritize the need to develop or revise standards based on the analysis of technical and environmental changes.
S5	Ability to develop technical/engineering standards	Standards professionals should be able to develop a standard by applying relevant rules for the structure and drafting of standards according to internal procedure.
S6	Ability to develop management system standards	Standards professionals should be able to develop and revise management system standards in companies that are considering the international management system standards implemented in companies such as; - ISO 9001 Quality management system - ISO 14001 Environmental management system - ISO 45001 Occupational health and safety management system For the terms and definitions of quality management system, see ISO 9000, Quality management systems - Fundamentals and vocabulary.
S7	Ability to check on the justification of standards	Standards professionals should be able to show or prove to be right for the reasonable needs for standards.
S8	Ability to measure the effectiveness and/or efficiency of standards	Standards professionals should be able to measure whether standards may achieve the planned results and how much resources may need to be expended to get the results.
S9	Ability to derive agreement of proposed standards	Standards professionals should be able to derive the agreement of proposed standards with strategic or diplomatic capacity.
S10	Ability to undertake impact analysis for company standards	Standards professionals should be able to analyze the estimated impact of the implementation of new or revised company standards in accordance with internal rules.
S11	Ability to teach and explain company standards	Standards professionals should be able to teach or explain how to develop and apply company standards effectively.
S12	Skills to search and purchase external standards	Standards professionals should be able to identify, search and acquire standards established by external standards bodies.
S13	Ability to prepare and respond to certification audit	Standards professionals should be able to prepare for a certification audit and respond to it.
S14	Ability to take action for performance assessment	Standards professionals should be able to take action on the results of performance assessment.
S15	Ability to take action for non-conformity	Standards professionals should be able to take action on non-conformity issues raised from audit.
S16	Language skills	Standards professionals should be able to communicate with official language(s) for standardization to promote standards development.

## Recommended Attributes

No	Attributes	Description
A1	Accurate/ Precise/ Meticulous	Standards professionals should be able to manage a whole process for standards development from preparation to completion according to agreed target dates in accordance with the development plan.
A2	Adaptable/ Adjustable/ Flexible/ Versatile	Standards professionals should have good flexibility and ongoing adaptability to adjust and work with people from different cultural and technical backgrounds both inside and outside the company.
A3	Analytical/ Logical/ Systematic	Standards professionals should have extensive analytical ability and talent for a logical and systematic approach to integrating technical and non-technical knowledge into drafted standards that will be both accepted and widely used.
A4	Attentive/ Good-listening	Standards professionals should be able to pay close attention to issues in an acceptable manner.
A5	Collaborative/Cooperative/ Synergic	Standards professionals should be able to facilitate cooperation among stakeholders to reach consensus, which is an essential procedural principle and the necessary condition for the development of standards.
A6	Courteous/Well-mannered/Polite/Respectful	Standards professionals should be respectful and courteous when communicating and developing standards with those from multiple backgrounds.
A7	Culturally broad-minded/ Non-discriminatory/ Unprejudiced	Standards professionals should be open and unprejudiced when working with people or groups from different cultures.
A8	Decisive (able to reach timely conclusions)	Standards professionals should be able to reach timely conclusions and provide decisive guidance during the process of standards development against conflicting situation.
A9	Diplomatic	Standards professionals should be able to manage and operate inter-divisions or international relations by considering different needs and objectives.
A10	Friendly/Outgoing/ Curious	Standards professionals should be able to be friendly and socially confident.
A11	Globally minded (able to work with people worldwide)	Standards professionals should be able to understand and respect political, social and cultural environments of others to ensure that the views of all are heard and understood.
A12	Intellectual/ Fast-learning	Standards professionals should be able to engage in critical thinking, research and reflection about society and propose solutions for normative problems, and learn things fast.
A13	Observant/Eagle-eyed	Standards professionals should be able to adhere strictly to the rules of standards development and drafting.
A14	Open-minded	Standards professionals should be willing to consider new ideas without prejudice.
A15	Patient/Uncomplaining/Tolerant	Standards professionals should be able to accept or tolerate delays, problems, or suffering without becoming too anxious.
A16	Perceptive /Insightful / Incisive	Standards professionals should have or show thoughtful insight, and be good at understanding issues or figuring issues out.
A17	Responsible/ Accountable	Standards professionals should be able to take responsibility for the overall management of standards development, including advice on process, meeting preparation, and networking.
A18	Results-oriented/ Willing to improve and/or learn	Standards professionals should be results-oriented and willing to improve the effectiveness of standards development process.
A19	Self-reliant/Self-directed	Standards professionals should be able to organize themselves.
A20	Strong-willed/Persistent	Standards professionals should be able to continue firmly or obstinately on a course of action in spite of difficulty or opposition.

# 1.4 Terms and Definition

For the purposes of this document, the following terms and definitions apply. It is useful to refer to the terminological databases operated by ISO and IEC for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

## Attribute

Inherent characteristic of a person

EXAMPLE Visual acuity; sensitivity to others; openness.

[SOURCE: ISO/IEC TS 17027:2014, 2.10]

## Competence

Ability to apply knowledge, skills and attributes to achieve intended results

Note 1: "Competence" can also be referred to as "competency".

[SOURCE: ISO 9000:2015, 3.10.4, modified

- "attributes" and Note 1 to entry have been added]

## Knowledge

Facts, information, truths, principles or understanding acquired through experience or education [SOURCE: ISO/IEC TS 17027:2014, 2.56]

## Responsibility

Obligation to act and take decisions to achieve required outcomes [SOURCE: ISO/IEC 38500:2015, 2.22]

## Skill

Ability acquired through education, training, experience or other means to perform a task or an activity with a specific intended outcome

[SOURCE: ISO/IEC TS 17027:2014, 2.74, modified]

## Standards professional

Person who has competence to perform a job or tasks related to standardization activities in a company or an organization performing standardization activities

## Standards-related organization

Organization that carries out standardization activities such as planning & evaluation, development, adoption, publication and/or dissemination of standards

Note 1: A standards-related organization (SO) is defined as a broader term than a standards developing organization. SOs include organizations involved in any part of the lifecycle of standards planning, developing, publishing, disseminating, applying and evaluating them. SOs include industry, national, regional, and international organizations. SOs include both governmental and non-governmental organizations; formal and less formal organizations including consortia or fora.

Note 2: Some of the primary activities and staff of SOs are related to standards, but other SOs activities may apply. The number of staff involved in standards in regulatory agencies or trade associations is limited, but their tasks are described in this document. In that context, SOs may include governmental agencies and nongovernmental organizations that have and undertake any standards related function or division.

## Task

Set of activities undertaken in order to achieve a specific goal

Note 1: These activities can be physical, perceptual and/or cognitive.

Note 2: While goals are independent of the means used to achieve them, tasks describe particular means of achieving goals.

## Company standard

Standard that is established by a company

Note 1: Company standard can be established in a subdivision of a company such as an individual factory, workshop or office.

## Company standardization

Standardization that takes place at the company level

# 1.5 References

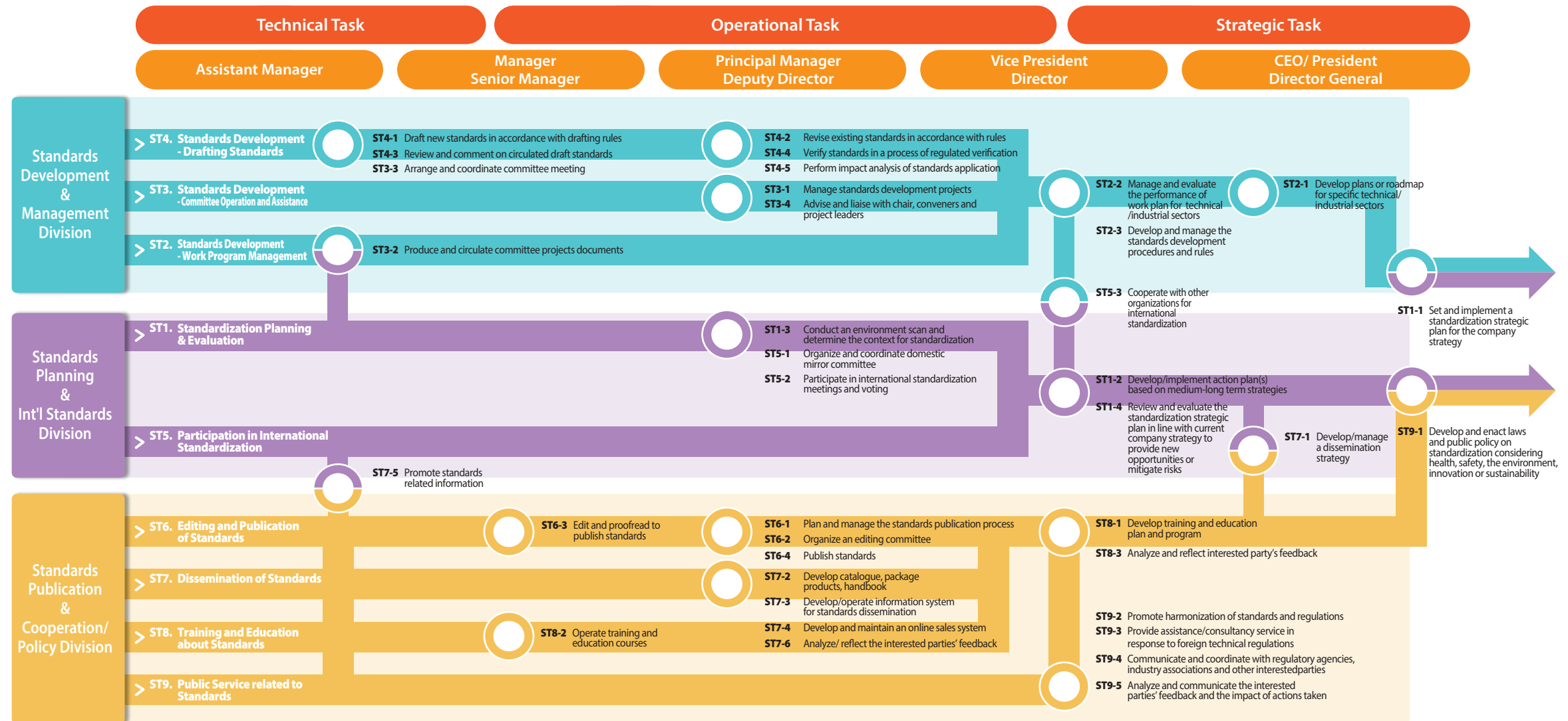
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**NOTE** This APEC guideline has been the basis of the ISO IWA 30-1 'Competence for standards professional - part 1. In companies'.

# Part 2. In Standards-related Organizations

## 2.1 Career Roadmap

· ST : Task in Standards-related Organizations



· NOTE The tasks of standards professionals in different standards-related organizations can vary depending on what these professionals actually perform during their standardization activities

<p><b>ST1 - Standardization Planning &amp; Evaluation</b></p> <p>ST1-1 Set and implement a medium-long term standardization strategic plan to align with and support the company strategy</p> <p>ST1-2 Develop and implement action plan(s) based on medium-long term strategies</p> <p>ST1-3 Conduct an environment scan and determine the context for standardization</p> <p>ST1-4 Review and evaluate the standardization strategic plan in line with current company strategy to provide new opportunities or mitigate risks</p>	<p><b>ST2 - Standards Development - Work Program Management</b></p> <p>ST2-1 Develop plans or roadmap for specific technical/industrial sectors</p> <p>ST2-2 Manage and evaluate the performance of work plans for specific technical/industrial sectors</p> <p>ST2-3 Develop and manage the standards development procedures and rules</p>	<p><b>ST3 - Standards Development - Committee Operation and Assistance</b></p> <p>ST3-1 Manage standards development projects (e.g. scheduling, prioritization, communication in committee work program)</p> <p>ST3-2 Produce and circulate committee projects documents (e.g. proposal, comment, resolution, ballot results)</p> <p>ST3-3 Arrange and coordinate committee meetings (e.g. agendas, minutes, decision/resolutions, reporting)</p> <p>ST3-4 Advise and liaise with chair, conveners and project leaders</p>	<p><b>ST4 - Standards Development - Drafting Standards</b></p> <p>ST4-1 Draft new standards in accordance with drafting rules (e.g. ISO/IEC Directives, Part 2)</p> <p>ST4-2 Revise existing standards in accordance with rules</p> <p>ST4-3 Review and comment on circulated draft standards</p> <p>ST4-4 Verify standards in a process of regulated verification</p> <p>ST4-5 Perform impact analysis of standards application</p>	<p><b>ST5 - Participation in International Standardization</b></p> <p>ST5-1 Organize and coordinate domestic mirror committees</p> <p>ST5-2 Participate in international standardization meetings and voting</p> <p>ST5-3 Cooperate with other organizations for international standardization</p>
<p><b>ST6 - Editing and Publication of Standards</b></p> <p>ST6-1 Plan and manage the standards publication process</p> <p>ST6-2 Organize an editing committee</p> <p>ST6-3 Edit and proofread to publish standards</p> <p>ST6-4 Publish standards (online, offline)</p>	<p><b>ST7 - Dissemination of Standards</b></p> <p>ST7-1 Develop and manage a dissemination strategy</p> <p>ST7-2 Develop catalogue, package products and handbook (paper)</p> <p>ST7-3 Develop and operate information system for standards dissemination</p> <p>ST7-4 Develop and maintain an online sales system (e.g. webstore)</p> <p>ST7-5 Promote standards related information (e.g. social media such as YouTube, online services, webzines, bulletins, journals, seminar, workshop)</p> <p>ST7-6 Analyze and reflect interested parties' feedback</p>	<p><b>ST8 - Training and Education about Standards</b></p> <p>ST8-1 Develop training and education plans and program</p> <p>ST8-2 Operate training and education courses</p> <p>ST8-3 Analyze and reflect interested parties' feedback</p>	<p><b>ST9 - Public Service related to Standards</b></p> <p>ST9-1 Develop and enact laws and public policy on standardization considering health, safety, the environment, innovation or sustainability.</p> <p>ST9-2 Promote the harmonization of standards and regulations</p> <p>ST9-3 Provide assistance/consultancy service in response to foreign technical regulations (including the operation of WTO/TBT Enquiry Point)</p> <p>ST9-4 Communicate and coordinate with regulatory agencies, industry associations and other interested parties</p> <p>ST9-5 Analyze and communicate the interested parties' feedback and the impact of actions taken</p>	

## 2.2 Competence Requirements

### In Common

Standards professionals should have competence in conducting and supporting standardization activities at the international, national and organizational level based on their profile or tasks so as to accomplish the mission and objectives of the organization performing standardization activities.

They do not have to be technical experts about the products, services and processes, but should have sufficient knowledge about these areas to understand how these may benefit from standards and standardization, and carry out the applicable standardization tasks.

The competence of standards professionals can be defined using recommended technical and non-technical knowledge, managerial and operational skills and personal attributes including behaviors and attitudes.

Knowledge	Skills	Attributes
Knowledge of existing standards/technical regulations in a specified sector (K2)	Ability to develop a strategic plan for standardization in alignment with national development plans (S1)	Collaborative/Cooperative/ Synergic (A5)
Technical knowledge in a specified sector (K1)	Written and verbal communications and presentation skills (S10)	Accurate/ Precise/ Meticulous (A1)
Knowledge of principles, process and procedure for standards development (K8)	Ability to collect relevant information of standards and standardization (S5)	Analytical/ Logical/ Systematic (A3)
Knowledge of international standardization activities and organizations (K12)	Ability to work with committees and individuals (S11)	Adaptable/ Adjustable/ Flexible/Versatile (A2)

### ST1. Standardization Planning and Evaluation

Task 1 "Standardization Planning and Evaluation" may include, but is not limited to, the following sub-tasks or processes:

- ST1-1. Set and implement a medium-long term standardization strategic plan to align with and support the company strategy
- ST1-2. Develop and implement action plan(s) based on medium-long term strategies
- ST1-3. Conduct an environment scan and determine the context for standardization
- ST1-4. Review and evaluate the standardization strategic plan in line with current company strategy to provide new opportunities or mitigate risks

Competence recommended for the Task 1 "Standardization Planning and Evaluation" can be defined with knowledge, skills and attributes.

Knowledge	Skills	Attributes
Knowledge of methodologies and methods for strategy development (K3)	Ability to develop action plans implementing the strategic plan (S3)	Result-oriented/ Willing to improve and/or learn (A18)
Knowledge of methods for standard/technology analysis and needs survey (K5)	Ability to identify needs of standardization (S4)	Attentive/ Good-listening (A4)
Knowledge of program management (K6)	Ability of performance measurement and analysis for standardization (S2)	Responsible/ Accountable (A17)
Knowledge of harmonization with international standards (K7)	Ability to manage multiple projects (S9)	Open-minded (A14)
Knowledge of methodologies for performance management (K4)	Ability to prepare standards development plans (S8)	Perceptive/ Insightful/ Incisive (A16)
	Ability to quantify needs and expectations of interested parties (S6)	Strong-willed/ Persistent (A20)
		Globally minded (able to work with people worldwide) (A11)

### ST2. Standards Development - Work Program Management

Task 2 "Standards Development - Work Program Management" may include, but is not limited to, the following sub-tasks or processes:

- ST2-1. Develop plans or roadmap for specific technical/industrial sectors
- ST2-2. Manage and evaluate the performance of work plans for specific technical/industrial sectors
- ST2-3. Develop and manage the standards development procedures and rules

Competence recommended for the Task 2 "Standards Development in Standards-related Organizations (SOs)" can be defined with knowledge, skills and attributes.

Knowledge	Skills	Attributes
Knowledge of drafting rules for standards (K10)	Ability to develop action plans to implement the strategic plan (S3)	Responsible/ Accountable (A17)
Knowledge of project management (K9)	Ability to identify needs of standardization (S4)	Result-oriented/ Willing to improve and/or learn (A18)
Knowledge of standard application to the development of technical regulation (K18)	Ability of performance measurement and analysis for standardization (S2)	Attentive/ Good-listening (A4)
Knowledge of harmonization with international standards (K7)	Ability to prepare standards development plans (S8)	Open-minded (A14)
Knowledge of program management (K6)	Ability to manage multiple projects (S9)	Decisive (able to reach timely conclusions) (A8)
	Project management abilities (S13)	
	Program management abilities (S12)	

### ST3. Standards Development - Committee Operation and Assistance

Task 3 "Standards Development - Committee Operation and Assistance" may include, but is not limited to, the following sub-tasks or processes:

- ST3-1. Manage standards development projects (e.g. scheduling, prioritization, communication in committee work program)
- ST3-2. Produce and circulate committee projects documents (e.g. proposal, comment, resolution, ballot results)
- ST3-3. Arrange and coordinate committee meetings (e.g. agendas, minutes, decision/resolutions, reporting)
- ST3-4. Advise and liaise with chair, conveners and project leaders

Competence recommended for the Task 3 "Standards Development - Committee Operation and Assistance" can be defined with knowledge, skills and attributes.

Knowledge	Skills	Attributes
Knowledge of drafting rules for standards (K10)	Ability to develop action plans to implement the strategic plan (S3)	Attentive/ Good-listening (A4)
Knowledge of project management (K9)	Ability to prepare standards development plans (S8)	Decisive (able to reach timely conclusions) (A8)
Knowledge of harmonization with international standards (K7)	Ability to manage multiple projects (S9)	Globally minded (able to work with people around the globe) (A11)
Knowledge of methodologies and methods for strategy development (K3)	Ability to draft standards (using drafting template)(S14)	Open-minded (A14)
Knowledge of IT system and Database management (K14)	Skill and leadership Leadership skill of committee operation (S16)	Responsible/ Accountable (A17)
		Result-oriented/ Willing to improve and/or learn (A18)



#### ST4. Standards Development - Drafting Standards

Task 4 "Standards Development - Drafting Standards" may include, but is not limited to, the following sub-tasks or processes:

- ST4-1. Draft new standards in accordance with drafting rules (e.g. ISO/IEC Directives, Part 2)
- ST4-2. Revise existing standards in accordance with rules
- ST4-3. Review and comment on circulated draft standards
- ST4-4. Verify standards in a process of regulated verification
- ST4-5. Perform impact analysis of standards application

Competence recommended for the Task 4 "Standards Development - Drafting Standards" can be defined with knowledge, skills and attributes.

Knowledge	Skills	Attributes
Knowledge of drafting rules for standards (K10)	Ability to draft standards (using drafting template) (S14)	Responsible/ Accountable (A17)
Knowledge of harmonization with international standards (K7)	Ability to prepare standards development plans (S8)	Result-oriented/ Willing to improve and/or learn (A18)
Knowledge of validation methods for standards (K11)	Ability to identify needs of standardization (S4)	Attentive/ Good-listening (A4)
Knowledge of methodologies for performance management (K4)	Ability of performance measurement and analysis for standardization (S2)	Decisive (able to reach timely conclusions) (A8)
Knowledge of methodologies and methods for strategy development (K3)	Ability to determine whether standard(s) needs to be newly established or revised (S7)	Culturally broad-minded/ Non-discriminatory/ Unprejudiced (A7)
		Intellectual/ Fast-learning (A12)

#### ST5. Participating in International Standardization

Task 5 "Participating in International Standardization" may include, but is not limited to, the following sub-tasks or processes:

- ST5-1. Organize and coordinate domestic mirror committees
- ST5-2. Participate in international standardization meetings and voting
- ST5-3. Cooperate with other organizations for international standardization

Competence recommended for the Task 5 "Participating in International Standardization" can be defined with knowledge, skills and attributes.

Knowledge	Skills	Attributes
Knowledge of harmonization with international standards (K7)	Language skills (S20)	Globally minded (able to work with people worldwide) (A11)
Knowledge of drafting rules for standards (K10)	Documentation skills of international standardization (S19)	Diplomatic (A9)
Knowledge of methodologies and methods for strategy development (K3)	Ability to draft standards (using drafting template) (S14)	Culturally broad-minded/ Non-discriminatory/ Unprejudiced (A7)
Knowledge of responding to foreign technical regulations (WTO/TBT) (K19)	Ability to derive the agreement of proposed standards (S17)	Responsible/ Accountable (A17)
Knowledge of standard application to the development of technical regulation (K18)	Ability to develop action plans to implement the strategic plan (S3)	Open-minded (A14)
Knowledge of methodologies for performance management (K4)	Ability to identify needs of standardization (S4)	
	Ability to organize a committee (S18)	

#### ST6. Editing and Publication of Standards

Task 6 "Editing and Publication of Standards" may include, but is not limited to, the following sub-tasks or processes:

- ST6-1. Plan and manage the standards publication process
- ST6-2. Organize an editing committee
- ST6-3. Edit and proofread to publish standards
- ST6-4. Publish standards (online, offline)

Competence recommended for the Task 6 "Editing and Publication of Standards" can be defined with knowledge, skills and attributes.

Knowledge	Skills	Attributes
Knowledge of drafting rules for standards (K10)	Ability to edit and publish documents (S21)	Observant/ Eagle-eyed (A13)
Knowledge of IT system and Database management (K14)	Ability to draft standards (using drafting template) (S14)	Responsible/ Accountable (A17)
Knowledge of harmonization with international standards (K7)	Ability to manage IT systems and Databases (S23)	Result-oriented/ Willing to improve and/or learn (A18)
Knowledge of marketing/ advertisement (K13)	Language skills (S20)	Attentive/ Good-listening (A4)
Knowledge of laws and systems related to standardization (K16)	Ability for standards marketing and sales (S22)	Decisive (able to reach timely conclusions) (A8)
	Ability to validate standards (S15)	Patient/ Uncomplaining/ Tolerant (A15)
		Self-reliant/ Self-directed (A19)

#### ST7. Dissemination of Standards

Task 7 "Dissemination of Standards" may include, but is not limited to, the following sub-tasks or processes:

- ST7-1. Develop and manage a dissemination strategy
- ST7-2. Develop catalogue, package products and handbook (paper)
- ST7-3. Develop and operate information system for standards dissemination
- ST7-4. Develop and maintain an online sales system (e.g. webstore)
- ST7-5. Promote standards related information (e.g. social media such as YouTube, online services, webzines, bulletins, journals, seminar, workshop)
- ST7-6. Analyze and reflect interested parties' feedback

Competence recommended for the Task 7 "Dissemination of Standards" can be defined with knowledge, skills and attributes.

Knowledge	Skills	Attributes
Knowledge of marketing/ advertisement (K13)	Ability for standards marketing and sales (S22)	Result-oriented/ Willing to improve and/or learn (A18)
Knowledge of IT system and Database management (K14)	Ability to manage IT systems and Databases (S23)	Responsible/ Accountable (A17)
Knowledge of harmonization with international standards (K7)	Ability to plan education and training programs (S24)	Friendly/ Outgoing/ Curious (A10)
Knowledge of methods for standard/ technology analysis and needs survey (K5)	Teaching and training skills (S25)	Attentive/ Good-listening (A4)
Knowledge of standard application to the development of technical regulation (K18)	Ability to develop action plans to implement the strategic plan (S3)	Open-minded (A14)
Knowledge of validation methods for standards (K11)	Language skills (S20)	

## ST8. Training and Education

Task 8 "Training and Education" may include, but is not limited to, the following sub-tasks or processes:

- ST8-1. Develop training and education plans and program
- ST8-2. Operate training and education courses
- ST8-3. Analyze and reflect interested parties' feedback

Competence recommended for the Task 8 "Training and Education" can be defined with knowledge, skills and attributes.

Knowledge	Skills	Attributes
Knowledge of human resource development (HRD) (K15)	Ability to plan education and training programs (S24)	Friendly/ Outgoing/ Curious (A10)
Knowledge of marketing/ advertisement (K13)	Teaching and training skills (S25)	Attentive/ Good-listening (A4)
Knowledge of project management (K9)	Language skills (S20)	Courteous/ Well-mannered/ Polite/ Respectful (A6)
Knowledge of laws and systems related to standardization (K16)	Ability to manage multiple projects (S9)	Open-minded (A14)
Knowledge of methods for standard/ technology analysis and needs survey (K5)	Ability to develop action plans to implement the strategic plan (S3)	Responsible/ Accountable (A17)
Knowledge of IT system and Database management (K14)	Ability of performance measurement and analysis for standardization (S2)	
Knowledge of statistical methods (K20)		

## ST9. Competence for Public Service

Task 9 "Public Service" may include, but is not limited to, the following sub-tasks or processes:

- ST9-1. Develop and enact laws and public policy on standardization considering health, safety, the environment, innovation or sustainability.
- ST9-2. Promote the harmonization of standards and regulations
- ST9-3. Provide assistance/consultancy service in response to foreign technical regulations (including the operation of WTO/TBT Enquiry Point)
- ST9-4. Communicate and coordinate with regulatory agencies, industry associations and other interested parties
- ST9-5. Analyze and communicate the interested parties' feedback and the impact of actions taken

Competence recommended for the Task 9 "Competence for Public Service" can be defined with knowledge, skills and attributes.

*NOTE "Public service" means standards related services, available to the public and interested parties, provided by governmental bodies and/or standards bodies*

Knowledge	Skills	Attributes
Knowledge of standard application to the development of technical regulation (K18)	Ability to interpret relevant documents and official letters related to WTO/TBT (S28)	Responsible/ Accountable (A17)
Knowledge of laws and systems related to standardization (K16)	Ability for applying standards to technical regulations (TR) (S27)	Result-oriented/ Willing to improve and/or learn (A18)
Knowledge of legislation process and methods (K17)	Ability to communicate with organizations related to WTO/TBT (S29)	Attentive/ Good-listening (A4)
Knowledge of responding to foreign technical regulations (WTO/TBT) (K19)	Ability to identify needs of standardization (S4)	Open-minded (A14)
Knowledge of harmonization with international standards (K7)	Ability to develop action plans to implement the strategic plan (S3)	Responsible/ Accountable (A17)
Knowledge of methodologies for performance management (K4)	Ability of performance measurement and analysis for standardization (S2)	Diplomatic (A9)
	Ability of drafting law (S26)	

## 2.3 Competence Description

### Recommended Knowledge

No	Knowledge	Description
K1	Technical knowledge in a specified sector	Standards professionals should have basic technical and/or professional knowledge of a specific industry or a related field, at a level sufficient to understand the added value of standards and standardization, and to be able to carry out the applicable standardization tasks.
K2	Knowledge of existing standards/technical regulations in a specified sector	Standards professionals should have knowledge of relevant existing standards and/or technical regulations in a specified sector.
K3	Knowledge of methodologies and methods for strategy development	Standards professionals, in charge of establishing policy on standards/standardization at the level of countries and regions, as well as industries and non-government organizations, should have knowledge of methodologies and methods for strategy and roadmap development.
K4	Knowledge of methodologies for performance management	Standards professionals should have knowledge of the methodologies to measure and manage the performance of planning, development and dissemination of standards.
K5	Knowledge of methods for standard/technology analysis and needs survey	Standards professionals should have knowledge of designing and conducting methods for standard/technology analysis and needs survey.
K6	Knowledge of program management	Standards professionals should have general knowledge of program management applicable to standards development.
K7	Knowledge of harmonization with international standards	Standards professionals participating in national standardization activities should understand the methods for adoption of International Standards and other International Deliverables as regional or national standards as specified in ISO/IEC Guide 21-1, Regional or national adoption of International Standards and other International Deliverables - Part 1: Adoption of International Standards and ISO/IEC Guide 21-2, Part 2: Adoption of International Deliverables other than International Standards.
K8	Knowledge of principles, process and procedure for standards development	Standards professionals should have basic understanding of the principles, process and procedure associated with standards development, and be able to provide appropriate advice.
K9	Knowledge of project management	Standards professionals should have knowledge of project management methodology applicable to standards development at the international, regional, national and industry/association level. Project management addresses planning, organizing, monitoring, controlling and reporting of all aspects of a project, and the motivation of all those involved to achieve the project objectives as specified in ISO 21500, Guidance on project management.
K10	Knowledge of drafting rules for standards	Standards professionals should have substantial knowledge of the rules, principles and structure of standards to be drafted in detail.
K11	Knowledge of validation methods for standards	Standards professionals should understand the methods for the review, verification and/or validation of standards.
K12	Knowledge of international standardization activities and organizations	Standards professionals should have practical knowledge of standardization activities and the organizations at the international regional, national or industrial level. Standards professionals participating in national standardization activities should be aware of council or technical management board decisions regarding the activities of the technical committees in general and of the committee for which s/he is responsible.
K13	Knowledge of marketing/ advertisement	Standards professionals in charge of the marketing of standards should have a basic knowledge of marketing, such as concepts, principles and techniques.
K14	Knowledge of IT system and Database management	Standards professionals in charge of IT system for the sales of standards (e.g. webstore) should have knowledge of IT system and database management. Standards professionals participating in developing standards should have knowledge on IT system or tools (e.g. ISO Portal) that support the standards development process (e.g. documents, mirror documents, ballots, projects, meetings, global directory, notifications, submissions).
K15	Knowledge of human resource development (HRD)	Standards professionals in charge of marketing of standards should have general knowledge of human resource development (HRD) such as concepts, principles and techniques.
K16	Knowledge of laws and systems related to standardization	Standards professionals should have knowledge of the national laws (e.g. acts, decrees, rules, ordinances, regulations) and systems related to standardization.
K17	Knowledge of legislation process and methods	Standards professionals should understand the system, the process and the methods for national legislation.
K18	Knowledge of standard application to the development of technical regulation	Standards professionals should have knowledge of standard application to the development of technical regulation.
K19	Knowledge of responding to foreign technical regulations (WTO/TBT)	Standards professionals should understand the process for searching foreign technical regulations related to standards development. Standards professionals should understand searching TBT notifications and responding to these through WTO/TBT Information Management System (IMS) or the national WTO TBT enquiry point (s).
K20	Knowledge of statistical methods	Standards professionals should have knowledge of statistical methods/techniques that can be applied extensively to the field of standardization.

## Recommended Skills

No	Skills	Description
S1	Ability to develop a strategic plan for standardization in alignment with national development plans	Standards professionals should be able to identify and develop the strategic plan for standardization harmonizing with the national plan for standards development.
S2	Ability of performance measurement and analysis for standardization	Standards professionals should be able to measure and analyze the performance of standardization activities.
S3	Ability to develop action plans implementing the strategic plan	Standards professionals should be able to develop action plans implementing the strategic plan including design an architecture of standards related to a framework of products, services and/or processes.
S4	Ability to identify needs of standardization	Standards professionals should be able to identify needs of standardization based on environment analysis, context analysis, etc..
S5	Ability to collect relevant information of standards and standardization	Standards professionals should be able to collect the relevant information of standards, standardization, market needs or other relevant information to determine the establishment of new standard(s) or the revision of existing standard(s). Standards professionals should be able to search for standards (published or under development), for instance, developing an inventory of standards in a specified sector.
S6	Ability to quantify needs and expectations of interested parties	Standards professionals should be able to evaluate and prioritize the needs and expectations of interested parties, and express it as a number or a quantity.
S7	Ability to determine whether standard(s) needs to be newly established or revised	Standards professionals should be able to determine the establishment of new standard(s) or the revision of existing standard(s) based on the information on standards and standardization.
S8	Ability to prepare standards development plans	Standards professionals should be able to prepare plans for standard development in accordance with the rules of international, regional, national and/or industrial organization in which s/he is participating.
S9	Ability to manage multiple projects	Standards professionals should be able to manage multiple projects simultaneously.
S10	Written and verbal communications and presentation skills	Standards professionals should be able to communicate with committee members and related interested parties in written documents as well as verbal communication when developing and disseminating standards.
S11	Ability to work with committees and individuals	Standards professionals should be able to cooperate and co-work with experts and stakeholders from different perspectives and backgrounds in terms of culture and technology.
S12	Program management abilities	Standards professionals should be able to manage the standardization program composed of multiple projects.
S13	Project management abilities	Standards professionals should be able to manage standardization project effectively by planning, organizing, budgeting, directing, controlling resources, etc..
S14	Ability to draft standards (using drafting template)	Standards professionals should be able to prepare the draft of standard according to the specified rules/procedures for the structure and drafting of standards. Standards professionals should be able to use of templates and other tools for the preparation of standards.
S15	Ability to validate standards	Standards professionals should be able to re view, verify and/or validate the draft of standard in terms of market relevance, duplication, and compliance with rules for the structure and drafting of standards.
S16	Leadership skills for committee operation	Standards professionals in charge of committee manager (secretary) should be able to operate a technical committee effectively and efficiently.
S17	Ability to derive the agreement of proposed standards	Standards professionals should be able to derive an agreement of proposed standards in strategic and diplomatic manner.
S18	Ability to organize a committee	Standards professionals should be able to take the lead to organize a new committee, subcommittee or working group.
S19	Documentation skills of international standardization	Standards professionals in charge of committee manager (secretary) or project leader should be able to prepare the documents for standardization (e.g. NWP, IS documentation, CRM reports, minutes).
S20	Language skills	Standards professionals should be able to communicate in both the local language and the international official language (usually English) for standardization and translation.
S21	Ability to edit and publish documents	Standards professionals should be able to maintain the highest degree of quality, clarity, timely delivery and consistency of standards (including conformity with relevant rules and policies) in editing and publication.
S22	Ability for standards marketing and sales	Standards professionals should be able to plan and implement the marketing, promotional, and other programs (including pricing of standards).
S23	Ability to manage IT systems and Databases	Standards professionals in charge of the IT system for standards (e.g. webstore, intranet) should be able to manage the IT systems and databases for standards and/or standardization.
S24	Ability to plan education and training programs	Standards professionals should be able to plan education and training programs for standards and/or standardization.
S25	Teaching and training skills	Standards professionals should be able to teach and train specific standards and/or standardization.
S26	Ability of drafting law	Standards professionals should be able to prepare a draft of law (e.g. acts, decrees, rules, ordinances, regulations) in accordance with the national rules for legislative drafting.
S27	Ability for applying standards to technical regulations (TR)	Standards professionals should be able to apply the standards to technical regulations to be established or revised.
S28	Ability to interpret relevant documents and official letters related to WTO/TBT	Standards professionals should be able to interpret the relevant documents (i.e. notifications, specific trade concerns) and official letters related to WTO/TBT.
S29	Ability to communicate with organizations related to WTO/TBT	Standards professionals should know how to communicate with organizations related to WTO/TBT (national WTO TBT enquiry points). Standards professionals should be able to search notifications and STCs using the TBT Information Management System ( <a href="http://tbtime.wto.org">http://tbtime.wto.org</a> )

## Recommended Attributes

No	Attributes	Description
A1	Accurate/ Precise/ Meticulous	Standards professionals should be able to manage a whole process for standards development from preparation to completion according to agreed target dates in accordance with the development plan.
A2	Adaptable/ Adjustable/ Flexible/ Versatile	Standards professionals should have good flexibility and ongoing adaptability to adjust and work with people from different cultural and technical backgrounds both inside and outside the company.
A3	Analytical/ Logical/ Systematic	Standards professionals should have extensive analytical ability and talent for a logical and systematic approach to integrating technical and non-technical knowledge into drafted standards that will be both accepted and widely used.
A4	Attentive/ Good-listening	Standards professionals should be able to pay close attention to issues in an acceptable manner.
A5	Collaborative/Cooperative/ Synergic	Standards professionals should be able to facilitate cooperation among stakeholders to reach consensus, which is an essential procedural principle and the necessary condition for the development of standards.
A6	Courteous/Well-mannered/Polite/Respectful	Standards professionals should be respectful and courteous when communicating and developing standards with those from multiple backgrounds.
A7	Culturally broad-minded/ Non-discriminatory/ Unprejudiced	Standards professionals should be open and unprejudiced when working with people or groups from different cultures.
A8	Decisive (able to reach timely conclusions)	Standards professionals should be able to reach timely conclusions and provide decisive guidance during the process of standards development against conflicting situation.
A9	Diplomatic	Standards professionals should be able to manage and operate inter-divisions or international relations by considering different needs and objectives.
A10	Friendly/Outgoing/ Curious	Standards professionals should be able to be friendly and socially confident.
A11	Globally minded (able to work with people worldwide)	Standards professionals should be able to understand and respect political, social and cultural environments of others to ensure that the views of all are heard and understood.
A12	Intellectual/ Fast-learning	Standards professionals should be able to engage in critical thinking, research and reflection about society and propose solutions for normative problems, and learn things fast.
A13	Observant/Eagle-eyed	Standards professionals should be able to adhere strictly to the rules of standards development and drafting.
A14	Open-minded	Standards professionals should be willing to consider new ideas without prejudice.
A15	Patient/Uncomplaining/Tolerant	Standards professionals should be able to accept or tolerate delays, problems, or suffering without becoming too anxious.
A16	Perceptive /Insightful / Incisive	Standards professionals should have or show thoughtful insight, and be good at understanding issues or figuring issues out.
A17	Responsible/ Accountable	Standards professionals should be able to take responsibility for the overall management of standards development, including advice on process, meeting preparation, and networking.
A18	Results-oriented/ Willing to improve and/or learn	Standards professionals should be results-oriented and willing to improve the effectiveness of standards development process.
A19	Self-reliant/Self-directed	Standards professionals should be able to organize themselves.
A20	Strong-willed/Persistent	Standards professionals should be able to continue firmly or obstinately on a course of action in spite of difficulty or opposition.

## 2.4 Terms and Definition

For the purposes of this document, the following terms and definitions apply. It is useful to refer to the terminological databases operated by ISO and IEC for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

### Attribute

Inherent characteristic of a person

EXAMPLE Visual acuity; sensitivity to others; openness.  
[SOURCE: ISO/IEC TS 17027:2014, 2.10]

### Competence

Ability to apply knowledge, skills and attributes to achieve intended results

Note 1: "Competence" can also be referred to as "competency".  
[SOURCE: ISO 9000:2015, 3.10.4, modified — "attributes" and Note 1 to entry have been added]

### Knowledge

Facts, information, truths, principles or understanding acquired through experience or education [SOURCE: ISO/IEC TS 17027:2014, 2.56]

### Responsibility

Obligation to act and take decisions to achieve required outcomes [SOURCE: ISO/IEC 38500:2015, 2.22]

### Skill

Ability acquired through education, training, experience or other means to perform a task or an activity with a specific intended outcome  
[SOURCE: ISO/IEC TS 17027:2014, 2.74, modified]

### Standards professional

Person who has competence to perform a job or tasks related to standardization activities in a company or an organization performing standardization activities

### Standards-related organization (SO)

Organization that carries out standardization activities such as planning & evaluation, development, adoption, publication and/or dissemination of standards

Note 1: A standards-related organization (SO) is defined as a broader term than a standards developing organization. SOs include organizations involved in any part of the lifecycle of standards - planning, developing, publishing, disseminating, applying and evaluating them. SOs include industry, national, regional, and international organizations. SOs include both governmental and non-governmental organizations; formal and less formal organizations including consortia or fora.

Note 2: Some of the primary activities and staff of SOs are related to standards, but other SOs activities may apply. The number of staff involved in standards in regulatory agencies or trade associations is limited, but their tasks are described in this document. In that context, SOs may include governmental agencies and non-governmental organizations that have and undertake any standards related function or division.

### Task

Set of activities undertaken in order to achieve a specific goal

Note 1: These activities can be physical, perceptual and/or cognitive.

Note 2: While goals are independent of the means used to achieve them, tasks describe particular means of achieving goals.

[SOURCE: ISO 9241-11: 2018, 3.1.11]

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**NOTE** This APEC guideline has been the basis of the ISO IWA 30-2 'Competence for standards professional - part 2. In standards-related organizations'.





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