

GISC 2025

Global ICT Standards Conference 2025

Standardization Capacity Building

TTA's Capacity Building Activities for ICT Standards Experts

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ICT Standards and Intellectual Property:
AI for All

Hosted by



Ministry of Science and ICT



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01 TTA Academy Overview

02 ICT Standards Expert Development Program

03 Achievements

Abstract

| This presentation introduces TTA's capacity-building programs for emerging ICT standardization experts.

The programs aim to expand participation in global standardization and build a sustainable framework for ICT standardization human resource development.

TTA fosters new standardization professionals through education, mentoring, and incubating programs for the public interested in ICT standards and graduate students, and introduces the key contents and achievements of each program.

01. TTA Academy Overview

- Cultivating the next generation of ICT standard experts for international activities in areas such as AI and Quantum technologies
- Operating systematic training and graduate-level programs for ICT standardization experts
- Incubating and mentoring emerging experts to participate in global standardization

Development of ICT Standards Experts

- Training certification auditors for ISO-based management systems (e.g., ISO/IEC 42001, 27001, 13485)
- Providing integrated 5-day and extended 3-day programs to enhance competencies in AI, information security, and medical device quality management

Development of Auditors for ISO based Management system Certification

An Institution for Developing Integrated Talent in Standards and Certification to Pave the Way for the Future

National HR Development Consortium

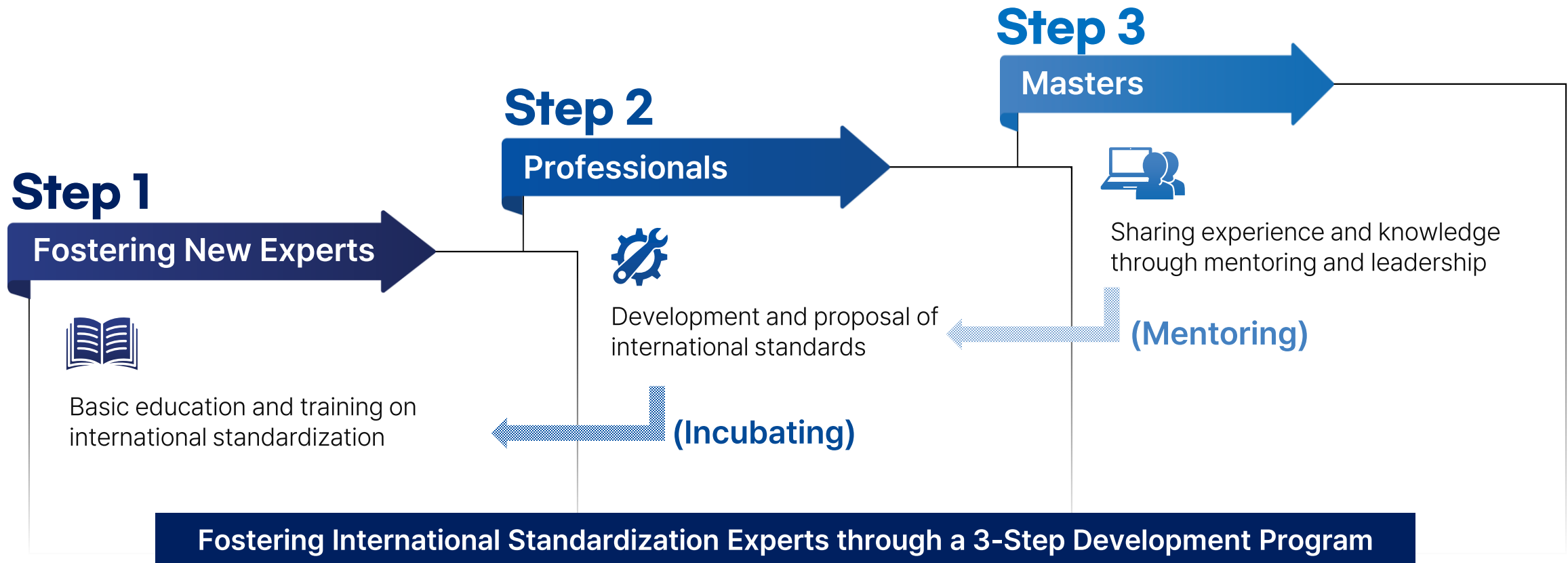
- Provided practical training for current employees in AI, software, and related ICT fields
- Enhancing workforce competencies through industry-academia cooperation and national support programs

Software Testing Expert Training Program

- Providing systematic education on software testing theories, planning, and management
- Fostering skilled professionals in AI and software verification and quality assurance

02. ICT Standards Expert Development Program

| International Standardization Expert Program (3-Step)



02. ICT Standards Expert Development Program (Step 1)



(For Individuals)

Standardization education for Expert in ICT and ICT convergence fields, including career-oriented courses and the Next-Generation Standard Expert Program, which provides mentoring and support for participation in international meetings.

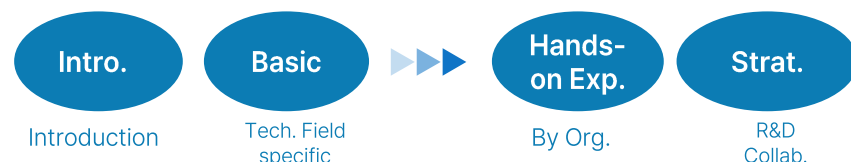


(For Post-graduate)

A customized "Standard Course"(2~3 credits), linked to research topics, combined with the Standard Expert Incubation Lab, offers collaborative support for international standardization initiatives together with supervising professors.



ICT Standardization Expert Education



Post-graduate Standard Expert Program



Next-Generation Standard Expert Program

Providing practical experience through participation in international standardization organizations and mentoring from experienced experts.

Post-graduate Standard Expert Incubation Labs



02. ICT Standards Expert Development Program (Step 1)

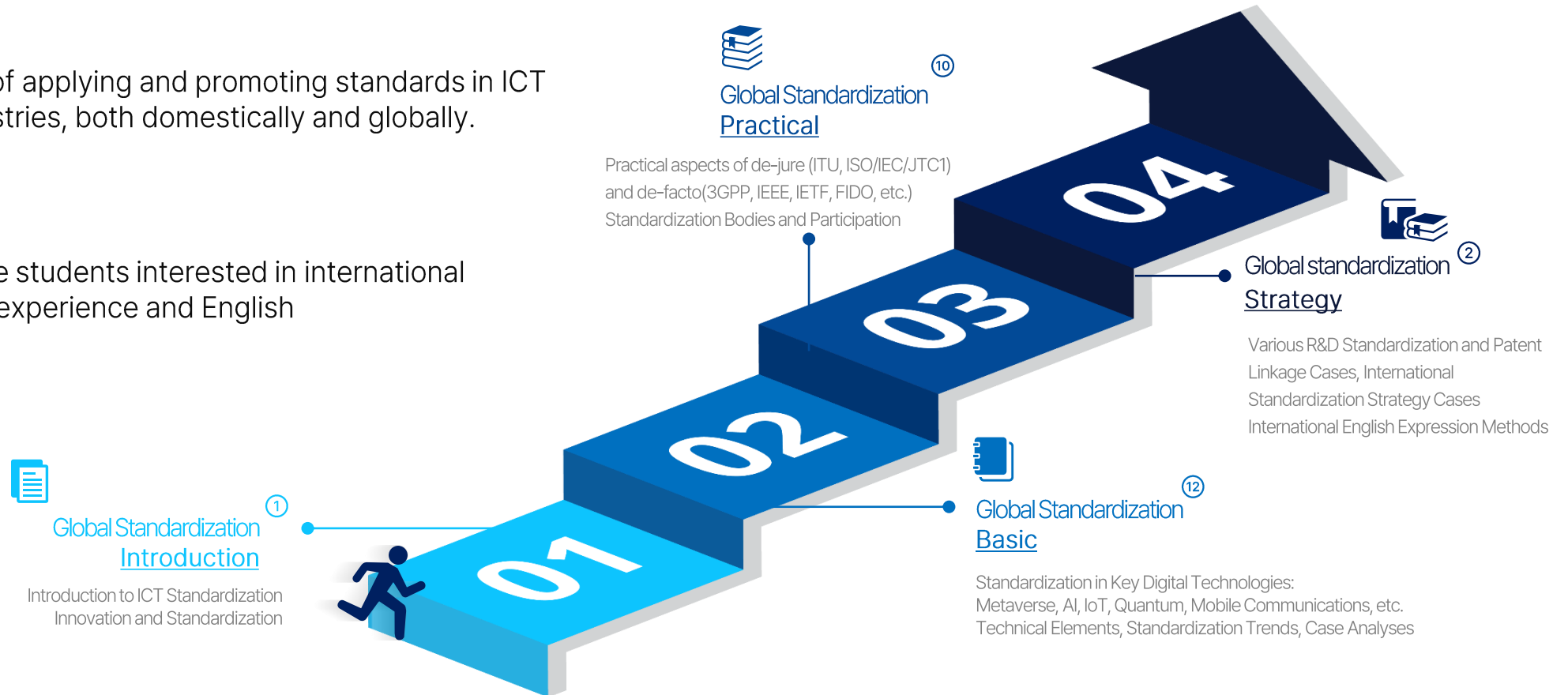
| ICT Standards Expert Training Program

Objective

To foster experts capable of applying and promoting standards in ICT and ICT convergence industries, both domestically and globally.

Target

Professionals and graduate students interested in international standardization, with R&D experience and English communication skills.



02. ICT Standards Expert Development Program (Step 1)

| ICT Standards Expert Training Program: Roadmap (2025)

Training Method & Schedule
Online Program
(Offered twice a year)

1. Introduction to ICT Standardization

① Introduction to ICT Standardization

2. International Standardization Basic Course – Technology and Standards

② AI	③ Metaverse	④ Cloud computing	⑤ IoT	⑥ Intelligent Network	⑦ Security and blockchain
⑧ Quantum Technology	⑨ Mobile Communications	⑩ Autonomous vehicles and UAM	⑪ Space(Satellite)/ Radio resources	⑫ Energy Environment	⑬ AI semiconductor

3. Practical Course on Standardization Organizations

⑭ de-jure SDO	⑮ de-jure SDO	⑯ Metaverse/AI	⑰ IoT	⑱ Wireless communication	⑲ Internet/Web	⑳ Online authentication	㉑ Mobile Communications	㉒ Autonomous vehicles	㉓ Domestic standardization
ITU	ISO/IEC JTC 1	Khronos Group, MPAA, MSF	oneM2M, CSA(Matter)	IEEE, Bluetooth SIG, WPC	IETF, W3C	FIDO	3GPP	5GAA, AUTOSAR, SAE	TTA

4. Strategic Course on Standardization Capacity Building

㉔ R&D Standard & Patent Strategy ㉕ Global Leadership & International Engagement

02. ICT Standards Expert Development Program (Step 1)

| Next-Gen Standardization Expert Mentoring

Step 1

Preparation

Preparation for International Standardization Expert Mentoring: Guidance on meeting registration, terminology, report writing, and participation procedures.



Step 2

On-site

On-site Mentoring at International Conferences: Guidance on meeting etiquette, presentation skills, and Q&A participation.



Step 3

Outcome Review (Feedback)

Post-meeting Mentoring: Guidance on Reporting outcomes, drafting revisions, and preparation for next meetings.



02. ICT Standards Expert Development Program (Step 1)

| Post-graduate Standard Expert Fostering Program

The "ICT Standard Major Course" for postgraduate students fosters expertise in ICT standardization through curriculum design, course materials, and lectures.



02. ICT Standards Expert Development Program (Step 1)

| Support for Postgraduate Standard Expert Incubating Labs

- Support for Postgraduate Students' On-Site Internship at International Standardization Meetings.
- Collaborative support with supervising professors to help postgraduate students gain practical experience in international standardization through funded conference participation.



**Complete the ICT standard Major Course → Gain Standardization Experience in Postgrad Incubating Labs
→ Become ICT Standardization Experts**

02. ICT Standards Expert Development Program (Step 2)

| Support for ICT International Standardization Experts Activities



Role

① *Proposals of International Standards* ② *Acquisition of Leadership Positions at International*

Formation and Support of Experts

Over 3 years of activities at int'l SDOs
(Industry/Academia/Research expert)



- Operate continuous expert recruitment system using enrollment/withdrawal system without evaluation
- Support business trips for international SDOs via quarterly selection process

Expert Support System and information Provision

Efficient expert support process



- Construction of Web-based Management /Database System
- Provides the latest international standardization information through expert's standardization issue reports

02. ICT Standards Expert Development Program (Step 3)

| Formation and Roles of Master Experts

Role

Knowledge transfer to future generation experts

Formation and Support of Experts

Experts with **over 20 years of experience** at international SDOs with leadership position (since 2019)



- 25 Master level experts selected from various technology areas (*Digital contents, AI, Quantum, 6G, Security, etc.*)

Roles by Master Experts

Activities in leadership positions, Mentoring services

- Act as Leaders (*Chair, Vice-chair, Rapporteur, etc.*) at international SDOs
- Consult and mentor those who wish to make their technologies as int'l standards, especially for SMEs



03. Achievements of ICT Standardization Expert Programs

| Key Results in Education, Mentoring, Incubating, and International Participation ('24)

ICT Standards Expert Training

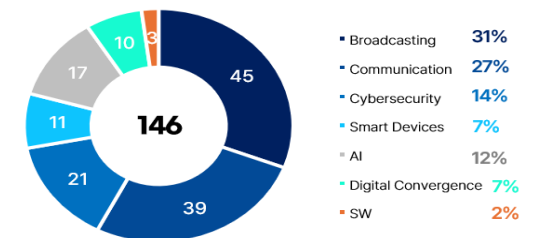
- 25 courses, 50 training sessions annually, with **over 1,100 participants completions** the program each year (85%+ completion rate)
- Overall satisfaction consistently maintained at 88% or higher

Post-graduate & Incubating Lab

- **14 universities**(17 Labs) **participated** with 163 students completed the program
- 20 researchers from 10 universities(11 Labs) were support to participate in 23 international standardization meetings, including ITU-T, IEEE, MPEG, and IETF

Next-Generation Standards Expert

- 63 new experts joined the program, reaching **146 experts in total** (since 2019)
- 47 mentoring and 56 international meeting supports, including **43 contributions and 2 standards developed** through incubation activities
- **21 experts** with contribution capabilities, including 10 serving as editors in ITU and ISO/IEC, etc.



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- Thank you -

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