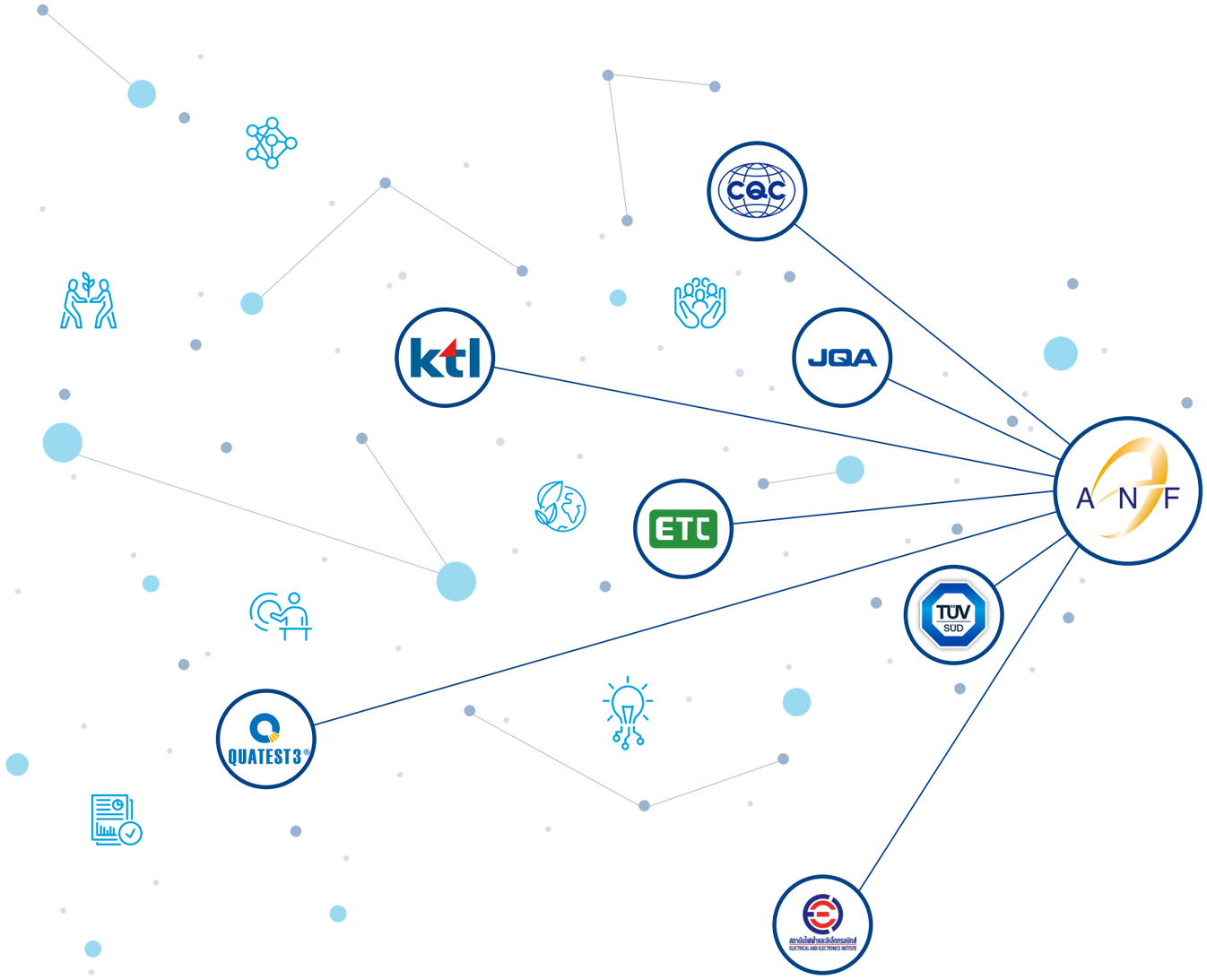

ANF 2024 ANNUAL REPORT

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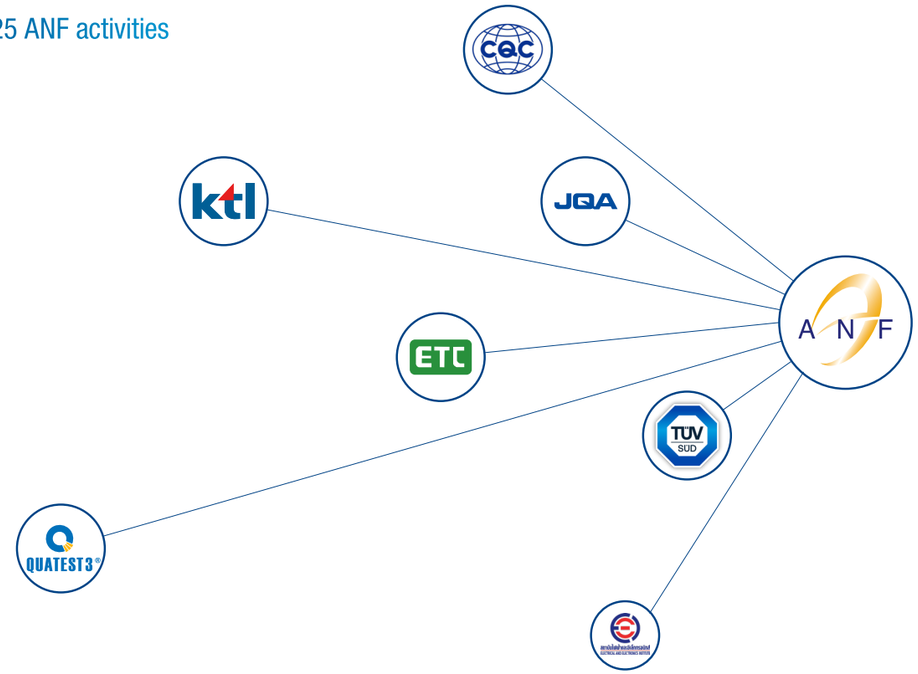


Greetings

Message from Dr. Hiroaki Ishii, ANF Vice president (JQA President & CEO)

Greetings to all. I am Ishii Hiroaki, President & CEO of Japan Quality Assurance Organization. I was appointed as Vice President of Asia Network Forum in April, 2025. It is a humbling honor to serve an important post of this long-established group of leading certification bodies in Asia.

ANF was joined by 6 leading certification bodies from China, Taiwan, Japan, Republic of Korea, Viet Nam, and Singapore. Since November 2024, when EEI from Thailand joined, ANF consisting of 7 bodies from 7 geographical areas has been around in wider operational areas.

Today, new initiatives, such as cybersecurity and sustainability, are attracting attention with IT technologies including artificial intelligence evolving and global environmental issues becoming imminent.

Expectations are becoming higher toward certification bodies to catch up with the ever-evolving economy and technology, and to make sure the safety and security for the economy and society.

As certification bodies, we are faced by many challenges including the traditional product certification, its fusions with system certification, response to newly-created standards, and human resource build-up.

Each member body of ANF, with its own unique special ability, has contributed to the economic development of the whole Asia. ANF could come up with great, innovative ideas and solutions to the common challenges being faced. Various views and experiences are brought together and will be the driving force to shape a better future.

I ask you for your continued support in mutual recognition and technical exchanges between economies to provide the very best certification service responding to the ever-changing needs.

Let us work together to further develop the economy of the whole Asia Region and multiply the value of Asia Network Forum.

New member introduction (Thailand EEI)

Electrical and Electronics Institute

EEI was established as a network institute of the Ministry of Industry by Cabinet resolution on July 7, 1998. EEI operates as an independent, non-profit organization that creates competitiveness and sustainable growth in Thailand's electrical and electronics industry.

VISION

A leading organization driving the advancement of Thailand's electrical and electronics industry while fostering sustainable growth and global competitiveness.

MISSION

Supporting government agencies in implementing national policies and industry initiatives.
Driving growth in the electrical and electronics sector by consulting, research and development, training, and conformity assessment services.
Promoting sustainability by integrating green technology and innovative solutions within the industry.
Delivering in-depth industrial insights and research to guide promoting and developing the industry.
Establishing strong partnerships across all sectors to enhance national and international recognition.

01 Electrical and Electronics Intelligence Unit

The focus is on analyzing the status of the Thai electrical and electronics industry and developing industry databases to keep pace with continuously changing situations. This is to provide guidance, issue warnings, and accurately predict industry trends in the future. Additionally, there is a commitment to leading strategic research related to the electrical and electronics industry and related industries, as well as analyzing and monitoring regulations, risk factors, and trade issues that may impact the industry sector. This is to propose recommendations to the government for policy development to elevate sustainable industry and enable the private sector to align their operations with the future direction of the global industry.

02 Industrial Development and Promotion Center

Develop entrepreneurs and personnel in the electrical and electronics industry to enhance their capabilities, productivity, and potential in alignment with business environment factors and technological advancements that are constantly changing. This includes providing in-depth consulting and advice by transferring knowledge in standards, productivity management techniques, product design and development, improving production process efficiency with robotics, automation, and digital technologies. Additionally, it involves encouraging entrepreneurs to create business networks among themselves by promoting market channel connections, learning modern technologies, and studying both domestic and international business practices. This aims to further business negotiations (Business Matching) and generate revenue for the country.

Training Service

Major Courses: Technology / Management / Productivity / General

In-House Training

Public Training

E-Training Production

Electronic Design Services

EDC Electronics Design Center (EDC)

- Electronic circuit board design service (PCB Design)
- Electronic circuit board assembly service (PCB Assembly)
- Electronic circuit board Design Training service (PCB Design Training)

03 Industrial Service Center

The Operation and Standards Center offers comprehensive services in standardizations and conformity assessment system. It develops and expands the scope of services including product testing, calibration, factory inspection, and product certification according to the requirements of Thai Industrial Standards (TIS) and international standards. Additionally, it provides certification for tax privileges under government measures aimed at addressing the tariff discrepancy issue between imported and domestically manufactured finished products, which helps reduce production costs, enhance competitiveness for domestic manufacturers and stimulate investment to elevate the domestic industry development to be on par with international industries.

Office (Bang Lamphu) : 6th Floor, Department of Industrial Works Building, 57 Prasumen Road, Pranakorn Bangkok 10200, Thailand.

Operation and Standards Center (Bangpoo) : 975 Moo 4 Bangpoo Industrial Estate Soi 8, Sukhumvit Road Km.37,Tambol Praksa, Amphur Muang, Samutprakarn 10280, Thailand.

Business field of member organization

01 Quatest 3 Introduction

QUATEST 3 offers technical services in the fields of standard, metrology, quality to serve management activities of Vietnamese Ministries as well as requirements of organizations and businesses aiming at improving quality and safety of products and benefits of customers.

02 KTL's New Business – Designated as a OCPP testing and certification body

KTL (Korea Testing Laboratory) has been designated as the 9th OCPP (Open Charge Point Protocol) testing and certification body in the world. OCPP, a standard developed by the Open Charge Alliance (OCA) to enhance interoperability in electric vehicle (EV) charging infrastructure, is a protocol that standardizes communication between EV charging stations and backend systems. By following this protocol, both charging equipment manufacturers and operators can ensure interoperability.

In addition to existing EV charging tests, KTL conducts tests on OCPP versions 1.6 and 2.0.1, verifying interoperability between charging stations and management systems, as well as assessing communication stability and security. With this certification, KTL can support the competitiveness of domestic and international charging infrastructure, helping companies enhance their global market presence. Moreover, KTL performs tests on various aspects of electric vehicle chargers, including electrical safety, EMC, metering, energy efficiency, and communication compatibility.

OCPP has become an essential global standard for charging infrastructure, and OCPP 2.0.1 supports enhanced security features, Plug & Charge, and V2G (Vehicle-to-Grid) technology. This is expected to make charging infrastructure smarter and more efficient. KTL plans to continue offering technical support to verify next-generation energy technologies and help companies strengthen their global competitiveness.

Summary of the 2024 Ad-Hoc Meeting

Overview

The Ad-Hoc meeting, hosted by Quatest 3 in Ho Chi Minh City, Vietnam, marked a significant milestone as the first in-person gathering since 2019. The event was held at the Caravelle Saigon Hotel and the Quatest 3 Testing Complex, attracting nearly 30 participants from 4 member organizations, Quatest 3 (Vietnam), ETC (Chinese Taipei), KTL (South Korea) and JQA(Japan).

C1 Policy and rules: Membership Expansion Efforts

The ANF Secretariat, Secretary General Mr. Jin-yong Kim, focused on expanding membership to include more members from Asian countries. He has visited to 3 organizations from each country, EEI (Thailand), and two organizations from Malaysia and Indonesia. To introduce the ANF roles and activities, Mr. Kim presented an overview of ANF's objectives, member organizations, committees and key initiatives, such as the Young Expert Program (YEP), Round Robin Test (RRT), and the ANF Joint Mark.

To further this initiative, it was proposed to invite these potential members as observers to the ANF General Assembly in Osaka, Japan, scheduled for November 2024. If they express interest in joining, a member approval vote could be conducted during the assembly. Additionally, discussions highlighted the need to update the membership application form, which was lastly revised in 2009, to streamline the application process. The Secretariat may expedite the approval process through document-based approval before the General Assembly if necessary.

NN – New Normal: Brainstorming for the establishment of the ANF Joint Mark

Building on the successful launch of the KTL-JQA joint mark for noise level testing of air purifiers requested by the client. To grant a joint mark, KTL and JQA decided to take roles of conducting test, witness for the approval. ANF plans to expand this initiative into a broader ANF joint mark. The New Normal program studied the NEMKO-SEMKO joint mark to understand best practices for test data acceptance and scope determination. Insights from this study will be presented at the next General Assembly.

[ANF Mid/Long Term Strategy Planning]

Recognizing the absence of a long-term strategic plan, members agreed on developing a long term vision to guide ANF's future. ANF's current objectives are:

1. Promoting mutual understanding among Asian certification/testing organizations
2. Fostering business development through a common platform for ANF members
3. Enhancing technical competence and capabilities
4. Exchanging information on product safety, EMC, environment and other relevant regulations
5. Representing Asian perspectives in international forums by consolidating member opinions

Members will have some time to think about the vision and get some ideas from the Young Expert, who will gather in YEP (Young Expert Program) in Chinese Taipei and at General Assembly in Osaka.

C2 Promotion and Marketing: Annual Report & Promotional Strategies

The first ANF Annual Report, released last year, highlighted 2023 activities and cooperative efforts among members. To enhance its effectiveness, members proposed shortening the report to focus on the latest trends in the TIC (Testing, Inspection, and Certification) industry. Additionally, the development of new promotional materials, such as newsletters and leaflets, was discussed. To catch the eyes of the stakeholders, members have agreed on shortening pages this year.

Given the diverse popularity of social media across member countries, it was agreed that promotional content should be tailored to each country's preferred platforms. Official accounts in each country will disseminate this content in the local language, ensuring effective communication and outreach.

C3 Electrical Safety: Updates on new regulations and standards

[Cyber Security Regulation in Chinese Taipei]

In Chinese Taipei, the Bureau of Standards, Metrology, and Inspection (BSMI) provides Voluntary Product Certification (VPC) services for four categories of Internet of Things (IoT) devices:

1. Renewable energy system inverters (PV inverters)
2. Elevator control system equipment
3. Smart poles
4. Electric vehicle charging systems

Between 2021 and 2024, cybersecurity requirements were incorporated into the certification process for these IoT devices to mitigate security vulnerabilities and enhance consumer protection. These requirements primarily focus on physical, system, and communication security, with additional specifications applied to each product category. Additionally, the Civil Aviation Administration (CAA) of Chinese Taipei plans to stipulate the mandatory cybersecurity inspections and compliance requirements for all drones. However, the implementation timeline has yet to be determined.

[Changes of the National Standard: Chinese Taipei and Vietnam]

Several updates have been made to the CNS Standard in Chinese Taipei. In the field of energy efficiency, CNS 2062:2024 (Electric Refrigerators and Freezers – Energy Efficiency) was officially announced on January 10, 2024. Additionally, the safety standard CNS 60335-2-30/Amd.1:2024 (Household and Similar Electrical Appliances – Safety – Part 2-30: Particular Requirements for Room Heaters – Amendment 1) was revised on June 13, 2024. This standard aligns with IEC 60335-2-30:2009/AMD:2016.

In Vietnam, QCVN 132:2022/BTTTT, the national technical regulation on electrical safety for telecommunications terminal equipment, has included Wireless Cordless Phone DECT under the Certificate of Conformity (Annex I), effective January 1, 2024. Additionally, starting from the same date, six products—desktop computers, laptops & portable computers, tablets, set-top boxes for cable television networks using digital technology, set-top boxes for IPTV networks, and televisions—are listed under Annex II, requiring a Declaration of Conformity.

Furthermore, Decision 14/2023/QD-TTg has revised the Lists of Low-Efficiency Equipment Subject to Elimination and Low-Efficiency Generating Sets Banned from Development and Application Roadmaps. The revision, effective April 1, 2025, includes national standard requirements for products such as LED lamps, infrared hobs, induction hobs, and refrigerators. Additionally, products including refrigerator-freezers, storage water heaters, non-ducted air conditioners, television sets, and various office, commercial, and industrial equipment will undergo standard version updates on the same date.

This revision ensures compliance with updated regulations and enhances energy efficiency standards in the respective markets.

[IEC 62368 3rd edition, 4th edition comparison by KTL]

IEC 62368-1 is the safety standard for audio/video, information, and communication technology equipment. The 3rd edition was issued in 2018, having a significant improvements over the previous version, including the acceptance of IEC 60950-1 and IEC 60065 for components and sub-assemblies without additional evaluation (Clause 4.1.1 – Application of Requirement).

With the release of the 4th edition in 2023, several key updates have been implemented. Notably, IEC 60950-1 and IEC 60065 have been removed from the normative references, meaning components and sub-assemblies previously approved under these standards are no longer accepted.

Other major revisions include:

- Clause 4.1.8 – Liquid Filled Components (LFCs): For equipment utilizing refrigerants, IEC 60335-2-40 and IEC 61010-2-11 have been added as new requirements.
- Table 13 – External Circuit ID Assignment and Associated Transient Voltages: has been fully revised, impacting compliance requirements for external circuits such as twisted pair, LAN, and PoE
- Clause 9.6 – Wireless Power Transmitters: The test method and temperature limit values for wireless power transmitters have been modified.

Annex Modifications:

- Annex G.15 – Pressurized LFCs: Introduces the concept and test methods for Modular LFCs.
- Annex M – Batteries and Protection Circuits: Expands coverage to removable batteries, incorporates fire enclosure requirements for battery units, and modifies the charging safeguard measurement criteria.

[Being involved in AI management system, ISO/IEC 42001]

KTL introduced ISO/IEC 42001 – Information Technology – Artificial Intelligence – Management System, the world's first AI management system standard, which provides essential guidance for navigating the rapidly evolving field of artificial intelligence. This standard establishes a structured approach to managing risks and opportunities associated with AI by auditing current systems and evaluating the effectiveness of AI management system.

Emphasizing the importance of AI management of ISO/IEC 42001, KTL highlighted its commitment to fostering reliable and trustworthy AI systems. KTL has joined the Industrial AI International Certification Forum, ensuring trustworthy industrial AI. Additionally, KTL serves as an ISO/IEC 42001 certification body within the Industrial AI International Certification forum, reinforcing its role in AI governance and compliance.

This meeting served as a pivotal platform for strategic discussions, setting the foundation for future growth and collaboration within the ANF community.

On last day, ANF members participated in a lab tour of Quatest 3 in Bien Hoa following the meeting. Members were highly impressed by the extensive range of testing capabilities offered by Quatest 3, demonstrating its expertise across various industries.

Summary of the 2024 Young Expert Program (YEP)

The 2024 Young Expert Program (YEP) was successfully held from September 3 to 5, 2024, at the Fullon Hotel, Chinese Taipei hosted by ETC. This year, members from ETC (Chinese Taipei), KTL (South Korea), JQA (Japan), Quatest3 (Vietnam), and EEI (Thailand) participated in person. 2024 YEP aimed to foster connections among young engineers and promote knowledge sharing in the testing, certification, and engineering sectors.

Day 1: Welcoming & Introductions

The program commenced with a welcoming speech from Mr. Andrew Lin, the President of ETC and Chair of C5, who emphasized the importance of the event for young engineers to build the platform to connect with each other by joining this program. Mr. MO Xiaofeng of CQC, the YEP Convenor, also shared an inspiring congratulatory message video, wishing the attendees a fruitful meeting. Ms. Pearl LEU from ETC introduced the history, objectives, and scope of ANF and the YEP program. She outlined the role of YEP in connecting young professionals and fostering the development of skills relevant to the industry.

The first session featured presentations by each organization participating in the YEP. Each speaker introduced their respective organizations, their areas of expertise, and the services they provide:

ETC (Chinese Taipei): A wide range of services in testing, certification, calibration, consulting, training, and R&D across various sectors such as ICT, AV, household appliances, automotive, and medical devices.

EEI (Thailand): A government-affiliated body specializing in testing, calibration, inspection, certification, and technical training, covering industries such as household appliances, automotive, medical devices, and electronics.

JQA (Japan): A comprehensive testing and certification, calibration body focusing on product safety, EMC testing and certification services such as JIS mark, functional safety, ISO certifications including management systems and Robot (ISO 13482).

KTL (South Korea): A leader in new industrial fields of the future, focusing on the future of technology with a strong emphasis on public, industrial and national safety, digital transformation such as 5G, AI, and low-carbon economy.

Quatest3 (Vietnam): A state-owned testing organization, recognized internationally for its EMC testing, food, microbiology and electrical testing, and recognized as a inspection body and conformity assessment body by the Vietnamese government agencies.

The day ended with a welcome dinner at Tou Kai Japanese restaurant, offering an opportunity for informal networking. Good food is all the sweeter when shared with all young members!

Day 2: Technological Insights & Presentations

On the second day, participants shared information on new technologies in their respective fields:

Mr. Thanawit Tao-ek from EEI presented Thailand's Ministry of Industry's development plan, covering next-gen automotive, smart electronics, medical tourism, robotics, and digital transformation and more.

Mr. Jerry Huang from ETC introduced 5G Smart Pole and EV DC charging standards, including test standards, charging modes, and the role of EMC testing in EV chargers and the implementation date for VPC* to RPC Conversion.

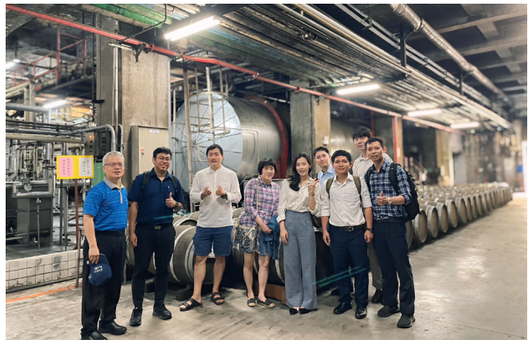
Mr. Sho Tsuchiya from JQA introduced Japan's progress in 5G and beyond 5G (6G) technologies, as well as JQA's involvement in AI, ESPR (Ecodesign for sustainable product design regulation) and CFP.

Mr. Woong Lee from KTL presented on cybersecurity requirements for connected appliances, highlighting IEC 60335-1, Ed.6 and Annex U, which define security requirements for household appliances. Mr. Bada Yoon, also from KTL covered functional safety standards for home appliances, focusing on systematic and random failure analysis in products like washing machines.

Mr. Truong Chi Trung from Quatest3 explained Vietnam's national certification regulations for household electrical and electronic products, detailing conformity assessment schemes and technical regulations on product safety and EMC. Also Mr. Nguyen Dang Anh Phung introduced the national regulation of electrical and electronic products and the capacity of Quatest 3.

In the afternoon, Dr. Jill Liu from ITRI (Industrial Technology Research Institute) gave a speech on the "Applications of AI in Materials Development", emphasizing the role of AI in identifying promising materials and predicting their properties. This was followed by a brainstorming session where participants discussed the future of the ANF Young Expert Program, focusing on innovation, career development, and the role of young experts in shaping the future of the industry. ETC surveyed young experts so give an insights to make a better program service for the next year.

*VPC: Voluntary Product Certification / RPC: Registration of Product Certification in Chinese Taipei




Day 3: Industrial Visits & Cultural Activities

On the final day, participants visited the “Linkou Sake Brewery” operated by Taiwan Tobacco and Liquor Corporation (TTL). The tour included an introduction to the company’s history, its product line (including the OMAR single malt whisky), and the sake brewing process.

The afternoon included a visit to the “National Palace Museum” in Taipei, where attendees had the opportunity to explore rich cultural heritage through the museum’s extensive collection of historical artifacts. A tour of “Dihua Street” followed, a bustling area known for its traditional food supplies and ingredients, popular during Chinese festivals.

The program concluded with a dinner at “Din Tai Fung”, a world-renowned Taiwanese restaurant specializing in soup dumplings. This dinner provided a relaxed setting for participants to reflect on the insights gained during the event and to foster continued connections.

Conclusion

The 2024 YEP successfully brought together young engineers and experts from various countries to exchange knowledge, explore new technologies, and strengthen collaboration within the ANF community. The combination of professional presentations, hands-on technology insights, and cultural experiences ensured that participants not only deepened their understanding of industry developments but also formed lasting connections for future collaboration.

Summary of the 2024 ANF General Assembly

Overview

The General Assembly (GA) meeting, hosted by JQA in Osaka, Japan, centered on expanding ANF membership and discussing newly introduced regulatory standards in a rapidly evolving environment. Held at the Osaka International Convention Center, the event brought together 35 participants representing 7-member organizations: JQA (Japan), CQC (China), ETC (Chinese Taipei), KTL (South Korea), TÜV SÜD PSB (Singapore), Quatest 3 (Vietnam), and EEI (Thailand).

C1 Policy and rules: ANF Application form revision and the new member candidate

ANF members updated the membership application form to reflect current status before the General Assembly (GA) meeting starts. With Thailand's EEI expressing its intent to join ANF this year, C1 reviewed and made minor modifications to the draft application form.

As part of the introduction process, EEI presented an overview of its organization and service areas to the members. Following a thorough review of EEI's membership application and relevant documents, C1 members agreed on EEI to join ANF. The final decision will be formally confirmed during the GA meeting.

C2 Promotion and Marketing: Update planning of the ANF website

To enhance the quality and accessibility of the ANF website, C2 initiated discussions on potential updates. During the brainstorming session, Ms. Taehee Kim from KTL proposed regular updates for the website by incorporating information on newly published or updated standards from each member country. Ms. Sunhee Shin from KTL supported the proposal and suggested additional content improvements to enhance the website's attraction.

Another key idea involved shifting the website's focus from a member-centered approach to a more customer-oriented platform. Additionally, C2 suggested expanding the website's functionality to better promote ANF members by including detailed information on organizational profiles, services, scope, designations, and accreditations.

C3 Electrical Safety: Updates on national standards and regulations

[ETC – Updates on Standard Revisions and Newly Regulated Products in Chinese Taipei]

ETC provided an overview of the latest CNS standard revisions and newly regulated products in Chinese Taipei. Detailed information can be found in Appendix C-1 and C-2 via the website below. Newly regulated products are indicated with an asterisk (*), along with their respective effective dates.

Product Description	Inspection Standards	Entry into force
Water dispenser, Drinking water supplier (inspection scope: rated voltage not exceeding 250Vac)	Safety - CNS 60335-1 (2014), CNS 60335-2-15 (2014) EMC - CNS 13783-1 (2013) RoHS - CNS 15663 (2013) Section 5	July 1, 2024
Freezers (inspection scope: rated voltage not exceeding 250V and rated storage volume not exceeding 700L)	Safety - CNS 60335-1 (2014), CNS 60335-2-24 (2016), CNS 2062 (2000) EMC - CNS 13783-1 (2013) RoHS CNS 15663 (2013) Section 5	January 1, 2025
All Information, Communication technology & Video appliance in Regulated electronic equipment list (inspection scope: of those medical Devices)	Safety - CNS 15598-1 (2020) EMC - CNS 13936-1 (2016) CNS 16197-1 (2023) RoHS - CNS 15663 (2013) Section 5	January 1, 2024

[CQC – Recent changes of certification in China]

Effective August 1, 2024, portable power banks, lithium-ion batteries and battery packs, and power adapters/ chargers for telecommunication terminal products must obtain CCC certification before being shipped, sold, imported, or used for business activities in China.

Newly Included CCC-Certified Products

Effective July 1, 2025, the following products are required to obtain CCC certification and needs the CCC certification mark:

- Commercial gas combustion appliances
- Flame-retardant wires and cables
- Electronic toilets
- Combustible gas detection and alarm products
- Water-based interior wall coatings

[TÜV SÜD PSB – Standards update in Singapore]

Updates on Singapore's Consumer Protection (Safety Requirements) Regulations (CPSR)

Singapore has announced major updates to the CPSR effective from June 1, 2024, for new registrations and June 1, 2025, for renewal registrations. The Minimum Requirements for Medium Risk Controlled Goods' Safety Standards and additional regulations have been revised, impacting products such as AC adaptors, audio and video products, and other controlled goods. Further details can be accessed via the official website:
https://www.consumerproductsafety.gov.sg/suppliers/cpsr/register-your-controlled-goods/

[JQA – S-Mark standards revision, and the cyber security in Japan]

The S-Mark, a widely recognized voluntary certification in Japan, has undergone standards revision in alignment with the updated Appended Table 12 of the DENAN Law. This revision ensures compliance with the latest regulatory requirements and enhances product safety and reliability.
S-mark certification standard revision are as follows and the more standards can be found from JQA official website: https://www.jqa.jp/service_list/safety/topics/topics_safety_596.html

Standard No.	Title	JIS Standard	Harmonized Standard / Date of Withdrawal
J60335-1(2024)	Household and similar electrical appliances - Safety - Part 1: General requirements	JIS C 9335-1:2023	IEC60335-1(2020)

Redline: Newly established standards.
A new S-Mark safety standard has been introduced to mitigate electrical risks associated with batteries in portable power supplies. Following a technical review by the Ministry of Economy, Trade and Industry (METI), the "Safety Requirements for Portable Power Supply (Interim Report)" was established.

Cybersecurity Evaluation in Japan

JQA has noted that while Japan currently does not have mandatory cybersecurity regulations, however, JQA is making efforts to develop evaluation services for both domestic and international markets.

[KTL – Introduction on Functional safety test]

IEC 60730-1(Automatic electrical controls – Part 1: General requirements) is the international standard for automatic electrical control devices, applicable to household and similar equipment. This includes thermostats, timers, pressure switches, actuators, temperature controllers (capillary type), and motor protectors. The IEC 60730 standard is structured around two fundamental safety principles:

1. Inherent Safety – Addresses potential hazards such as electric shock, fire, and personal injury, under both normal and abnormal operating conditions within the control system design.
Evaluates electric shock, fire, and personal injury risks using methods such as tracking resistance, endurance testing, dielectric strength, and earth continuity testing.

2. Functional Safety – Ensures the correct operation of safety-related functions. Failure or malfunction of these functions can lead to hazards such as explosions, excessive temperatures, electric shock, fire, or personal injury due to the loss of protective functions.
This test ensures the protection against internal faults through measures such as Failure Modes and Effects Analysis (FMEA) and durability testing of components like bimetal thermostats and automatic pressure switches.
KTL is an accredited CBTL (Certification Body Testing Laboratory) for IEC 60730-1, providing comprehensive testing services to ensure compliance with this standard.

C4 Environment & Energy: Carbon Policy and the Energy Efficiency updates

[KTL – Introducing international regulation, EU CBAM]

European Union Regulation (EU) 2023/956 establishes the Carbon Border Adjustment Mechanism (CBAM) to address greenhouse gas (GHG) emissions embedded in imported goods listed in Annex I. The regulation aims to prevent carbon leakage, support the reduction of global carbon emissions, and align with the Paris Agreement by incentivizing emission reductions in third countries.

Key Implications

Under this regulation, EU importers has to purchase CBAM certificates to offset the price differences resulting from carbon costs when importing goods produced outside the EU.

The CBAM applies to industries with high greenhouse gas emissions, high risk of carbon leakage, and the initial sectors affected includes Steel, Aluminum, Fertilizers, Cement, Electricity, Hydrogen and more. Expected future extensions will cover Oil refining, Petrochemicals and Plastics.

Implementation Timeline

- May 2023 – Finalization of implementation guidelines
- October 2023 – Transition period commencement
- January 2026 – Definitive period begins

From the definitive period, Annual CBAM Declaration, including the required information, verification report, and CBAM certificates, Third-Party Verification, Tax Submission must be submitted annually.

- January 2034 – CBAM Full application

Given the ongoing regulatory developments, it is crucial to continuously monitor EU publications and updates regarding CBAM compliance and implementation

[CQC – Newly developing energy efficiency standard for electric vehicle charging piles in China]

Energy Efficiency Standards for Electric Vehicle Charging Piles (HS code(s): 850440); (ICS code(s): 27.010)

This document defines the energy efficiency grades, minimum allowable energy efficiency values, and testing methods for electric vehicle charging piles.

Scope of Application

This standard applies to off-board conductive power supply equipment with current and/or voltage control, including:

- Direct Current (DC) power supply equipment (Mode 4, Connection Method C)
- Alternating Current (AC) power supply equipment (Mode 3, Connection Method B or C)

The rated voltage specifications are not exceeding 1,000V (AC) for Power supply network side, and not exceeding 1,000V (AC) or 1,500V (DC) for Electric vehicle side.

Implementation Timeline is not yet decided.

[ETC – Chinese Taipei's Green Procurement Policy]

Chinese Taipei has implemented a green procurement policy to encourage consumers to purchase or lease products and services that carry labels or marks recognized by the Ministry of Environment. This includes 9 types of domestic certifications, such as the Environment Mark and Water-Saving Mark, as well as internationally recognized labels including Energy Star, FSC from United States, Korea Eco-Label, China Eco labelling, Singapore Green Label, Japan Eco Mark, and more.

Domestic products that qualify under the green procurement policy without requiring markings include Bicycles, Electric vehicles, LED lamps, Green Life Initiative products, Domestic organic fertilizers, Renewable energy solutions, and Recycled resource-based green products.

[TÜV SÜD PSB - Updates on MELS and MEPS Requirements under the Energy Conservation Act (ECA), Singapore]

TÜV SÜD PSB has prepared the Mandatory Energy Labelling Scheme (MELS) and Minimum Energy Performance Standards (MEPS) in accordance with the Energy Conservation Act (ECA).

Currently, few models in Singapore achieve a 4- or 5-tick rating; however, these criteria will be revised over time. The updated 4- and 5-tick energy efficiency bands aim to encourage manufacturers to introduce higher-efficiency models in Singapore, providing consumers with more options and greater cost savings.

MEPS Revisions Effective April 1, 2025

- Single-split air conditioners: MEPS requirement will be raised to 4-tick
- Multi-split air conditioners: MEPS requirement will be raised to 5-tick
- All refrigerators: MEPS requirement will be raised to 3-tick

For further details, please refer to the official link provided below:
https://www.nea.gov.sg/our-services/climate-change-energy-efficiency/energy-efficiency/household-sector/about-mandatory-energy-labelling-and-minimum-energy-performance-standards

C5 Factory Inspection & EMC/RF: Updates on EMC/RF

[ETC – Updates on EMC/RF Standards and Regulations for EVSE in Chinese Taipei]

Regulatory Amendments for Electric Vehicle Charging Equipment (EVSE):

- Scope: Applicable to systems below 30kW
- Effective Date: January 1, 2026

No	CNS Standard	IEC Standard	Regulations
1	CNS 15511-21-2 (2021) (EMC)	IEC 61851-21-2 (2018)	RPC (≦30 kW)
2	CNS 15511-21-2 (2021) (EMC)	IEC 61851-21-2 (2018)	VPC (>30 kW)

[TÜV SÜD PSB – Singapore EMC/RF Technical Specification Updates & IMDA Developments]

Draft Technical Specifications for Cellular Base Station and Repeater Systems, IMDA Issue 1, Revision 4, and Cellular Mobile Terminal, IMDA Issue 1, Revision 3, were published on September 24, 2024 and comments were closed on October 15, 2024

Key Updates for this specification are Removal of 3G specifications, Addition of 5G repeater specifications, Addition of Band 28, Updates to RF EMF standards and others.

Infocomm Media Development Authority (IMDA) is actively advancing initiatives in Generative AI development, 10G Nationwide Broadband Network (NBN), Expansion of Generative AI (GenAI) capabilities, Building an Environment Industry Digital Plan, and Exploration of AI and emerging technologies.

These efforts reflect Singapore's commitment to enhancing digital infrastructure and adopting cutting-edge technology.

[Quatest 3 – Summary of Vietnam's Circular 02/2024/TT-BTTTT]

Effective May 15, 2024, Vietnam's Ministry of Information and Communications has introduced Circular 02/2024/TT-BTTTT, which includes updates on technical standards and regulatory requirements.

New QCVN Standards:

- QCVN 117:2023 – 2G/3G/4G Devices
- QCVN 110:2023 – E-UTRA Base Stations
- QCVN 111:2023 – E-UTRA Repeaters
- QCVN 55:2023 – SRDs (9 kHz – 25 MHz)

Key Regulatory Adjustments:

- Wireless charging devices now require only QCVN 96:2015/BTTTT, eliminating additional testing.
- Suspension of extreme condition testing extended until June 30, 2025 (excluding Wi-Fi Access Points).
- 5G NR mobile phones must support both SA and NSA modes and meet QCVN 127:2021/BTTTT requirements.
- Chassis test results now allowed for SDoC declarations under QCVN 63:2020/BTTTT, streamlining certification.

This Circular simplifies compliance, eases certification for manufacturers, and updates regulations in line with industry advancements.

[JQA – Revision of PSE Technical Standards, Japan]

- METI has announced that EMC standards will switch from Appendix 10 of Japan's original standards to Appendix 12 of the International Harmonized Standards for some electrical products.

Electrical products	Appendix 12* Newly introduced, Valid immediately	Appendix 10 Former version valid until July 31, 2026
Copy machines(Using Electromagnetic induction heating)	J55032	Chapter 2 and Chapter 4
Household ultrasonic therapeutic appliances, Household ultrashort wave therapeutic appliances	J55011	Chapter 2
Electronic music intstruments, Radio receivers, Record players, Juke box, Other audio appliances, Video tape recorder, Television receivers, Boosters for television receiver	J55032	Chapter 3

More Information can be found at: https://www.meti.go.jp/policy/consumer/seian/denan/topics.html#t8 (written in Japanese)

NN – New Normal

During the Ad-hoc meeting, New Normal continued its case study on Nordic Certification, a voluntary certification mark from Nordic certification bodies that ensures product safety through third-party evaluation.

Key Benefits of Nordic Certification:

- Flexibility – Applicants can choose their preferred certification body and extend the certification mark to another body if necessary.
- Efficiency – A single submission allows applicants to obtain four certification marks simultaneously.

Based on this case study, ANF will continue efforts to develop its own voluntary certification program.

Regulatory Database Development

New Normal also proposed the creation of a regulatory database to store and organize regulatory information, including laws, regulations, and industry guidelines from various countries. The database will facilitate regulatory updates through newsletters, social media, and other communication channels. ANF aims to upload latest information shared at committee meeting to ANF website.

YEP – Young Expert Program: ETC Hosts Young Expert Program (YEP) 2024

ETC successfully hosted the Young Expert Program (YEP) from September 3 to 5, 2024, at Fullon Hotel, Taoyuan City, Chinese Taipei. As outlined in the Annual Report, YEP participants gained valuable insights into the business operations of member organizations and shared expertise on emerging technologies relevant to their roles.

ETC extended exceptional hospitality throughout the event, ensuring a meaningful and engaging experience for all attendees.

For further details, please refer to the full article on the previous pages.

General Assembly (GA) Meeting Summary

On the final day, the General Assembly (GA) meeting was held at the Osaka International Convention Center.

The secretary general officially opened the session, followed by member introductions and greetings. The draft agenda and minutes from the previous GA meeting were reviewed and approved.

Approval of New Member – EEI (Thailand)

As part of ANF's initiative to expand its network across Asia, the 2023 GA set forth plans to engage with regional testing and certification bodies. KTL, the presidential organization, has made their move to promote ANF activities and the membership resulting in EEI's participation in ANF activities and subsequent membership application.

During the meeting, current members reviewed the application, conducted an assessment, and unanimously approved EEI's membership, making it the 7th official member organization of ANF. Members warmly welcomed EEI, emphasizing their commitment to strengthening multilateral collaboration.

Appointment of New ANF Vice President

During the General Assembly, a leadership transition was confirmed as Mr. Kobayashi stepped down from his role as Vice President, with Mr. Ishii of JQA appointed as his successor. Members unanimously agreed and approved the transition, ensuring continuity in ANF's leadership.

Review of Issued and Recognized Test Reports

Member organizations compiled data on the number of issued and recognized test reports. Overall, case volumes remained stable, with expectations of increased activity following the appointment of a new member.

Secretariat Report Approval

The Secretary General presented the Secretariat Report to members, covering the nomination of EEI and key issues discussed during the GA. As there were no objections, the report was formally accepted.

JQA Presentation: AI in Conformity Assessment

JQA delivered a presentation on the role of AI in the Conformity Assessment field, highlighting its transformative potential across industries such as healthcare, agriculture, entertainment, chatbots, and robotics. AI can serve as both a tool for conformity assessment activities and an object of assessment itself.

Leading Testing, Inspection, and Certification (TIC) companies are incorporating AI-powered services to enhance conformity assessment processes. These solutions, including generative AI, offer automated and efficient services to benefit customers and industries.

As AI becomes an object of conformity assessment, global regulatory frameworks and certification schemes are actively being developed. Key initiatives include:

- EU AI Act – Already entered into force
- ISO/IEC JTC1 SC42 & CEN/CENELEC JTC21 – Developing AI standards
- IEC AI Task Forces – Working on AI certification frameworks

These developments reflect the increasing importance of AI governance and compliance in the conformity assessment landscape.

Final Approval and the next year plan

The final approval was made unanimously, so the members had time to look over the next meeting plans. YEP program will be hosted by JQA in Japan next year, and the Ad-hoc Meeting will be discussed later and the GA will be held in Singapore by TUV SUD PSB.

This meeting covered a wide range of important topics, providing valuable insights for all members. With new regulations and standards evolving rapidly, ANF members remain committed to staying informed and leading industry advancements.

Plans of 2025 ANF activities

Timeline of the ANF 2025