VCWS in Tokyo 2025

October 6, 2025, at Keio University's Mita Campus, with 57 participants

Report

Program

Time	Session	Speakers / Details
9:30	Doors Open	
10:00	Opening Remarks	Jay Kishigami (WCAP), Philippe Le Hégaret (W3C)
10:20	Keynotes	Nat Sakimura (OIDF), Naohiro Fujie (OIDF Japan)
11:20	Lunch	

12:30	Updates from Asia-Pacific Country/Region and World Trends	1. Rushdan Anuar, Director, Information Technology at MY E.G. Services Berhad, Malaysia (remote) 2. Cheang Vutha, Deputy Secretary General, Ministry of Tourism and Creative Economy, Cambodia (remote) 3. Miss Khanit Phatong, Advisor, ETDA Thailand 4. Zoey Tseng, Odditysay Labs, Taiwan 5. Makoto Yoshiike, OP CIP Japan 6. Pierre-Antoine Champin, W3C (remote) 7. Kristina Yasuda, SPRIND Germany (remote)
14:50	Networking coffee break	
15:10	Panel Discussion	Moderated by Nat Sakimura, all speakers participate Topic 1: Usability and assurance of trust, balancing user trust with multi-factor authentication Topic 2: Standardization bodies involved in VCs Topic 3: Impact of AI
5:00 PM	Closing Talk	Dr. Chaichana Mitrpant (Executive Director, ETDA)

Opening Remarks

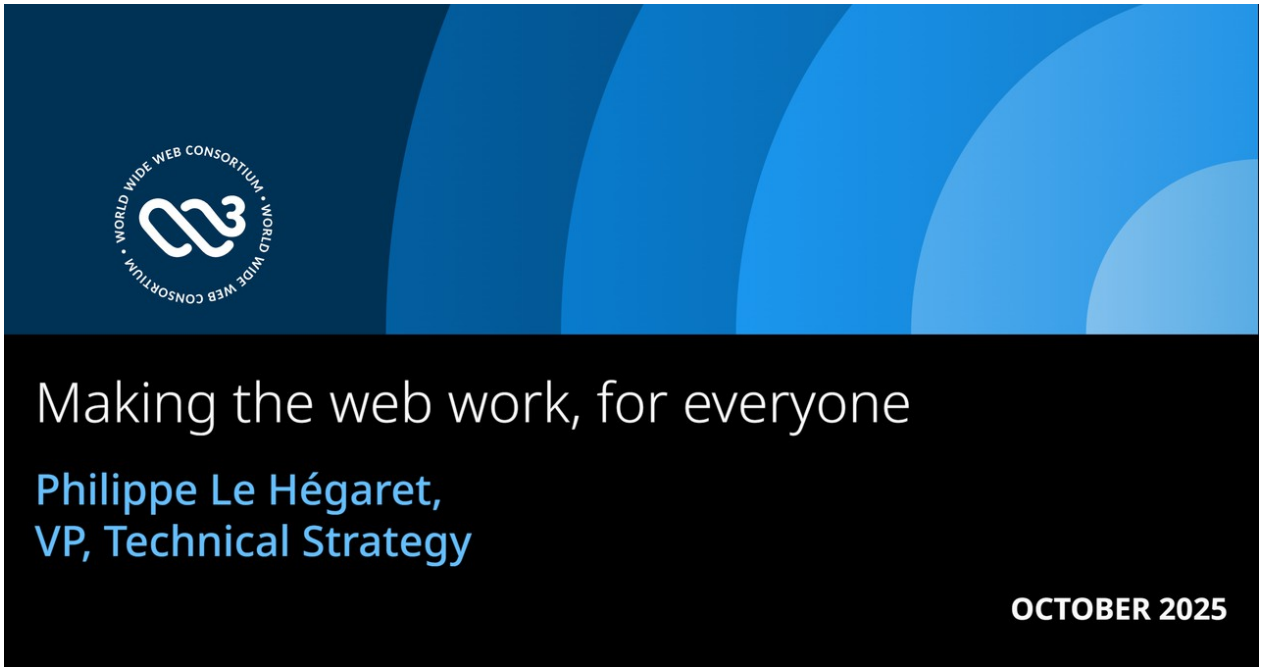
Junichi Kishigami

The opening of VCWS in Tokyo 2025 was announced. This event was co-hosted by WCAP, also a W3C Partner in Japan, and Thailand's ETDA (The Electronic Transactions Development Agency). Counting the event held in Bangkok in November 2024, co-hosted by the World Bank and ETDA, as the first practical session, this marks the second session.This event, held over half a day at Keio University's campus in Tokyo's Minato Ward, featured passionate discussions with leading experts in Verifiable Credentials from around the world (Japan, France, Malaysia, Cambodia, Thailand, Taiwan, Germany).

Dropbox document preview

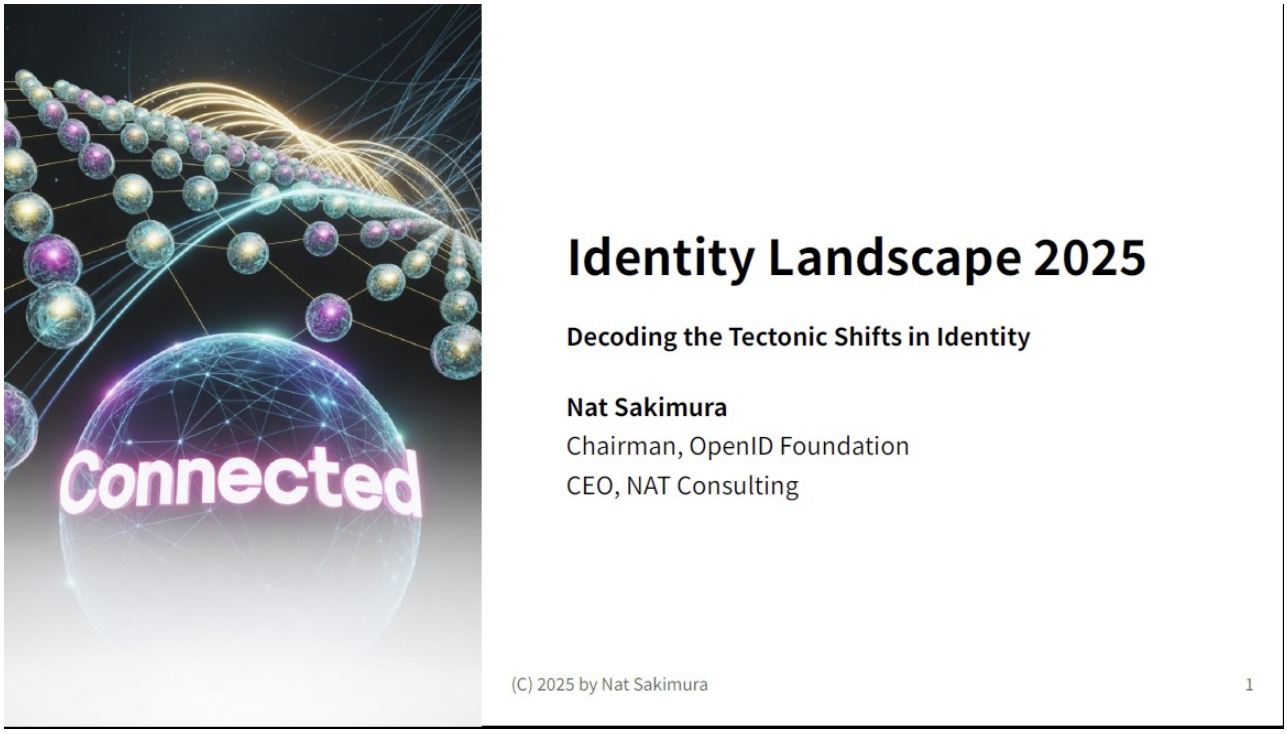
Philippe Le Hégaret

Provided a concise overview of W3C, VC progress, and WG explanations



Nat Sakimura

The presentation on the 2025 Identity landscape was titled "Tectonic Shifts and Shocking Developments."



The outlook for identity in 2025 began with an explanation that it stands at the following turning point, where multiple axes are simultaneously being reconstructed.

- Human/Non-Human
  AI agents, bots, and cloud workloads will participate as decision-making entities.
- Centralized/Decentralized Digital wallets will enable selective openness and cross-border interoperability.
- Nation/Enterprise/Citizen

  New social contracts will be required in scenarios involving multiple actors

- The Rise of Non-Human Identity

Generative AI and agent technologies have shattered the assumption that identity belongs solely to humans. Future identity scales are projected to exceed humanity's by hundreds of times. AI agents face the following challenges:

- Boundaries of Responsibility: Defining accountability in delegated decision-making
- Privilege Escalation: Preventing unauthorized authority from expanding across chains

- Interoperability: Agent and service authentication and proposal management

- Agent ID Management and SPIFFE

Recommending the use of SPIFFE for agent identity management

- Challenges of National Identity Standards

Most national standards, such as NIST SP 800-G3-4, focus solely on human identity.
However, ISO/IEC 26115 introduced non-human entities (NPE) in 2011, primarily for IoT devices.
(NPE).

- The EU must distribute certified Walletwo by 2026, but readiness may be uncertain. Germany, France, and Italy are currently developing immediate schemes.

- Global Rollout of Digital Wallets

Given these developments, 2025 has become the year of the Wallet-first paradigm shift. From a standards perspective

  - W3C VC Data Model 2.0
  - OpenID4VP 1.0 Formalizes interoperable presentation flows
  - OpenID4VCI 1.0 Standardized issuance API, bridging EUDI, mDoc, and VC ecosystems, hybrid interoperability between DID/VC and mDL/mDoc models becomes reality

- Nationally-led Digital ID System
  - Under EU eIDAS 2.0, mandates wallet issuance and cross-border interoperability. Maintains legal enforceability aligned with web standards while ensuring consistency with VC/OID4VC. Decentralized issuance and centralized oversight coexist
  - USA Without a national ID system, the US relies on: NIST SP 800-G3-4 and agency guidelines. AAMVA and state DMVs form the de facto operational standard.
    Private sector adoption for age verification in retail
    Decentralized ID is advancing through autonomous, market-driven implementation.
  - Japan: My Number Card to be introduced on smartphones in June 2025. Implementation will comply with mDoc (ISO/IEC 23220).

  - ISO Assurance Framework scheduled for release in 2025
    - Establishes global principles for age verification, estimation, and inference. Key features include the separation of age verification from personal identification information, minimal disclosure of privacy, and the close alignment of selective disclosure with accountability in wallet integrity.

, and close alignment between selective disclosure and attribute presentation in wallet integrity.

- UK Online Safety Act
  - Requires "robust age verification" for all adult content sites and apps
- USA By 2025, age verification regulations will be significantly strengthened.

Comprehensive, multi-layered age verification is becoming a legal requirement for many online services.

- Social Impact and Future Outlook
  - Freedom to Become Who You Want: The issue is evolving into a shared responsibility among states, corporations, citizens, and non-human entities. Ultimately, personal identity is co-defined by the self and others. The freedom to become oneself is a constitutional right.

Recommendations for the Future

- For Governments and Regulatory Authorities

1. Enhanced Transparency
   a. In wallet interoperability, authentication, and auditing
2. Harmonization of age verification
   a. Implementation based on ISO/IEC 275GG-1
3. Privacy Protection
   a. Regular compliance reviews and protective mechanisms

- For enterprises and ID providers

1. Prioritizing Hybrid Compatibility
   Between VC 2.0, OID4VCI/OID4VP, and mDL/mDoc
2. Standardization of disclosure
   Selective disclosure, minimal disclosure, audit trail
3. Machine IAM Integration
   Integration into Zero Trust IAM Architecture

- For citizens and civil society

1. Promoting Understanding of Self-Determination and Least Privilege
   Understanding of self-determination and minimal disclosure
2. Establishment of Oversight Mechanisms
   Public Oversight Mechanisms for Age Verification Systems
3. Institutionalization of Feedback Loops

Institutionalizing Feedback Loops to Detect and Correct Algorithm Bias and Overcollection

- For Research and Standardization Communities

1. Agent Consent and Delegation
   Accelerate work on the social contract. Define legal and ethical standards.
2. Bridge Identity Framework
   Integrate Workload Identity (SPIFFE) and Human Identity
   (NIST 800-G3-4, OIDC, VC) to establish unified standards for the agent era

Naohiro Fujie

"Current State of Digital Identity Interoperability Across Asian Countries"

How to achieve interoperable digital identity across Asian countries

2025/10/6
Chairman, OpenID Foundation Japan
WG co-chair, OpenID Foundation eKYC&IDA WG
Naohiro Fujie

We live in silos defined by different languages, races, cultures, and social systems. We must overcome these differences to communicate. This is called interoperability, and many standardization bodies and regulatory agencies are already working diligently toward it. Attempting this without standardization carries significant risk. This is why we need to introduce technical standards.

Some may argue that a single technical standard could achieve excellent interoperability. However, reality does not reflect this.

What matters is the combination of multiple standards. Currently, a combination of trust frameworks and multiple technical specifications is required. This involves not only technical aspects but also non-technical challenges like semantics.
We must consider appropriate application for each group's attribute representation and size, along with privacy and persistence.

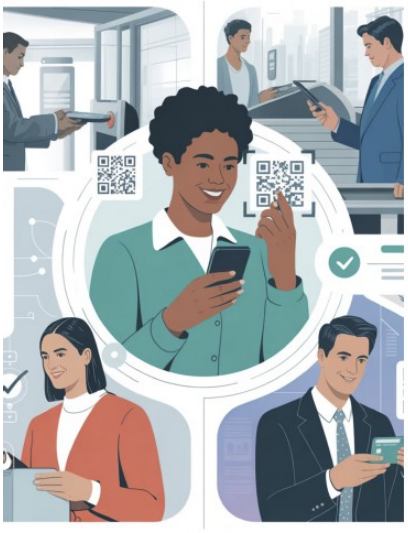
For digital credentials, transport protocols like issuance, display methods, and revocation checks are crucial. Data schemas and signature algorithms also play a role. Achieving interoperability requires not just standard technologies, but diverse technical profiles. We must also be mindful of the semantic space used to express attributes. Certification is necessary. There's also the question of whether digital signatures alone can be trusted. Ultimately,

- interoperability is not solely a technical issue
- I want to emphasize that it is the

accumulation of small successes that matters

Latest Trends in the Asia-Pacific Economic Zone and the World

Rushdan Anuar, Director, Information Technology at MY E.G. Services Berhad, Malaysia (Online Participant)



Zetrix & Verifiable Credentials

Driving Trust, Interoperability, and Adoption in Malaysia and beyond

2025 Verifiable Credentials Workshop
6 October 2025
Presented by Rushdan Anuar, Zetrix AI

> "Building Trust Across Borders"

Advancing Reliability, Interoperability, and Adoption in Malaysia and Beyond

In Asia, 4.4 billion people are awaiting the rollout of digital IDs. While the 10 ASEAN nations are each promoting their own digital ID initiatives, these remain fragmented.

- Introducing Malaysia's Blockchain-Based Infrastructure (MBI)
  A pilot university program conducted by Malaysia's Ministry of Education and a Chinese university using this system saw a 70% reduction in cases of fraudulent academic credentials, demonstrating the effectiveness of the blockchain-based verification system.

Zetrix VC, used in the above system, is

1. - , Guangxi Zhuang Autonomous Region Tourist Attraction: Attraction entry via Passport & MyCard VC
2. NIISE App – Immigration Management Super App
3. eBG – Electronic Bank Guarantee
4. Certificate of Origin (COO) – MITI (Malaysia) and GACC (China)

Adopting W3C standards, ISO-IEC integration, and ASEAN frameworks in the short term,

with implementation of a virtual campus trust framework across ASEAN by 2027

- Implementation of the Virtual Campus Trust Framework across ASEAN
- Launch regional certification exchange program
- Expand infrastructure to support over 50 million wallet users

Long-term: By 2030

- Establish a globally trusted network of interoperable digital IDs
- Achieve 50% of ASEAN population using cross-border virtual currencies
- Achieve full integration with the global ID ecosystem

Current challenges include

Complexity of wallet adoption, privacy technology, governance (regulatory inconsistencies), and market resistance

The rapid proliferation of AI agents and large language models (LLMs) is transforming the interaction of digital systems, enabling autonomous decision-making and complex collaboration.

Cheang Vutha, Deputy Secretary General, MPTC, Cambodia (Online Participation)

Advancing Document Verification Platforms in Cambodia

- Toward a Paperless Government:
  - Digital Applications
  - Digital Responses
  - Utilizing Information Digitally

- For High School Graduation Certificates
  - The government must notarize over 500,000 certificates daily within three days
  - Additionally, over 3,000 public services (national ID cards, military service certificates, cohabitation documents, certificates of origin, etc.) save over $100 million annually

Khanit Phatong, Advisor, ETDA Thailand

Digital Document Wallet in Thailand

Launched in 2018, the VC wallet project was initiated in 2020, with service launch scheduled for 2027
The success factors are as follows

- User Experience (Convenience)
  - Simple, secure, and intuitive interface avoids unnecessary complexity.
  - Support for both mobile and web platforms utilizing familiar methods like QR codes and mobile authentication.
  - Adopting the "one-time input principle" similar to Estonia's approach, eliminating redundant data entry to reduce user burden.
- Implementation and Real-World Application
  - Clear, practical use cases that directly benefit citizens, such as a digital national ID card integrated with services.

- Through the principles of Self-Sovereign Identity (SSI) and selective disclosure, citizens retain control over their own data, ensuring privacy and trust.

- • Interoperability (Cross-system and cross-border collaboration)
  - Support for cross-system and cross-border usage
  - Adoption of international standards: W3C Verifiable Credentials, Decentralized Identifiers (DID), OpenID4VC/VP
  - Establishment of a trusted issuer registry to ensure only accredited and authorized entities can issue digital credentials
- Governance and clear legal framework
  - Digital documents possess equivalent legal validity to paper documents and receive formal recognition by courts and government agencies
  - A mechanism defining certification and revocation criteria for organizations acting as issuers and verifiers
- Reliability and Security
  - Certified cryptographic and digital signature standards to ensure authenticity and data integrity
  - Key and credential storage systems must rely on Secure Enclave
  - Conduct continuous risk assessments based on established guidelines to detect vulnerabilities and proactively address cybersecurity threats

Zoey Tseng, Odditysay Labs, Taiwan

TW DIW 數位憑證皮夾

TWDIW Project Update

Sandbox for Public Test and Feedback.

SDK of Issuer, verifier and holder's wallet will be open-sourced by the end of 2025.

Engagement with Potential Issuing Authorities & Regulatory Alignment (WIP)

Taiwan's Trusted Registration Authority TWDIW (Taiwan Digital Identity Wallet) is built using IETF, W3C, OpenID4VCI, and OpenID4VP. Plans to open-source the wallet SDK by the end of 2025.
Potential issuance targets include

- Mobile driver's licenses
- Mobile ID credentials
- Educational qualification certificates

To prepare these ecosystems, TAM: Technical Advisory Meetings are being held diligently.

Makoto Yoshiike, OP CIP Japan

version 1.4

ORIGINATOR PROFILE

Introducing the "Originator Profile" technology

Latest progress for FY2025

Originator Profile Collaborative Innovation Partnership (OP-CIP)
https://originator-profile.org/en-US/

6 October 2025 @ Verifiable Credential Workshop in Japan

OP's 2025 Progress Update

- Governance Enhancement
- Identification and Verification of Original Documents
- Development within the COP Organization

OP Structure

- Technology-Independent Design: Domain-Independent and Credential Model-Independent
- Multiplicity of Trust
- Third-party certification

Expansion of Application Areas

- Ad fraud prevention
- Expansion into financial centers Deployment methods
- Global OP Standardization

Pierre-Antoine Champin, W3C (Online Participation)

The explanation of VC within W3C was exceptionally clear and well-received. The presentation skillfully used graphs to explain the VC model from the IHV model, focusing on the VC 2.0 Recommendation released this May and the overview published in September. It was an excellent talk, carefully crafted to be understandable even for first-time attendees.

Kristina Yasuda, SPRIND Germany (Online Participation)

Development of the EUDI Wallet Ecosystem in Germany

Examining Challenges for Users and Services

Three key solutions for digital verifiable credentials:

- Trust-based
  - Reliance on trusted credential issuers to verify specific attributes of individuals
- User-Managed
  - Users themselves decide when and with whom to share digital credentials
- Tamper-proof & Verifiable
  - Verification possible without unnecessary data sharing – only required information is transmitted

Wallets capable of this already exist on smartphones, but they are not under our control

- Functionality is limited: Primarily for payments, airline tickets, and concert tickets
- Use cases and technology are determined by providers
- The lack of influence threatens Europe's digital sovereignty If each issuing authority can build its own wallet

- Fragmented user experience
  - Having separate apps or wallets for each function leads to app clutter and increased user burden
- Low user adoption
  - No one wants to download and maintain a new app for every single use case
- High costs

- Developing, maintaining, and operating wallets incurs significant expenses

Therefore

Vision – Enable all EU citizens to use a digital wallet by 2026

European Digital ID Wallet: To be established by the end of 2026

Germany's EUDI Wallet: Germany is building a secure, user-friendly wallet ecosystem through transparent public architecture and consultation processes.

* Germany's dual strategy: Promoting innovation while ensuring trustworthiness
- Government-Provided Wallets
- Users gain the freedom to choose and use from multiple certified and approved EUDI wallets. This fosters competition and accelerates adoption.

EUDI wallets become more than just digital IDs

- Identification: Secure authentication cards using personal identification documents
- Digital Authentication Information: Proof of Attributes: Example: Driver's license, etc.
- Digital Signature: Legally binding signature without physical documents
- Payment: Authorization of payment transactions using a wallet

RUDI Wallet as a Global Digital ID Infrastructure Expanding from Europe to the World

1. Strategic Investment
   a. The EU's focus attracts top talent, innovation, and capital, setting the pace for others to follow.
2. Built for Trust
   a. With high-level security and privacy standards, the EUDI Wallet becomes the global benchmark for trust.
3. Scalable Architecture
   a. Designed for interoperability across 27 member states—ready for global adaptation.
4. Global interoperability
   a. EUDI Wallet establishes a precedent for cross-border digital ID solutions.

EUDI Wallet Ecosystem Management Portal

- The EUDI Ecosystem Management Portal is
  - serves as the access foundation for the EUDI Wallet ecosystem.
- The Ecosystem Dashboard provides
  - provides a public overview of all interactions and key KPIs.
- The portal consists of seven core functions, including organizational registration and identification to meet new eIDAS requirements

- The portal covers all legal, technical, and commercial aspects, serving as the central hub for all ecosystem information
- The Ecosystem Orchestrator
  - provides the portal for the EUDI Wallet ecosystem, with potential for reuse by other ecosystems being evaluated
- Development is iterative and implemented in three phases to ensure flexibility and support ecosystem deployment

Furthermore, interviews enabled us to identify people's behavioral patterns surrounding wallets, understand their underlying motivations, grasp the values driving their actions, and gain a deeper understanding of individuals.

- The following are various reference materials:

https://github.com/eu-digital-identity-wallet/eudi-doc-standards-and-technical-specifications/issues?q=state%3Aopen%20label%3A%22Wallet%22%20label%3AEssential

eu-digital-identity-wallet/eudi-doc-standards-and-technical-specifications • github.com

https://bmi.usercontent.opencode.de/eudi-wallet/eidas-2.0-architekturkonzept/content/ecosystem-architecture/introduction-and-goals/ | Introduction and Goals - Blueprint for the EUDI Wallet Ecosystem in Germany
https://bmi.usercontent.opencode.de/eudi-wallet/eidas-2.0-architekturkonzept/content/ecosystem-vision-and-fundamentals/standards/ | Standards - Blueprint for the EUDI Wallet Ecosystem in Germany
https://bmi.usercontent.opencode.de/eudi-wallet/wallet-development-documentation-public/Guidelines/eidFlow/#requirements-for-eid-client | eID Flow - German National EUDI Wallet: Architecture Documentation

Panel Discussion

Moderator: Na Sakimura, All Speakers Participate

Topic 1: Ensuring Usability and Reliability, Securing User Trust, and Balancing Multi-Factor Authentication

Topic 2: Standardization Bodies Related to VC

Topic 3: Impact of AI

Here, an extremely active discussion on the above points took place over nearly two hours. The main points of discussion are as follows.

- As a means to enhance reliability, VC will take on greater social significance, necessitating greater focus on user acceptance, usability, and promoting user benefits.

- Given the current proliferation of standards, organizations, and regulations, it is crucial to effectively combine standardization with repeated field testing and Proof of Concept (PoC) to expand adoption throughout society.
- While AI certainly brings many benefits, it also has a downside, making an approach that effectively combines it with VC desirable.

Closing Remarks

Chaichana Mitrpant (Executive Director, ETDA)

With the words, "We hope to continue this format next year. We are also prepared to cooperate to the fullest extent possible," the lengthy VCWS in Japan 2025 concluded successfully.

Next Step

We received requests from many participants to continue holding workshops like this. ETDA also made a concrete offer to be involved in hosting. Building on the success of this event and the 2024 Bangkok event, we plan to continue holding workshops in 2026.