

## The Core Human Resource Program graduates gave their presentations at One of the Largest OT/IT Cybersecurity Conferences in Japan

In February 2021, the 5th Critical Infrastructure Cybersecurity Conference and 2nd Industrial Cybersecurity Conference (hosted by the Critical Infrastructure Cybersecurity Conference) were concurrently held online. Seven graduates from the Second Cohort of the Core Human Resource Program appeared on the platform as presenters and conveyed the significance of learning at the ICSCoE and their activities continuing even after completing the program to the OT/IT industries. The presenters expressed their personal views on the program they felt after participation.

### Best use of the Building Security Guidelines ~ 2021 update ~

The graduates from the building industry, who had engaged in examining the Building Security Guidelines (released in June 2019 by Ministry of Economy, Trade and Industry), reported changes in circumstances surrounding building security and the latest trends of the METI's activities in this field.



Mori Building Co., Ltd.

**Mr. SATO Yoshinori**

During our participation in the ICSCoE, the remarks from our volunteer trainees on solicited public comments about the guidelines triggered this activity; whence we joined a working group examining the contents of these guidelines and still have been participating in it even after completing the program. It is an excellent and well-timed project for us to expand the activities and bring us a privilege to meet with outstanding colleagues. I believe I contribute to my company by taking advantage of my connections cultivated through these various activities at the ICSCoE.



Japan Nuclear Security System Co., Ltd.

**Mr. TAGUCHI Kei**

My participation in this conference became a great opportunity to rethink how to apply the knowledge that I had absorbed so far. I also learned a lot from other members' ideas, which helped me organize my thinking. This activity is not directly related to my work; however, I always think about how to translate this activity into our business. When I consider my interests and feedbacks to my company, I see committed activities as a graduate of the ICSCoE. Therefore, I would like to contribute somehow to the whole industry and our society.

### How should we prepare procurement specifications for supply chains Essentials revealed through a buyer-supplier discussion

In the final project of the Core Human Resource Development Program, the graduates, who had researched supply chain security, presented the contents of their final project. They also introduced the essentials to develop procurement specifications through a lively discussion with the perspectives of both buyers and suppliers.



NEC Corporation

**Mr. KUSAKABE Kotaro**

We discuss the gaps between our thoughts as of the time of our final project and current views. When I look back on the project, I believe it gave us the privilege of experiencing a wide variety of things. I think having learned various security methods through the program is beneficial to our current operations.

Besides, we had an opportunity to decipher multiple guidelines, which is not happening during our ordinary business hours, and that became one of our advantages.



Hitachi Industry & Control Solutions, Ltd.

**Mr. FUJIE Yuki**

We debated some issues regarding procurements between "buyers" and "suppliers". This debate replicates the efforts of our actual final project. I hoped to convey the characteristics of the ICSCoE activities, where the trainees with different perspectives receive lectures together and work closely on projects. In that manner, not only taking the program but also after completing it, we have an atmosphere where cooperating with and helping each other regardless of users or vendors when necessary. It is hard to tackle cybersecurity on my own; therefore, I would like to keep working with my colleagues whom I met through this program.

For more details of our final projects on building security and supply chain security mentioned above, please refer to the ICSCoE REPORT vol.5  
ICSCoE REPORT vol.5 <https://www.ipa.go.jp/files/000079391.pdf>

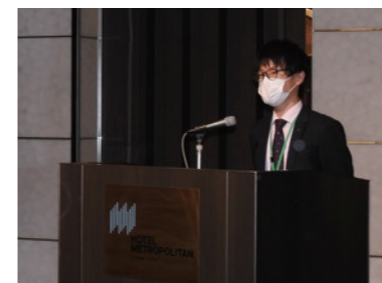


The ICSCoE Report is a public relations newsletter on ICSCoE's activities.

## The 3rd General Assembly of "Kanae-kai"

The third general assembly of "Kanae-kai", an alumni community of trainees who completed the Core Human Resource Development Program, was held in November 2020. The graduates of the first through third cohorts, lecturers, and staff members gathered together totaled 131 attendees (including 70 remote participants) at the assembly.

Mr. HASEGAWA Hiroyuki, a newly appointed Chairperson of Kanae-kai, gave his speech at the assembly and expressed his determination to "create an attractive-and-easy-participating community for alumni", "foster a culture of industry-government-academia cooperations and inter-organizational collaborations", and "build a management system to realize the objectives set by Kanae-kai".



Mr. HASEGAWA expressing a determination as the chairperson of Kanae-kai

Mr. EGUCHI Junichi, Deputy Director-General for Cybersecurity and Information Technology of Ministry of Economy, Trade and Industry (METI), introduced the METI's latest initiatives and expected its members to build a close relationship among individuals beyond organizational boundaries in the keynote speech.

At this assembly, the graduates presented the activities by "Kanae-kai Subcommittees" and the updates on each member. We could see that the graduates and lecturers enthusiastically interacted with other participants and exchanged their opinions between and after the sessions. We believe that the participants felt the significance of their efforts and continued connections even after completing the program through this assembly.



### Kanae-kai Subcommittee Reports

#### First Cohort Committee

The committee reported the study session held in January 2020, where shared information in seminar-style and conducted the in-depth discussion in a free discussion format.

#### Know-How Sharing Committee

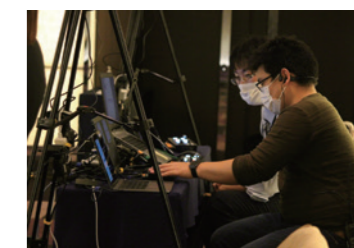
The committee reported that they had been taking advantage of online technologies and sharing their cybersecurity knowledge with its members. They also recognized the members who had actively been promoting the committee's activities throughout the year.

#### Community Activities Committee

The committee reported that they regularly held meetings in the Chubu region and have exchanged opinions to advance their skills. The committee also announced that they were planning activities in the Kansai region.

### Realized an Onsite-Online Simultaneous Participation

Each year, we only allow onsite participation; however, due to the coronavirus (COVID-19) pandemic this year, we prepared a live streaming environment for some graduates, who might not possibly come to the venue, using technologies and equipment developed as a part of the ICSCoE training. We live-streamed the assembly from the site, and 70 people could enjoy online participation.



Live-streaming at the venue

For more details of Kanae-kai activities, please refer to the ICSCoE REPORT vol.6  
<https://www.ipa.go.jp/files/000082688.pdf>



## Introducing International Relation Activities

In the Core Human Resource Development Program, we are working on international relations in collaboration with overseas specialized organizations as part of the “Professional Networks” program to build an advanced network of personal connections in the cybersecurity field. We interviewed Dr. KADOBAYASHI, who supervises the curricula for the significance and features of this program.



Dr. KADOBAYASHI Youki,  
Professor, Nara Institute of Science and Technology

—Please tell us the background of how you incorporated the curricula for international relations into the Core Human Resource Development Program.

I had been considering it was essential to have an international-focused approach before ICSCoE was established in 2017.

In Japan, critical infrastructures, such as plants and automotive industries, are valuable “export industries”. On the other hand, information technologies used for critical infrastructures, such as computers and the internet, overseas are way ahead of Japan; thus, we can say that these technologies are Japan’s “import industries”. Besides, I heard that the studies of systems and regulations for cybersecurity in other countries are far ahead of Japan.

We assumed that if we kept addressing cybersecurity based solely on domestic standards under such circumstances, it might end up being a situation, “we do not buy Japanese plants because they do not comply with international regulations”. In other words, Japan will lose its global competitiveness of critical infrastructures, and these infrastructures will not continue to be export industries.

In order to avoid this situation, we believe that we should comprehensively understand various areas of cybersecurity, such as regulatory trends, judicial precedents, and business practices in other nations, and therefore, we decided to incorporate international relations into our curricula. We believe the best way to understand global trends is to visit actual locations ourselves; thus, we have been conducting deployment exercises overseas.

—What can the trainees gain experience during the overseas deployment exercises?

They are traveling overseas, attend lectures and exercises, and exchange information with local experts.

We have visited the United Kingdom and France as well as Greece where the ENISA locates its headquarters. We also visited the Czech Republic to participate in the international conference on cybersecurity analysis. We planned to travel to Israel responding to the demands from the trainees (canceled due to the social conditions). Thus, we may start arranging events not initially planned if trainees request us with passionate desires.

\*ENISA (The European Union Agency for Cybersecurity)

—Please tell us the features of overseas deployment exercises to the United Kingdom and France?

Under the equal partnerships with the UK and France, our trainees will realize the distinctions between these two countries and Japan.

Both countries have a strong presence among the European nations and are in a position as a rule maker of regulations. Therefore, we can learn a lot from their positive and proactive attitudes and awareness toward security.

The UK receives substantial supports for security programs from its governments. Thus, we can obtain a variety of information through our deployment exercises.

The UK excels in the automotive and financial sectors and focuses on industrial innovation. We visited the UK coincided with “Black Hat”, the world-leading information security event, and we could experience the world’s most advanced technologies.

France has a similar aspect in its industrial mechanisms to Japan.

Japan and France have a commonality in their approaches where both nations have their own critical infrastructures in various areas including automotive and electric power. Although these two countries bear some resemblances, they can learn from each other because each country has fields tackling way ahead of the other. Another feature of our exercises is that trainees can witness the actual cybersecurity systems or system demonstrations at research institutions.



Trainees can understand the latest global trends from experience (France, 2019)

I believe that we have great significance that “we do not end up with pre-established harmony” in terms of visiting actual sites.

We have seen the trainees passionately press the local experts hard with questions, not in given scenarios:” tell me more” and “what’s happening here” Humans are not ever likely to grow with the theory of pre-established harmony, and I believe that we definitely need a willingness to take on challenges to grow. Our overseas deployment exercises could be an excellent opportunity for our trainees to have technical conversations with local experts without interpreters.

—Please tell us your concerns regarding the deployment program for the fourth cohort under the COVID-19 pandemic.

Our ultimate goal was to manage to carry out the overseas deployment exercises.

The experts remotely lectured the trainees from the UK and France, and they asked and answered questions by the audio and chat tools. We also invited the experts from the Israeli Embassy to explain their latest efforts in cybersecurity.



The Overseas Deployment Exercise for the 4th cohort was held with the cooperation of the British embassy

We were sometimes irritated by the remote sessions but could find some merits from them. For example, the trainees could ask questions by chat. With this chat tool, these sessions enabled the trainees lacking confidence in speaking English precise and advanced communication among participants by utilizing machine translation during the remote sessions. We are truly grateful that we could continue our activities. We cannot express enough our feelings of appreciation to the nations who supported us under such difficult circumstances. I believe that such hardships will make

us deepen trusting relationships. I am very looking forward to the coming year and beyond.

Each year, we have sent the trainees to the United States for the DHS exercise; the fourth cohort, however, will participate remotely in the exercise this year. We will nominate suitable trainees to participate in this exercise as representatives of ICSCoE based solely on proficiency in English. I was involved in this candidate nomination and am sure they will proactively participate in this exercise.



A send-off event was held for the exercise participants

—Please tell us about your future plans.

I would like to build a connection with foreign researchers and businesspeople active in Japan.

For example, I have an acquaintance from Cote d'Ivoire who speaks French and English and has knowledge of a security analysis methodology on smart homes in France. I introduced this methodology to one trainee, he became interested in using this methodology to analyze supply chains, and these two connected each other. I would like to provide such opportunities more and hope them to reach the stage of expanding their networks beyond nationalities and solving problems facing industries.

Therefore, ultimately, we become aware of a desire for further development in the export industries of Japan. I believe the world will surely realize in amazement someday that Japan has been grappling firmly with cybersecurity and will create critical infrastructures, which never stop delivering solutions and services. We have been committing to the Overseas Deployment Exercises since we believe that our trainees are the ones who will play a prominent role in the cybersecurity field near future.

### The Trainees' Voluntary Activities

#### The Alumni-Trainee Collaboration Team Participated in Demonstration Experiments of Wide-Area Video Streaming with Ultra-High-Resolution Video

The graduates and fourth cohort trainees of the Core Human Resource Development Program participated in the experiments of video streaming demonstration organized by the National Institute of Information and Communications Technology (NICT). A total of 61 organizations from governments, academia, and industries took part in the experiments. ICSCoE participated in these demonstration experiments for the third consecutive year since 2019.

Each year, the alumni and trainees transmit high-resolution live videos of the Sapporo Snow Festival. However, in 2021, due to the COVID-19, the participants decided to distribute the prerecorded videos of the Shuri Castle in Nago City, Okinawa, and the live videos from Sapporo City. Moreover, they conducted a new experiment to realize “Remote Video Production”, which will be paid more attention to a new normal lifestyle in the COVID-19 era.

ICSCoE performed various penetration tests on these new technologies, video controllers, and network equipment. The graduates and trainees voluntarily participated in the experiments and subjectively tackled an objective and challenge of each participant, such as acquiring knowledge and networking with experts. We expect that the participants will utilize their experiences absorbed from their large-scale and cutting-edge experiments for ever-changing communications and broadcasting fields.

For more details of our demonstration experiments, please visit the following URL  
<https://testbed.nict.go.jp/event/yukimatsuri2021-press.html>



The participants performing the remote production experiments