Tokyo Tech–AYSEAS
2022 Online

Tokyo Tech–Asia Young Scientist and Engineer Advanced Study Program

Final Report

-From Asia to the World-

Tokyo Tech
AYSEAS

1. Acknowledgement

Tokyo Tech-AYSEAS (Tokyo Tech-Asia Young Scientist and Engineer Advanced Study Program) Administration Office and all Tokyo Tech-AYSEAS 2022 online members would like to thank the following cooperating organizations, companies and universities (listed here in the order we virtually visited) for the precious opportunity to visit them virtually and for discussions with students from Japan and partner universities in Indonesia, the Philippines, Thailand, and Vietnam.

Jij Inc.
Ho Chi Minh City University of Technology
Divers Clean Action
P&G Innovation Godo Kaisha

2. About the Program

Tokyo Institute of Technology (Tokyo Tech) launched the Tokyo Tech-Asia Young Scientist and Engineer Advanced Study Program (Tokyo Tech–AYSEAS) in 2013. It is the successor to the highly successful Japan–Asia Young Scientist and Engineer Study Visit (JAYSES), which was launched in 2007 with the aim of establishing networks among promising young persons in Asia. With more than 500 alumni, the two programs have nurtured lifelong friendships among participants. Tokyo Tech–AYSEAS provides opportunities for participants to broaden their horizons through collaboration with students from different backgrounds and to experience the dynamism of rapidly growing Asian countries' industry, education and government.
This year, the program was held online. With the same spirit as previous iterations, the theme is "From Asia to the World." The program primarily consisted of the two parts outlined below:

(1)Pre-study sessions
The Tokyo Tech participants had pre-program orientation sessions lectured by Tokyo Tech professors in Japan to prepare for discussions in English and to deepen understanding of South East Asia.

(2) Activities with all participants from August 29 to September 6, 2022
- Virtual visits to companies and organizations
- Group discussions and presentations
- Virtual campus tour of Tokyo Tech

The topics of the Group discussions and presentations are indicated below:
Group A: MUSKE-TEER - Volunteer Application
Group B: Precise forecast of natural disasters and developing cost of forecasting methods
Group C: Recycle Green - An alternative and innovative way of reusing masks
Group D: Smart city and privacy
Group E: Improve of health conditions and excessive population increase
Group F: Sustainable Housing

2.2 Objectives
- To experience collaboration with students from different nationalities, cultures, languages, viewpoints or fields of study.
- To brush up English as an international language.
- To develop friendship ties with students from different countries.
- To get motivated to be global leaders.

2.3 Participating Universities

Japan:	Tokyo Institute of Technology
Indonesia:	Institut Teknologi Bandung
Thailand:	Chulalongkorn University
	King Mongkut's Institute of Technology Ladkrabang
	Kasetsart University
The Philippines:	De La Salle University
	University of the Philippines, Diliman
Vietnam:	Hanoi University of Science and Technology
	Ho Chi Minh City University of Technology

2.4 Benefits for the participants
- Participants can develop an international human network.
- Participants can learn about ASEAN area.
- Participants receive certificates signed by an Executive Vice President of Tokyo Tech.
- Participants can collect useful information about studying at Tokyo Tech.
- Participants can improve their English skills.

2.5 Expected Results
- More Japanese students will go to study abroad.

- More ASEAN students will come to study in Japan.
- A strong network will be established between top-ranking universities in ASEAN countries and Japan.

3. Schedule

	Date	Content
	8/23	Pre-event
Day 1	8/29 （Mon）	Opening Ceremony, Orientation, & Lecture Prof. Motomu Nakashima, Tokyo Tech
		Ice Breaking Session
Day 2	8/30 （Tue）	Group Discussion
		Lecture: Jij Inc. Mr. Yu Yamashiro
Day 3	8/31 （Wed）	Lecture Dr. Le Tuan Anh, HCMUT
		Group Discussion
Day 4	9/1 （Thu）	Lecture: Divers Clean Action Ms. Swietenia Puspa Lestari
		Group Discussion
Day 5	9/2 （Fri）	Case Study Session: P&G Dr. Yukari Segawa
		Group Discussion
Day 6	9/5 (Mon)	Virtual Campus Tour of Tokyo Tech
		Group Discussion
Day 6	9/6 （Tue）	Practice of Final Presentation
		Final Presentation, Closing Ceremony

4. Participant List

Group	University	Name	Department	Year of Study	Gender	Nickname
A	DLSU	Julia Aliana L. Halili	Chemical Engineering	B3	F	Julia
A	HCMUT	Febrina Vienna Soulisa	Construction Engineering and Management	M2	F	Ebi
A	HUST	Nguyen Trong Son	Mechanical Engineering	B2	M	Son
A	KU	Pakorn Laohakanniyom	Software and Knowledge Engineering	B2	M	Ryu
A	Tokyo Tech	Noe Naganuma	Environment and Society	B1	F	Noe
A	Tokyo Tech	Erdenebat Battseren	Transdisciplinary Science and Engineering	B3	M	Eba
A	Tokyo Tech	Hayato Yoshitomi	Life Science and Technology	B3	M	Tommy
B	DLSU	Michelle Airah N. Pablo	Chemical Engineering	B4	F	Pabs
B	HUST	Lê Minh Quân	Mechatronic	B3	M	Mike
B	ITB	Reza Nugraha	Geophysical Engineering	B2	M	Reza
B	KU	Anchalee Chaichanavongsaroj	Chemical Engineering	B2	F	Unun
B	Tokyo Tech	Meng Sun	Environment and Society	B1	M	Meng
B	Tokyo Tech	Aoi Ishikawa	Life Science and Technology	B3	F	Aoi
B	UP Dilliman	Johndel B. Obra	Chemical Engineering	M2	M	JD
C	DLSU	Lemuel James Oliva	Science in Civil Engineering	B2	M	Lemuel
C	HCMUT	Phan Son Phuc	Electronics and Electrical Engineering	B4	M	Phuc
C	HUST	Nguyen Van Ngoc	Mechanical Engineering	B2	F	The Poker
C	KMITL	Syeda Fatema Azmi	Industrial Engineering and Logistics Management	B1	F	Syeda
C	Tokyo Tech	Genki Nakagawa	Materials and Chemical Technology	B1	M	Genki
C	Tokyo Tech	Suzune Nishii	Materials Science and Engineering	B3	F	Suzune
C	UP Dilliman	Jericho Denzel Vosotros Aruta	Mathematics	B3	M	Jericho
D	Chula	VINY ALFIYAH	Chemistry	M1	F	WIN
D	HCMUT	Huynh Truong Tu	Computer Science	B4	M	Naga
D	HUST	Phan Thanh Dương	Automotive	B1	M	Positive
D	ITB	Hafia Luma Munira	Architecture	B2	F	Hafia
D	KMITL	Patchavit Pumnikom	Mechatronics and Automation Engineering	B2	M	Earth
D	Tokyo Tech	Ohiro Fujie	Engineering	B1	M	Fujie
D	Tokyo Tech	Bayarsaikhan Onon	Electrical and Electronic Engineering	B3	F	Onon
E	Chula	Sutinee Loachariyakul	Marketing	B2	F	Ling-Ling
E	DLSU	Harvey Andrew Lim	Chemical Engineering	B2	M	Andrew
E	HUST	Nguyễn Lâm Phúc	Automotive Engineering	B2	M	Lucky
E	KMITL	Poom Yimyuean	Computer Science	B4	M	Poom
E	Tokyo Tech	Watanabe Kiyomasa	Transdisciplinary Science and Engineering	B3	M	Ken
E	Tokyo Tech	Natsumi Kobayashi	Materials Science and Engineering	M2	F	Natsumi
E	UP Dilliman	Sthephanie Kate R. Ko	Industrial Engineering	B4	F	Steph
F	Chula	Muhammad Saqib	Chemistry	M2	M	Saqib
F	DLSU	Sophia Ng	Chemical Engineering	B1	F	Pia
F	HCMUT	Poe Myat Thu	Construction Management	M2	F	Julia
F	KU	Pakapon Kitipaisalnont	Chemical Engineering	B3	M	Guy
F	Tokyo Tech	Tsubasa Higashi	Engineering	B1	M	Tsubasa
F	Tokyo Tech	Rei Teshima	Life Science and Technology	B3	M	Rei
F	UP Dilliman	Akira Trinidad	Civil Engineering	B2	M	Aki

5. Participating Universities

・De La Salle University(DLSU)

Reporter: Tommy

De La Salle University is a prestigious private university which was founded in 1911. Originally this institution was founded as a community of clergymen, De La Salle University is a catholic university. Plus, this university has an integrated school which offers pre-school, primary, and secondary education and senior high school. This consistent education style is one of the unique features of De La Salle University. De La Salle University has 36 academic departments from art to state-of-the-art technology such as computer science. De La Salle University used to be a single sex school, but in 1973 it became a co-ed school. Now that about half of the undergraduate students are female. Plus, De La Salle University's faculty members are not only researchers but also specialists in various industries, which enable the university to offer a high level of education.

Reference

https://www.dlsu.edu.ph/inside/

Source of image

https://www.dlsu.edu.ph/about-dlsu/

・Institut Teknologi Bandung (ITB)

Reporter: Onon

Institut Teknologi Bandung, abbreviated as ITB, was established in 1920 and is the first technology-oriented university in Indonesia that celebrates its 100th anniversary on July 3, 2020. ITB is one of the most prestigious and oldest universities in Indonesia and a coeducational research university located in Bandung. ITB has two main campuses; Ganesa Campus and Jatinangor Campus, and it has 12 Faculties, 128 study programs, 111 research groups, 25 centers, seven research centers, and seven centers of excellence. Furthermore, ITB currently has more than 26,000 students, 1.510 academic staff, and 195 professors. It has become the leading national university that made a great contribution to Indonesia's art, technology, and research. Moreover, its alumni have significant roles in developing the country.

References

[1] *History*, Institut Teknologi Bandung. Retrieved September 9,2022, from https://www.itb.ac.id/history

[2] *Bandung Institute of Technology*, Wikipedia. Retrieved September 9, 2022, from https://en.wikipedia.org/wiki/Bandung_Institute_of_Technology

Source of image

[1] My University (uec.ac.jp)

[2] Bandung Institute of Technology - Wikipedia

・University of the Philippines Diliman（UPD/ UP）

Reporter: Meng

The University of the Philippines Diliman is a coeducational, public research university located in Diliman, Quezon City, Philippines. It was established on February 12, 1949, as the flagship campus and seat of administration of the University of the Philippines System, the national university of the Philippines. It is the fourth oldest and is the largest constituent campus of the University of the Philippines System in terms of the number of degree-granting academic units, student population, faculty, and library resources. There are 27 degree-granting units on campus, accounting for 22,031 students of which, 15,299 are undergraduates. UP Diliman had a complement of 1,526 full-time faculty in 2012, of whom 528 have doctoral degrees. In addition to the units in the main campus, UP Diliman has extension programs in Angeles City, Pampanga (the Clark Freeport Zone area) and Olongapo, Zambales, as well as a marine laboratory in Bolinao, Pangasinan under the Marine Science Institute, and an annex campus at Bonifacio Global City, Taguig. UP Diliman offers academic programs in 247 major fields. There are 70 programs at the undergraduate level, 109 at the master's level and 68 at the doctoral level.


Reference

https://en.wikipedia.org/wiki/University_of_the_Philippines_Diliman

Source of images

[1] https://en.wikipedia.org/wiki/File:UP_Oblation_1.jpg

[2] https://en.wikipedia.org/wiki/File:Oblation_Plaza_during_fireworks_display.jpg

Chulalongkorn University (Chula)

Reporter: Genki

Chulalongkorn University is Thailand's oldest university which was founded in March 1917. The campus is located in Bangkok. Its first name was "The Civil Service College of King Chulalongkorn". This university has 20 faculties, 23 colleges and research institutes and 8,138 faculty members. It has about 27,000 students in total. King Chulalongkorn introduced a royal policy to strengthen and improve the government so that the country could successfully resist the tides of colonialism. One of the major parts of this policy was to improve the Siamese educational system to produce capable personnel to work in both the public and private sectors.

Reference

https://www.chula.ac.th/en/about/overview/facts-and-stats/

Source of image

https://www.u-tokyo.ac.jp/adm/go-global/ja/program-list-USTEP-CU.html

・King Mongkut's Institute of Technology Ladkrabang (KMITL)
Reporter: Genki

King Mongkut's Institute of Technology Ladkrabang is a national science university which has seven faculties such as faculty of engineering, science and agriculture. It was established in 1960 and its campus is located in Bangkok. This university has more than 25,000 students.
This university is one of the university that has top research level.

References

[1] https://www.kmitl.ac.th/

[2] https://asiatojapan.com/news/japanese-lessons/king-mongkuts/

Source of image

http://www.arch.kmitl.ac.th/auc2018aura/

・Kasetsart University (KU)
Reporter: Genki

This university was established in 1908 and its campus is in Bangkok. This establishment was part of agricultural education in Thailand. Now, it has faculties of natural science, social science and humanities. This university has three founders, Phra Chuangkasetsinlapakan, Luang Ingkhasikasikan and Luang Suwan Vajokkasikij. It has 70,000 students in total.

Reference

https://www.ku.ac.th/en/history-ku

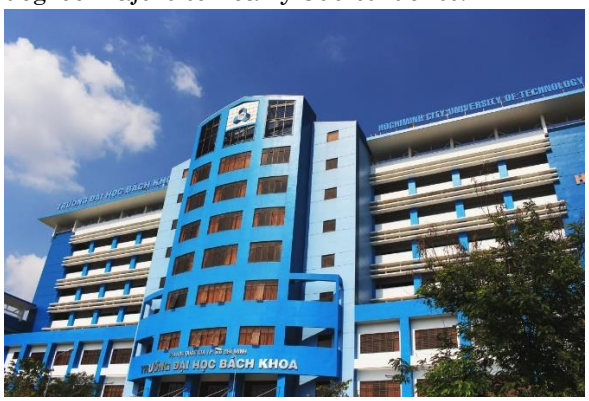
https://dept.sophia.ac.jp/fs/international/ryugaku/university_list/asia_oceania/kasetsart-university/

Source of image

https://www.u-fukui.ac.jp/schools/25034/

・Ho Chi Minh City University of Technology(HCMUT)
Reporter: Genki

This university is one of the top universities in Vietnam. In 1957, the National Technical Center was established by a combination of College of Civil Engineering, College of Electrical Engineering, College of Industrial Arts Engineering and Vietnam National College of Maritime Technology. Currently, this university has 12 faculties and training centers to offer 35 undergraduate majors to over 23,000 students, 34 master's degree majors to more than 2,100 students, and 27 doctoral degree majors to nearly 300 students.



Reference

https://hcmut.edu.vn/thong-diep-cua-hieu-truong?lang=en

https://hcmut.edu.vn/tong-quan?lang=en

Source of image

https://www.edujournal.com/course/ho-chi-minh-city-university-of-technology-hcmut-vietnam-national-university/

・Hanoi University of Science and Technology(HUST)
Reporter: Genki

This university is one of the top universities in Vietnam. It was established in 1956 and it has 16 schools and 3 faculties. It is the 5th oldest university in Vietnam. There are more than 32,000 students in this university. It is a reservoir of competent IT personnel.

Reference

[1] https://en.hust.edu.vn/quick-facts1

[2] https://iconicjob.jp/blog/vietnam/topeightuniversitiesinvietnam

Source of image

https://en.hust.edu.vn/display-academics/-/asset_publisher/sum9Zls6uqmE/content/universities-talk-technology-expertise-transfer?inheritRedirect=false

・Tokyo Institute of Technology(Tokyo Tech)
Reporter: Genki

Tokyo Tech was established in 1881 and it was first a vocational school. Its campus moved after the Great Kanto earthquake. There are about ten thousand students in this university. It is one of Japan's top universities of science and technology.

Reference

https://www.titech.ac.jp/english/about

Source of image

https://ja.wikipedia.org/wiki/%E6%9D%B1%E4%BA%AC%E5%B7%A5%E6%A5%AD%E5%A4%A7%E5%AD%A6

6.Pre-Study Sessions

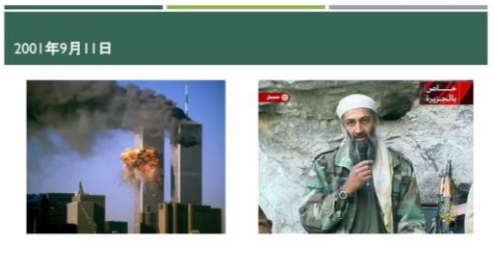
6.1 アジア理解講座

Date: 2022/7/12 (Tue)
Lectured by Dr. Takeshi Nakajima
Reporter: Suzune

The end of the cold war

In 1989, a significant event happened in the world, the fall of the Berlin Wall. The Berlin Wall symbolized a conflict between capitalism and socialism. Therefore, the fall of it meant the end of the Cold War, that is, capitalism's victory over socialism. After that, the Soviet Union was extinguished. At that time, most people thought that there would be no more war caused by the difference of values. For instance, in the book “The end of history” written by Francis Fukuyama, it is indicated that the world is going to a next stage putting the emphasis on capitalism with American strong power. In addition, George Bush talked about “New world order” in his speech. He insisted on the beginning of an American-centric world.

Nationalism and religion



After the end of the war, however, there still have been conflicts in the world. The new key points are nationalism and religion. For instance, in India, the conflict between Hindus and Muslim became intense as represented by Demolition of the Babri Masjid in Ayodhya. In addition, other ethnic conflicts happened around eastern European countries. This violent incident was caused by Hindus’ thought of nationalism to recapture its sacred place. Samuel Phillips Huntington referred to the religious problem and said that major conflicts in the new world would occur among civilizations based on religions. Especially, the conflict between the civilization in America and Islam would be violent. It was represented by one terrorism happened in America, which is called September 11 attacks.

The decline of American presence, and the rise of China

After the attacks, the Iraq War broke out in 2003. In the war, America sent in numerous soldiers there to perform as a police state in the world. However, because of the huge cost of interfering in this conflict in the Middle East, American presence became lower and lower. Therefore, America retired dominating there and started basing on Asia. For instance, Barack Obama reviewed the previous world strategy. He took a new policy of rebalancing and focused on relationships with Asian countries, especially Korea, Australia, and Japan. The purpose of this policy was to deal with China as its power became stronger in the world than the American one. Thus, around this time, civilization moved from the Atlantic (Europe) to the Pacific (Asia), and Asia became one of the highest priorities in the world.

This is the reason why America forced Japan to allow the right of collective self-defense. America was concerned if a military conflict happened related to China, and concluded that Japan would

be the base for this conflict. However, it was almost impossible for Japan to support the war at first due to the ninth article of the Constitution. In order to meet the request from America, Security Legislation to allow Right of collective self-defense was taken effect by the Liberal Democratic Party. Opposition parties claimed that this law went against Constitutionalism, and it has been discussed a lot among the public in Japan.

Asian Diplomacy

Ishiba Shigeru, a member of the house of representative, thought that the Security Treaty between the United States and Japan was not enough to treat China and Russia, as the power of the US was becoming relatively weaker. Therefore, he advocated Asian version of NATO. This idea insists on making connections among Asian countries like a network, not one-on-one. We would be able to build Asian version of NATO if such connections spread throughout Asian countries, such as Singapore, Malaysia, and Indonesia.

Previous Prime Minister Suga went to Vietnam and Indonesia for his first visit in his term. This visit has a big message; Japan starts creating good relationships with Southeast Asian countries. The idea of FOIP(Free and Open Indo-Pacific Strategy) came up around this time. The significant point is that this is not actually the strategy to be in confrontation with China, but the strategy to contain China friendly.

In these ways, Japanese people have been thinking about the importance of connection in Asian countries. Recently, however, the relationship between Japan and one of the Asian countries, Russia, has been becoming worse due to the Russian invasion of Ukraine. Accordingly, the US imposed relentless sanctions on Russia to oppose and stop its invasion. Prime Minister Kishida, who is out-and-out pro-United States, has a severe attitude toward Russia similar to the US. Therefore, he decided to execute assets freezing to Russian individuals, which made it almost impossible to establish a good relationship between the two nations again. Now It becomes more difficult to build good connections among Asian countries.

Learning from the EU

To build cooperative relationships and realize Asian version of NATO, we can learn various factors from the EU. The EU had been aiming to be a federal state at first, but it finally failed. Thus, there are incomplete connections among EU countries. Those connections are the most important factors of the recent peaceful situation in the EU, which is the ideal form in the world. Asia should learn from the EU about how to cooperate with each other.

To learn from the EU, we need to understand the reason why it has been stable for a long time. In fact, it required considerable time for discussion to construct the union. There were various problems to be solved: constitutional amendment, consensus formation, building good relationships with each other. By striving for solving them, the EU gained its longest stable period in Europe though countries there had fought a lot in a long history, such as World War II .

What is Europe, and what is Asia

European countries are connected strongly by religion as most of the countries there believe in Christianity. In addition, we can imagine that the sceneries in European countries are alike. European strong connection is said to be made by its similarity.

How about Asian countries? There are various of religious culture, such as Islam, Hindu, Buddhism, and Shinto. Each country has its own culture, so it seems difficult to understand other cultures.

However, cultural diversity does not mean that there is no similarity in Asia. In fact, in “The Ideals of the East”, Okakura Tenshin tried to prove the beginning saying, “Asia is one”. Although there are so many differences, he insisted that Asians have common sense in the thought of truth, referring to “Advaita Vedanta”. Moreover, Mahatma Gandhi mentioned as follows; Asians think that there is only one truth in the world, and the way to reach the truth is different from each other. From this saying, it might be possible for Asian countries to cooperate with each other in order to make Asia peaceful and progressive.

What we learned

In the lecture, we learned how Asia has progressed since the end of the war. These days, Asia has been getting strong influence in the world, but there are still so many problems. By looking back the history and keeping on interacting, we will be able to cooperate each other, which leads to a better world.

6.2 英語ディスカッション練習

Date: 2022/7/22 (Fri)
Lectured by Dr. Yuto Koizumi
Reporter: Onon

On the second day of the pre-study session, Dr. Yuto Koizumi gave a lecture about English practicing. It consists of three main parts, mindset-fluency, expressions for discussion, and language muscle memory.

Mindset-fluency

First, we got into a break-out room to do a self-introduction, and answer three questions, name, what makes you participate in the program, and what you want to expect/learn from this discussion training. After that, we talked about what is fluency. Being fluent generally means speaking easily, well, and quickly without many pauses. Thus, he introduced three rules of fluency, explained as follows.

1. Speak poor English.

We tend to worry about making mistakes or making fools of ourselves when speaking in foreign languages. So, the rule is to enjoy making mistakes and talk more actively. In this way, we can learn from our mistakes and improve.

2. Become a chairperson.

Be the person who starts the conversation. Not waiting for others and initiating the discussion is one of the rules of being fluent in English.

3. Make questions

Sometimes discussion stops when another member finishes talking. So, when that happens, what should we do? Make questions. Asking questions or pointing to someone who will speak later can make discussions continue and livelier.

During this practice session, I learned the mistakes I made during a discussion, and in the future, I want to try to fix those by applying three rules.

Expressions for discussion

In this part, we learned many types of expressions, such as starting the discussion, asking for more details/examples, confirming understanding, clarifying, and giving your opinion. Moreover, the lecturer gave us more practical examples and advice that we could apply later in discussions. For instance, if no one replies to me or asks a question, I can use the expression If you ask me and make a discussion continue. Also, we learned reaction words and the importance of being an active listener. Saying nothing in response is same as being absent, and silent treatment is rude towards the speaker. Therefore, instead of listening silently, we can give reaction with more words like “Oh, really?”, “Certainly.”, “I couldn’t agree more.”

Language muscle memory

By using our muscles, we can speak and talk. So, in this part, we learned how to get used to foreign language by creating muscle memory. We did two practices. First, we mimicked the speech style of Boris Johnson, the Prime Minister of the United Kingdom. He had made a short speech about the Ukraine war and the Russian invasion, and we tried to imitate how he gave speech. Next, we sang “Danger zone” of Top Gun together. While seeing the lyrics, we sang and followed the rhythm. By doing this shadowing exercise every day for at least 15 minutes, we can build muscle memory. As a result, we can successfully improve our pronunciation and fluency.

What we learned

Through this lecture, we understood the essential key point of speaking in English, practiced how to speak fluently, and learned expressions and manners for discussion. Moreover, not only we learned many expressions, but also, we got several valuable pieces of advice about learning languages. It was very informative and inspiring lecture.

7. Virtual Visits

7.1 Lecture: Prof. Nakashima

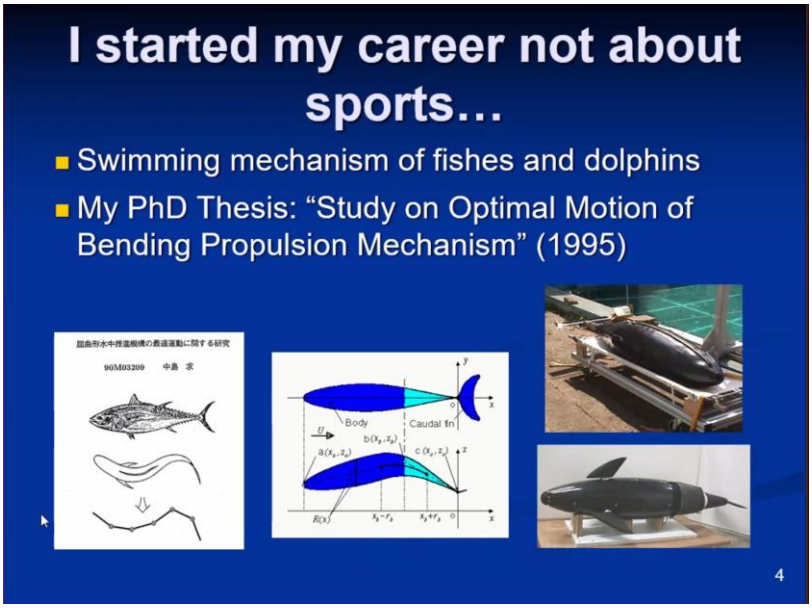
Date: 2022/8/29 (Mon)
Lectured by Dr. Motomu Nakashima
Reporter: Ken

Interdisciplinary Collaboration in Sports Engineering and Biomechanics

At the beginning of Tokyo Tech-AYSEAS 2022 Online, we could hear the research of Prof. Motomu Nakashima, the chief of Tokyo Tech-AYSEAS committee.

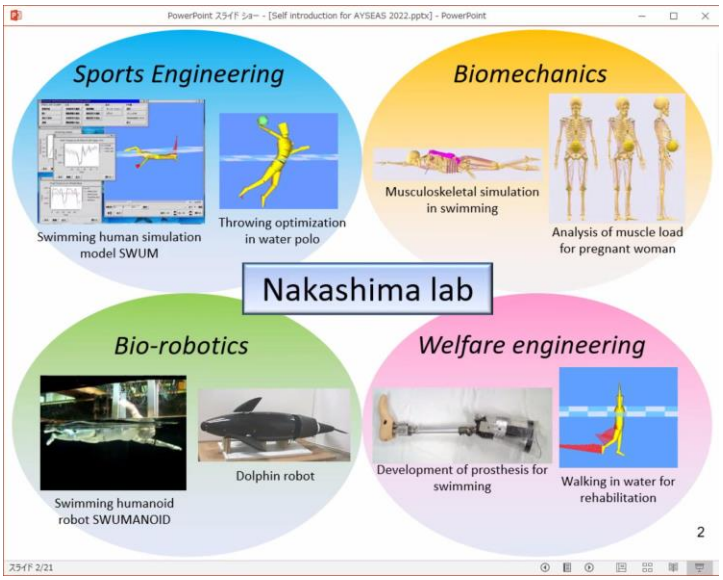
1. Prof. Motomu Nakashima's background

About 30 years ago, Motomu Nakashima researched the swimming mechanism of fishes and dolphins as a master course student in Tokyo Tech. In 2002, he joined the sports engineering lab in Tokyo Tech, which changed his direction from "dolphins" to "human". He applied dolphin simulation to human swimming simulation. He developed "SWUM", a simulation application, but he is not good at swimming. Then, he has collaborated with other people who are professional about swimming even though he is a shy and introverted person.



2. Research at Tokyo Tech

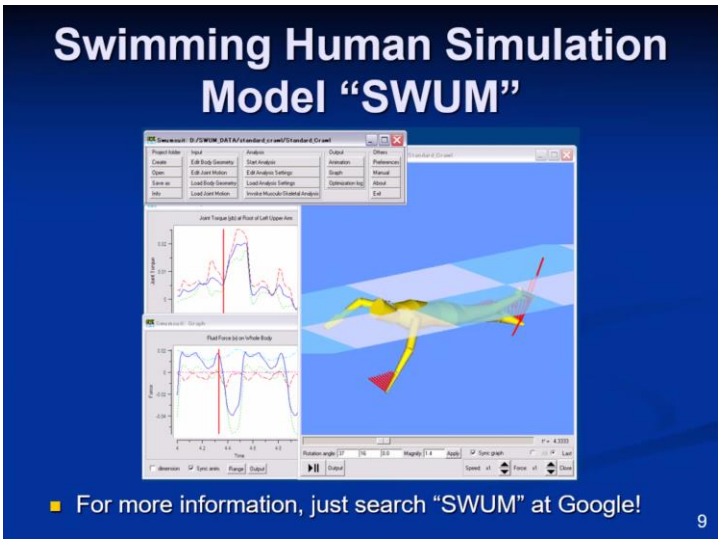
He belongs to the school of engineering course in department of systems and control engineering. He researched human issues which are called Bio-robotics, welfare engineering, or biomechanics. His major is sport engineering, which solves problems in sports, by means of methods of engineering, from the viewpoint of engineering. It is engineering but he has to collaborate with various people such as medical doctors, therapists, and physical education.



His other research field is biomechanics. He investigates animals' and human's body and motion, regarding those as "machines". For this goal, he and his research team members developed "SWUM", and he collaborated with many universities and companies in order to make his research best.

3. About “SWUM”

The red lines describe fluid force. This simulation can give him hints to find what kind of stroke is the best to swim fast, namely, we can optimize the arm stroke for freestyle by using this simulation. Not only for general sports, but also for Paralympics. For optimization, we need simulation many times. Not only about stroke but also the athletes’ body move (S-shape is good for fastest swim). This simulation software can simulate not only regular form but also irregular form which people would not want to use.



4. Last message

Collaboration is most important. He has some technique of engineering but he is always amateur about research subjects. Even if you have specific knowledge in some field, you cannot understand everything. Thus, you are needed to relate to others when you apply specific knowledge to other fields. Improvement of communication skills makes mutual understanding and collaborating with others easier.

5. What we learned

It is good to study one thing, but it works best when you apply it to other fields. You need your interests to many fields, but it is not important to be familiar with because you can collaborate with the professionals if they approve your passions.

Keep your interests and passions for your successful future.

References

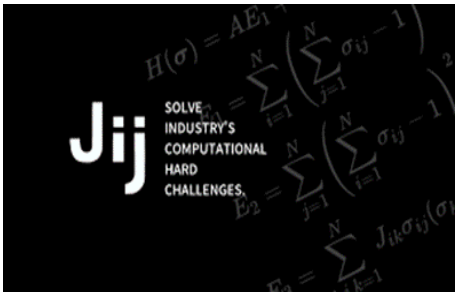
[1] http://www.hei.sc.e.titech.ac.jp/nakashima_labo/index.html

[2] http://www.swum.org/index_j.html

7.2 Jij inc.

Date: 2022/8/30 (Tue)
Lectured by Mr. Yu Yamashiro
Reporter: Natsumi

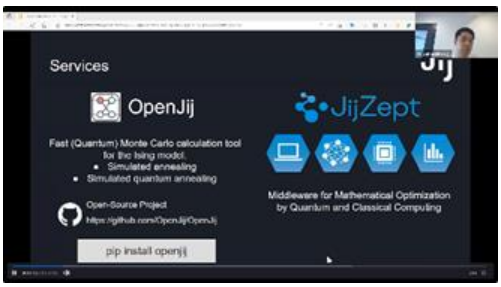
『Research and development start-ups and Quantum annealing』

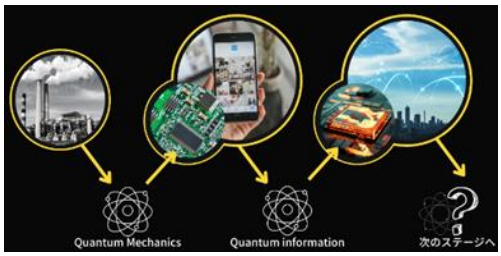


Jij Inc. is a research and development startup founded November 2018 by world-class quantum annealing researchers through the START university-initiated new industry creation program. They are classified as the main three teams, such as business development, algorithm development and software development, in which they are creating industrial applications. Also, they provide service of middleware for Mathematical Optimization by Quantum and Classical Computing. Recent technological developments in the Internet and AI have made it possible to predict human behavior patterns, and new services are being created to meet mobility needs and fluctuations in energy supply and demand. Jij uses state-of-art hardware and research methods such as Ising machines and quantum annealing to develop technologies to solve industrial problems that are difficult to calculate with conventional calculation methods.

Features of Jij Inc.

- Easy-to-use Modeling tool
- Mathematical model Compiling
- Multiple Hardware Support
- BenchmarkingTools





"Jij-Cloud" developed by Jij is a cutting-edge quantum optimization technology that allows business companies facing operational optimization problems that cannot be solved by existing methods to easily use cutting-edge quantum optimization without the need for expertise in Ising machines or quantum algorithms. It is middleware that makes it possible to handle transformation technology. At the same time, they are also conducting consulting joint research for each business company, aiming for practical application of quantum optimization technology that requires adjustment for each business area. Since their founding, they have been challenging the applicability of their technology in areas such as network stabilization, electricity and gas supply stabilization, and life insurance portfolio optimization. Most recently,

Domain specific compiler is called JijModelingEngine, which solves problems with quantum technology. I could learn about what is important for deeptech startups and student entrepreneurs through this lecture. I felt that we need to focus on not only quantum technology but also what kind of problems are customers facing and what are the expectations of society for this technology etc that are also important things.

What I learned

I am also interested in startups so this lecture really impressed me and a great opportunity to learn about how to start a startup and quantum fields realistically. Before, I have participated in an innovation program in California which is a famous place in the IT field, startups, and entrepreneurs. In that program, I visited startup organizations or innovation companies such as Apple, Google and I was able to learn the important things or thinking for startups like entrepreneurship, business partners, to know about the latest social situation with antennas, and to have a strong area of expertise while broadening my horizons. Jij Inc.'s lecture reminds me about this previous program and moreover, I was able to learn about the startups in Japan, and I realized that it is important to learn my specialized field now and always need to think how we can apply that knowledge to society issues. Furthermore, I have taken quantum chemistry before, which is quite complicated for me. However, when I listened to this lecture, I learned about how that optimization approach works in the construction industry, and how the model works.

References

[1] https://www.j-ij.com/ja

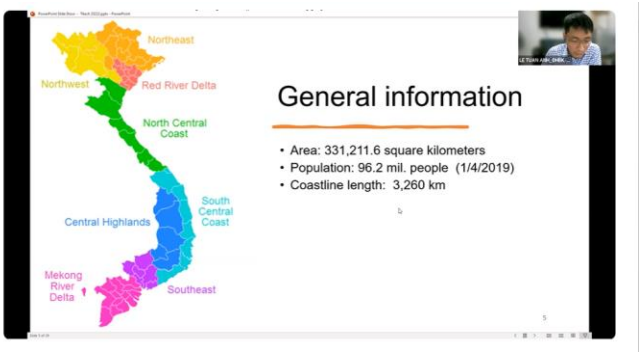
[2] https://prtimes.jp/main/html/rd/p/000000004.000046947.html

7.3 Lecture: Dr. Le Tuan Anh

Date: 2022/8/31 (Wed)
Lectured by Dr. Le Tuan Anh
Reporter: Tsubasa

Dr. Le Tuan Anh gave us a presentation about "Coastal disasters in Vietnam". Coastal disasters are not specific problems in Vietnam, but will happen everywhere. We learned useful knowledge about coastal disasters through the lecture.

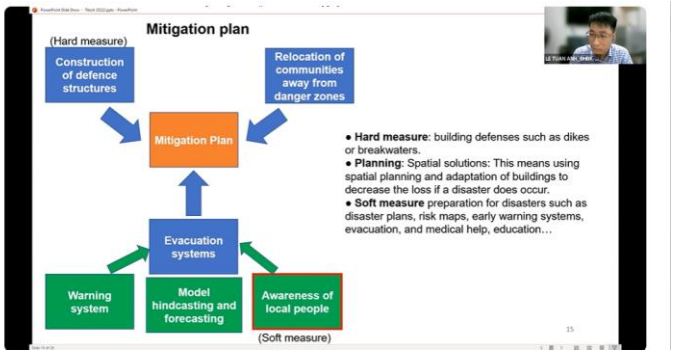
1.Coastal disasters in Vietnam



Vietnam is located in south-east Asia and its shape is like "S". It has a long coastline, 3,260km. There are two big deltas, Red River Delta and Mekong River Delta.

The map on the figure shows that the number of disasters per 1,000km^2 is high in the north and central coastal area. Almost every part of the country suffers from disasters. The disasters that happen in the north and central part of Vietnam are different from those in the south part of Vietnam. The typical types of coastal disasters in Vietnam are typhoons, storm surge, high waves, coastal erosion, coastal flooding, sea level rise and land subsidence. Land subsidence is that the land becomes lower and lower because of groundwater overexploitation. Ho Chi Minh City has serious land subsidence because the population is high and there are many roads and buildings. The land becomes more than 4cm lower per year. The place suffering from land subsidence and next to sea will be lower and be affected by sea water. Coastal erosion is that sea water destroys the coastal line. The reasons are typhoon high waves and human activities, such as sand mining, tourism and deforestation. Typhoons are the most severe and most dangerous coastal disaster. In Vietnam, typhoons often hit the north and central parts but rarely the south part. Storm surge is also a coastal disaster which comes with typhoons. Most people in Vietnam live in delta or low places, so large waves due to typhoon may have a big effect on many people's lives. Flooding is also a big problem. It is estimated that approximately 70% of the population who live in coastal areas and low-lying deltas in Vietnam, are exposed to the risk of flooding. [1]

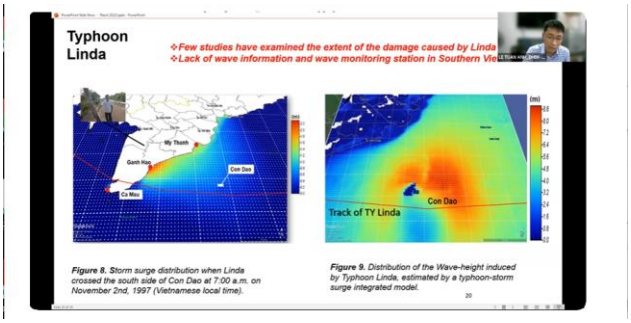
2.Mitigation plan



There are three ways to mitigate the disasters, construction of defense structures (hard measure), relocation of communities away from danger zones and evacuation systems including warning system, model hindcasting and forecasting and enhance awareness of local people (soft measure). Hard measure generally costs a lot of money, but soft measure, preparation for disasters such as disaster plans, risk maps, early warning systems, and education, is easier and cheaper than hard measure. Dr. Anh focuses on soft measure. To know about the perception of local people, he conducts field surveys. During the survey, he interviews local people to know what

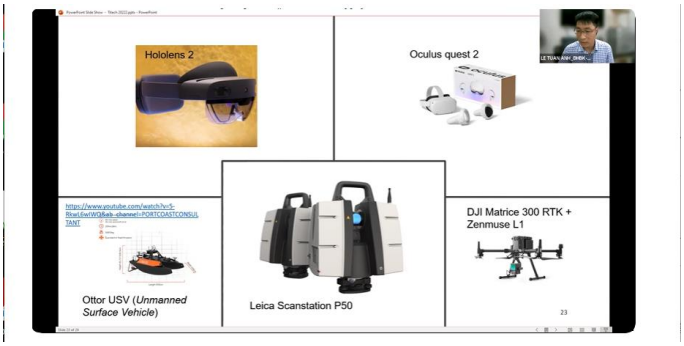
they know or what they think about coastal disasters. According to the results from the questionnaires survey, it was found that local people remember typhoon Linda and fear coastal disasters or typhoons. Linda, the worst storm to have hit the southern part of Vietnam, happened on November 2nd 1997, and resulted in 3,111 people being killed. However, they can't separate typhoon storm surge with flooding because the typhoons rarely come to southern Vietnam. In addition, the level of children's education about disasters in school is low. This will lead local people to forget the danger of typhoons. People would underestimate the power of a typhoon without appropriate knowledge, Linda's memory which has been decreasing day by day.

Dr. Anh sets up the models to estimate the damage when coastal disasters happen. He uses hydraulic models. He used the data of three typhoons in 20 years and made the models (figure). These models show that the typhoon raised the water level. This simulation, especially the simulation of typhoon Linda, makes it easy for local people to imagine the height of water level that hit the area 20 years ago and understand the danger of typhoons.



3.Modern technology applied in coastal survey and disasters

Technology has been improving day by day. There are a lot of useful technologies which we couldn't imagine a few decades ago, like cloud, 3D laser scan, drone, metaverse, AR and VR. Dr. Anh uses those technologies as in the figure. There is an example of a 3D scan. The 3D data of a video game could help to rebuild Notre-Dame Cathedral.[2] In the case that there is not enough document or drawing to review it, 3D scanning data is very helpful. The merit of 3D scan is that you can measure the object directly, which you can't do with a 3D picture. He uses these technologies in the flood control project in Ho Chi Minh city and coastal erosion study.



-What we learned-

From the lecture, we learned the current situation and solutions for coastal disasters in Vietnam. Still coastal disasters are one of the serious problems for coastal regions, but recent new technologies can lead us to solve them. It was very interesting lecture.

References

[1] WHO "Disaster in Viet Nam" Retrieved 9/14/2022 from https://www.who.int/vietnam/health-topics/disasters

[2] designboom.com "how a video game could help rebuild the notre dame cathedral" Retrieved 9/14/2022 from https://www.designboom.com/architecture/how-a-video-game-could-help-to-rebuild-the-notre-dame-cathedral-04-17-2019/

7.4 Diver's Clean Action

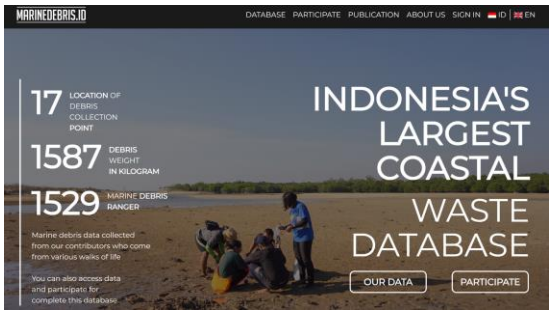
Date: 2022/9/1 (Thu)
Lectured by Ms. Swietenia Puspa Lestari
Reporter: Rei

About Ms. Swietenia Puspa Lestari

Ms. Swietenia was born in Pramuka island, Indonesia. She was a keen diver since her childhood, and she loved to dive in the ocean. However, due to the growing number of tourists, trash was littered around the beach and, little by little, the site turned into a trash heap. This led her to enroll in one of Indonesia's prestigious colleges, the Institute of Technology Bandung (ITB). She studied at the department of environmental engineering and in her 3rd grade at ITB, she and her friends established an organization called the Diver's Clean Action, DCA (*1). She also took part in the UN Climate Change Conference in 2017 and put forward a suggestion. Furthermore, due to her achievement and efforts to tackle marine debris problems, she was chosen as BBC100 women in 2019(*2).

What is DCA(Divers Clean Action)

DCA is an organization established to tackle marine debris problems. DCA now became a foundation, and a large number of divers and volunteers are working hard to clean the beach. DCA's final goal is to reduce the number of marine debris less than the number of fish in the ocean by 2050(*3).



-**Research Program:** DCA is conducting research on the number of marine debris and anyone can take part in this program. In this research program, two courses (scientific ranger course/adventure ranger course) are offered and volunteers can download cleanup guidelines (*4) so that even those who are not familiar with beach cleanups can join in this program. The purpose of this program is mainly to collect and sort out what types of marine debris exist near the beach. This will certainly make it easier for us to develop the most efficient cleanup policies. The outcome of the research is collected into a database called Marinedebris.ID and now more than 576 data were collected (*5).

-**Spread Awareness of the Marine Debris Issues**: In addition to the research program, DCA is working hard to spread awareness of the gravity of marine debris issues. In 2017, DCA held a conference called Indonesian Youth Marine Debris Summit, IYMDS (*6) to train and enlighten the youth to know more about the environmental effects marine debris causes. In this program, not only lectures on marine debris issues but also cleanup field trips were held and participants were able to acquire in-depth knowledge of the issues. Furthermore, in 2018, DCA and the US Embassy Jakarta hosted YSEALI Marine Debris Expedition (*7).

-**Eco Trip:** At the end of the session, we watched short clips of Eco Trip. Eco Trip is a leisure trip hosted by DCA to enlighten participants the importance of environmental conservation (*8). In this trip, participants are not only able to enjoy snorkeling, but also able to get hands-on experience of beach cleanups.

What We Learned from the Lecture

Through the lecture, we were able to recognize the gravity of marine debris issues, especially the environmental effects on the ecosystems and the burden on those who live near the coastal areas. Though we always tried to clean up the bins when we visited the seaside, we were unaware of the seriousness of the issues. We truly believe Ms. Swietenia's hard work must have changed the way people face this issue, and we have learned a lot from the session.

Reference

*1: Kiki Siregar. "Love for ocean motivates Indonesian diver to clean up marine debris"https://www.channelnewsasia.com/asia/indonesia-diver-environmentalist-ocean-debris-bbc-100-inspiring-849836

*2: The Irrawaddy. "Youth Activist Calls for Joint Effort to Clean Up Indonesia's Seas"

https://www.irrawaddy.com/news/asia/youth-activist-calls-joint-effort-clean-indonesias-seas.html

*3: DCA Divers Clean Action. https://www.diverscleanaction.org/

YSEALI Marine Debris Expedition 2018 in Indonesia.

https://www.youthop.com/workshops/yseali-marine-debris-expedition-2018-in-indonesia

*4: Marinedebris.ID. https://marinedebris.id/Sea/participate

*5: Marinedebris.ID. https://marinedebris.id

*6: The Global Partnership on Marine Litter Platform, "Indonesian Youth Marine Debris Summit" https://marinelitternetwork.engr.uga.edu/events/indonesian-youth-marine-debris-summit/

*7: U.S. Embassy & Consulates in Indonesia. "YSEALI Regional Workshops"

https://id.usembassy.gov/education-culture/yseali/yseali-generation-workshops/

Image Source

(1) Marinedebris.ID https://marinedebris.id/

(2) Virtual Tour Ecotrip Harapan. https://www.youtube.com/watch?v=zG5b4-e7pEo&t=19s

7.5 P&G Innovation Godo Kaisha

Date: 2022/9/2 (Fri)
Lectured by Dr. Yukari Segawa
Reporter: Aoi

The lecture was very interactive. Dr. Segawa asked us to type our ideas or answers in chat. She started the lecture by showing us a video and we could understand the basic concept of P&G Godo Kaisha. So, the important motivation or purpose of P&G is to provide people with better and more convenient lives. They are trying to be eco-friendly as well. Their attempts come from the same question, which is "What if~~?". Asking ourselves, "what if~~?", popping up assumptions is important when it comes to generating innovations.

What is needed? What is possible? Thinking about what customers want and problems in current products or situations makes the trigger of the birth of a new product. Dr. Segawa took a detergent as an example and explained how it is designed and sold. After that, we were divided into groups and solved the problem together based on the process Dr. Segawa talked about. The topic we were given was "Package Design Case". Based on the conditions given, we had to consider the hypothesis of the problems first, then we came up with experiments to prove the causes.

At the end of the lecture, Dr. Segawa told us that it was important to plan your career and make action by yourself because a job or position wouldn't be dropped out of the sky for you. In addition, she said that thinking about many things would help create new ideas.

I think we have learned a lot from Dr. Segawa. Being a researcher and creating products in a company is very exciting but requires hard work. The simple question "what if~" gives us many creative ideas to change our lifestyles in a better way. Coming up with totally different and innovative ideas seemed hard and for students like us, it sometimes feels like a bone-breaking task. Therefore, it is significant to think flexibly and remind oneself of the "what if~?" question. In addition, discussing the problem with others often leads to better solutions.

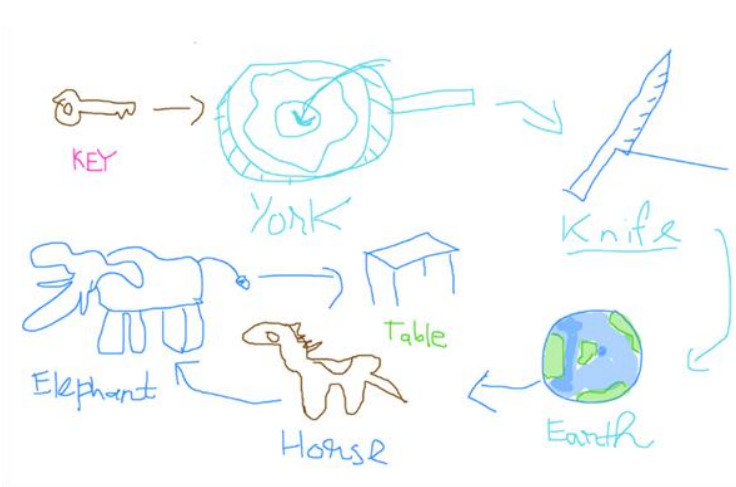
We don't have a lot of chances to hear from researchers in the company. They are of course, different from researchers in the University. However, in terms of designing experiments and exploring, they are the same. From this lecture, I deem we had the opportunity to get an idea of the common preparedness of being a researcher.

8. Cultural Exchange Events

8.1 Pre-Event

Date: 2022/8/23 (Tue)
Reporter: Fujie

We prepared a pre-event in order to make participants get more familiar with each other. Due to the Covid-19, we held this event by using zoom meeting. There was three parts of Pre-event. Firstly, we did self-introduction in alphabetical order to make sure everyone can know others' name. Then we played eshiritori game. Eshiritori is basically an alphabet game by the use of drawings. We used zoom whiteboard to play it. After that we played daifugo game. Daifugo, also known as Tycoon, is a Japanese shedding-type card game for three or more players played with a standard 52-card pack. Since it was 7:45 pm when we finished eshiritori game, daifugo game was optional. Participants who didn't have time left zoom meeting without playing daifugo. The whole pre-event ended at 8:30 pm. Everyone seemingly had fun and made some friends through this event. Our purpose has been achieved.



8.2 Ice-Breaking Session

Date: 2022/8/29 (Mon)

Reporter: Noe

In this session, students from different countries introduced their own countries. Below is the list of the teams in alphabetical order:

*China
*Indonesia
*Japan
*Mongolia
*Myanmar
*Philippines
*Thailand
*Vietnam

Each team had 8 minutes to introduce their country and culture to the other students. Since there were many international students, a total of 8 groups introduced their countries. The following is a description of each presentation.

1.1 China

The China team introduced their country and culture by showing many beautiful photos. For example, *Guang Xi* is a scenic area in southern China, with karst landscapes, clean rivers, and magnificent rice terraces (Figure 1). They also showed the image of mouth-watering Chinese food, called Chong Qing. *Chongqing* Dish is famous for its spicy flavor, because many spices are often used in *Chongqing* dishes, including chili peppers, mustard, Sichuan peppercorn and other ingredients. We saw pictures of spectacular nature, buildings and relics with a long history, and unique vegetation. It was all fascinating and made us want to visit China in the future.

Fig.1
Photo by Patrick Xu on Unsplash
https://unsplash.com/@patrickxt

1.2 Indonesia

The Indonesia team gave a presentation titled “Tak kenal maka tak sayang”. This is a popular saying from Indonesia, meaning “if you do not know about something, then you cannot be in love.” They played several songs, and we were asked to write in the chat what we felt after listening to the songs. They showed how a person's mood will be affected by the music. After that, they introduced “Dangdut” as the music of their country. It is one of the most popular music genres in Indonesia. We also learned the official national motto of Indonesia: “Bhinneka Tunggal Ika”. This is translated in English as “Unity in Diversity” in English, and it represents how Indonesian people harmonize and unite between different individuals. After we learned about Indonesia, we sang a song called “Dangdut Is The Music Of My Country” together.

1.3 Japan

The Japan team explained how to make “Japanese origami ninja star (shuriken)” to introduce Japanese culture. We all prepared two sheets of paper, and made ninja stars together according to the Japanese team’s instructions. Here is the picture of an origami ninja star we made during this session (Figure 2).

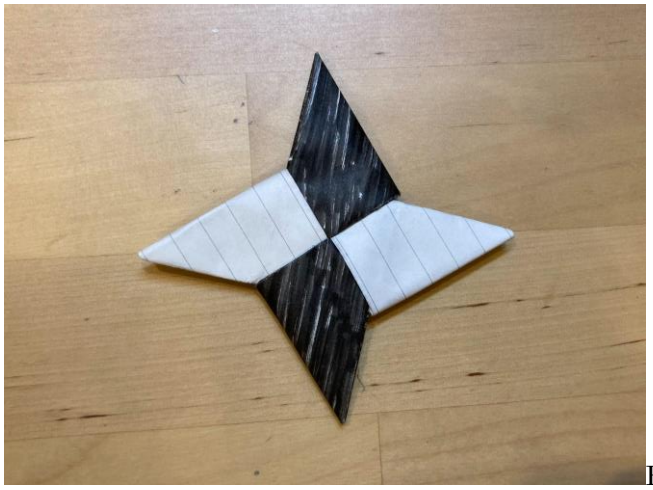


Fig.2

1.4 Mongolia

The Mongolia team shared their interesting culture by showing presentation slides. One of the things that surprised us was Mongolia's extreme climate. In summer, it’s generally warm with highest temperatures around 30 °C, but in winter, surprisingly, temperatures can reach -30°C. As for Mongolian food, dairy products are popular, and it’s called *tsagaan idee* in Mongolian, which is translated as “white food” in English. We also learned about the Mongolian language. In addition to the normal script, they also have a traditional Mongolian script called *Hudum Mongol bichig*, which can be used for official documents. Both are pronounced the same, but written in different scripts. The fact that they could actually read those two scripts was amazing.

1.5 Myanmar

The Myanmar team introduced their country with photos and illustrations on slides. Myanmar is a diverse nation with 7 states, 8 divisions, and ethnic groups. Burmese Monthly Festivals is monthly festivals in Myanmar, includes *TaSaungMone* (Offerings Festival), and *ThaDinGyut* (Lightning Festival). There are a lot of festivals in Myanmar, but one of the most popular festivals is the *ThinGyan* Festival. It is the Burmese New Year Festival, and people throw water to wash down the bad things that happened in the last year and start the new year with clean and clear minds. They showed traditional Myanmar dance, traditional dress, food, and tourist destinations. All of them were really attractive, and after the introduction, we were ready to join Myanmar’s fun and significant festivals.

1.6 The Philippines

The Philippines team gave a presentation, and asked everyone to write the answers to the questions on the slides in the chat. They showed images of classic Filipino dishes, such as *sinigang* (sour soup), and *adobo* (chicken stew), and asked us what our favorite dish was. Every dish explained in the session looked very appetizing. The Philippines also has many tourist destinations, especially its beautiful beaches, which attract many people from all over the world. Figure 3 is a picture of chocolate hills. The hill has a unique topography, and it got its name because the vegetation turns chocolate brown color during the dry seasons. They also explained the meaning of the Philippine flag. The white of the Philippine flag symbolizes equality and fraternity; the blue symbolizes peace, truth and justice; the red symbolizes valor and patriotism. It is meaningful that

the blue color, which represents peace, is above the red color, and in times of war, this flag is allowed to be flipped upside down to indicate the state of war.


Fig.3

Photo by P199 - Own work, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=25403038

1.7 Thailand

The Thailand team began with a presentation about their country and then used an online quiz platform which everyone could join and answer. We learned about the country's geography, language, religion, etc. I will introduce some of the interesting information I learned through the presentation and quiz. Figure 4 is a picture of "Red bus". It is a popular transportation among locals used in *Chiang-Mai.* Figure 5 is the floating market. It has been a hub of the communities for a very long time, and nowadays it's a famous tourist attraction. We enjoyed the quiz and at the same time we gained knowledge about Thailand.


Fig.4

Fig.5

Original uploader: Henry Flower at English Wikipedia. - Transferred from en.wikipedia to Commons., CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=3206337

1.8 Vietnam

The Vietnamese team introduced their country with a video and slides. They introduced famous parks, architectures, and festivals. Here are some examples of Vietnam's beautiful nature and architecture. Figure 6 is the Huc Bridge, built in 1865. It is a vermilion bridge, made of wood, connecting the shore with Ngoc Son Temple in the middle of Hoan Kiem Lake. Hoan Kiem Lake is also a beautiful sightseeing spot in Hanoi. *Ba Squarenh* is a significant square where president Ho Chi Minh read the Proclamation of Independence of the Democratic Republic of Vietnam. It is surrounded by several important buildings, such as the National Assembly Building or the President's Palace (Figure 7).


Fig.6

Fig.7

Photo by Martin Fisch on Flickr

This concludes the introduction of each country. All groups presented in a way that allowed the audience to actively participate by asking questions or playing videos and music. Everyone said they were intrigued by each country's presentation and made them want to visit there. I think the ice-breaking session played an important role in getting everyone to accept diversity and respect each culture before AYSEAS began.

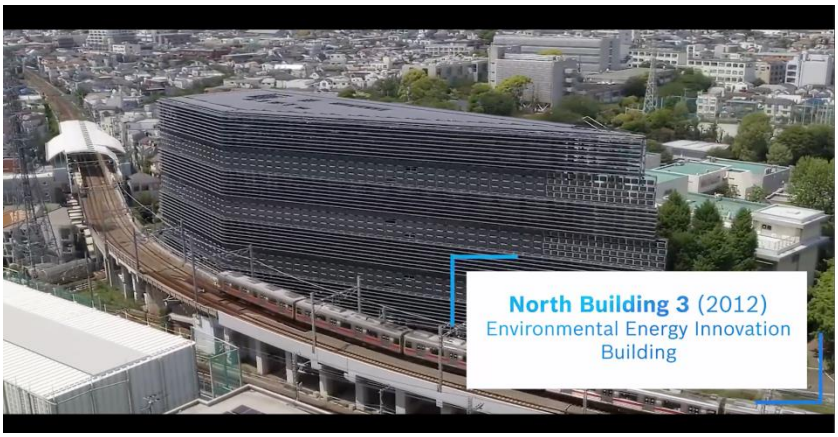
8.3 Virtual Campus Tour

Date: 2022/9/5 (Mon)

Reporter: Eba

On the last day of virtual learning sessions, Tokyo Tech students introduced Ookayama Campus using zoom broadcasting. Due to COVID-19 related matters and other constraints, Suzukakedai and Tamachi campuses were introduced using videos that Tokyo Tech students recorded beforehand. Virtual campus tour team consists of 4 members (Rei Teshima, Kiyomasa Watanabe, Erdenebat Battseren, Natsumi Kobayashi) together with AYSEAS staff Ms. Ichinose Yasuko.

Introduction video can be watched from the following link provided:
Link:
https://drive.google.com/file/d/1nlO3N_IQ0qOfIAN4qvEqE2M8-BoocUhc/view?usp=sharing



The video explains overall views of all 3 campuses, their interesting points and well-equipped facilities. The introduction video footages were recorded by virtual campus tour members and edited before the program. After the introduction video, team members introduced Ookayama campus by walking through the facilities. The students prepared a route to cover most of the campus areas.

Areas covered in the tour are:
Romance Hill, Sport Ground, EEI view (Environmental Energy Innovation Building), Sport Hall, Liberal Arts Library, W9 Building, W1 Building, Main Building Cafeteria, Food shop, Collaboration center for design and manufacturing, Main building Introduction, Wood deck, Teshima Seiichi stature, Taki Plaza

Impression from the reporter's perspective:
Eba: "Even though it has been three years since I entered university, I was still not familiar with university campuses. Due to the COVID-19 pandemic, I spent half a year spending time in my home country, and even after I came to Japan, the university continued online classes due to uncertainties. The virtual campus tour was a perfect opportunity to learn about the Ookayama campus but also other campuses of Tokyo Tech. This project started way before the actual AYSEAS program. We held out a first briefing on July 14th and worked together ever since. Our team members, along with Ms. Ichinose discussed how to showcase the campuses. Since the virtual tour was the first time, we struggled a bit with the style of the presentation. We wanted to introduce the campus from the student's perspective. However, it was during the summer break, and the campus was slightly deserted compared to normal school days.

I explored places I had never been to before. Such as the swimming pool or judo hall. I had never known about a secret passage connected to the West-9 building from the road that connects romance hill. Interacting with students and exchanging ideas on a regular basis, I finally felt I was in a university.
In the video, our talented group members featured their club activities. Currently, I do not belong to any clubs or circles. Seeing my passionate group members, I got encouraged to pursue my hobbies and passion along with my studies. University and campus life is not only for academic studies but to expand our horizons, building connections, and making lifelong friends.
With several group meetings and recording sessions, we completed our introduction video. The plan was to show an introduction video, play interactive quiz games with students, and later walk through the campus in real time. Our group members walked around the campus and introduced the areas one by one. We had some technical difficulties such as internet stability but those parts themselves were part of the experience as well.
Overall, I appreciate that I was a part of this wonderful project and made unforgettable memories."

Comments from the team members:
Rei Teshima: "I was able to enjoy the school campus tour overall, and the things I really enjoyed the most was that I was also able to know more about Tokyo Tech. This is largely because most of the 20B student did not have so many opportunities to visit campus. I was also glad that I could make lots of friends both inside and outside the college and hopefully I am now still getting in touch with some of my group members. The thing I struggled most was that we had to do school campus tour online, so that we had to be more proficient at using gadgets like PC and smartphones. Through the course, I was able to nature skills essential in cooperating with my group mates in English and learned the joy of building up one thing with my group members. Overall, the campus visit was full of fun, and I was able to enjoy the whole activities!!"

Natsumi Kobayashi: "This virtual tour is great opportunity to know about our campus. Because I entered this university from master's course and I always do research in the laboratory, so I don't know much about the campus. Through tour planning, I could visit a lot of places where I didn't know such as working place of above the library, second floor of Taki Plaza, manufacturing center and museum etc. Moreover, I was able to listen to explanations of the meanings, thoughts, and ingenuity put into each architecture, building, object, and cafeteria. Furthermore, I could learn about history of Tokyo Tech and I noticed about the feelings that people had for Tokyo Tech in the past. In that day, through the tour, I was able to observe club activities such as juggling, a cappella, gymnastics and so on. There are one of the members who belong to a cappella, so we did a cappella a little and were able to enjoy its atmosphere. It was fascinating experience not only to introduce international students to Tokyo Tech by online, but also to have fun with students in different grades and courses that I don't usually meet and I really appreciate to them and Ichinose-san."

Kiyomasa Watanabe: “It was hard for me to introduce the facilities in Tokyo Tech because I did not use(know) them. Thanks for my team members, however, I also learned about Tokyo Tech and I could make fresh reactions during the virtual visit instead of the joiners from foreign countries. I hope it helped the program be warm up!”

9. Discussion and Presentation

Group A

Topic:MUSKE-TEER Volunteer Application

Members:Julia, Ebi, Son, Ryu, Noe, Eba, Tommy

・Background

Volunteers have had several challenges over the years, and some of those exacerbated by the outbreak of the pandemic. For example:

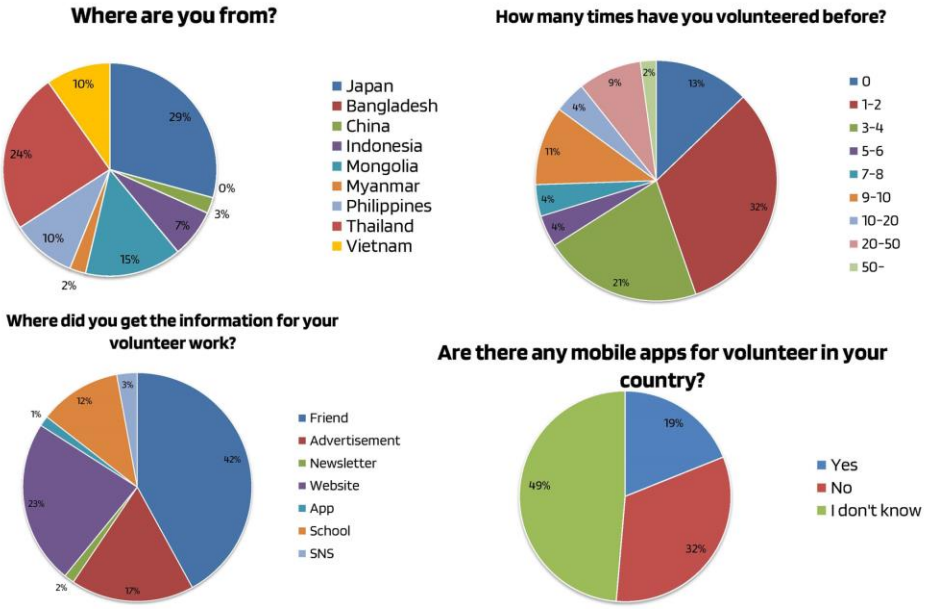
-Pandemic caused organization to reduce their resources due to fear of exposure to Covid-19

-Under-resourced communities lacking infrastructure to support volunteer projects

-There is lack of coordination and communication between volunteers and organizations

-Host organizations lack effective methods and tools to evaluate the impact of volunteer activities on host communities

We conducted a survey to find out what Asian students thought about volunteering. Below is the result. These results suggest that few students volunteer on a regular basis, and efficient methods for obtaining information on volunteer activities do not currently exist or are not recognized.



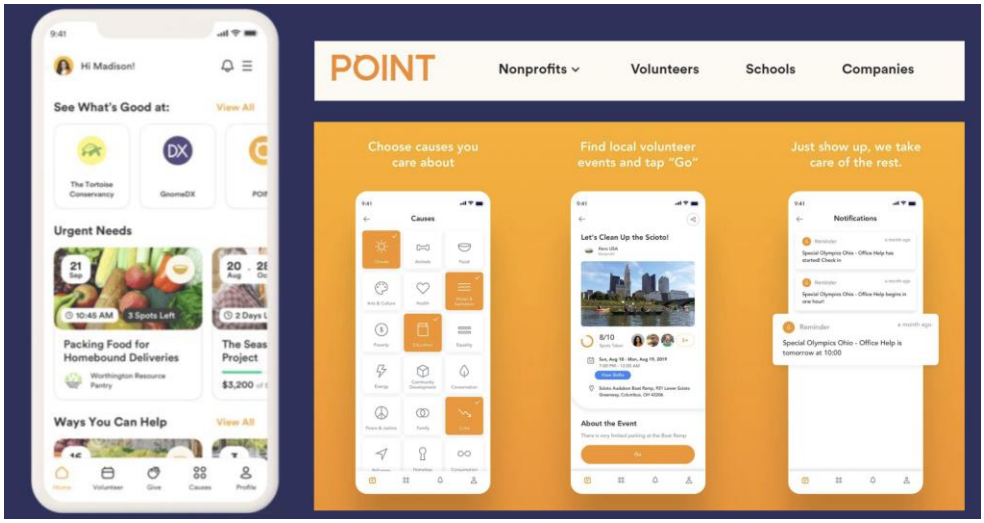
From the survey, we extracted and categorized sentences about what people expect from volunteer activities. We found out that they want to experience those four factors through volunteer activities.

From the results of these surveys, we decided to present ourselves as an NGO which offers an application that can connect volunteers and partners.

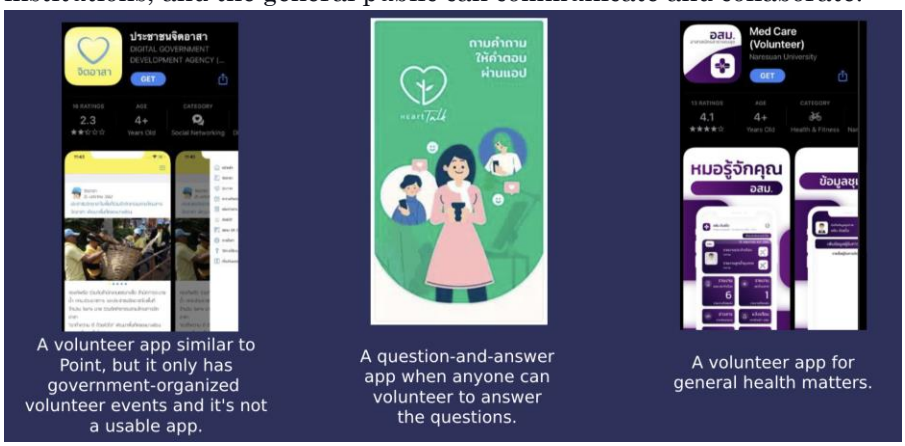
▪ About app

Based on the issues mentioned in the background, we studied the existing online platforms and applications that are currently available to analyze the demand and necessity. Multiple applications are currently available such as the “Point”, which provides an integrated platform for finding volunteer information and options for directly applying. However, most of the features are exclusive to the region /US, and Canada/, and limited options for collaborations.

▪ App Inspiration and similar applications



Our members researched similar platform in countries. We have found several alternatives. However, most of the applications are only government-organized, inflexibility of application requirements, hard-to-understand policies, or too narrow in terms of volunteer selection. Therefore, our target picture was to create an online platform and mobile application where NGOs, institutions, and the general public can communicate and collaborate.



A volunteer app similar to Point, but it only has government-organized volunteer events and it's not a usable app.

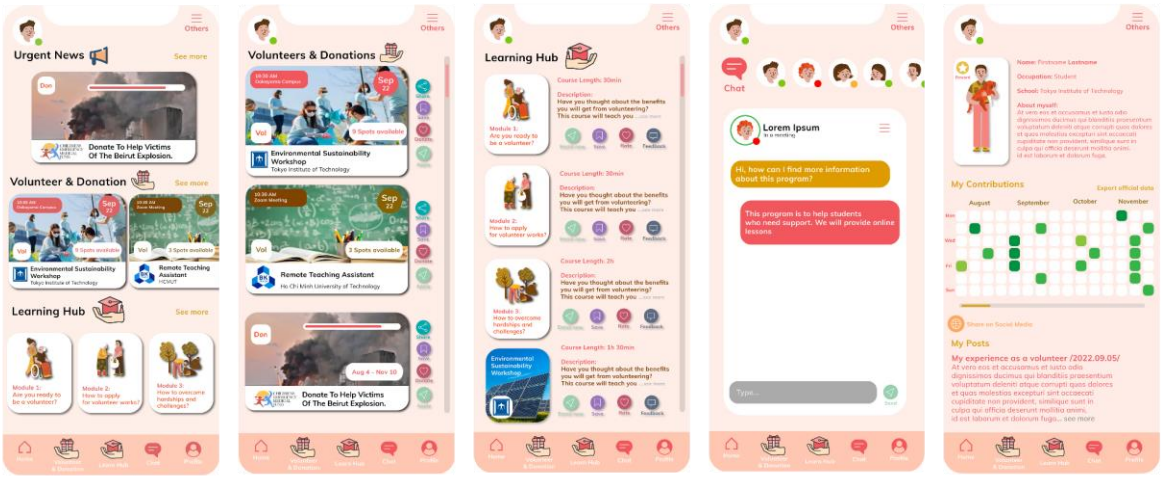
A question-and-answer app when anyone can volunteer to answer the questions.

A volunteer app for general health matters.

We designed and built a demo version of our app. One can refer to the application model down below. There are five main pages that users can interact with. First, there is a homepage where users can find every brief information about urgent news, learning hub, updates and blog. On the second page, the users can find the volunteer & donation page. Here, users can look up and apply to various volunteer activities and even have the option to donate as well. On the learning hub section, native learning modules are provided for firs-time users to get them familiar with volunteer activities. On the next page, the users will find the chat feature. THis feature allows user to get in touch with each other and information sharing, building connections, and reach out to communities of interest. On the profile page, the users can build their own portfolios.

Features of the application:

1. Urgent alarm: Notification will appear on the top of the homepage
2. Volunteer & Donation: Events or programs organized by institutions, and users - the events will have the feature of donation.
3. Learn Hub: The app will provide the necessary training to become a volunteer. Institutions can also have the chance to host their learning modules.
4. Chat feature:
5. Avatar: Users can have the chance to build their profiles. The users can build their avatars and they will evolve based on the performance of the users.
6. Share feature: The app is connected to other social platforms and they can directly share the news on connected platforms
7. Data submission: necessary data can be provided as users are allowed to input data needed to the platform. Instead of manually putting the information, users can upload the
8. User feedback: Users can give feedbacks to the application and programs for further improvements
9. Reward feature: Connected to the avatar, users can build their portfolio and can have the official data they can use for later job applications or official studies.



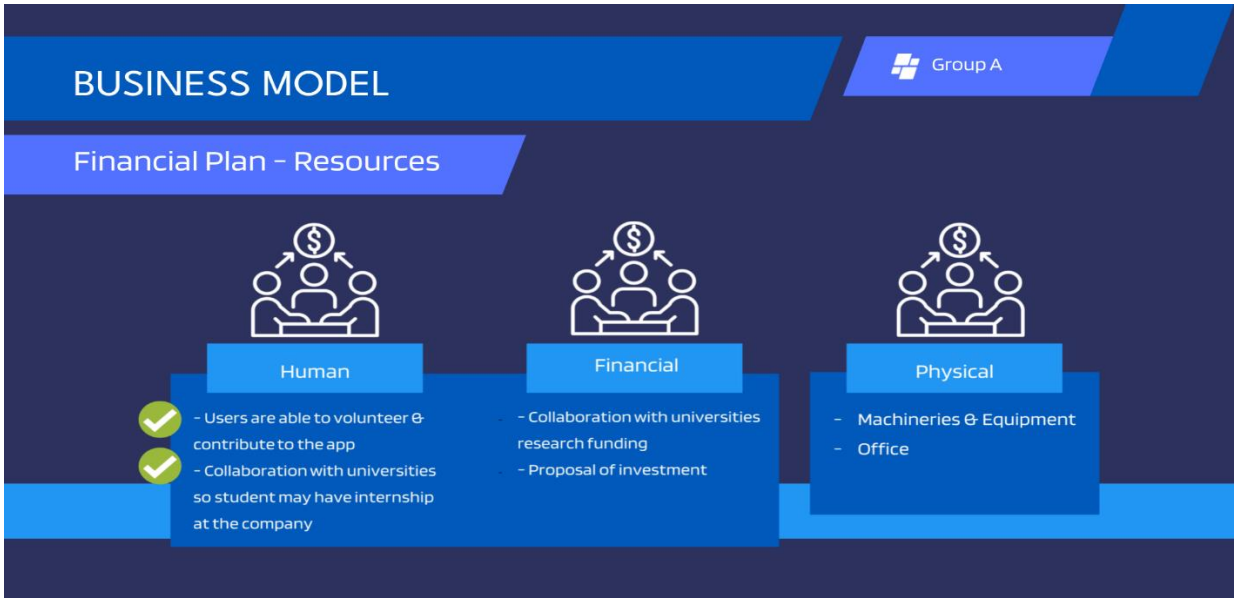
▪ Business model

In our business model, major concerns have two factors. One is financial concern. As you know, developing the app needs funds. The other factor is expert staff and equipment. Without expertise, we can't make sophisticated app, but hiring experts requires a lot of money. Plus, we need legal advice in order to address the potential issues. As for resources, we considered 3 kinds of resources.

First, Human resources. Users can find volunteer activities through the app and contribute to app development. Plus, collaborating with universities would help increasing the number of people who engage in volunteer work. As for financial resources, universities may help us financially. In return, we can provide universities data which is related to their research. Some companies may donate to app developers, which makes the company's reputation better. Finally, in volunteer activity, some machines and equipment are necessary. For instance, in order to overcome a great earthquake, heavy machinery is necessary. Aside from costs and resources, we have to consider revenue so as to keep operating this app. Without revenue, it would be difficult to make ends meet.

In order to make the company profits increase, we contemplated two ways. First, we will make connections with some institutions for further revenue. As I mentioned before, institutions can get data we got through operation and contribute to society. They can kill two birds with one stone.

Second, we will make a premium package for paid users. With a premium package, users can show their advertisements or their posts preferentially. Plus, they can get access to more data like statistics. Companies can know what people need in the region and then utilize it for R & D. Furthermore, advertisement is also important. We have considered three ways to increase the usage of the app. One is participating in events which are related to volunteer activities. Hearing the presentation delivered by Ms. Swietenia -Founder & Executive Director of Divers Clean Action-, we came up with this idea. According to the Ms. Swietenia, it is one of the best ways to promote activities. Second idea is making connections with other institutions or NGO. Each institution may have different ideas. Adopting other's ideas may help us enhancing the features of app. Finally, using SNS is a very important method. Most people enjoy SNS, which means that sharing the experience of volunteer activities on social media attracts a large amount of people. Through these promotions, we aim for worldwide expansion.



- **Summary**
- We will be a company that provide the app to connect users
- One of the benefit of having the platform is networking
- Anyone can be volunteer
- Program depends on the organization/institution. We help provide a platform to tackle the listed challenges

Group B

Topic: Precise forecast of natural disasters and developing cost of forecasting methods
Members: Aoi, JD, Meng, Reza, Pabs, Unun

The motivation of behind the app

Floods and storm surges are recurring problems of coastal countries especially SEA. Although we have project like NOAH which can give us information about natural disasters and evacuation centers, it's only available in website form. Therefore, we want to focus on a solution that maximizes models like Project
NOAH by making disaster awareness a few clicks away. We basically want to
bridge the valuable information of Project NOAH and the people.

The logo, name and functionalities of the app

Logo:

Name: Floobes

The reason the name is Floobes is that the app can tell us where the flood is. The logo has a big B because of our group name and there is a flood symbol behind "B".

Functionalities:

- The user has an option to turn on or off their location
- If the location is turned on: The app shows your real time risk to storm surge, tsunami, flooding based on your location and based on the trajectory of the typhoon
- The user has an option to click a button to inform the city's emergency response team and tell them what's happening (maybe in the form of photos/videos)
- The app must be able to show the nearest evacuation centers (like google maps)
- The app should be able to show the flooded areas or roads as well (just like how Waze provides signal on which roads have heavy traffic and stuff)
- The evacuation centers can use the app to show their status when they are lacking drinking water, blankets, etc. Also shows the number of people already in the center
- They can also show their contact numbers so that donations or call for help can reach them
- The users can list important people and their contact numbers and the app can send them a text message of your location and status (like needs help, etc.) if the user would allow it
- The alert of disaster in someone's phone can be sent to others nearby (like in a bus) by Bluetooth
- The functions of TV and radio are incorporated in a smartphone which can be carried all the time.

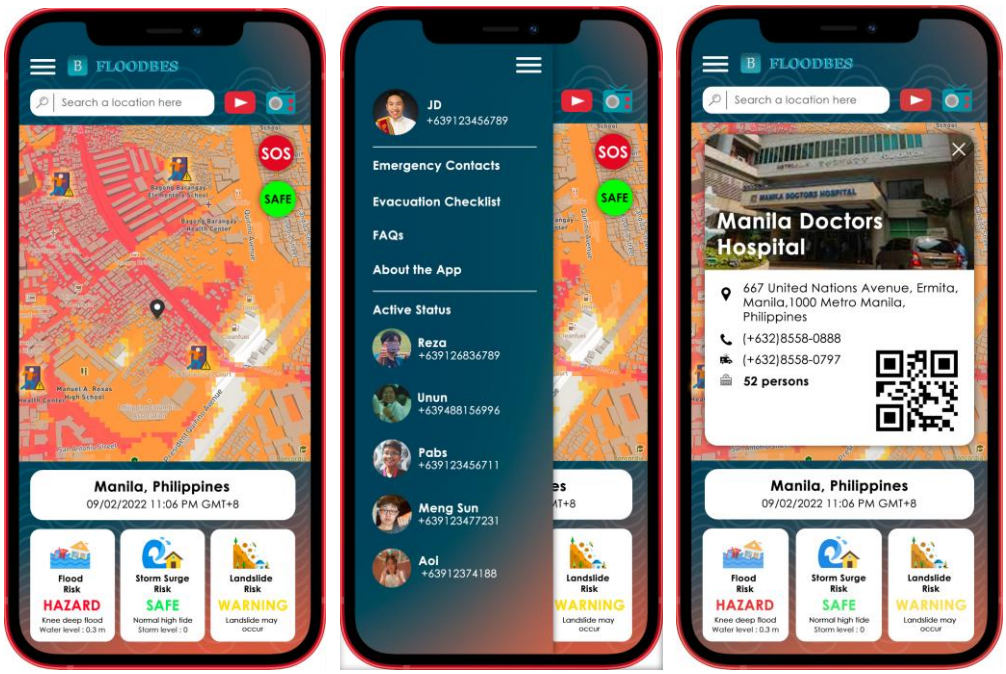
The proposed user interface of the app

As soon as the user opens this app, as long as their location and GPS are open, a map accurately showing their location will be displayed. Above the location indicator, an icon depicting the current weather of the user's place will also be provided. Nearby evacuation centers will also be displayed

as shown by these icons here. Below the map, the location and the exact time and date to which the data provided by the app is updated are also displayed. Such features put emphasis on the "real-time" function of our app.

Aside from providing the user's location and nearest evacuation centers, we also have several buttons at the upper part of the homepage that are straightforward when clicked. First, we have the emergency buttons. This is one of the features that make our app special. Our app allows the user to store emergency contacts who can be their family, friends or whomever they want to add. These buttons allow their contacts to know the user's situation whether they need help or not. Aside from your own location, you can also search the situation of other locations using the search bar above the map.

The main and important feature of our app are the warning systems that we provided and updated real-time through the different data and simulation models that we're going to obtain from our collaborators. This gives emphasis on the inclusivity of our app. The warning systems are for flood, storm surge, and landslide risks. Real-time quantitative data will be provided along with the necessary notification on whether the location is hazardous, safe, or necessary caution is much needed. Qualitative description also of the situation is also provided for easier understanding of the user.



- **Users and collaborators**

Users:

It is user friendly so that it is available for all kinds of people including elders. While it is simple, it has many functions so that it can handle various kinds of problems such as broadcasting, evacuation sites and so on. When it's urgent, people can call ambulance or police. What people may like about this is that it looks like a Facebook and we can know about where our friends are safe or not and text them. Moreover, it is supported by many people including experts, so that it is reliable.

Basically, it is a combination of social media and Hazard Map plus emergency apps. On the other hand, since it is a software service, it will be difficult to help people without smartphones. To solve this, we considered that it is necessary to provide something additional by infrastructure.

Collaborators:

First of all, we would like to ask for the help of the central government and local governments to promote our software Floobes as official software to the people. On the one hand, it can better raise people's awareness of protection against natural disasters such as floods and reduce the impact of natural disasters. On the other hand, we plan to obtain a portion of the necessary funds from the government to operate our software.

Secondly, we want to cooperate with disaster agencies. We request the agencies to use our software, and we can publish official intelligence and information on the software. This will make a big difference, especially in the recovery efforts after natural disasters such as floods, when people can easily and conveniently receive information from agencies on Floobes. Then, we want to work with researchers at universities and natural disaster research institutes. With the latest data support and technical support from researchers, we can continually update our system to provide more accurate risk predictions and level estimates.

Finally, we would like to get more volunteers involved. We need people who can program and interface design, people who can collect and analyze data, and people who can market and promote the system

Summary

- We have conceptualized an app addressing the lack of disaster response and awareness
- We believe that this app maximized forecasting models like Project NOAH
- The application is an all-in-one easy to use tool that the public can use to mitigate disaster effects to their lives
- The application fosters collaboration that aims to create a disaster conscious community

Group C

Topic: Recycle Green - An alternative and innovative Way of Reusing Masks
Members: Phuc, Jericho, Lemuel, Genki, Suzune

1. Current Situation

Since COVID-19 appeared in 2019, we can see the uprising of medical waste and single-use plastics. There has been an increase in Plastics used for packaging 40% and PP, PVC plastics which used to make PPE for short. The reasons for this uprising is firstly of course we are making more PPE like face-masks to protect ourselves against the virus. The second reason is the panic buying during the pandemic. And the last reason is medical waste, including test kits, and syringes of the vaccine.

These reasons all contribute to a new plastic source, especially after the pandemic has eased down. As a habit people will continue to wear their face-masks, and these masks could be a new source of microplastic fibers. The material of these masks is not biodegradable and may take years to break down. Masks are being discarded carelessly which end up in oceans and waterways.

2. NGO Introduction

- Mission-

The mission of our NGO is to be able to reduce waste by promoting sustainable solutions to the existing mask-waste problem along with our partner organizations.

-Vision-

Our vision is to create a sustainable and safe system of recycling mask waste across countries for the overall sustainability of the world.

- Objectives-

1. Improved Waste Collection System

We aim to improve the waste segregation system in each country so the wastes can be properly identified first.

2. Disinfection of Wastes upon Collection

Since we are focusing on the face mask wastes, we need to disinfect these wastes because they are hazardous to humans and might be contagious as well.

3. Create Innovative Products

Our NGO plans to make products out of our collected mask wastes to turn it into something environmentally-friendly.

4. Raise Awareness on the Issue

We aim to raise awareness on how harmful these wastes can be both for the people and the environment.

- Partners-

1. United Nations.

They have recurring goals which are the SDGs which aim to make the world a cleaner and more peaceful place, not just for us in 2022, but also for the future generations. We may ask them for help since we would have a common goal, which is to clean the earth and make it livable again.

2. World Health Organization

Since this topic concerns the health of all people, WHO may help us in maintaining a safe and clean environment for the people.

3. Garbage collection company

Since they collect the wastes from households and to the dump site, we may coordinate with them, along with the other two organizations, to filter out masks that are being thrown out from other wastes so that there would be no contamination.

3. Action Plan

-Current waste collection

Two examples

・Japan: Classified into about 4 types, burnable, non-burnable, recyclable and oversized garbage.

・Philippines: Classified into about 3 types, biodegradable, non-biodegradable and recyclable waste.

Currently, masks are not recycled and are burned.

- Disinfection and Storage

First, face masks are collected from houses and washed. Next, the strings are cut off and then stored. Before they are processed, they are disinfected by UV.

4. Products

1. Pavement

Our first idea is concerned with reducing mask wastes by using them as an additive to pavement bases. This step is inspired by the research of Boroujeni in 2021 which found out that disposed face masks can be used for pavement base subbase applications, stating that shredded face masks or SFMs can improve ductility, flexibility, and strength. Hence, one of the plans of RECYCLE GREEN is to coordinate with various construction companies to inform them of the benefits of incorporating these SFMs to their products. What we can do is provide convenience for them. In addition, we can also go in-depth into explaining to them the findings of the research as shown in this diagram.

After safely collecting and shredding these mask wastes, we'll mix these with the pavement base commonly used by the company. For this, we will initially collect samples of the companies' bases and look into what percentage of SFMs works best when mixed with what they use. All in all, the output of this method is a more ductile and flexible pavement base and subbase layers. Not only will these provide better structural support and drainage, but also reduce construction costs significantly.

2. Chairs

The second product is a chair. This recycling method is based on the idea proposed by one Korean student.

To make chairs, we use only two materials; wasted masks and fabric scraps. First, we'll collect materials. To make one chair, we use about 1500 masks. Then, we'll melt them with a heat gun, and pour them into the mold to shape the parts of the chairs. After that, we'll assemble the parts to make chairs.

As you can see from the process, this chair doesn't cost a lot since we don't use so much equipment and difficult technology. Therefore, we plan to recycle masks to chairs by ourselves and volunteers, and then donate the chairs to whoever needs them, such as schools and public facilities.

3. Flower Pots

The last idea of recycling masks is making small flower pots. This idea refers to one YouTube video about crafts and arts.

The process to make flower pots is very easy. First, we'll put water and bleach into a bucket, and soak used masks in it. Then, we'll dry those masks and cut off the ends of the masks. After this process, we'll make them like pockets to make pots, by taking two pieces of masks and sewing them together, or folding the mask and stapling both ends. After that, we'll put soil in the pots and then place plants.

This way of recycling almost does not need special technology and money, so we'll just need volunteers. In addition, everyone can try this recycling at home, so it will be effective to teach people who are interested in gardening how to make the pots from masks.

5. Conclusion

Now, OUR PLANET is in our hands! We need to Live Green! Think Green! Be Green! And See Green!

Together with Recycle green, you and I can build a greener future, one mask at a time!

References

1. 3SIXTY. (2020, NOVEMBER 6). WHY REUSABLE FACE MASKS ARE THE ECO-FRIENDLY AND BETTER OPTION: 3SIXTY. HOSPITALITY - ENVIRONMENTALLY SUSTAINABLE TEXTILE PRODUCTS. RETRIEVED SEPTEMBER 5, 2022, FROM HTTPS://3SIXTYHOME.CO/WHY-REUSABLE-FACE-MASKS-ARE-THE-ECO-FRIENDLY-AND-BETTER-OPTION/

2. ALBURY ENVIRO BAGS. (2019, AUGUST 12). ENVIRONMENTAL ATTRIBUTES OF SHOPPING BAG FABRICS - NON-WOVEN POLYPROPYLENE. ALBURY ENVIRO BAGS. RETRIEVED SEPTEMBER 5, 2022, FROM HTTPS://WWW.ALBURYENVIROBAGS.COM.AU/ENVIRONMENTAL-ATTRIBUTES-OF-SHOPPING-BAG-FABRICS-NON-WOVENPOLYPROPYLENE/#:~:TEXT=NON%2DWOVEN%20POLYPROPYLENE%20IS%20NOT,PLASTIC%20CALLED%20MICROPLASTICS%20(19).

3. ALPHABETICAL LISTING OF WASTE CLASSIFICATION - AISAI. (N.D.). RETRIEVED SEPTEMBER 5, 2022, FROM HTTPS://WWW.CITY.AISAI.LG.JP/CMSFILES/CONTENTS/0000002/2506/ALPHABETICAL_LISTING.PDF

4. ANDRÉ GONÇALVES - EDITOR & HEAD OF ENGLISH MARKET, AFTER STUDYING AND WORKING IN HR, & ALL, S. (2020, MAY 5). CORONAVIRUS: WHICH FACE MASKS ARE MORE SUSTAINABLE? YOUMATTER.RETRIEVED SEPTEMBER 5, 2022, FROM HTTPS://YOUMATTER.WORLD/EN/CORONAVIRUS-SUSTAINABLE-FACE-MASKS/

5. BBC. (2018, MAY 24). PLASTIC POLLUTION: IMAGES OF A GLOBAL PROBLEM. BBC NEWS. RETRIEVED SEPTEMBER 5, 2022, FROM HTTPS://WWW.BBC.CO.UK/NEWS/SCIENCE-ENVIRONMENT-44215882

6. DHARMARAJ, S., ASHOKKUMAR, V., HARIHARAN, S., MANIBHARATHI, A., SHOW, P. L., CHONG, C. T., & NGAMCHARUSSRIVICHAI, C. (2021). THE COVID-19 PANDEMIC FACE MASK WASTE: A BLOOMING THREAT TO THE MARINE ENVIRONMENT. CHEMOSPHERE, 272, 129601. HTTPS://DOI.ORG/10.1016/J.CHEMOSPHERE.2021.129601

7. DHARMARAJ, S., ASHOKKUMAR, V., HARIHARAN, S., MANIBHARATHI, A., SHOW, P. L., CHONG, C. T., & NGAMCHARUSSRIVICHAI, C. (2021). THE COVID-19 PANDEMIC FACE MASK WASTE: A BLOOMING THREAT TO THE MARINE ENVIRONMENT. CHEMOSPHERE, 272, 129601. HTTPS://DOI.ORG/10.1016/J.CHEMOSPHERE.2021.129601

8. FADARE, O. O., & OKOFFO, E. D. (2020). COVID-19 FACE MASKS: A POTENTIAL SOURCE OF MICROPLASTIC FIBERS IN THE ENVIRONMENT. SCIENCE OF THE TOTAL ENVIRONMENT, 737, 140279. HTTPS://DOI.ORG/10.1016/J.SCITOTENV.2020.140279

9. KÖHLER, J., THOMA, A., BRAUN, S., PICH, A., & HERRMANN, A. (2021). BEDEUTUNG VON MAKROMOLEKÜLEN IM KAMPF GEGEN DAS CORONAVIRUS. CHEMIE IN UNSERER ZEIT, 55(6), 393–405. HTTPS://DOI.ORG/10.1002/CIUZ.202100024

10. LIFE CYCLE INITIATIVE. (2022, APRIL 3). SINGLE-USE FACE MASKS VS. REUSABLE FACE MASKS: WHICH ARE MORE ECO-FRIENDLY? - LIFE CYCLE INITIATIVE. LIFE CYCLE INITIATIVE - JOIN US! RETRIEVED SEPTEMBER 5, 2022, FROM HTTPS://WWW.LIFECYCLEINITIATIVE.ORG/SINGLE-USE-FACE-MASKS-VS-REUSABLE-FACE-MASKS/

11. MAYU. (2020, SEPTEMBER 28). HOW DO I SEPARATE MY TRASH? A GUIDE TO GARBAGE DISPOSAL IN JAPAN: MATCHA - JAPAN TRAVEL WEB MAGAZINE. MATCHA. RETRIEVED SEPTEMBER 5, 2022, FROM HTTPS://MATCHA-JP.COM/EN/10149

12. MOMBLAN, G. (2020, JANUARY 15). ILOILO CAPITOL EYES STANDARD, UNIFORM WASTE BINS. PHILIPPINE NEWS AGENCY. RETRIEVED SEPTEMBER 5, 2022, FROM HTTPS://WWW.PNA.GOV.PH/ARTICLES/1090800

13. SABERIAN, M., LI, J., KILMARTIN-LYNCH, S., & BOROUJENI, M. (2021). REPURPOSING OF COVID-19 SINGLE-USE FACE MASKS FOR PAVEMENTS BASE/SUBBASE. SCIENCE OF THE TOTAL ENVIRONMENT, 769,145527. HTTPS://DOI.ORG/10.1016/J.SCITOTENV.2021.145527

14. UNCTAD. (2020, JULY 27). GROWING PLASTIC POLLUTION IN WAKE OF COVID-19: HOW TRADE POLICY CAN HELP. UNCTAD. RETRIEVED SEPTEMBER 5, 2022, FROM HTTPS://UNCTAD.ORG/NEWS/GROWINGPLASTIC-POLLUTION-WAKE-COVID-19-HOW-TRADE-POLICY-CAN-HELP

15. UNITED NATIONS. (N.D.). THE 17 GOALS | SUSTAINABLE DEVELOPMENT. UNITED NATIONS. RETRIEVED SEPTEMBER 5, 2022, FROM HTTPS://SDGS.UN.ORG/GOALS

16. WHAT IS THE PURPOSE OF FACE MASKS AND RESPIRATORS? · COVID PORTAL. COVID PORTAL. (N.D.). RETRIEVED SEPTEMBER 5, 2022, FROM HTTPS://COVID.GOV.CZ/EN/SITUATIONS/FACE-MASKS-ANDRESPIRATORS/WHAT-PURPOSE-FACE-MASKS-AND-RESPIRATORS

17.YADA, F. (2021, JUNE 25). SURGING VOLUME OF LITTERED FACE MASKS PUTS MORE PLASTIC IN OCEANS: THE ASAHI SHIMBUN: BREAKING NEWS, JAPAN NEWS AND ANALYSIS. THE ASAHI SHIMBUN. RETRIEVED SEPTEMBER 5, 2022, FROM HTTPS://WWW.ASAHI.COM/AJW/ARTICLES/14371627

18. YASUKA. (2020, OCTOBER 27). HOW TO SORT YOUR GARBAGE WHILE IN JAPAN. KCP INTERNATIONAL. RETRIEVED SEPTEMBER 5, 2022, FROM HTTPS://WWW.KCPINTERNATIONAL.COM/2019/09/SORTGARBAGE-JAPAN/

Group D

Topic: Smart city and Privacy

Members: Fujie, Hafia, Naga, Onon, Positive, WIN

Smart City

Smart city is a development that is being applied in urban areas where the society is encouraging the use of automation for routine activities

There are so many appliances of smart cities that have already been used in different aspects of life, such as traffic management systems, smart buildings, water quality, smart energy, and many other things. We could also see that the list of smart city appliances is constantly growing day by day. So, let's discuss the appliance of the smart city based on the stakeholders, which is the one who provides/uses the technology of the smart city appliance. There are 4 categories of stakeholders, individual stakeholders, business, government, and public private partnership. Individual stakeholders are the ones that use the technology and provide data. Examples of the appliance include Bike Share Services and Mobile App for buses. The second is business, business stakeholders usually provide technology for a specific consumer/target, such as Location beacons to support navigations for the blind and cloud servers to hold and process data. Third, the government, as we all know, government provides smart city appliances that can be used for keeping regulations or fulfilling large numbers of people's needs such as traffic control, tolling, and smart trash cans. Then lastly, the one that involves collaboration between a government and the private sector, called, Public Private Partnership. Such as urban smart cards and public WIFI kiosks to provide free WIFI in public spaces.

Once we grasp the concept of smart city, then why do we have to pursue it in the future? The answer is that since the beginning of human civilization, humans relied on information for decision making activity. Since we assume that it will be possible for us to get more data, it is possible for us to make a better-informed decision. We do that to pursue a more prosperous and sustainable society.

Data

Data is a collection of facts, such as numbers, words, images, intended to measure, observe, or simply describe things. Developments in the technology sector, especially in smartphones, have resulted in text, video and audio being included in the data along with web logs. Most of this data is unstructured. The key features of a smart city are big data, information collected from many different sources, and its analysis, followed by the data's intelligent use to improve the lives of its residents. This type of data collection requires fast and reliable connectivity from all possible data sources.

Data privacy

Data privacy relates to how a piece of information—or data—should be handled based on its relative importance. For instance, you likely wouldn't mind sharing your name with a stranger in the process of introducing yourself, but there's other information you wouldn't share, at least not until you become more acquainted with that person. Open a new bank account, though, and you'll probably be asked to share a tremendous amount of personal information, well beyond your name. Private data is something we all want to be secure, and whenever a huge breach or security issue happens.

Why is online privacy important?

The importance of digital privacy becomes clear once you try to make a mental list of personal things you're ready to share with complete strangers — and those you'd rather not. For sure, you don't want your medical records, bank statements, or even certain items from your shopping cart to be widely known. Anyone who watched you saw how easy it was for people to get hold of

someone's personal information like home address, friends' names, tastes, or favorite places based on what they publicly shared.

Available methods to protect data privacy

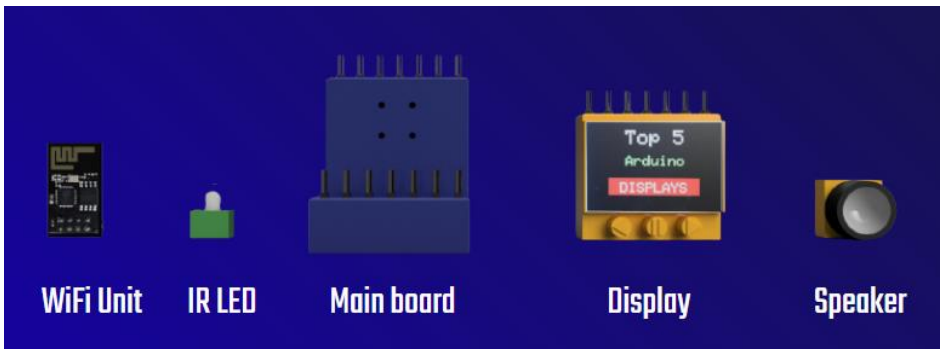
First, let's see some explanations about data privacy and data protection. Both have been used with the same meaning sometimes, but there are some differences. Data privacy is focused on defining who has access to data such as putting policies to ensure data is handled in appropriate ways. On the other hand, data protection focuses on applying those restrictions. It is a legal mechanism that ensures safety. So, let's know more about methods of data protection. What are methods of data protection? There are numerous methods to protect our privacy, so here only mention a few.

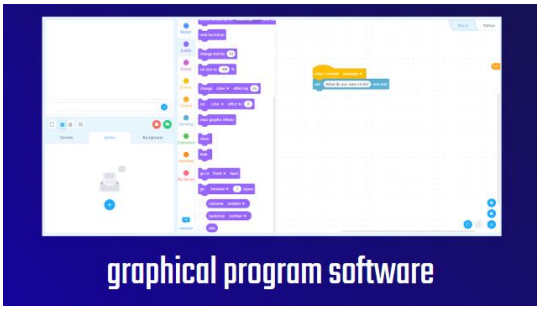
The first example method is Data loss prevention. It is typically defined as any solution or process that identifies confidential data, tracks it, and prevents them from being lost. This method often includes several tools to protect against and recover from data loss. The second is firewalls. "Firewalls" is the same as shown in the picture. It blocks malicious traffic, such as viruses and hackers. "Firewalls" is a network security device that monitors incoming and outgoing network traffic to allow only authorized users can access or transfer data. The next one is encryption. Encryption alters data content to encoded information that makes it unreadable to anyone without holding the right encryption key. Thus, unauthorized users cannot access the data. Data privacy tools, such as data minimization or transparency & consent, is also one of the methods. Data minimization is a principle that only the essential personal data is collected, and kept for as long as it is needed. Next is Transparency & consent, it is principal that informs individuals about how and why their data will be collected and used, and offer choices to participate.

There are many methods and tools to protect our data and privacy. It is sometimes confusing and hard to choose. So, our team created a simple and handy product to ensure our data security.

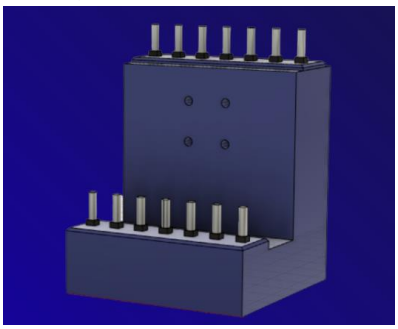
Detail about our product

Nowadays, there are many IoT devices in your house which can collect data and invade your privacy. For example, a smart speaker like Amazon Alexa, it will send your voice data to the company so that they can deal with it. And Apple will also get your location data from Air tag. Here is a question. Why the companies need our data? One of the answers is they need to do data processing in their server. So, if we can handle the data by ourselves, we can protect our privacy from companies. In other words, if we can make an Alexa or Air tag by ourself, we can protect our privacy. We find the solution!! Our product is just like a Lego block consisting some hardware kits and a graphical program software. Hardware contains all the complex parts inside such as IC chips, circuit boards and so on. The appearance looks like a Lego block and you can build them up easily. We also provide some additional parts so that you can make anything which you want. Here is the example of how to make a Smart speaker with our products.

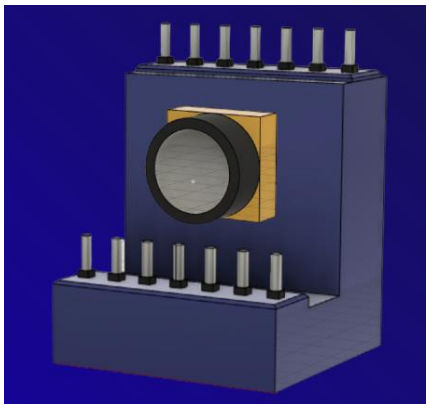




Firstly, you need an IC chip, here it is, we call it main board.



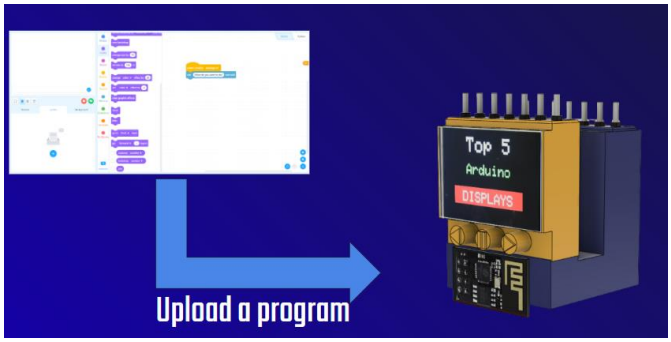
Next, you need a microphone to collect voice, so put this one on the main board. There are pins on one block and holes on another, you can connect two blocks by this way like Lego block.



If you want your speaker looks cooler, you can put a display on it.

And maybe you want your smart speaker connect to the internet, just add a WIFI unit to it.

At last, you need upload a program to control it. You can code a speech recognition program by using a graphical program software.

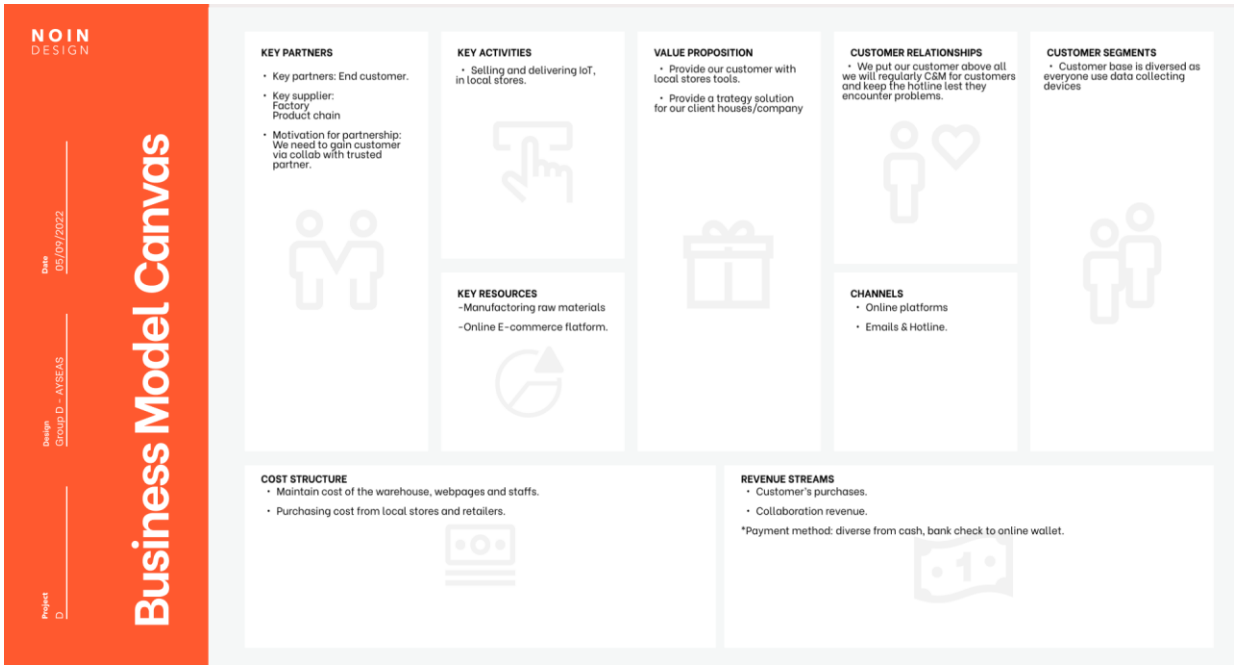


Then, you get your own smart speaker, and it will not send your private data to anybody.

Our plan

For our product to be trusted and used, we plan to cooperate with the already trusted company or government office. As long as the partner accepts our proposal, we can begin the manufacturing right away. Within the six key values for start-up, we are confident firstly about our customers who we believe are everyone who is living within the smart city since at least each of us are using a data collecting device right now. Then we are also confident in our price which would be cheaper than other solutions.

Here is our business model canvas.



References

[1] Future of Privacy Forum, Shedding Light On Smart City Privacy. Retrieved September 4, 2022 from https://fpf.org/uncategorized/smart-cities/

[2] Cloudian, Data Protection and Privacy: 12 Ways to Protect User Data. Retrieved September 4, 2022 from Data Protection and Privacy: 12 Ways to Protect User Data (cloudian.com)

Group E

Topic:　『Improve of health conditions and excessive population increase』
Members: Ling-Ling, Andrew, Lucky, Poom, Ken, Natsumi, Steph

1. Background

People suffered COVID-19 and other impacts related to COVID-19. In order to avoid the same situation as 2020, we should protect ourselves from infections not only COVID-19, but also influenza, Tuberculosis, Syphilis, and so on. In 2020, anti-virus material played a great role everywhere. However, we cannot spray it on our surface and we cannot protect ourselves. Then, we propose to use the organic anti-virus material in cosmetics.

Fig 1 Inside Tokyu railway [1]

2. Product Description

OUR PRODUCT
『SUNNYTIZER』

This is a sunscreen with antibacterial and antiviral properties, an image of the product is shown on the right. This is the first ever sunscreen that offers protection from bacteria, viruses and UV rays, which have a strong effect of protection from UV rays like SPF 50 with PA+++. This translucent cream is made for all skin types, thus it is suitable for daily use for the face and body. This sunscreen can be used by all genders and all ages except the people whose surface cannot match it.　Some people use it all seasons.

- **Mission**

We strive to produce a product that protects people from UV rays, viruses, and bacteria, which everyone can conveniently take and use the product anytime and anywhere.

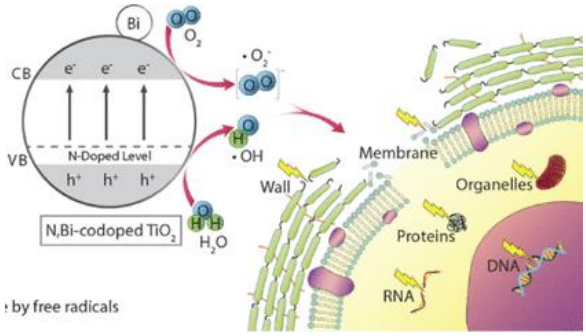
- **Vision Statement**

To push the boundaries of the skincare product to be more beneficial for people's health and for people's life.

- **How can our product give you protection?**

Recently, there are lots of antiviral and antibacterial materials. Thus, I will introduce the basic mechanism of antiviral materials such as TiO2. When this material absorbs UV-light energy, inside of the material, electrons and holes will separate and they react with oxygen and water on the surface of the material, respectively. Then, they produce the active oxygen and hydroxyl radicals that have strong oxidizing power and they decompose the membrane on the surface of viruses and bacteria as well. This mechanism does not work on the skin of humans so it is safe and

harmless to the skin.



3. SWOT analysis

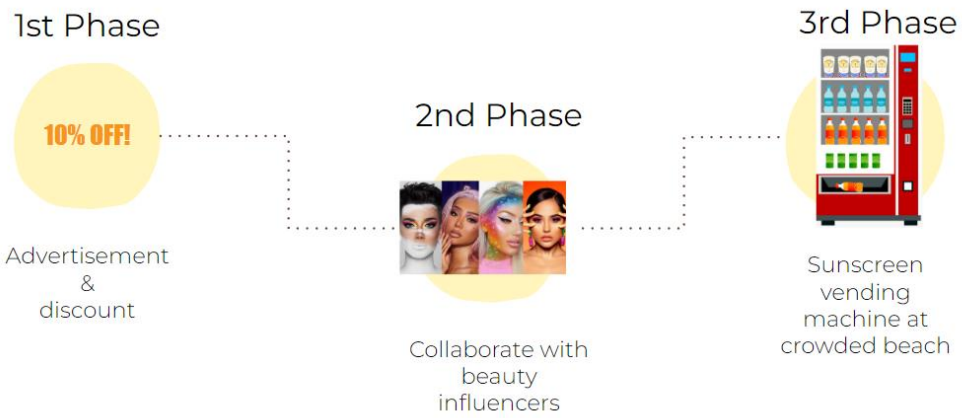
Strength	Weakness	Opportunity	Threat
• The product is made for all ages, skin tone, and sex • Can protect skin from three threats	• Concerns due to being a new product • Many existing sunscreen product in the market	• First human antiviral and antibacterial sunscreen • "New normal" market	• Higher cost to development due to the advancement of the technology

First, strength of "SUNNYTIZER" is being suitable for all ages and sex and can protect human skin from not one not two but three threats. Second, our weakness may include people are scared to try our product since it's relatively new and we have a lot of existing sunscreen competitors. However, we also have many opportunities as the first human antiviral and antibacterial sunscreen and "new normal" market. Last, threats. Because the technology that we will apply to our product advances, it might cause a lot to develop and produce the product.

4. Market segmentation and plan

We will dive deeper into the market segmentation such as Geographic, Demographic, Behavioral, Psychographic. Our customer will be people of any age and sex who live where delivery service or retail store are accessible. They are usually health-conscious people who wouldn't pass down a chance to be protected from viruses, bacteria, and UV light. However, at the same time they also have fears of missing out. They like to socialize so they care about how their skin looks but at the same time, they are also careful.

5. 1 year Marketing Execution Plan



Our product "SUNNYTIZER" has a specialty that can protect you from viruses and bacteria, but there are many competitors such as SHISEIDO and ROHTO. Before they imitate our product, we set a 1-year marketing execution plan with a big campaign. First, we will use advertisements and discounts to attract buyers to purchase our product. The second step is to collaborate with well-known influencers to raise awareness and promote our social media presence. The last step is to distribute our product in a vending machine in crowded and sunny areas like the beach to send a message to our customer that we are their best solution to their problems that they can access everywhere.

6. Summery

We suggested “SUNNYTIZER” this time, it is sunscreen that have three main function with antiviral, antibacterial and sunscreen, which is safety and suitable for all age so you can protect your skin with your parents, friends, children, lover etc. This product is made by fusing recent advanced technology with sunscreen. We hope this product will protect everyone and be loved and trusted all over the world.

References

[1] Tokyu railway ~for safe & comfortable~ https://ii.tokyu.co.jp/safety/video_covid-19

[2] Antiviral technology. Lonseal Corporation. (n.d.). Retrieved September 6, 2022, from https://www.lonseal.co.jp/english/products/floor/functionality/anti-virus/

[3] Isaac Jeffries. (2019, January 9). How to fill in a business model canvas. Isaac Jeffries. Retrieved September 6, 2022, from https://isaacjeffries.com/blog/2018/9/8/how-to-fill-in-a-business-model-canvas

[4] ACS Appl. Mater. Interfaces 2019, 11, 18186−18202

[5] ACS Pharmacol. Transl. Sci. 2021, 4, 8−54

Group F

Topic: Sustainable Housing

Members: Aki, Pia, Poe, Guy, Tsubasa, Rei

Target

Although long term economic growth certainly improves our quality of lives, and leads to the better health of the population, short term economic growth does more harm than good considering the impact of air pollution, waste disposal, greenhouse effect and so on. Considering these issues, Group F wanted to build an environment where people could not only live in harmony with nature but also could encourage the growth of small businesses, so that the health issues as well as other economic problems could be solved in one stroke.

Impact and Correlation of Health and Economy

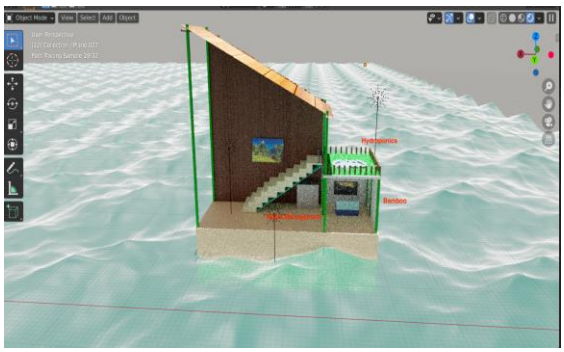
Short term economic growth is one of the major contributors to many risk factors to health, such as air pollution and automobile incidents. It also leaves more vulnerable stakeholders such as the youth or the elderly at a precarious position since they are the ones most affected by these risks. While the frame of reference greatly affects how health and economy relate to one another, it should not be that some people must sacrifice their health or lives just for economic progress. As such we believe that self-sufficient housing would greatly boost the economy while skipping over the short-term hazards of a revitalizing economy. This is especially pertinent in today's situation, since COVID-19 had brought most economies to a low point.

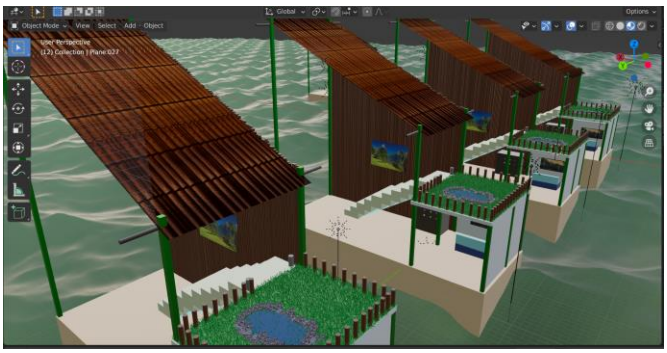
The Proposed Solution: Self Sufficient Housing

In order to solve the issues of health and economy in one stroke, we tried to maximize our knowledge. This is mainly because our group members had different academic and cultural backgrounds (architecture, chemical engineering, engineering, and life science, furthermore, we were from the Philippines, Thailand, Myanmar, and Japan). Therefore we tried to integrate our knowledge and build self-sufficient housing where those complex issues were able to be solved. We then used Blender, which is a software for 3D modelling, to build models of the self-sufficient housing. We also tried to consider whether our plan is attainable or not by estimating the energy consumption, durability of the materials, and whether they are available in each of Asian countries. Furthermore, we chose water hyacinth as a solution for purifying water so that the inhabitants could lead a healthy life. We also tackled waste management issues using our knowledge of chemical engineering and built concrete plans for water cycling systems.

Model of the Self-Sufficient Housing

As written above, we used Blender to build concrete models of self-sufficient housing.





Materials Used in the Self-Sufficient Housing

In this self-sufficient housing project, we would like to focus mainly on the sustainable perspective. Therefore, we chose bamboo, ash concrete, carbon fiber and wood as the construction materials for our project. We decided to use bamboo on the superstructure part of the house as the upper half of the wall and also ash concrete on the superstructure part of the house mainly as the lower half of the wall. As for carbon fiber, we decided to use it by replacing the steel mesh up to connect the concrete in order to get the strong bond and strength. Lastly, we will use wood for the flooring material and more over as the column and beams of the self-sufficient housing. Before we decided to use them as the construction materials, we made the comparison with the factors of light weight, durability, thermal resistance, waste reduction and cost effectiveness. Based on the research from journals and papers, we can conclude that the construction materials that we decided to use are suitable for self-sufficient housing-project. Furthermore, we tried to check that those materials are really sustainable by making comparisons with sustainable design, energy efficiency, recyclability and effect on human health. There is only one concern for ash concrete and carbon fiber. If we counter ash and carbon as the raw material, it can affect human health slightly but before we use ash concrete and carbon fiber, we will definitely do the preparing and reverting into material which can be used for building. In conclusion, we can guarantee that the materials that we decided to use, which are bamboo, ash concrete, carbon fiber and wood are suitable for self-sufficient housing projects.

	Light Weight	Durability	Thermal Resistance	Waste Reduction	Cost Efficiency
Bamboo	★★★ ★★	★★	★★	★ ★ ★ ★	★★★ ★★
Ash Concrete	★★★	★★★ ★★	★ ★ ★ ★	★★	★★★ ★★
Carbon Fiber	★★★	★★★ ★★	★★★ ★★	★ ★ ★ ★	★★
Wood	★★★ ★★	★ ★ ★ ★	★★	★★	★★★

Properties of Construction Material

	Sustainable Design	Energy Efficiency	Recyclable	Effect on Human Health
Bamboo	★★★ ★★	★ ★ ★ ★	★★★	★★★ ★★
Ash Concrete	★★★ ★★	★ ★ ★ ★	★ ★ ★ ★	★★★
Carbon Fiber	★★★	★ ★ ★ ★	★ ★ ★ ★	★★★
Wood	★ ★ ★ ★	★ ★ ★ ★	★ ★ ★ ★	★★★ ★★

Sustainability of Construction Material

Use of Hydroponics

In order to purify water, use of hydroponics is important, and we chose water hyacinth as a hydroponics we use in this self-sufficient housing. Water Hyacinth naturally grows at the temperature of 27-28 degrees. But even in the harsh environment, hydroponics can grow, and they

are able to grow even under the temperature of 7-8 degrees. Although the existence of water hyacinth may become obstacles to the merchant ships, or fishing boats, it does purify water, and in this sense, the use of hydroponics is truly essential, and also, since we put our hydroponics in the house, hydroponics are less likely to be obstacles.

Water Hyacinth can purify water by removing heavy metals, nitrogen, and phosphorus from the water. As shown in this table, the existence of hydroponics, certainly higher the levels of transparency from 14cm to 30cm, and lower the pH, DO, COD, BOD, nitrogen and phosphorus levels. DO is a abbreviation of dissolved oxygen, and it means the amount of oxygen that is present in the water, COD and BOD are abbreviation of chemical oxygen demand, and biochemical oxygen demand, and the definition of the term is the amount of oxygen that can be consumed for chemical/biochemical reactions.

	Transparency	pH	DO	COD	BOD	T-N	T-P
No Water Hyacinth	14cm	6.8	18	4.7	13	1.7	0.38
Water Hyacinth	30cm+	6.4	5	0.6	1.8	1.0	0.20

Estimation of Energy Consumption

The self-sufficient house also needs to provide electricity. We will install solar, wind and water current power plants on the house to generate sustainable electricity. In addition, we also need a storage battery to supply stably whether it is rainy, cloudy or snowy.

We intend that four people live in a house. According to eia (Energy Information Administration), about 30 kWh electricity a day is needed for living, plus approximately 50 kWh electricity a day is needed for the hydroponics and other systems to control the house. That's why 80 kWh electricity a day will be needed for this housing.

Following sheet shows how much power generation and costs are. We expect that in total 84 kWh a day will be supplied on the housing and it will cost more than $70,000 for installation.

	Power generation	Costs
Solar(5 kW)	15 kWh/day	$4,000
Wind(10 kW)	60 kWh/day	$48,000-65,000
Water current(1.5 kW)	9 kWh/day	more than $3,000
Battery(13 kWh)	for night use and contingence	more than $15,000

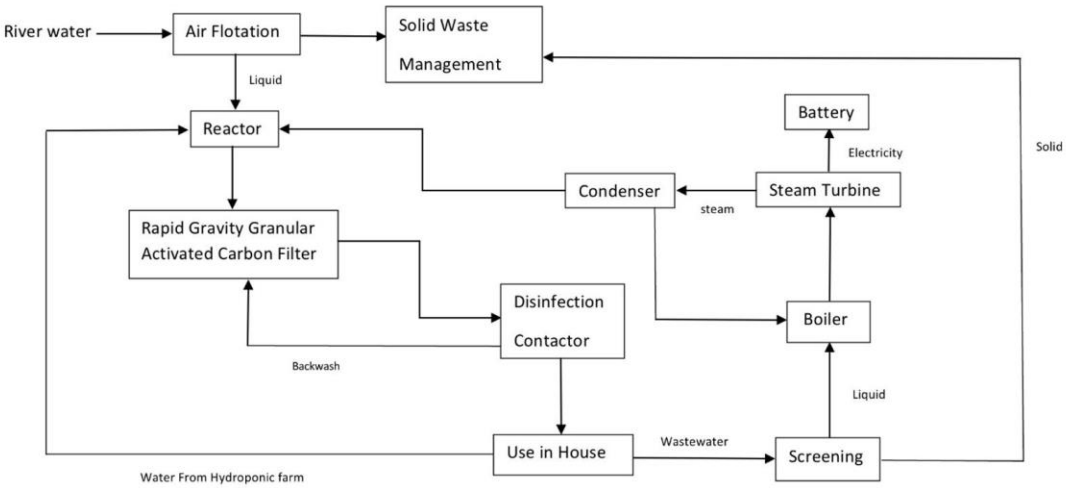
Water Recycling Systems

For the water cycle. We have made a self-water cycle that can be reused. For the first we pumped the water to the air flotation system to separate liquid and solid from each other then liquid will pass the reactor, rapid gravity granular activated carbon filter and disinfection for treatment. When water passes all this process it will be ready for use in the house.

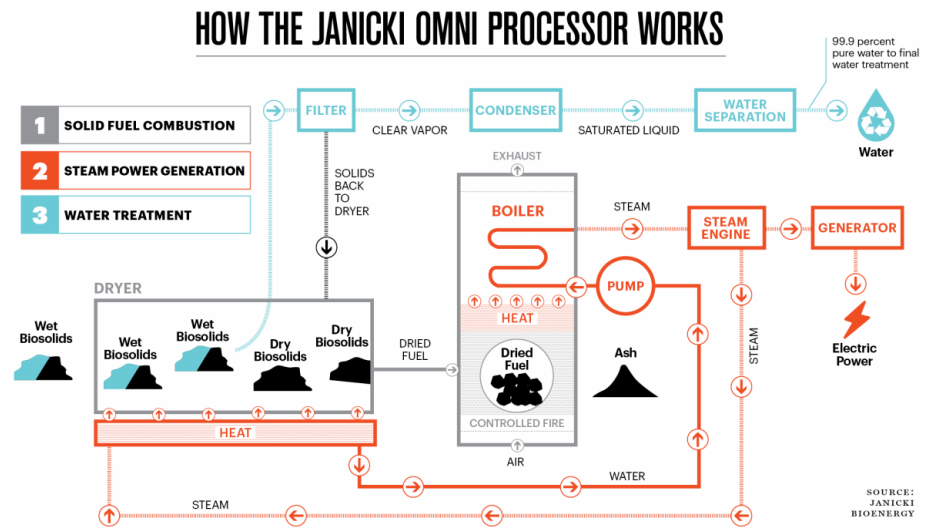
When water is used in house, they will separate the treatment of wastewater. Some of the water will pass the hydroponics farm and back to the reactor. The other will go to screening to separate liquid and solid. All the solid will be at Solid waste treatment. The liquid will go to the boiler to

make electricity. Then it will condense and separate some of them will go back to the reactor, some of them will go back to the boiler.

For all of solid waste management we used the Janicki Omni Processor system.



Block diagram of Water Cycle



From this picture. The solid waste will be heated by steam. Some of them will transfer to fuel for boilers to run down the steam turbines and make electricity. On the other side they will produce clean water and can go back to the river.

References

[1] C.F.Calvillo n, A.Sánchez-Miralles,J.Villar, (March 2016), "Energy management and planning in smart cities", 10.1016/j.rser.2015.10.133

[2] D. P. Bentz, Max Peltz, Alejandro Durán-Herrera, Pedro Valdez, 2011, "Thermal properties of high-volume fly ash mortars and concretes", Journal of Building Physics, 34(3) 263–275

[3] Frakt, A. B. (2018, March 27). *How the Economy Affects Health*. JAMA. Retrieved September

5, 2022, from https://jamanetwork.com/journals/jama/fullarticle/2676095

[4] Gates, B. (2015, January 5). *This ingenious machine turns feces into drinking water*. gatesnotes.com. Retrieved September 5, 2022, from https://www.gatesnotes.com/development/omniprocessor-from-poop-to-potable

[5] *Give a man a fish, and you feed him for a day. teach a man to fish, and you feed him for a lifetime*. Quote Investigator. (2019, April 24). Retrieved September 5, 2022, from https://quoteinvestigator.com/2015/08/28/fish/

[6] Jenniches, S. (2018). Assessing the regional economic impacts of renewable energy sources – A literature review. *Renewable and Sustainable Energy Reviews*, *93*, 35–51. https://doi.org/10.1016/j.rser.2018.05.008

[7] Mohammad Arif Kamal, 2016, "Recycling of Fly Ash as an Energy Efficient Building Material: A Sustainable Approach", 10.4028 /www.scientific.net/KEM.692.54

[8] Our World in Data. (n.d.). Levelized cost of energy by technology. Retrieved from https://ourworldindata.org/grapher/levelized-cost-of-energy

[9] Ritchie, H., & Roser, M. (2018, February 14). *Causes of death*. Our World in Data. Retrieved September 5, 2022, from https://ourworldindata.org/causes-of-death

[10] S Punlert, P Laoratanakul, R Kongdee and R Suntako, "Effect of lightweight aggregates prepared from fly ash on lightweight concrete performances" Shabiimam M. A, 2017, "Heavy Metals in Fly Ash; Its Impact on Human Health and Environment", NICMAR 2nd International Conference On Construction, Real Estate, Infrastructure and Project (CRIP) Management Shimizu Corporation. (n.d.). The Environmental Island, GREEN FLOAT. Retrieved from https://www.shimz.co.jp/en/topics/dream/content03/

[11] Wikipedia. (n.d.). Levelized cost of electricity. Retrieved from https://en.wikipedia.org/wiki/Levelized_cost_of_electricity

[12] Wikipedia. (n.d.). List of countries by electricity consumption. Retrieved from https://en.wikipedia.org/wiki/List_of_countries_by_electricity_consumption#cite_note-4

10. Epilogue（全員による所感）

At first, I was really nervous and I could hardly say anything because It was my first time to discuss something in English. However, all of my group members were kind and friendly so gradually I could join the conversation. I really enjoyed chatting with them about our own countries and cultures. I hope we will have such opportunities in the future. In addition, I was inspired by several interesting lectures. By their lectures, I could learn how they work in Asian countries. It was a valuable experience for me.
by Suzune

I've learned a lot from this program. It was my first time to discuss difficult issues for such a long time. Sometimes I had difficulties to make myself understood in English because what I was supposed to tell was very difficult to tell. However, overcoming these difficulties made my English skills better. What is more, I am very happy because all of the group members became friends! If I have a chance, I would like to meet team members in person.
By Tommy

It was this AYSEAS program that I participated in which all participants used only English for the first time. At first, I felt depressed because I couldn't catch what other participants said and I couldn't tell what I was thinking or feeling. However, they always helped me and knew each other very well through chatting or the weekend party we held. I was delighted that I felt their kindness and made wonderful friends in South-East Asian Countries. I would like to meet them face to face someday.
By Tsubasa

Every lecture of AYSEAS is very informative and intriguing. Some terms are new to me, and I am glad I learned about them through this program. Even though my major does not directly relate to some of the contents, exploring different fields was so interesting that it was a great opportunity to widen my view. After hearing the lectures, I realized that I barely knew about natural disasters, quantum technology, pollution, R&D work in a company, innovations, and volunteer work. Thus, I am motivated to learn more. Through this program, I learned a lot, and it was amazing to talk with other students from different nations.
by Onon

I really enjoyed this program, Tokyo Tech AYSEAS. In department of Transdisciplinary Science and Engineering, there are many exchange students, but I do not know where they are from. Thus, I cannot talk about their home country. In the group work session, I enjoyed talking with other participants thanks to our bright group members. I remember the importance of idle talk in group work, which can lead us to make up great ideas. Even though there are technical troubles on this Online program, it costs no money to travel abroad, so I think it is not so bad to hold on Online.
I hope to visit their hometowns someday!!
by Ken

In this Tokyo Tech AYSEAS, it was fun to broaden my horizons through the lecture, interact with other Asian students, and learn about other countries. In our group work, I was able to apply my current research field in group discussions and presentations. Moreover, I was in charge of the technical part of the presentation, and we were able to demonstrate quite great teamwork in marketing, background, vision of product and so on in preparation. As a result, it led to good presentations and was a valuable experience for me.
by Natsumi

Through this project, I was able to understand the economic, geographical, and political differences between my own country, Japan, and various countries in Southeast Asia through the exchange of ideas with my fellow group members. Also, after listening to the lectures of the teachers, I was able to gain a deeper understanding of the enthusiasm and efforts of people to solve problems in the face of environmental issues and natural disasters, which greatly increased my passion to work and contribute in these developing countries.
by Meng

I made some international friends by participating in AYSEAS program. I learned a lot of things about Southeast Asia from special viewpoints. The volunteer activity in Indonesia which make a contribution in marine debris problem was most fantastic. This program shows me what is a global leader and teach me how to be a global leader, I think it is a great program because I get a lot from it.
By Fujie

I was able to make friends from other countries in this program and I could acquire presentation ability, communication ability and the ability to think about things from many viewpoints in this program. I could know how researchers in companies think when they want to develop new products and this was fantastic. I am thinking about becoming a researcher in the future and it was very informative.
By Genki

All the lectures in AYSEAS were really intriguing for me. The lecturers were very diverse in terms of their countries and backgrounds, and the lectures were quite different from the ones I have attended in the past. In the group discussions, I was impressed by everyone's enthusiasm and actively participated in the program. I was able to do my best to learn and enjoy as much as I could from this program. Besides the lectures and discussions, we enjoyed spending time with other members. Talking with people of completely different ages, nationalities, and backgrounds gave me many new insights.
By Noe

AYSEAS 2022 was definitely one of the most memorable courses I have taken this academic semester. It is such a rare opportunity to truly interact and work on the same project with students from such diverse background. In addition, I was inspired by the scientists and engineers who are leading the frontiers of their own fields. Every lecture was informative, intriguing and highly relevant.
I reflected the ideas and lessons I taken from the lectures and tried to output as an experience on the group project. Aside from interacting with students from different universities, I had built a valuable friendship with my fellow Tokyo Tech students. On the prior lessons and preparations, we had exchanged our ideas and spent memorable moments together. I highly encourage students who are considering course during your summer break. Have a blast!
By Eba

The lectures were truly intriguing, and I learned a lot from them. This is mainly because I could learn about various fields of subjects, including sports engineering, quantum technologies, prevention of coastal disasters, ways to remove marine debris, and the works of P&G. Since I wanted to work in foreign countries in the future, the session gave me the opportunity to broaden my perspective and deepen my understanding of the cultures of Asian countries. Furthermore, group work was also fascinating since each of our group members had different cultural and academic backgrounds, so that I could learn diverse values and how their upbringing and

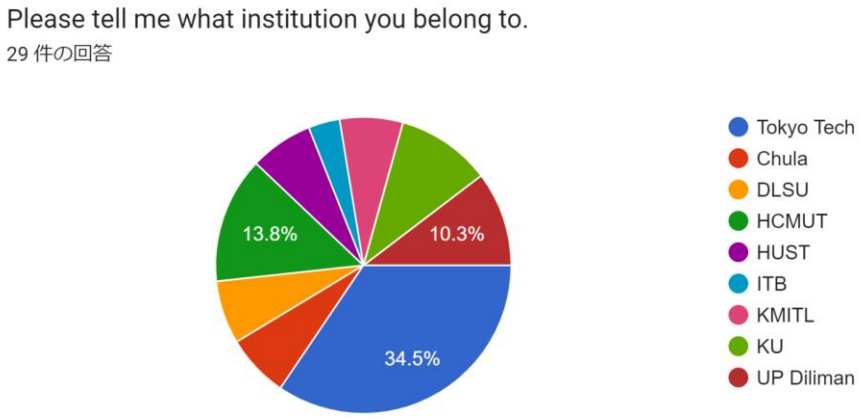
environment built their values and characters. Since the majors of our group members were quite varied (architecture, chemical engineering, engineering, and life science), we tried to cooperate and integrate our knowledge into the plans of starting up NGOs. Although the class was held online, we were able to get to know each other better and build strong relationships with our group members.
By Rei

I was impressed by the lecture. I was glad that we could meet people who were enthusiastic about their research, work and project. It was such a good chance to know about their attitude because we usually do not have the opportunity to listen to their stories. I must thank the teachers for providing these events. The group work was also amazing. I did not expect that everyone could collaborate peacefully and share their ideas. From this experience, I felt that talking and discussion are the key to solving the problem. In addition, it was a great chance to learn about cultures in South East Asia. Again, Professor Nakashima and Ms.Ichinose, thank you so much.
By Aoi

11.Appendix: Evaluation of Tokyo Tech AYSEAS 2022 Online

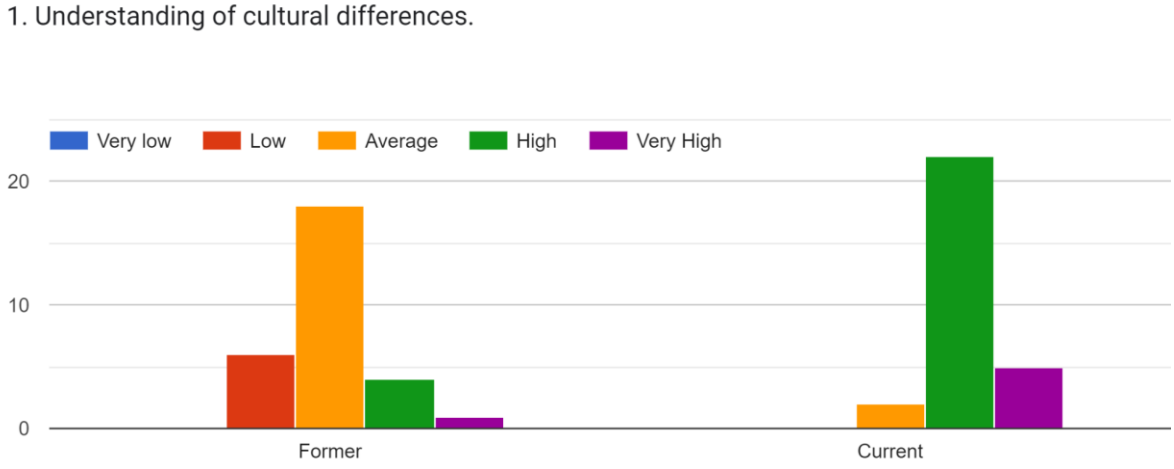
29 participants in Tokyo Tech-AYSEAS 2022 were given a questionnaire about the program. The following evaluation was based on the answers to the questionnaire.

About participants

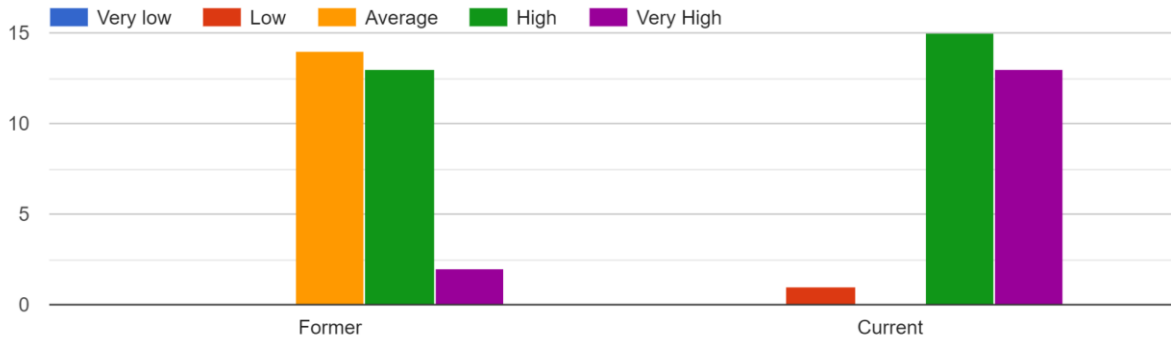


Part1: Global awareness

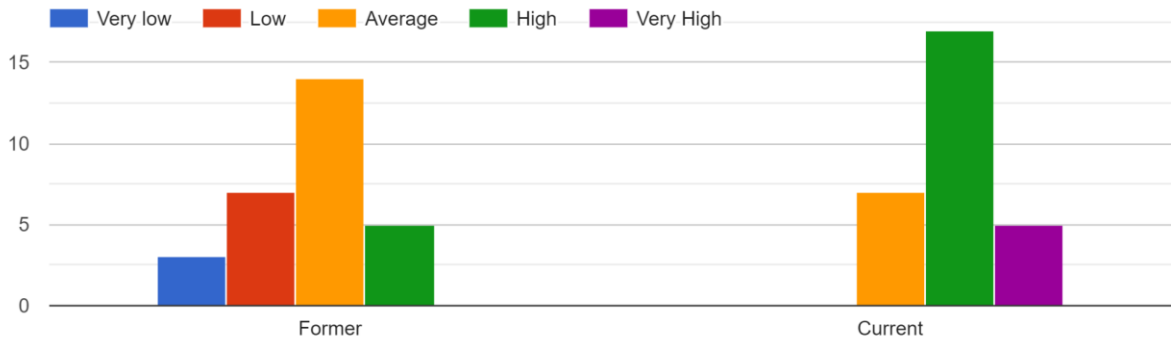
For each item, please select the answers that best describe your level of interest or awareness or ability level before and after participating in AYSEAS 2021.



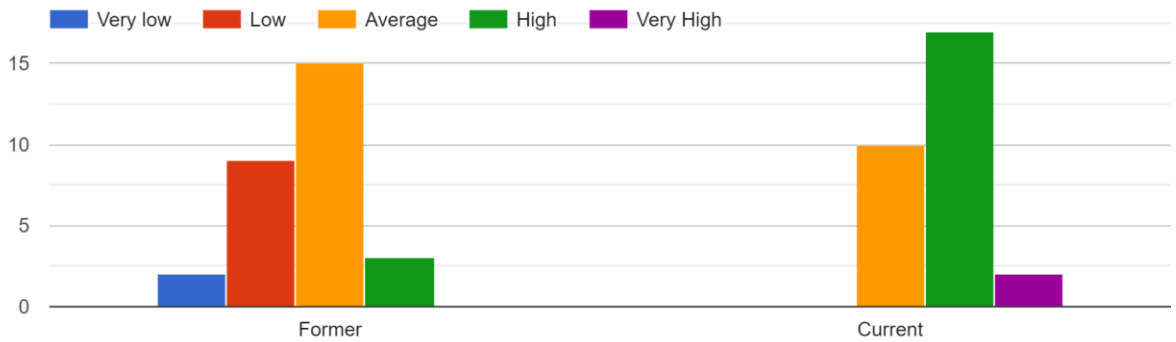
2. Awareness of the importance of respecting differences(race, language...)



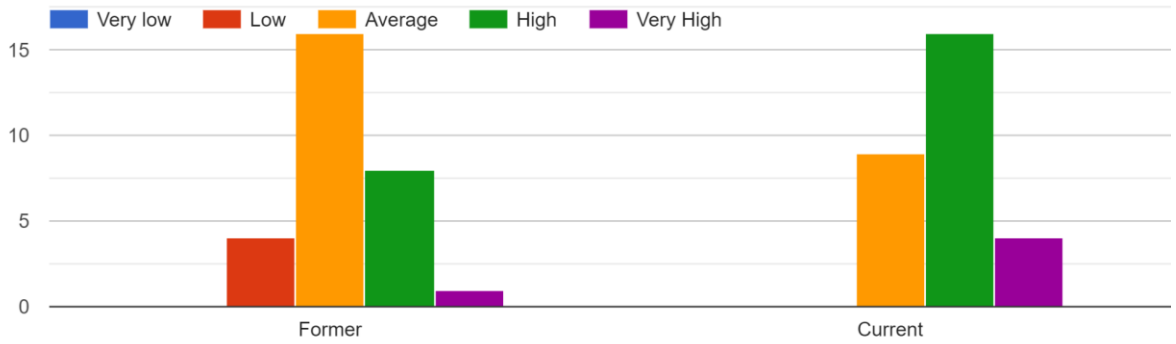
3. Ability to work in a multicultural team.



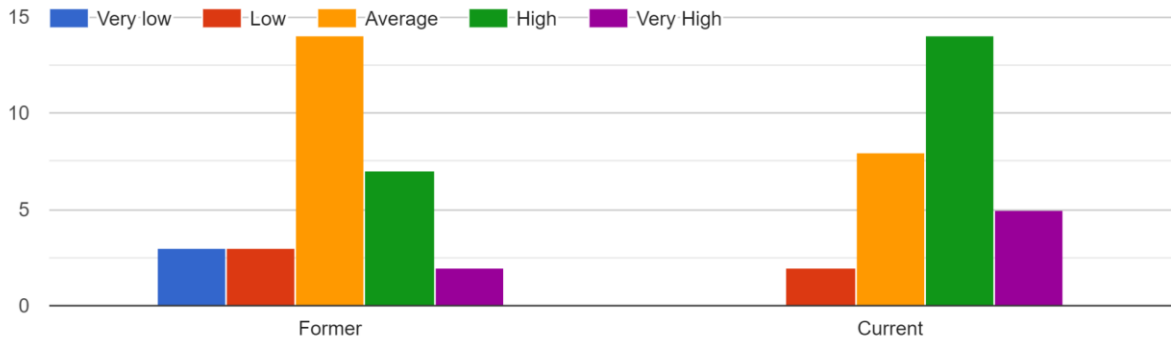
4. Communication skills in general.



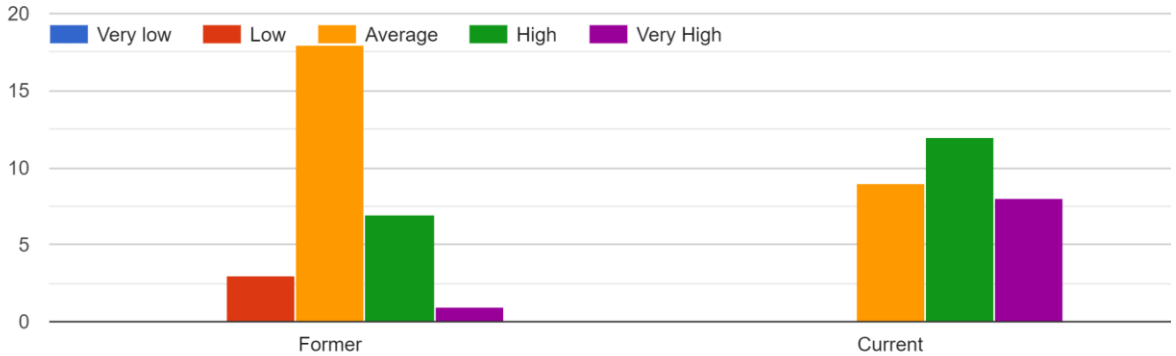
5. Presentation ability.



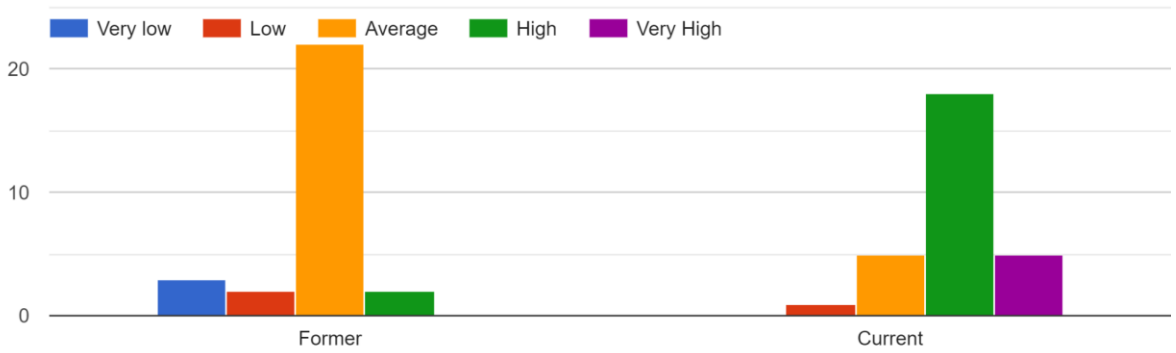
6. Ability to communicate in English.



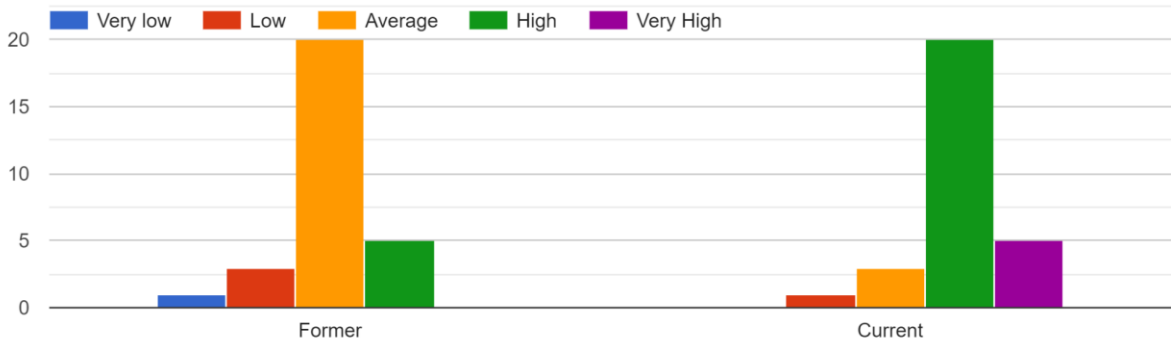
7. Ability to think critically.



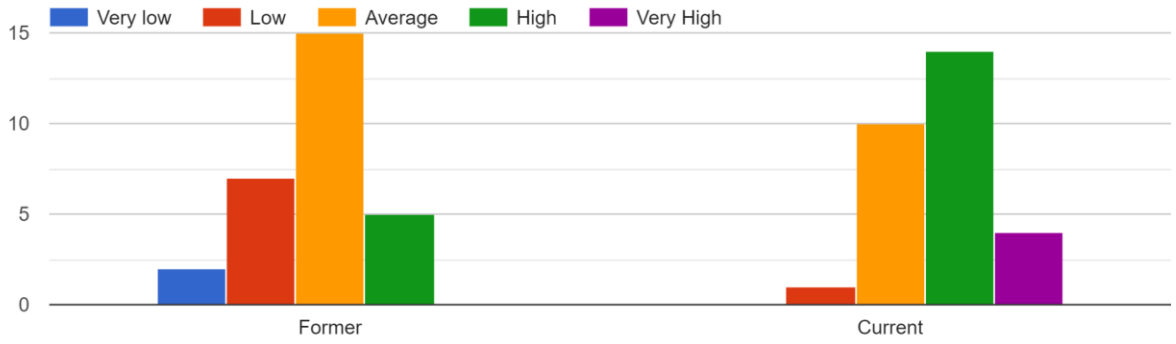
8. Ability to develop ideas which localize/customize a program for different cultures.



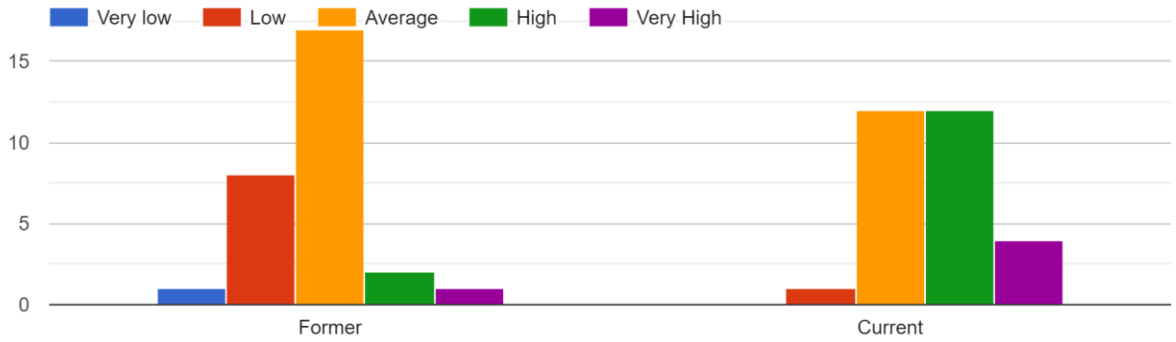
9. Ability to identify social problems of the society.



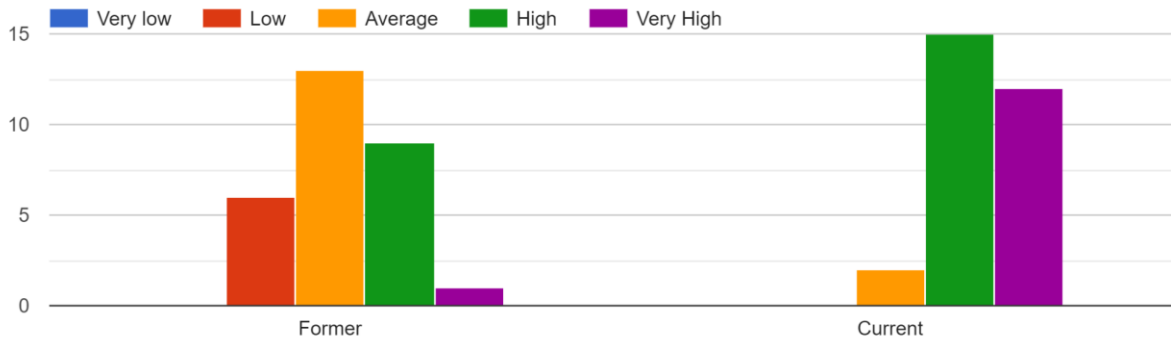
10. Ability to find solutions for social issues you have identified.



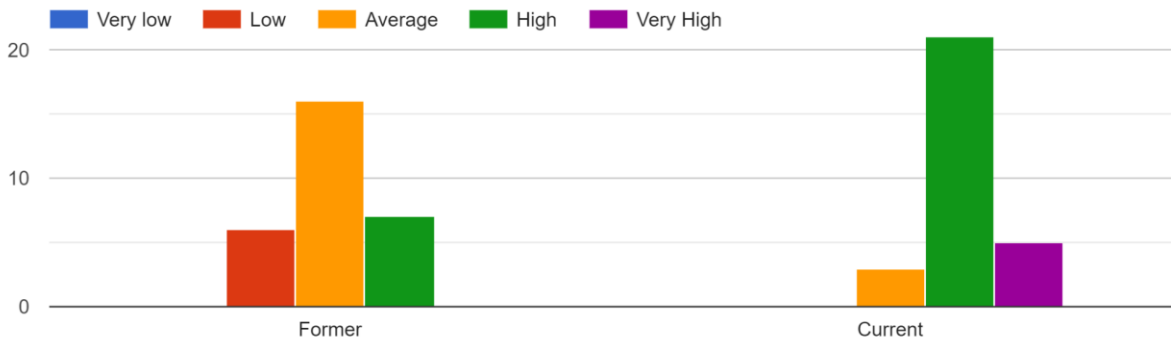
11. Awareness of implementing successful program on global scale.



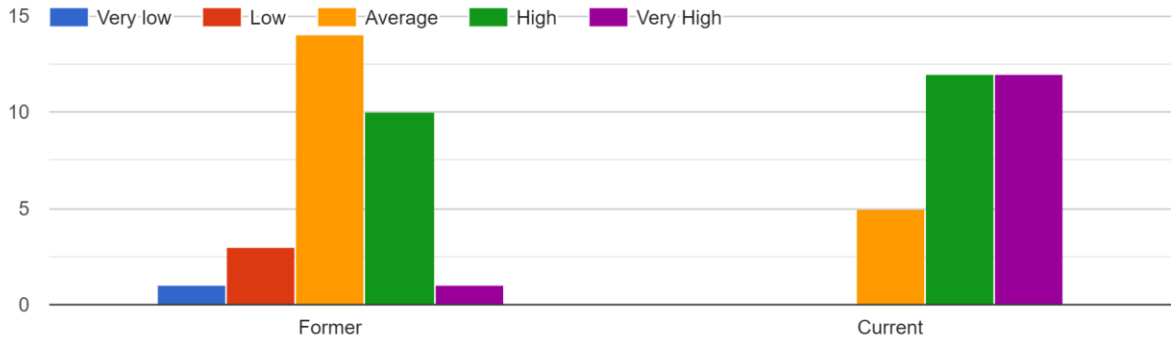
12. Interest in problems which are common to different societies.



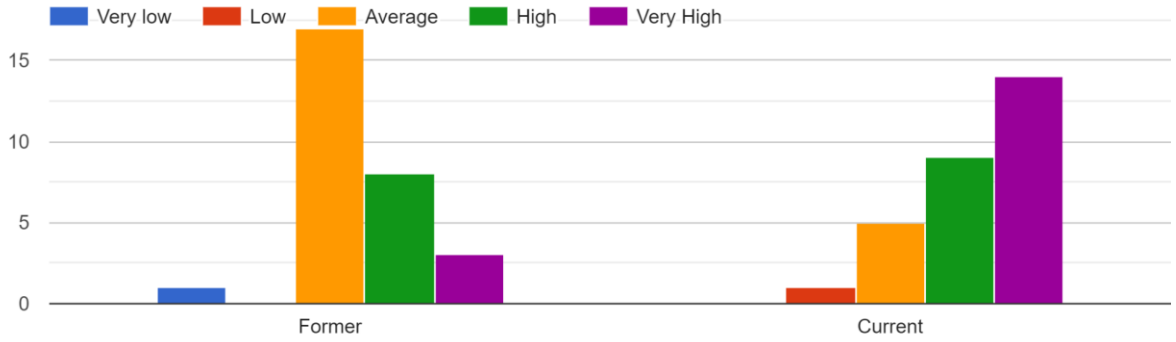
13. Confidence in becoming someone who can utilize his/her expertise and skills.



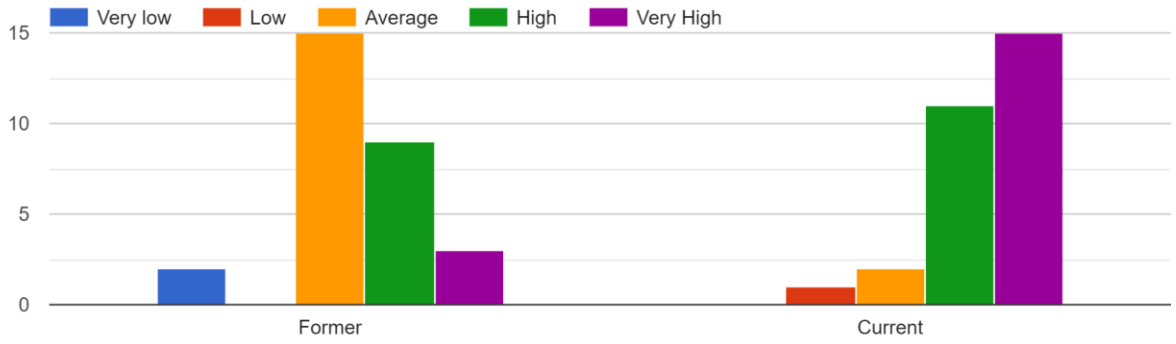
14. Expected impact on your future plans.



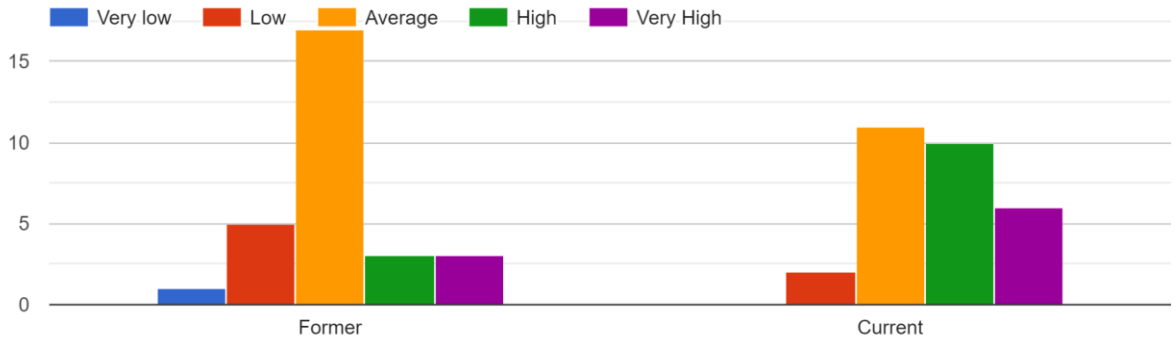
15. Interest in developed countries.



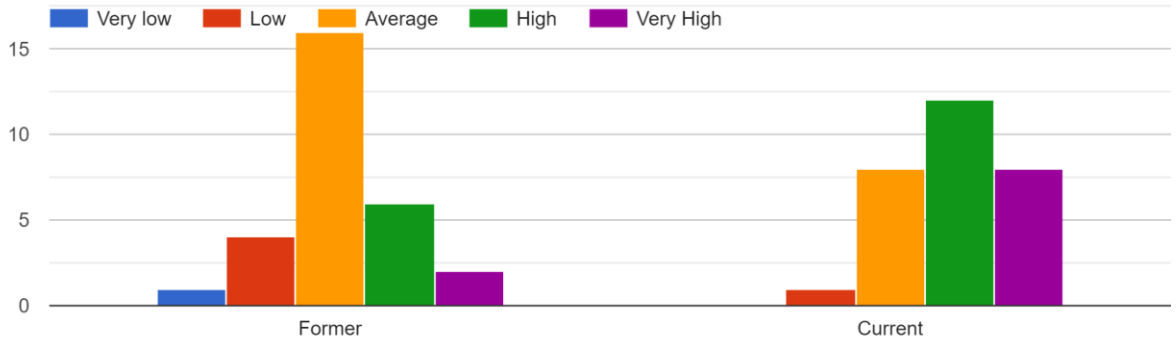
16. Interest in developing countries.



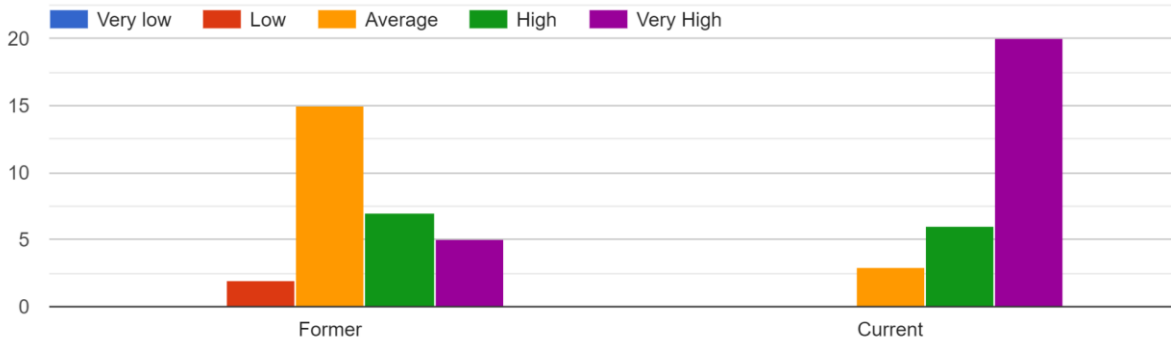
17. Interest in working in developing countries.



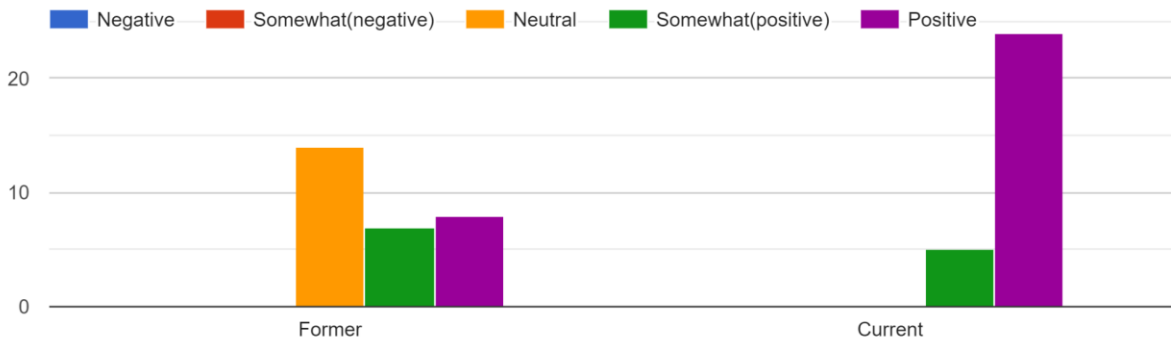
18. Interest in working in contributing for the development of developing countries.



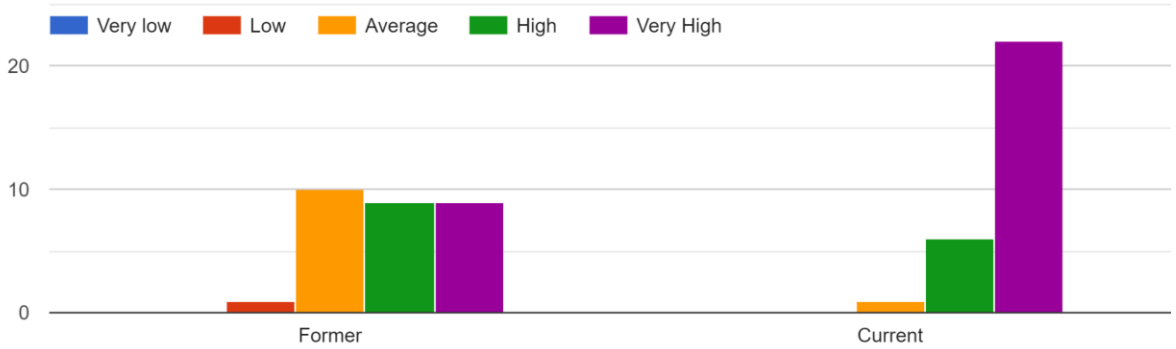
19. Interest in member universities.



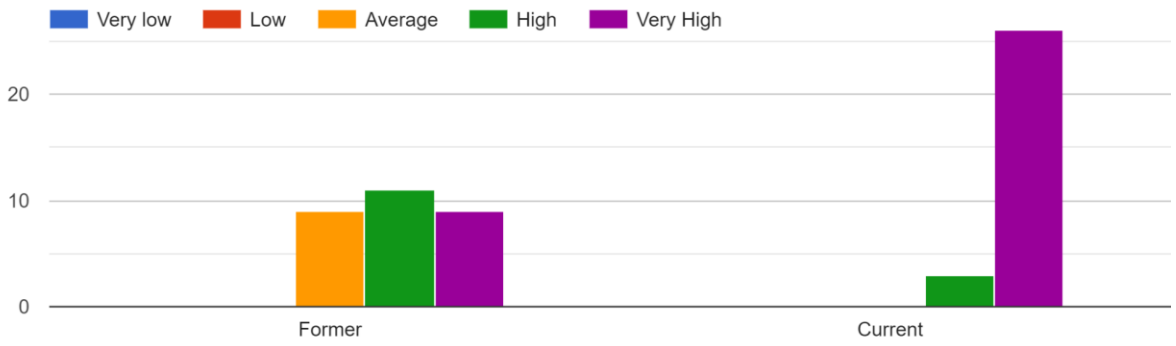
20. Please describe your impression about member universities.



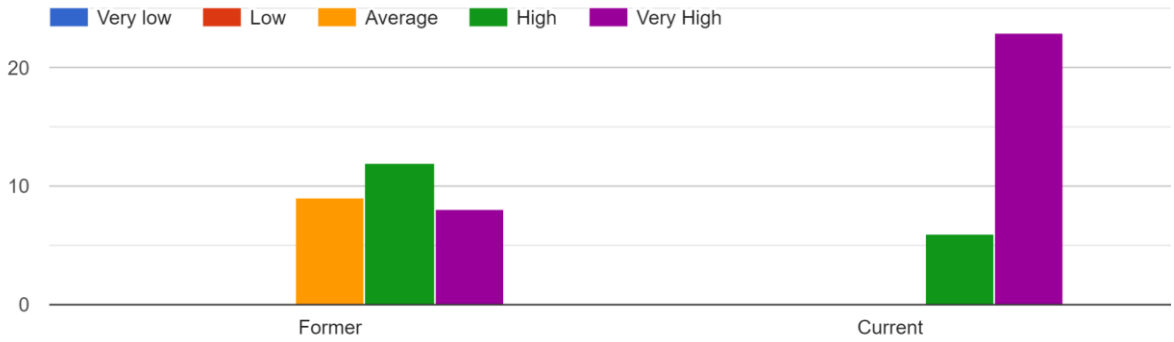
21. Interest in going abroad for future studies.



22. Overall motivation to visit abroad.



23. Overall interest about the Foreign study program.

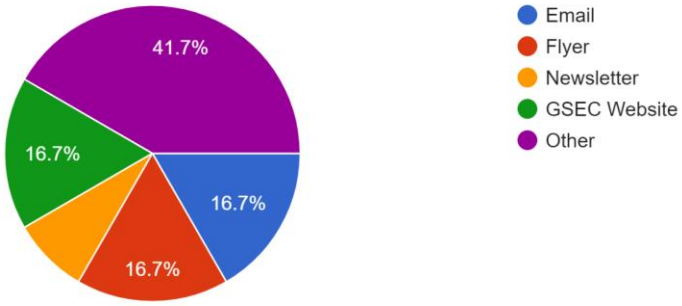


Part2: Tokyo Tech-AYSEAS

Some questions are divided into 2 sections, for Tokyo Tech students and for member universities' students.

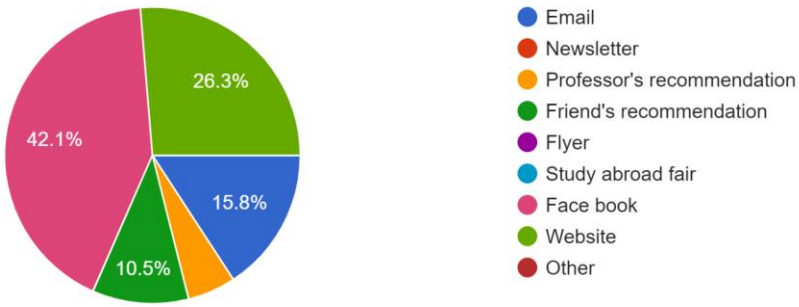
How did you know about Tokyo Tech-AYSEAS? (for Tokyo Tech students)

12 件の回答



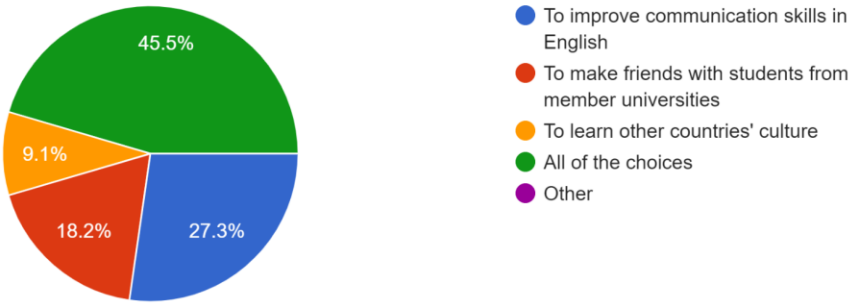
How did you know about Tokyo Tech-AYSEAS? (for member universities' students)

19 件の回答



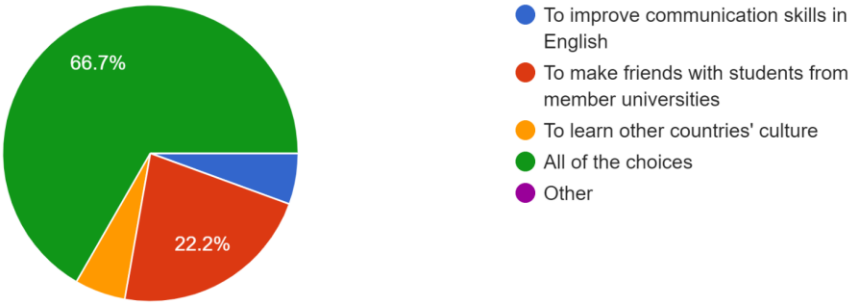
Please specify your initial motivation for joining Tokyo Tech-AYSEAS 2021.(for Tokyo Tech students)

11 件の回答



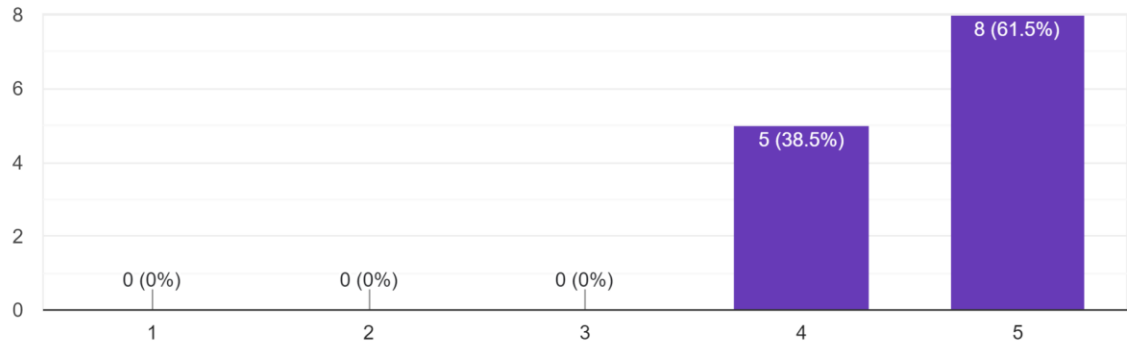
Please specify your initial motivation for joining Tokyo Tech-AYSEAS 2021. (for member universities' students)

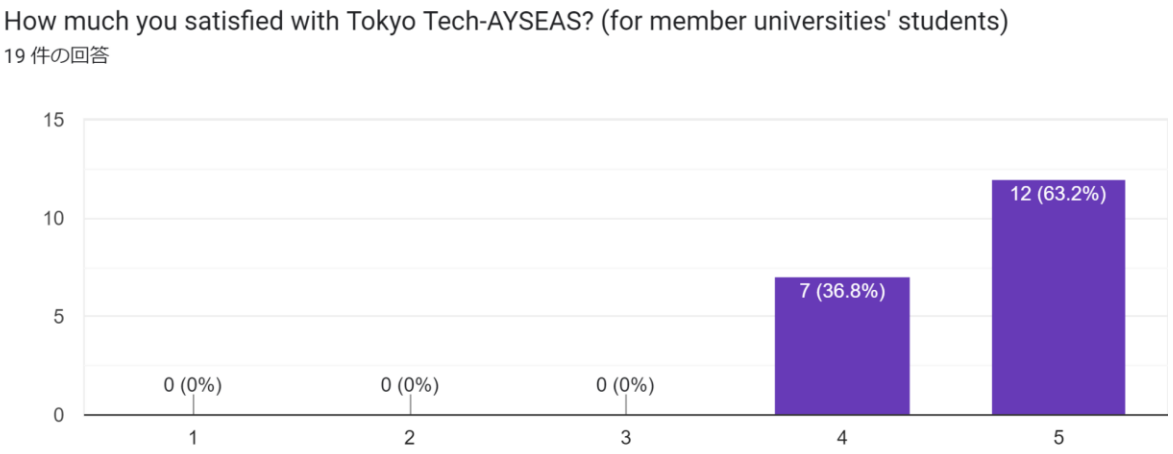
18 件の回答



How much you satisfied with Tokyo Tech-AYSEAS?(for Tokyo Tech students)

13 件の回答





Q. Please describe why you chose the above answer.

・I could have a lot of opportunities to communicate with students who have different background, which motivated me to discuss the issues enthusiastically.

・I learned a lot from both the speakers and my colleagues. I learned to collaborate with them and be able to make friends with them as well.

・I was able to know about ASEAN countries culture and people, cooperate and enjoy with them through the program.

・I feel so amazing to meet all of these amazing college students, They are amazing people and make me want to much more improving myself!

・I got to make new friends and learn new things, which is exactly what I had expected out of this program. I would love to go again ^^

・It was really fun and exciting. I learned a lot even if it's online.

・Because the program gives me a platform to solve worldly problems with different perspectives from students around Asia. It also helps me improve my communication skills, especially in English.

・The program is extremely good, so I like the question to what extent are you satisfied with the program

・There could be a program that could be deepened the bond more between each participants. But maybe because its online too, we don't have that much chance to talk with others

・I am really satisfied with Tokyo Tech-AYSEAS, but I wish there was more time to meet others, and other types of interacting events.

・I was very satisfied with this program because everyone is very active and inspire about this program either lecture or group discussion and every sensei are very kind.

・My friends are very understanding. There were times that I could not attend one of the group discussions because I had something urgent to do but they were okay with it. And I do appreciate that.

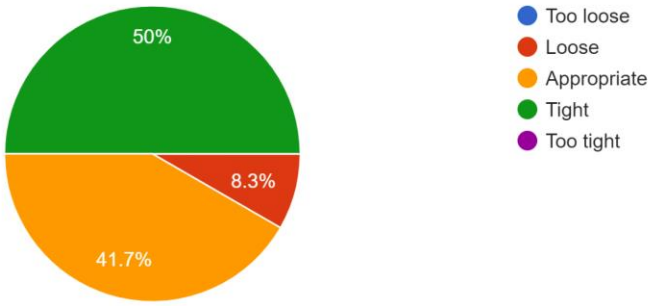
・Though sometimes the assignment was hard, I could make friends from foreign universities, and could know more about their cultures, hobbies and studies they are now majoring

・At first I thought this program would be serious focusing on discussing and preparing for presentation. However, we also could spend a lot of time for talking about ourselves and our own cultures. It was really fun!

・Everyone is inspiring, dedicated and show their own aspect of skill when working. Not only that, everyone is so funny and friendly. In the end, I hope I have a chance to meet in person with you guys.
・The program is very good in general, I love the lecture from the professors and everyone else. But I only can communicate and make friends within my groups, if possible, I would like to communicate with others group members in Zoom chat, and have a goodbye word in the closing ceremony after our final presentation.
・Although I expected that will be the great program, but it's more than my expectations. I got a lot of knowledge and definitely friends from different countries. Although the time is one week, I can say our chemistry between us means a lot to us.
・I learned about the difference between the countries and I really shocked. Also, from the people in my group, I knew that they are all good guys! I really appreciate it. In our group project, they also did a very good job!
・Because it is an activity that allows you to learn new things, there are activities that can be done together as an interesting team.
・I've gained my experience so much from the program, but It's better If we join the program on-site.
・The lecture was very informative and I was able to make many friends.
・I absolutely loved how the event freely encouraged us to interact with one another without anyone strictly monitoring us. This helped me make friends with my groupmates a lot quicker, which is one of the main reasons I joined the event. Apart from that, I believe we also had really fruitful discussions as well, making me learn not only about the serious topics we were assigned to discuss, but also about the cultures and day-to-day lives of my friends. However, I did wish there was more time allotted to befriending participants from other groups as well. We were only able to interact with them in the weekend party, but, not all of them attended. Also, I wish there was at least one day to discuss about how to formally create an NGO since it is the main objective of the groups. But, all in all, it was a really great event and I look forward to future ones as well!
・I was able to gain more knowledge than expected and making friends with everyone. Thank you!
・I met many friends, I had spent time with them and worked with them. I enjoyed it.
・The lecture was very inspiring, and I learned a lot through group discussion
・I loved how the program be and what will this program will provide for me.
・I could talk with some members but not all members because of online. There were many troubles related to internet connection. However, I enjoyed talking with others.
Tokyo Tech did a great job in their program!
・I have enjoyed talking with my friend a lot.
・I have learnt from presenters and reflect on my future.

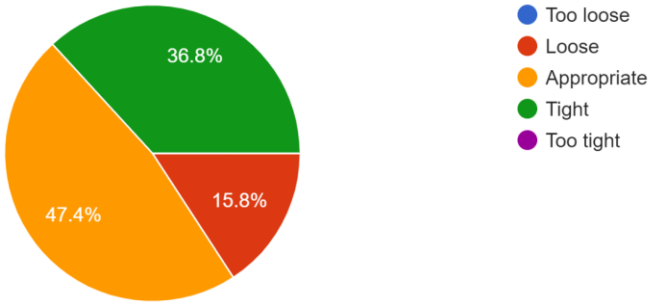
How do you rate overall activity schedule of Tokyo Tech-AYSEAS 2022? (for Tokyo Tech students)

12 件の回答



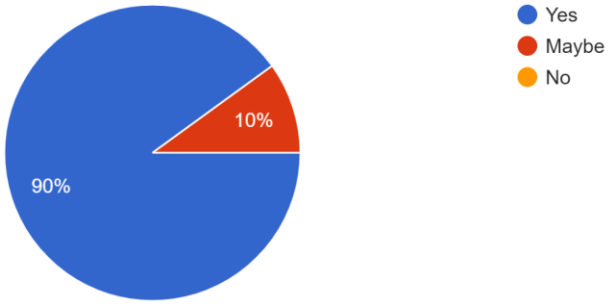
How would do you rate overall activity schedule of Tokyo Tech-AYSEAS 2022? (for member universities' students)

19 件の回答



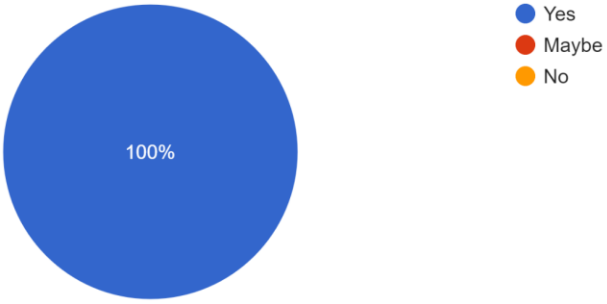
Would you recommend Tokyo Tech-AYSEAS to others? (for Tokyo Tech students)

10 件の回答



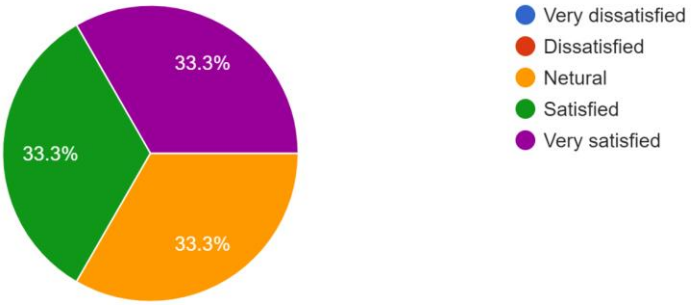
Would you recommend Tokyo Tech-AYSEAS to others? (for member universities' students)

19 件の回答



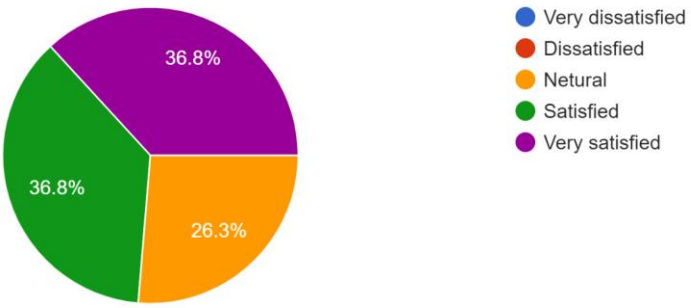
Please indicate your level of satisfaction with the pre-event.(for Tokyo Tech students)

9 件の回答



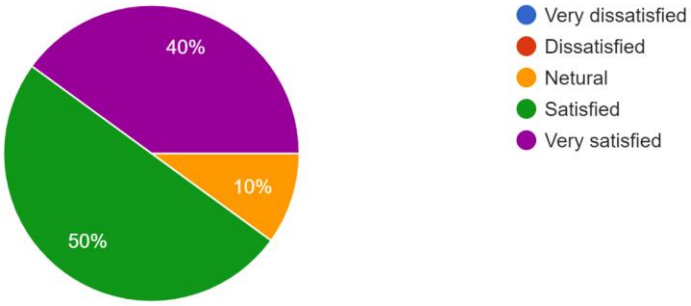
Please indicate your level of satisfaction with the pre-event.(for member universities' students)

19 件の回答



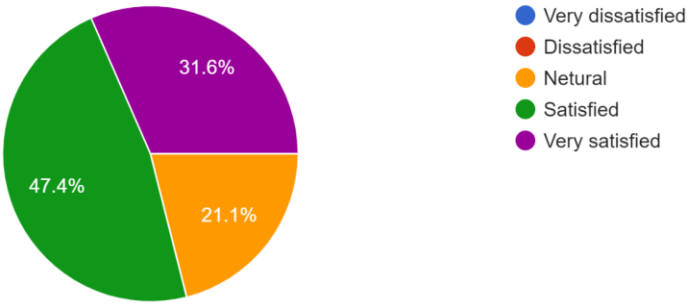
Please indicate your level of satisfaction with the ice-breaking session.(for Tokyo Tech students)

10 件の回答



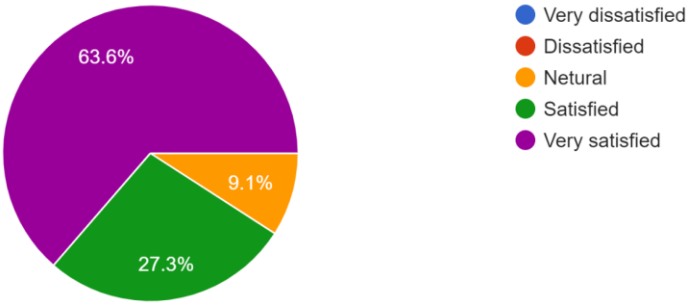
Please indicate your level of satisfaction with the ice-breaking session.(for member universities' students)

19 件の回答



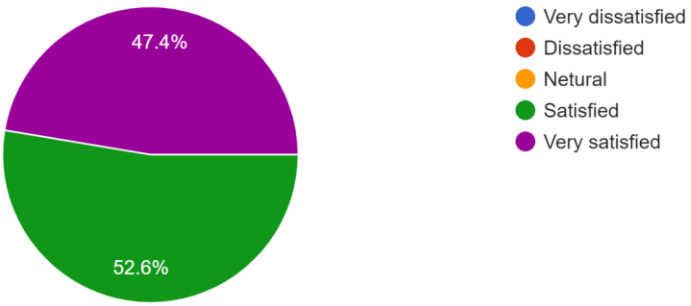
Please indicate your level of satisfaction with the opening ceremony&Lecture from Prof. Motomu Nakashima, Tokyo Tech.(for Tokyo Tech students)

11 件の回答



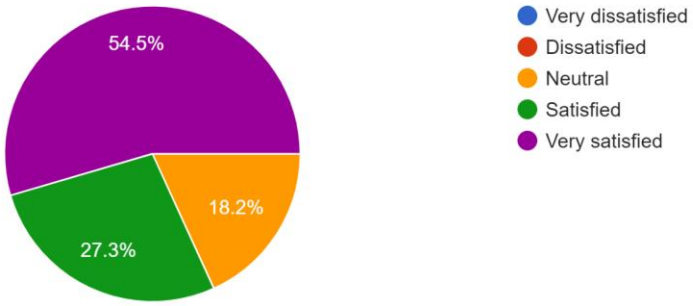
Please indicate your level of satisfaction with the opening ceremony&Lecture from Prof. Motomu Nakashima, Tokyo Tech.(for member universities' students)

19 件の回答



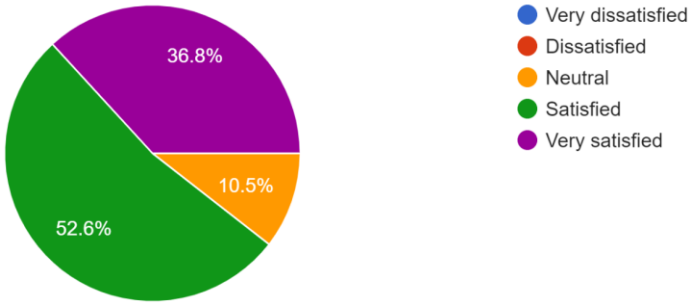
Please indicate your level of satisfaction with the lecture: Jij Inc. (for Tokyo Tech students)

11 件の回答



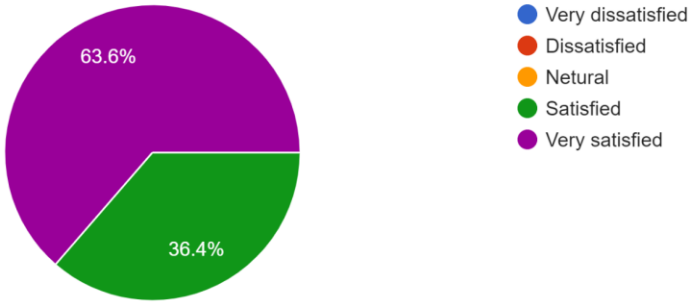
Please indicate your level of satisfaction with the lecture: Jij Inc. (for member universities' students)

19 件の回答



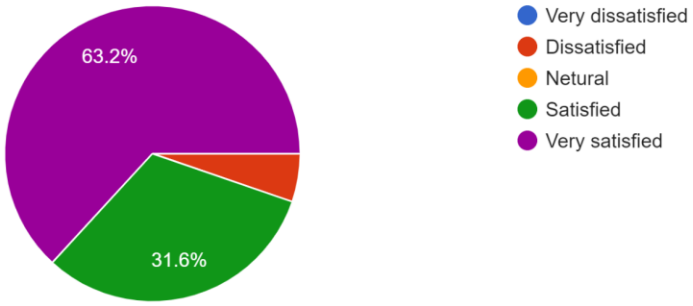
Please indicate your level of satisfaction with the lecture from Dr. Le Tuan Anh, HCMUT. (for Tokyo Tech students)

11 件の回答



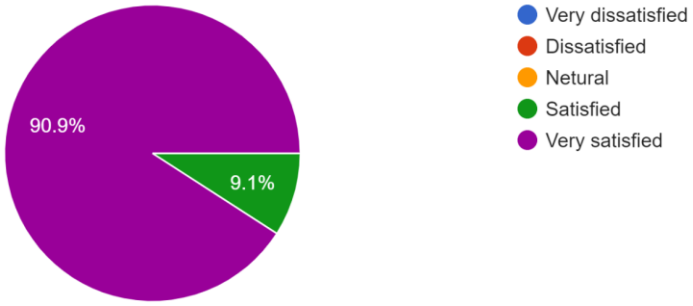
Please indicate your level of satisfaction with the lecture from Dr. Le Tuan Anh, HCMUT. (for member universities' students)

19 件の回答



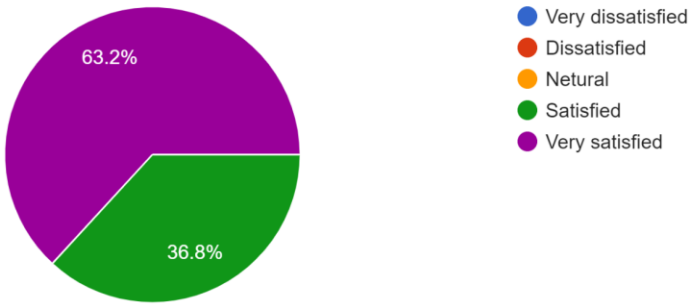
Please indicate your level of satisfaction with the lecture: Divers Clean Action. (for Tokyo Tech students)

11 件の回答



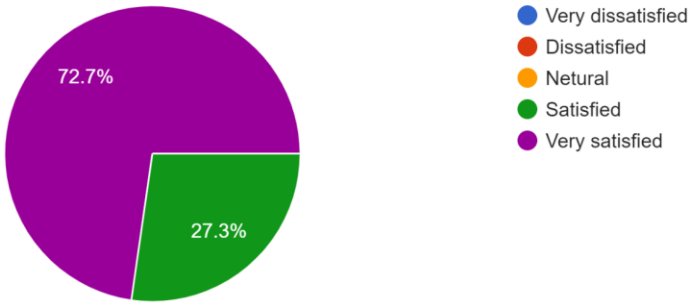
Please indicate your level of satisfaction with the lecture: Divers Clea Action.(for member universities' students)

19 件の回答



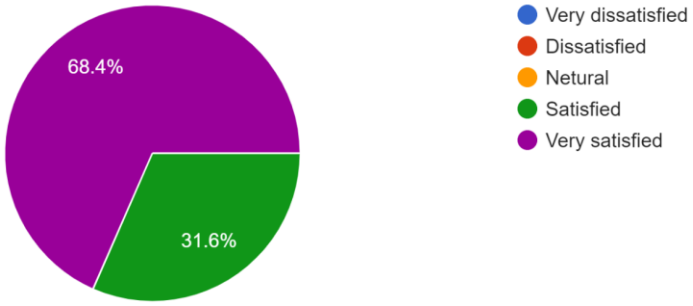
Please indicate your level of satisfaction with the Case Study Session: P&G. (for Tokyo Tech students)

11 件の回答



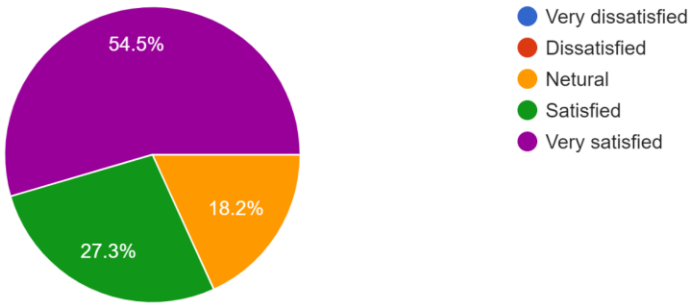
Please indicate your level of satisfaction with the Case Study Session: P&G. (for member universities' students)

19 件の回答



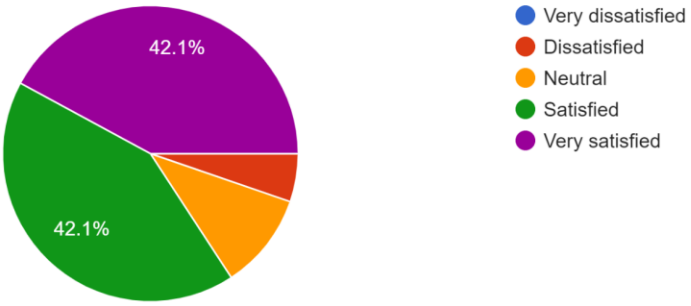
Please indicate your level of satisfaction with the Virtual Campus Tour of Tokyo Tech. (for Tokyo Tech students)

11 件の回答



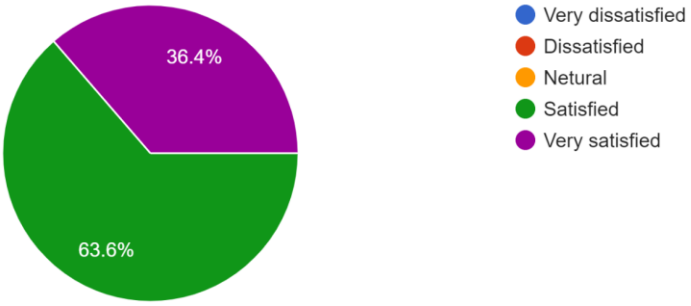
Please indicate your level of satisfaction with the Virtual Campus Tour of Tokyo Tech. (for member universities' students)

19 件の回答



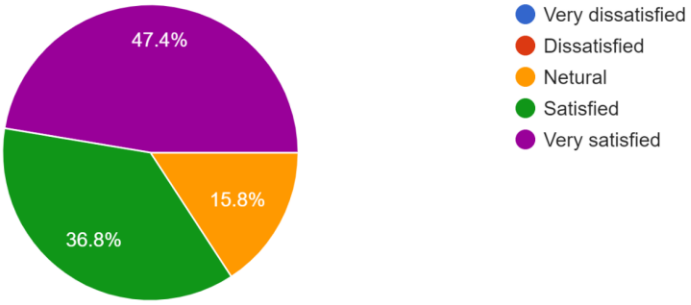
Please indicate your level of satisfaction with the Discussion and Presentation method.(for Tokyo Tech students)

11 件の回答



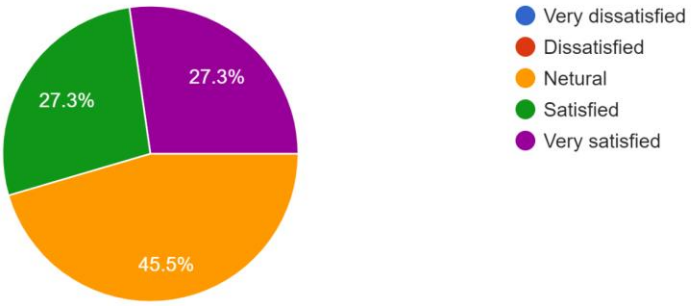
Please indicate your level of satisfaction with the Discussion and Presentation method.(for member universities' students)

19 件の回答



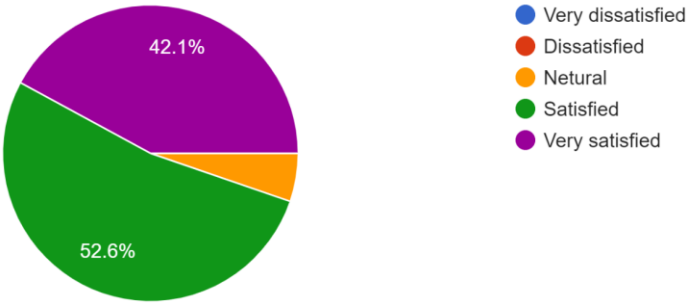
Please indicate your level of satisfaction with the time for discussion.(for Tokyo Tech students)

11 件の回答



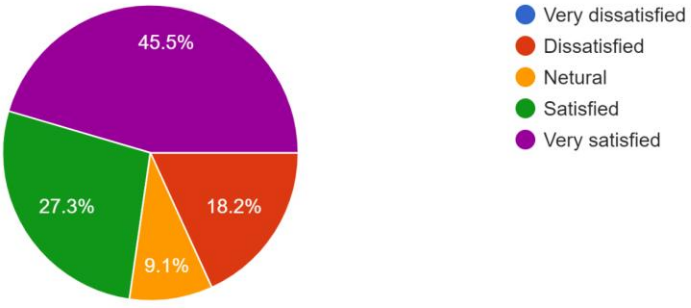
Please indicate your level of satisfaction with the time for discussion.(for member universities' students)

19 件の回答



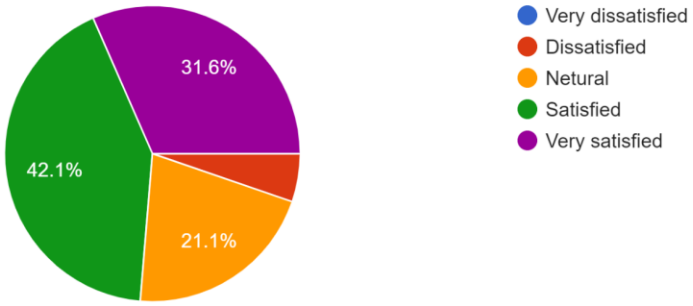
Please indicate your level of satisfaction with the time for presentation.(for Tokyo Tech students)

11 件の回答



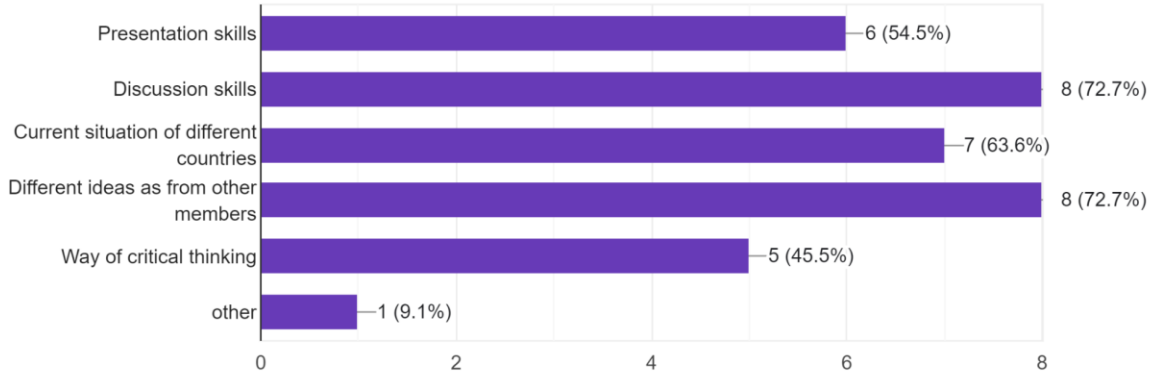
Please indicate your level of satisfaction with the time for presentation.(for member universities' students)

19 件の回答



Please answer what you learned through discussions during the program.(for Tokyo Tech students)

11 件の回答



Please answer what you learned through discussions during the program.(for member universities' students)

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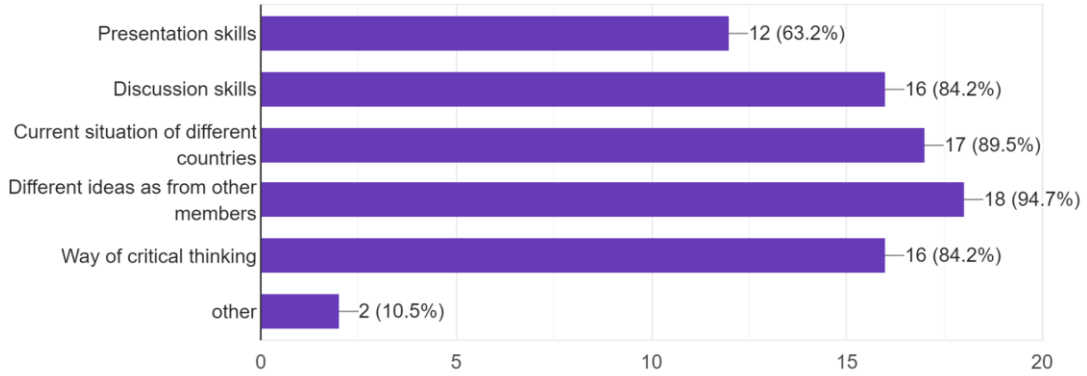
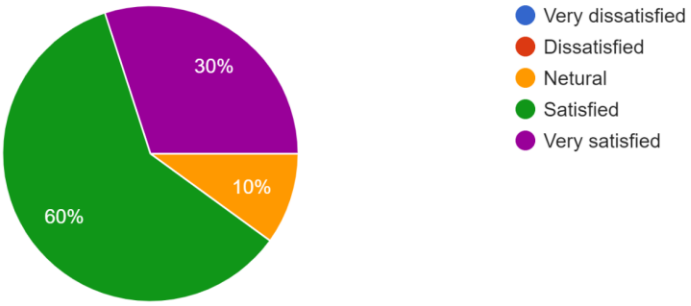


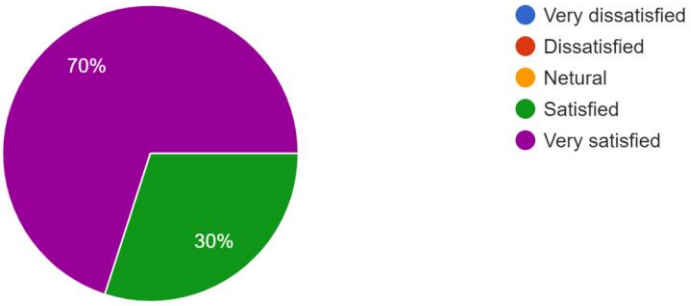
(Only for Tokyo Tech students) Please indicate your satisfaction with pre-study session.(orientation on July 5th)

10 件の回答



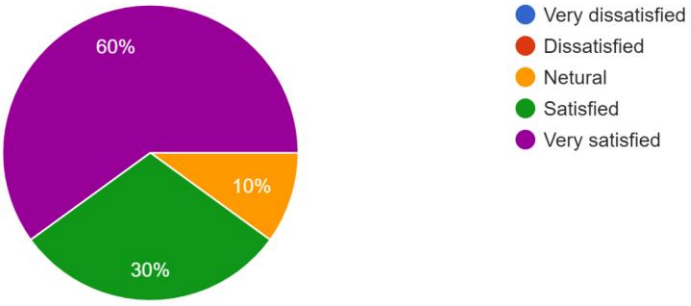
(Only for Tokyo Tech students) Please indicate your satisfaction with lecture on July 12th.

10 件の回答



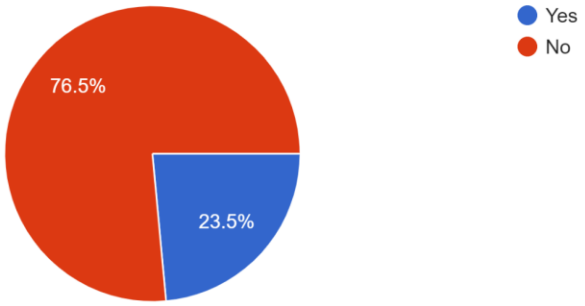
(Only for Tokyo Tech students) Please indicate your satisfaction with lecture on July 22th.

10 件の回答



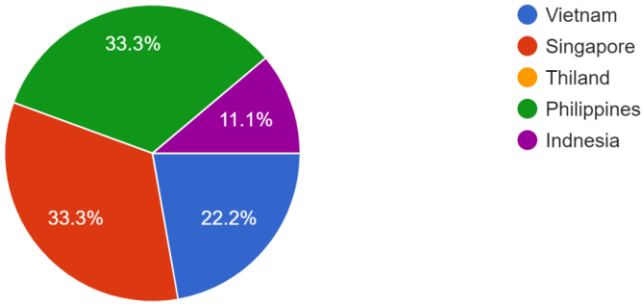
(Only for member universities' students) Did you have an interview test in your unversity after sending your application form?

17 件の回答



If you would participate in AYSEAS 2023 and you could travel abroad, which country would you like to go to?(for Tokyo Tech students)

9 件の回答



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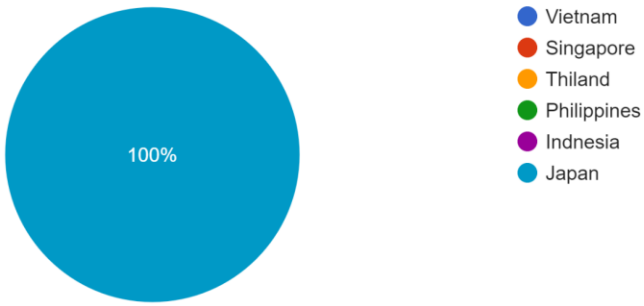
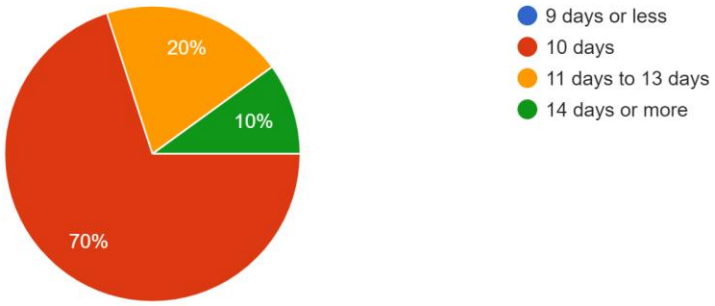
19 件の回答



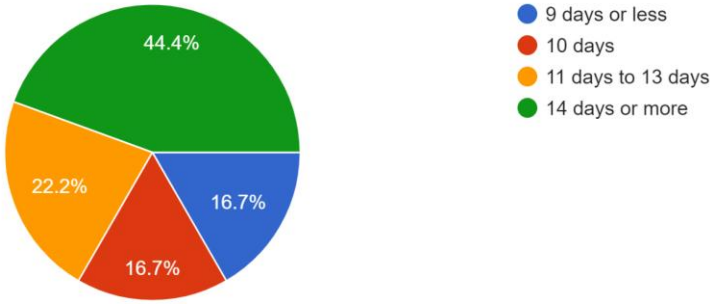
How mand days would be best for Tokyo Tech-AYSEAS?(for Tokyo Tech students)

10 件の回答



How mand days would be best for Tokyo Tech-AYSEAS?(for member universities' students)

18 件の回答



Q. What discussion topics would be of interest to the participants?

・Improvement of health conditions and excessive population increase

・I think having the 'food talk' or the 'place talk' is a really great conversation starter. For me, the discussion topic about how to clean the environment as students would be a great discussion.

・smart city

・I think its engineering thinking, how we could solve the problem by knowledge for each major.

・Developments in the participants' majors

・Renewable energy, education

・Current problem around the world will be more relatable.

・Group E has successfully completed the task, I'm super excited about it, thank you for everything

・Computer science topic related, business, and high tech

・Since most of students are engineers, topics related to engineering would be interesting such as AI, data privacy, 5G technology.

・About technology to prevent a infection

・Social transformation in society and how technology becomes an important factor for human civilization

・Language of each countries

・About global warming

・What interested me the most maybe Sunnytizer, because it has been hot for a month in Hanoi(Vietnam), not to mention Ho Chi Minh city in the south which is sunshine all year round.

So, skin care is very important, furthermore the product is high protection to the health in post-covid situations. By the way, we also looking forward to cooperating with group B, because our app when working collaborative will certainly be a must-have app in certain areas which always need the help of volunteers

・Global Warming, Culture differences, Future career abroad

・The difficulties that everyone have faced and solutions for them during Covid-19 Pandemic

・The group　presentation was very good. As said in lecture, the natural disasters like flood, storm surge is very common in these countries. It critical to have an app to forecast natural disasters, which can save many people lives.

・Software & Programming

・Education System Improvement, AI and Automation System for social developing.

・Creating new industries in Southeast Asia

・The current general topics are already perfect for the participants since they give a lot of room for us to choose a specific one we are passionate about. However, I do suggest possible discussing more about topics that are relevant in the time of the event. Also, it would be nice to hear maybe some discussions on how we may pursue careers in other countries since we have already felt excited from the cultural exchange.

・How to start building your own business and contribute to society

・Any topic will do.

・Asian culture, language, communication

・Some of more science topic

・2 truth and 1 lie

・Circular economy, sustainable and green energy, business

・Environmental problem, entrepreneurships, SDGs

Q. Please describe your suggestions, ideas, and comments for Tokyo Tech-AYSEAS.

・Through this program, I could get confidence to discuss controversial topics with foreign people. It was a very valuable opportunity for me. I'm sure that this experience will be helpful in my future career.

・I really do not have any suggestions for the Tokyo Tech-AYSEAS, because I really enjoyed every activity that was made for us.

・Thank you for opening the zoom during the program! We spent a wonderful time on the weekend. This may be a good point of online program.

・Thank you so much, it’s so much fun and hope we could do it offline, I could join it again next year, for sure!

・There was a lot of focus on coastal and sea protection, from the swimming simulator to the clean diver's act, so I think that theme can be expanded upon on future Tokyo Tech-AYSEAS. The presentation is really fun to make, I'm just a bit sad that there wasn't enough time to fully research every detail. Maybe next time it can be a bit longer?

・I really had fun thank you very much TokyoTech for making this happen!

・This is a really great program for students in different region of the world to learn more from one another while contributing their ideas to the society.

・Play game or ice-breaking more

・Great! Hope we can meet offline next time

・I really liked this program, and I am really glad that I participated. Lectures are very informative and intriguing that I learned a lot.

・In my opinion This program going to be perfect if we can do on-site program because when it was held online sometimes, we can't participate in all session. Anyways thank you for this amazing

program that help me improve my language skill, communication skill, researching skill and presentation skill.

・Cool and very wonderful

・It would be better if the session could also include the introduction of other universities(not only on the icebreaking session).

・Thank you for planning such a great program. I was really nervous at first, but I really enjoyed it.

・I think time for the last presentation is quite short and I hope we could have more time to inspire all of our ideas more since we have to change a lot in the script to adapt the presentation in 10 minutes.

・None.

・I know it is difficult to meet in person because of Covid-19 but I hope starting from 2023, this program can proceed by face to face .

・I really hoping to go abroad to have this program. I think if we were face-to-face, we could have a better communication with gestures or body action. Overall, I really appreciate that we had a good time for each other. And thanks for universities to make this chance for our students!!!

・Want to have activities to increase getting to know other

・I think they should have some day in the program with at least two lecture sessions.

・I think the Tokyo Tech-AYSEAS will be better if Introduction of recipes of Southeast Asian food is included.

・First, I would like to suggest providing more opportunities in interacting with participants from other groups (not that I did not like to have a lot of time with my own groupmates haha but we only had the optional weekend party to talk with other students outside our groups wherein not everyone participated in). Second, I suggest making the virtual campus tour in a video form instead (to avoid the network issues which took up most of the time), and just have students stay there in case there are specific places in the university the other participants ask about. Lastly, I recommend having a final check whether or not certain participants will be joining. Honestly, my group *sort of* struggled since 2 of the members suddenly decided not to join the program. However, all in all, this AYSEAS is a event was such a fun and memorable event even though it was done fully online!

・It would be nice if there is an album for each activity

・I have no suggestion.

・Thank you very much. I learned a lot through this program. Hopefully next year's program will be held in person.

・I suggest for a time , I think day of program are too short.

・I am totally satisfied with this program

・Free plane tickets for Tokyo Tech visits!

・It was wonderful. It would be better if the schedule becomes more compressed.