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Smart Cities and Post-Pandemic Situation:

The Case of Ho Chi Minh City

Today I would like to share with you four topics and maybe four raising question about what we would like to discuss more in detail in Q&A and maybe more in another seminar. As Dingding introduced, I'm right now the director of information technology park of Vietnam national university.

I would like to share with you is about the story, about the case of Vietnam in general and in the Ho Chi Minh City in particular, in how we deal with the pandemic, and how we come to the question of reopening of the economy and how we shut down economy.

To this question, I have four topics. First, from my understanding, the question of reopening economy is very related to the question how Vietnam and how Ho Chi Minh City controls the coronavirus. So at the very early beginning, so the ministry of Health of Vietnam and Ho Chi Minh City has prepared 4 scenarios to cope with the COVID-19.

First scenario is for detecting the new inflections abroad. So from our experience, most of the infected case come not from the community in Vietnam, but from other country like China, like Korea, Italy, Iran and Europe. So that's why at the beginning, we tried to detect the suspected infection from abroad.

The scenario 2, we try to accept the small scale of community permission. So that means if there are already those people in the community, and we could not do something. And that's why we had accepted this very few people, not trying to frozen them in the very restricted area.

Scenario 3, this is fast community permission, that we try to limit them under hundred infected case, and Scenario 4 is the large scale community permission over 1,000, and that's not our case.

Because we do very well in the early phase, so we focus into the preventing the COVID-19 from overseas, we apply effectively quarantine on the travelers entering Vietnam.

Firstly, focusing on the people travel entering from China, Korea, Italy, Iran and Europe. And then all the nations, then infected patient quarantine and receive the treatment in hospital immediately.

With this plan Vietnam right now has set in delaying and preventing the community permission of the COVID-19. Right now we don't have any dead case of COVID. And right now actually, we're re opening the economy already. It's the first question. And that's why in our case, we come to the question of reopening economy by answering the question whether we can control the pandemic situation or not. And in this case, we have controlled the pandemic situation. And that's why we come to the question of reopening economy.

But the Vietnamese government, or the Ho Chi Minh City government, they don't use the general term of reopening. What term we use right now is we are talking about a new normal of economy. Why new normal? Because we are re-opening economy, but we are not totally reopening. So we don't allow abroad travel to Vietnam. The tourism is totally domestic tourism. So we don't have new international tourism. We have also limited the traveling for expertise, foreigner expertise entering Vietnam. Only the long term expertise, who is in a big project or something like that, a very important project, is allowed a visa or allowed entering Vietnam. And of course they have to be in quarantine for 14 days after they came to the community. And that's why the reopening of economy right now is still hung. It's not totally. This is the first question. The first topic I would like to share with you about the condition of reopening economy.

The second one I would like to try to focus on the question how the technology in general, and AI in particular plays a role in the control of the pandemic, or control the coronavirus in Vietnam in general and in the Ho Chi Minh City specifically.

So from my understanding, and working closely with the local authority of Ho Chi Minh City, we saw three areas where the technology plays a very important role.

First one is the treatment capacity. So based on the data of the ministry of Health, the local entering, in and out from traveler, we try to divide them to many groups. So one year ago, we did a very general static on the population of Ho Chi Minh City. And based on that database and calculation, we tried to categorize infected patient into groups of high risk. So for different medical condition, the low risk case that means not so serious and less service case. We tried to classify them how

to treat service case with the high risk and instruct people to follow the self-quarantine and receive treatment at home. So that's the treatment capacity, the hospital and also the medicine school of Ho Chi Minh City try to divide them based on the data what we already did one year ago.

A second one is the testing ability. So in Ho Chi Minh City, we have only the capacity for 2,000 patients in one time. That means if over that, we are overloaded of our resources. Based on that, people of the Vietnam national university, we try to do the calculation with the question with a limited resource, and how to divide the people who is not in high risk and can wait and do not need testing.

And also together with the department of health of Ho Chi Minh City, we developed telemedicine and tried to help the people for testing, to introduce to them the home testing and give them some information, very early information on how they can do the testing at home.

Also the testing ability, the Ho Chi Minh City authority has set up 62 COVID red location, spot, over the city. This can also provide testing for people in and out Ho Chi Minh City. They used the app to transfer the information of who infected or who were susceptible to infect coronavirus. And they connect to the app, and they give information directly to the center authority to allow them to go to Ho Chi Minh City or they have to go quarantine area. This is the testing ability.

The 3rd is, in Vietnam and Ho Chi Minh City, we don't talk about lockdown, but we're talking about social distancing. This is about the limit of our economy in general and in particular, in some provinces, to cope with the lock down or social distancing. There's a group of the ministry of technology, they use also AI and machine learning to do 19 scenarios for the economy, especially for the Ho Chi Minh City and big cities. And they estimate the prototype to lock down to ensure economy of a city. If in the end, you have to lock down, you had to do social distancing. And the more you do that, the less costly you have for your economy.

These are the three areas. So treatment capacity, testing ability, and lockdown or the social distancing scenario. And in Ho Chi Minh City and also in Vietnam in general to use the new technology, database technology, and AI to contribute to the calculation to the decision making to help with the Ho Chi Minh City authority and Vietnam.

The 3rd question I would like to share with you is about the role of technology in general and AI specifically, in the time of social distancing. So that means and I mentioned earlier, we don't have a lockdown, but we have social distancing. And we have very strict social distancing in two weeks. That means the government has the resolution that we are not allowed to go outside and have to stay at home for

safety and based on that, you have to do many things for your business. And that's why the Ho Chi Minh City has followed this policy. This means keeping social distancing, but increasing online activity, online interaction. So they tried to develop the security app to give the signal for who is dangerous, or which area of the city is dangerous for the infected COVID cases, in order to let people know and let the people have the information don't go to this area in this time.

Second one, they tried to boot up online activities, online meeting, online work on a workshop, from offline to online. I will talk about new technology developed by Vietnamese government later, based on the change, from offline to online. And also the telemedicine is developed and I mentioned earlier, also during the time of COVID, the department of health working with three top medicine school and university, developed telemedicine and also AI based treatment, try to use the newer case the of Vietnam to identify many things what we already know about the case in Vietnam.

The 3rd one is that the government tried to use the pandemic, to use the coronavirus to try something, what in the past that they tried but were not successful.

The final point of my talk, I would like to share with you about what they called ecosystem stuff created or developed during pandemic.

So this is the what we call the VNU ecosystem, developed by the VNU people. So VNU, Vietnam National University, one of the biggest universities in Vietnam, we call them the VNU people, because that's from the VNU professors, from the VNU lecturers, from the VNU students, and from the VUN alumni.

At the beginning of the coronavirus, the VNU people, we see the opportunities from the threats. And we tried to do something that Ho Chi Minh City authority already tried before but unsuccessful. I would like to share you with 1, 2, 3, 4, 5 things that I would have already used last two months and very quickly, and also with the successful case study applying to the Ho Chi Minh City and many big cities in Vietnam.

The first one because of the social distancing, we cannot allow schooling, people can't go to school. And that's why VNU Tech, the education technology is developed. And we see in the slide, we have, up here, the platform developed by VNU alumni and student to online solutions for learning and examination. That is for long time two weeks.

The second one is the VNU Meet. VNU is like ZOOM. So at the beginning, over 60,000 students and 5,000 lecturers in the VNU used zoom. And then we have many scandals, not very good news from zoom. And that's why in two weeks our

team have developed VNU Meet. So this is like the online meeting solution, we have all the functions of ZOOM. But better, we have this web-based solution. And with more security, and more important with the data, we are safe in the Ho Chi Minh City in Vietnam and fulfill the requirement of the internet law of Vietnam.

And the 3rd is VNU Connect, this is the solution for the webinar I just shared with you earlier. This is the early notification system from security people. That means they have the function to identify COVID-19 infected case based on the information and based on the data of Ho Chi Minh City.

In the end is VNU Care. This is some kind of telemedicine that is an online platform connects patients and doctors through that online platform in order to provide appropriate medical consulting and advise a treatment method, especially in the time of the COVID-19.

Another thing about the VNU Care. This is the robot in the hospital. We try one this robot in the quarantine area. Another is the robot for the hospital, also developed by the VNU lecturers.

With that, I would like to get to the conclusion. I love the work of the PPP. The first speaker mentioned that we need more public private partnership in this time. I also love the work of coordination as we try to connect many shareholders to the topic. But I would like to use the more general work, what we already use in Vietnam or in Ho Chi Minh City, we would like to use the innovation ecosystem. So the threat of the coronavirus has encouraged us to reopen and to speed up our ecosystem for innovation. And this is the result of what we did in two months, and also which we have also the threat is also our ability to speed up the ecosystem and to bring many shareholder and many products to the ecosystem.

So this is my final words. Thank you for your attention!