

The power of technology has helped Korea control Covid-19 very well

From the 'relegation' from the position of the world's second largest outbreak and the surprisingly low mortality rate, one can clearly see the power of the Korean health sector. They do it thanks to technology.

In the absence of a vaccine or special medicine for SARS-CoV-2, South Korea turned to relying on intellectual power: Koreans curb the epidemic with technological breakthroughs, based on the efforts of the government, locally and through the capabilities of reputable startups.

As of March 12, the country had a total of 7869 cases - the fourth most number of cases in the world, behind China, Italy and Iran. However, Korea's anti-epidemic work has often been praised as a remarkable milestone, thanks to its prompt and effective response and open quarantine measures for the entire population.

While the government controlled the epidemic on a macro scale, national laboratories and related startups poured money and manpower into researching solutions to curb the spread of the virus and find ways to detect the disease early.



Technology goes hand in hand with transparency

Since the outbreak, the capital Seoul confronted SARS-CoV-2 with both technological power and methods of eliminating bureaucracy.

" We consider these two core values ??of high importance ," Kim Gang-lip, Vice Minister of Health of Korea, told the international press on March 9.

According to the Infectious Disease Control and Prevention Act, the community has the right to be informed about any disease prevention method, any medical progress related to disease control. Every day, government officials not only conduct meetings twice, but the law also requires the establishment of reliable sources for the community. One of them is an interactive website called Corona Map.



The government monitors the routes of an infected person's travel through phone locator data, payment activities and data extraction from security cameras, then updates where the infected person has traveled, so detailed that even the number of seats they've sat in the theater. Through the mobile application, people can access all of the above information, in order to avoid the frequent areas of infection.

Many Korean organizations also release apps to help people who are isolated at home who exhibit symptoms like a dry cough and fever. The application allows users to self-diagnose their own clinical signs, then connects to a network of epidemic control specialists.

Not only Koreans benefit from these applications. At entry points, visitors from translated regions are required to download the app, constantly reporting their health status over the next 14 days.

Is there going to be medicine?

On March 4, a group of Korean researchers, with financial backing from the Ongoing Virus Research Center under the Korean Institute of Chemical Technology Research (KRICT), made an important statement: **health**

care workers can use antibodies acquired after the two pandemics of SARS and MERS to treat SARS-CoV-2.



By analyzing the similarities in the genes of the three viruses, the team showed that the old antibody worked against the new virus. They explained that when a patient is injected with antigen antibodies that can inhibit the activity of two SARS and MERS viruses, the patient's body can form antibodies, fighting off SARS-CoV-2.

The team also announced all the achievements they have made in the sensitivity of virus test kits.

Quarantine stations right across the road

Local governments also have their own ways of controlling Covid-19.

Many places that follow the example of Goyang city in Gyeonggi Province have opened diagnostic clinics on the side of the road, which allows health workers with tight protective gear to sample saliva and nasal fluid from passersby.



“ Chúng tôi có thể thử càng nhiều người càng tốt trong một khoảng thời gian ngắn mà lại không có tình trạng chen chúc đông người, tỷ lệ lây nhiễm sẽ giảm khi việc thử nghiệm được tiến hành ngay trong xe”

Ông Kim An-hyun,
chủ tịch trung tâm sức khỏe cộng đồng
thành phố Goyang.

A one-stop visit to the test station only takes about 15 minutes, costs less than 20 USD / time and does not require the driver and accompanying people to get out of the car, because the simple sampling should be done through the glass window. In other major cities, including Seoul and port cities like Incheon and Sejong, the government has also learned about Goyang's sampling method, establishing roadside epidemic checkpoints.

Kim An-hyun, president of Goyang City Community Health Center, told local news channel MBC: ' *We can try as many people as possible in a short period of time without being able to get the status. crowded, the infection rate will decrease when the test is conducted right in the car* '.

The startup entered

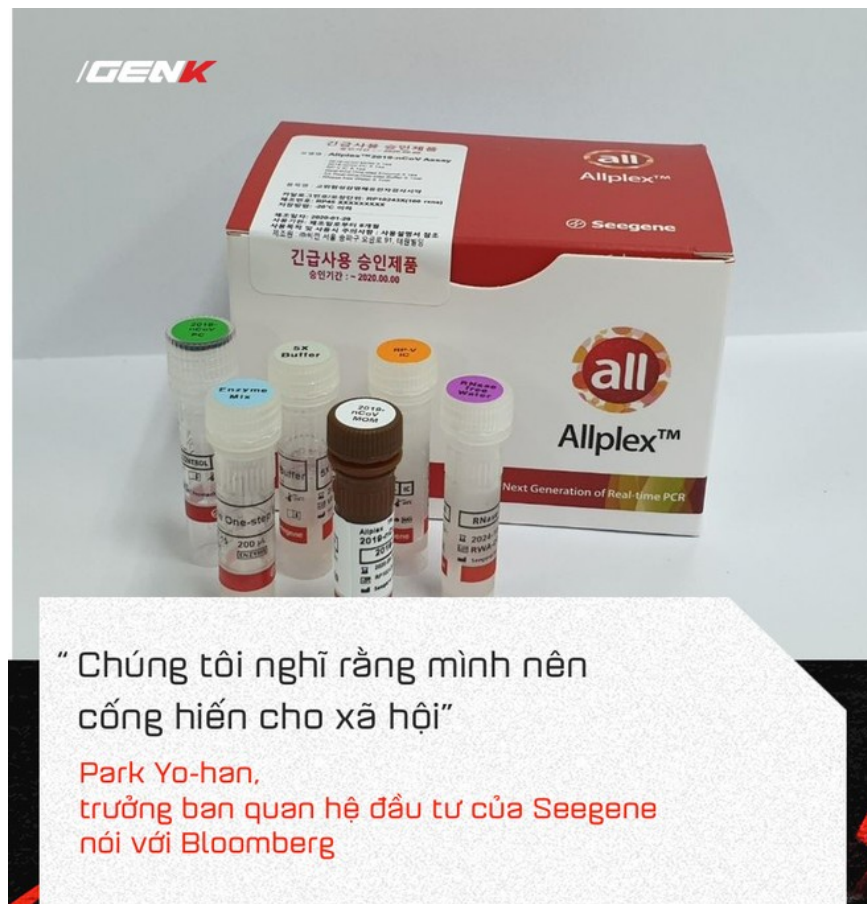
A large part of the reason the number of viral infections in Korea is so high is that the testing is so widespread. By the time the Korean government released its official numbers to the international media, it had conducted a test on more than 200,000 people, and was fully capable of testing up to 20,000 suspected cases a day.

Waiting time for results ranges from 6 to 24 hours; Thanks to the large number of companies that can produce test kits, the waiting time for results can be significantly reduced.

In Seoul, Seegene diagnostic company has successfully developed a test kit that produces results within 6 hours. Seegene uses an automated production line, powered by artificial intelligence, that makes it possible to create test kits at high speed.

' This is a risky investment for our company to put financial resources into developing a test kit, because at that time it was not clear how fast the virus spreaded ,' 'said Park Yo-han, head of relations. Seegene's investment told Bloomberg. ' We just think we should contribute to society .'

Seegene is also a supplier of test kits to Italy and Germany, and has sent test results for comparison and evaluation to Canada, Brazil, South Africa, Australia and Vietnam.



MiCo BioMed, another South Korean biotechnology startup, announced last month that it has successfully developed a fast molecular diagnostic system, capable of detecting SARS-CoV-2 in just one. hours. The company has made a name for itself from the development of a device that detects pathogens related to bioterrorism, providing it to major sporting events in Asia and around the world.

MiCo CEO Kim Sung-woo told the local newspaper that they expected the lightweight diagnostic device to appear at airports, jetties and even medical centers.

Besides these two companies, two other biotechnology start-ups, Ahram Biosystems and Doknip Biopharm, have collaborated to develop a handheld scanner that will detect germs in just 30 minutes. Another startup uses semiconductor technology to create a real-time test suite, applying polymerase PCR chain reaction technology to

make the test faster and more accurate. PCR can detect SARS-CoV-2 fairly quickly, but is inaccurate when there is more than one virus in the sample.

Thanks to technology, Koreans are far away but not pleased

Schools are closed, many universities extend the winter holidays, but not many people are bored in the surroundings of their homes: technology companies put effort to help the community comfortable with the situation of not communicating with the world. outside.

Rsupport, a telecom provider, invites startups and large corporations to use the free RemoteMeeting application for three months.

Another startup, called Classum, provides online learning for schools and universities that are closed. Classum possesses full functionality that allows teachers and students to interact easily; a class with Classum is not different from a class.

In the context of the widespread Covid-19 epidemic, we have only seen how the unparalleled power of technology can help people. Comparing technology with 'magic' for people to customize reality is not overly exaggerating, and with magic and spirit because the community of technology companies, Koreans can control the translation. Very fruitful.

From the position of a 'top race' to the Chinese epidemic, the number of South Korean infections is numerous but the situation of infection has subsided. European and North American countries can look at the mirror from halfway around the world to learn more or less, in order to promptly cope with the Covid-19 pandemic knocking on their door.

According to Asia Times, Bloomberg

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