

Business Sweden



5G

BEYOND COVID-19: THE RISE OF 5G IN CHINA

MARKET INSIGHT REPORT

Opportunities in 5G in China after COVID-19

KEY MESSAGES

1. The Chinese government has long considered 5G as a key industry of strategic importance for the development of the country, this focus remains strong even after COVID-19
2. China has successfully deployed several 5G-related technologies to help in the pandemic response and fight against COVID-19
3. In the wake of the virus, China is even more focused on using 5G as a way to drive high value growth in manufacturing and services, giving opportunities for foreign companies to supply solutions and to leverage 5G applications in China

NETWORK CAPACITY IS EXPANDING QUICKLY AS CHINA WANTS TO BECOME A WORLD LEADER IN 5G

Investments in 5G in China are steadily increasing. Despite an initial dip in activity from the major telecoms in the beginning of 2020, they have been quick to get back on their feet. Of the three big telecoms, China Unicom and China Telecom have announced that they are accelerating their rollout of infrastructure in 2020, planning to deploy 250,000 base stations by the end of Q3. The third and largest, China Mobile, has end-2020 target of building 300,000 base stations.

A lot of money is being put into this rollout, with China Unicom estimated to invest RMB 35 billion, China Telecom investing RMB 43.5 billion, and China Mobile investing RMB 100 billion. Equipment manufacturers are also getting ready for the big 5G push, with companies like ZTE raising RMB 11.7 billion in a private share placement to boost 5G network development. China Tower is also expected to spend RMB 17 billion on 5G in 2020.

China Mobile's 5G already covers 50 cities in China, and they reported having signed on 6.7 million 5G users since the launch in October to December. The goal is now to develop 70 million 5G customers this year and drive the sales of 100 million 5G terminals.

Estimated value of 5G by 2025	
1.1 Trillion yuan	3.2% of China's GDP

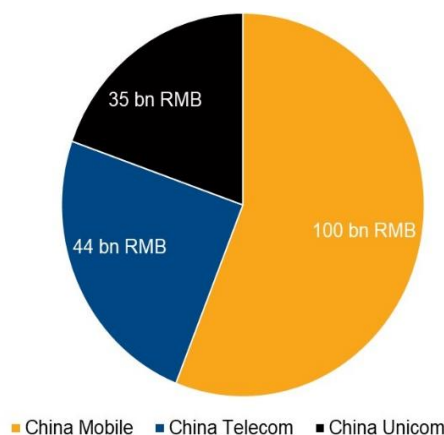
COVID-19 DID NOT PUT A BREAK ON THE 5G DEVELOPMENT PLANS

The COVID-19 outbreak had a severe negative impact on the Chinese economy, leading to sharp reductions in GDP growth estimations for 2020.

However, the Chinese government's initial economic stimulus packages were not broad sweeping policies, instead they were highly targeted, and focused on speeding up the implementation of a handful of new development concepts collectively referred to as the 'New Infrastructure'. Key among them, the government particularly highlighted 5G and 5G infrastructure as a way to boost economic growth and get the economy back on track.

As the rest of the world continues its battle against COVID-19, China has already gained a head start in applying several 5G technologies as a way to help fight the spread of the pandemic. As China looks to increase investment in 5G, there are emerging market opportunities, also for Swedish firms.

2020 Spending on 5G by the major Chinese mobile companies



5G USE CASES CARRIED OUT IN CHINA DURING THE COVID-19 OUTBREAK

The outbreak of COVID-19 saw all three mobile companies in China jump to action in terms of creating solutions to help fight the epidemic.

Solutions for individuals to scan QR-codes to show verified travel history were created in order to facilitate quarantine rules and to track the spread of the virus across different provinces.

China Mobile cooperated with The First Affiliated Hospital of Kunming Medical University to launch the 5G-based “Online Platform for Free COVID-19 Diagnosis and Treatment”.

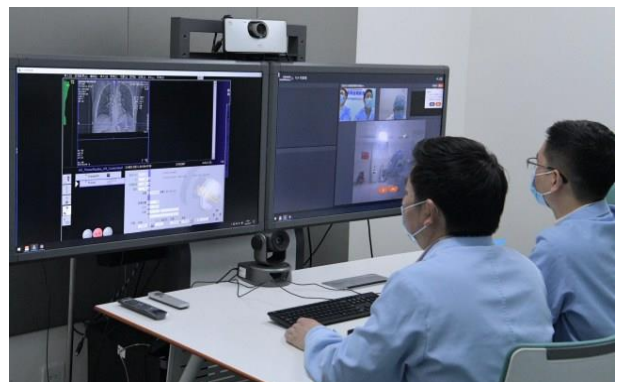
China Telecom helped West China Hospital and Sichuan University to complete a 5G teleconsultation system for COVID-19 where doctors in West China Hospital could consult directly with 27 other hospitals transmitting large amounts of complex data at high speeds.

China Unicom assisted with the provision of the 5G+4K live streaming of the “Xiaotangshan Hospital” construction in Zhengzhou, allowing viewers and stakeholders all over China to follow the development in real time.

Sweden’s Ericsson was also quick to respond, building four base stations in two days to provide 5G coverage for mission critical hospitals in Wuhan.

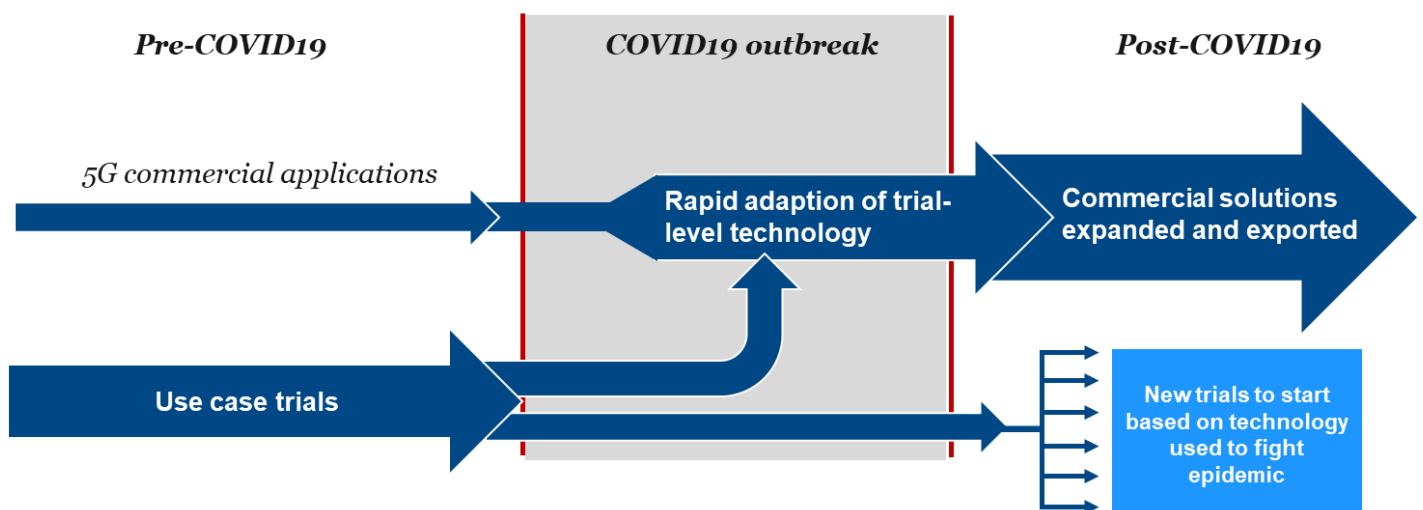


Kunming Medical University



Low latency video connection in a Sichuan hospital

HOW THE CHINESE 5G ECOSYSTEM ADAPTED TO COVID-19 AS AN OPPORTUNITY



NEED FOR NEW 5G SOLUTIONS GOING FORWARD IN CHINA

According to the Ministry of Industry and Information Technology, the Chinese government is looking towards 5G solutions to address some of the following issues:

Empowering healthcare and improving news broadcast

5G 4K/8K HD teleconsultation can be used on local level even in rural areas, improving the ability of community-based medical organizations to cope with the outbreak and reduces the risk of cross-regional people-to-people spread. News can also be broadcast from rural areas with better quality.

Strengthening pandemic control in public spaces

5G infrared thermal imaging temperature measurement can be used to scan crowds of people in places such as hotels and restaurants, entertainment venues, shopping malls and supermarkets, and in public transportation hubs. Infrared temperature-sensing precision detectors can also be used to record and track human faces and their corresponding body temperature, providing immediate diagnostics for large groups of people.

Improving production and manufacturing

5G unmanned AGVs (Automatic Guided Vehicles) can be widely applied to various scenarios such as product handling, equipment detection and automatic identification. With the machine vision technology, 5G can support unmanned fine control of product quality, increased testing efficiency, and provide protection for testing personnel. It will remove the need for people to be in close proximity to each other and avoid infections.

ADVICE FOR SWEDISH COMPANIES

The COVID-19 outbreak acted as a catalyst in kick-starting 5G-trials in several areas that have become actual real-life implementations. The continued government support for the roll-out of 5G is perhaps an indicator that the battle against COVID-19 will be a prolonged and gradual one, but it also indicates that the solutions and use cases that are being quickly implemented now will also find their continued use after the proverbial dust has settled.

Telemedicine and broadcasting technology implemented in hospitals around the country will remain also for future patients with other ailments. Image recognition technologies and processing power that were applied for checking the temperature of large crowds of people could also be used for smart city and smart home applications. China is also ramping up the use of 5G in smart manufacturing and logistics – two sectors that will become the key drivers of China's economic recovery and future growth.

As the three operators China Mobile, China Telecom and China Unicom both cooperate and compete in identifying and developing the next essential use case, it is clear that solutions started in China will be expanded also to other markets abroad. Looking forward, 5G will be more extensively applied to daily life, manufacturing and smart city solutions, along with the gradual perfection of 5G networks and the deepening of innovation in 5G applications.

In the middle of this big development, Swedish companies should:

- **Evaluate if they have solutions within areas such as AR/VR, IoT, 8K video and drones that are relevant to the telecom industry in China**
- **Utilize the advanced stage of 5G roll-out in China as a test-bed for developing or trialling new solutions**
- **Monitor the developments in China and keep an eye on new future solutions and applications**



Joakim Abeleen
Market Area Director
Greater China



Thomas Larsen
Project Manager
Shanghai

If you are interested in discussing the possibilities of 5G in China, do not hesitate to contact us:

E-mail: Joakim.Abeleen@business-sweden.se or Thomas.Larsen@business-Sweden.se
Web: business-sweden.se/china
Linked In: [Business Sweden Asia-Pacific](#)



We help Swedish companies grow global sales and international companies invest and expand in Sweden.

BUSINESS SWEDEN in Beijing

609, 6F, CYTS Plaza, No. 5 Dongzhimen Nandajie, 100007 Beijing, China

T +86 10 5815 6006 F +86 10 5815 6223

BUSINESS SWEDEN in Shanghai

12F, Sail Tower, 266, Hankou Road, 200001 Shanghai, China

T +86 21 6218 9955 F +86 21 6217 5152

BUSINESS SWEDEN Box 240, SE-101 24 Stockholm, Sweden

World Trade Center, Klarabergsviadukten 70

T +46 8 588 660 00 F +46 8 588 661 90

info@business-sweden.se www.business-sweden.se

