**5G+X will create a smart new era**

Keynote at Web Summit by Mr. Guo Ping, Huawei Rotating Chairman

Thank you! I’m honored to be with you all.

Today I want to talk to you about why 5G represents a golden opportunity for our entire industry and particularly for you, the developers.

My topic is "5G+X will create a smart new era". This X can be AI, big data, or VR/AR, among other technologies.

As you all know, 5G deployment has just begun. AI applications for a range of industries are still in their infancy. I believe that in the future, 5G+X will create countless opportunities for entrepreneurs.

**ICT is the new electricity**

In 1875, the Paris Nord Train Station started using electric lights. In 1879, a power plant in San Francisco started selling electric power. These were historic changes. Later in the 20th century, electricity significantly increased productivity in all industries. Humanity entered the electric age.

Just as that age began with electric lighting, 3G and 4G solved the problem of connecting people. 5G and AI represent a tipping point for ICT. This technology will be further applied in all industries, like electricity was over a century ago. This makes ICT a key enabler of industry development.

**5G is arriving sooner than expected**

The rollout of 5G commercial networks is faster than expected. As of now, 40 carriers in over 20 countries are using 5G networks commercially. We predict that we will see 60 commercial 5G networks by the end of the year. The new experiences delivered by 5G have been warmly welcomed by consumers.

Take South Korea, for example. One million users signed up for 5G during the first 69 days of its deployment. When 4G was rolled out, it took 150 days to amass that many users. The average 5G user consumes three times as much data as a 4G user.

**5G+X: driving industry upgrades**

5G can achieve speeds as high as 20 gigabits per second and latency as low as one millisecond. It can support one million connections per square kilometer. 5G can ensure a superior experience for the Internet of Things.

You are all familiar with cloud and AI. 5G reduces the distance between devices and the cloud, putting the computing power of the cloud right in your pocket.

Now I’d like to share some case studies with you.

**5G enables 8K remote real-time musical collaboration**

Two weeks ago at a Huawei forum, the CEO of Swiss carrier Sunrise demonstrated this 5G use case.

In a field 20 kilometers away, three musicians played Alpine horns, while in our forum venue, another musician played the guzheng, a Chinese stringed instrument.

The ultrahigh bandwidth and ultra-low latency of 5G kept the musicians in perfect time with each other.

In the near future, people separated by long distances can communicate in real-time over 5G networks. Users can feel as if they are sitting in the same room together.

**5G+X makes production safer and more efficient**

Located in Rotterdam, the Shell Pernis oil refinery hopes to improve the safety of its workers and increase O&M efficiency.

With 5G, patrol robots can roam the complex to quickly spot oil leaks and respond. This reduces the risks of working onsite.

During inspections, smart 5G helmets can allow junior engineers to talk in real time with off-site experts. The experts can view the work onsite on an ultra-HD video stream.

This reduces the time it takes to complete an inspection from days to hours.5G+X makes the inspection of the 160,000 kilometers of pipes easier than ever before.

**TrackAI**

5G and AI are not just being used in entertainment and factories. They are also used for medical diagnosis and treatment.

**Applications are critical**

We’ve just looked at some typical 5G applications. 5G+X is changing the way we work and live.

5G is an upgrade to our communications infrastructure, and AI provides us with more powerful computing engines. However, the applications and software built on top are what generate true value.

The Internet showed us that app developers typically get the lion’s share of the profits, and their income increases most rapidly.

This is a huge market worth trillions of US dollars. The biggest winners will be our partners.

**Huawei is committed to enabling application development**

For the past 30 years, Huawei has been working with carriers to create the foundation for the Internet, so app and software developers can fully unleash their potential.

In the 5G+X era, we will continue to enable app developers and drive the entire industry forward.

Specifically, we are focused on two areas: the cloud and mobile devices.

To support these two areas, we have launched the Huawei Developer Program and the Shining-Star Program.

**Huawei Developer Program 2.0**

I’d like to now talk about Huawei’s Developer Program. This is a program aimed at advancing ICT infrastructure.

Over the last five years, we established 21 OpenLabs around the world and already have 1.3 million developers.

Now we are starting to roll out our Developer Program 2.0. Over the next five years, we will invest 1.5 billion US dollars as we expand the program to 5 million developers.

We have programs for universities and institutes, individuals, startups, and partners. For example, we provide free AI boards and vouchers for cloud services training to enterprise developers and some European universities.

**ModelArts: a one-stop platform for AI developers**

We are working to make AI development easier for all developers.

AI has already attracted a lot of attention, but the technology is complex. We are still facing a skill shortage.

We have launched ModelArts to help developers make better use of AI.

We use AI itself to solve the problems of AI development. ModelArts supports automatic data enrichment, automatic model optimization, and one-click model training, among other features.

Simply put, we want developers to be free to focus on their core work. Huawei will take care of the complex computing problems. Developers can just focus on designing service logic and creating the best possible products.

**1+8+N: one smart device ecosystem for all scenarios**

So far, smartphones have had the biggest impact on our daily life. However, we will soon enter a fully connected world. Huawei has long been determined to develop the next-generation device ecosystem.

Huawei has launched a "1+8+N" all-scenario strategy, in which smartphones connect all kinds of devices and offer all-scenario services.

At home, users can switch seamlessly between smartphones and larger screens with a single touch. In the car, mobile phone apps can interface with the vehicle itself.

The next-generation device ecosystem will be about more than smartphones. We would like to see developers join and innovate their apps for integrated scenarios.

**HMS empowers mobile innovation, Shining-Star inspires global developers**

Huawei’s smartphones, smart watches, and smart screens are very popular. To deliver better experience, we are opening up to more third-party apps and services. This has allowed the Huawei Mobile Services ecosystem to develop.

Huawei also provides all kinds of service kits, enabling developers to quickly develop apps and distribute them to Huawei devices in all scenarios.

We have also allocated one billion dollars to our Shining-Star Program, which aims to motivate developers to innovate.

With this program, we hope to attract more high-quality apps to our HMS ecosystem. We will provide details tomorrow afternoon at our Huawei Developer Day event. We hope to see you there.

**5G+X: Let’s create a new era**

5G+X is the new electricity. It will be the key enabler of the smart world. Huawei looks forward to working with industry developers and startups to create more 5G+X applications.

We welcome you all to join us in creating the smart new era.

Thank you!