



## AI and the new wave of Enterprise Intelligence

AI is poised to occupy a leading role in the new digital economy. What challenges will AI create? What is Huawei's strategy?

By Zheng Yelai, President of Huawei Cloud BU

### AI will transform every industry

**A**I is crucial for enterprise digitalization to improve production efficiency. Since the Industrial Revolution of 1870, a major business revolution has occurred roughly every 30 to 50 years. Over the next 30 years, AI will become a basic force of production that drives the economy, rather than just a suite of

technologies geared toward testing.

AI fits most economic activities. It will pervade most production stages in enterprises and create a multiplier effect of enormous value. For example, autonomous driving and electric vehicles will transform the auto industry, which in China alone is worth 16 trillion yuan (US\$2.3 trillion). It will also transform education, health, manufacturing...and every industry.

“

AI can be used to check for anomalies in customs data and discover problems at the front end, with discovery rates of up to 99 percent.

”

In our own business, we deployed a machine vision system in our PCB production lines to support high-speed, automated PCB fault detection. This improved defect discovery during manufacturing and increased line production yield from 99.2 percent to 99.55 percent. Costs were lowered and manual workloads were cut by 48 percent, which is remarkable for the manufacturing industry.

Huawei operates in over 170 countries and regions worldwide, transporting a huge number of containers each year. AI helps to optimize Huawei's supply chain process, integrating various links in the chain, from the supply side to logistics and transportation, through optimized routes and optimal algorithms, all of which have helped us to automate our internal logistics.

Specifically, we operate many warehouses and a total of 108 supply points. We design optimal packing solutions based on parameters such as the size, shape, and weight, of goods, which are shipped to more than 170 plus countries by land and sea. This helps us to increase loading rates by 15 percent. We've also automated customs declaration forms, significantly reducing

the manpower required and improving customs clearance efficiency tenfold.

We can also open up this capability. As customs control has set rules and regulations, AI can be used to check for anomalies in customs data and discover problems at the front end, with discovery rates of up to 99 percent. By using AI, Huawei has been able to continually improve its products, without increasing prices, and make its operations increasingly stable.

In the retail field, Huawei generates tens of millions of sales documents. We've used AI to achieve 99.5 percent accuracy in the document review process, integrate our sales and online risk control. Account login behavior, for example, can be used to identify intent, basically stopping unusual transactions such as surfing attacks and password sniffing.

## Two major challenges

AI faces two challenges. First, the cost of legitimately obtaining data is too high, which – in China – is exacerbated by a lack of clear data sovereignty compliance standards. On May 25, the General Data

“

The AI era will be characterized by large amounts of data of different types, scattered data, diverse service scenarios, and complex AI application development.

”

Protection Regulation (GDPR) came into effect in the EU, meaning that the EU can impose penalties of €10 to €20 million, or 2 to 4 percent of a company's worldwide annual revenue, for violations. The GDPR has standardized data privacy protection, which no cloud service provider can ignore. And Huawei Cloud, China's only full-platform, full-node, full-service cloud provider, uses PCI-DSS security certification to make our AI services not only accessible and usable to customers, but also reliable.

The second challenge for AI is the lack of specialist talent. There are millions of software companies in China, but perhaps less than 10,000 experts who understand AI – the same is true all over the world. Today's mathematicians understand algorithms but they don't understand application scenarios. While experts in application scenarios understand the industry, they lack proficiency in algorithms. The whole AI system requires people who understand both algorithms and application scenarios. How can this boundary be crossed? We still have a long way to go. Huawei's main mission over the next three years is to open up its capabilities to all industries and allow AI to move beyond the current small group that use it for testing, and enable thousands of software

engineers to be able to use it and use it well.

AI is a group of technologies. When applied in business we call it “enterprise intelligence”. Making AI accessible, usable, and reliable – that's our goal. The foundation of AI is data. Huawei Cloud's Intelligent Data Lake provides a foundation for smartification based on the imminent AI wave. The AI era will be characterized by large amounts of data of different types, scattered data, diverse service scenarios, and complex AI application development.

With Huawei Cloud's Intelligent Data Lake, the database supports seamless data flow in a full lifecycle and multiple analysis engine sharing, simplifying collaboration between data services. Moreover, its open format means that user data can be migrated to the cloud without the need for format conversion, making AI easier to use and extremely efficient. To give an example, it's possible to accurately find target data in seconds using multiple query criteria in a PB-level database with trillions of records.

We're committed to moving forward with all industries. I believe our future will only get better and brighter. 