

5 THINGS YOU NEED TO KNOW ABOUT IOT IN CHINA

As part of its push towards expanding its IT cloud services, China plans to become a major player within the Internet of Things (IoT) market.

By 2020, there'll be 200 billion IoT connected devices worldwide, with 95 percent of these manufactured in one place: China.

To support this growing trend in IoT, 34 percent of Chinese telecom companies have implemented IoT initiatives and 40 percent plan to do so in the next 12 months, compared to 23 percent and 26 percent, respectively, among their global peers, according to Forrester.

Here are a few fascinating insights into the ongoing development of the IoT in China:

01 The overall IoT market in China will rise to \$361 billion in 2020 from \$193 billion in 2015.

The applications for IoT technologies by both businesses and consumers are growing:



Energy:

The Chinese government is aiming to ensure that 95 percent of China's households will have a smart meter installed by 2017.



Retail:

95 percent of small merchants in China still do not use any sort of point of sale system.



Transportation systems:

Beijing TransWiseway and IBM are partnering to design an IoT platform to connect millions of vehicles in China adding \$22 billion in productivity.



Consumers:

The market size of wearables in China reached \$2.6 billion in 2016, up 70.2 percent year on year.

02 Manufacturing Stands to Benefit the Most From China's IoT.

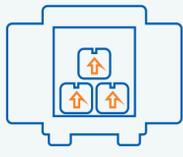
Chinese internet technology can help manufacturing in several ways:



China is the world's largest Machine-to-Machine (M2M) market by number of cellular connections, with almost a third of the global base. GSMA forecasts that connections will grow by 29 percent annually to 336 million in 2020.



GE and China Telecom have partnered to launch GE's Predix software platform, bringing data analytics to China's industrial sector. Both parties are also collaborating in cloud-based image storage, telemedicine applications, advanced manufacturing and cloud computing.



Assign digital identities to physical assets to track them in real-time.



\$127.5b

IDC notes that Chinese manufacturing enterprises' spending on IoT will reach \$127.5 billion in 2020.

Manufacturing, public services and resource industries are expected to account for over **60 percent** of the IoT's GDP impact by 2030.



03 China's IoT Progress is Backed By Its Internet Plus Roadmap.

The Chinese government has made \$1.6 billion available in grants and loans for IoT projects in 2015, and has already backed smart city projects in 202 cities across China.

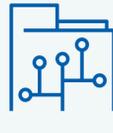
China's internet policy, including the Internet Plus Roadmap, will enhance various industries with:



Mobile



Cloud



Big data



IoT

Enhanced industries:



Medicine



Finance



Manufacturing

Internet Plus will add **\$4.4 billion** to China's research and development investment.

\$4.4b

04 China is Expected to Have Nearly 5 Billion Connected Devices by 2020.

The Asia-Pacific region is expected to be the biggest market for connected devices, with over **11 billion** by 2020:

5.6 billion of those devices will be mobile.

Asia-Pacific's mobile market will outpace both Europe and North America.

Potential market revenues could reach **\$180 billion**.

5 BILLION

05 Security is a Top Priority.

ABI Research, another industry consultancy, estimated that the cybersecurity market in China is on track to hit \$10 billion by 2017, double the size of 2012.



Information security budgets for Chinese companies neared \$8 million this year, significantly higher than the global average of \$5.1 million, according to PwC.



Under the new law, network operators will need to verify the identity of users when providing services.



Large Chinese companies responded to more than 1,200 information security incidents on average in 2016, five times higher than 2015.



IoT devices being used for DDoS attacks and weak default/admin passwords are the source of the vulnerability.

In addition to provisioning the internet service across 80 percent of China which makes IoT possible, China Telecom is investing heavily into converged IoT infrastructure and plans to have nationwide narrow-band IOT (NB-IoT) coverage using the 800MHz band by mid-2017.

Furthermore, to speed commercial adoption, China Telecom is actively partnering with numerous leading global and local IoT innovators; these partnerships intend to develop and deploy high-performance connectivity management, as well as provide the systems integration services needed to power a wide range of connected devices spanning the retail, automotive, home appliance and wearable sectors.

For detailed information on China Telecom's IoT initiatives, please visit www.ctamericas.com/iot