

ADVANCED MANUFACTURING IN CHINA



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ACCIÓ



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1. CHINA and SHENZHEN 's INNOVATIONS ECOSYSTEM

- Shenzhen stands out for its incredible transformation.
- Within 50km radius of Shenzhen are the production and R&D centres established in China of a 180 of "FORTUNE 500" companies.
- From Shenzhen's ecosystem have emerged some of the most innovative brands in the world such as Huawei, Tencent, ZTE or BYD confirming that Shenzhen is the perfect platform for high-tech companies, startups and, ultimately, innovators from around the world



SHENZHEN

- Population: 13.02m
- Area: 1,997km²
- GDP: USD359b
- GDP per capita: USD 28k
- R&D per GDP: 4.8%

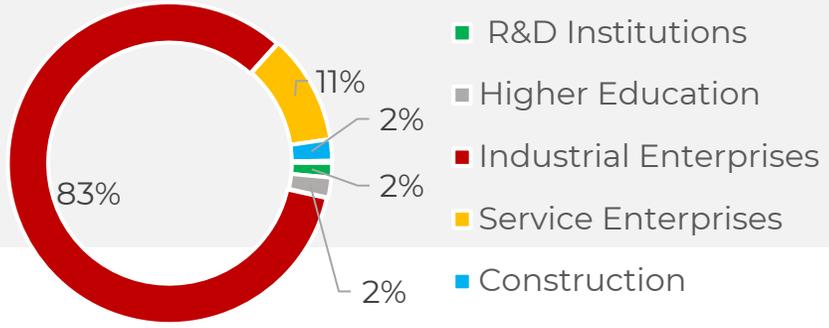
R&D spending in 2018
RMB 116.35billion
(EUR 14.78billion)

- 89.4% on experimental development
- 7.9% on applied research
- 2.6% on basic research

CHINA

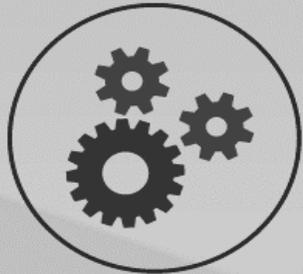
- Population: 1.4 billion
- Area: 9.6million km²
- GDP: USD14,298b
- GDP per capita: USD 10,212
- Unemployment rate: 3.6%
- R&D Spending 2018:
RMB 1.87 trillion
US\$275 billion

SHENZHEN R&D expenditure by unit



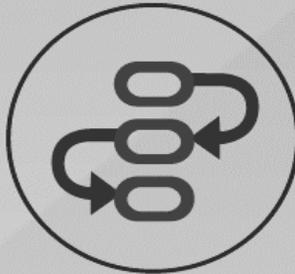
2. INDUSTRY 4.0 / ADVANCED MANUFACTURING IN CHINA

2.1 OVERVIEW and TRENDS



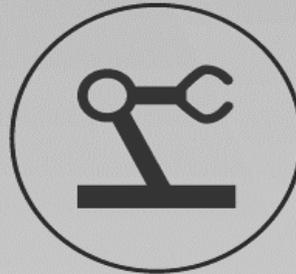
Industry 1.0

Mechanisation and the introduction of steam and water power



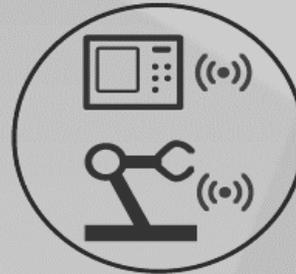
Industry 2.0

Mass production assembly lines using electrical power



Industry 3.0

Automated production, computers, IT-systems and robotics



Industry 4.0

The Smart Factory. Autonomous systems, IoT, machine learning

- Leading centres of smart manufacturing are already emerging in China. These include above all the districts of Pudong in Shanghai, Wujiang in Suzhou and Longgang in Shenzhen.
- There are regional specialisations: Shanghai is China's leader in key components, robotics and aerospace equipment manufacturing. Suzhou is strong in the field of smart manufacturing.
- Across the country, 537 industrial parks specialized in smart manufacturing have been established.
- China's IIoT market has seen a rapid growth, reaching nearly 700 billion yuan last year.
- IIoT (Industrial Internet of Things), is among the #NewInfrastructure agenda.

2. INDUSTRY 4.0 / ADVANCED MANUFACTURING IN CHINA

2.1 OVERVIEW and TRENDS

The
#NewInfrastructure
agenda



Landscape of industrial platforms

Geographical distribution of China's industrial internet platform providers

Number of platform providers:

- 1-5
- 5-10
- 10-20
- 20-30
- > 30

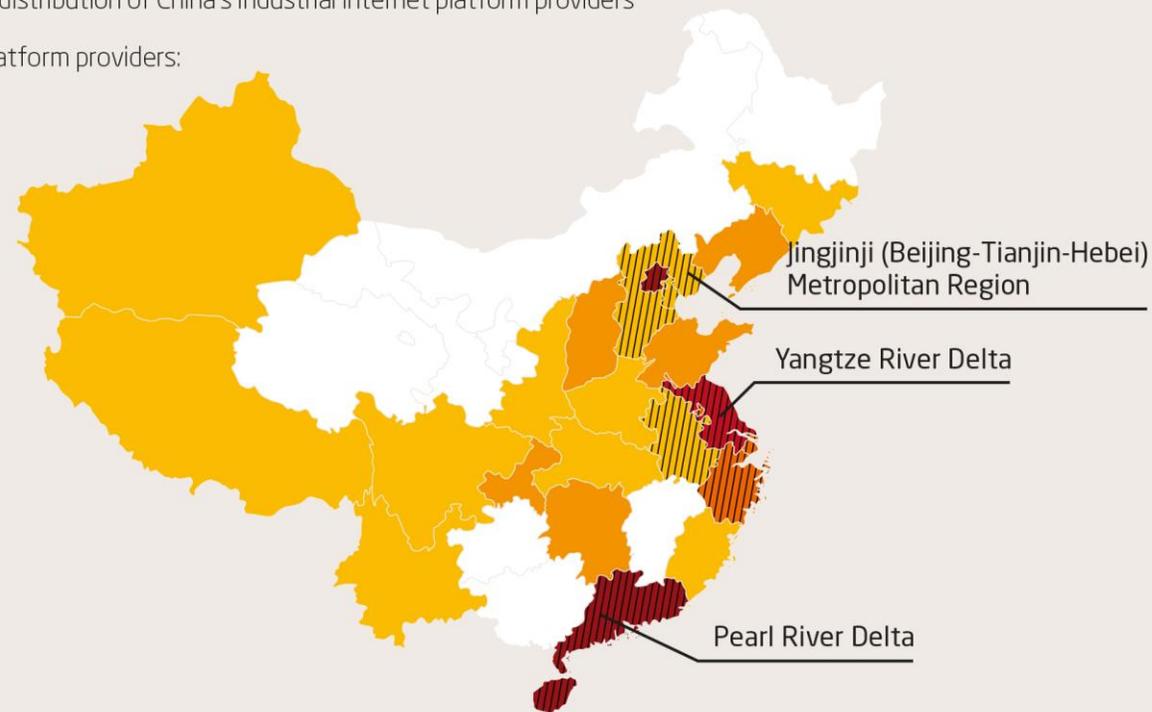
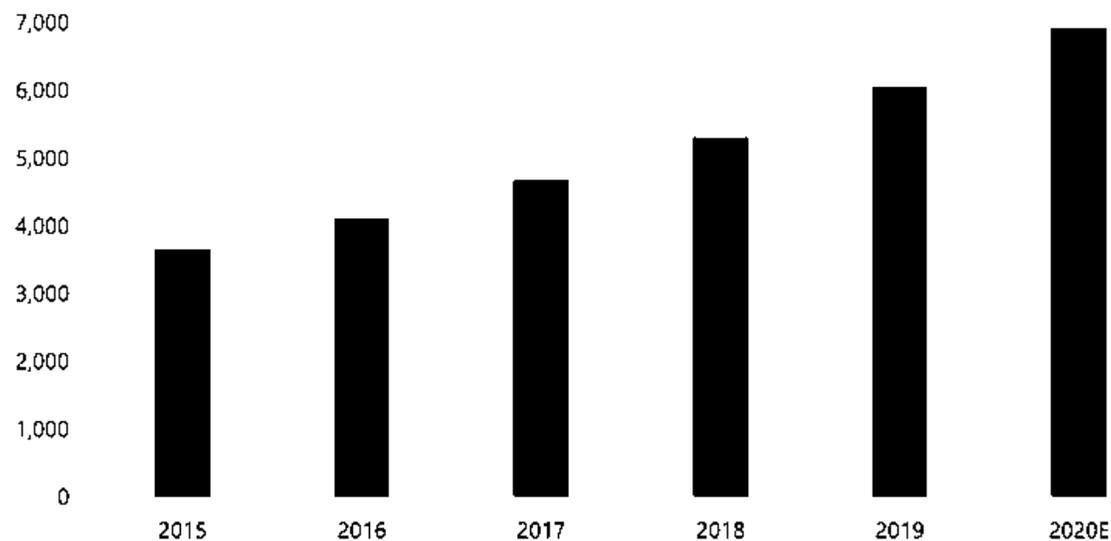


Figure 2: China IIoT Market Size (RMB 100 million)

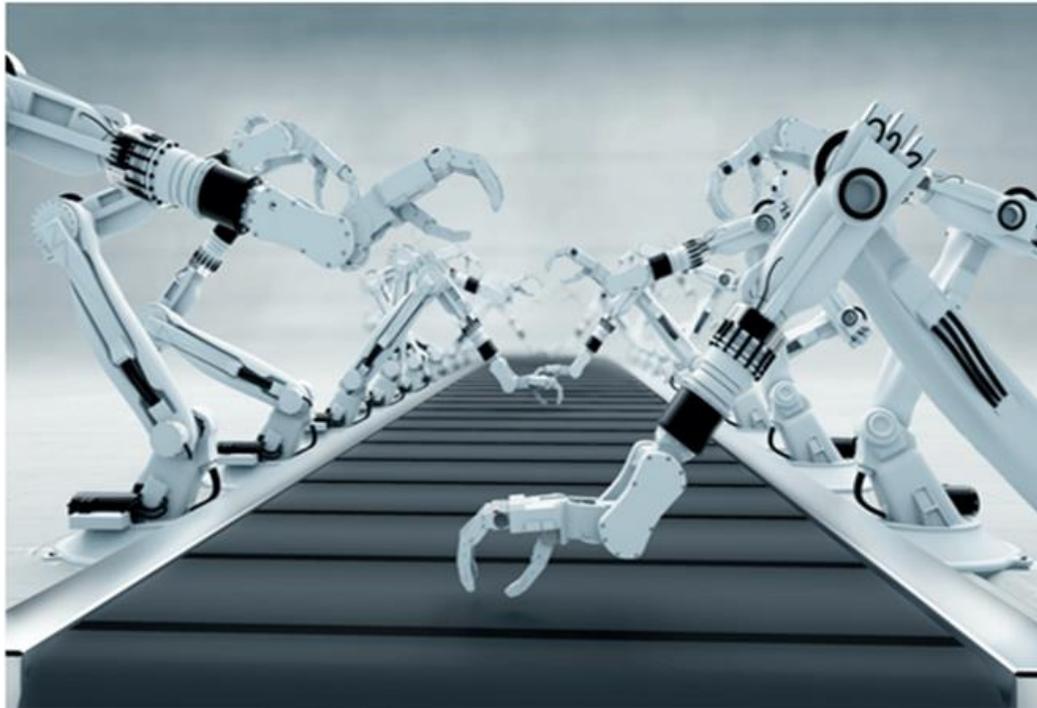


Industrial Internet of Things is where 5G and Industry 4.0 collide.

By 2023 China will have 30 new "5G factories"
+ a "big data centre" for the industrial internet.

2. INDUSTRY 4.0 & ADVANCED MANUFACTURING IN CHINA

2.2. Startup (1/2)



A I N N O V A T I O N

- Incorporated in 2018 / Valuation over USD 1 billion in 2020
- Image classification algorithms and advanced detection and positioning technology to provide sophisticated computer vision and pattern recognition solutions
- Customers Foxconn Technology Group, Yee Tung Group, Carlsberg, Nestle etc.
- Case for Yee Tung - knitwear manufacturer with more than 12 sites globally and more than 20,000 staff
- Customers includes A&F, Polo Ralph Lauren, Vans etc.,
- QC using advanced AI computer vision technology
- Efficiency said improves by 7 times

2. INDUSTRY 4.0 & ADVANCED MANUFACTURING IN CHINA

SmartMore

2.2. Startup (2/2)



Smartmore

- Incorporated in 2019 / Valuation over USD 1 billion in 2021
- Headquartered in Hong Kong, with offices in Singapore, Tokyo, London, and 6 major cities in China
- Served more than 100 enterprises including Airbus, Bosch, Canon, P&G, Unilever, Carl Zeiss
- The all-in-one platform was built upon their precision optical engineering technology
- Application Scenario : fault detection, classification, quality control, OCR etc in electronics, optical, automotive, semiconductors sector

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