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# ABB to build the world's most advanced robotics factory in Shanghai

Milestone investment will combine connected digital technologies, state-of-the-art collaborative robotics and cutting-edge artificial intelligence research to create the most sophisticated, automated and flexible Factory of the Future.

- US\$150 million investment will expand ABB's #1 position in the world's largest robotics market
- Expanded, onsite R&D Center will accelerate digital innovations and advances in artificial intelligence
- Innovative factory design makes the most of every meter of production
- Builds on US\$2.4 billion ABB has invested since 1992 in China, now the company's second largest market

Pioneering digital technology company ABB today announced a major, new US\$150 million investment in Shanghai, China to build the world's most advanced, automated and flexible robotics factory - a cutting-edge center where robots make robots. The new Kangqiao manufacturing center, near ABB's expansive China robotics campus, will combine the company's connected digital technologies, including ABB Ability™ solutions, state-of-the-art collaborative robotics and innovative artificial intelligence research to create the most sophisticated and environmentally sustainable "factory of the future." It is expected to begin operating by the end of 2020.

Today's announcement marks a significant milestone for ABB as China's #1 robotics manufacturer as well as a critical global growth investment for the company in the world's largest robotics market. In 2017, one of every three robots sold in the world went to China, which purchased nearly 138,000 units. Today, ABB employs approximately 5,000 people in Shanghai, and the company's robotics businesses in China employ more than 2,000 engineers, technology experts and operational leaders in 20 locations across the country. ABB has invested more than US\$2.4 billion in China since 1992, with over 18,000 employees in total.

ABB and the Shanghai municipal government today also signed a comprehensive strategic cooperation agreement focused on supporting industry, energy, transport and infrastructure in the region, and to support the "Made in Shanghai" manufacturing initiative. The agreement was signed by Shanghai Mayor Ying Yong and ABB CEO Ulrich Spiesshofer.

"China's commitment to transform its manufacturing is a torchlight for the rest of the world," said Spiesshofer. "Its strategic embrace of the latest technologies for artificial intelligence, advanced robotics and cloud-based computing present a playbook for every country that wishes to have a globally competitive manufacturing base. Shanghai has become a vital center for advanced technology leadership - for ABB and the world. We look forward to working with Shanghai Mayor Ying Yong, other community leaders and our customers as we launch this major expansion of ABB's substantial presence in China, building on our journey to become China's leading Robotics manufacturer that started in Shanghai over two decades ago."

## Leading the Way with a Digital Factory of the Future – Tailored Solutions and Better Performance

The new Shanghai factory will feature a number of machine learning, digital and collaborative solutions to make it the most advanced, automated and flexible factory in the robotics industry, and an onsite R&D center will help accelerate innovations in artificial intelligence. Using a new, global design approach that ABB announced earlier this year, the factory will be able to dramatically increase both the breadth (type of robots) and depth (variants of each type) of robots that can be made onsite, allowing greater and faster customization to meet the needs of customers.

ABB will also be able to combine this expanded portfolio of robotics into an almost limitless number of tailored solutions. "The concept behind this factory is the same advice we give our customers every day: invest in automation solutions that provide flexibility and agility to grow in whichever direction the market goes,"

said Sami Atiya, President of ABB's Robotics and Motion division. "ABB is proud to help our customers in China and around the world with solutions that take full advantage of the latest technologies to meet the challenges of mass customization, faster cycles and constant change which have become the new normal – even in our own factories."

The entire Shanghai factory will be modeled as a digital twin, which will provide intuitively tailored dashboards for management, engineers, operators and maintenance experts to make the best decisions. This includes gathering and analyzing intelligence through ABB Ability™ Connected Services on the health and performance of ABB robots in the factory to ensure early identification of potential anomalies. In addition to avoiding costly downtime, ABB Ability™ offers advanced digital solutions that can improve performance, reliability and energy usage, as well as providing access to the world's best platforms, such as the Microsoft Azure enterprise cloud, which is the first international public cloud service operated in China.

### **An Innovative Design that Makes Better Use of Manufacturing Space**

The new factory will have an innovative, flexible floorplan based on interlinked islands of automation rather than fixed assembly lines. ABB logistics automation solutions will be used throughout the plant, including automatic guided vehicles that can autonomously follow robots as they move through production, supplying them with parts from localized stations. This will allow production to adapt and scale efficiently to changes in China's robot market without additional capacity expansions.

Per Vegard Nerseth, Managing Director of ABB's Robotics business, said "There's a large shift away from looking at factory size and CAPEX investments as the way to meet future demand. The concept behind our new factory is to make the smartest and most flexible use of every meter of production. That comes from combining agile automation solutions with the great capabilities of our people."

To aid the move to mass customization in manufacturing and to ensure the highest levels of productivity and flexibility, the new Shanghai factory will make extensive use of ABB's SafeMove2 software, which allows people and robots to work safely in close proximity. In addition, ABB's YuMi robots will allow close collaboration on many of the small parts assembly tasks needed to manufacture an ABB robot.

ABB was an early entrant in the China robotics market and the first global robot supplier in the country to have a complete local value chain, including R&D, manufacturing, system integration and service. Through close customer collaboration, ABB has helped introduce many "firsts" to local manufacturing including: China's first automotive press, welding and painting lines; the first assembly line for mobile phones; and the first automated press line for white goods.

"2018 marks the 40th anniversary of China's reform and opening-up policy," said Dr. Chunyuan Gu, Chairman of ABB China and President, AMEA region. "ABB was an early arriver in China and we now have a fully localized value chain, supported by China's remarkable economic and social development. As the market leader in China's robotics industry, we are glad to build on this success and continue our investment momentum."

The new Shanghai factory – with a comprehensive R&D center onsite – will become a key part of ABB's global robotics supply system, together with the company's recently upgraded factory in Västerås, Sweden and its factory in Auburn Hills, Michigan, where ABB remains the only global robot supplier with a US manufacturing footprint.

To learn more about the factory, watch the video.

**ABB** (ABBN: SIX Swiss Ex) is a pioneering technology leader in power grids, electrification products, industrial automation and robotics and motion, serving customers in utilities, industry and transport & infrastructure globally. Continuing a history of innovation spanning more than 130 years, ABB today is writing the future of industrial digitalization with two clear value propositions: bringing electricity from any power plant to any plug and automating industries from natural resources to finished products. As title partner in ABB Formula E, the fully electric international FIA motorsport class, ABB is pushing the boundaries of e-mobility to contribute to a sustainable future. ABB operates in more than 100 countries with approximately 147,000 employees. [www.abb.com](http://www.abb.com)

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