

# ABB in China

Let's write the future. Together.

ABB 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 was formed in 1988, when the Swedish Asea and the Swiss BBC Brown Boveri merged under the name of ABB. Headquartered in Zurich, Switzerland, ABB operates in more than 100 countries with about 147,000 employees.

ABB's relationship with China dates back to 1907, when it delivered a steam boiler to the country. After decades of fast development, ABB today has a full range of business activities in China, including R&D, manufacturing, sales and services, 40 local companies with 18,000 employees located in 142 cities. In 2017, China continued as ABB's second-largest market worldwide, with more than 90% of sales from locally-made products, solutions and services.

#### **Milestones in China**

Ø 1974 Set up first China office in Hong Kong

Ø 1979 Set up permanent office in Beijing

Ø 1992 Established first manufacturing joint venture in China

Ø 1994 Moved ABB China's headquarters to Beijing

Ø 1995 Set up holding company – ABB (China) Ltd.

Ø 2004 Won major Three Gorges orders

Ø 2005 Set up global research centers in Beijing & Shanghai

Ø 2006 Moved global Robotics center to China

Ø 2006-2008



Contributed to over 30 Beijing Olympics projects

Ø 2009 Launched the first locally developed robot - Dragon

Ø 2010 Started e-Commerce business in China

Ø 2011 Set up global marine propulsion system base in Shanghai

Ø 2012 Launched ABB University Innovation Contest

Ø 2014 Announced investment of RMB2 billion to set up an industrial hub in Xiamen

Ø 2016 Applied 1,100 kV UHVDC technology in China

Ø 2017

Launched industry-leading digital solutions offering ABB Ability<sup>™</sup> in China

### Digitalization-led transformation

Building on an installed base of more than 70 million connected devices and 70,000 digital control systems, ABB is using its profound domain expertise and experience to work with partners to plan, build and operate a unique digital offering which delivers true operational differentiation for customers, cementing ABB's leading position in the Energy and Fourth Industrial Revolutions.

ABB Ability<sup>™</sup> is our unified, cross-industry digital capability — extending from device to edge to cloud — with devices, systems, solutions, services and a platform that enable our customers to know more, do more, do better, together. ABB Ability connects our customers to the power of the Industrial Internet of Things and, through our services and expertise, goes further by turning data insights into the direct action that "closes the loop" and generates customer value in the physical world.

For utilities, ABB Ability<sup>™</sup> provides tailored digital solutions and products for the differing needs of utility providers across power generation, transmission and distribution. Our industry-leading digital capabilities are combined with decades of experience with utilities. This includes over 120 years of experience across the electricity value chain, more than 50,000 experts currently on our team, 7,000 distributed control systems and 5,000 power and water installations worldwide.

For industry, ABB Ability<sup>™</sup> includes a wide range of optimization and automation solutions that bring increased quality and precision to even the most complex manufacturing processes. From software that streamlines production to predictive maintenance that lowers operating costs, our solutions are built on industry-leading digital capabilities, combined with decades of experience across multiple manufacturing sectors.

For transport, based on our deep domain expertise in marine, rail and e-mobility, ABB Ability<sup>™</sup> provides the services and solutions that integrate systems on land, sea and air, such as collaborative operations, remote monitoring, motion forecasting and energy management. And for infrastructure,



ABB is a world-leading provider of smart home, smart building and intelligent community solutions. Today, infrastructure is often operated independently of the power grid, which in a smarter network, means it will interact with the grid to give consumers greater control over the amount of electricity they use with tailored ABB Ability<sup>™</sup> digital solutions.

## China innovation unlocks values for customers

As a pioneering technology leader, ABB regards innovation as a key to keep its long-term competitive edge. In China, ABB has continuously improved its local R&D capabilities through investment and R&D footprint optimization. ABB China maintains the global leadership in the fields of insulation materials, small-piece assembly robot, hybrid HVDC and renewable integration technology. The application of technological patent by ABB China rose by 20% CAGR over the past 6 years, making China the fastest growing region in R&D capacity. Today, ABB China has one of the 7 global research centers, over 20 business R&D centers and about 2,000 professionals dedicated to local innovation.

The ABB China R&D team led or participated in the research and development of smart sensors, 1100 kV UHVDC transformer, 800 kV GIS, new type of ring main unit (RMU), dual-arm robot YuMi, i-Jia smart home system and Terra 63Z DC fast charger in recent years.

ABB also joins the society to actively propel technical innovation by strengthening cooperation with universities and supporting talent cultivation. ABB China's R&D capabilities and achievements are fully recognized. ABB China has been named as one of the "Top 10 Most Innovative Multinational Companies" for years by Global Science.

### A responsible corporate citizen

When supporting customers' digital transformation, ABB actively fulfills its social responsibility and plays an active role in charity, as well as educational and environmental programs in China.

ABB Group Executives have been members of mayor's or governor's advisors in Beijing, Shanghai, Chongqing and Guangdong, proposing forward-looking advices to support China's sustainable growth.

ABB promotes the cultivation of local talents by holding the annual University Innovation Contest and national automation thesis contest.

ABB has participated in various charity activities, such as planting trees, volunteering in communities, caring for senior citizens and hosting electrical safety seminars. ABB also launched the "ABB-New Great Wall Fund" to support impoverished college students. To date, the fund has donated about RMB15 million, benefiting 2,053 students from 45 universities.

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