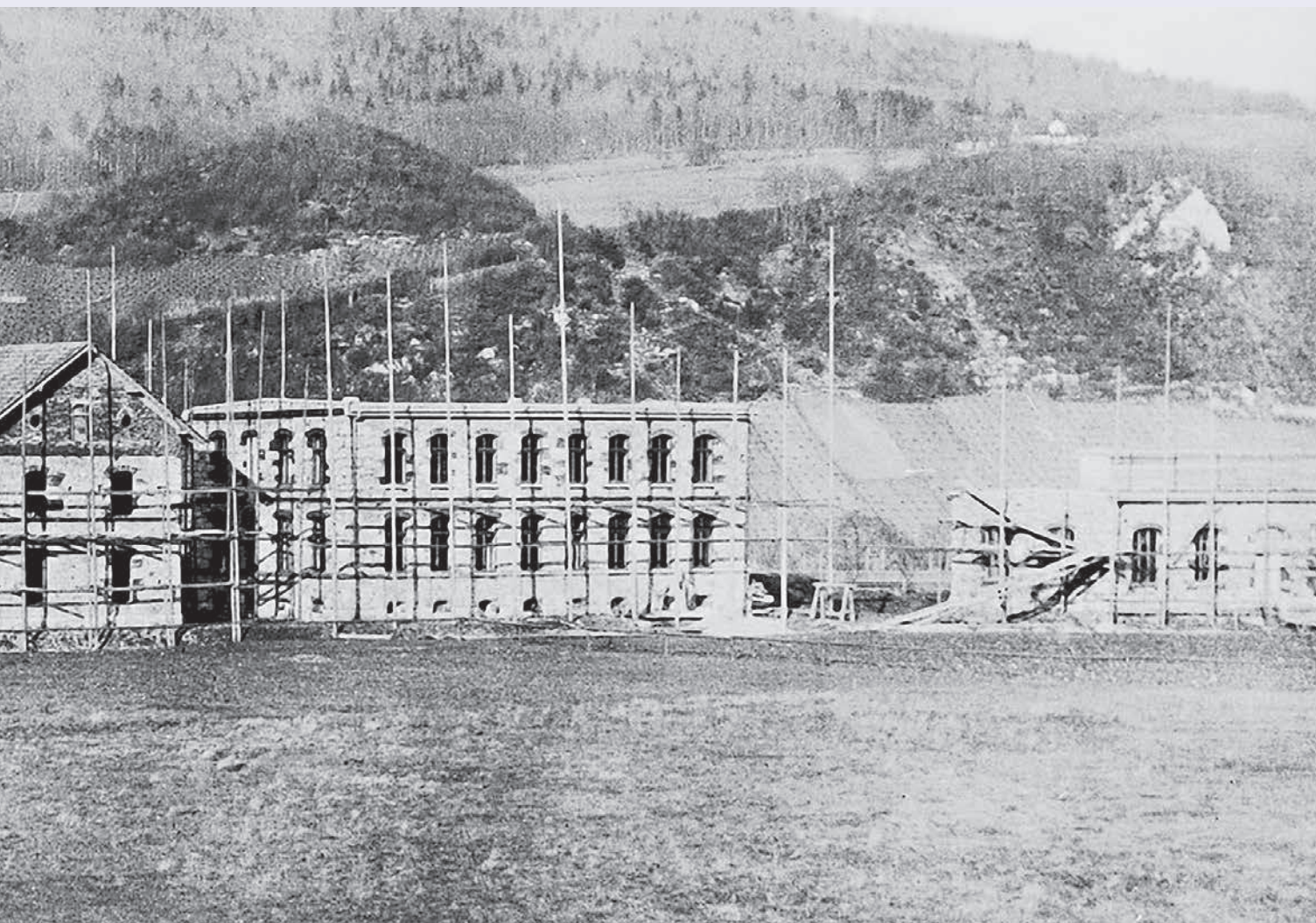


125 years

ABB celebrates 125 years in Switzerland

MALCOLM SHEARMUR – In 1891, Charles Brown and Walter Boveri created a start-up in Baden, Switzerland, to tap the opportunities of a promising new technology – electricity. Thanks to the vision and entrepreneurial spirit of its founders, Brown Boveri & Cie. (BBC) quickly became a success, pioneering many innovations that power the modern world. Some years before the BBC genesis, in 1883, ASEA was founded in Västerås, Sweden, by Ludvig Fredholm as a manufacturer of electrical light products and generators. ASEA was also a pioneer and the company continued to produce a stream of innovations for power and industrial applications until its merger with BBC in 1988 to form ABB. In this article – the first in a series to look at some of the main achievements of ABB and its progenitors over the past 125 years – the impact on modern society of ABB developments over the past century-and-a-quarter are assessed.



Brown and Boveri complemented each other perfectly: The former was an inspired engineer who designed the transformer and generator for the first power station to transmit high-voltage power (in Lauffen, Germany); the latter – also technically gifted – was a visionary businessman who drove the European expansion of BBC.

BBC was a pioneer from its earliest days: Within a year of its founding on October 2, 1891, it had electrified its own factory and enabled the first power station in the town of Baden to come into existence. By 1895, it was supplying electrical equipment for the tram system in the Swiss city of Lugano and, in 1897, BBC developed the first high-voltage oil circuit breaker, which was the foundation of ABB's expertise in switchgear and substations.

Title picture

1891: The construction of the first BBC offices and production facility in Baden, Switzerland.

Belief in the power of electricity

BBC's success was in large part down to the founders' belief that electricity was going to change the world. Indeed, so convinced were they that steam locomotives would be replaced by electric ones that, in 1905, BBC electrified the newly completed Simplon rail tunnel between Switzerland and Italy at its own expense. Six years earlier, the company had developed an electrically powered locomotive that was used on Europe's first electrified standard-gauge track on the Burgdorf-Thun line, beginning a new era in railway electrification.

These innovations were among many pioneering technological developments that made BBC and later ABB a byword for innovation. In the 1940s, BBC developed the first high-speed locomotive with a direct-drive system, improving

efficiency and reliability, and in the 1960s, it pioneered the first gearless-drive cement mills. The company built the world's most powerful transformer in the 1970s and provided power generation and

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transmission systems for the world's largest hydropower station in the 1980s.

ASEA innovations

Since its foundation in 1883, ASEA also followed a path of innovation, making early advances in three-phase generators, motors and transformers. ASEA built and commissioned entire nuclear plants and recognized early on the potential of robotics – introducing its first industrial robot in 1974.

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Innovation continues at ABB

Since the merger of BBC with Sweden's ASEA in 1988 to form ABB, the company has continued to drive innovation in its core segments of power and automation. It has developed technologies that allow customers to provide reliable power supplies and improve productivity while lowering environmental impact. ABB has retained technology and market leadership in many leading areas, such as industrial robotics, which improves quality and safety in manufacturing; variable-speed drives, which slash the energy consumption of electric motors; automation systems, which run factories cost-effectively; and high-voltage direct current technology which allows power to be transmitted over long distances with low losses.

In short, many of the benefits taken for granted in daily life, from electricity at the touch of a switch to the consistently high quality of industrial goods, were made possible by technology developed by ABB, and its predecessors ASEA and BBC, over the past 125 years.

ABB is everywhere

Today, ABB equipment is orbiting the earth and working beneath it, as well as crossing oceans and operating on the seabed. ABB technology is found in homes, offices and factories; in the plants that generate power and process water; in the fields that grow food; and in the trains and buses that are so critical to the transport network.

ABB believes in building long-lasting, value-creating partnerships with customers, suppliers, business partners, employees and the communities in which the company operates. ABB's goal in this milestone year is to celebrate with all those who have contributed to the company's success.

A year of anniversary events

ABB will mark the 125th anniversary in 2016 with a number of events in Switzerland and around the world. These include a gala event for customers, public officials and other key stakeholders in October. The company also participated in the opening, in Switzerland, of the world's longest tunnel – the new Gotthard rail tunnel. BBC played an important role in the electrification of the first Gotthard tunnel – opened in the late 19th century – and ABB is a major supplier to the latest project.

At these events, ABB will also feature some of the changes being driven by the company's 8,500 technologists. For example, with the surge in demand for renewable energy, power grids are becoming increasingly complex so ABB is providing new solutions to improve the efficiency and reliability of the power supply that is so critical to the wellbeing of families and businesses around the globe.

Further, in industry, the revolution in digital technology is opening up new ways to increase productivity. A new industrial era is being shaped in which machines are increasingly able to perceive their surroundings and interact with human beings, creating the Internet of Things, Services and People.

ABB is a multicultural team that spans the globe, working in a fascinating world of high technology. Together with all stakeholders, ABB looks forward to celebrating the achievements of the last 125 years and to sharing the company's excitement about the prospects for the future.

125
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THE WORLD FROM
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