A significant slowdown in investment levels worldwide was palpable even in the second half of 2018, which led to a substantial reduction in orders in 2019 among Beckhoff’s machine builder customers in particular. Many markets bounced back strongly at the start of 2020, which all changed again, however, with the outbreak of the global coronavirus crisis. Beckhoff expects economic life at the company to resume more or less fully again once the pandemic subsides, including the associated investments. While it is difficult at present to forecast precisely how business will develop in 2020, Beckhoff is planning for a financial year at the previous year’s level and is cautiously optimistic about single-digit sales growth.

"With global sales totaling 903 million euros, 2019 was a balanced financial year for us," says owner and managing director Hans Beckhoff. "This was somewhat unusual for us, since we have grown on average by 15% annually since the year 2000. After a number of boom years, a cyclical correction was to be expected, which is being exacerbated by the coronavirus situation. However, we are presently working at full capacity, and this is set to continue over the coming months with no reduction in working hours envisaged. We assume that the impact of the pandemic will probably subside in the summer or in the fall at the latest. For this reason, our medium-term target of 2 billion euros in sales in 2025 remains unchanged." On the strength of this optimistic general
assessment, Beckhoff is proceeding with all investment projects as well as research and development activities with full intensity. "Beckhoff currently has a workforce of 4,350 employees globally, and this will further increase in certain areas too," adds Hans Beckhoff.

**Adjusting to the coronavirus situation**
The company has adjusted well to the coronavirus situation. Beckhoff continues to serve customers at an unchanged capacity level and is ready to take on new projects. As a globally active company with branches in 39 countries, Beckhoff became aware of the effects of the COVID-19 pandemic at an early stage. The subsidiary in China, in particular, was able to gain experience of how employee safety can be ensured in the COVID-19 pandemic, and how company operations can be maintained. Based on the experiences of Beckhoff employees in China, the company introduced initial measures in Germany at the end of February. By mid-March, all employees in Germany were working from home offices whenever feasible (1,200 positions in Germany and 2,100 positions in total worldwide).

"By the end of May, almost 80% of employees with an office workplace were working from home offices. Since June 2, a 50% staffing level has been back in the office. All employees, however, continue to be accessible for our customers in the usual way," reports Hans Beckhoff. The recently introduced time-separated two-shift operation was also switched back to the usual one-shift operation at the beginning of June. All employees in production are also split into safety groups (= potential infection groups), which can work independently and at a safe distance from each other. “All production, warehousing and supply functions were protected by introducing social distancing and staggered working times and a number of hygiene measures, thus enabling continued supply chain security for our customers. The company would like to thank all production and warehousing employees for the exemplary and selfless manner in which they supported these changes and restrictions,” affirms Hans Beckhoff.

In addition, Beckhoff can help in the battle against coronavirus by providing cutting-edge products and technologies and through the experience and expertise of its employees (see also p. 8f). Beckhoff is involved in more than 40 projects worldwide in the field of coronavirus control, from the automation of diagnostic processes to production plants for respiratory masks and lung ventilators.

**Business expansion in Germany and worldwide**
The dense sales network was extended in Germany with the addition of new sales offices in Waldkirch (near Freiburg), Aachen and Kempten. In addition, Beckhoff acquired ADL Embedded Solutions GmbH, headquartered in Siegen,
Germany, on 1 April 2019. ADL is a specialist company that is well known for producing deep embedded applications using motherboards and specially adapted peripherals. The company develops tailor-made, turnkey embedded solutions in collaboration with customers. For many years now, it has based its projects on Beckhoff industrial motherboards, and with the integration of ADL into the Verl-based company, this successful collaboration can progress to the next stage. To strengthen further global expansion, Beckhoff acquired Tri-TEK Corp. in Seoul, South Korea, on 1 July 2019. The successful distributor has been closely associated with Beckhoff for many years. As Beckhoff Korea, the experienced team, which to date has focused primarily on semiconductor and display manufacturing, will now be able to support South Korea’s high-tech market even more comprehensively. Beckhoff currently has subsidiaries and representative offices in 39 countries worldwide. Counting its own sales companies and distributors, Beckhoff is represented in 75 countries around the globe.

Behind this successful company development are highly qualified and committed employees. In order to safeguard its future supply of talent, Beckhoff trains young people in a number of occupations. Since 2010, the company has also focused on providing practice-integrated degree programs and, today, offers degrees in Mechatronics/Automation, Industrial Engineering, Digital Technologies, Product Service Engineering and Digital Logistics in association with the Bielefeld University of Applied Sciences at its Gütersloh Campus in Germany. This course offering is being extended continually. To meet the need for further qualifications after earning bachelor’s degrees, Beckhoff also supports extra-occupational master’s programs in Applied Automation and Industrial Engineering. New additions include the extra-occupational master’s program in Digital Technologies, which is proving very popular with bachelor graduates, and the research master’s program in Data Science. Beckhoff currently employs 124 apprentices and 102 students.

Beckhoff Automation targets carbon neutrality
Beckhoff is committed to climate protection and has been actively targeting climate-neutral and sustainable production since 2019. In order to avoid CO₂ emissions and promote greater use of renewable energies, Beckhoff has been sourcing green electricity since 1 January 2020 – the aim is to achieve full coverage of the total power requirement of 8.7 GWh at the locations in Verl and surrounding areas as well as at Smyczek GmbH.

The remaining currently unavoidable emissions will be balanced out by measurable CO₂ savings elsewhere. CO₂ credits will be purchased to compensate for these emissions, with the proceeds flowing into climate protection projects. In this context, Beckhoff is working with the foundation myclimate Deutschland gGmbH, whose global development projects are making a
measurable contribution to climate protection and sustainable development. One of these projects involves subsidizing efficient cookers and solar cookers in Madagascar so that people can cook food in an environmentally friendly manner.

In all, Beckhoff has offset approx. 21,700 metric tons of CO₂ emissions for 2019, which were produced by the company’s operations globally. However, Beckhoff is not just involved in offsetting emissions, many measures are also being taken in the company to avoid CO₂ directly (solar power generation, electric and hybrid vehicles, energy savings thanks to modernization of building exteriors and infrastructure in production and administration). In particular, developing automation technology that promotes energy-efficient production using fewer resources also supports climate protection. "The benefits we can generate for our customers with our automation technology are actually the greatest contributions we can make to environmental protection as a company," argues Hans Beckhoff.

Success through innovation

In no small part, Beckhoff owes its sustained business development to its dedicated focus on new technology. This is evident throughout the entire Beckhoff product portfolio, for which new, more powerful Industrial PCs, Bus Terminals, Fieldbus Box modules, drive technology solutions and new software capabilities were unveiled again. Their great success in the market is demonstrated by the example of a German car manufacturer that relies on the modern IPCs and Control Panels: Beckhoff PC technology is to be used globally by the BMW Group as part of a partnership that is set to run to 2030. Industrial PCs and multi-touch Control Panels are used — both in new systems and in retrofits — for interlinking machines, access control, data recording, visualization and other PC-based activities.

Furthermore, the PC-based control technology as a central and open control platform for all machine functions optimally supports the implementation of highly efficient IoT-based automation concepts. Machines, systems and production lines can be networked to increase efficiency potential across processes. Beckhoff supports its customers in this respect with a number of useful enhancements. For example, the TwinCAT 3 automation software was extended to include artificial intelligence functions. With TwinCAT Cloud Engineering, the entire engineering platform is now available in the cloud. This means that all users of Beckhoff technology can increase their development effectiveness worldwide and facilitate new cloud-based training concepts. Initial practical applications of the revolutionary planar motor system XPlanar with its free-floating movers, which was launched in 2018, have now come online. Among the numerous current product innovations are the SCT current transformer series for a seamless energy measurement chain from the sensor to the cloud (see p. 12ff), the EP7402 2-channel motor controller box for roller conveyor systems and the new AL8000 linear servomotor series.

Subsidized stoves help the people of Madagascar to deal with their living space in a more sustainable way.