

CHAPTER

1



“We are in an ideal situation to analyse pioneering business models in our core sectors, and to identify attractive companies even during times of change.”

Torsten Grede,
Spokesman of the Board
of Management
of Deutsche Beteiligungs AG



**THE AUTOMOTIVE SUPPLY
INDUSTRY AS WELL AS
MECHANICAL AND PLANT
ENGINEERING REMAIN
IMPORTANT SECTORS**

The pressure on automotive suppliers to change is particularly evident. This also has an impact on the buyout market. In contrast to the years preceding the financial crisis, smaller companies are now looking to tap new potential with private equity. The average volume of transactions in mechanical and plant engineering has hardly changed over the last 15 years, with numbers remaining low of late. Both sectors make up a significant part of the German buyout market. Their potential, however, is limited and the choice between business models is more important than ever.

35 COMPANIES from these sectors, with a total value of 3.5 billion euros, have changed ownership in the last five years.

TRANSFORMATION IN TRADITIONAL INDUSTRIES



Investment strategy: Our core sectors

DBAG's experience extends back more than 50 years

A corporate history comprising more than five decades – this represents more than 300 private equity investments in German mid-sized enterprises for Deutsche Beteiligungs AG. A large number of these transactions concerned the four sectors in which the German economy demonstrates particular strength: mechanical and plant engineering, automotive suppliers, industrial services and industrial components. It therefore goes without saying that these are our core sectors. We are active here in the DACH region (Germany, Austria and Switzerland) and occasionally in other European countries too, such as in France, Denmark and Italy.

Digitalisation opens up opportunities for our core sectors

Triggered by digitalisation as well as structural change, our core sectors have undergone a fundamental change process in recent years. In an era of cloud-based IT solutions, globalisation has reached entirely new dimensions and is setting new challenges for German medium-sized enterprises that have always been oriented upon the global markets. Business models are breaking up, and new opportunities are being created – even in sectors that are currently regarded as less attractive. We are determined to support agile and innovative companies in implementing their visions.

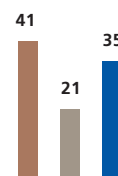
Initiate change processes – support growth opportunities

With our extensive knowledge and a deeply-rooted network in our core sectors, we comprehensively support our portfolio companies with capital for financing growth – but especially with our long-standing experience in the successful implementation of change processes. This support can, for example, comprise operational improvements, the development of additional business segments or tapping new markets. Acquisitions are often a focal point, too. We also introduce companies to seasoned industry experts, who occasionally assume managerial responsibility in the companies. The members of our investment team support portfolio companies as Advisory Board members.

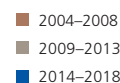
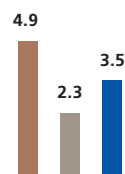
MANAGEMENT BUYOUTS

*in our automotive suppliers
and mechanical and
plant engineering core sectors*

TRANSACTIONS number



TRANSACTION VOLUME €bn



Source: FINANCE research for
Deutsche Beteiligungs AG

LEADING-EDGE TECHNOLOGIES:
THE KEY TO TOMORROW'S MOBILITY REQUIREMENTS



Opportunities in the automotive supply industry

Due to the current challenges in the sector, it seems somewhat bold to talk about “opportunities in the automotive supply industry”. Obviously, drivetrain technology will be transformed, and mobility requirements will change. But in the future, there will be more cars on the streets – not less.

Germany is Europe's leading automotive market

Globally, the German automotive industry is known for its quality, innovation, reliability, longevity, safety, efficiency and design. Germany's first-class R&D infrastructure, the full integration of the value creation chain as well as the qualified workforce contribute to an environment which is competitive on an international level. These are good conditions for companies in order to develop leading-edge technologies that will meet tomorrow's mobility requirements.

Higher R&D requirements provide opportunities for private equity

Currently, the automotive value-added chain is changing fundamentally. This is due to topics such as electric mobility (whilst vehicles powered by fossil fuels continue to exist), autonomous driving, setting up production facilities around the globe, as well as the growing diversity of vehicle models. This is the reason why the R&D tasks in the automotive industry have become increasingly demanding for quite some time. OEMs and large suppliers pass on some of the resulting pressure to their own suppliers – by expecting that they handle a great part of the development effort or co-finance it. Even 'healthy' family companies therefore are asking themselves how they can improve their capitalisation – an opportunity for private equity.

Business models which are not related to the drivetrain

The challenge now is to filter out those business models that offer considerable developmental potential independently from traditional drivetrain technology. We have a high-performance network in this sector. Already now, you can find suppliers in our portfolio that offer useful technical input like connectivity blocks or that may benefit from the trends towards more sophisticated interiors.

CONNECTIVITY AND DIGITALISATION

are turning the automotive industry upside down. According to a survey amongst executives in the automotive and technology industries as well as consumers around the globe conducted by advisory company KPMG, connectivity and digitalisation is the industry's key trend. Respondents saw a competitive edge for those who successfully connect auto and digitalisation.

Source: KPMG, Global Automotive Executive Survey 2019, January 2019

NEW BUSINESS MODELS

Today's automotive supply means much more than wings, air-conditioners and sliding roofs. New business models of the sector envisage for example how to experience brands in an electronic showroom, or how to organise different mobility models. In other words: software along with hardware.

70 PER CENT of the value in the German automotive industry is created by mainly mid-sized suppliers.

Source: German Association of the Automotive Industry (Verband der Automobilindustrie – VDA), www.vda.de

On the following pages we outline how we implement our investment strategy in the automotive industry, taking our two portfolio companies **DIETER BRAUN** and **SERO** as examples.

DEMAND GROWING
BY EIGHT PER CENT PER ANNUM



Networking intelligent components in state- of-the-art vehicles

Dieter Braun benefits from the current transition in the automotive industry: for the networking of intelligent components, an increasing amount of cables is built into state-of-the-art vehicles. Likewise, the increasing electric mobility supports the company's growth: this requires additional high-voltage networks with particular safety needs and regulations.

Two of the company's future growth factors are the increasing use of driver assistance systems and the trend toward autonomous driving. Vehicles equipped in this manner require a wide variety of sensors which are connected together with cables.

Acquisitions can also support future developments, especially when enhanced by additional engineering performance – for instance, to expand Dieter Braun's offer along the value-creation chain. This includes, for example, processes in which the finished cables are being additionally embedded in a plastic matrix so that they can fit in properly in a defined installation space.

Furthermore, efficiency improvements through continuous automation represent a key issue. The recently completed new corporate headquarters and

logistics centre at Dieter Braun's registered office in Bayreuth, Germany, are set to contribute to enhanced efficiency in the company's internal processes, allowing the current team to realise higher business volume.

If the market opportunities are suitable, the regional expansion will once again come to the fore. Dieter Braun has already successfully built up an international presence in close proximity to its customers. We can encourage the company to use its gained experience for further development. Dieter Braun can tap these potentials thanks to its strong internally generated cash flow.



DIETER BRAUN

CABLE SYSTEMS AND
INTERIOR VEHICLE LIGHTING,
BAYREUTH, GERMANY

DIETER BRAUN is a specialist for cable systems and vehicle interior lighting. The company is valued by its customers for being able to deliver efficient solutions of above-average complexity, even for small- to medium-sized quantities and with variable lead times. Dieter Braun benefits from the increasing share of electric and electronic components in vehicles. In addition, the company has ensured its position in the future field of electric mobility. Dieter Braun's significance for its customers in the automotive supply industry has become correspondingly high. The company has operations in its customers' major production locations: in addition to its head office in Bayreuth, it has factories in the Czech Republic, the Ukraine, Mexico and China.

**REVENUES OF 87 MILLION EUROS
1,620 EMPLOYEES**



“We design the electronics manufacturing system of tomorrow – with around 300 employees providing ideas.”

Dr Bernd Welzel,
Managing Director of Sero GmbH

Sero was founded in 1992 as an engineering office for electronic testing methods. Today, the company is a sought-after service provider in terms of electronic testing and production modules or systems, primarily for the automotive industry. Thus, the company operates in the highly attractive market for electronic components – a sub-market of this industry, with long-term above-average growth potential.

The proportion of electronics in motor vehicles is predicted to increase from about 35 per cent at present to around 50 per cent by 2030, driven by the trend towards higher comfort in the vehicle interior amongst other factors. This equates to a growth rate of 8 per cent a year.

In the first year since the start of our investment, Sero's management team has already triggered various change processes, including the restructuring of the sales organisation as well as the expansion of its presence at industry trade fairs. Opportunities in the international markets such as Mexico and North America are set to be exploited in the future. Company acquisitions are also conceivable. Moreover, Sero intends to further expand its business with industrial customers. A newly installed Advisory Board, comprising members from DBAG's network, is going to contribute the experience of its experts, who not only command strong process knowledge but have already successfully supported implementation.



SERO

DEVELOPMENT AND
MANUFACTURING SERVICE PROVIDER
FOR ELECTRIC COMPONENTS,
ROHRBACH, GERMANY

Alongside the automotive industry, customers from other industries are also attracted by the outstanding competence of the development and manufacturing service provider **SERO**. For instance, the circuit boards assembled by the company as well as the electronic components are not only being installed in brake lights and engine sensors, but also in high-performance microphones, heat meters as well as in other industrial measurement products. Customers attach importance to cost efficiency and top quality. At Sero, they find industrialisation expertise and a high degree of automation, thanks to a machine park that enables innovative production processes. Sero distinguishes itself from its competitors through its capacity to combine standard production lines with self-developed test and production modules.

**REVENUES OF 86 MILLION EUROS
270 EMPLOYEES**

STRUCTURALLY AND SUSTAINABLY
GROWING MARKET



Automation in the production of electronic components

DIVERSITY
AS A MAJOR BENEFIT



Industrial components – a heterogeneous market

Germany possesses a strong industrial basis – German companies enjoy a globally leading position in many sectors. We have rich experience through diverse investments in companies which manufacture industrial components.

Advantage Germany

Germany is the biggest economy in Europe. In 2017, industrial manufacturing accounted for nearly one-third of German GDP, which is a considerably larger part compared to France (20 per cent), Italy (24 per cent) or the European Union as a whole (25 per cent). Germany's leading global position in different manufacturing industries such as mechanical engineering, electrical engineering, automotive, medical products, or aeronautics is based on the comprehensive national coverage of different value creation stages. With numerous research institutions as well as customers and suppliers in close proximity, Germany provides an excellent setting for developing fresh B2B products. .

Often very small markets

One of our core sectors is that of industrial component manufacturers. In the past, we invested in companies which – typically for this sector – mostly serve very small markets. Industrial components comprise a variety of different materials such as metals, plastics, electronics or innovative lightweight engineered materials as well as a broad range of products such as semi-finished or finished articles, components, modules, systems or turnkey solutions. These may be targeting highly productive mass production or small niche segments.

Broad range of development approaches

During our decades of commitment to this sector, we have accompanied very diverse business models and approaches to develop these models. Very often, investments are entered into for expanding the geographical footprint, or for broadening the product range. The focus is also frequently on efficiency enhancements – for example, through better processes or reduced scrap.

INDUSTRY 4.0

Whenever machines ask for maintenance themselves as required, or re-order material; whenever humans, machines and industrial products form intelligent networks – then we are talking about Industry 4.0. The fourth industrial revolution, along with smart factories, follows on from disruptive developments such as the steam engine, the assembly line or the computer. Examples for companies that take a leading role in this area are also found in our portfolio.

TOP RANK for Germany – this is how the World Economic Forum judges Germany's innovative power. For the second time in a row, Germany has achieved this top position in international comparison, this time ahead of competitors such as the United States or Switzerland.

Source: World Economic Forum, Global Competitiveness Report 2019, October 2019

*On the following pages we outline how we implement our investment strategy in the market for industrial components, taking our two portfolio companies **KRAFT & BAUER** and **DUAGON/MEN** as examples.*



PRODUCTS CRITICAL TO
SUCCESS AND SAFETY



Leading position in a niche market



Kraft & Bauer wants to strongly expand – but not only by installing new fire extinguishing systems on new machine tools or by retrofitting existing systems. It is also the services business that provides strong growth potential. To date, Kraft & Bauer only provides maintenance for 50-70 % of the relevant installed base.

By now, most of the leading international machine tool manufacturers are customers of Kraft & Bauer. This means that the company's fire extinguishing systems will be installed on these manufacturers' new product lines – so Kraft & Bauer does not have to serve end-customers directly. This success is also supported by the lasting trend towards miniaturisation: oil cooling and oil lubrication in machine tools of the high performance sector are on the rise, yet the use of oil increases fire hazard. The second important part of the Kraft & Bauer business is machine retrofitting. Demand is driven by growing machine automation as well as the companies' sense of responsibility and security awareness. Companies also use automatic fire extinguishing systems even if not required to do so by regulation.

The sales activities of Kraft & Bauer are currently concentrated on the still-unexploited potential in the DACH region (Germany, Austria and Switzerland) and Italy. Over the medium term, especially the market development in China and the United States offers great additional opportunities as many customers of Kraft & Bauer are present there. DBAG's widely-branched network and great experience in processes of globalisation in mid-sized companies is set to support the management team within converting opportunities into sales.

KRAFT & BAUER Kraft & Bauer develops and produces fire extinguishing systems, installing them in around 800 different types of machine tools. The focus here is on extinguishing systems controlled by microprocessors that detect fires and initiate the extinguishing process using sensors. In addition to its headquarters in Holzgerlingen (Baden-Württemberg, Germany), Kraft & Bauer operates a site in Bannwil (Switzerland) and 13 other service locations in Germany, Switzerland and Italy. Kraft & Bauer's systems are used in very high-speed and high-precision machines and are thus exposed to an increased fire hazard. The outlook for Kraft & Bauer is favourable, as the demand for these high performance machines is increasing. In addition, Kraft & Bauer benefits from a steadily growing services business – with a broad installed base of more than 30,000 systems in Germany alone – as the fire extinguishing systems must be regularly inspected and maintained.

**REVENUES OF 26 MILLION EUROS
80 EMPLOYEES**



KRAFT & BAUER

FIRE EXTINGUISHING SYSTEMS
FOR TOOLING MACHINES,
HOLZGERLINGEN, GERMANY

“duagon has further strengthened its already strong competitive position due to the merger with MEN – an ideal situation for sustainable above-average growth.”

Dr Rolf Scheffels, member of DBAG's Board of Management, with many years of experience in private equity investments in German mid-sized companies.



MEGA TRENDS:
TRANSPORT AND AUTOMATION



Full-service provider
of communication
solutions
in rail vehicles

duagon/MEN hold an excellent position in China, the world's largest market for rail vehicles – a market characterised by huge investment projects as the growing prosperity in broad sections of the population goes hand in hand with the growing desire for mobility. Not only does China automate existing systems, but the country has also successfully tested autonomous high-speed trains in the last year. In this attractive environment, the group will be able to profit from several growth drivers.

New opportunities are being created for duagon/MEN – for example, by tapping unexploited customer potential: duagon has a strong presence in China and India, while MEN has successfully expanded in the US and Russia. By combining duagon's primarily software-driven components with MEN's rather hardware-oriented solutions, valuable synergies can be realised. Key topics are automatic security systems and innovative technology trends, such as autonomous driving. MEN's hardware systems can be equipped with additional software components from duagon. Examples include cyber security features or selected digital solutions such as automatic status monitoring of machines and systems.

The group wins orders both in connection with newly-acquired rail vehicles and with the retrofitting of older rolling stock, with the latter being modernised by customers in predictable cycles. Harnessing the distribution power of the combined group allows duagon/MEN to adopt a targeted position for such cycles in the future.

Last but not least, over the next 10 to 15 years, duagon/MEN is going to benefit from the trend towards technological development of ethernet-based solutions, especially in the field of retrofitting. Whilst ethernet-based technology is much more powerful than existing protocols – in terms of data transfer rates, bandwidth and flexibility – it is also significantly more complex. Recognising the importance of integrated communications solutions for rail vehicles, and communications between different protocols and standards, duagon has positioned itself accordingly at a very early stage – gathering substantial experience which the company can now leverage for business with other customers. duagon ensures that the systems meet rigorous regulatory requirements, remaining fail-safe and durable even in challenging conditions.



DUAGON

NETWORK COMPONENTS
FOR RAILWAY VEHICLES,
DIETIKON, SWITZERLAND

DUAGON, which has its registered office in the Swiss city of Dietikon, was established in 1995 and has since become a leading independent provider of network components for data communication in rail vehicles. The company's products allow individual railway vehicle systems, such as doors, brakes, air conditioning systems and the primary control computer, to communicate via what is known as the TCN ("train communication network"). This makes it easier to integrate these systems into the train manufacturers' networks and limits sources of errors in the process. This allows suppliers to concentrate on their core competencies, namely the development of the individual railway vehicle components. duagon's products are used by virtually all train manufacturers and system suppliers. The company has developed long-standing customer relationships and broad-based technological expertise in its niche market.

**REVENUES OF 103 MILLION CHF
400 EMPLOYEES**