

STRATEGY

Global megatrends such as demographic change and increasing urbanisation are causing global demand for engines to rise continually. DEUTZ benefits from this as an independent engine manufacturer in the premium segment and a driver of innovative, market-led technologies. We want to provide our customers not just with engines but with complete system solutions and a comprehensive range of services. Our long-standing strategy therefore includes the expansion of our customer and product base along with globalisation and internationalisation.

Our strategy for growth, which we have pursued consistently for many years, is based on three pillars:

→ The first is the **expansion of our customer base** while achieving profitable growth. Our aim is to increase business in all regions with new and existing customers. Over the past few years, we have been able to achieve that and have won new customers in every region. In the year under review, we continued to launch many new products for our customers – this is demonstrated by the success of our current generation of engines. At the end of 2015, we entered into an agreement with the KION Group, one of the world's two leading suppliers of forklift trucks, to expand our long-standing cooperation. Last year, we were able to establish a partnership with the Japanese construction machinery manufacturer Takeuchi and broaden our collaboration with the Chinese construction equipment manufacturer Sany.

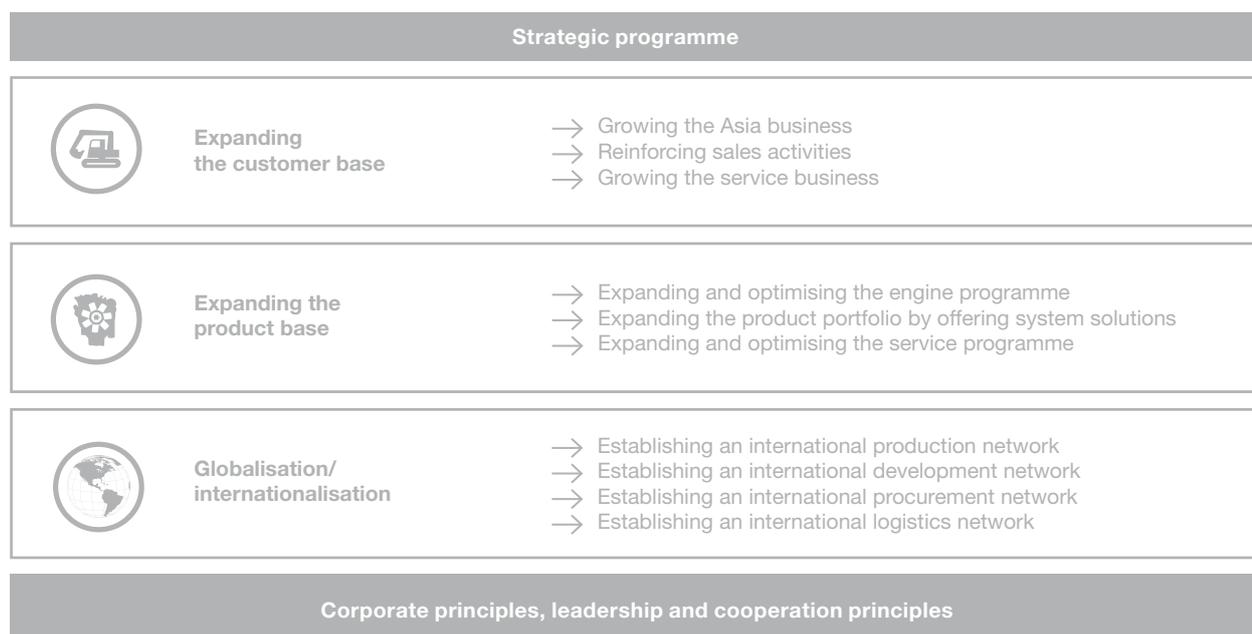
In terms of application segments, our main focus remains off-road applications, particularly construction equipment, material handling equipment and agricultural machinery. We also serve the market for stationary equipment and niche applications. Our automotive business

is increasingly shifting to Asia, where we occupy a very strong position in the market by virtue of our DEUTZ Dalian joint venture. We are working with our joint venture to prepare for the introduction of the China IV emissions standard, which will apply in the Chinese truck market from 2019.

In addition, our high-margin service business has become another important pillar of our business. Going forward, we want to expand this area further with new engine-related products and services. In response to the growing complexity of engines, we are taking an active approach to dealer management and providing ongoing product training for our dealer network. We also intend to invest in our own service support centres in selected locations. In the year under review, for example, we opened our first DEUTZ Power Center in the USA, which offers our customers there application-specific development services as well as maintenance and repairs.

Together with our dealers, we will use the internet as a sales channel to ensure that genuine DEUTZ parts are even more readily available.

Strategic programme up to 2020



→ The second pillar is the **expansion of our product base** using products at the leading edge of technology. The current TCD engines in the 2.9 to 16.0 litre capacity range with a power output of between 25 and 520 kW for the EU Stage IV/ US Tier 4¹⁾ emissions standards were introduced into the market by 2014. These engines feature very compact installed dimensions, intelligent exhaust aftertreatment systems and lower lifecycle costs than their predecessors. Furthermore, all the engines already meet the more stringent EU limits²⁾ that come into force in 2019. We are actively advertising this with our 'Stage V ready' campaign. The DEUTZ powerpack, a ready-to-install solution that includes the engine, cooling system and SCR tank, was showcased at *bauma*. This solution significantly reduces the application outlay, in particular for smaller OEMs. In addition, we are expanding our product range for series delivery from 2019, mainly at the lower and upper end of the power output range. This will include adding gas variants and replacing some products. More information on this, including details about the new products that we presented to the public last year, can be found in the 'Stage V ready' section on pages 16 and 17.

We will continue to work on developing solutions to further improve the energy efficiency of our products. In addition, we intend to continually expand our application expertise, an area in which we already have a leading market position.

Our profitable service business makes us less exposed to fluctuations in the economic cycle. This is based on the 1.6 million or so DEUTZ engines that are currently in operation around the world. The market share of these engines is being increased through new products; for example, we are expanding our programme of Xchange engines and components for economically viable repairs. The increased complexity of the engines for the new emissions standards calls for a high level of specialist knowledge on the part of our service partners and the appropriate diagnostic tools. For this reason, DEUTZ is investing in the provision of additional training courses and in the SERDIA 'electronic wrench', without which diagnosis would not be possible. Our reliable global service network ensures the availability of the machinery and equipment powered by DEUTZ engines – for the engines' entire lifetime. Customer satisfaction is also a key driver of new engine sales.

→ The third pillar is the **globalisation and internationalisation** of the DEUTZ Group, because the regional focus of our markets is shifting and the trend is increasingly towards basing assembly nearer to the customer. Against this background, we want to create structures in the three major economic areas of Europe, America and Asia that, in addition to their sales, marketing and service activities, will also encompass local assembly, purchasing, logistics and application development activities. All these activities will need to be closely interlinked and centrally coordinated.

Back in 2014, we decided to carry out a comprehensive optimisation of our network of sites in Germany in order to

increase efficiency. In Cologne, we are consolidating two sites and, as part of the process, we have built a shaft centre for the production of camshafts and crankshafts at our largest site in Cologne-Porz. The relocation of production was completed in February 2017. At the same time, the site in Cologne-Deutz was vacated. We are currently applying for planning permission to create a new city district near the Rhine. The Cologne-Deutz site is to be sold within the next few years. Our exchange engine plant in Übersee on Lake Chiemsee is closing and being integrated into the plant in Ulm. We successfully moved the assembly line in 2015. All other functions will move in 2017.

ZERO-ERROR STRATEGY

We implemented our zero-error strategy in 2015. The purpose of this quality assurance programme is to detect errors when they first begin to materialise, i.e. before they actually occur. And if errors do occur, we must consistently learn from them so that we do not make the same mistakes again. The overarching aim, therefore, is to establish a culture of prevention and avoidance in relation to errors.

We strive to make the products that we supply to our customers perfect and to meet or even exceed our customers' expectations. The challenge here is that we produce a large number of variants in order to provide customers with bespoke solutions and the complexity of our products has risen significantly in recent years as a result of emissions legislation.

GLOBAL MEGATRENDS DRIVING ENGINE DEMAND

We build engines for applications that are heavily influenced by the megatrends of demographic change, increasing urbanisation and ongoing globalisation. Apart from the occasional downturn in the economic cycle, global demand is therefore continually rising. This also includes demand for agricultural machinery, infrastructure investment and transport.

However, there are only limited natural resources to cope with this structural growth in demand. In light of this, strict environmental and climate change regulations are being imposed in practically every industrialised country and emerging market. Consequently, emissions legislation has been the major technology driver in the diesel engine market in recent years. We are, of course, delighted to take up the emissions legislation challenge because, as a leading technology company, we regard this legislation as an opportunity. Emissions legislation in the emerging economies is generally at least one step behind.

To this extent, the structural growth drivers at DEUTZ are the engine systems that meet the new emissions standard, which are of considerably higher value and more complex than their respective predecessors.

¹⁾ The EU Stage IV/US Tier 4 emissions standards are mentioned at various points in the annual report. This refers to the 97/68 Stage IV exhaust emissions standards in the European Union and the EPA Tier 4 rules for diesel engines in the USA.

²⁾ Regulation (EU) 2016/1628 of the European Parliament and of the Council dated 14 September 2016.