Background information

Trends and drivers in the vertical and horizontal transportation sector

The rapid and safe transport of people in growing urban structures is one of the great challenges of the future. Convenient and time-efficient transport in smart cities and smart buildings cannot be achieved without intelligent elevators, travelators and escalators.

Profile of the industry
The elevator and escalator industry is one of the major industrial segments both in Germany and in many other countries. In 2017, the world’s five largest companies in the field, Otis, Mitsubishi Electric, Kone, Schindler and ThyssenKrupp had a combined turnover of around € 46 billion worldwide.

In Germany in 2017, the sector accounted for a turnover of more than € 2.5 billion, for approx. 17,000 employees and a tally of 750,000 elevators and 36,000 escalators already installed. These figures were produced by the Elevators and Escalators Division of the VDMA (Association of German Machine and Plant Manufacturers) annual report on the developments, trends and challenges in the elevator and escalator industry in Germany. The spectrum of companies ranges from the production of complete installations and components, the sales and installation of elevators, escalators and travelators, to the maintenance, repair and modernisation of these installations.

The market in Germany is diverse: on the one hand, it is dominated by the four largest companies, Kone, Otis, Schindler and ThyssenKrupp, with a market share of around 60 percent. On the other hand, according to the 2015 IMU institute report on the industry, there are, however, lots of small and medium-sized enterprises (SMEs), with a total share of 40 percent of the market. There is an increasing international dimension to elevator and escalator sales by manufacturers in the sector. So that significantly more than 60 percent of the world’s elevators are installed in China. In 2016, Germany exported escalators and elevators to the value of € 817 million, as the VDMA reported in figures and graphics in their economic and statistics report on mechanical engineering in 2017.

Continually growing market
Turnover in the elevator and escalator industry has, over the past few years, been continuously on the up, which is linked to the significantly increased activity in both industrial and domestic building work. As a result, sales and orders in building works grew by 9.8 and 6.7 percent respectively in 2017. In a similar vein, the orders for elevators in 2017 were up by 2.4 percent and for escalators by as much as 53.5 percent.
according to the VDMA's annual report 2017. And entries in the order books have also shown a continuous increase from € 191 million in 2013 to € 227.2 million in 2017. The overwhelming majority of the companies from the elevator and escalator sector in the VDMA assess the current situation as good and rate their expectations of business in the coming six months as better or equally good.

VDMA elevator index reveals top business confidence: VDMA member companies show a newly risen confidence in the 1st quarter of 2018 which reaches a new record high. Source: VDMA Association Elevators and Escalators April 2018

Excellent prospects in the building trade
And the development of the market for elevators and escalators is also set to be closely linked to activity in the building sector. Projections for the building industry are similar to the expectations of companies in the elevator and escalator industry. In its medium-term forecast for Germany, the Ifo Institute assumes that work in the construction industry will continue to grow in the current year. The level of building achieved as a result (around a fifth more than the annual value in 2009) should continue more or less unchanged until the end of the decade. The current situation is notable for the bottle-necks in available capacity on the part of public bodies and the planning and construction sector, not to mention the resultant steep rise in building costs.

The upsurge in the construction of new domestic dwellings has been the driving force behind the positive developments since 2009. Particularly important for the elevator industry has been the considerable increase in the building of multiple-occupancy dwellings. Because of the recent increase in demand for domestic dwellings, and also because of the growing lack of space in increasingly congested urban areas, the buildings now being built are bigger – or rather taller. Since the annual targets for additional building in the residential sector are a long way from being attained, we can reckon on a healthy rate of building work well into the next decade (see chart below).

The stronger measures designed to foster new building work that have been implemented since 2016 by both commercial and public commissioning authorities are also currently benefitting the elevator and
escalator industry. New building in the non-residential sector is set to increase further in the current year. In the medium term, we can assume that there will be a cooling off of activity in the business sector. This reflects a background of economic conditions that are no longer set to be quite so rosy in the future. Local authorities, on the other hand, will – not least because of Federal Government subsidies - be likely to concentrate more strongly on the renovation of existing buildings, many of which are clearly in need of extensive modernisation. Nevertheless, the prospects in respect of existing buildings are limited. In terms of domestic dwellings in particular, the signs rather tend to indicate a recession, although concern for barrier-free accommodation is highly likely to become more and more important.

Number of multiple family dwellings (permitted new builds) Taller dwellings with above-average growth

Construction work is, according to the findings of the Ifo Institute, set to remain at a high level over the next few years. There will, at the same time, be an emphasis on the construction of bigger buildings.

Source: Ifo Institute – Leibniz Institute for Economic Research at the University of Munich, April 2018

“The construction industry is currently pretty much at its limit. This can be seen from the extremely stretched capacity and the steep increases in building costs. There are several reasons which might lead us expect lively building activity in the coming years: nevertheless, the lack of homes will, in many places, improve only slowly. But, quite apart from the domestic dwellings sector, there continues to be a marked demand for additional surface area (in, for example, offices, logistics facilities, schools and hotels). At the same time, there has been significant improvement in the financial freedom for manoeuvre on the part of local authorities. In spite of a sluggish new buildings sector, there is likely to also be a clear focus, in the future, on the need to upkeep the existing building stock.” Such is the view of Ludwig Dorffmeister, a specialist of the Ifo Institute in his speech at the VDMA annual meeting in April.

Visionary ideas for the future of buildings and infrastructure

The elevator and escalator industry is one of the most innovative areas of business in the mechanical engineering sector in Germany. Not least through the introduction of European and national standards, manufacturers have been introducing a host of new ideas onto the market, many of them ground-breaking in their field and generally leading to significant cost-savings on the part of the customer. These
include, amongst other things, the electrically powered, machine-roomless elevator and, more recently, the cableless elevator, which moves at high speed both vertically and horizontally in the building. This historical background, studded with innovation as it is, is set to help the companies in the elevator and escalator sector overcome the challenges that the future holds and that arise as a result of trends such as demographic change and urbanisation.

The conference in the E2 Forum Frankfurt will, in accordance with these developments, focus on the following current issues: Building Information Modelling (BIM) from the customers point of view; planning buildings with elevators, taking into consideration questions of noise abatement and ventilation; rules and regulations for planning elevators and the factors which impact on fire protection measures; digitalisation concepts in the light of the challenges imposed by cloud-based solutions and IoT (Internet of Things) applications in buildings: the demands of energy and cost efficiency requirements on maintenance; interfaces with building regulations, norms and standards, operational obligations and the implications of the elevator as a piece of equipment in the workplace.

The list of exhibitors includes leading manufacturers of elevators, escalators and relevant components, such as Bosch Service Solutions, Cedes (Switzerland), Kleemann, Kollmorgen, Kone, Meiller, OSMA, OTIS, RLS Wacon, Schindler Deutschland, Serapid Deutschland, Siemens, Thyssenkrupp Elevator, Vestner and Wittur.

**Trade fairs for the challenges facing building services engineering and the domestic construction industry**

The E2 Forum Frankfurt will be taking place for the first time on 18 and 19 September 2018, in the Forum1 conference building at the Frankfurt Fair and Exhibition Centre. It is planned as a forum for innovation that will take place on a two-yearly cycle. The E2 Forum Frankfurt is being organised by Messe Frankfurt, in collaboration with the Elevators and Escalators Division of the VDMA (Association of German Machine and Plant Manufacturers), who are taking on responsibility for the content and planning of the conference element. You will find further information on the internet at: [www.e2forum.com](http://www.e2forum.com)

The E2 Forum Frankfurt is the third elevator and escalator sector event in Messe Frankfurt’s building technologies portfolio, which includes the perennially successful IEE-Expo in Mumbai (India) and the E2 Forum Milan, introduced in 2016. In the expert field of building technologies Messe Frankfurt organises a total of 25 trade fairs on three continents, including the world’s two leading trade fair brands for building technologies: Light + Building and ISH. Further information is available internationally at: [www.e2Forum.it](http://www.e2Forum.it), [www.ieeexpo.com](http://www.ieeexpo.com), Fehler! Hyperlink-Referenz ungültig.

**Sources and further reading for the press:**

Mechanical engineering in figures and graphics 2017, Economics and Statistics Division of the VDMA 2017:
https://www.vdma.org/documents/105628/16646535/Maschinenbau-in+Zahl+und+Bild.pdf/5b1ff9a8-d0f6-43ac-9949-31742fc9b4ef

Economic Facts in the elevator industry, VDMA Annual report 2017
https://auf.vdma.org/viewer/-/v2article/render/24738122

Mittelfristige Perspektiven für den Hochbau in Deutschland (Medium-term prospects for the construction industry in Germany – In German), Ifo Institute – Leibniz Institut für Wirtschaftsforschung an der Universität München e. V. (Leibniz Institute for Economic Research at the University of Munich); Ludwig Dorffmeister, specialist on research into construction work and real estate, April 2018

Press releases & images:
www.e2forum.com/press

On the internet:
www.twitter.com/e2forum

Background information about the Elevators and Escalators Division of the VDMA
The Elevators and Escalators Division of the VDMA (Association of German Machine and Plant Manufacturers) represents approx. 90 per cent of the German market for lifts, escalators and moving pavements. There are currently 750,000 elevator systems installed in Germany, of which some 640,000 are for carrying people. For escalators, the current figure is around 36,000 installed units. Turnover in the sector, which employs approximately 17,000 people, amounts to more than two billion euros.
Further information is available at: https://auf.vdma.org

Background information on Messe Frankfurt
Messe Frankfurt is the world’s largest trade fair, congress and event organiser with its own exhibition grounds. With over 2,500 employees at some 30 locations, the company generates annual sales of around €661* million. Thanks to its far-reaching ties with the relevant sectors and to its international sales network, the Group looks after the business interests of its customers effectively. A comprehensive range of services – both onsite and online – ensures that customers worldwide enjoy consistently high quality and flexibility when planning, organising and running their events. The wide range of services includes renting exhibition grounds, trade fair construction and marketing, personnel and food services.
With its headquarters in Frankfurt am Main, the company is owned by the City of Frankfurt (60 percent) and the State of Hesse (40 percent). * preliminary figures for 2017
For more information, please visit our website at: