August 6th, 2019
Research report

SMC Research
Small and Mid Cap Research

THOMSON REUTERS ANALYST AWARDS 2018 WINNER
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Mensch und Maschine SE

Profitable growth continues

Rating: Buy (prev.: Hold) | **Price:** 31.50 Euro | **Price target:** 37.10 Euro

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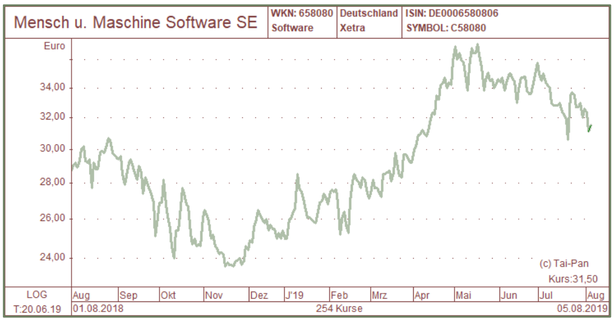


Short profile

With the figures for the first half of the year, in which a sales growth of 27 percent and a disproportionately high increase in EBIT (this time by 36 percent) was again achieved, Mensch und Maschine continued the upward trend of several years and impressively demonstrated once again that the combination of the business with its own software and the VAR business as an Autodesk partner works indeed very well. The new subsidiary SOFiSTiK, with which M+M can now more effectively address the attractive areas of construction software and BIM, provided additional momentum in the first half of the year. Contrary to current market trend, M+M has raised its sales forecast for the year and confirmed its profit targets. This growth is to be continued in the coming years and is expected to enable a dividend increase by 15 to 20 cents per year. The distribution announced for this year alone would correspond to a dividend yield of 2.6 percent, making the share attractive for dividend-oriented investors as well. We currently see the fair value of the share at EUR 37.10 and are therefore upgrading our rating to "buy".

Basic data

Based in:	Wessling
Sector:	CAD/CAM software
Headcount:	930
Accounting:	IFRS
ISIN:	DE0006580806
Ticker:	MUM:GR
Price:	31.50 Euro
Market segment:	Scale / m:access
Number of shares:	17.2 m
Market-Cap:	540.2 m Euro
Enterprise Value:	599.2 m Euro
Free Float:	approx. 46.4 %
Price high/low (12M):	37.90 / 23.10 Euro
Ø turnover(Xetra, 12 M):	157,200 Euro / day

FY ends: 31.12.	2016	2017	2018	2019e	2020e	2021e
Sales (m Euro)	167.1	160.9	185.4	226.0	249.7	275.9
EBIT (m Euro)	12.5	15.2	19.7	26.2	29.3	34.1
Net Profit	6.6	9.4	11.7	15.5	17.4	20.6
EPS	0.39	0.56	0.71	0.92	1.03	1.22
Dividend per share	0.35	0.50	0.65	0.82	0.97	1.12
Sales growth	4.2%	-3.7%	15.3%	21.9%	10.5%	10.5%
Profit growth	70.4%	42.9%	24.1%	32.7%	11.9%	18.7%
PSR	3.18	3.30	2.86	2.35	2.13	1.92
PER	80.6	56.4	45.4	34.2	30.6	25.8
PCR	36.3	34.9	34.9	22.1	18.4	17.2
EV / EBIT	47.2	38.7	30.0	22.5	20.1	17.3
Dividend yield	1.1%	1.6%	2.1%	2.6%	3.1%	3.6%

Executive summary

- **Highly profitable business with CAM software:** The wholly-owned subsidiary Open Mind that develops and sells technologically leading CAM software is the group's paragon of profitability. Although the globally acting company with a broad customer and installed base contributes only a quarter to the group's sales, it provides considerably more than a half of the profits. As the largest component of the Group's software segment, the company has been crucially responsible for its high sales and margin growth in recent years. The segment's EBIT margin has exceeded 20 percent since 2016, in the first half of 2019, it was at 24.6 percent.

- **Autodesk partnership for more than 30 years**: M+M's origins lie, however, in the trade business with the CAD software of the American CAD pioneer Autodesk. Since the company's founding more than 30 years ago, Mensch und Maschine has established itself as a leading reselling partner of Autodesk and has a solid market position in the addressed market with a broad geographical presence and a very large customer base. Following the transition from value added distribution to end-customer distribution in the form of a VAR initiated in 2009, M+M has become Autodesk's largest European VAR partner.

- **High margin potential**: The most important reason for the change was the higher value creation and the resulting higher margin potential in the VAR business. Around 65 percent of the VAR's value creation now come from services and the proprietary software solutions, while the trade margin from Autodesk reselling accounts for only 35 percent of segment gross profit and 17 percent of Group gross profit.

- **Dynamic sales and profit growth**: In the seven years since the completion of the change of distribution level in the Autodesk business, M+M has increased sales by 56 percent and more than tripled earnings. For the future, the company is aiming for sales growth of 10 to 12 percent p.a. and above-average earnings growth. The EBIT margin, which has already doubled to 10.6 percent since 2015, is expected to exceed 14 percent in the medium term. Dynamic growth continued in the first half of 2019 as well, with profit again increasing at a disproportionately high rate.

- **Promising acquisition**: With the majority takeover of SOFiSTiK AG, M+M has strengthened its expertise in a very attractive field. The new subsidiary is Europe's leading software producer for the calculation, design and construction of building projects, with a particular focus on bridge and tunnel construction.

- **Good dividend yield and attractive price potential**: M+M uses the high profit growth for a generous dividend policy, which is why the share convinces both as a growth stock and as a dividend stock. Currently, the share promises a dividend yield of 2.6 percent and a price potential of almost 18 percent, which is why we upgrade our rating to "buy".

SWOT analysis

Strengths

- Strong position in attractive target markets established for decades.
- A fast-growing, highly profitable software segment with a global market presence and a leading technological position.
- Change of distribution stage in the Autodesk business successfully completed.
- High continuity at management level and very low employee turnover.
- Stable shareholder structure with more than 50 percent of shares in management hands.
- Solid balance sheet structure with a high equity ratio and low debt.
- Growth dynamics above the industry average, with recently a disproportionately high rise in profits

Weaknesses

- Despite the progress already achieved, the earnings contribution of the VAR segment is still below its potential.
- The VAR business is largely determined by Autodesk's product and pricing policy.
- The geographic expansion of the VAR business requires the expensive establishment of additional offices; in principle, the segment's scaling potential is limited.
- Strong dependence on Germany and Europe.
- In both segments, M+M faces the challenge of attracting and retaining suitable employees in a difficult labour market.

Opportunities

- There is still considerable potential for margin growth in the VAR business; if the present trends continue, an above-average profit development should be possible in the next few years.
- The change in Autodesk's pricing model appears to meet expectations and could further fuel growth in the trade business.
- With its expertise in BIM and bridge and tunnel construction, the new subsidiary SOFiSTiK is opening very promising markets for M+M.
- With the new eXs software, M+M could benefit from the trend towards electromobility
- The foreseeable profit growth should allow a steady and considerable increase in dividend.

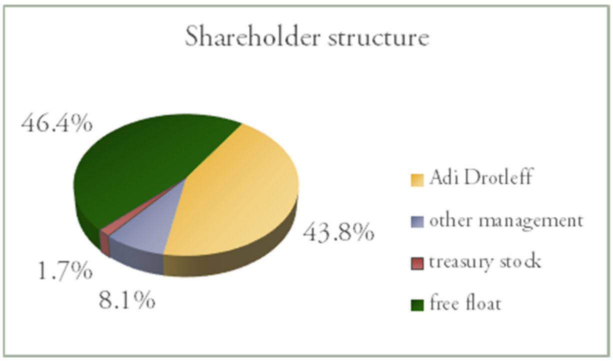
Threats

- High personnel intensity in the VAR business causes a high extent of utilization risk in economically weaker phases.
- The envisaged further margin increase in the VAR business cannot be taken for granted and could well turn out to be more protracted than planned or even totally unsuccessful.
- The economic downturn could have a dampening effect.
- Should Autodesk fall behind in competition, it could have a perceptibly negative impact on the VAR business.
- The role as technology leader requires intensive development activities of Open Mind and carries the risk of technological failures.

Profile

Leading market position

Mensch und Maschine Software SE (M+M) was founded in 1984 and has its origins in the distribution of software from the US-based CAD manufacturer Autodesk (the abbreviation CAD stands for Computer Aided Design). In the meantime, the focus has expanded and the market has developed further, which is why M+M defines its own field of activity as the market for CAD/CAM/CAE/PDM/BIM solutions (Computer Aided Manufacturing, Computer Aided Engineering,Product Data Management and Building Information Management), in which the company based in Wessling, Bavaria, is one of Europe's leading providers.



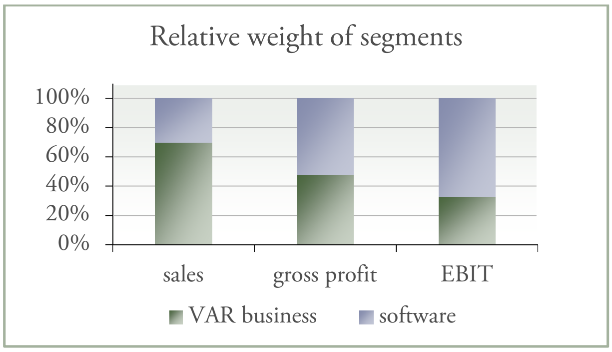
Source: Company

Majority of shares held by management

By far the largest shareholder (43.8 percent) is still the founder Adi Drotleff, who has been both a member of the Executive Board and Chairman of the Board of Directors since the transformation into a Societas Europaea (SE). Mr. Drotleff documents his extraordinary commitment to the company not least with his continuous acquisitions of MuM shares, with which he has increased his stake by around 3 percentage points since the beginning of the decade. Again this year, Adi Drotleff opted for the stock dividend instead of the cash dividend and exchanged most of his dividend rights for shares. Due to the majority takeover of SOFiSTiK (see below), which was partially paid for with new shares, the portion of shares held by other management has recently increased to 8.1 percent. Further 1.7 percent of the shares are held by the company itself, while the free float amounts to 46.4 percent. The M+M share has been listed on the stock exchange since 1997 and is traded in the m:access segment of the Munich Stock Exchange and in the Scale segment of the Frankfurt Stock Exchange.

Clear holding structure

Within the Group, Mensch und Maschine Software SE acts purely as a financial holding company. Located below is the subsidiary Mensch und Maschine Management AG, which performs the typical management and service tasks for the other companies. The operating business, however, is performed by more than 40 direct and indirect subsidiaries with altogether 930 employees and nearly 60 locations worldwide. A geographical focus lies clearly in the German-speaking region, where M+M is represented comprehensively with more than 40 locations. Ten further offices are maintained in other European countries. Moreover, the company has also offices in five Asian countries as well as in the USA and Brazil.



Source: Company, as of 2018

Two business segments

Since 2012, the business model is based on two segments: on the one hand the VAR business, i.e. the direct distribution of Autodesk software to end customers and services in the CAD and BIM field, and on the other hand the development and distribution of proprietary software. In terms of sales, business is dominated by the first segment, which generated 70 percent of consolidated sales last year with EUR 129.7 m. However, at the level of gross profit, the two segments are equally important, but the software segment still accounts for more than two thirds of the group EBIT.

Highly profitable software business

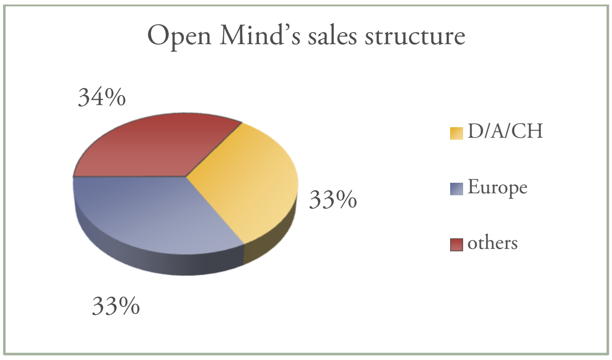
The different segment weights reflect considerable differences in profitability. While the VAR business generated a gross margin of 34.9 percent and an EBIT margin of 5.7 percent in the first half of 2019, in the software segment these figures are 93.9 and 24.6 percent respectively. They reflect the continuous and successful development of the four subsidiaries included in this segment, Open Mind, DATAflor, M+M Mechatronik and SOFiSTiK, all of which achieve operating margins of more than 20 percent.

High-end CAM solution

The group's paragon of profitability and by far the biggest unit within the software segment is clearly the CAM specialist Open Mind, founded 1994 and fully owned by the M+M group since 2002. The company specializes in high-quality software for computer-aided manufacturing (CAM) and last year generated approximately EUR 47 million or 85 percent of segment sales (without SOFiSTiK). The product, worth between EUR 15,000 and 100,000 per workstation, allows the customer to perform highly complex and extremely precise drilling and milling tasks (e.g. with 5-axis mills) in a fraction of the usually required time, thus increasing the productivity of the machines controlled by the software many times over. The software can be used with all common NC mills and lathes, is compatible with leading CAD products (including Autodesk and Solidworks), has a user-friendly interface and enables continuous processes from designing to manufacturing on the machine. In addition, the company offers its own CAD solution that is clearly geared to the requirements of CAM programming, in contrast to leading CAD programs that are mainly optimized for the needs of design engineers. As a central unique selling point, however, M+M emphasizes especially its own cutting-edge kernels. They allow a very efficient mapping of highly complex mathematical and geometrical models, resulting in a shorter processing time in the programmed machines. To maintain this technological lead, Open Mind attaches a great importance to software development: of the more than 300 employees of the company, around 60 are software developers.

Worldwide customer base

Altogether, Open Mind has a worldwide base of about 6,000 customers and more than 20,000 installations. The customers hail from various industries using this kind of machine tools, such as prototype construction, tool and mould construction, aerospace, turbine and generator construction, mechanical and medical engineering, and jewellery manufacturing. But also several Formula 1 racing teams use the software to tune their engines or to aerodynamically optimize the carbon elements. Unlike the VAR business, Open Mind also addresses non-European markets and has offices in Japan, Singapore, Taiwan, China, India, Brazil and the USA. Last year, Open Mind generated slightly more than a third of its revenues (EUR 16.2 m) overseas, with another third coming from German-speaking countries and another third from other European countries.



Source: Company

New software for electrical engineering

Under the name eXs, a new software for Computer Aided Engineering was introduced to the market this year, which has been developed from scratch with great intensity in recent years. The software is tailored exactly to the mapping of extremely complex electrical circuit diagrams and enables efficient planning and management of very large electrical projects with thousands of individual sheets, such as those required with railways, mechanical and plant engineering, energy supply, process engineering, hydraulics and pneumatics as well as audio and video technology. This solution replaces an older product (ecscad) originally developed by M+M as a supplement of the standard Autodesk program, then sold to the Americans, and licensed back in 2014, including – at that time – more than 1,000 customers. Since M+M took care to ensure the new product's full data compatibility with ecscad, customers with maintenance contracts should be able to automatically switch to eXs and benefit from the numerous advantages of the new solution. These include a faster database, greater variety of functions with simplified operation, largely free configurability as well as an easy data exchange with other systems. With this modern software, M+M sees itself well positioned in an area that offers attractive prospects, not least against the background of the growing importance of electric mobility.

Leading BIM solution

With the majority takeover of SOFiSTiK AG agreed last year and completed in the first half of 2019, M+M has expanded its product portfolio with a leading solution for Building Information Management (BIM). SOFiSTiK AG, in which M+M had held a minority interest since 1999, has been active in the market since 1987 and specializes in the development of construction software. The company now claims to be Europe's leading software producer for the calculation, design and construction of building projects, with a particular focus on bridge and tunnel construction. The strengths of SOFiSTiK's software products include the planning and calculation of static layouts and reinforcements as well as their BIM functionalities, which enable frictionless and complete mapping of the entire design and construction process in consistent data models, making the company one of the leading BIM providers. The software's strength can play out especially where special demands are made on the static of the object, which is why the reference list includes several world-famous and spectacular buildings. These include numerous bridges, such as the new Bosporus Bridge in Turkey, several stadiums and the BMW World in Munich. However, the software is also suitable for "normal" use in building construction and civil engineering. In total, M+M speaks of thousands of construction projects that were calculated and constructed with SOFiSTiK products. An exceptional potential for SOFiSTiK could arise in the coming years due to the large repair and replacement requirements in bridge construction, for which the SOFiSTiK Brigde Modeler was presented as a new product, already fully compatible with BIM standards as will be mandatory in Germany from 2020. In the first half of 2019, the new M+M subsidiary with its more than 70 employees generated sales of around EUR 7 m and an EBIT margin of just under 23 percent.

DATAflor leading in its niche

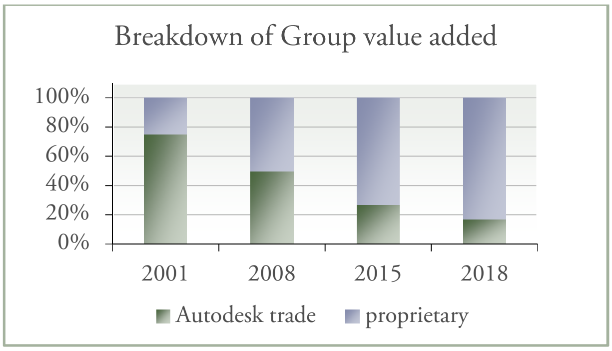
DATAflor, a software that helps landscape architects and garden centres to plan green areas both graphically and financially, completes the software segment’s product range. The product costs - according to the company - about EUR 5,000 per workstation. It has already been in the market since 1982 and has a leading position in the addressed niche in the German-speaking area. The scope of application was recently extended to earthworks and civil engineering.

Europe's largest Autodesk VAR

In the second segment, Mensch und Maschine specializes in direct end-customer distribution of Autodesk software and related services and products. With around 50 locations throughout Europe, 40 of which in the DACH region, and just under 470 employees, Mensch und Maschine is now the largest Autodesk VAR in Europe.

Diminishing weight of Autodesk trade

However, even within the VAR segment, the importance of trading with Autodesk licenses - the nucleus and origin of the M+M Group - has declined in recent years. This was made possible, on the one hand, by the change in the distribution stage from value added distribution to VAR, which was carried out in two steps between 2009 and 2011. In a first step, an extensive market coverage was achieved in 2009 and 2010 by converting the company's own locations and taking over several former customers in the DACH region; the sale of the European distribution business and the transformation of foreign subsidiaries into VARs followed at the end of 2011. On the other hand, the disproportionately high growth in service revenues and the continuous expansion of the range of proprietary special solutions and supplements to the standard Autodesk software are reducing the weight of the Autodesk trade. In the last financial year, the trading margin contributed only 35 percent to the gross profit of the VAR segment; at Group level it was only 17 percent. For comparison: in 2001, more than three quarters of the Group value added was accounted for by the trading margin and in 2008 more than half.



Source: Company

High service share

It is thus paying off that the transition of the business model has allowed M+M to extend the value chain and to unlock new income sources by collecting the retail markup and by offering services like installation, configuration, maintenance and training courses. In recent years, the courses covering the new opportunities in data management offered by the new PDM and BIM software (Product Data Management and Building Information Management) have turned out to be especially dynamic and promising. Last year, about 40 percent of the services' gross profit in the VAR business was accounted for by such training courses, while about 60 percent was generated with customer-specific projects. These projects, comprising up to several man-years, include usually the implementation and the customized adaptation and extension of the Autodesk software, the configuration of adequate data models and the migration of data sets. The projects are increasingly using M+M's own software modules that add special functionalities or industry solutions to Autodesk's basic software. These include industry solutions for plant engineering and construction as well as the customX variant and configurator software, with which variant design can be automated with a time saving of more than 90 percent.

Broad industry focus

While its size makes M+M nearly indispensable for Autodesk as a European partner on the purchase side, on the customer side the Bavarians pursue a directly opposed strategy in the form of a very high diversification. This applies both with regard to industry structure and – even more – with regard to the share of sales generated with the more than 25,000 individual customers, none of whom is responsible for more than 1 percent of the Group's sales. Although the customer list is dominated by mechanical engineering, it is such a heterogeneous industry that the cycles of individual subsectors usually offset each other. In addition, there has been recently a growing number of new customers from the AEC industry (including Architectural, Engineering, Construction and Facilities Management), in which M+M benefits from the strong demand for BIM solutions (Building Information Management).

Market environment

CAD world highly dynamic

In the early 1980s, the CAD pioneer and M+M partner Autodesk was one of the creators of the CAD market that has since developed into a global billion-dollar market. The sector is undergoing a very dynamic change in terms of content as well. While in the early years 2D products for the use in architecture and building industry were most important, the CAD world is now dominated by 3D applications that have become indispensable in other areas as well, such as mechanical and plant engineering, the automation industry or consumer goods industry. The scope of services of the software has also been massively expanded, which means that the overlaps with other areas such as ERP software are becoming increasingly greater. An important industry trend is, for example, the offer of software solutions that enable fully software-supported optimization of the entire product life cycle (PLM), from planning, through construction, calculation and production to controlling, distribution and servicing. A similarly comprehensive functional extension in the building industry is becoming increasingly common under the name of BIM (Building Information Management) and enables efficient planning, designing, constructing as well as managing of buildings, infrastructure facilities and utilities in a single system. By now, a major focus within the CAD world is on consistent data models and solutions for the collaboration of numerous participants. And of course, there is a strong tendency towards cloud-supported and mobile applications.

Robust growth

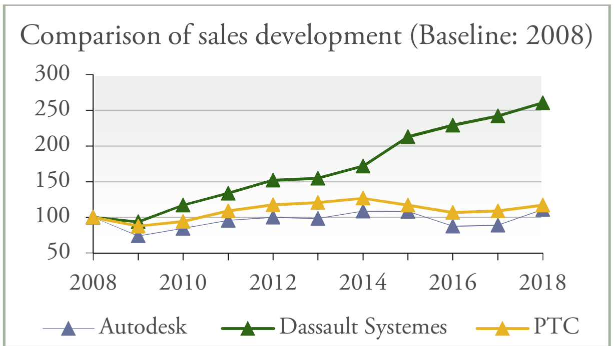
Given the large overlaps with other software segments, a precise demarcation of the CAD market is not easy. Mensch und Maschine estimates the total European market for CAD/CAM/PLM/BIM at about EUR 3 billion. Globally, Research and Markets estimates the market (in its narrower CAD definition) at a little over USD 8 billion, with America accounting for the largest share and the highest growth rates being recorded in Asia. Overall, the analysts expect a constantly dynamic market growth over the next few years, estimated at 6.8 percent p.a. Accordingly, Research and Markets expects a global market volume of more than USD 14 billion in 2026.

Intense competition

However, the market is considered highly competitive. According to an older assesment by Jon Peddie Research, the narrower market is still led by Autodesk (measured by installed base), followed by Dassault Systems, Siemens PLM Software, PTC and Bentley Systems. Autodesk is particularly strong in the mid-price segment, while the premium segment, which is defined primarily by comprehensive PLM functionalities, is dominated by Dassault Systems. Another leading player in this area is Siemens PLM. The Munich-based company has been active in the market since the takeover of UGS from Texas in 2007 and is claiming market leadership in the PLM sector. Finally, at the lower end of the market, there are several free solutions, some of which are launched by the major manufacturers themselves as door openers to new customer groups.

Autodesk with strong sales jump

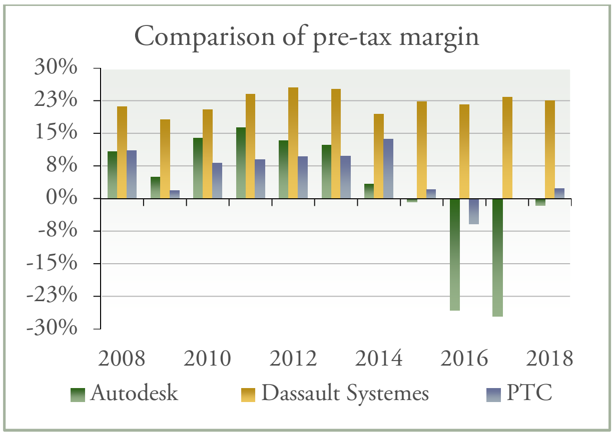
In terms of sales, however, Autodesk has long since lost market leadership to Dassault Systemes. One of the reasons is the accelerated transformation of the business model towards cloud software and subscription, which involves lower license revenues in the transition period. After the sale of one-time licenses was discontinued in 2015 in favour of the subscription model, Autodesk sales fell 2016 by 19 percent to just over USD 2 billion and remained at this level in 2017 as well. Only last year did the new model show its high potential. Driven by subscription revenues, which more than doubled to USD 1.8 billion, sales increased by a quarter to USD 2.6 billion. Thus, for the first time since the financial crisis, Autodesk has succeeded in growing faster than the French world market leader, which still pursues the model of perpetual licenses and which grew by 7.7 percent to EUR 3.5 billion in 2018. But the cumulative growth gap since 2008 is still enormous. While Autodesk is now 11 percent above its 2008 level after last year's jump in sales, the French have increased their revenue by more than 160 percent over the same period. Dassault Systemes benefited both from its strong positioning in the 3D sector and in the PLM market and from an aggressive acquisition strategy. In particular, the acquisition of IBM's former PLM division fuelled the growth rates of 2010 and 2011, but numerous further acquisitions followed. Over the past three years, investments in the acquisition of new subsidiaries totalled more than EUR 850 million, with a further acquisition with a volume of EUR 377 million already completed this year.



Source: Autodesk, Dassault Systemes and PTC

Large differences in profitability

The temporarily weak sales performance was also reflected in Autodesk's profits, which fell into the red for the first time in 2015 and has not yet returned to profitability since then. Although last year's growth spurt significantly improved the pre-tax margin from -27.1 percent to -1.7 percent, EBT remained negative at almost USD 43 m. The situation was similar for PTC. Like Autodesk, the Americans have converted their licensing model to rental software and, as a result, have generated declining sales in 2015 and 2016. PTC has been growing again since 2017, although last year's growth of 7.3 percent was far below Autodesk's level. On the earnings side, PTC already returned to the black last year, although the pre-tax margin remained very moderate at +2.3 percent. By contrast, Dassault Systemes generated a pre-tax margin above 20 percent for the fourth time in a row in 2018. An important reason for Autodesk's weak growth and earnings was the realignment of the business model, because in the new model the high-margin license revenues are not generated at once but are spread over the contract duration. Moreover, the development of new products, reflected in rising installation figures, had initially also a negative impact on earnings. Research and development expenses were increased, especially in the years with weaker sales, and peaked at almost 38 percent of sales.



Source: Autodesk, Dassault Systemes and PTC

Autodesk with strong market position

In spite of this relatively weak growth and profits, Autodesk is still holding a strong market position. The Californians have by far the widest range of products and are thus able to address the entire width of the market, while the competition is mainly focusing on industrial customers and among them especially on individual sectors like automotive or aerospace industry. Autodesk is still the undisputed leader in the architecture/engineering/construction area (AEC) which constitutes approximately one third of the market. Another advantage is the fact that Autodesk's products, due to their widespread use, represent a kind of industry standard that many users have come to identify with CAD. Thus, the high availability of users able to work with Autodesk software is an important argument in favour of Autodesk from the customer's point of view.

High expectations of the rental model

Last year's strong momentum also indicates that the high upfront expenditures for the conversion of the license model are likely to pay off. With the second consecutive doubling of subscription revenues, the transition has now been largely completed and Autodesk is expected to benefit fully from the model's higher pricing and the recurring nature of the revenues. The company also has high expectations from the reduction of the still widespread sublicensing on the customer side, which is much easier to identify in the rental model. Basically, Autodesk calculates in the new model with a growth of 20 percent p.a., which was even significantly exceeded last year. In the first quarter of the current year, sales growth of 31 percent to USD 735.5 m was well above this mark as well. Of this amount, EUR 595.8 m were accounted for by subscription revenues, which thus improved by 70 percent. On this basis, a slight profit was finally achieved at the pre-tax level, even though a loss still had to be reported after taxes.

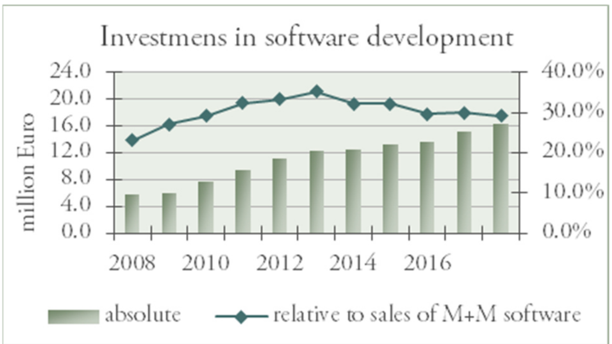
BIM as an important market driver

Given its strong position in the AEC field (architecture/engineering/construction), Autodesk could well benefit from the trend to extend the CAD software by a complete management of all data pertaining to the building, The market shows currently a keen interest in such BIM (Building Information Management) solutions. The data management incorporates a time component as well, and some market observers speak in this context of a transition towards 5D models, which include – in addition to the three spatial dimensions – also costs and a time axis. In some cases, the definitions reach up to 7D if the models also include a sustainability assessment and applications for facility management (manuals, service contacts, spare parts information, etc.). Regardless of the definition used, many market observers believe that the BIM concept has disruptive potential for the construction industry. The importance attached to this topic is illustrated not least by the new regulation of the Federal Ministry of Transport and Digital Infrastructure, which makes the use of BIM mandatory for bridge and tunnel projects from 2020 onwards. This regulation is related to the establishment of the new federal BIM Competence Centre, which will serve as the central point of contact for digital tendering and awarding of public construction projects and cover all areas of planning, construction and use of buildings.

Strategy

Technological leadership in the CAM sector

From the Group's perspective, the central strategic thrust that has been instrumental in the successful development of recent years is the technological leadership of the subsidiary Open Mind in the CAM business it addresses. The increases in productivity Open Mind is offering its customers are in some instances very considerable. They are the most powerful sales argument and they create the scope for positioning in the high-price segment and, consequently, for the sustained achievement of very high margins. To maintain and expand this positioning, high-quality innovations are crucial; therefore, high investments in the maintenance and development of the company's own software (only capitalized to a very small extent in the balance sheet) are at the core of M+M's strategy. In relation to segment sales, development costs averaged just under 31 percent over the past five years. Efforts were further intensified in the past year by 8 percent to EUR 16.3 m; the ratio of development expenses to segment sales was 29.2 percent.



Source: M+M

Diversification with two segments

M+M's positioning with two segments that have, although thematically related, developed very differently offers a positive diversification effect, without which the change of business model in Autodesk trade, for one thing, would have been much more difficult. Even if, according to the company, the synergies between the two segments are limited, the two-pillar strategy has tangible advantages for M+M. Firstly, the CAM business provides an important diversification effect both in terms of content (outside the Autodesk world) and geography (strong non-European business) and secondly, it noticeably increases the profitability of the Group as a whole.

Increasing market share

The focus on Autodesk's products means that the development of the CAD pioneer is a central determinant for the VAR business. Autodesk's strategic decisions, such as the realignment of the business model towards rental software, have as much direct impact on the development of M+M as the quality and degree of innovation of the Americans' product portfolio. But within this setting, M+M has enough regulating variables at its disposal to be able to influence its own sales and profit growth. The main source of growth is therefore an even more intensive penetration of already covered markets and an increase of the company's share in Autodesk sales (at the expense of other VARs). The development of recent years illustrates that the Bavarians are quite successful in this respect. Since 2012, Mensch und Maschine has increased its VAR sales by more than half to EUR 129.7 m, while Autodesk sales in the geographical segment EMEA (Europe, Middle East and Africa) rose by 19.1 percent to USD 1 billion. Last year, however, the geographic Autodesk EMEA segment grew much more strongly than the M+M VAR business, but this was partly due to the fact that the companies' fiscal years are not congruent, which means that the very strong January is recognized at Autodesk in the last fiscal year and at M+M in the current fiscal year.

Realizing economies of scale

By now, M+M has achieved a size that offers a major competitive edge against other VARs and perceives itself as Europe's leading Autodesk VAR. As it allows a centralization of some important functions such as marketing or hotline support, M+M is able to realize substantial cost benefits. At the same time, the consistent label and the comprehensive presence facilitate the addressing and support of larger customers.

Extending the value chain

One important aspect in M+M's strategy to increase its share in the Autodesk business is the conversion of the business model from distribution – strong in terms of sales but comparatively weak with regard to profit – to VAR business, which was initiated 2009. M+M has thus decisively extended its value chain within the market. With additional services such as training courses, support, maintenance, implementation and individual adjustment as well as the collection of the retail markup, the management now sees in the VAR business a margin potential three times as high as in the distribution business.

Reducing dependence on Autodesk

By setting up and expanding the VAR business, M+M was also able to reduce its dependence on Autodesk; the share of trading business, i.e. Autodesk licenses, in the Group's gross profit has by now sunk to about 17 percent. This is also due to the fact that M+M VAR offices are increasingly perceived as manufacturer-independent CAD specialists and are engaged for comprehensive projects that use third-party software as well.

Expansion of own software portfolio

Further important differentiating features in competition with other Autodesk partners are the two Autodesk-based or -compatible software products DATAflor and eXs (formerly ecscad), with which M+M offers custom-fit solutions for a certain sector or for certain requirements (highly complex circuit diagrams). Especially eXs is a modern product that serves as a door opener especially into the technologically dominated German Mittelstand. Moreover, M+M is constantly developing (in projects) new modules and extensions to Autodesk standard software that meet customer- or industry-specific requirements. These solutions then demonstrate the degree of expertise to the industries addressed, facilitate sales, increase productivity in the projects and facilitate their calculability.

Strengthening growth drivers

The software business experienced an important expansion with the majority takeover of SOFiSTiK AG, with which M+M has positioned itself as a software producer for the calculation, design and construction of statically particularly demanding building projects, especially in bridge and tunnel construction. As a result of both this and SOFiSTiK's similarly strong position in the BIM field, M+M has significantly strengthened its own positioning in two very promising areas.

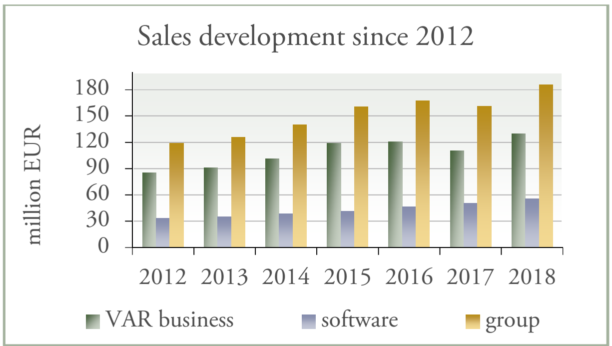
Continuity and predictability

M+M pursues its long-term strategy with great dependability, thus ensuring a high degree of reliability for customers, partners and investors. Continuity is also a top priority in terms of personnel and, above all, in the management structure. In line with this, the upcoming generation change in the top management has been not only prepared but already implemented for several years through the development of suitable executives and the increasing delegation of tasks and responsibilities.

Figures

Dynamic sales growth

With the exception of the year 2017, in which the VAR business and thus Group revenues declined as a result of the change in the license model at Autodesk, M+M has grown continuously since the alignment to the current business model and has increased sales by 56 percent to recently EUR 185.4 m between 2012 and 2018. The software segment made particularly strong gains (+65.9 percent to EUR 55.7 m), but revenues in the VAR business also increased by more than half to EUR 129.7 m.



Source: Company

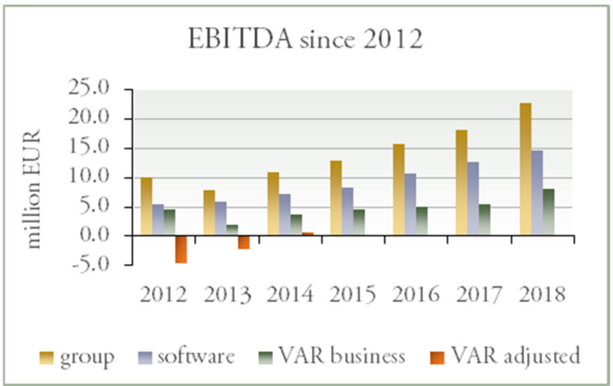
Gross profit at record level

Gross profit has grown even more strongly in recent years, increasing by 64.9 percent to EUR 103.9 m between 2012 and 2018. Thus, the core advantage of the new business model (VAR instead of value added distribution), the extended value chain, has paid off considerably. In contrast to sales, gross profit had declined only moderately following the change in business model and by 2014 has already exceeded the record level of 2011 (EUR 70.0 m) – despite the still considerably lower sales. The Group's gross margin, for which values below 30 percent were usual until 2008, reached a new record high of 59.0 percent in 2017. However, as this was partly due to the temporary weakness of the Autodesk trading business as a result of the Americans' conversion of the license model, last year's pick-up in the Autodesk business resulted in a normalization of the gross margin to 56.0 percent. In absolute figures, however, gross profit increased again and, at EUR 103.9 m, exceeded the EUR 100 m mark for the first time.

Source: Company

EBITDA multiplied

The sales growth and the rising gross margin have allowed a very positive EBITDA development in recent years. Overall, reported EBITDA more than doubled in the seven years to 2018 by 128.2 percent to EUR 22.7 m. However, this figure still understates the operating profit growth: in the years up to 2014, M+M had covered the initial operating start-up losses in the VAR business with the high profit that had been generated from the sale of the European Autodesk distribution business in the autumn of 2011, thus somewhat bolstering the EBITDA reported. Adjusted for this effect, EBITDA in the VAR business improved from EUR -4.5 m to EUR +8.1 m between 2012 and 2018. Together with the steady and strong EBITDA growth in the software segment, the Group's operating profit growth during this period amounted to more than 2,000 percent (from EUR 1.0 m to 22.7 m).



Source: Company

Double-digit EBIT margin

The margin increase in both segments was even stronger for EBIT. Across the Group, the EBIT margin has more than doubled in the last seven years, reaching a double-digit figure for the first time in 2018 at 10.6 percent. In the software business, an EBIT margin above 20 percent has been generated since 2016 (most recently 23.7 percent), while the VAR business achieved 5.0 percent. Mensch und Maschine thus managed to achieve an increase in profitability last year despite the reduced gross margin, to increase EBIT by 29.2 percent and to improve the EBIT margin in both segments. The improvement was 1.6 percentage points in the VAR business and 1.0 percentage points in the software segment. The company benefited thus once again from its continued cost discipline, which was reflected not least in the disproportionately low growth in the number of employees. The headcount in the VAR business increased by only 1.8 percent and in the Group by 4.7 percent. As a result, the increase in personnel expenses was limited to 7.0 percent, while other operating expenses increased even by only 3.3 percent.

Dividend increased by 30 percent

Thanks to an improved financial result and a lower tax rate, net profit after taxes and minorities even grew by 36.7 percent to EUR 11.7 m, equivalent to a net margin of 6.3 percent. Based on this high profit growth and the unchanged strong cash flows of the business model (see below), M+M was able to continue its shareholder-friendly dividend policy and distribute a dividend of 65 cents per share. The dividend, which had steadily increased since 2015 after four years of stability at 20 cents and doubled between 2015 and 2017 alone, was thus increased by a further 30 percent in 2018. Thus, the dividend has tripled in the last five years.

Business figures	**FY 2017**	**FY 2018**	***Change***
Sales	160.85	185.40	*+15.3%*
VAR business	110.39	129.67	*+17.5%*
Software	50.47	55.73	*+10.4%*
Gross profit	94.82	103.91	*+9.6%*
VAR business	45.88	49.55	*+8.0%*
Software	48.94	54.36	*+11.1%*
Gross margin	*59.0%*	*56.0%*	
EBITDA	18.04	22.75	*+26.1%*
VAR business	5.35	8.07	*+51.0%*
Software	12.69	14.68	*+15.6%*
EBITDA margin	*11.2%*	*12.3%*	
EBIT	15.21	19.66	*+29.2%*
VAR business	3.76	6.45	*+71.5%*
Software	11.45	13.21	*+15.3%*
EBIT margin	*9.5%*	*10.6%*	
Pre-tax result	13.59	18.16	*+33.6%*
Pre-tax margin	*8.5%*	*9.8%*	
Net profit	8.55	11.69	*+36.7%*
Net margin	*5.3%*	*6.3%*	

SOFiSTiK and Autodesk trade as revenue drivers in the first half of the year

In the first half year of 2019, Mensch und Maschine continued to grow and increased sales by 27.3 percent to EUR 120.3 m. One part of the growth (amounting to about EUR 7.0 m) is attributable to the consolidation effect of the majority takeover of SOFiSTiK GmbH, meaning an organic growth of about 20 percent. This was mainly driven by the VAR business with growth of 24.4 percent to EUR 82.7 m, while the software business, adjusted for the consolidation effect, grew "only" by around 9 percent. While M+M actually speaks of a slight slowdown and "consolidation at a high level" in the software segment, the high growth in the VAR business is primarily attributable to Autodesk's change of pricing model. At first, the change had burdened licence sales because the initial subscription payments only account for part of the license payment that was earlier due immediately upon contract conclusion. Now, maintenance customers' switch from the old model to the subscription model has the opposite effect because the current subscription fees are significantly higher than the maintenance payments in the old model. In addition, the strong momentum was also due to a price increase implemented by Autodesk in May, which had a noticeable pull-forward effect.

SOFiSTiK highly dynamic

The company is very satisfied with the current development of the newest subsidiary SOFiSTiK, which faces very strong demand both in the BIM field and with the new product Bridge Modeler, a BIM-capable special solution for bridge design and analysis. With the Bridge Modeler, SOFiStiK not only has a modern solution that already meets the legal requirements that will apply from 2020, but also a product with which the company can strategically enlarge its focus from the previously addressed high-end area to broader market. In view of the tens of thousands of bridges that will have to be renovated or replaced in Germany alone over the next few years, SOFiSTiK is thus opening up a very large market potential.

Gross profit margin slightly lower

The strong growth in the trading business led to a shift in the sales mix towards low-margin sales, as a result of which the Group's gross profit increased at a lower rate than sales, by 22.4 percent to EUR 64.1 m. A further dampening effect on the gross margin resulted from the consolidation of SOFiSTiK, whose gross margin is below the level achieved to date in the software segment; as a result, it fell from 97.8 to 93.9 percent in the first six months. By contrast, the VAR business achieved a gross margin of 34.9 percent, compared with 37.6 percent in the previous year.

Business figures	HY 2018	HY 2019	*Change*
Sales	94.46	120.22	*+27.3%*
VAR business	66.50	82.70	*+24.4%*
Software	27.95	37.51	*+34.2%*
Gross profit	52.39	64.12	*+22.4%*
VAR business	25.04	28.90	*+15.4%*
Software	27.35	35.22	*+28.8%*
Gross margin	*55.5%*	*53.3%*	
EBIT	10.28	13.98	*+36.0%*
VAR business	3.12	4.75	*+52.4%*
Software	7.16	9.23	*+28.8%*
EBIT margin	*10.9%*	*11.6%*	
Pre-tax result	9.60	13.56	*+41.2%*
Pre-tax margin	*10.2%*	*11.3%*	
Net profit	6.34	8.32	*+31.2%*
Net margin	*6.7%*	*6.9%*	

EBIT increases by more than one third

As in the previous year, M+M was able to convert gross profit growth into above-average profit growth. This was once again due in part to a sustained cost discipline, reflected in a disproportionately low increase in personnel expenses compared to gross profit. They rose by 18.8 percent, so that the personnel expense ratio (based on gross profit) fell from 61.7 to 59.9 percent year-on-year. The total of other operating expenses and leasing expenses, which increased by 20 percent, also had a margin-increasing effect. Since other depreciation and amortisation (excluding IFRS 16 depreciation) also increased at a disproportionately low rate of 11 percent, EBIT for the first six months improved by 36 percent to EUR 14.0 m, equivalent to an EBIT margin of 11.6 percent (previous year: 10.2 percent).

Minority interest quadrupled

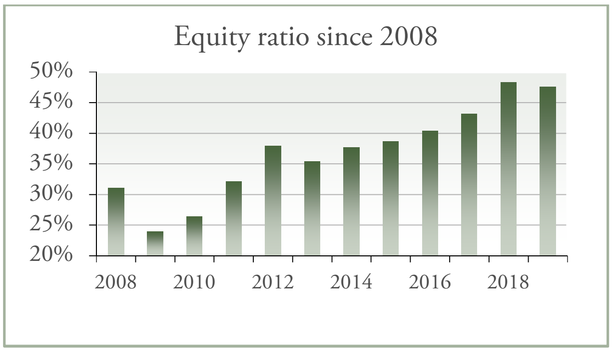
Thanks to a slight improvement in the financial result, profit after tax rose by 41 percent to EUR 9.3 m, of which this time a significantly higher share was attributable to minority shareholders as a result of the SOFiSTiK acquisition. This share quadrupled to almost EUR 1.0 m, so that the half-year net profit after minorities amounted to EUR 8.3 m, 31.2 percent more than in the previous year.

Operating cash flow and capital expenditure rise sharply

The high profitability of the M+M business model is also reflected in the operating cash flow, which, in the first half of the year, increased by 42.5 percent to EUR 12.8 m or 10.6 percent of six-month sales. However, EUR 1.8 m of this is attributable to the first-time application of IFRS 16, as a result of which leasing expenses in this amount had to be reclassified from operating cash flow to financing cash flow. Adjusted for this effect, operating cash flow improved by 22.4 percent to just under EUR 11 m. Due to the payments made for the SOFiSTiK acquisition and the completion of the new SOFiSTiK headquarters, as well as the more than doubled other investments (from EUR 1.0 m to EUR 2.5 m) due to the purchase of a customer base, the cash outflow from investing activities in the first six months increased significantly year-on-year from EUR -0.9 m to EUR -5.9 m. As a result, free cash flow fell by almost 15 percent to EUR +6.9 m. After taking into account the cash outflow from financing activities of EUR -3.1 m (primarily for the dividend payment for 2018), liquidity increased by EUR 3.9 m to EUR 13.4 m in the first six months of 2019.

Balance sheet total significantly increased

Major changes resulted from the consolidation of SOFiSTiK and the first-time application of IFRS 16 in the balance sheet. The capitalisation of the rights of use for leased or rented assets and the recognition of the corresponding liabilities alone resulted in a balance sheet-extending effect of EUR 6.2 m. Due to the full consolidation of SOFiSTiK and the high level of investments in the first half of the year, items such as goodwill (+39 percent), other intangible assets (+52 percent) and real estate (+55 percent) also increased significantly. In total, fixed assets increased by 42 percent to EUR 90.5 m. Together with the increase in liquidity (+40 percent), other current assets (+44 percent) and inventories (+34 percent), this resulted in a 32 percent increase in total assets to EUR 140.4 m. Thanks to the half-year profit, the issue of new shares (for the SOFiSTiK takeover and for the stock dividend), equity also increased sharply by 30 percent to EUR 66.9 m despite the simultaneous high dividend payment (EUR 10.6 m). Thus, despite the significant increase in the balance sheet total, the equity ratio fell only moderately from 48.3 percent to a still very solid 47.6 percent. The debt position also remains comfortable. Even including the secured real estate loan, the ratio of net financial debt to last year's EBITDA was only 0.7 at the end of June.



Source: Company

Profit targets "comfortably backed"

Against the background of the strong first half of the year, M+M has raised its sales forecast for the current year as we had expected and confirmed its profit targets as "comfortably backed". Accordingly, with sales growth of 20 to 24 percent to EUR 220 to 230 m (previously: 15 to 20 percent to EUR 215 to 220 m), an EBIT increase of 22 to 33 percent to EUR 24 to 26 m and an increase in earnings per share of 25 to 34 percent to 89 to 95 cents are to be achieved, from which M+M intends to pay a dividend of 77 to 83 cents per share if the target is reached. The outlook for the next few years has also been left unchanged, with annual sales growth of 10 to 12 percent, an EBIT increase by EUR 3.5 to 5.0 m p.a., and EPS growth by 18 to 24 cents p.a. On this basis, dividend growth of 15 to 20 cents per year is targeted.

Equity story

Strong market position

M+M has a strong market position in the addressed markets. In the CAM field, the company with its subsidiary Open Mind is one of the pioneers of the 5-axis milling process, holds a technologically leading position and has a broad and globally spread customer and installed base. In the CAD software market, moreover, M+M has been active for more than three decades and is Europe's largest Value Added Reseller for the software of the American CAD pioneer Autodesk. The Bavarians have a comprehensive presence in the DACH area as well as offices in several other European countries and a broad customer and installed base.

New products with high potential

The already good positioning was further improved by the majority takeover of SOFiSTiK. With the new Group subsidiary's strong position in the BIM field and as a specialist for construction software, M+M has decisively expanded its own standing in two high-potential areas. SOFiSTiK's reported very good performance in the first half of the year confirms this assessment.

Distinctive continuity

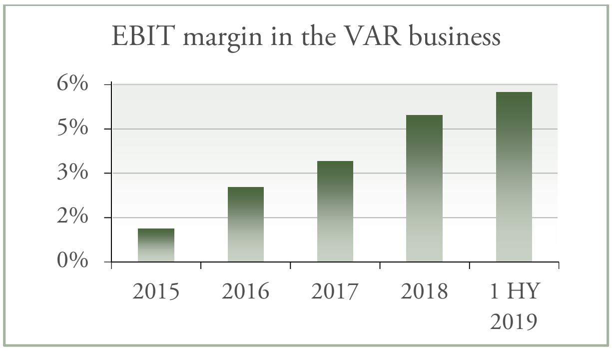
M+M is characterised by an impressive continuity. This is true for the addressed business areas and the pursued strategy, as well as for the persons involved. Despite its more than 30-year history, the company is still led by its founder, Mr. Adi Drotleff, who is also the largest single shareholder with 43.8 percent. But the personnel also shows a strong bond with the company: According to M+M, there is only a low staff turnover, and the second and third management levels are composed of staff members most of whom have been part of the team for more than 15 years.

Smooth generation change

This stable management structure has enabled M+M to prepare and initiate the upcoming generation change at the top of the company already in recent years. By now, according to the company, the process (facilitated by the SE's monistic management structure) has progressed well and so far absolutely without friction.

Conversion of business model successful

The only major change M+M has made in recent years was the conversion of distribution stage from value-added distribution to end-customer sales as a value-added reseller (VAR) initiated in 2009. M+M was able to implement this large-scale change in the business model, involving 20 takeovers in Germany and abroad, without major frictions and largely according to the long-standing schedule. We regard this success as evidence for the expertise of the entire management team and infer from this that the second phase of the transformation – to reach target profitability with the new segment – will be similarly successful. As illustrated in the figure below, M+M has made considerable progress in this respect in recent years.



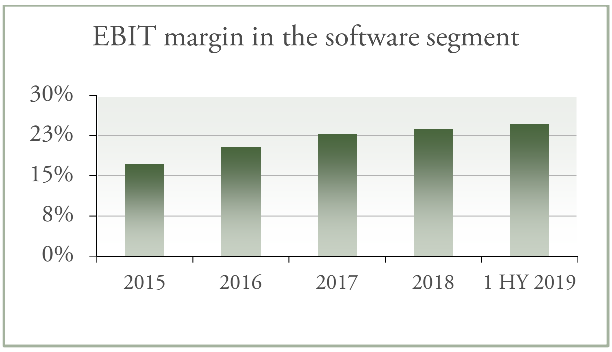
Source: Company

High potential for profit increase

Especially the expected gradual improvement in profitability in the VAR business leads to a considerable profit fantasy. According to M+M, important margin drivers for this continuous improvement are, on the operating level, growth-related economies of scale, a growing number of prefabricated extensions and industry modules and increasing routine of the processes within the new segment. The past four financial years, during which the EBIT margin in the VAR business almost quintupled from 1.1 to 5.0 percent, have already demonstrated that this progress can be achieved. In the first half of 2019, the margin was already 5.7 percent. On this basis, M+M is confident to be able to increase the EBIT margin across the Group to more than 14 percent in the medium term.

Highly profitable software business

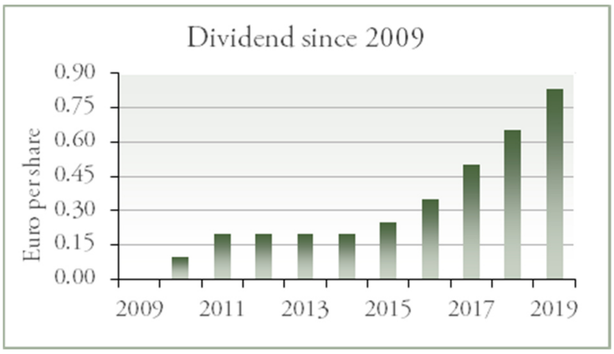
But the already highly profitable software business also offers even further scope for above-average profit increases. The EBIT margin here increased by 3.3 percentage points to 23.7 percent between 2016 and 2018 alone. In addition to the growth-related economies of scale in average overhead costs and development expenses, the market launch of the new eXs product and the strong momentum at SOFiSTiK are currently generating additional margin fantasy, which M+M could further support by the announced slowdown in the segment's personnel growth.



Source : Company, EBIT margin in the software segment

Reliable forecasts

In recent years, M+M has reliably fulfilled its own forecast, achieving especially the announced profit increases. We consider therefore the current forecast, which assumes further profit growth of up to 34 percent for the current year and a steady further increase in profits for the following years, to be very trustworthy at the upper end as well.



Source: Company, 2019: Upper margin of M+M forecast

Attractive dividend policy

M+M converts the profit increase into high dividend growth. After the dividend was kept constant at 20 cents per share between 2011 and 2014, it was increased by 25 percent in 2015 and by 40 percent in each of the following two years. This year's dividend for 2018 amounted to 65 cents per share, 30 percent more than in the previous year. If targets were reached at the upper end of the forecast range, the dividend would increase again this year by around 28 percent to 83 cents per share and would currently correspond to a dividend yield of 2.6 percent. In the current low-interest environment, the M+M share offers thus an attractive dividend yield as well as a comparatively reliable prospect of further increases in dividends over time, which the company puts at 15 to 20 cents per year.

DCF valuation

Growth scenario confirmed

The growth scenario we have assumed, based on the company's guidance that has been very reliable for years, has proved to be the right one so far and we will continue to adhere to it for the coming years. Accordingly, we continue to assume that M+M will succeed in continuously growing and further improving its margins in the next years. Following the presentation of the half-year figures, we have even increased our estimates for the current year.

Sales projection increased

As we had already expected, M+M has raised its own sales forecast for 2019 to between EUR 220 m and EUR 230 m. Although our estimate (EUR 222 m) had already been above the old forecast, we have also adjusted our sales forecast upwards and are now expecting sales of EUR 226 m. By contrast, we have left the growth rates for the coming years unchanged at 10.5 percent p.a., which in combination results in a higher sales projection. By the end of the detailed forecast period in 2026, we calculate now with sales of nearly EUR 455 m.

Margin increase slightly slower

While our estimation is now in the middle of the new company forecast in terms of sales, we expect EBIT to slightly exceed the target range of EUR 24 to 26 m and calculate with EUR 26.2 m. However, the net income estimation (EUR 0.92 per share) lies still within the guidance range. By contrast, we have modelled the margin development for the next few years somewhat more cautiously and have thus reacted to the recently slightly reduced organic dynamics in the software segment. At the end of the detailed forecast period, we now expect an EBIT margin of 14.2 percent and thus remain close to M+M's medium-term forecast (over 14 percent). Previously, we had expected a target margin of 15.4 percent - assuming a higher weight of the software segment. In our opinion, however, the more cautious development of the margin in the detailed forecast period also requires a lower safety discount in determining the terminal value, which is why we have now reduced it to 15 percent and calculate with a "perpetual" EBIT margin of around 12 percent. "Perpetual" growth is left unchanged at 1 percent p.a.

Investments higher

There has also been a major adjustment with regard to this year's investments, which, at EUR 5.9 m, were already well above our previous estimate for the year as a whole in the first half of the year, due to the completion of the new SOFiSTiK headquarters and the acquisition of a customer base. For this reason, we have now significantly increased our estimation of capital expenditure for 2019, which has resulted in changes in depreciation patterns for subsequent years as well. We have also made minor changes to minority interests and the development of working capital. The table on the next page shows the model business development resulting from our assumptions for the years 2019 to 2026; detailed overviews of the estimates for balance sheet, income statement and cash flows statement can be found in the Annex.

Discount rate

We discount the free cash flows resulting from these assumptions with WACC (Weighted Average Cost of Capital) at an interest rate on borrowed capital of 4.0 percent. The cost of equity is determined using the Capital Asset Pricing Model (CAPM). Our risk-free interest rate is – at 2.5 percent – the long-term average value of German current yield, the market risk premium of 5.4 percent is set to an average value adequate for Germany (source: Pablo Fernandez, Javier Aguirreamalloa and Luis Corres: Market risk premium used in 82 countries in 2012: a survey with 7,192 answers). Combined with a beta of 1.2 and a target debt ratio of 40 percent, this results in a WACC rate of 6.5 percent.

m Euro	12 2019	12 2020	12 2021	12 2022	12 2023	12 2024	12 2025	12 2026
Sales	226.0	249.7	275.9	304.9	336.9	372.3	411.4	454.6
Sales growth		10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%
EBIT margin	11.6%	11.7%	12.4%	13.0%	13.9%	14.0%	14.1%	14.2%
EBIT	**26.2**	**29.3**	**34.1**	**39.6**	**46.8**	**52.1**	**58.0**	**64.5**
Tax rate	32.0%	32.0%	32.0%	32.0%	31.5%	31.0%	30.5%	30.5%
Adjusted tax payments	8.4	9.4	10.9	12.7	14.8	16.2	17.7	19.7
NOPAT	**17.8**	**19.9**	**23.2**	**26.9**	**32.1**	**36.0**	**40.3**	**44.8**
+ Depreciation & Amortisation	6.6	9.5	8.2	7.4	5.4	5.3	5.3	5.2
+ Increase long-term accruals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Others	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross operating Cash Flows	24.5	29.5	31.4	34.3	37.4	41.3	45.6	50.0
- Increase Net Working Capital	0.2	0.1	0.1	0.0	0.0	-0.1	-0.2	-0.3
- Investments in fixed assets	-7.1	-2.3	-2.4	-2.5	-2.6	-2.7	-2.9	-3.0
Free Cash Flows	**17.5**	**27.3**	**29.1**	**31.8**	**34.8**	**38.4**	**42.5**	**46.8**

Target price: EUR 37.10 per share

In our favourite scenario (perpetual growth 1.0 percent, WACC 6.5 percent), these assumptions add up to a market value of equity of EUR 625.7 m or EUR 37.12 per share. From this we derive a new price target of EUR 37.10 (previously: EUR 35.80), which signals upward potential of around 18 percent compared to the current price.

Sensitivity analysis	Perpetual cash flows growth				
WACC	**2.0%**	**1.5%**	**1.0%**	**0.5%**	**0.0%**
5.5%	55.62	50.06	45.75	42.31	39.50
6.0%	48.49	44.32	41.00	38.29	36.03
6.5%	42.95	39.74	37.12	34.94	33.09
7.0%	38.53	36.00	33.89	32.11	30.58
7.5%	34.91	32.88	31.16	29.68	28.41

Average estimation risk

In addition to the fundamental fair value calculation, we assess the estimation risk on a scale from 1 point (very low) to 6 points (very high). In the light of a market position stable for years, a long-standing track record and the proven forecast reliability of the management, we think that the predictability of M+M's development is rather good. In our opinion, the greatest uncertainty is still – in spite of the recently achieved progress – the targeted margin improvement in the VAR business. This aspect has considerable impact on our valuation, and the managerial challenge involved is substantial as well. Overall, we think it therefore still reasonable to assume an average estimation risk of 3 points.

Sensitivity analysis

For our sensitivity analysis, we have varied the input parameters WACC and perpetual growth. The calculated fair value lies between EUR 28.41 per share in the most restrictive case (WACC of 7.5 percent and perpetual growth of 0 percent) and EUR 55.62 in the most optimistic case.

Conclusion

Mensch und Maschine has been writing a remarkable success story for years. Its basis is the concentration on CAD and CAM software, which the company skilfully translates into continuous and, above all, increasingly profitable growth. After EBIT has already more than tripled to EUR 19.7 m since the focus on the current business model, M+M intends to achieve a further increase of 22 to 33 percent this year and continue its growth course in subsequent years.

The first half of the year was already successful in this respect: with sales up 27 percent, EBIT rose by 36 percent, bringing the EBIT margin to a new record level of 11.6 percent. On this basis, M+M has raised its sales forecast for 2019 and confirmed its earnings targets as "comfortably backed".

We have raised our estimates slightly as well and now see the fair value at EUR 37.10 per share. This means that the share currently offers attractive upward potential of almost 18 percent, which is why we are upgrading our rating from "Hold" to "Buy". The dividend yield, which we estimate to be 2.6 percent this year, emphasises the attractiveness of the share as well. All the more so as Mensch und Maschine wants to raise the payout, which has already been increased considerably in recent years, by 15 to 20 cents per year in the future.

Annex I: Balance sheet and P&L estimation

Balance sheet estimation

m Euro	12 2018	12 2019	12 2020	12 2021	12 2022	12 2023	12 2024	12 2025	12 2026
ASSETS									
I. Total non-current	63.7	91.8	84.5	78.6	74.8	74.0	73.5	73.1	72.8
1. Intangible assets	42.6	53.1	52.0	51.0	50.1	49.2	48.5	47.8	47.2
2. Tangible assets	13.2	30.7	24.6	19.8	16.8	16.9	17.1	17.4	17.8
II. Total current assets	42.4	60.2	66.6	72.1	83.5	96.7	109.1	122.4	136.4
LIABILITIES									
I. Equity	51.3	78.5	82.7	87.7	94.0	102.4	110.2	118.8	128.1
II. Accruals	10.4	14.0	14.6	15.2	15.8	16.4	17.1	17.7	18.4
III. Liabilities									
1. Long-term liabili-	20.6	24.2	18.2	11.8	10.4	10.4	10.4	10.4	10.4
2. Short-term liabili-	23.8	36.3	36.6	37.0	39.1	42.4	45.9	49.6	53.4
TOTAL	**106.1**	**153.0**	**152.1**	**151.8**	**159.3**	**171.7**	**183.6**	**196.5**	**210.3**

P&L estimation

m Euro	12 2018	12 2019	12 2020	12 2021	12 2022	12 2023	12 2024	12 2025	12 2026
Sales	185.4	226.0	249.7	275.9	304.9	336.9	372.3	411.4	454.6
Gross profit	103.9	127.7	140.3	154.1	170.3	188.2	207.9	229.8	253.9
EBITDA	22.7	32.9	38.9	42.3	47.0	52.2	57.4	63.2	69.7
EBIT	19.7	26.2	29.3	34.1	39.6	46.8	52.1	58.0	64.5
EBT	18.2	25.3	28.2	33.3	39.2	46.6	52.0	58.0	64.6
EAT (before minorities)	12.5	17.2	19.2	22.6	26.6	31.9	35.9	40.3	44.9
EAT	11.7	15.5	17.4	20.6	24.2	29.0	32.7	36.7	40.8
EPS	0.71	0.92	1.03	1.22	1.44	1.72	1.94	2.18	2.42

Annex II: Cash flows estimation and key figures

Cash flows estimation

m Euro	12 2018	12 2019	12 2020	12 2021	12 2022	12 2023	12 2024	12 2025	12 2026
CF operating	15.2	24.0	28.8	30.9	34.0	37.2	41.1	45.4	49.8
CF from investments	-2.4	-7.1	-2.3	-2.4	-2.5	-2.6	-2.7	-2.9	-3.0
CF financing	-11.2	-6.6	-21.7	-24.7	-21.9	-23.5	-28.1	-31.7	-35.5
Liquidity beginning of year.	7.7	9.6	19.8	24.8	28.6	38.2	49.3	59.5	70.3
Liquidity end of year	9.6	19.8	24.8	28.6	38.2	49.3	59.5	70.3	81.6

Key figures

percent	12 2018	12 2019	12 2020	12 2021	12 2022	12 2023	12 2024	12 2025	12 2026
Sales growth	15.3%	21.9%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%
Gross profit growth	9.6%	22.9%	9.9%	9.9%	10.5%	10.5%	10.5%	10.5%	10.5%
Gross margin	56.0%	56.5%	56.2%	55.8%	55.8%	55.8%	55.8%	55.8%	55.8%
EBITDA margin	12.3%	14.5%	15.6%	15.3%	15.4%	15.5%	15.4%	15.4%	15.3%
EBIT margin	10.6%	11.6%	11.7%	12.4%	13.0%	13.9%	14.0%	14.1%	14.2%
EBT margin	9.8%	11.2%	11.3%	12.1%	12.8%	13.8%	14.0%	14.1%	14.2%
Net margin (after minorities)	6.3%	6.9%	6.9%	7.5%	7.9%	8.6%	8.8%	8.9%	9.0%

Disclaimer

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II) Preparation and updating

The present financial analysis was prepared by: Dipl. Volkswirt Dr. Adam Jakubowski

Participants in the preparation of the present financial analysis: -

The present analysis was finished on 06.08.2019 at 8:30 and published on 06.08.2019 at 9:00.

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Date	Rating	Target price	Conflict of interests
02.05.2019	Hold	35.80 Euro	1), 3), 4)
19.02.2019	Buy	35.00 Euro	1), 3), 4)
17.12.2018	Buy	33.70 Euro	1), 3), 4)
23.10.2018	Buy	31.30 Euro	1), 3),
30.07.2018	Buy	30.80 Euro	1), 3), 4)
24.04.2018	Buy	26.70 Euro	1), 3)
19.02.2018	Buy	25.90 Euro	1), 3), 4)
26.10.2017	Hold	21.80 Euro	1), 3), 4)
17.08.2017	Hold	19.80 Euro	1), 3), 4)

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