Combined Management Report for the 2022 Financial Year

About This Report

The management report of Nemetschek SE and the Group management report for the 2022 financial year have been consolidated. The corporate governance declaration in accordance with Section 161 of the German Stock Corporation Act (AktG) is published on the website *ir.nemetschek.com/en/corporate-governance*. The corporate governance declaration can also be found in the chapter *<< To our Shareholders >>*. The consolidated financial statements prepared by Nemetschek as of December 31, 2022 comply with the International Financial Reporting Standards (IFRS), as applicable in the European Union (EU) as of December 31, 2022, as well as with the requirements of the German Commercial Code in conjunction with the German Accounting Standards.

1 Group Principles

1.1 Group Business Model

Organization

The global Nemetschek Group comprises Nemetschek SE and its subsidiaries. The company's history dates back 60 years to its foundation in 1963 by Prof. Georg Nemetschek. Today, the Nemetschek Group is a global provider of software solutions in the AEC/O industry (architecture, engineering, construction, and operation) as well as in the Media segment.

The strategic holding company, Nemetschek SE, is headquartered in Munich, Germany. The company's operating activities are clustered in four segments with a total of 13 brands in 2022 (previous year: 13 brands). The brands are represented by subsidiaries or groups of subsidiaries that operate independently in the market under an overarching group strategy. This group structure reflects the company's philosophy of central management at holding company level and a high degree of entrepreneurial freedom at subsidiary level. The subsidiaries operate as largely independently managed brands in their respective end markets. This enables the individual brands to focus on their respective customers' needs and thus increase the benefits and added value for the customers. Nemetschek SE takes on Group responsibility for the central Group-functions including Corporate Finance & Tax, Controlling, Investor Relations & Communication, Corporate Development & Operations, Mergers & Acquisitions, Start-up & Venture Investments, Human Resources, IT & Business Solutions, Corporate Audit and Corporate Legal & Compliance so as to enable the brands to focus fully on tapping new customer potential.

The corporate structure of the Nemetschek Group, with its portfolio of solutions ensuring a comprehensive end-to-end workflow across the entire construction lifecycle and encompassing solutions for the world of media, is reflected in the reporting structure with its four segments: Design, Build, Manage and Media. An Executive Board member or Segment Manager is assigned to each segment. The close interlocking of the Group holding company and segments also ensures close coordination with the subsidiaries as well as a high degree of management efficiency. To leverage synergies within the Nemetschek Group, the Executive Board members support the coordination of strategic projects between the brands in the respective segment but also cross-segment cooperation between individual brands. As a result, the subsidiaries benefit from synergies at segment and Group level with regard to internationalization, the exchange of best practices, and sales and development activities.

The legal structure of the company is presented in the notes to the consolidated financial statements under item *<< 32 List of Companies in the Nemetschek Group >>*.

Business Activities

The Nemetschek Group offers digital solutions for all disciplines across the entire lifecycle of buildings and infrastructure projects, as well as for all phases in the creation of 2D and 3D digital content in the Media segment.

In the AEC/O segment, the aim of offering networked solutions is to further improve cooperation between the various professional groups in the construction industry and to make this cooperation more efficient. Our broad portfolio comprising graphical, analytical and commercial solutions therefore enables an end-to-end workflow in the lifecycle of construction and infrastructure projects.

The brands are the "experts" and "entrepreneurs" in their specific customer segment, and have a high level of expertise in their respective market segment. Customers include architectural and design offices of all sizes, structural planners, engineers of all disciplines, planning and service providers, construction companies and their suppliers, process controllers and general administrators, as well as property, building and facility managers.

Here, the Nemetschek Group's software solutions meet the requirements of the central working method within the planning, construction and administrative process for buildings known as Building Information Modeling (BIM). BIM, an integral part of the digitalization of the construction industry, is used to digitally record and connect all design, quality, timing and business requirements and data. This information is used to create a virtual, three-dimensional, semantic building model. Time and cost planning aspects are added as fourth and fifth dimensions starting in the simulation phase. BIM therefore helps to identify and correct planning errors as early as the digital planning phase and thus before construction actually begins. This ultimately enables more efficient and resource-conserving construction.

The Nemetschek Group has been following this integrated BIM approach for more than 30 years. Building Information Modeling enables efficient, sustainable and transparent collaboration, improving the workflow for all those involved throughout the entire planning and building process and subsequent use phase of a property or infrastructure project. Data generated via BIM throughout the entire construction process also form the basis for a digital twin – a digital image of a building that is created during the planning phase and continuously enriched with updated information throughout the entire building lifecycle, e.g. on the building construction, the building physics and energetic behavior and the building use. This allows forecasts to be made about changes to the building itself or its use. Ideally, the digital-physical connection is bidirectional. That means that the digital twin can cause changes in the physical object, and these changes are registered in the virtual copy. As a result, information and implications from each phase of a building's lifecycle – whether related to cost, durability, or user experience – can be applied to other phases. Ultimately, these insights can help architects, engineers and building managers design and operate efficient and sustainable buildings. This accumulation of data, also in conjunction with artificial intelligence (AI), is called Building Lifecycle Intelligence (BLI).

The Nemetschek Group also develops and promotes OPEN BIM solutions and workflows to enable seamless and open cooperation between the various disciplines in the construction industry – regardless of their choice of software. The OPEN BIM standard also makes it possible for the Nemetschek Group's software solutions to communicate seamlessly with competitors' software solutions via open standards for data and communication interfaces (e.g. IFC from buildingSMART). This allows the seamless transfer and documentation of all information, data, and digital models relevant to construction throughout the building's entire creation and operational cycle. Nemetschek is thus making a key contribution to further establishing this digital method of working as a standard in the AEC/O industry.

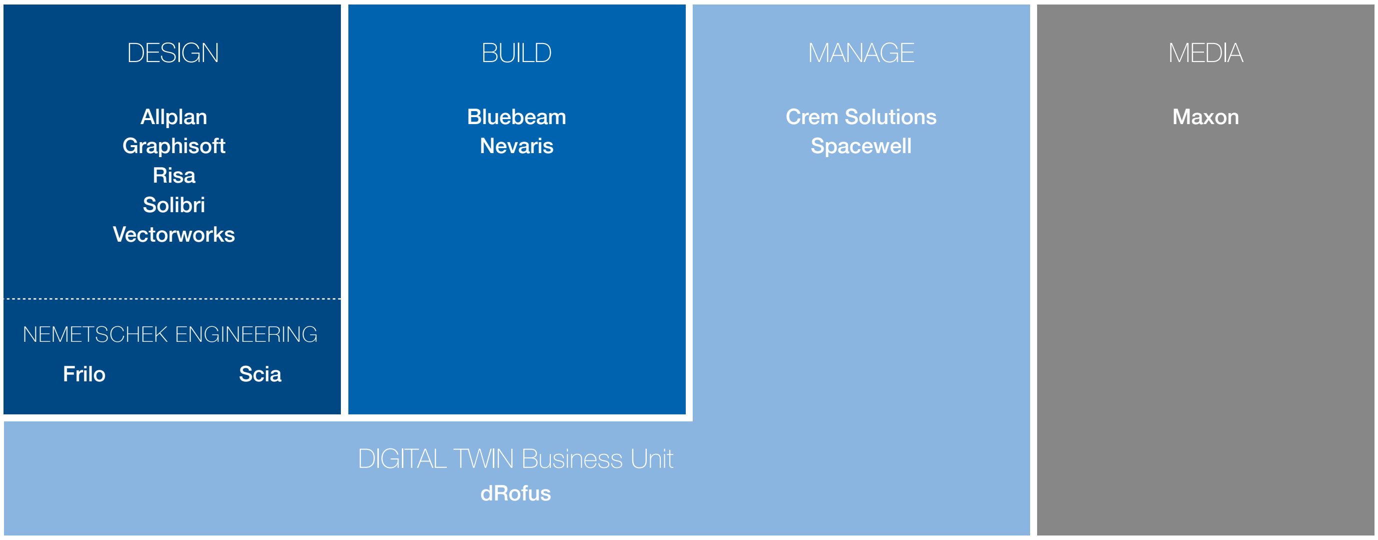
In view of sustainability, the Nemetschek Group's software solutions also contribute to more resource-efficient planning and construction and subsequently more efficient operation across the entire lifecycle of buildings and infrastructure projects. Detailed documentation also enables efficient operation across the entire lifecycle – for example, a structure can thus be efficiently rebuilt and renovated years after completion.

For creative and accurate planning and implementation along the building lifecycle, 3D visualizations are of great importance. Visual effects create a realistic presentation for the owner, property developer or building contractor. With the Nemetschek Group solutions, planners and architects can quickly, easily and precisely create 3D models from drawings and make more informed decisions based on the exact structural or dynamic visualizations. At the same time, the Nemetschek Group with its Media segment is also a provider in the field of 3D animation solutions. The Nemetschek Group thus supports artists in optimizing their creative workflows, e.g. through 3D modeling, simulation and animation, tools for editing, motion design, and film production as well as rendering solutions for high-end productions. Our professional solutions for producing 2D and 3D digital content are used to create and render visual effects in feature films, TV shows and commercials, as well as for applications in the gaming industry and for applications in the areas of medical illustration, architecture and industrial design. Since the end of 2021, the Nemetschek Group portfolio has also integrated the US-based company Pixologic, Inc. with its solution ZBrush, an Oscar-winning sculpting and painting software used by renowned film studios, game developers, designers, advertisers, and illustrators worldwide.

Segments

The Nemetschek Group total of 13 brands are divided among the four segments of Design, Build, Manage and Media according to their respective focus on specific end markets and customer groups. In the 2022 financial year, there were changes in the segment structure aimed at further harmonizing the portfolio. For this purpose, the Frilo and Scia brands in the Design segment were merged into one competence center (Nemetschek Engineering). However, the product brands have been preserved as part of the new alliance. The aim of this alliance is to offer a comprehensive overall package of software solutions with static presentation and calculation options to further optimize interoperability and to serve customers from a single source. In addition, a new "Digital Twin" business unit was created to act as a horizontal binding element between the segments in the AEC/O industry. Our dRofus brand, which was still allocated to the Build segment in the year under review, is assigned to the Digital Twin business unit and consolidated in the Manage segment as of January 1, 2023. With its data management and BIM collaboration solutions for supporting workflows and providing building information throughout the entire building lifecycle, dRofus has the expertise to cover the complete AEC/O lifecycle and thus acts as a binding element linking the different segments.

The segments are responsible for implementing the Nemetschek Group's operating activities in accordance with the objectives and strategic framework specified by the Group holding company.



Design Segment
The individual brands within the Design segment target a broad range of different specialist areas within architecture, design and engineering disciplines. In terms of revenue contribution, the key brands in the Design segment are Graphisoft, Allplan and Vectorworks.

Major customer groups include architects; designers; engineers from all disciplines, including structural engineers; specialist planners and landscape designers; as well as owners and general contractors. The solutions offered enable customers to carry out their tasks across all phases, from planning and design right up to factory and construction planning. In particular, the portfolio features OPEN BIM solutions for computer-aided design (CAD) and computer-aided engineering (CAE), which are used in 2D and 3D building design and imaging. These are complemented by BIM-based solutions for quality assurance and control and to avoid errors and conflicts during the planning and construction phase.

The integration of the SDS/2 brand into Allplan initiated in 2021 as part of the ongoing process of consolidation within the segments was successfully completed. The merger with SDS/2, a provider of software solutions for detailed steel construction planning, further strengthened Allplan's position as an expert in platform-based BIM solutions for building lifecycles. In addition, the merger of the Graphisoft and Data Design Systems brands, which was instigated in the previous year, was completed during the year of review as planned. Combining technology and expertise from Graphisoft – a global provider of BIM software solutions for architecture and Data Design System – the planning software specialist for technical building installations – has expanded the offerings and expertise of both companies worldwide for their customers. Since mid-2022, the Frilo and Scia brands have been joining forces in the competence center Nemetschek Engineering.

Build Segment
In the Build segment, the Nemetschek Group offers integrated complete 5D BIM solutions from the bidding and award phase to invoicing, budgeting, scheduling and cost calculation. This also includes commercial ERP (Enterprise Resource Planning) solutions for construction-related accounting from the Nevaris brand as well as PDF-based and, in part, cloud-based workflow solutions for digital work processes, collaboration and documentation from the US-based subsidiary Bluebeam brand – which was once again the Nemetschek Group's strongest brand in terms of revenues in 2022.

The Build segment's customers include construction companies, developers and building suppliers, as well as general contractors, planning offices, architects, and civil engineers.

Manage Segment
The Manage segment rounds out the Nemetschek Group's range of solutions for all disciplines across the entire lifecycle of buildings and infrastructure projects. The Group's smallest business segment in terms of revenues bundles its competencies in the field of facility management and professional property management. Key customers include property managers, facility managers, globally active property companies, banks, and insurance companies.

The segment's two brands – Spacewell and Crem Solutions – offer software solutions across all commercial processes in property management as well as modular and integrated solutions for property, facility and workplace management (IWMS, integrated workplace management system). The portfolio also includes a smart building platform that uses intelligent sensors and big data analysis to help improve productivity and efficiency in the operation and management of buildings. These are complemented by artificial intelligence-based energy management solutions for optimizing the use of energy in buildings and reducing CO_2 emissions.

Media Segment

With the Maxon brand, the Media segment primarily targets customers from the international media and entertainment industry in addition to architects and designers. These include film and television studios, advertising agencies, the video games industry, product and graphic designers, and creative freelancers.

Maxon is a provider of professional solutions across all phases of a creative project. Its product portfolio includes 3D modeling, painting, animation, sculpting and rendering solutions for the creative industry. All over the world, creative professionals from a wide range of fields use the solutions to create 3D motion graphics, architectural or product visualizations, graphics for computer games, medical illustrations, industrial design, visual effects, and much more.

Maxon's product portfolio helps artists and creative professionals optimize their workflows as part of content design. The Maxon ONE product suite, which unites all Maxon products, includes the Cinema 4D suite for 3D modeling, simulation and animation; the integrated Red Giant product range with tools for editing, motion design and film production; the sculpting and painting solution ZBrush; and the Redshift rendering solutions for high-end production. The Forger sculpting app for 3D modeling on mobile devices rounds off Maxon's comprehensive product range.

The key figures of the four segments are detailed under << 3.3 Results of Operations, Financial Position and Net Assets of the Nemetschek Group >>.

Locations

Nemetschek SE is headquartered in Munich, Germany. The Nemetschek Group brands develop and market their solutions worldwide from a total of 82 locations (previous year: 81).

NEMETSCHEK LOCATIONS WORLDWIDE

Growth Drivers, Market and Competition

Growth Drivers

The macroeconomic impacts of the current global crises and geopolitical tensions are also affecting the global construction industry, which may slow down the industry's growth pace – at least in the short term. Nevertheless, the long-term structural growth drivers of the global construction industry are still ticking over, which means there is potential for a new, lasting phase of growth in the future. As in the previous year it remains to be stated: The growing world population, increasing urbanization and the associated rising demand for housing are key growth drivers of the industry. The construction industry already generates around 13% of global GDP. By 2030, the construction industry market is expected to grow by 42% to around EUR 13 trillion.

On top of that, there is the ongoing and increasingly dynamic transformation towards a more sustainable world, which requires extensive investment in infrastructure and the energy-efficient refurbishment of buildings, among other things. At present, 36% of annual global energy consumption is attributable to the construction and operation of buildings. In view of this, there is growing demand for efficiency, quality and sustainability in the construction industry.

Another key growth driver remains the digital transformation of the construction industry, which is far less advanced than just about all other key industries, such as the automotive industry. This means the construction industry has a significant need to catch up when it comes to the use of digital technologies. This represents great market potential for Nemetschek. IT expenditure in the construction industry is expected to increase by around 13% annually in the next few years. The impact of the global Covid-19 pandemic and the macroeconomic repercussions of Russia's war of aggression against Ukraine, as well as the sharp increase in remote working, supply chain disruptions, and significant increases in the price of energy and materials, have highlighted the need for and benefits of digital solutions and have accelerated digital transformation, including in the construction industry. Optimizing collaboration between everyone involved in a construction project through systematic digitalization will offer the industry great potential to increase efficiency moving forward by shortening construction times, improving quality and lowering costs.

The Nemetschek Group benefits from several, long-term, structural growth drivers in its three core segments of the AEC/O industry:

- Digitalization in the construction industry is still at a low level compared with other industries. Two factors that are becoming increasingly important include catch-up effects and the increased investment in industry-specific software solutions that control processes more efficiently and therefore increase quality and reduce costs and time spent. The repercussions of the current crises have demonstrated that once again.
- State regulations that require or make the use of BIM software mandatory for state-financed construction projects continue to pave the way for further growth of the Nemetschek Group worldwide. Alongside the USA, the UK and the Scandinavian countries are particular pioneers in Europe when it comes to the introduction of BIM regulations and the use of BIM-enabled software solutions.
- The increasing use of software over the entire building lifecycle is required by the BIM regulations so that a model-based and continuous workflow may be achieved. The Nemetschek Group brings its solutions to all phases of the construction lifecycle and meets the requirements of an integrated workflow, starting with the transition from 2D software solutions to model-based 3D BIM solutions – including on what are termed digital twins –, to the increased use of solutions for cost and time calculation and collaboration to products for the efficient use and management of buildings.
- Furthermore, sustainability and environmental protection are becoming increasingly important in the planning, construction and operation of buildings. This is particularly true for the construction sector, as buildings and the construction industry are responsible for 40% of global CO_2 emissions. A more energy- and resource-efficient way of working throughout the entire construction process, including the subsequent use phase, is therefore a key factor in achieving the climate targets set by policy makers (e.g. European Green Deal). Intelligent BIM software solutions for more sustainable and resource-conserving construction, as well as more efficient building operation, form an essential foundation for this.

Overall, the digital transformation in the AEC/O market will – despite or rather because of the current macroeconomic situation – continue to lead to strong demand for solutions that enable a digital workflow in the various disciplines of the Design, Build and Manage segments. These market conditions provide the Nemetschek Group with a strong framework for its long-term growth ambition. It should be noted that the degree of digitalization and the above-mentioned drivers have different effects on the respective segments. In the Design segment, the markets are already being penetrated more strongly by software solutions. Here, the Nemetschek Group sees the transformation from 2D to 3D solutions as a key driver in the coming years. In the Build and Manage segments, digitalization is far less advanced than in the Design segment, which means that investments in software solutions are likely to drive the market more strongly.

Sources: 2022 Global Status Report For Buildings And Construction; McKinsey (October 2020) – Rise of the platform era; Oxford Economics (September 2021) – Future of Construction.

The media and entertainment industries are also characterized by high growth and steadily increasing demand for digital content. In addition, the change in usage behavior has again accelerated significantly, with an increasing shift to digital due in part to the global Covid-19 pandemic.

This is reflected in the continued positive development of digital application areas, for example in the field of Internet video, streaming models, video games, e-sports, and AR and VR. This trend is also reflected in the revenue figures for the German media industry: Although non-digital segments continued to generate the lion's share of the industry's total revenue, namely EUR 36.7 billion in 2020, the digital segment once again grew much more strongly and now accounts for EUR 18.7 billion.

The following trends and developments are also currently visible worldwide: The production of films, series and TV shows is becoming increasingly digital – and is relying to a greater extent on more sophisticated digital solutions to create special effects, animations and much more. The advertising industry is also shifting towards more personalized and digital advertising. This underscores the need for digital solutions that enable more efficient and targeted production of commercials – to better reach the relevant target groups as well as to enable adaptation to new, mobile formats. One of the strongest growth drivers, the video games industry, will become one of the largest markets by 2026 – in part due to the younger generation, which has grown up with digital tools and has been familiar with consuming digital content, such as video games, since childhood.

The next major technological paradigm shift – the metaverse – is taking on more and more concrete form. In the metaverse, users can access immersive virtual experiences using a VR headset or other connecting device. Initial applications for the metaverse are already available now. In the future, the metaverse could be an astonishingly realistic world. The implications of this open and virtual digital world are enormous for businesses, especially entertainment and media companies.

Sources: https://www.pwc.de/de/technologie-medien-und-telekommunikation/gemo/2021/german-entertainment-media-outlook-2021-2025-summary.pdf; https://www.pwc.com/gx/en/industries/tmt/media/outlook/outlook-perspectives.html, https://www.tagesschau.de/wirtschaft/unternehmen/facebook-umbennung-meta-103.html.

Market and Competition

The Nemetschek Group is a global player in the AEC/O software market. In 2022, the global AEC/O software market amounted to almost EUR 19 billion. Based on external market data and internal analyses, the Nemetschek Group assumes that the market will grow annually by an average of almost 11% to a volume of around EUR 28 billion in 2026.

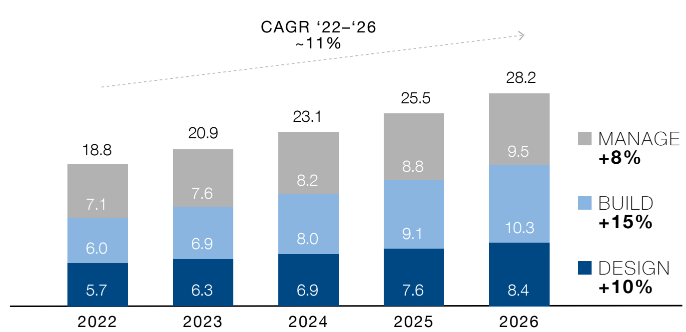
The Design market segment has a historically higher degree of maturity compared to Build and Manage, as digitalization in this area was promoted earlier than in the two other market segments. The Design market segment is expected to grow from around EUR 5.7 billion in 2022 to around EUR 8.4 billion in 2026. This leads to an average market growth rate of around 10% for the period 2022-2026, with the Asia/Pacific and Americas regions offering the greatest growth potential in the coming years.

The Build segment's underlying market is expected to grow from around EUR 6 billion in 2022 to an anticipated EUR 10 billion in 2026, corresponding to an anticipated average annual growth rate of around 15%. In this market segment, too, above-average growth potential is seen for the Asia/Pacific and Americas regions.

In 2022, the market volume in the Manage segment amounted to around EUR 7 billion. By 2026, this market segment is expected to grow by around 8% per year to almost EUR 10 billion. The Americas is the largest regional market, but slightly above-average market growth is expected for the Asia/Pacific region.

GLOBAL AEC/O SOFTWARE MARKET

End-user expenditure in EUR billion



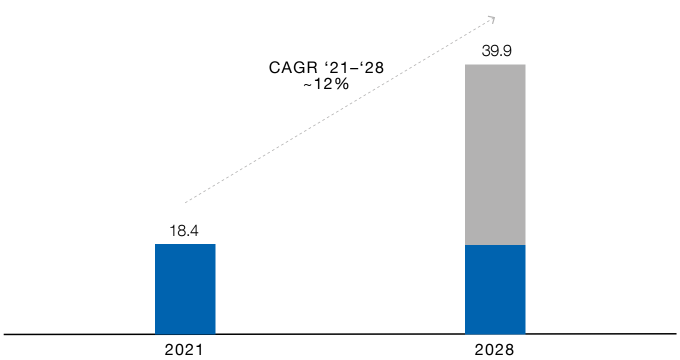
* Compound Annual Growth Rate.
Sources: Cambashi Q3 2022; Verdantix; Nemetschek Research.

The AEC/O software industry can be described as a highly fragmented competitive environment. Therefore, depending on the segment and region, the Nemetschek Group faces competition from different companies. Despite the period of market consolidation that has been ongoing for years now, the market continues to be influenced by a large number of small, local companies. By contrast, the Nemetschek Group is one of the few global companies actively shaping the process of consolidation through acquisitions. The main competitors in the AEC/O segment are in particular US-based companies such as Autodesk, Trimble, Bentley, Procore, and Oracle.

In the Media segment, the Nemetschek Group addresses the global 3D animation market, which is characterized by structurally high growth rates and potential. The market volume is estimated at around USD 18 billion in 2021, with even higher growth momentum anticipated in the coming years compared to the AEC/O software industry. The market volume is expected to grow to around USD 40 billion by 2028. That equates to average growth of around 12% per annum and thus higher than the anticipated market growth rate for the AEC/O software industry. The current high and expected further increase in demand for high-quality content and animations by creative professionals, as well as the increasing use of visual effects (VFX) in films, videos and the gaming industry, are some of the most important growth factors. Moreover, increasing integration of artificial intelligence (AI) in 3D animation is expected to give an added boost to market growth. In addition, the proliferation of VFX in the entertainment industry and the trend of using VFX in advertising and infomercials to showcase products with 3D elements is driving the growth of the 3D animation market. The main competitors in the Media market segment include Autodesk, The Foundry, Side FX, Adobe, MAGIX, and LumaFusion.

GLOBAL 3D-ANIMATION MARKET

in EUR billion



Source: https://www.researchandmarkets.com/reports/4452097.

1.2 Targets and Strategy

The strategic positioning of the Nemetschek Group is based on three key characteristics. These three characteristics apply to the medium term and form the basis of the company’s strategic approach:

#1: With its software solutions, the Nemetschek Group supports **digitalization** along the entire construction lifecycle – from the planning and construction and operation/renovation phase to the demolition of buildings. This strategically integrated approach makes it possible to bundle and focus investments and expertise on the customer-oriented segments and thus offer end-to-end support for customers in the building lifecycle. At the same time, the Nemetschek Group’s solutions enable the workflow in the construction lifecycle to be improved and greater efficiency to be achieved, particularly in the use of construction materials and in the management of building sites thanks to their end-to-end approach. Added to this are digital solutions for visualizations, 3D modeling and animation, which, in particular, find a market in the media and entertainment industry as well as the construction industry. Here, too, the Nemetschek Group’s solutions cover the entire content creation workflow and thus address the entire creative content production process.

#2: With four segments under the umbrella of a strategic holding company, the **Group structure** enables the Nemetschek Group to bundle the competencies of its 13 brands in the best possible way in its customer-oriented segments of the AEC/O industry and in the Media area. This structure is intended to increase the benefits and added value for the customer. The focus here is on the further integration and stronger cooperation of several brands under the roof of the Nemetschek Group, which allows it to offer an integrated and more networked range of solutions. This has already been accomplished in the Media segment. Here, the Maxon brand, which has fully integrated all acquisitions made to date, offers a comprehensive range of solutions for the complete workflow of creative professionals. In the AEC/O segment, the aim is to further improve cooperation between the various professional groups in the construction industry and to make this cooperation more efficient. In addition, the bundled offerings are intended to address and win over the customer group of (multinational) key accounts in particular in an even more targeted manner. The brands are “experts” in their specific customer segment and have a high level of expertise and very close customer relationships in their respective market segment. This segment and brand approach ensures that market changes can be quickly identified, analyzed and evaluated and that customer requirements can be responded to promptly. At the same time, the Nemetschek Group benefits from synergies at segment and Group level with regard to internationalization and sales strategies, the exchange and sharing of best practices, and development activities.

The **Design** segment pursues the strategy of providing a broad and integrated range of services to the respective customer segment. A strategic component here is bringing together brands with a common customer base. This offers the opportunity to exploit synergies between the brands and create further added value for customers by bundling competencies, expertise and technologies.

In areas where we consider integration or bundling effects to be very advantageous, we have also merged group brands in recent years. For instance, the aim of last year’s merger of the Graphisoft and Data Design System brands is to further expand their range of integrated, multidisciplinary planning solutions. The step-by-step implementation of the merger of the Allplan brand with Precast Software Engineering (which was accomplished in 2021) and the SDS/2 brand (which was accomplished in 2022) brings together knowledge, expertise and technology to enable a seamless and integrated BIM workflow to be mapped from planning through to production and construction. In this process, the platform-based BIM solution takes “buildability” into account right from the start to