

Information on the detailed development of the Nemetschek Group and its segments in the 2020 financial year and in comparison to the previous year can be found under [« 3.3. Results of Operations, Financial Position and Net Assets of the Nemetschek Group »](#). In addition, a comparison of current and forecast business development can be found under [« 4. Comparison of Actual and Forecast Business Performance of the Nemetschek Group »](#).

1.4 Research and Development

Research and development are a high priority for Nemetschek. Around a quarter of Group revenue is regularly invested in research and development and thus in new and further developments of the solution portfolio.

Research and development activities are aimed at further expanding the Nemetschek Group's innovative strength in the AEC/O market, and identifying and addressing technological trends at an early stage. Proximity to and cooperation with customers is a key component of this. Ideas and potential for improvement are identified during discussions with customers and then evaluated by the brands in the respective segments.

In addition, there are cross-brand development projects in the respective segments designed to leverage synergies, address new customer segments and expand the portfolio. Key strategic and cross-brand projects are managed by the respective Segment Manager and developed further in cooperation with the brands. In foreign markets, adapting solutions to national standards and regulations remains important.

All brands focusing on the AEC/O markets contribute to the Open BIM approach with their solutions and support open interfaces to promote the exchange of information and data along the construction process value chain. Together with partners in the global buildingSMART initiative promoting the further development and standardization of open exchange standards – also software solutions from external companies – in BIM projects Nemetschek is involved in the further development and implementation of corresponding standards, in particular the Industry Foundation Classes (IFC). IFC is a manufacturer-independent, freely available and particularly powerful format for the exchange of 3D component-oriented design data in the construction industry. The brand companies are continuously working to improve and certify their interfaces for seamless exchange with other Open BIM solutions. In addition, the brand companies are working on the development of collaborative additional functions, such as tracing which project participant has received, read, possibly changed or already released which detailed information and when.

Innovation focus

All brands are continually developing their solutions. In their respective segments, the brands have focused on issues such as improving the user-friendliness of their solutions, process optimizations and integrated interfaces and connections for a smooth Open BIM workflow. The focus in the year under review was also on improvements aimed at minimizing the time required, increasing efficiency and productivity in the planning and construction process, and optimizing workflows.

In addition, cross-brand developments were brought to market maturity. These include the integrated workflow solutions Integrated and Federated Design. Integrated Design enables architects, structural engineers and engineers for mechanical, electrical and plumbing systems (company technicians) to collaborate agilely in a central model for the first time and exchange all essential project information in real time. Federated Design, on the other hand, enables engineers and structural designers to be part of the BIM workflow right at the start of a project. For example, the structural model automatically generates structural analysis models, which leads to considerable time savings while also increasing quality.

In the development of new solutions and the further development of proven ones, internal resources were mainly used, while the services of third parties were used only to a small extent. 87% of the expenses are attributable to internal R&D staff and 13% to external staff.

The fact that around a quarter of Group revenue is regularly invested in product and process innovations underlines the high importance of this area for the Nemetschek Group, as does the fact that around 38% (previous year: 40%) of employees work in this area.

In the 2020 financial year, EUR 142.0 million (previous year: EUR 133.3 million) was invested in research and development. This corresponds to an unchanged high R&D intensity (share of Group revenue) of 23.8% (previous year: 23.9%).