Media Release

December 13, 2022

BIM-Monitor 2022/23: Is Germany Ready for Digitization in Construction?

For the last two years, BIM has already been mandatory for public infrastructure projects and, from the end of the year, this obligation will also apply to buildings commissioned by the national government. © eyetronic - Fotolia

Düsseldorf/Stuttgart, Germany, December 13, 2022. The German government is promoting digital transformation as a way to reduce expensive planning errors and delays in the construction process. The Building Information Modeling planning method (short form: *BIM*) aims to ensure maximum transparency and planning certainty. For the last two years, BIM has already been mandatory for public infrastructure projects and, from the end of the year, this obligation will also apply to buildings commissioned by the national government. However, in spite of this requirement, a large proportion of architectural bureaus, engineering offices, contractors and installation companies still do not use the digital planning method. The reasons for this are investigated in the BIM Monitor 2022 published by the Düsseldorf-based market data specialist BauInfoConsult. For this report, over 300 companies were contacted by phone and asked about their experience and their opinions on the subject of BIM. The Monitor provides valid results which André Friedel, BIM expert at the construction and real estate specialist Drees & Sommer SE, comments on, based on the corporate experience gained in over 400 BIM construction projects.

Alexander Faust, market analyst at BauInfoConsult, summarizes the results of this year's data collection as follows: 'The results clearly show that BIM has a good reputation in the industry, but that all too often its full potential is still not exploited,': Of the 300 respondents, only one in five

Barbara Wiesneth
Head of Media and Public Relations
phone +49 (0)711 1317 2411 ▪ mobile +49 (0)172 7995752
barbara.wiesneth@dreso.com

Regina Schmalz
Media and Public Relations Manager
phone +49 (0)711 1317-1336▪ mobile +49 (0)172 7690404
regina.schmalz@dreso.com

Media Release

December 13, 2022

users from planning companies with five or more employees and from construction and trade contractors with ten or more employees have experience of BIM – so only 20 percent currently work actively with BIM. 'But the advantages are obvious. BIM is a method of networked collaboration which brings together all relevant data in a digital model, which acts as the building's *digital twin*. All major parties to the construction process work with models, so the information captured in BIM is then available to everyone. If a planner changes the building's floor plan, for example, the other project participants can then directly adapt their specialist planning. And if the designs no longer fit together, these collisions are not left hidden until they surprise everyone during the construction process, leading to expensive delays,' explains Alexander Faust.

BIM is currently mandatory in infrastructure projects carried out for the national government and, from the end of 2022, it will also be compulsory in buildings constructed for the national government. Since January 1, 2021, Germany has also had a BIM obligation for the procurement of public contracts. Building with the support of BIM is much more advanced in Scandinavia, the USA, Canada, the Netherlands and Austria.

But why are participants in the German market still so hesitant, and what could help to promote the adoption of BIM? The figures in the BIM Monitor 2022/23 clearly show that the present users of BIM use it because clients demand it (36 percent), and to ensure that they can remain competitive (30 percent) or optimize their internal processes (30 percent).

Demanded by clients/customers	36 %
To be competitive in the future	30 %
To optimize internal processes	30 %
To optimize construction processes	25 %
Due to pressure of the market	21 %
To optimize collaboration between trades/project participants	15 %
USP of companies	13 %
Cost optimization/avoidance of cost due to errors	6 %
Political pressure/legal requirements	4 %
Because other market participants are using it in their projects	4 %
Other	2 %
Do not now / no answer	2 %
Source: BauInfoConsult	

Fig. 1.6 – BIM users: reasons for introducing BIM (as a percentage, n = 53)

Drees & Sommer's BIM specialist, André Friedel, explains that the results show a clear interaction between push and pull factors: 'Market demand and the need to remain competitive are driving the

Barbara Wiesneth
Head of Media and Public Relations
phone +49 (0)711 1317 2411 ▪ mobile +49 (0)172 7995752
barbara.wiesneth@dreso.com

Regina Schmalz
Media and Public Relations Manager
phone +49 (0)711 1317-1336▪ mobile +49 (0)172 7690404
regina.schmalz@dreso.com

Media Release

December 13, 2022

change. The optimization of internal processes and building procedures are then the natural consequence, but they almost seem to be an incidental benefit.‘

Clients Must Systematically Demand BIM

At present, the demand and capacity crisis in the construction industry seems to inhibit the progress of BIM,‘ says also Alexander Faust. But he assumes that when market demand recovers, the use of BIM in working practice will increase again. This is also supported by the figures:

32 percent of the non-users of BIM say that they would introduce BIM if the method is requested by the client – partly to remain competitive in the future (20 percent), partly in response to the general pressure of the market (20 percent). 21 percent of the respondents agree that BIM leads to an optimization of the construction process.

Demanded by clients/customers	32 %
To optimize internal processes	21 %
To be competitive in the future	20 %
Due to pressure of the market	20 %
To optimize internal processes	14 %
Political pressure/legal requirements	11 %
Because other market participants are using it in their projects	11 %
To optimize collaboration between trades/project participants	10 %
Cost optimization/avoidance of cost due to errors	6 %
USP of companies	3 %
Technology will be ready by then	2 %
Other	1 %
Do not now / no answer	2 %
Source: BauInfoConsult 2022	

Fig. 1.11 – non-BIM users who intent to use BIM in future: reasons for planned introduction of BIM (as a percentage, n = 157)

The advantages of BIM are especially considered to be improved quality, efficiency and cooperation in projects. The hindrances that are mentioned include the necessary investment and also the complexity of the topic, which leads to an increase in the need for personnel training.

In fact, the greatest obstacles to the introduction of BIM no longer relate to the necessary technical resources. The larger problem consists of the required changes in operational processes and the

Barbara Wiesneth
Head of Media and Public Relations
phone +49 (0)711 1317 2411 ▪ mobile +49 (0)172 7995752
barbara.wiesneth@dreso.com

Regina Schmalz
Media and Public Relations Manager
phone +49 (0)711 1317-1336▪ mobile +49 (0)172 7690404
regina.schmalz@dreso.com

Media Release

December 13, 2022

tasks of the personnel. In the estimated or planned costs of BIM, the investments in software and hardware are significantly less than the cost of personnel training.

Is the Cost of BIM Training a Deterrent?

Almost half of the respondents (47 percent) plan to invest in comprehensive BIM training for their staff in the near future. Drees & Sommer's BIM expert, André Friedel, who implements BIM as a method in many projects and organizations, confirms this trend from his own experience: 'It is true: the largest investment is the training and development of the staff. Our experience in the strategic implementation of digital BIM processes shows that in addition to the intensive training of the employees before the project starts, the provision of technical support for at least the first pilot project is very effective. In our opinion, this investment is worthwhile in the long term for both the company and its employees.'

Further exciting results of the BIM Monitor:

1. Every fifth company works with BIM in its projects, and the average proportion of company turnover which is achieved with BIM is 31.8 percent.
2. On average, the construction process is accompanied by a *digital twin* in 41.5 percent of BIM projects.
3. 32 percent of companies in the construction industry wish to receive training in the use of BIM from the manufacturers. The demand for training is even greater for the specific users of BIM.
4. Compared with 2017 and 2019, the importance of manufacturer websites in the search for manufacturer-specific BIM projects has grown considerably.
5. Open BIM is expected on average in 59 percent of the projects covered by the BIM users. Manufacturers should be prepared for this when they prepare their models.

The figures in this year's study show that BIM is known in the industry and its advantages are recognized – but the uncertain market situation seems to inhibit a more widespread use of the

Barbara Wiesneth
Head of Media and Public Relations
phone +49 (0)711 1317 2411 ▪ mobile +49 (0)172 7995752
barbara.wiesneth@dreso.com

Regina Schmalz
Media and Public Relations Manager
phone +49 (0)711 1317-1336▪ mobile +49 (0)172 7690404
regina.schmalz@dreso.com

Media Release

December 13, 2022

method. The use of BIM is especially encouraged by architects and the manufacturers of BIM-capable software.

On the client side, familiarity with BIM is highest among public sector clients, followed by commercial clients. So BIM is ready to go – and the construction industry is simply waiting for more favorable future prospects to enable it to join in.

About the study

The monitoring study *BIM Monitor 2022/23: Trends and Development* shows the current status and the potential of the BIM market penetration in Germany. To compile the *BIM Monitor 2022/23* report, the planning and consulting company Drees & Sommer and the Düsseldorf-based market research company BauInfoConsult cooperated to offer the readers their two supplementary perspectives. On the basis of selected survey results, André Friedel, the specialist responsible for BIM in the building performance project management at Drees & Sommer, takes the figures obtained by BauInfoConsult and supplements the statistics with market factors.

Then the data from the last surveys (2017-2019) are compared with the current results and the development is shown. The study then investigates the demands which are especially placed on building material manufacturers and (software) service providers in relation to BIM. It also examines how often the potential of BIM is utilized in practice in relation to features such as:

- integral planning/*digital twins*;
- 3D visualization to check for collisions between parts of the project;
- BIM monitoring even beyond the overall life cycle.

The complete study with all data can be purchased from BauInfoConsult. Please visit the company's website at: www.bauinfoconsult.de

About BauInfoConsult:

Düsseldorf-based BauInfoConsult has been active since 2007 as a market data specialist for the construction and installation industry. The company's roots go back to Rotterdam, where the USP Marketing Consultancy and its subsidiaries worked from 1992 as specialists serving the construction, installation and real estate sector. BauInfoConsult constantly analyzes market data and information about the German construction industry, and on the basis of its own market surveys it

Barbara Wiesneth
Head of Media and Public Relations
phone +49 (0)711 1317 2411 ▪ mobile +49 (0)172 7995752
barbara.wiesneth@dreso.com

Regina Schmalz
Media and Public Relations Manager
phone +49 (0)711 1317-1336▪ mobile +49 (0)172 7690404
regina.schmalz@dreso.com

Media Release

December 13, 2022

compiles analyses and forecasts on current building trends and developments which can then be used as a basis for decisions with a relevance to the market.

About Drees & Sommer: Your Innovative Partner for Consulting, Planning, Construction and Operation:

As the leading international planning and consulting enterprise with headquarters in the German city of Stuttgart, Drees & Sommer SE has worked with private and public clients from construction bodies to investors on all types of real estate and infrastructure projects – both analog and digital – for more than 50 years. With its pioneering and future-shaping consulting, the company offers solutions for successful buildings, high-return portfolios, powerful infrastructure and livable cities. Around 4,500 employees in interdisciplinary teams based at 51 locations worldwide support clients across a wide spectrum of sectors. All the services provided by the partner-run company take into consideration both economic and ecological concerns. Drees & Sommer calls this holistic approach 'the blue way'.

Barbara Wiesneth
Head of Media and Public Relations
phone +49 (0)711 1317 2411 ▪ mobile +49 (0)172 7995752
barbara.wiesneth@dreso.com

Regina Schmalz
Media and Public Relations Manager
phone +49 (0)711 1317-1336▪ mobile +49 (0)172 7690404
regina.schmalz@dreso.com