

# Industry Survey

## Understanding the role of BIM and CDEs Today and Expectations for the Future

### About the Survey

This survey gives you a better understanding of how BIM and Common Data Environments (CDEs) are used today and the expectations for the role they will play in the future. This survey shows clearly how projects and organizations are approaching information management capabilities of a CDE and the trends and aspirations of BIM use globally. The survey represents a global view with responses spanning various phases of the lifecycle and across companies of different sizes.

# Background

This survey was conducted as part of the buildingSMART Virtual Summit in October 2021, and the results are evaluated in this report. A total of 250 responses were collected. The aim of this survey is to find interesting correlations and results that reflect the current use of BIM and CDEs today, and look at the role they will play in the future.

The data collected is interpreted with some assumptions and the findings are designed to share knowledge and insights into current trends.

## Survey Findings

### Key findings

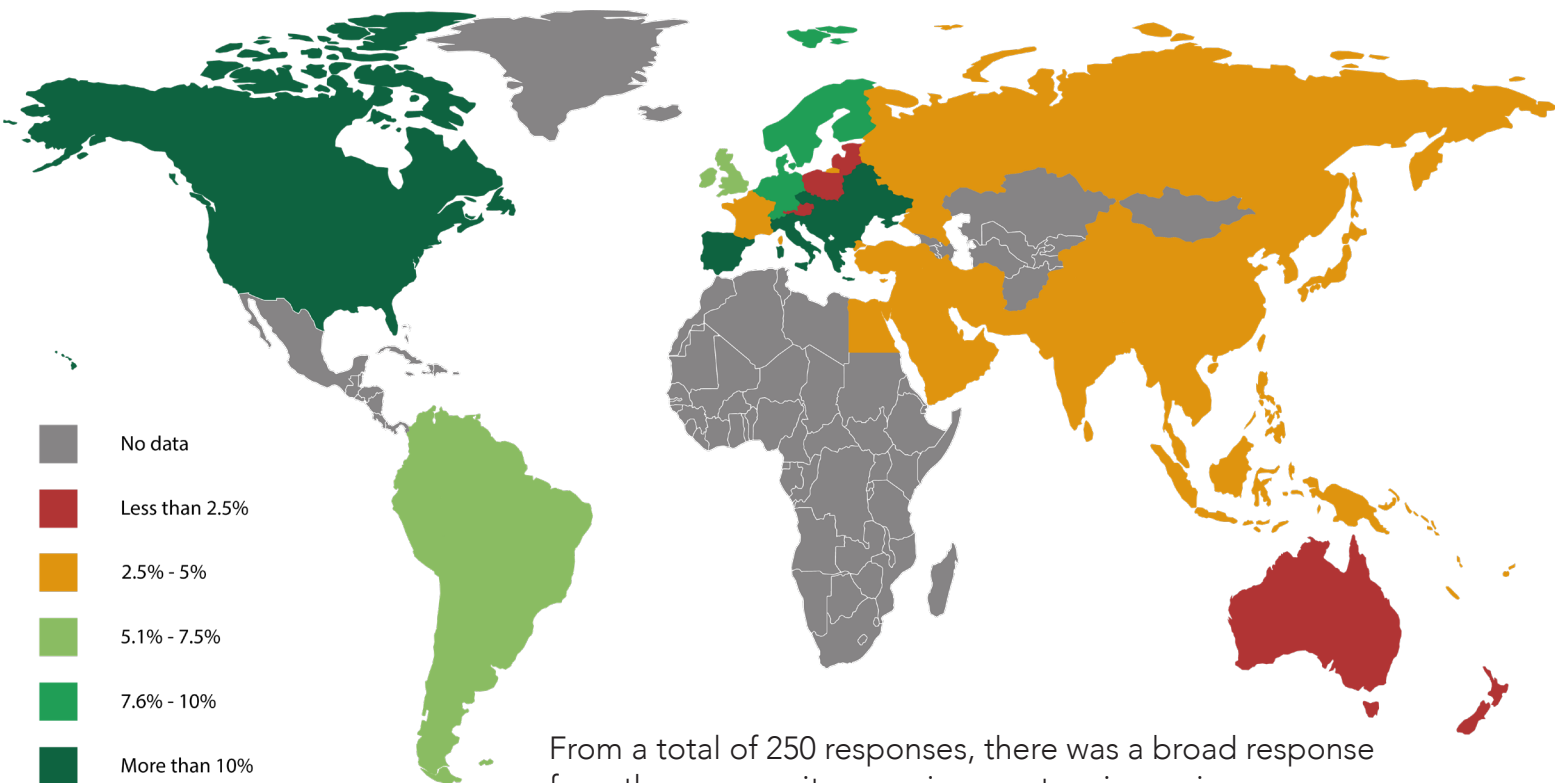
- Europe and the Americas provided the majority of responses
- Large and small businesses are almost in balance using BIM
- A majority with job title BIM Manager/ Leader
- Most are involved in the design phase
- Private and public sectors evenly split
- A clear trend in using cloud solutions
- BIM adoption appears to be widespread

There is widespread use of openBIM formats for modelling and collaboration. IFC and BCF have high response rates which is encouraging. Other services like openCDE are expected to have high uptake.

Finally, there appeared to be a move to cloud infrastructure internally within organizations and responses provided input that this was a major shift in their focus and delivery. This confirms the importance of CDEs in enabling the digital transformation for many different organizations.

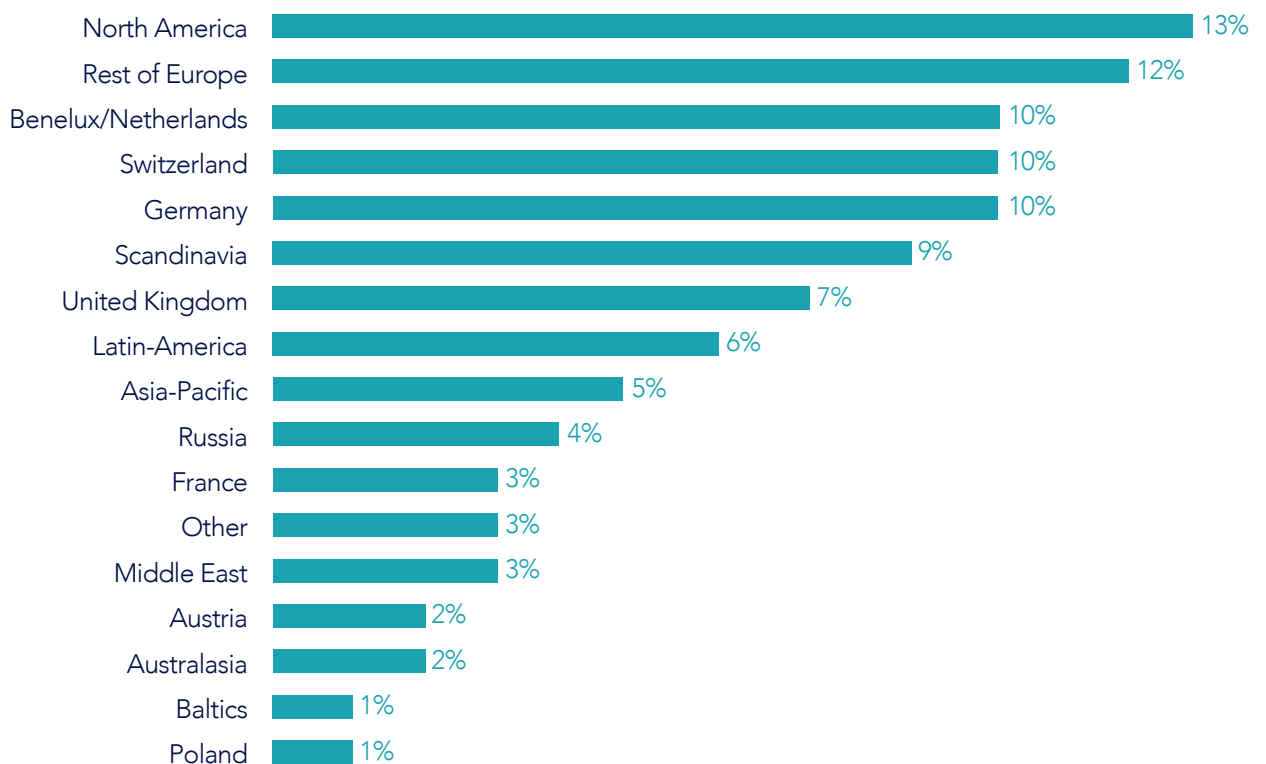
The rest of the responses can be found later in the report.

# Geographical Response

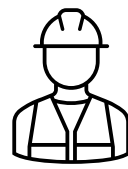
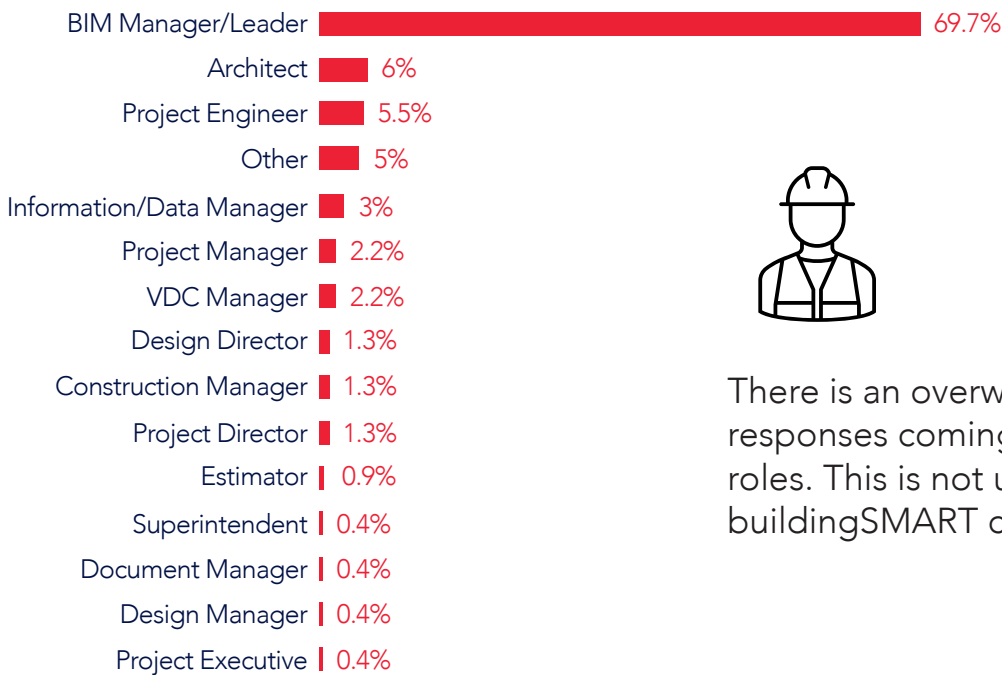


From a total of 250 responses, there was a broad response from the community, covering most major regions providing useful insights and a global perspective.

## Please choose your country/region

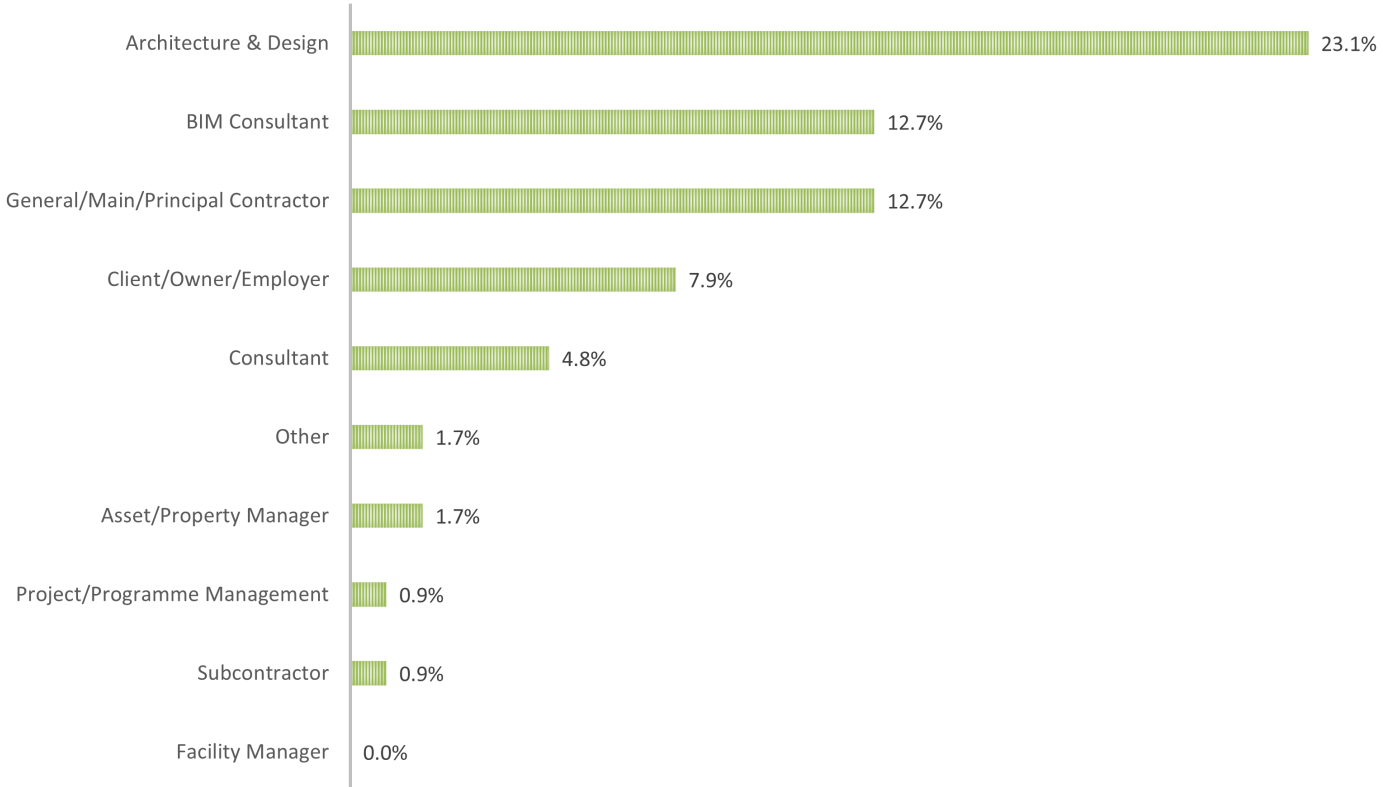


# Position/job title



There is an overwhelming majority of responses coming from BIM-related roles. This is not uncommon based on the buildingSMART community.

# Type of Firms from the BIM Manager role



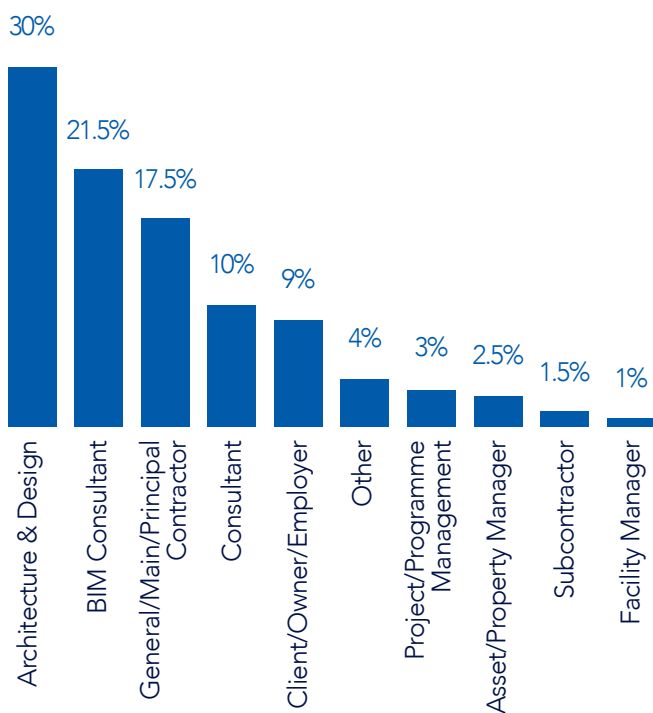
# Company and Lifecycle

The majority of responses came from the Architecture, Engineering and Construction (AEC) industry. Only 9% were from clients and just 2.5% from asset or property managers. This is fairly typical and anticipated as a result.

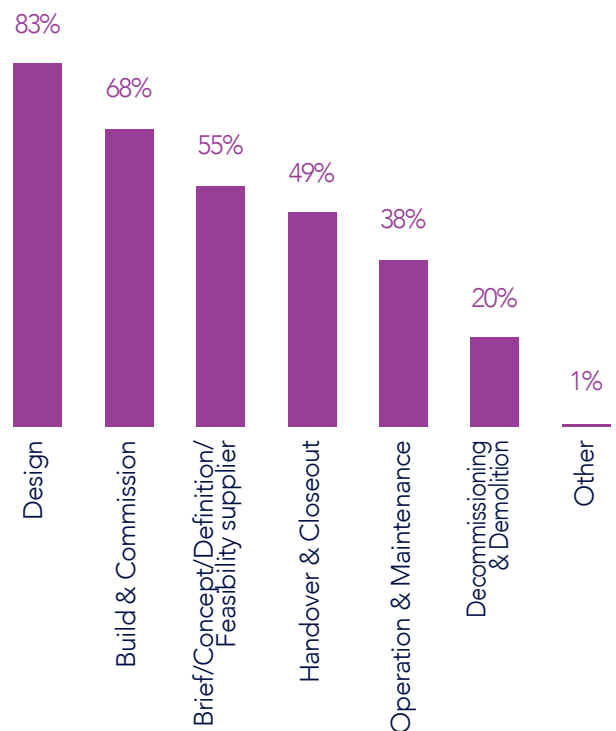
There was another typical focus on Design and Build as a response but a high amount of focus on Handover (49%) and Operation & Maintenance (38%) provides good insight into the types of lifecycle phases.

These results show that BIM managers and leaders (on the whole) are focused on providing value for the full CAPEX of projects and assets.

To which of the following categories does your company belong?



Which stages of the asset lifecycle does your company's work cover?

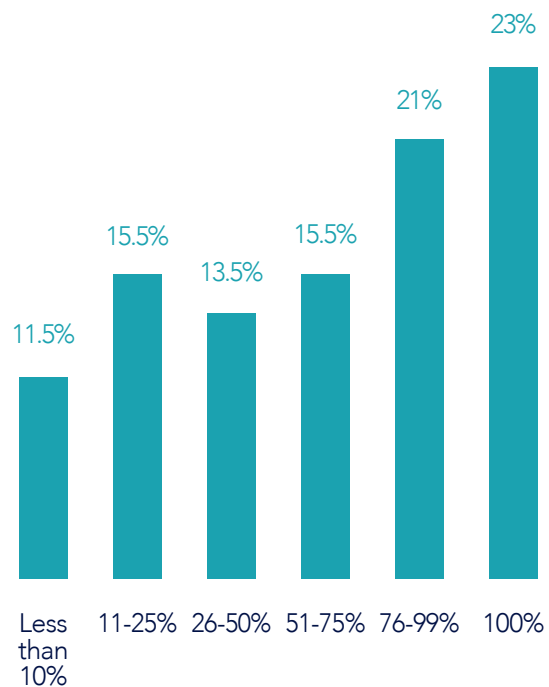


## About your Business

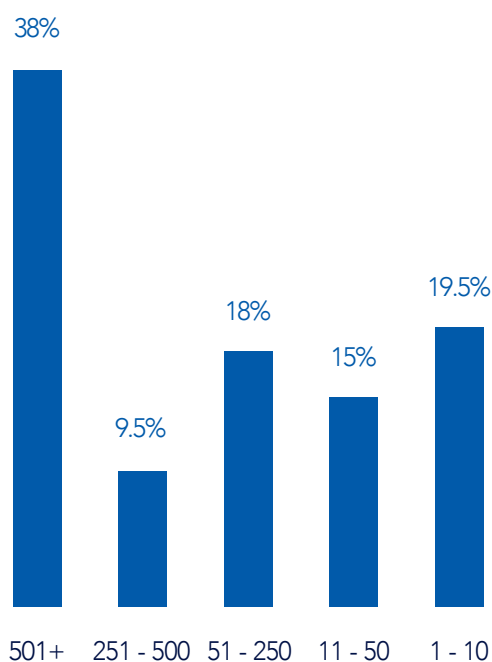
Nearly half the responses indicate that BIM caters for between 76-100% of the projects undertaken at these companies. A small 11.5% have less than 10% of their business related to BIM.

There is a surprisingly large number of responses from businesses with over 501 employees indicating larger companies are well represented.

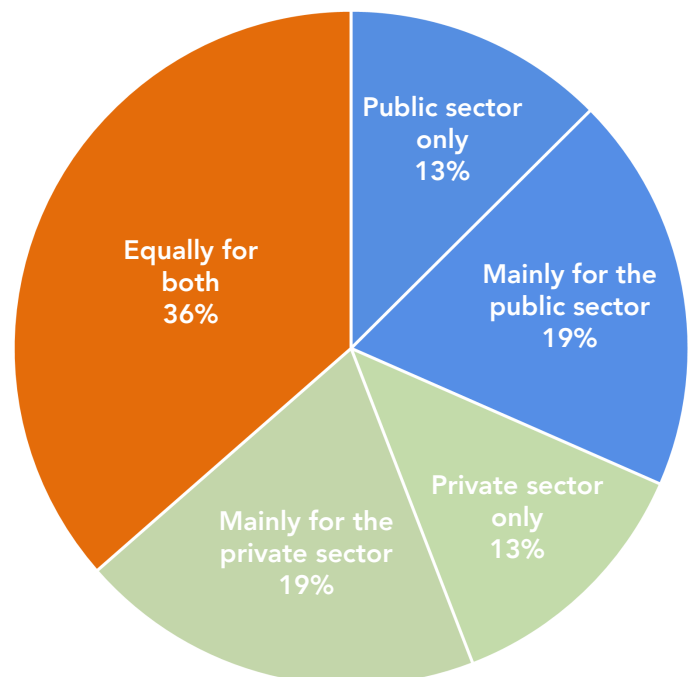
## On what percentage of projects is BIM used in your company?



## How many employees does your company have?



## Do you work for the public or private sector?

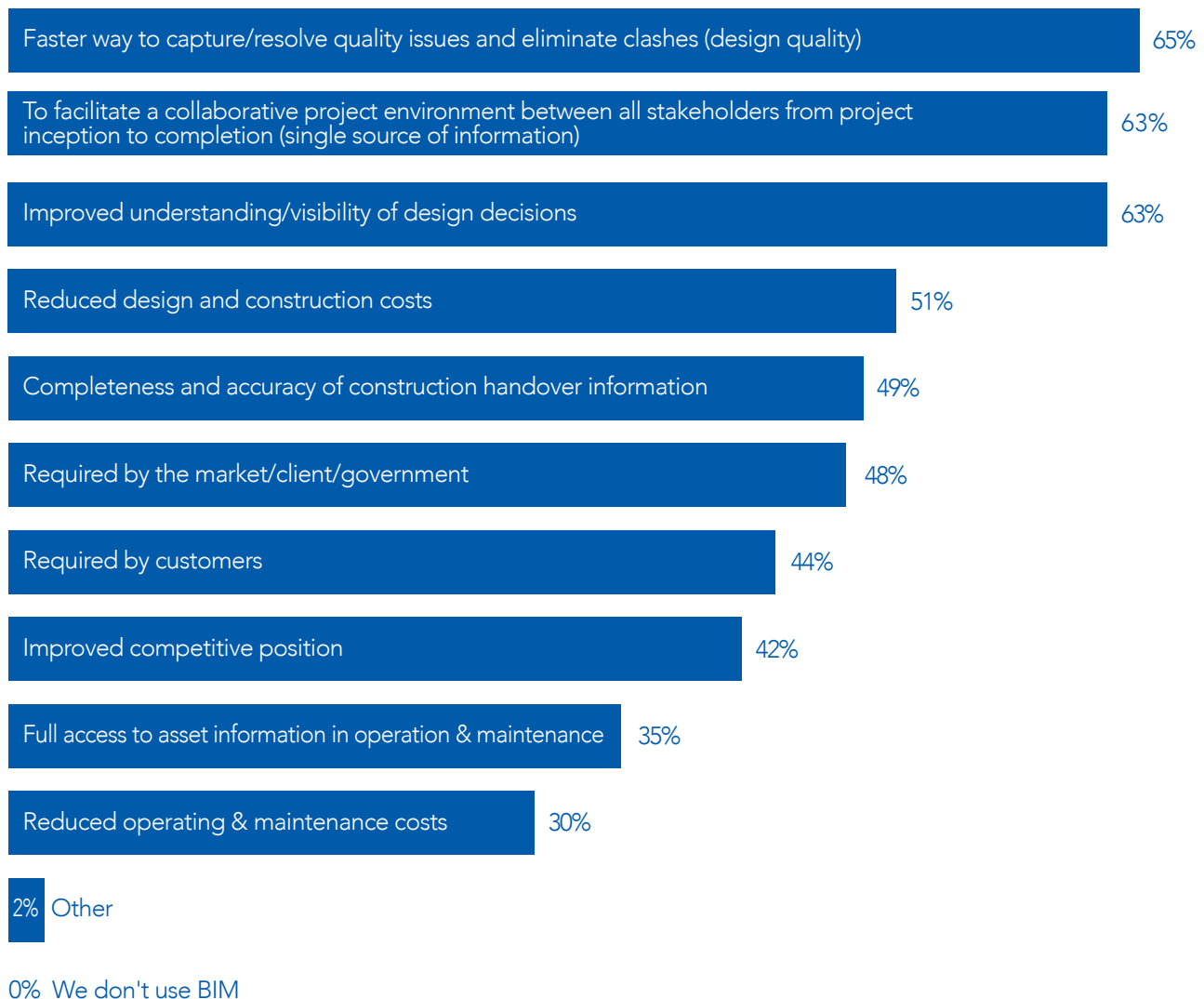


# Why BIM?

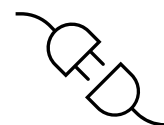
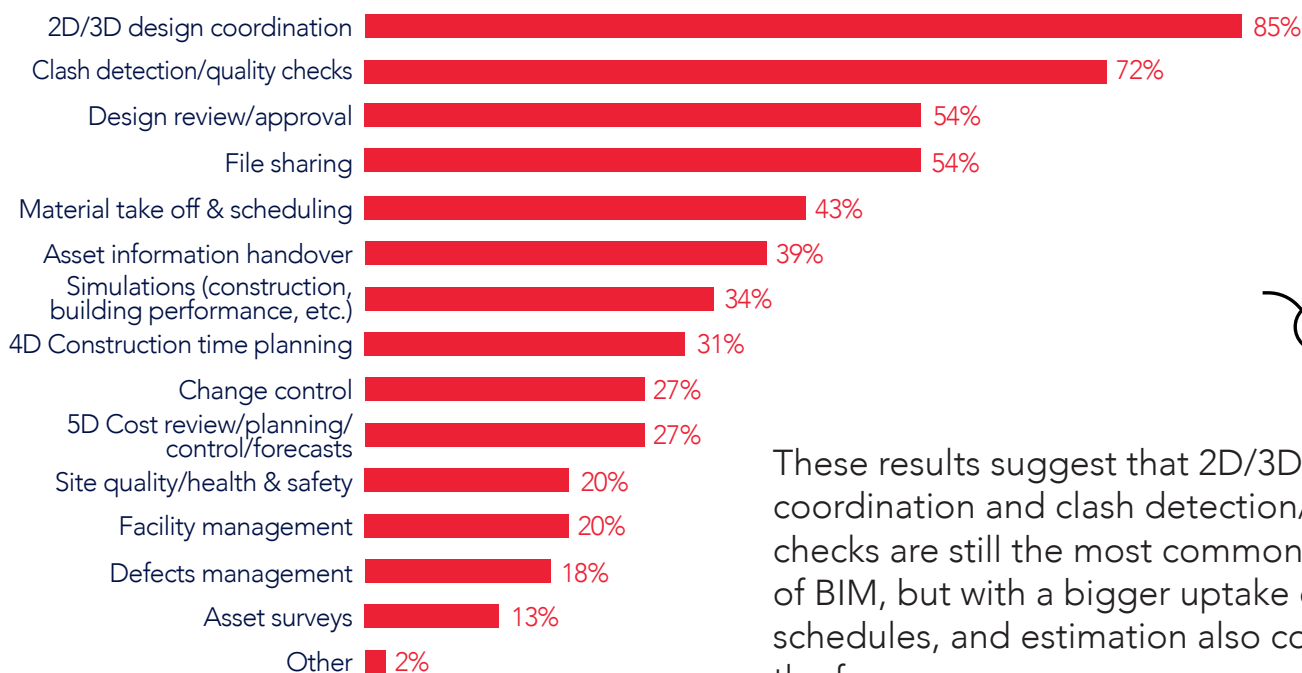
There are many benefits to using BIM and some are captured below. It is worth noting that this was a multi-choice question and therefore is designed to indicate the most important reasons and benefits to BIM.

There is a growing number of governments and clients that are starting to mandate BIM and this is somewhat reflected below, as well as the usual benefits of BIM listed.

## Why does your company use BIM?

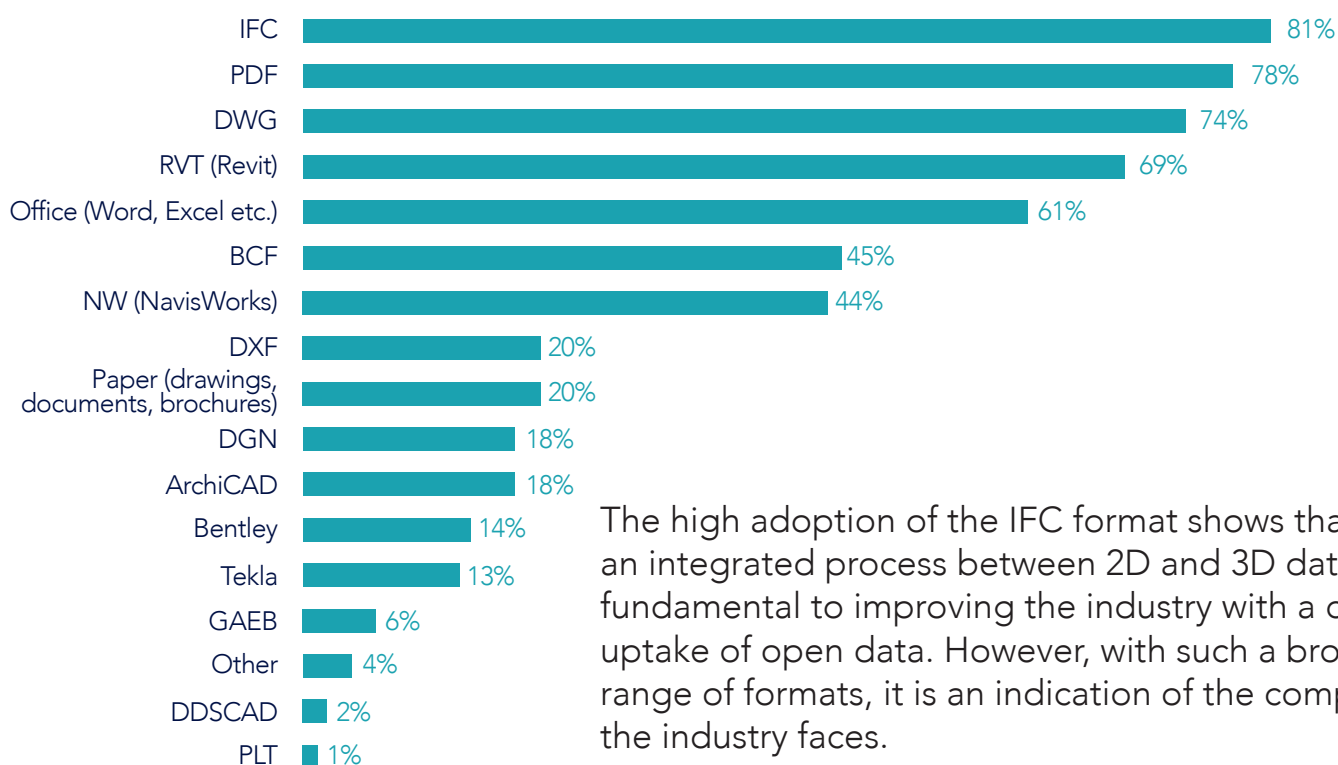


## Which of the following processes are optimized for BIM in your company?



These results suggest that 2D/3D design coordination and clash detection/quality checks are still the most common uses of BIM, but with a bigger uptake of cost, schedules, and estimation also coming to the fore.

## Which data formats do you use to exchange design information with project participants?



The high adoption of the IFC format shows that an integrated process between 2D and 3D data is fundamental to improving the industry with a clear uptake of open data. However, with such a broad range of formats, it is an indication of the complexity the industry faces.



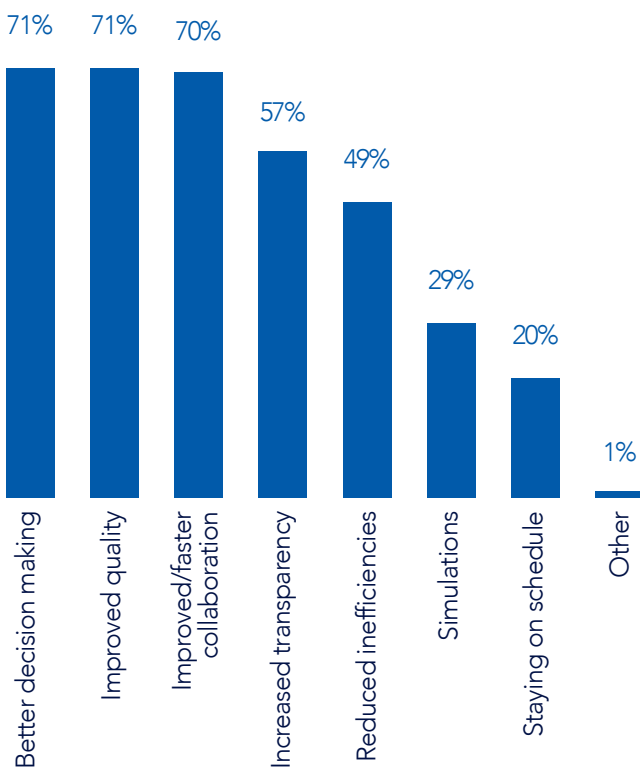
# Benefits of BIM

BIM has often been associated with better decision-making and this is again reflected here. There is also no surprise in the fact it provides better coordination and collaboration, but the "Simulations" result is slightly lower than expected.

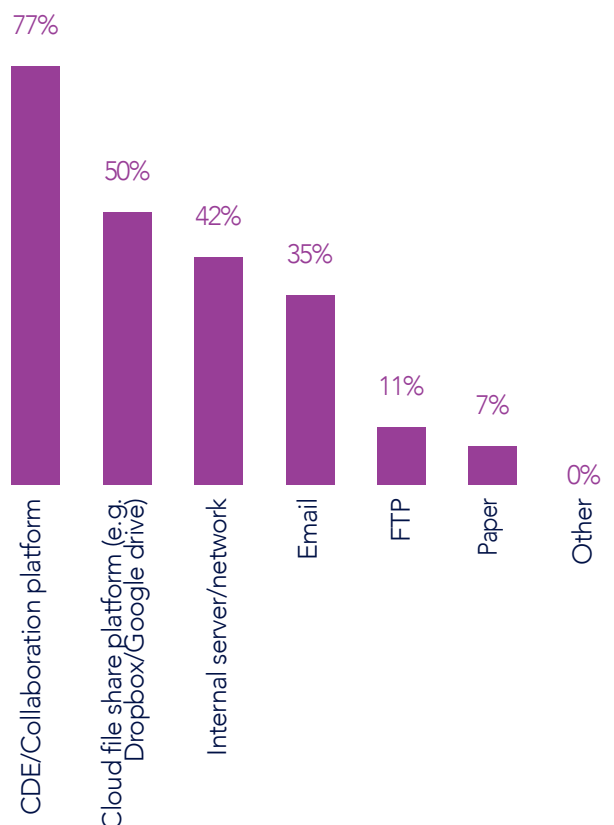
There is also a very high response for CDE as a platform for exchanging data. This is anticipated and expected to increase as time goes on. Only 7% still use paper.

These results are encouraging for CDE providers and enablers for digital transformation.

## How does BIM currently help you the most?



## How do you share/exchange large amounts of data with other teams/offices in your daily work?

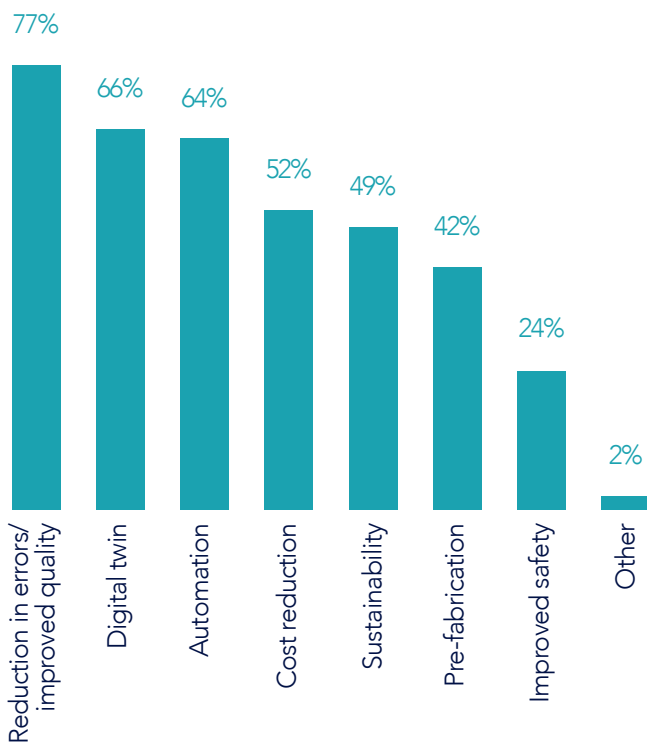


# The Future of BIM

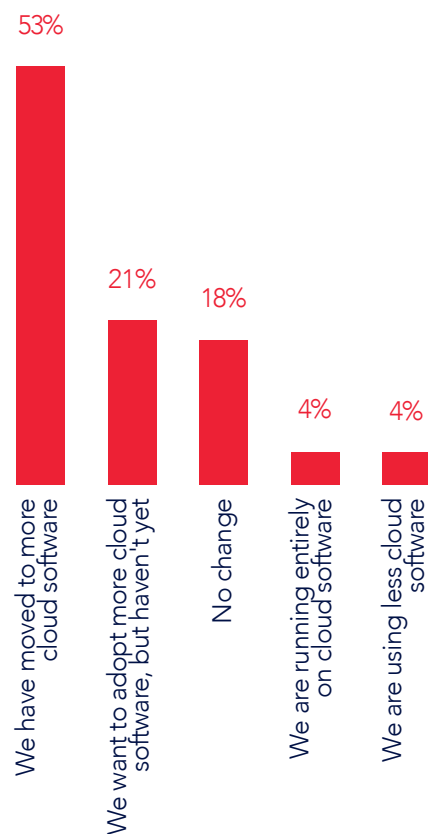
There is a high response for BIM to be supportive of future efforts with digital twins and automation. There is no surprise that reducing errors and improving quality is the most answered. The topic of sustainability is expected to increase. BIM is expected to play an important role in this topic.

The most interesting change for companies over the last two years is the move to cloud software. There is still 21% of respondents who want to move to the cloud but haven't yet and 18% citing no change.

Where do you expect BIM to help you most in the future?



In the last 2 years, how has your company changed its use of software tools to complete your work



# Conclusion

This survey provides interesting insights into the role of BIM, CDEs and the outlook for the future. From a broad range of countries, the results provide input into this conclusion. The first remark should be that this sample is taken from 250 responses and the predominant job role is that of a BIM professional.

BIM is continuing to expand from design and build into downstream phases of the project lifecycle such as handover, operations and maintenance, and even decommissioning and reuse.

There is also a clear indication that cloud infrastructure is driving the digital transformation at these organizations. CDEs are expected to play a bigger role in a digital future.

Following an increase in government mandates for BIM, we can see real value in the "Benefits of BIM" tables. This is encouraging that BIM continues to provide tangible output and value. There is also a clear indication of the rising use and adoption of openBIM workflows. IFC, BCF and, openCDE are expected to continue their growth.

There is increased use of CDEs from the responses collected above what was anticipated. This reinforces the industry uptake in these platforms and the supporting standards such as ISO 19650 and DIN SPEC 91391.

An uptake in cloud infrastructure is well reflected here with 53% citing this as the biggest change at their organization in the last two years. There is also a high number planning to move to cloud platforms in the future, thus highlighting a big shift in the adoption of CDEs.

The future of BIM is also reflected positively in this survey with many respondents citing major benefits in the future.

There is a plan to do another survey in the future to see if there are any changes to the trends found in this report. This survey was developed in conjunction with Oracle Construction and Engineering.

## The Outlook for CDEs

# About Oracle Construction and Engineering

Asset owners and project delivery teams rely on Oracle Construction and Engineering solutions for the visibility and control, connected supply chain, and data security needed to drive performance and mitigate risk across their processes, projects, and organization. The Oracle Smart Construction Platform helps project teams work together, turn data into intelligence, and orchestrate resources for smooth project delivery. [www.oracle.com/construction-and-engineering](http://www.oracle.com/construction-and-engineering).

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