

# De Nijs Success Story

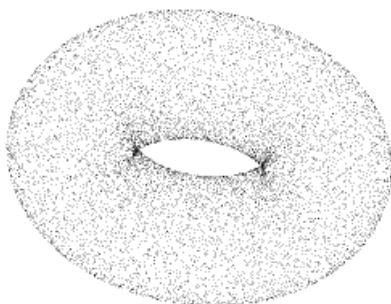
## ownCloud in the construction industry: Leveraging Open Source file sharing to improve collaboration in Building Information Modeling (BIM) projects

### Background

The construction company „Bouwbedrijf M.J. de Nijs“ is a Dutch ISO-certified contractor and property developer, which undertakes major projects in Randstad, Amsterdam, Alkmaar and Haarlem in the Netherlands. For the planning and implementation of these projects, the company increasingly relies on Building Information Modeling (BIM).

BIM is a software-supported, object-centered approach that optimizes a number of processes during the construction of buildings, thus saving time and money. All relevant data is digitally modelled and recorded, from planning to implementation and maintenance. Regardless of whether residential building, civil engineering, city construction or road construction is involved, one thing connects all BIM-controlled projects, the acquisition and intelligent use of large amounts of data. Their demand-oriented synchronization and internal or external transfer of that data is a key task for companies in the construction and engineering industry. ownCloud offers an intelligent solution for this.

Flexibility, security and connectivity are particularly important in construction projects. To illustrate the amount of data generated by large construction projects, the point cloud is a particularly good example, where an incredibly large number of points on a



Example for a point cloud, also called point cluster. Source: [wikimedia.org](https://commons.wikimedia.org/wiki/File:Pointcloud_donut)

particular object are scanned. The individual points contained in such a point cloud are linked with spatial coordinates, which then represent a digital, object-related model. Within this 3D point cloud, other attributes such as normal vectors, color values or measurement accuracies can also be captured. The result: a large data cloud with millions of measuring points.

De Nijs relies on ownCloud to collaboratively process and manage the data volumes processed in BIM processes, as ownCloud can be operated on company-owned servers and is just as easy to use as consumer grade cloud solutions such as Dropbox or Google Drive, the key difference being that the users of M.J. De Nijs always retain control over their own data and can process very large files.

### Problem

BIM software has the potential to revolutionize the entire construction industry. At the same time, however, the technology places high demands on data management. The data volumes of a point cloud are extremely large and quickly reach a two-digit gigabyte range. Users require a solution that offers sufficient storage resources and the necessary user-friendliness to manage all the data efficiently. That's why De Nijs relies on ownCloud.

Where once files used to be shared via email, the amount of data exchanged in the construction and machinery industry is now simply too large. Moreover, the exchange of files via email involves the risk of different versions of a file circulating in parallel, which makes collaboration unproductive. SaaS services are not suitable for exchanging files larger than 10 GB. On the one hand, the files must always be up-to-date so that everyone can work with the same version of a file. On the other hand, the flexible transfer of files while maintaining effective rights management for the integration of external project partners (stakeholders) is absolutely essential.

## DE NIJS

In addition to the employees of the construction company, architects, structural engineers and many external suppliers, project partners and persons are usually involved in a construction project. The number of suppliers and project partners who need access to the collected data is constantly increasing during a project and often reaches up to 50 people. It is therefore essential to be able to integrate project partners and suppliers easily and flexibly into an existing data infrastructure and to share the relevant files securely with all partners. In this way, every construction project becomes a data-driven project.

### Solution

The main reason for using ownCloud as a central file sharing solution is that the software is very well suited to operate with large amounts of data: The files are stored in a central location, the De Nijs data centre in Warmenhuizen ( the Netherlands).

Another factor in choosing ownCloud is the software's flexibility. ownCloud provides a central interface that efficiently integrates various applications used in the BIM context. In addition to the well-known tools such as Solibri from Nemetschek, Autodesk ReCap or BIMcollab Zoom, numerous other BIM tools such as the free „BIM Viewer“ are used in parallel within a project in order to be able to use the entire range of BIM functions. The compatibility between these different tools is one of the main expectations of a suitable file-sharing infrastructure.

The company's own servers form the central location where all BIM data and files are stored. All viewers and tools used have access to it and all models are updated automatically. Files can be sent via ownCloud's Outlook plug-in regardless of their size or file type. The solution, which was specially developed for companies, enables files stored in ownCloud to be sent via email with just a few clicks. Instead of an e-mail attachment, the Outlook plug-in creates an individual link with which the recipient can then download the file. The plug-in is fully integrated into Outlook, easy to use and features secure SSL encryption.

M.J. De Nijs also uses a Windows network drive to securely share files within its own organization. However, access to the files located there is often only possible from remote locations, such as airports, from the home office or from on the road via a VPN connection ,with corresponding restrictions, above all in terms of transmission speed. ownCloud's „Windows Network Drive

Integration“ offers an intelligent alternative here. After one-time configuration by the administrator, the app treats the network drive as normal external storage, comparable to a private server that can be accessed via the browser or via corresponding clients. The use of ownCloud enables all files to remain in their secure storage location and all users to access them remotely without restrictions.

### Result

For the implementation and adaptation of the software, De Nijs was able to fall back on the individual support of ownCloud, where every type of user enquiry is answered in regular web meetings or solved directly by a developer. The professional enterprise support and consulting provided by ownCloud played a key role at De Nijs, especially during the initial phase, and was, as stated by De Nijs, decisive for the successful implementation of the software and the overall success of the project.

**“ownCloud combines usability, flexibility, security and enterprise-grade support & consulting to create a framework that ensures that everyone involved in the project is always up to date and can access their files from anywhere in the world”**

*Bastian de Geus, Application Manager bei De Nijs*

In this way, the complexity in the construction industry, which is growing faster and faster due to technologies such as BIM, can be met appropriately, because the large amounts of data require software that makes this data optimally usable.

By using ownCloud, the distribution processes for all data were accelerated massively. Since the BIM files no longer have to be stored manually, on the local user's mobile device, but are synchronized automatically using a desktop or mobile client, the most up-to-date version of a file is always on the mobile device. The high bandwidth at De Nijs headquarters results in high data transfer rates, which enables fast synchronization between servers, desktops and mobile devices.

Thus, ownCloud enables de Nijs to have a significant increase in productivity and brings the future of BIM on mobile devices a big step closer.

## About ownCloud

ownCloud is the market leading open source content collaboration solution worldwide. ownCloud enables users to securely access and share data from any device, anywhere in the world. With more than 200,000 installations and 25 million users, ownCloud provides organizations a modern collaborative experience, thereby boosting productivity without compromising on security. At the same time, it gives organizations the visibility and control required to manage sensitive data.

To get the latest updates, please visit <https://owncloud.com/newsroom> or follow us on Twitter [@ownCloud](https://twitter.com/ownCloud).

**ownCloud GmbH**  
Rathsbergstr. 17  
90411 Nürnberg  
Germany

Contact:  
owncloud.com/contact  
Phone: +49 911 14888690  
[owncloud.com](https://owncloud.com)

[@ownCloud](https://twitter.com/ownCloud)  
[facebook.com/owncloud](https://facebook.com/owncloud)  
[linkedin.com/company/owncloud](https://linkedin.com/company/owncloud)