

SUCCESS STORY

**Using Digital Twins
with dRofus planning
and data management
tool for complete
Lifecycle management.**



CLIENT

Helse Bergen HF

START PHAS 1

2011

START PHAS 2

2017

COMPLETION

2022

OCCUPANCY

AUGUST 2023

PROJECT SIZE

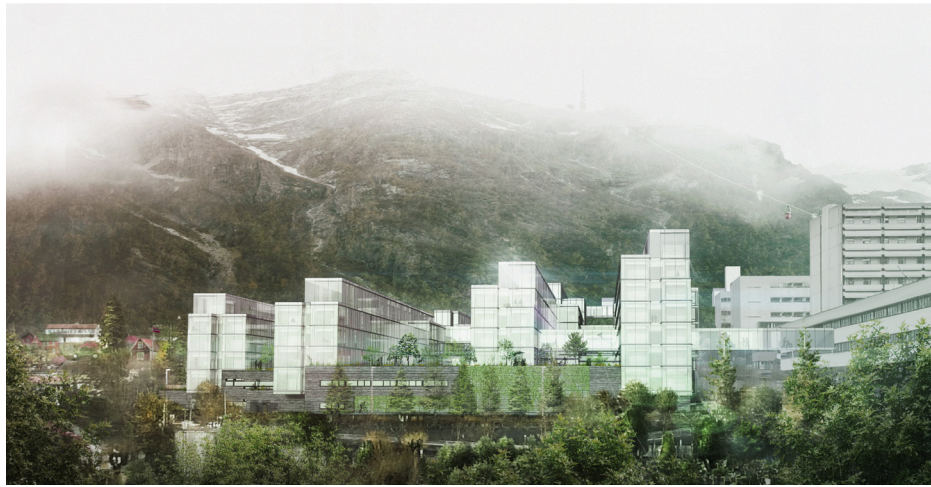
50.000 m2

BUDGET

5.4 Billion NOK

SUCCESS STORY

Using Digital Twins with dRofus planning and data management tool for complete Lifecycle management.



Using a digital twin was a game changer for the hospital construction project Glasblokkene Trinn 2 in Bergen, Norway. The new 50,000sqm hospital for children and teenagers was finalized in 2023 and includes outpatient clinics, operating rooms, X-ray departments, intensive care units and much more. By capitalizing on an open cloud-based planning and data management solution from the Nemetschek Group, the teams were able to implement a completely digital working method to maximize collaboration and efficiency. This provided significant cost savings, better project control, and substantially better outcomes for all project stakeholders.

The client, Helse Bergen HF, required one master asset database that would connect all data from early planning, through design, engineering and construction, and finally into operation of the Glasblokkene Trinn 2 project. In essence, a golden-thread of information that connects all project phases and stakeholders.

"In terms of our workflow in the project and dRofus facilitated centralization of data in which all the different actors can access at once, we only need to look at one place for the data at any given time. And we know that the data is always being updated. Well, working with dRofus has affected our workflow in terms of better collaboration with the client and the entrepreneurs." says **Nick Karrebæk Gabriel, the BIM Manager of KHR Architecture.**

As the largest construction project in the region for nearly 40 years, the Glasblokkene Trinn 2 project needed a solution that would centralize the enormous amount of data for the building in a central location. The client also wanted an open system so that other software

could access and add to the data within this database. They opted to use dRofus, a Nemetschek Group solution, which would provide all the functionality required to connect different systems and provide a data-first digital twin solution.

A Golden Thread of Data

The entire hospital project is created based on a master asset database for all disciplines and models – always up to date with all the documentation required for any element quickly to be accessed just by clicking on the item in the model. For this reason, dRofus was embedded into other applications, which allowed on-site updates of data directly into the master asset database, and then synced to the design and engineering models and IFC files for a consistent and current set of information. The centralized information management the database offered provided a golden thread of data throughout the project. *"Using a cloud-based federated repository, the golden thread of data, from the start, combining it with real time data in the future will create additional huge benefits for the operate and manage phase: This is building lifecycle intelligence at its best,"* says the Nemetschek Group's **César Flores Rodríguez, Chief Division Officer Operate & Manage and Digital Twin.**

Preserving the Value of Information

By using a digital twin, the documentation was delivered and controlled before the work started on site, unlike a traditional approach where the

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**Nick Karrebæk Gabriel, BIM Manager,
KHR Architecture**



documentation is delivered after the building is finished. Not only was the quality of the information enhanced, also complete and correct information was available throughout the project. The database was not only used for the design and construction but is also planned to be used throughout the entire building lifecycle, including operation, linked to building control systems via APIs.

*"Information from every stage of a building's lifecycle will have implications or value in other stages, so preserving and leveraging this data across the building's lifespan makes total sense," says **Rolf Jerving, CEO of dRofus**. "We call this Building Lifecycle Intelligence. Solutions like dRofus bridge the gap between BIM and Building Lifecycle Intelligence, creating a Digital Twin and providing a single source of truth that prevents data silos and ensures a data-driven approach that provides value across a built asset's complete lifecycle."*

A New Way of Working

The project was exclusively digital, with no printed drawings used at any stage. For some of the project partners, this was a totally new way of working. *"Using a digital twin enabled all parties to work in the same environment, collaboration and cross-discipline coordination was improved. Responsibilities for different element data was able to be assigned in the consultants' models, and these updates were shared with the entire project team", says **Main Project leader, Kristian Brandseth from Healthcare Bergen**.*

Having the contractors be able to create data within the consultants'

models was another unique feature of this approach, which further supported collaboration between teams. Contractors could update product data, generate unique equipment IDs automatically, and update the status of objects. Another valuable addition was that everyone could see the current progress on site thanks to the live cross-disciplinary dashboards built on top of dRofus. This enabled subcontractors to plan their work more efficiently, as they knew when another trade was finished.

An Invaluable Tool

For the team on the Glasblokkene Trinn 2 project, the central database that connected all the project information held in different systems was crucial – many would not want to deliver such a large project without this tool. *"The data-first digital twin solution has helped avoid data silos and resulted in better project outcomes. The value that the created data provided throughout the project has generated significant savings as well as better project control – and will continue to do so throughout the building's operation", explains **Main Project Leader, Kristian Brandseth**.*

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dRofus the software development company was established in 2011 in Norway. The first version of dRofus software was developed by



Nosyko AS, the leading hospital and equipment planning consultancy company in Norway founded in 1970, and the software is currently used to plan and manage data through all project stages for all building types, including some of the world's largest, most complex, and iconic buildings. It was fully acquired by Nemetschek Group in 2017. With operations in 39 countries – chiefly Asia-Pacific, America and Europe, the company, and its software development team, are based in their European Headquarters in Oslo, Norway. As a **BIM data tool for all stakeholders**, dRofus always strives to help the AECO industry work smarter.

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Kristian Brandseth, Main Project Leader,
Healthcare Bergen

ABOUT DROFUS

The leading planning and data management solution for the global building industry. dRofus is a unique planning, data management and BIM collaboration tool that provides all stakeholders with comprehensive workflow support and access to building information throughout the building lifecycle. We are committed to Open BIM and as part of the Nemetschek Group, our aim is to deliver the best possible, most innovative and most successful AECO software solutions.

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