thinkproject

BIM Information Management

Empowering Construction Management
with Integrated Excellence

The Challenges

Though the construction industry is the largest industry in the global economy, accounting for

13%
of the world's GDP[1]

it has one of the lowest digitalisation rates[2]. According to a study from pwc[3], one of the areas with the biggest potential is Building Information Modelling (BIM). Yet, only about

20%
of construction companies in Germany are working with BIM[4].

The reasons behind this are many-fold.

A stack of point solutions makes BIM expensive

In many construction projects today, the core BIM use cases require a stack of different point solutions. Implementing, managing and maintaining multiple tools is cumbersome and expensive. It is also the main reason for missing transparency with project stakeholders working with multiple tools and various sources of information posing a risk for construction errors and defects based on outdated or faulty information.

Change management to foster digitalisation strategy

Delaying the digitalisation of processes and with it BIM, is missing out on opportunities to increase efficiency and productivity, along with lowering cost. Little transparency and hardly any or no insights or learnings from information hidden in data islands, is presenting a risk on overall performance and profitability. Loss of acceptance and trust are caused by issues and problems requesting non-specialists to use model data who tend to fall back to manual work by default, undermining change programmes and lowering adoption rates. And last but not least, managing time-lines and costs of a project is complex with 4D and 5D BIM raising the hurdles.

Current BIM Management processes are inefficient

With across-project disconnected tools, there is a lot of stop-go with models and data. Sharing and enriching information and models is both complex and time-consuming. Knowing where and how to find an overview and identifying risks or issues is a challenge. The lack of interoperability of systems and tools prohibits automation and contributes to inefficiencies. Determining the Bill of Materials or Bill of Quantities and aligning with schedule data is also difficult, and in turn this causes risk to a projects costs, time and quality. Overall, BIM management is a demanding task with multiple versions of the same model causing a lack of confidence in BIM data.

Projects are not meeting sustainability goals

In many construction projects, processes are very resource-intensive with manual and paper-based processes and a lot of commute between on and off-site to exchange information and data. This is not only in the way of meeting sustainability goals but also causing substantial cost through errors leading to duplicate work and a waste of resources. There are hardly any processes and tools to reach the goals of carbon reduction and only limited means of measuring and scheduling carbon footprint.

1 The next normal in construction How disruption is reshaping the world's largest ecosystem, McKinsey, June 2020
2 McKinsey, 2018 KPMG Global Construction Survey of 223 senior leaders
3 Pwc, Die Bauindustrie in anspruchsvollen Zeiten: Geopolitik, Digitalisierung und Nachhaltigkeit, Februar 2023
4 BauInfoConsult, BIM-Monitor 2022: Trends und Entwicklung, November 2022

Project teams need a solution that supports the core use cases in the BIM value chain, while at the same time, simplifying BIM processes to foster the change process and leverage acceptance.

The Solution

DESITE BIM supports enhanced collaboration among project stakeholders, and enables real-time information sharing, coordination, and communication, reducing delays and improving project outcomes.

Created by industry experts, DESITE BIM is our full-stack open BIM software that enables the integration of various types of information into BIM, conducts model checking and clash detection, runs 4D simulations, and creates schedules, information take-off, quantity take-off and more.

DESITE BIM is ideally suited for BIM managers, BIM developers and BIM contributors, allowing them to meet high quality standards while meeting their time and budget requirements.
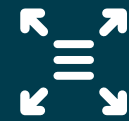
Decrease your costs with a full stack BIM Management

DESITE BIM supports all core BIM use cases in the BIM value chain in a single system, helping different project stakeholders with varying levels of BIM proficiency. It integrates BIM Information-Management, BIM Quality-Management and BIM Project-Management into one solution and increases quality and project performance with transparency and insights from reliable, up-to-date BIM data.

DESITE BIM is a unified tool that serves multiple use cases thus increasing productivity and improving cost efficiency.

Interoperability and automation through open BIM Information Management

DESITE BIM is open, neutral and fully interoperable with 3rd party software via integrated APIs. It supports a multitude of data formats like IFC and native Revit to collaborate with all stakeholders throughout the project. It integrates different sources of information like geospatial data from GIS software, bill of quantities (BOQ) or schedule data alongside models.

DESITE BIM offers you an API to augment BIM data, automate processes and extend DESITE functionality with customized work-flows based on own scripts.

Efficiency gains by digitising BIM processes fostered through change programmes

DESITE BIM helps to simplify high-quality BIM content such as 4D or 5D to make it more accessible - even by non-BIM-experts. That raises acceptance and stimulates usage which are important pillars of any change program. Leverage the 4D and 5D capabilities of DESITE BIM to ensure highest quality of model data with model checking, clash detection, issue management and more.

DESITE BIM enhances quality and overall outcome by allowing access and viewing of large data sets, models and work-flows. It provides actionable insights to improve outcomes and project performance.

Meet your sustainability goals

DESITE BIM facilitates the digitisation of BIM processes and models in any construction project, eliminating former paper-based and often manual procedures. It helps to reduce resources and waste by efficiently using BIM data during the design, plan and build phase increasing overall performance.

Build sustainably with open BIM supporting the tracking of sources and type of material, while measuring the carbon footprint.

Core use cases

## Data Visualisation, Federation and Normalisation

Digitise and visualise 3D models of buildings with geometrical and design parameters to ease collaboration across the project.

Combine, extend, complete and check partial models from authoring software - interactively and rules-based.

Combine partial models together in a federated model (coordination model).

Normalise data from partial models in the coordination model e.g., mapping of different attributes of models.

Enable automation later in the process (i.e. Model Data Validation and 4D Sequencing) to improve overall performance.
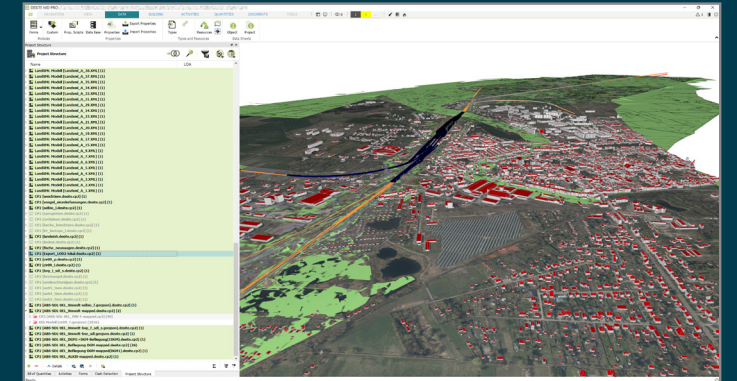

Clash Detection and Design Quality Assurance

Analyse the digital models of different building systems for conflicts or clashes - ensuring highest quality of the model for the successive phases of design, execution and management of the project.

Control geometric and spatial interferences within the partial or coordination model to identify all the physical intersections between elements.

Identify and detect possible issues in advance to reduce errors, prevent rework and extra cost.
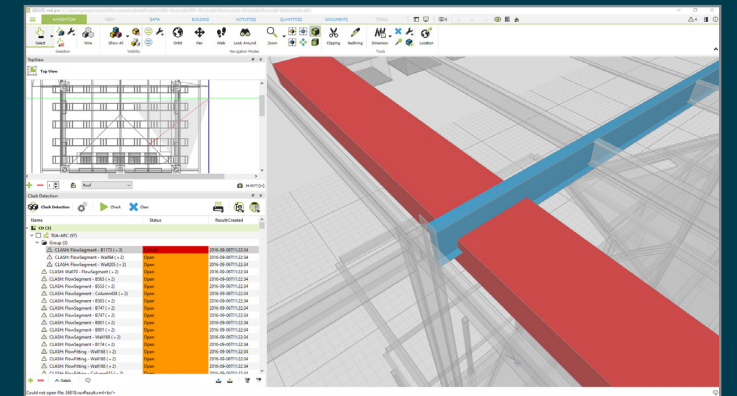

Model Data Validation

Check modelling attributes and procedures using appropriate sets of parametric rules to detect modelling and design errors as early as possible.

Check project conformity of objects of a single or coordination model with regulations and reference standards (code checking).

Automated and rules-based model checking to increase productivity and efficiency.
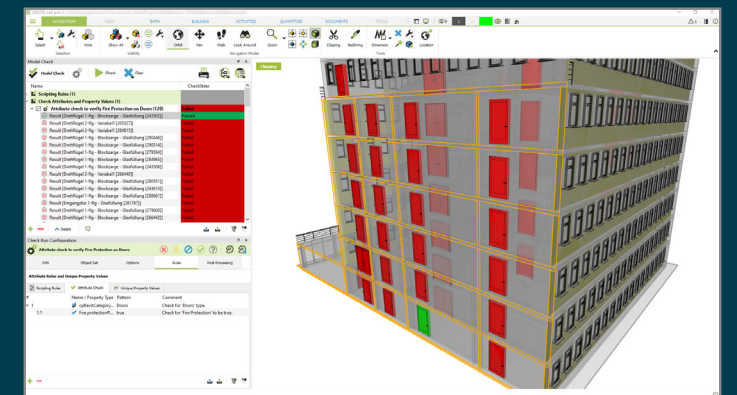
Core use cases

## Construction Planning and Sequencing (4D)

Create intelligent connections between a 3D digital model (defining the geometry of the structure) and time-lines and schedules. Visualise your construction time, calculate and automate the method schedule, and simulate construction progress.

Define activities to be performed, their duration and dynamically connect them to the BIM model.

Monitor status of project material supply and reduce waste during construction.

Right first-time 4D Sequencing (no "round-trips" of models or data to resolve clashes or add/remove attributes).

Semi-automated through "rules-based" checks and added/mapped parameters.
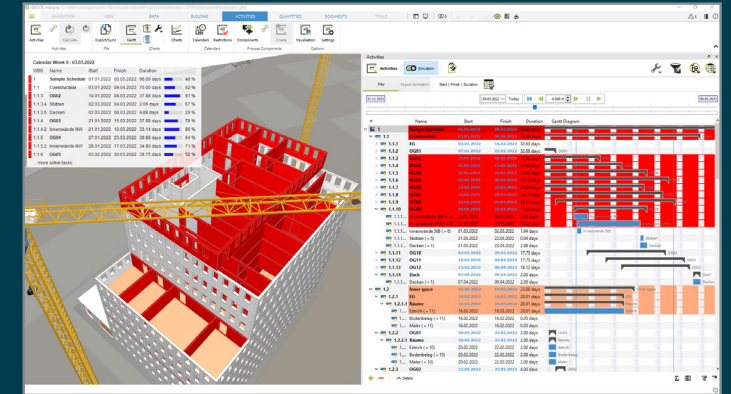

Cost Estimation (5D)

Identify properties with costs to be associated; link building components with cost data.

Create an intelligent selection tree (dynamic organisation according to defined properties) according to the user's needs.

Assign unique tracking codes by type.

Create intelligent connections (via rules) between properties, their typology and other parameters.

Retrieve quantities directly from the model – manually or rules-based - to improve bill of materials accuracy, and reduce the time required to quantify resources and costs from days to minutes.
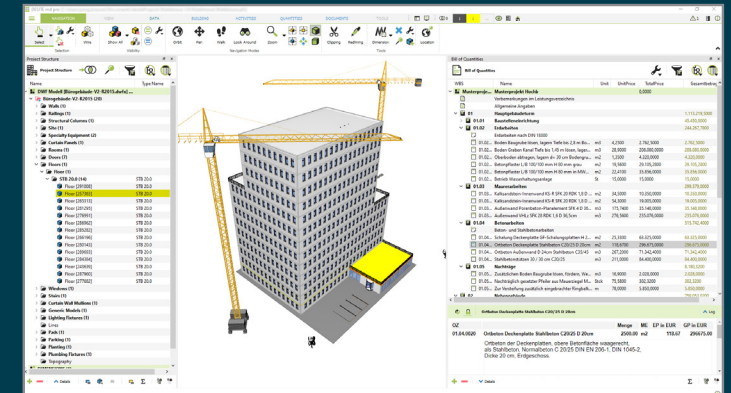

Custom Data Extraction and Analysis

Create new parameters.

Fully configurable data filters.

Add data and attributes (aka "properties" in DESITE BIM) to your models or import them from external sources and extract them to another system.

Visualise and colour-code (configurable) data and events, e.g. 4D planning in DESITE BIM models, to simplify further processing and quickly get the overview you need.

Customisable add-ons, aka webforms, and an API allows you to add, automate and adapt functionality to your specific BIM processes; integrate with your existing IT environment.
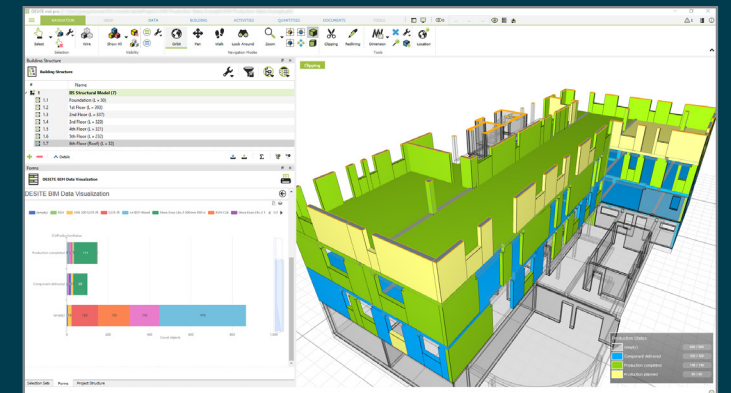
DESITE BIM | KAIRNIAL

Connect the office

to the construction site

Access and view your models on-site

Desite BIM integrated with Kairnial

Thinkproject's mobile-first BIM-enabled platform to access, capture, control and share asset data, simplifying the exchange of models and leveraging the web and field capabilities of Kairnial. The solution enables users to digitalise inspections and controls while in the field, to improve collaboration through using the latest project information – thus seamlessly connecting on-site and off-site.

Users can view and share the latest models and data from DESITE BIM on the KAIRNIAL mobile application using their mobile device of choice, facilitating users to fulfil their tasks on-site based on the most up-to-date information.

On the other hand, when back in the office, participants can access and view large data sets, models and work-flows from on-site in DESITE BIM; leveraging the sophisticated 4D, 5D capabilities of DESITE BIM in order to extend Quality Assurance.

Kairnial covers a variety of capabilities that are fully integrated and available on any web or mobile device, from BIM collaboration, Defect Management, to Checklists, Equipment Management, and more.

Kairnial BIM

allows users to quickly and easily access the latest models and plans on the Kairnial mobile application using their mobile device of choice while in the field. Thus, users can fulfil their tasks on-site based on the most up-to-date information increasing quality and efficiency.

Kairnial Observations and Defects

helps you to capture and manage defects and issues directly in the field even when offline, and speeding up closeout processes by automating resolution work-flows.

Closes the gap between on-site and off-site and enables users to locate defects in models and plans when on-site.

Kairnial Control Forms

empowers you to implement quality objectives across the entire construction project from plan, build to operate, by standardising and centralising inspection processes.

Benefit from standardised check lists with work-flows to document and track construction management. Position the current events with own checklists and forms in models and plans via Pins.

Kairnial Equipment

Facilitate users to easily and accurately track installation progress and continued operations of critical maintainable equipment and components while in the field – associated with the latest, most up-to-date models and plans. Make better use of your assets and meet highest quality and compliance requirements.
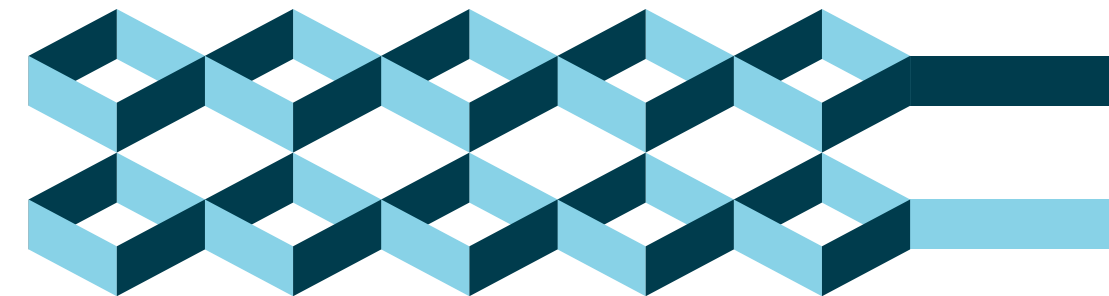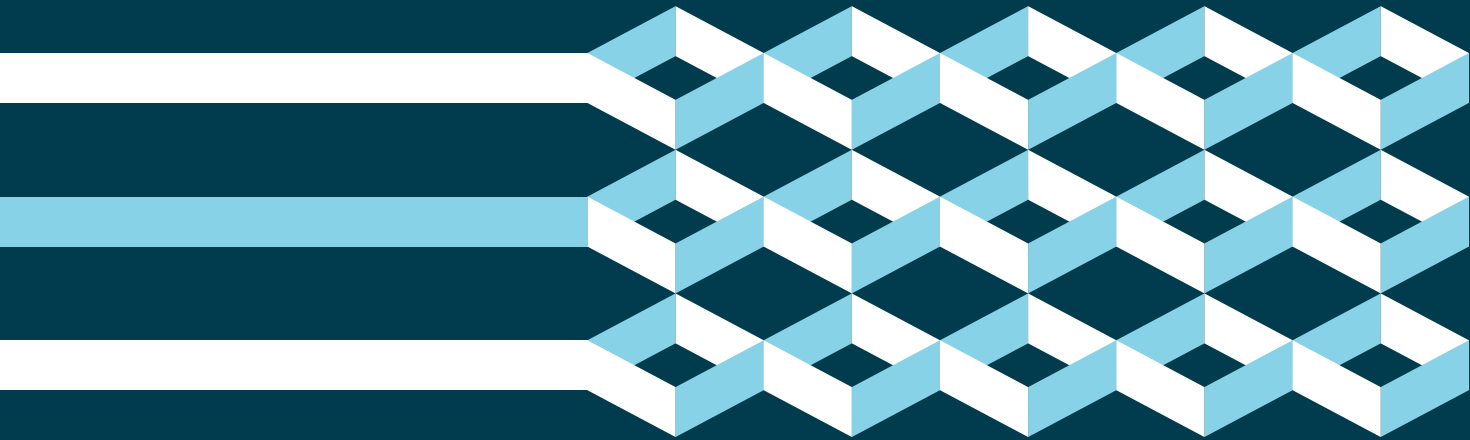
Desite BIM at a glance

Full stack BIM Management

Covers the main BIM use cases along the BIM value chain in a single tool

Open BIM

Open and neutral: a variety of data formats like IFC and native Revit are supported to collaborate with all stakeholders throughout the project

More than 20 years expertise

Developed from years of industry know-how and applicable for all types of projects, from building construction to infrastructure

Industry Experts

with decades of proficiency in the AEC sector for guidance and support in the rollout of your collaborative processes

Interoperable

Integrates different sources of information like geospatial data from GIS software, schedule data or bill of quantity alongside models

Flexibility and Adaptability

An API to augment BIM data, automate processes and extend DESITE BIM functionality with customised work-flows based on own scripts

Mobile-Enabled

Brings BIM on-site facilitating access to model and data on the Kairnial mobile application, and helping users to fulfil their tasks based on the most up-to-date information

thinkproject

Thinkproject is Europe's leading SaaS provider for Common Data Environment, Asset, BIM and Field Management, and Project Controlling. Thinkproject has been digitising construction companies, builders, project managers and planners for more than 20 years with powerful, flexible technology in combination with consulting expertise from knowledge of complex large-scale projects.

With 650+ employees worldwide, Thinkproject offers digital solutions that cover the entire life cycle of a construction project.

75000
PROJECTS

300000
USERS, IN OVER...

650+
CUSTOMER-ORIENTATED EMPLOYEES

3250
CUSTOMERS

60
COUNTRIES

23
OFFICES

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