

Coordinated, Complete Control.

**Autodesk®**

Navisworks

Autodesk®

# Control Your Project Outcomes



The Autodesk® Navisworks® family of products helps architecture, engineering, and construction teams improve control over the outcome of their projects. With Navisworks solutions, detailed design models can be aggregated and reviewed by all project stakeholders, helping users to benefit from the competitive advantages of building information modeling (BIM) workflows. BIM processes allow team members to explore a project's key physical and functional characteristics digitally before it is built, helping to deliver projects faster, more economically, and with reduced environmental impact.

With Autodesk Navisworks solutions, users can combine design data created in applications—such as the AutoCAD® software and Autodesk® Revit®-based applications—with geometry and information from other design tools in multiple file formats, regardless of file size. The result is a whole-project view that helps all project stakeholders to make better design decisions, increase accuracy of construction documentation, and predict performance and planning.

The Autodesk Navisworks software family offers three products to provide project stakeholders with the right tools to help collaborate, coordinate, and communicate more effectively.

## Fully integrate, analyze, and communicate your design models and gain insight and predictability into construction.

### Autodesk Navisworks Manage

Autodesk® Navisworks® Manage software is a comprehensive review solution for analysis, simulation, and coordination of project information. Multidisciplinary design data can be combined into a single integrated project model for interference management and clash detection. Navisworks Manage helps design and construction professionals anticipate and avoid potential problems before construction.

### Autodesk Navisworks Simulate

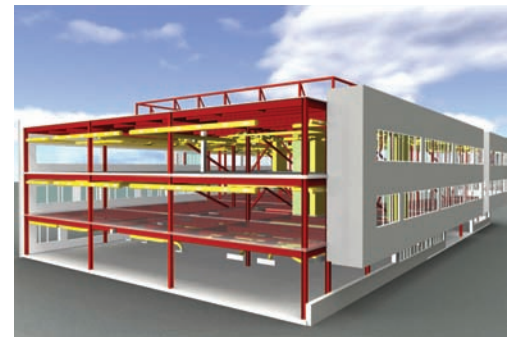
Autodesk® Navisworks® Simulate software provides advanced tools for reviewing, analysis, simulation, and coordination of project information. Comprehensive 4D simulation, animation and photorealism capabilities enable the demonstration of design intent and simulation of construction to provide better insight and predictability. Real-time navigation combines with review toolsets to support collaboration among the project team.

### Autodesk Navisworks Freedom

Autodesk® Navisworks® Freedom software is the free\* viewer for NWD and 3D DWF™ files. Navisworks Freedom extends the whole-project view to all project stakeholders, helping to improve communication and collaboration.

	Autodesk Navisworks Manage	Autodesk Navisworks Simulate	Autodesk Navisworks Freedom
Project Viewing	●	●	●
Project Review	●	●	
Simulation and Analysis	●	●	
Coordination	●		

### Project Review Features



### Model File and Data Aggregation

Autodesk Navisworks model file and data aggregation features enable you to combine design, construction, and other project data into a single integrated project model. The software incorporates files in any major 3D design or laser scan file format, reads intelligent data from original design files for viewing beside the model, and imports data from external databases and displays it within the model.

### Review Toolkit

The software's review toolkit offers a host of tools that facilitate whole-project review. Its features enable you to measure distance, areas, and angles; store, organize, and share camera views of a design and export those views into images or reports; and add cross sections and section plans to inspect details closely. Navisworks NWF reference files enable you to view the latest version of a CAD design while maintaining previous review data.

### NWD and 3D DWF Publishing

Publish your entire project for a whole-project view. Complete project models can be published and stored in a single distributable NWD or DWF file with compressed file sizes up to 90 percent smaller than original design files.

# Collaborate, Coordinate, Communicate

Bring together the contributions of project designers and building professionals into a single, synchronized building model rich in information.

## Collaboration Toolkit

Communicate design intent and encourage teamwork with the ability to add markups to viewpoints with advanced redlining tools, comment on viewpoints with searchable notes, record animated walk-throughs for real-time playback, and stream large models and content, navigating the design as the model loads.

## Simulation and Analysis Features



## Photorealistic Visualization

Use Autodesk Navisworks advanced visualization features to develop compelling 3D animations and imagery to present projects to stakeholders. Customize and configure every render aspect, including materials, lights, backgrounds, and rendering styles; use environment backgrounds to add real-world scenery; and choose from more than 1,000 built-in materials to create an accurate, photorealistic look.

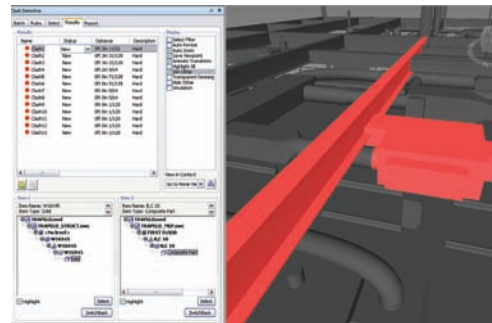
## Object Animation

The software's object animation features help you create animations of objects for clash and interference analysis. You can create interaction scripts that link animations to specific events, triggers, or key comments, and link animations to tasks in a 4D schedule for improved construction planning.

## 4D Scheduling

Simulate construction schedules and logistics in 4D to visually communicate and analyze project activities, and help reduce delays and sequencing problems. The 4D scheduling features enable you to verify building or demolition viability by developing construction or demolition sequences that link model geometry to times and dates; import times, dates, and other task data from project management software to dynamically link schedules with project models; and set up planned and actual times to visualize deviations from the project schedule.

## Coordination



## Clash and Interference Detection

Anticipate and avoid potential problems before construction, reducing expensive delays and rework. Clash and interference detection features in Autodesk Navisworks Manage software enable you to perform clash tests against specified geometry to more easily find and resolve conflicts. Link clash tests to 4D simulations and object animations to analyze issues in space and time.

## Clash and Interference Management

Autodesk Navisworks Manage software provides the ability to manage and track clashes and interferences through to resolution. Reports of clash tests, including comments and screenshots, can be exported to communicate issues to the project team.

## Project Viewing



## Real-Time Navigation

Explore your integrated project model using advanced navigation tools that produce a realistic, real-time experience. Real-time navigation capabilities are included in all Autodesk Navisworks products.

Using Navisworks for clash detection during the initial design coordination process, we reduced thousands of clashes to only a handful—helping us save time and money and decrease the overall time spent on design. During construction, Navisworks helped us push the completion of critical areas and significantly increase coordination with the trades.

—Evan Walker  
Cost/BIM Engineer  
Turner Universal

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