KOBELCO

Enable Your Crane Construction Planning with Revit Add-In Simulation Software

K-D2
PLANNER

English version
This product is sold only within Japan.

Do You Have Any of These Problems?

Professional CAD software is difficult to use

It takes time to check a crane's lift

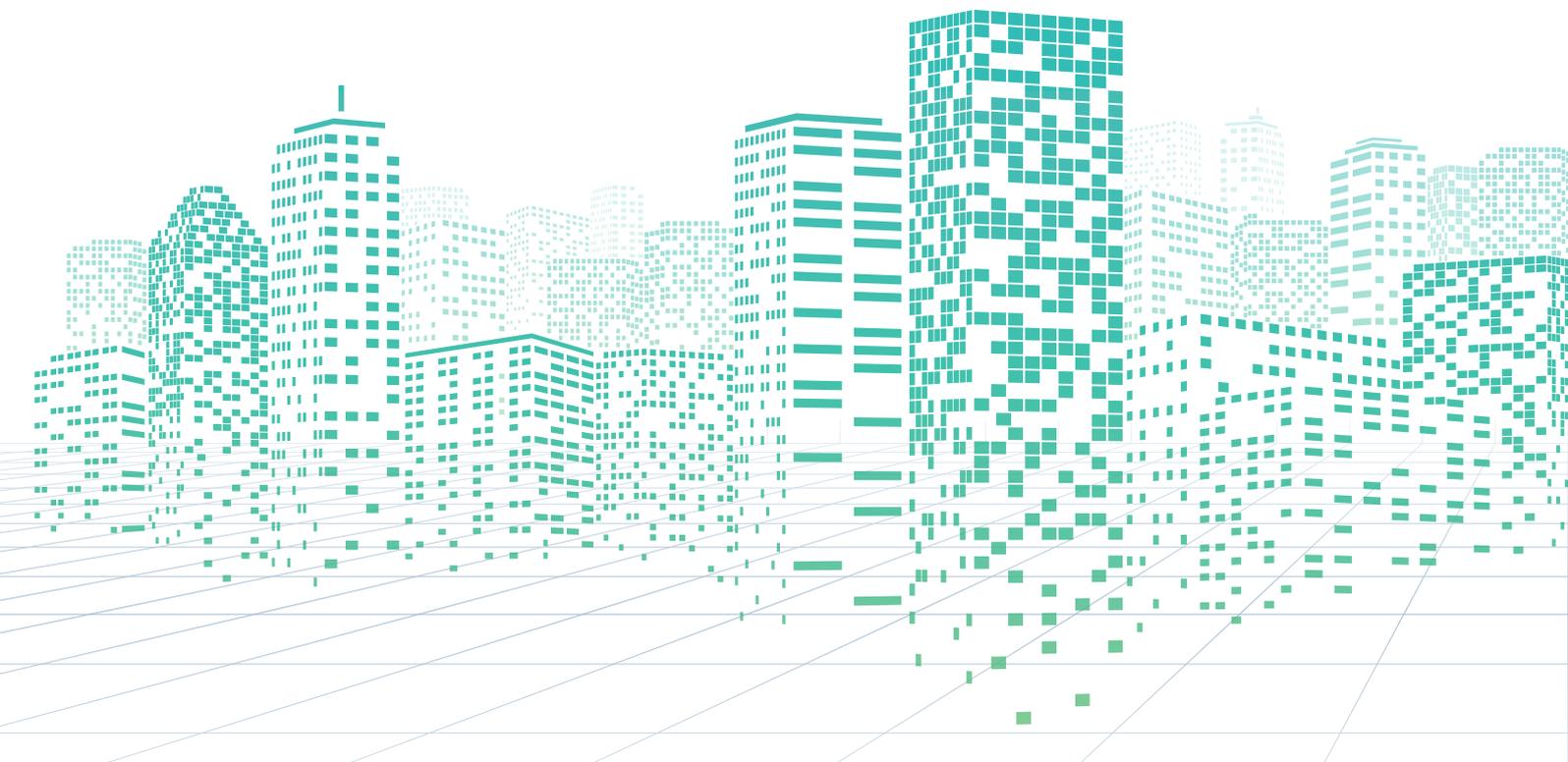**We're unsure about the work simulation with the model we created…**

With cranes in so many types and specifications, it's difficult to select one suited to the site…

It takes time to make documentation to distribute at the site

Searching through old projects uses up time …

Plan Your Crane Construction with These 5 Features ———
And Solve Your Problems

Ease of Use

Safety

Making Use of Data

K-D2
PLANNER

Adaptability to Workflows

Cost Merits

These features support high-level construction planning that is needed at construction sites with easy and intuitive operation, together with high-precision crane models and a plethora of functions.
In addition to solutions to concerns such as safety and cost that can prevent the need to redo site planning, the software can also be used for sharing plans between you and a site, and converting plans into knowledge that can be passed down to younger staff.
This significantly shortens time used on crane construction, and contributes to work reform, also a pressing need in the construction industry.

Ease of Use

• **Professional CAD software is difficult to use**

• **It takes time to check a crane's lift**

Plan View

Create plan views. Detailed information such as the crane's attitude and operating radius are displayed on the plan view.

• Crane model 7120G - 2
• Boom length 42.5 m× jib length 38.1 m
• Boom angle 90.00°
• Current 10.4 t×28.2 m
• Max. 3.5 t×40.1 m
• Min. 13.6 t×13.3 m

Cross-Section View / Operating Range View

Create a cross-section view of a crane as viewed from the side, and show/hide an operating range view of the crane with one click.
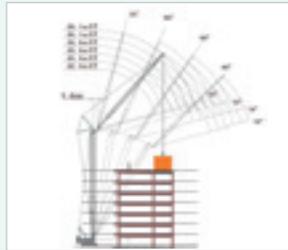
Operating Radius
(Maximum, Minimum)

Show maximum and minimum operating radiuses.

Rotating Radius

Show the rear end counter-weight radius.

K-D2 PLANNER - AJ1.3.5.0

Constuc. | Search | Operation | Task

View

Target

ID	crane
1	kobelco 7120G2-TW

CR Info, Load Info.

38.1

49

42.5 ⌄ m

90.0

Body angle 90.0 °
Swiv Ang 270.4 °

Deflex.@Jib tip
Lev. 1,870.6 mm
Virt 1,197.6 mm

Figures For Reference Use ONLY

# Stress-free, one-rev* construction planning with smooth operation

- Can be used easily by anyone, with easy-to-understand UI and intuitive operation, even the first time
- Check crane attitude and determine lift simply by clicking material

* One-rev is 1 revolution of the pointer hour glass in Windows.
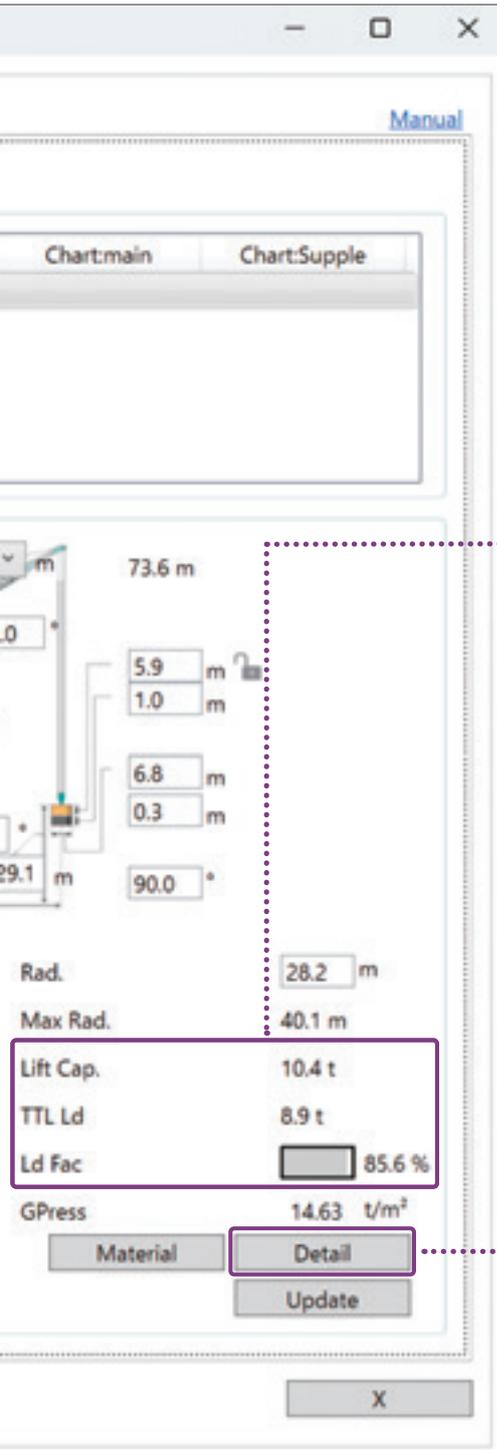
Alert Indications

An alert is displayed if the crane has an overload or has gone beyond its operating range. You can set load factor, ground contact pressure, and height limits, so alerts are displayed if limits have been exceeded.
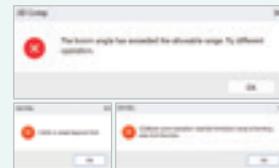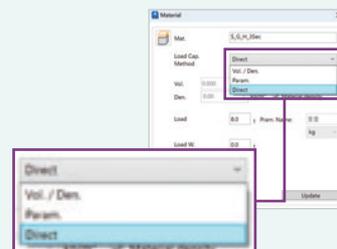
* Ground contact pressure and height limit functions are only supported for Kobelco Construction Machinery cranes.

Crane Hoisted Load Capacity

The crane's rated total load and the load factor when material is hoisted.

Material Details

Set material weight, and crane hook weight and safety factor. A method for calculating hoisted load can be selected from "calculate from cubic footage and density", "calculate from parameters", and "specify directly".

Ground Contact Pressure Details

Detailed information on ground contact pressure is displayed including maximum contact pressure and contact pressure when the crane is upright.
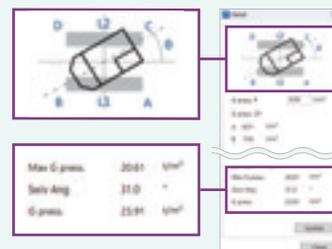
* Ground contact pressure function is only supported for Kobelco Construction Machinery cranes.

Do You Have Any of These Problems?

- **We're unsure about the work simulation with the model we created…**

Genuine Models by Domestic Crane Manufacturers Are Standard Pre-Set

KOBELCO

Crawler crane
(50 t to 500 t class)

TADANO

Rough terrain crane
(13 t to 100 t class)

All-terrain crane
(100 t to 700 t class)

HSC CRANES

Crawler crane
(55 t to 500 t class)

KATO

Rough terrain crane
(13 t to 80 t class)

All-terrain crane
(110 t to 400 t class)

* As of February 2, 2024, the software comes with standard preset models that have been released as BIM data by Tadano Ltd., Kato Works Co., Ltd., Sumitomo Heavy Industries Construction Cranes Co., Ltd., and Kobelco.
  Future BIM data releases will be made available on a continuing basis.

Also Import Crane Models You Already Have
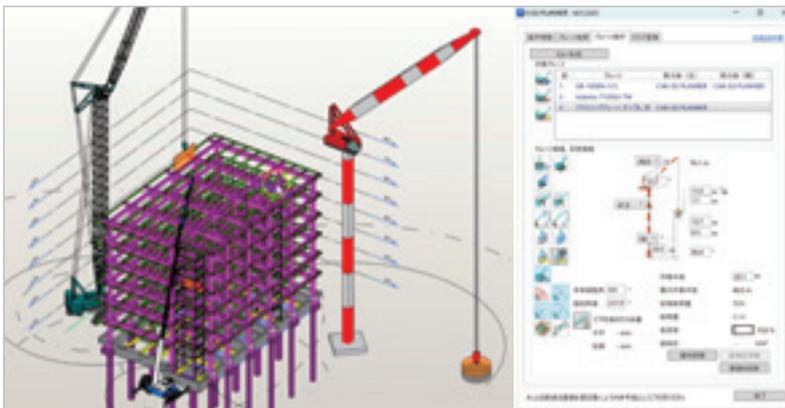
By importing Revit families and hoist capacity charts as CSV files, you can operate any crane with K-D2 PLANNER.

Genuine manufacturer models contribute to safer construction planning

- Genuine models by 4 domestic crane manufacturers are standard pre-set
- Flexion rendering* and similar functionality as expected from a major manufacturer enable detailed study

* Flexion rendering only for Kobelco Construction Machinery cranes.

Do Studies in Detail with Functions Such as "Flexion" and "Generate Path"

Flexion
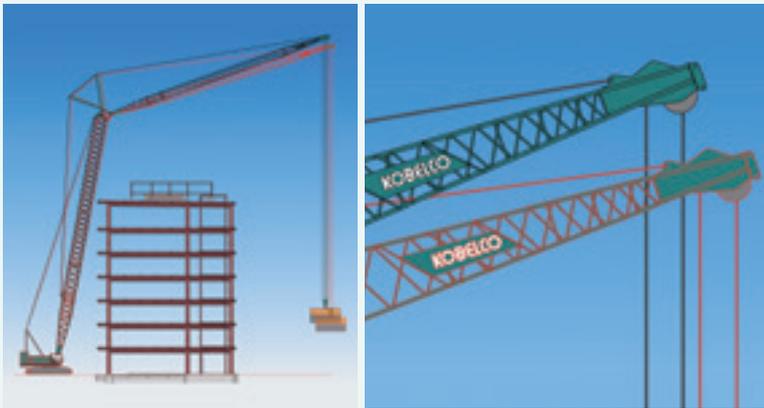
Show simulation of the amount the jib end moves when hoisting starts. The attachment tilts according to the load, and the hoisted load moves. This feature can be used when there is a high risk of the crane contacting a structure, such as at a narrow-space site.

* So the amount of flexion is visible, images of 2 crane models are discernibly overlaid as in the graphic above.
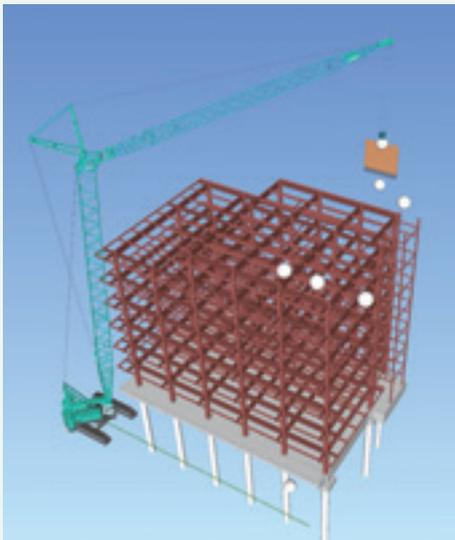
Generate path

If the crane is a Kobelco Construction Machinery crawler crane, the hook lift path can be automatically displayed based on the slinging location and the material attachment location. For other-company cranes, the path can be registered manually to display the lift path.
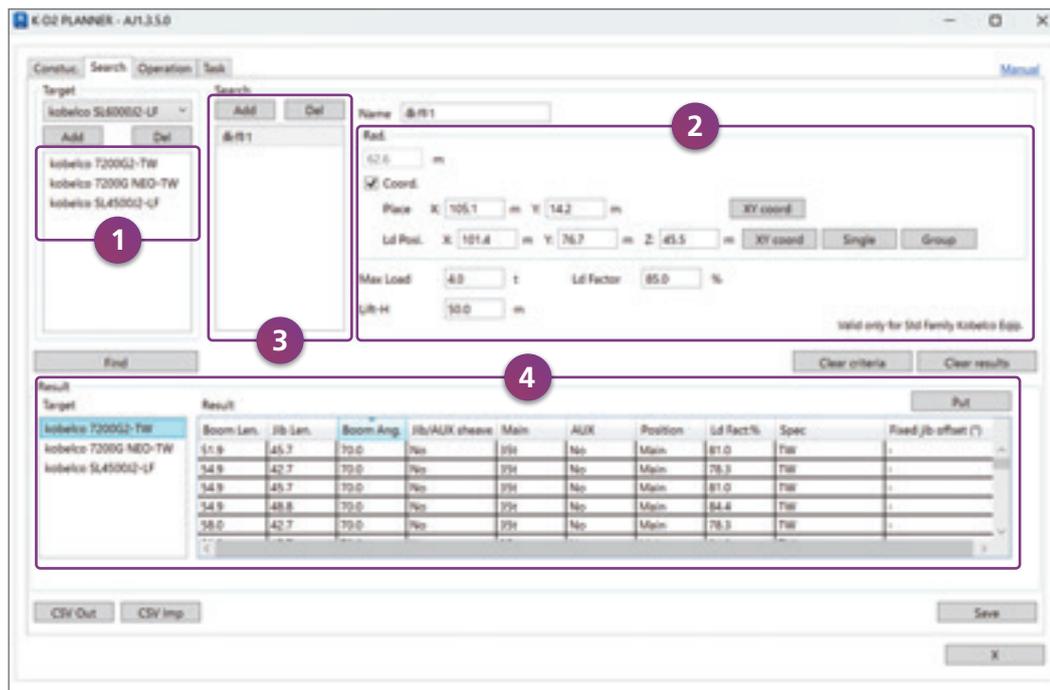
Do You Have Any of These Problems?

• **With cranes in so many types and specifications, it's difficult to select one suited to the site...**

| 1 | Select cranes to search | First, add crane candidates from the list of cranes. In addition to Kobelco Construction Machinery, you can also add other-company cranes and any you have loaded in as candidates. |

| 2 | Register conditions to specify crane placement/ hoisted load placement | You can specify placement of a crane on a plan view, and select the placement of the hoisted load on a plan view or in 3D. You can also enter the maximum total load (total value of hoisted load, hoisting attachment, etc.), the permissible load factor, and lifting height information. |

| 3 | Register several conditions | Each of several sections of a construction project and construction steps can be registered. Results that satisfy all the conditions are displayed. |

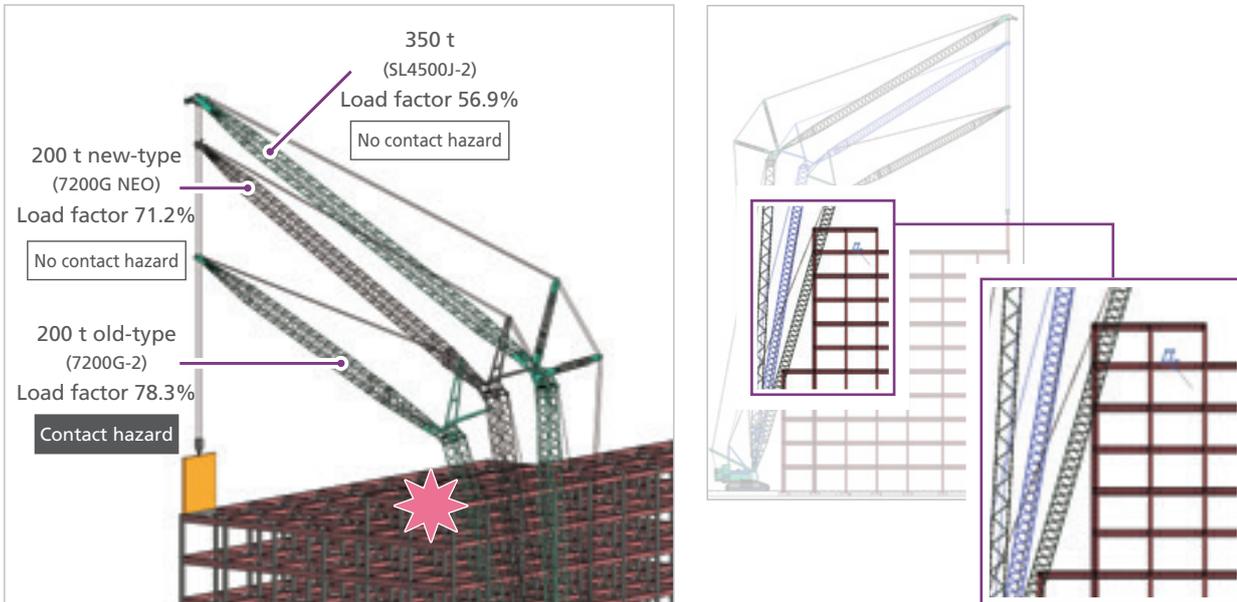| 4 | Narrow down the crane selection | Results matching the conditions from among the candidate cranes are displayed per model/attitude. |

Check optimal cranes with the filtering function! Reduce chartering costs

- Select a crane from the optimal class for the job site with only 4 operations
- Easily check contact hazards visually*
- Contribute to reduced chartering costs and prevent the need to redo site planning

* We request that a check for contact hazards be done visually in 2D or 3D.

Check Contact Hazards Visually in 2D and 3D

Cranes displayed in the search results can be displayed in 3D simply by clicking the placement button, where you can make lift determination as well as check model and do a visual check of contact hazards with surrounding objects. Then, simply click the icon for creating a cross-section view to check clearance in 2D.

350 t
(SL4500J-2)
Load factor 56.9%

No contact hazard

200 t new-type
(7200G NEO)
Load factor 71.2%

No contact hazard

200 t old-type
(7200G-2)
Load factor 78.3%

Contact hazard

Cost Reduction by Selecting of the Optimal Crane

Selecting an optimal crane with the filtering function would allow you to, for example, expect cost savings* of 4 million yen where you optimized your selection and changed from a 120 t to a lighter-class 90 t at a work site where a crane was going to be in operation for 10 months.

In this way, if you were able to change the planned weight class beforehand, you should be able to reduce unnecessary expenses and prevent any need to redo site planning.

* Calculated based on 120 t class at 2.4 million yen, 90 t class at 2 million yen, per-unit monthly fee for mobile crane work (Kanto region)

**120 t class
10 months
(24 million yen)**

**Savings of
4 million yen**

**90 t class
10 months
(20 million yen)**
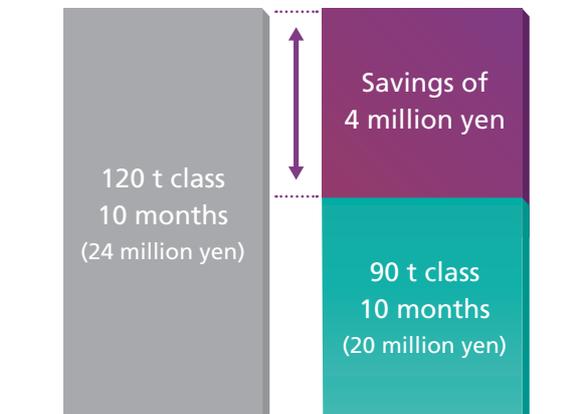
• Reference: [Kensetsu Bukka Feb. 2023 issue], ©Construction Research Institute publication, published Feb. 1, 2023, p. 809 Ido-shiki crane sagyo ryokin <mobile crane work fees> (Kanto region)

- **It takes time to create documentation to distribute at the site**
- **Searching through old projects uses up time …**

Convenient Function for Saving Past Search Results at the Same Time

Creation steps can be created simply by clicking on material. Material information (hoisted load weight and coordinates) and crane information (load factor, ground contact pressure, etc.) can be saved as results for each registered construction step, and can be recalled at any time.
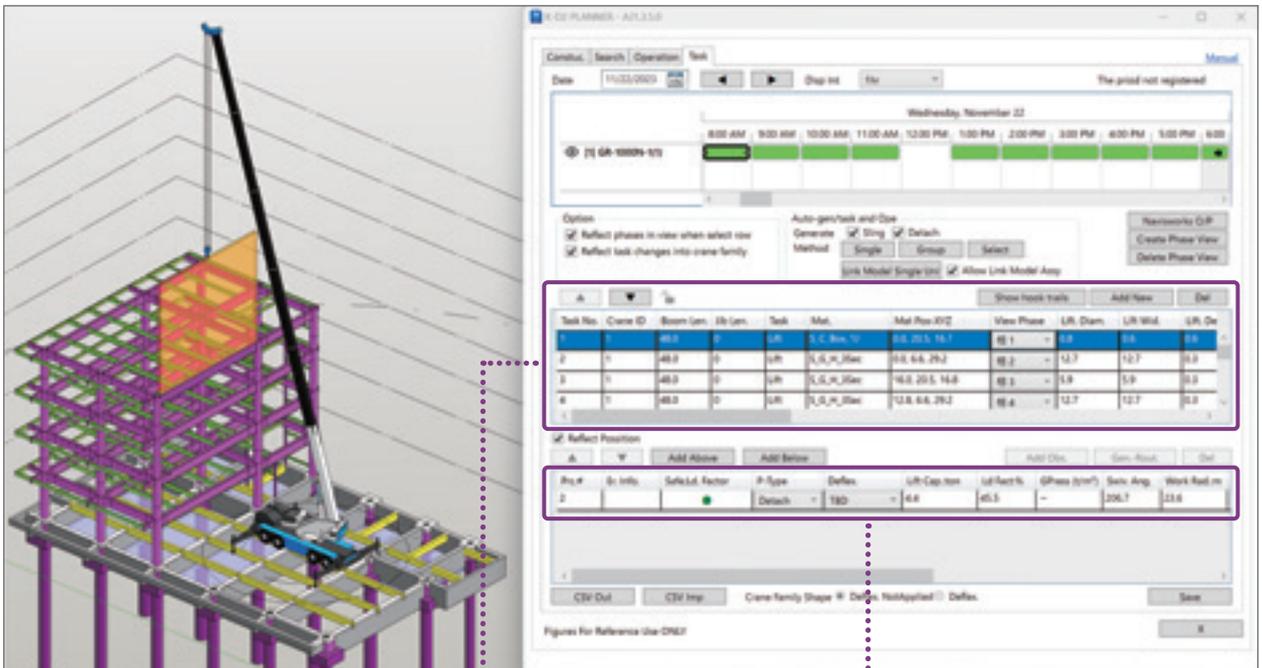
Material information

Material name	Cubic footage
Density	Hook weight
Hoisting attachment weight	Safety coefficient
Hoisted load weight	Total load

Crane information

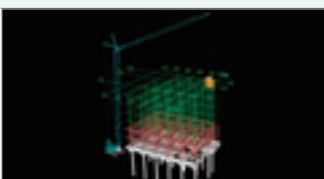|		
Safety condition (alerts)	Load factor	Rotating angle
Operating radius	Hook location	Work time
Hook lifting height	Heavy machinery location	Flexion
Rated total load	Ground contact pressure	

Solved!

Outputting to Navisworks allows use in a variety of situations, such as safety awareness events and information sessions for local residents

- 4D simulation with added time axis for more visualization
- Functionality for outputting to formats such as Navisworks -- Share information easily with site workers and clients
- Contributes to improved QCD through sharing of construction planning data

Variety of Output Options with 3D / Plan View / Cross-Section View / Navisworks

Created construction steps can be output to 3D, plan view, cross-section view, or Navisworks with a single click.

3D
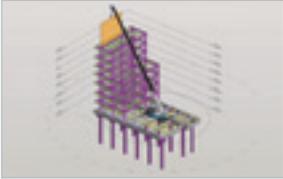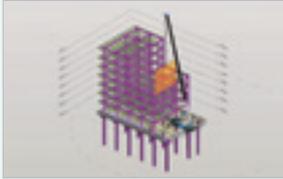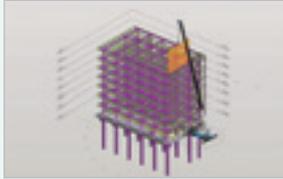
Plan View
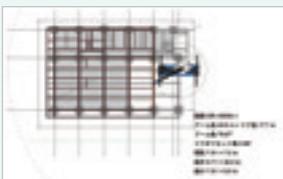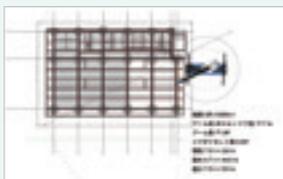
Cross-Section View

Navisworks

Use of Construction Planning Data Improves QCD and Supports Personnel Education

Construction planning QCD is improved by sharing construction planning data and making use of it in team studies or similar projects. Further, by saving the data in a database, knowhow transforms into knowledge, where it can be used to enhance planners' skills and educate younger staff.