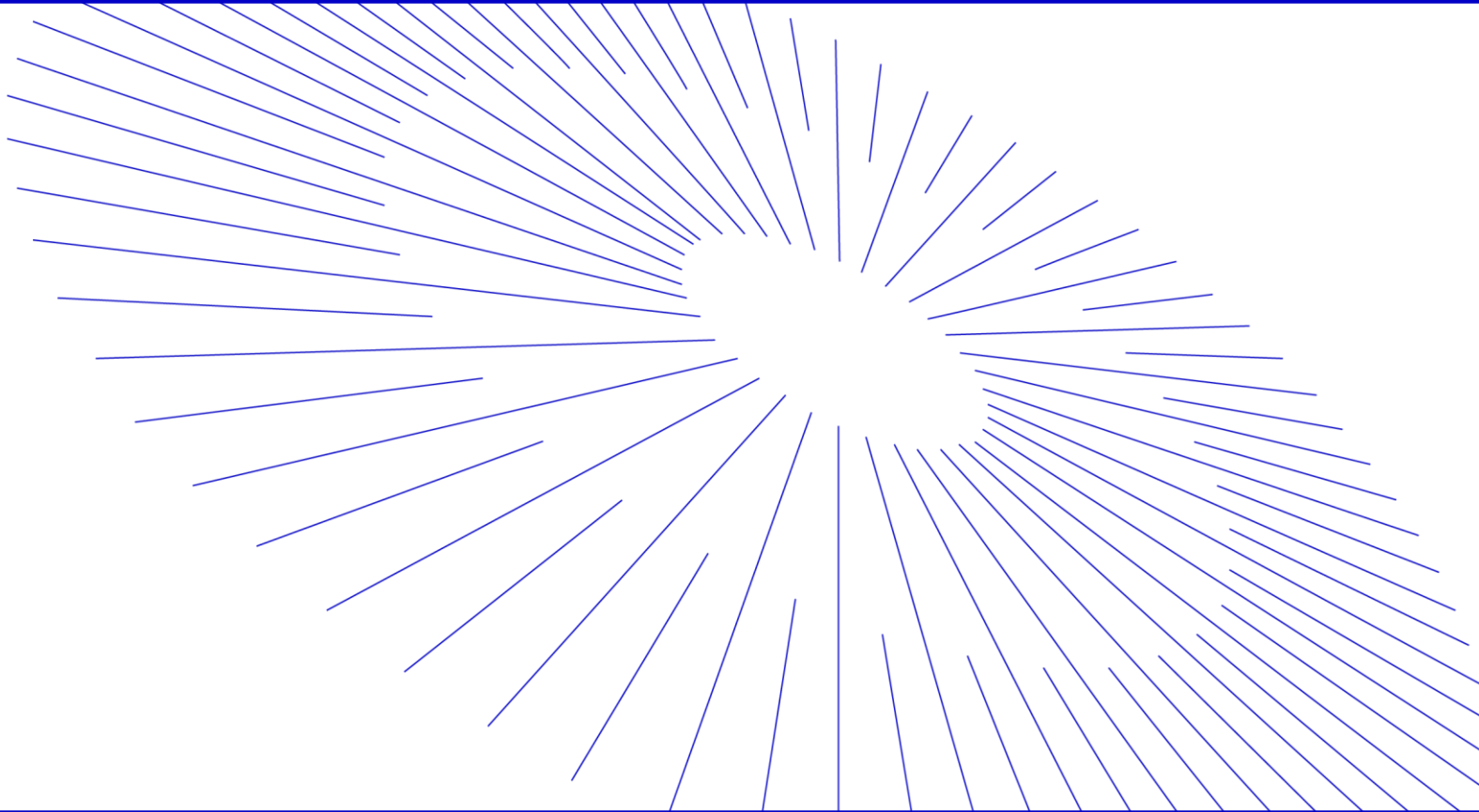


# Smart Construction Quick3D - plus AR application scenarios

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EARTHBRAIN

## 1. efficiency in design and construction

Using the AR function, it is possible to **confirm the next process and the completed form while overlaying digital information on the actual construction site and facilities during** the design and construction of buildings and facilities.

This reduces checking time and facilitates information sharing among workers, leading to more efficient operations, cost reductions, and a shorter construction period.

## 2. improve explanations and proposals to clients and prime contractors

The AR function **can show images of buildings and facilities in three dimensions.**

This allows for visual, easy-to-understand explanations and proposals to clients and prime contractors, **leading to improved satisfaction and acceptance.**

## 3. improvement of safety measures

The AR function allows you to **visualize dangerous areas and safety measures.**

It can **also be used for safety training and advance preparation**, raising safety awareness among all concerned.



## ■ Monitoring the progress of ICT construction

At ICT construction sites, design data is checked on the ICT monitor of the ICT construction equipment while construction is in progress. Because there were no (or only a few) Dingbangs, it was difficult for the site supervisor and other site workers to understand the status of the construction. Smart Construction Quick3D - plus AR,

**It is possible to visually check the progress and construction status against the design data.**

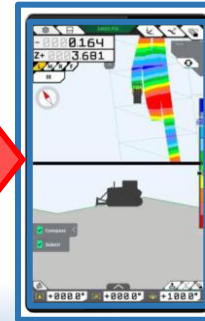
Site supervisors and field workers can use AR to get design data.  
Check and monitor progress and construction details



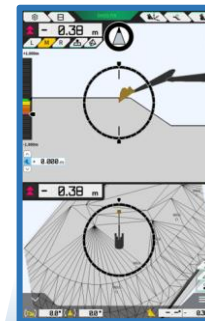
Site Supervisor, etc.

- Smart Construction Quick3D - Plus AR
- viDoc RTK rover
- iPhone/iPad

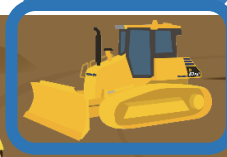
Confirmation of  
design data on site



Operator checks design data on ICT monitor  
while constructing



Example: Smart Construction 3D Machine Guidance Flex  
on-board bulldozer



Example: Smart Construction 3D Machine Guidance  
On-board hydraulic excavator



ICT construction site (hinge-less)



## Imaging of the finished product

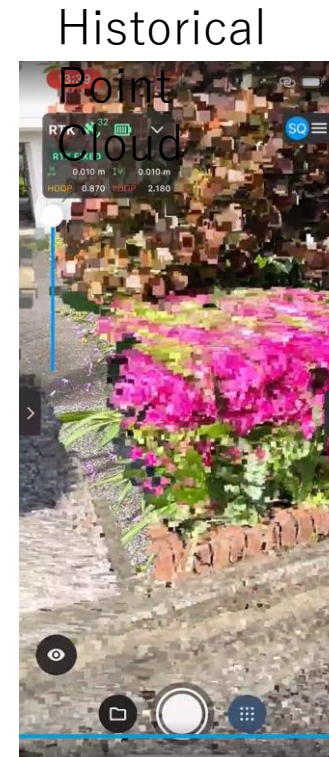
Smart Construction Quick3D - Plus with AR,  
The completed construction can be visualized on site. This allows you to concretely check parts that are difficult to understand from blueprints alone.



Example of use:  
Explanation of construction details on site to the client  
Detailed on-site instructions from the site supervisor to the workers

## Maintenance

By using Smart Construction Quick3D - Plus AR, the difference between the original and current conditions can be grasped by superimposing the completed point cloud and the current conditions, and it is possible to grasp specifically what kind of changes have occurred due to accidents, disasters, and deterioration over time.



change

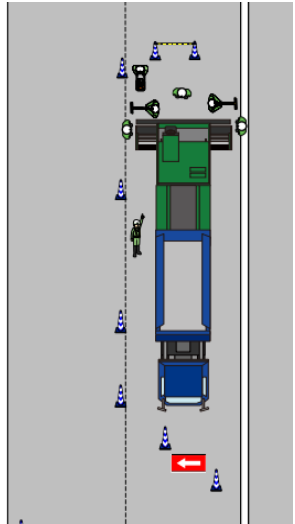


Application example: Confirmation of damage to structures due to natural disasters, etc.



## ■ Safety Management

Smart Construction Quick3D - Plus AR can be used to display traffic restrictions and other information on construction sites, allowing the exact location to be communicated to the site and enhancing safety.



Regulatory considerations  
in 2 dimensions

Regulatory considerations in AR

Examples of use:

- (1) Safety confirmation during pre-check by site supervisor
- (2) Accurate instructions to workers on installation location

## ■ Remote consensus building

Smart Construction Quick3D - Plus AR allows you to share site conditions and completion images with remote stakeholders to facilitate consensus building.

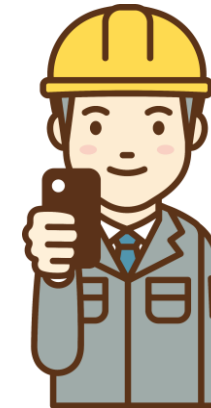
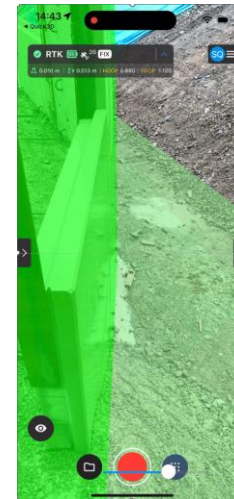
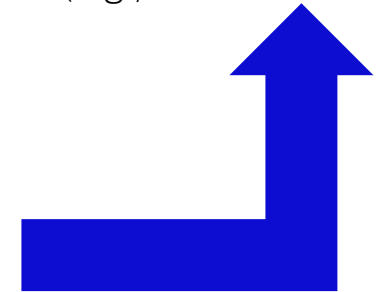
Construction site



Office



(e.g., web conferencing)



Example of use:

Explanation of construction status by remote presence with the client