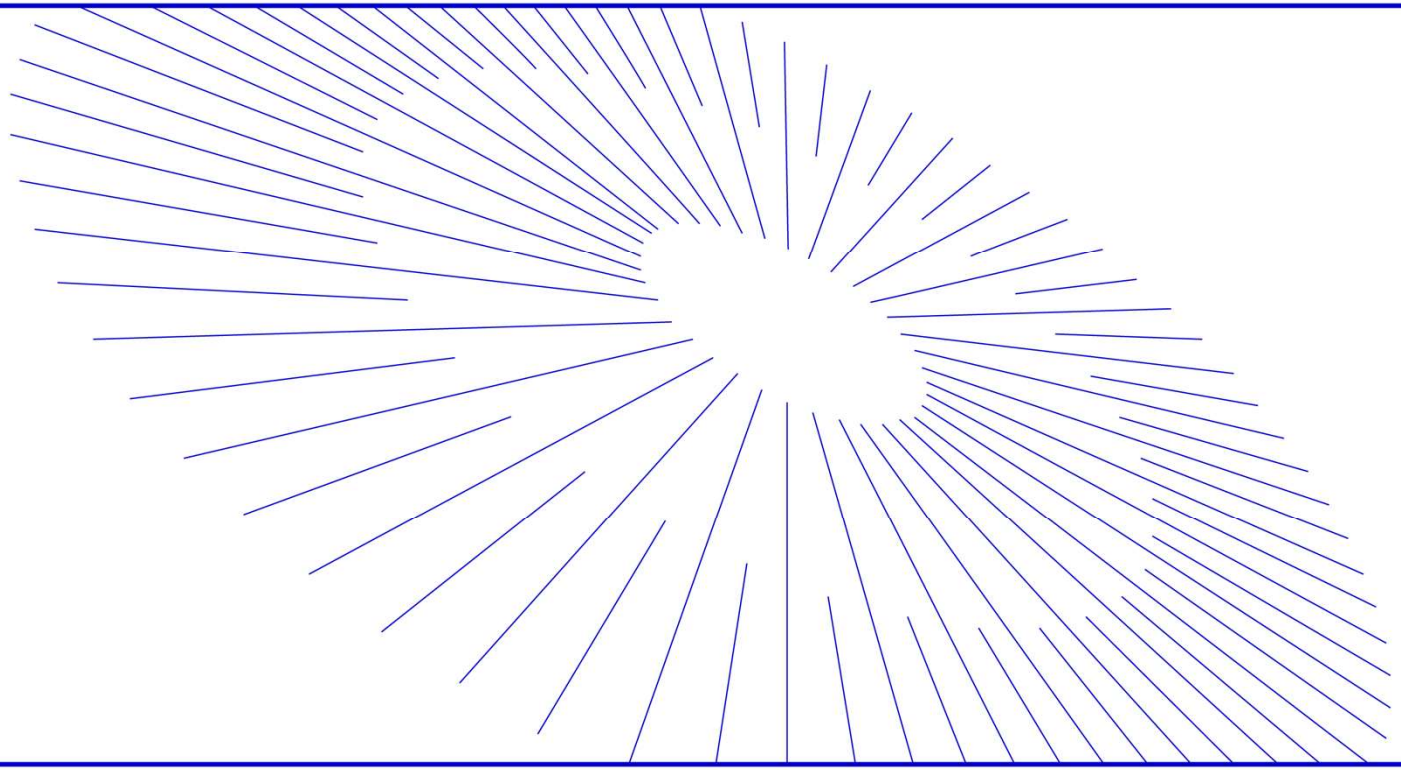
Smart Construction Simulation
2025.3.18(Schedule) About the Release Version



EARTHBRAIN

Release Item List

- We are pleased to announce the release of updates to "Smart Construction Simulation" with the following schedule and content.
- Due to system maintenance, the relevant services will not be available during the following dates.

(*The release schedule, time, and contents are subject to change depending on the situation. Please understand this in advance.)

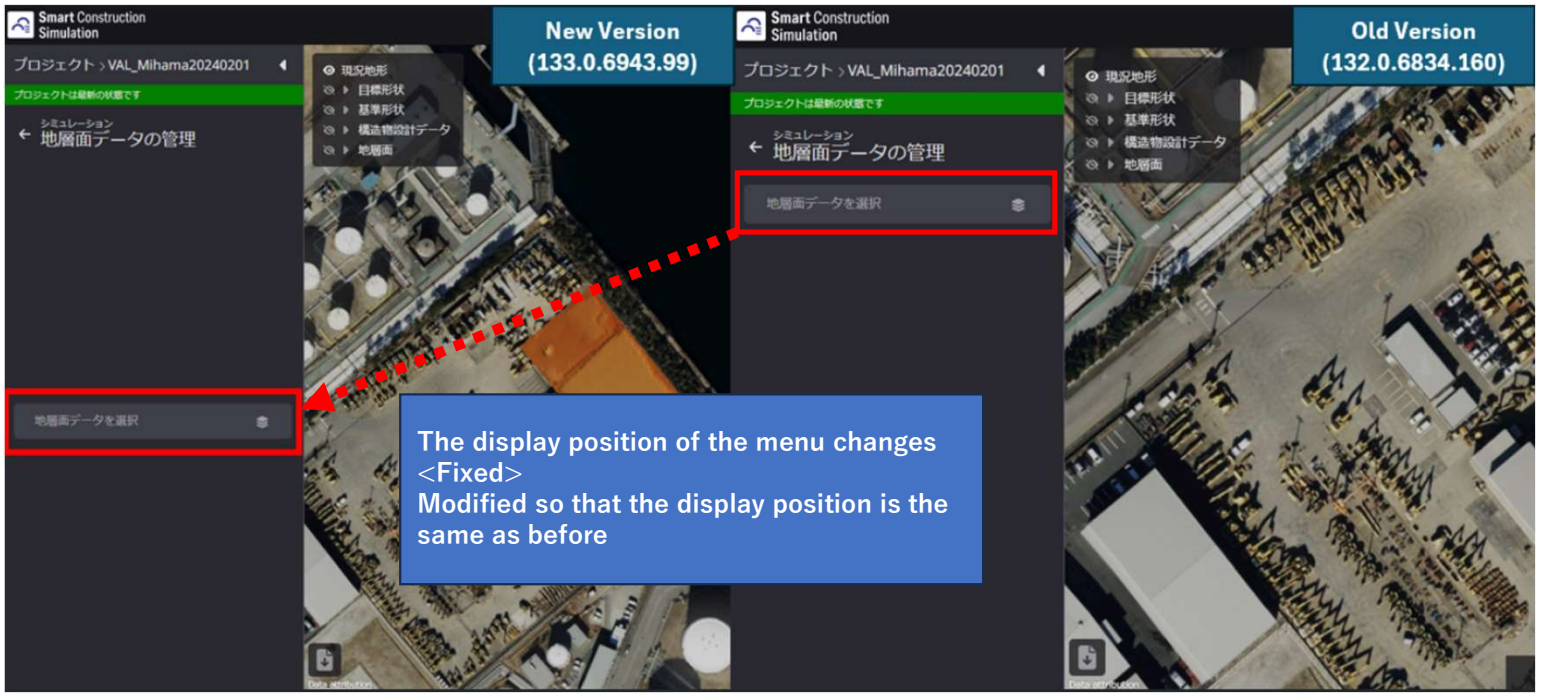
Schedule： Tuesday, March 18 (Japan time)　7:00 p.m. - 12:00 p.m.

NO.	Target Functions	Overview
1	Simulation (Function Improvement)	• Overview：Improved multiple selection when adding holidays • Details：Multiple dates can now be selected at once from the calendar when adding a holiday on the Basic Field Information setup screen. On the calendar, the selected dates are added to the holiday list, and by making them unselected, they disappear from the holiday list. 

Release Item List

NO.	Target Functions	Overview
2	Simulation (Function Improvement)	• Overview：Implemented the ability to display all area information on a map. • Details：The display of all area information can now be toggled from the display toggle in the upper left corner of the map. Area name and soil volume” information will now be displayed for all areas, just as it is when the mouse is over the area.However, there are some issues, such as the display being hidden by the existing topography or the area information remaining before the change after the construction area is automatically divided.

Release Item List

NO.	Target Functions	Overview
3	Simulation (Bug Repair)	• Overview：Fixed UI display position collapsing problem with Chrome version update • Details：Due to a version update of Chrome, there was a problem with the display position of some menus. The problem has been corrected so that the menus are displayed as before. 

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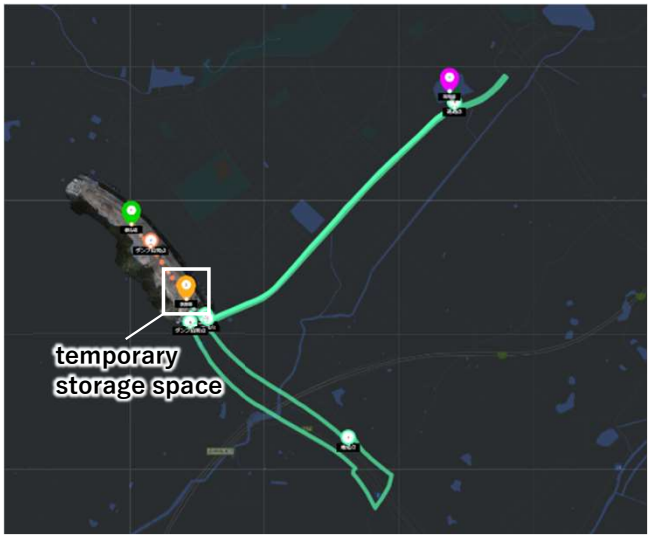
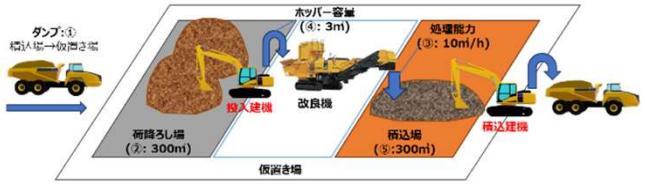
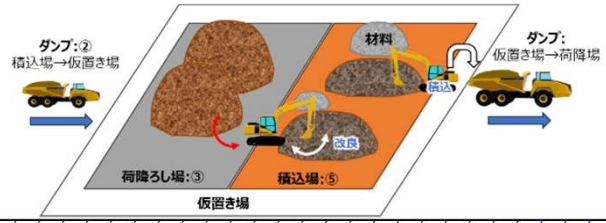
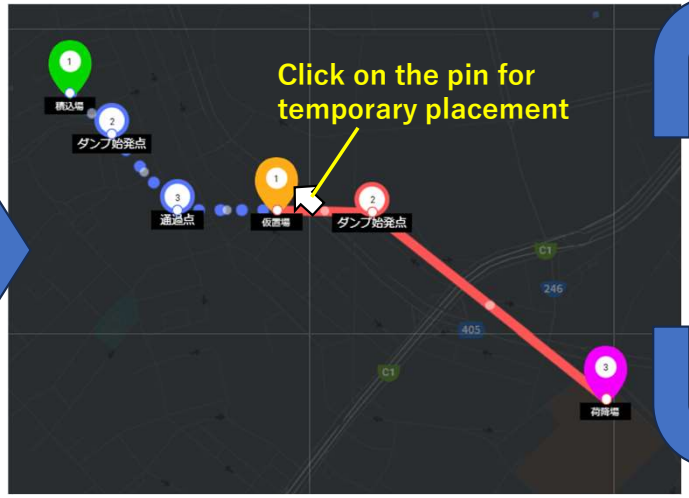
NO.	Target Functions	Overview
4	Machine Simulation (Function Improvement)	• Overview：Operation calculation function that takes temporary placement into account • Details：Calculations can now be made for temporary storage of soil during construction, such as when soil is brought from inside a field to outside the field for reloading, temporary storage for aeration drying, and soil improvement inside the field.  **【Temporary placement calculation pattern】** **① Temporary placement/replacement**  **② Soil improvement using an amendment machine**  **③ Soil improvement using construction equipment** 

Temporary placement function (usage instructions)

【 Operation Procedure 】

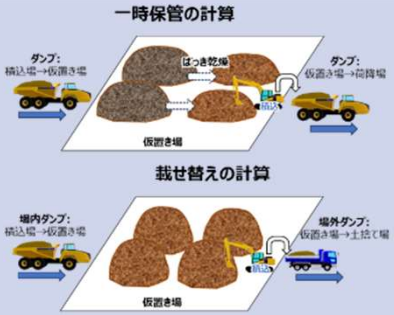
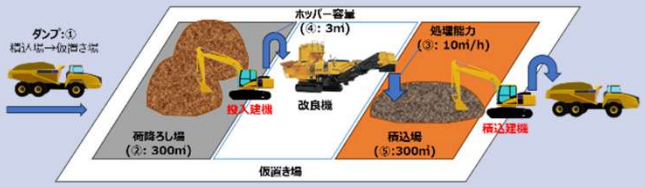
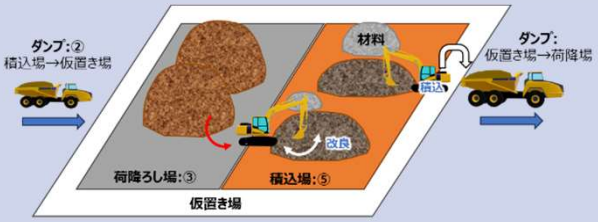
1. Create two runways, one to bring into the temporary storage area and the other to take out from the temporary storage area to the embankment
   *Set the start condition to “Date” for both.
2. A temporary storage area is created by overlapping the “unloading place” pin on the bring-in side and the “loading place” pin on the take-out side.
3. Click on the pins of the temporary storage area created, and select a “processing method”.
4. Set the construction equipment required for the “temporary storage area.



Select treatment method (use) for temporary storage

Select the construction equipment to be used in the temporary storage area

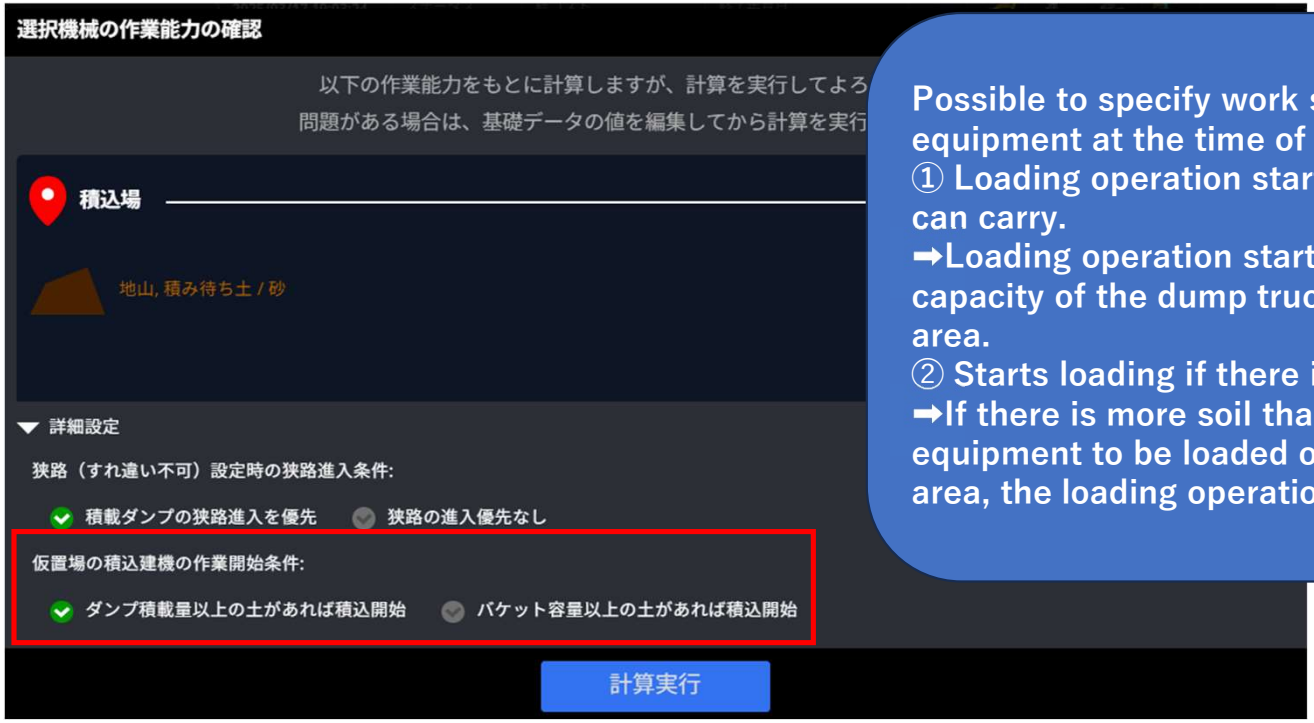
Temporary storage function (for processing method)

processing method	temporary storage	Soil improvement (Improver)	Soil improvement (construction equipment)
Processing image			
Setting Parameter	1. **Storage days:** After the storage days have elapsed, the material can be taken out (e.g. - 0 days: can be taken out on the same day - 1 day: can be taken out from the next day) 2. **Temporary storage capacity:** total amount of soil that can be placed in the temporary storage area 	1. **Unloading soil limit:** the total amount of soil that can be placed on the lifting side 2. **Capacity of the machine:** The capacity of the machine to process and improve the soil 3. **Soil hopper capacity:** the maximum amount of soil that can be fed into the machine. 4. **Waiting soil limit:** the total amount of soil that can be placed on the carry-out side after improvement 	1. **Unloading soil limit:** the total amount of soil that can be placed on the lifting side 2. **Soil to be improved at one time:** the amount of soil to be mixed with the improvement material 3. **Waiting soil limit:** total amount of soil that can be placed on the off-taker's side after improvement 
Role of Required Construction Equipment	• **Loading** (responsible for loading the dumpster on the take-out side)	• **Input** (Responsible for loading the soil into the improvement machine) • **Loading**(responsible for loading the dumpster on the take-out side)	• **Input** (in charge of preparing soil to be mixed with the improvement material) • **Improvement** (Responsible for mixing and improving the soil) • **Loading** (responsible for loading the dumpster on the take-out side)

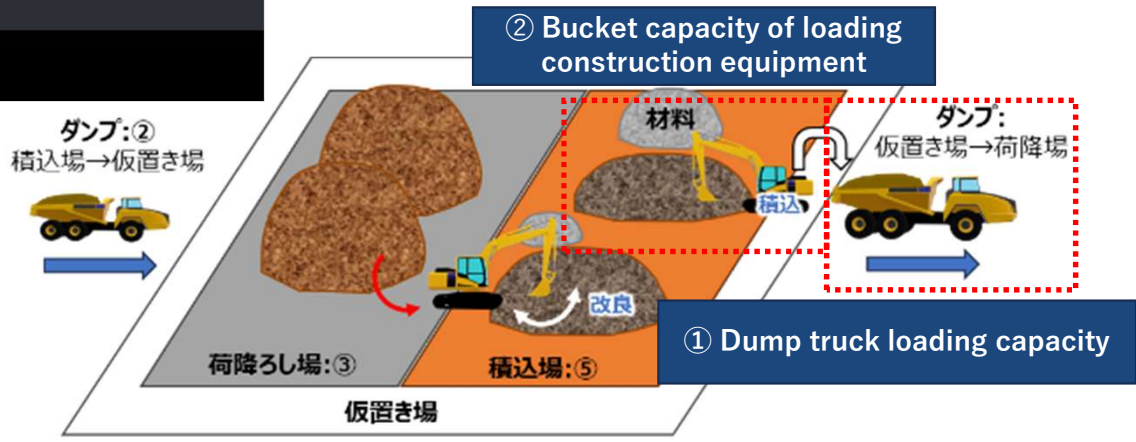
【Notes on use】

- **Temporary soil shaping work is not taken into account when the material is brought into the temporary storage area.**
- **Because the capacity of the temporary storage area is always taken into account in the calculation, the “simple calculation that copies the calculation results of the first day” cannot be used.**
- **The dump truck loading start mode cannot be used with the temporary storage function because it affects the temporary storage capacity calculation.**

Temporary storage function (for work start conditions for loading construction equipment)

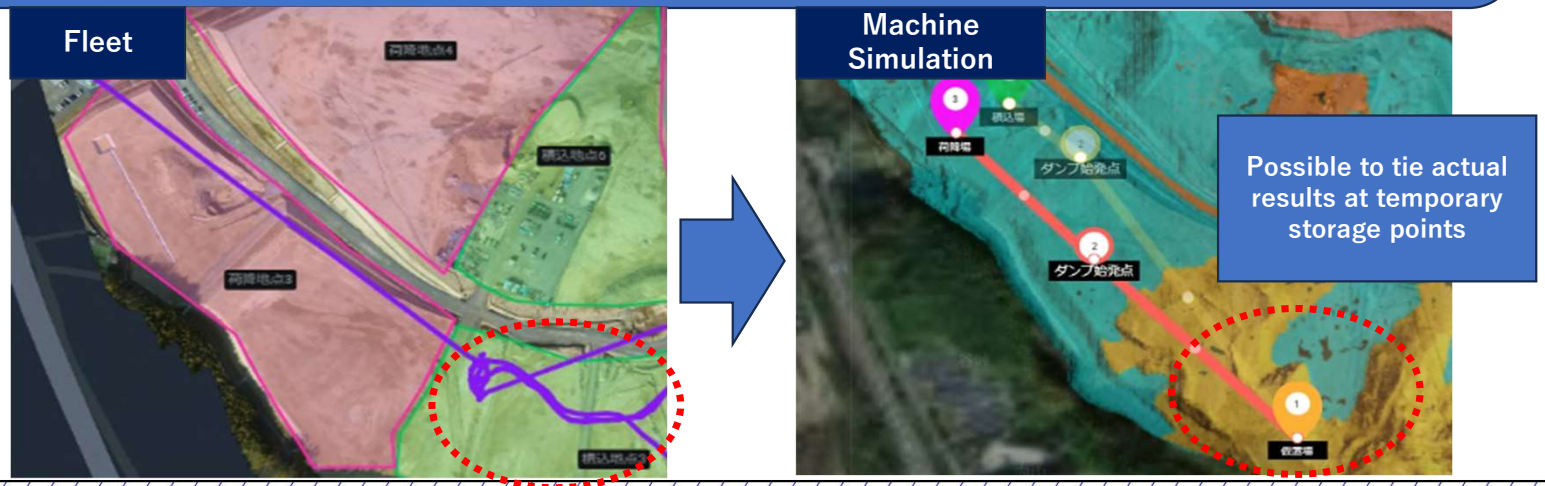


Possible to specify work start conditions for loading construction equipment at the time of calculation execution.
① Loading operation starts when there is more soil than the dump truck can carry.
➡Loading operation starts when there is more soil than the loading capacity of the dump truck waiting for loading at the temporary storage area.
② Starts loading if there is more soil than the bucket capacity.
➡If there is more soil than the bucket capacity of the construction equipment to be loaded onto the dump truck at the temporary storage area, the loading operation starts.

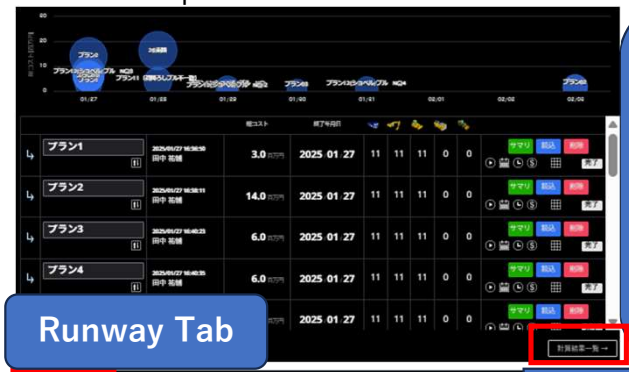


Release Item List

NO.	Target Functions	Overview
5	Machine Simulation (Function Improvement)	• Overview：Implementation of Fleet performance tie-in function in temporary storage • Details：Fleet can now associate temporary storage sites with temporary storage sites in construction equipment simulation. Even if a temporary yard is set up, the following connection processing is performed for both dump trucks and construction equipment. **■Points assignment when setting up temporary storage** **<Dump truck>** **・When a dump truck is unloading at a temporary storage area, it is linked to the loading area.** **・When loading at a temporary storage area, the location is linked to the temporary storage area.** **<Construction equipment>** **・If the machine is started at a temporary storage area, it is linked to the temporary storage area.**



NO.	Target Functions	Overview
6	Machine Simulation (Function Improvement)	• Overview：Implementation of output function of calculation result list (runway comparison) • Details：It is now possible to compare calculation results for each runway from the list of calculation results on the Plan List screen. For details of the output function, please refer to the following.



① Specify the date of the data to be displayed.
➡Display data for the specified date (if not specified, first day data for each runway is displayed)
②Filtering of “Plan/Runway” display
➡Set the display/non-display of plans and routes to be displayed in the list.
③Filtering of “Item” display
➡Set to show/hide items to be displayed in the list
④ List display
➡Display the results of each run in a table format
⑤ Output results to CSV file
➡Download the list display in CSV format
※Only the items displayed in the filtering are output.

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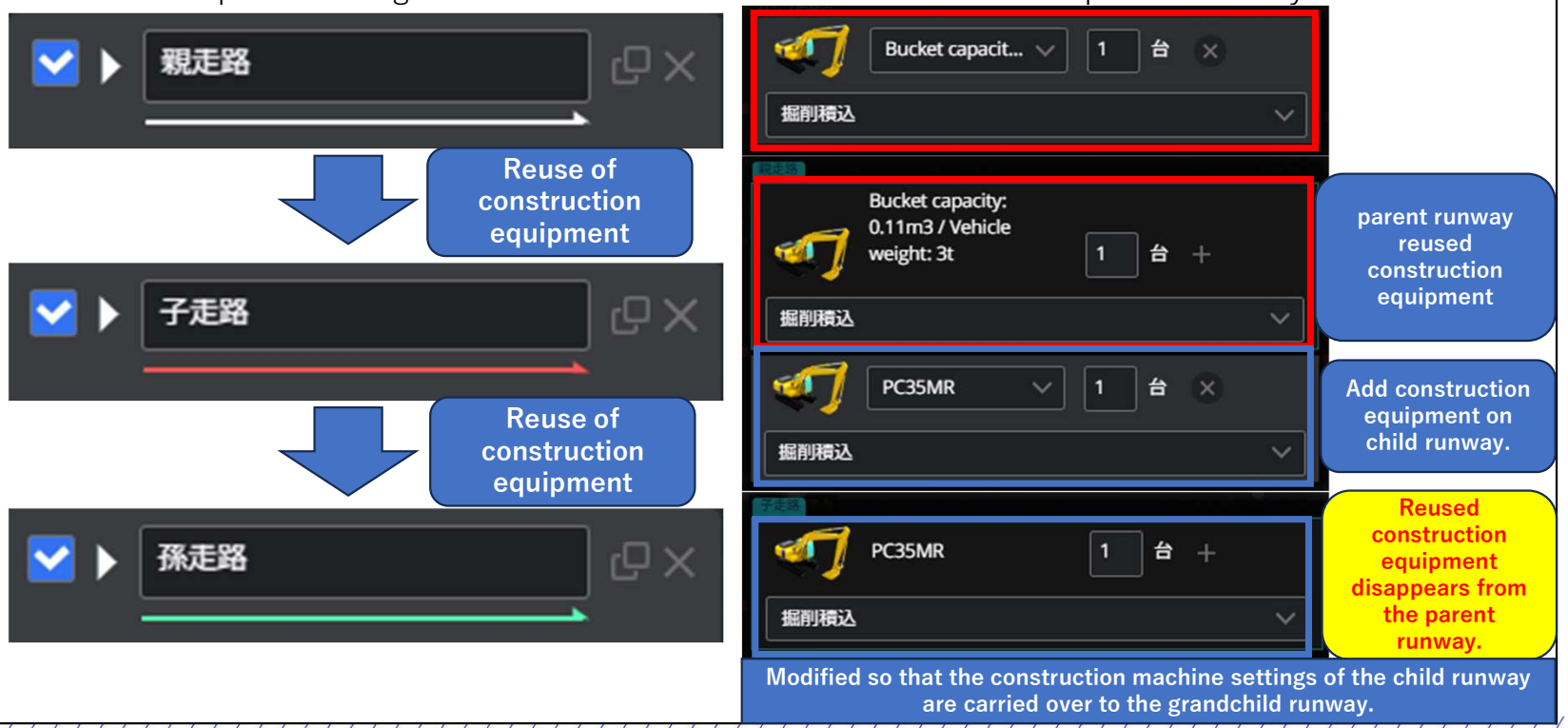
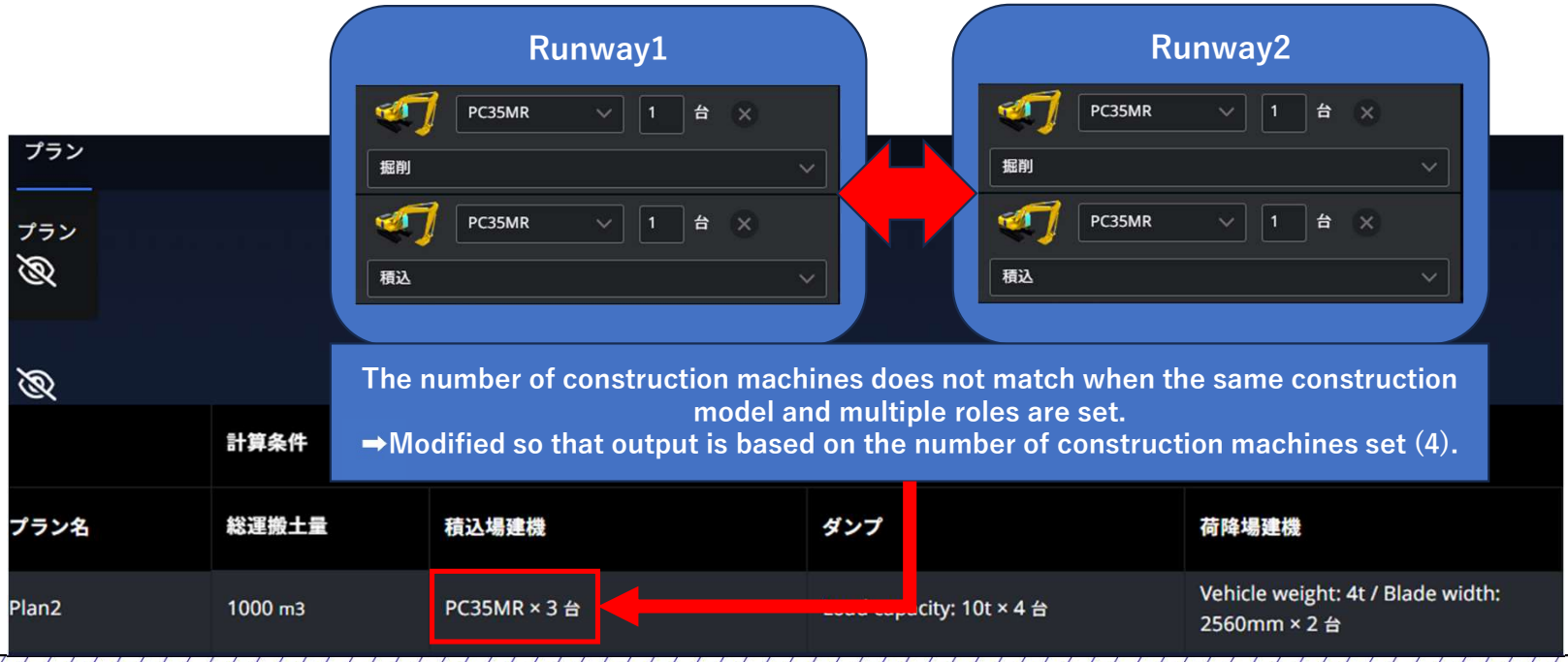
7	Machine Simulation (Bug Repair)	• Overview：Fixed a problem in which changing the setting of a construction machine in the child runway causes the setting of the succeeding construction machine in the grandchild runway to be corrupted. • Details：A problem has been corrected in which adding a new construction machine on a child runway when reusing a construction machine on three parent and child runways would corrupt the settings of the reused construction machine from the parent runway.



NO.	Target Functions	Overview
8	Machine Simulation (Bug Repair)	• Overview：Fixed a problem in which the number of construction machines is not displayed correctly when multiple roles of the same construction machine are set in the plan comparison. • Details：There was a problem in which the number of construction machines could not be calculated correctly when multiple roles were set for the same construction model in the plan comparison in the calculation results list. This has been corrected so that the number of construction machines set is displayed correctly.



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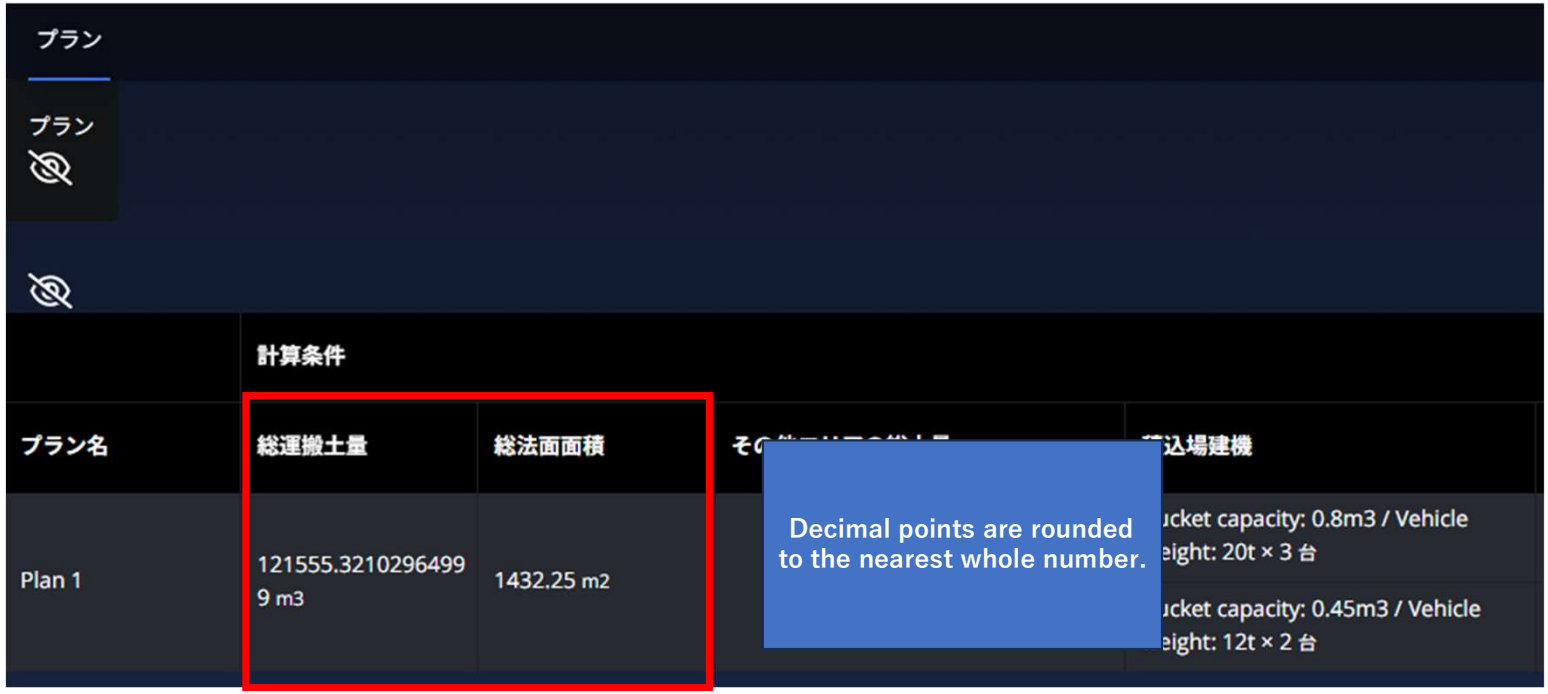
NO.	Target Functions	Overview
9	Machine Simulation (Function Improvement)	• Overview：Improved the plan comparison screen to display “Total Soil Transported/Total Slope Area” as an integer value. • Details：In the case of data from the Soil Distribution Sim linkage, a decimal point was displayed in the “Total Soil Transported/Total Slope Area” value on the Plan Comparison screen. The relevant items have been unified so that they are now displayed as integer values.



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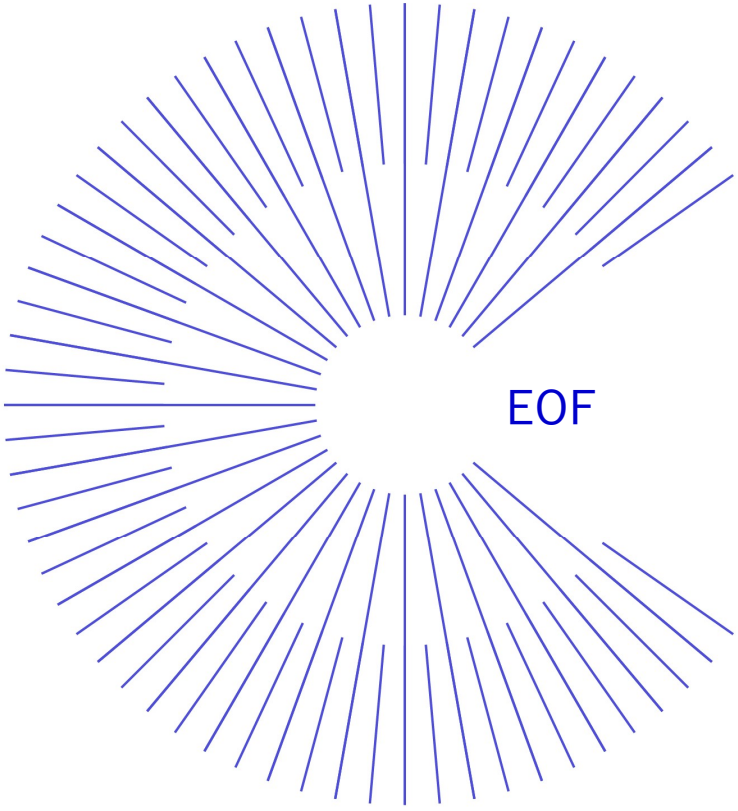
NO.	Target Functions	Overview
10	Machine Simulation (Function Improvement)	• Overview：Adjustment of transported soil volume graph excluding single construction zone and slope • Details：In the daily utilization rate screen, the overall trend graph has been changed so that the amount of soil in single construction sections and slopes is excluded from the total.The name of the graph has also been changed from “Total Soil Volume Completed” to “Total Soil Volume Transported”.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