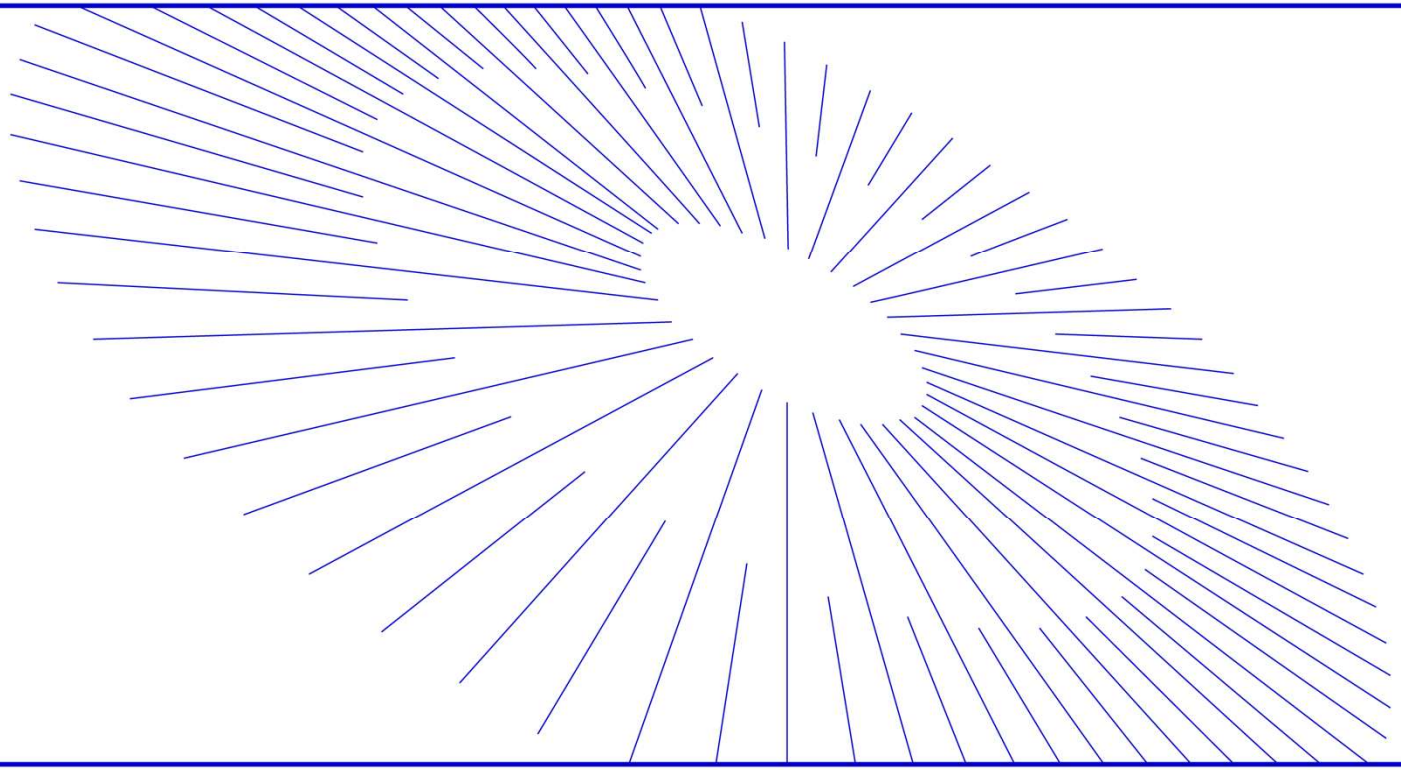
Smart Construction Simulation
2025.9.2(Schedule) About the Release Version



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, September 2 (Japan time)　7:00 p.m. - 12:00 p.m.

NO.	Target Functions	Overview	Details
1	Simulation (Function Improvement)	Upport for importing GeoJSON files	GeoJSON (.geojson, .json) files are now supported as vector overlay formats. Uploaded GeoJSON files are displayed with a linework icon and are automatically added to the "Design Data" list in the upper-left corner of the screen. Additionally, the "Project onto Ground Surface" option is now supported for these files.
2	Simulation (Function Improvement)	Support for importing DTM data	It is now possible to upload two TIFF files simultaneously and import them as DTM data. Each file can be designated as either "Image" or "Terrain," and will be uploaded with a point cloud icon to the Manage Surface list. Additionally, the imported data can be set as the Initial Surface.
3	Simulation (Bug Repair)	Fixed an issue where the point cloud format was not applied during import from groupware	Fixed an issue where the selected point cloud format was not correctly applied during import from groupware. Imports will now correctly reflect the chosen point cloud format.

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NO.	Target Functions	Overview	Details
4	Simulation (Function Improvement)	Added support for importing 2D design drawing data	TIFF files can now be uploaded as 2D design drawings. When uploading TIFF files, you can select "Ortho/2D Design Drawing" as the asset type. Files uploaded as 2D design drawings will be displayed with the same icon as design data and automatically added to the "2D Design Drawing" list in the upper-left corner of the screen.
5	Simulation (Bug Repair)	Fixed an issue where the task end display setting changed during duplication	Fixed an issue where the display end task setting for custom tasks was reset during simulation duplication. The display end task setting is now correctly retained in the duplicated simulation.
6	Simulation (Bug Repair)	Resolved a bug that prevented unused design data from being deleted after removing custom tasks	Fixed an issue where design data linked to a custom task could not be deleted even when it was no longer in use. Design data can now be properly removed from the file list after deleting the associated task, as dependencies are correctly cleared.
7	Simulation (Function Improvement)	Implemented CSV point cloud download functionality for intermediate terrain	It is now possible to download terrain data from intermediate stages of the simulation as point cloud data in CSV format. Point cloud data can be exported from each menu in both the Earthwork Planning settings screen and the Schedule screen, similar to LandXML export.

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NO.	Target Functions	Overview	Details
8	Simulation (Function Improvement)	Implemented vertical resizing via drag in the Gantt chart view	The vertical height of the Gantt chart view in the schedule menu can now be freely adjusted via drag operation. The collapse button for the Gantt chart view has been relocated to the right edge of the screen.
9	Machine Simulation (Bug Repair)	Fixed an issue where loaded vehicle start did not function correctly on the second and subsequent lanes	The issue where unloading operations did not occur from the off-site loaded vehicle during the first lap, even when the start condition was set to "loaded vehicle start" from the second route onward, has been fixed. Now, regardless of the start condition, unloading operations correctly occur during the first lap when starting with a loaded vehicle.
10	Machine Simulation (Bug Repair)	Resolved a bug where only the "Total" column in the cost summary table had an incorrect background color	The issue where only the "Total" column in the cost summary table had a different background color has been fixed. The background color has been adjusted to match the rest of the table for consistency.
11	Machine Simulation (Bug Repair)	Fixed a save failure issue when creating temporary storage in a synchronized Fleet-linked construction zone	The issue where the save process failed when creating a temporary storage area on a route linked to a Fleet with three or more routes has been fixed. As a result, saving under the above conditions now works correctly. Additionally, the following specification change has been made as part of this fix: It is now possible to save with only one of either the loading point information or the Fleet unloading point information set.

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12	Machine Simulation (Function Improvement)	Implemented automatic lane progress input when creating a re-planning plan	When a linkage table exists and a route is linked, the progress soil volume is now automatically entered into the rescheduling dialog based on the actual soil volume aggregation period. This allows users to create a rescheduling plan with the actual soil volume automatically populated.
13	Machine Simulation (Function Improvement)	Enhanced simplified calculation to consider parallel construction on multiple lanes	To more accurately estimate operations involving multiple parallel routes during simplified calculations, the system has been improved to also include the day following the completion of a route in the calculation. Previously, only the start and end dates of each route were considered, but now the day after the completion of other routes is also included in the calculation.
14	Machine Simulation (Bug Repair)	Fixed an issue where lane display switching failed after changing the date in the animation playback screen	The issue where route display switching did not work after changing the date on the transport animation screen has been fixed. Route display switching now functions correctly after the date is changed.
15	Machine Simulation (Function Improvement)	Improved progress graph prediction logic to support non-working days and cumulative averaging	The progress graph has been improved with the following specification changes: ・Goal (Earthwork Volume): Total transported volume across all lanes defined in the selected plan ・Slope of the Progress Line: Average of the actual volumes recorded over the most recent 5 days ・Handling of Non-Working Days: No volume is added on non-working days ・Predicted Final Day Volume: Adjusted so that the total volume reaches the goal exactly on the goal date

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19	Machine Simulation (Bug Repair)	Fixed incorrect display of daily operation rate volumes and units during standalone zone calculations	Fixed an issue where the volume and units were incorrectly displayed in the daily operation rate screen during calculations for standalone zones (slope and other work). The values shown in the chart and the progress graph are now consistent.

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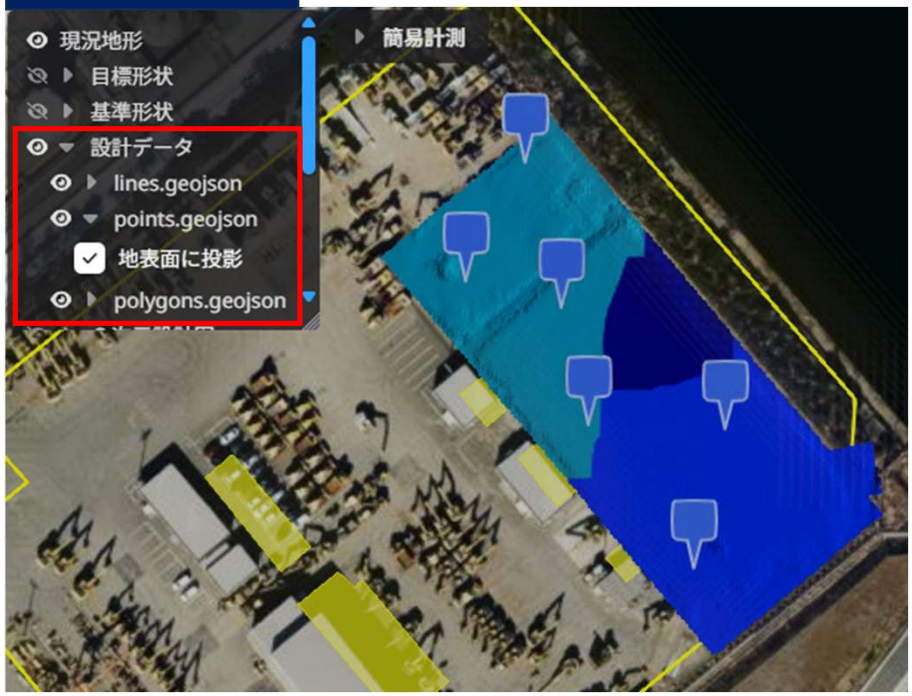
File Upload

Groupware

Map display



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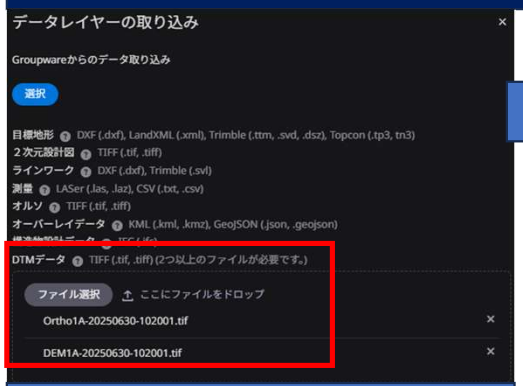
File Upload



Upload two TIFF files simultaneously
TIFF形式を2ファイル同時にアップロード

Terrain Settings

DTM data can be set to the Initial terrain
DTMデータを現況地形に設定可能

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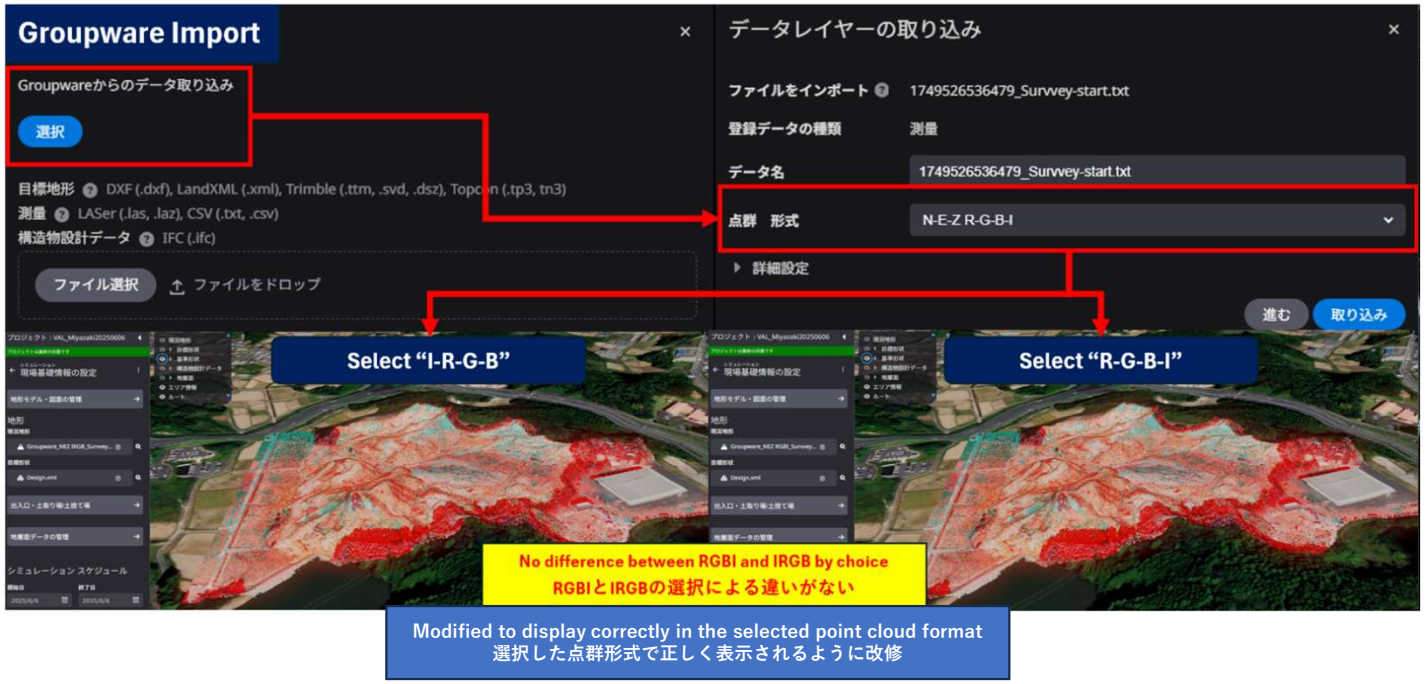
3	Simulation (Bug Repair)	• Overview：Fixed an issue where the point cloud format was not applied during import from groupware Details：Fixed an issue where the selected point cloud format was not correctly applied during import from groupware.Imports will now correctly reflect the chosen point cloud format. 

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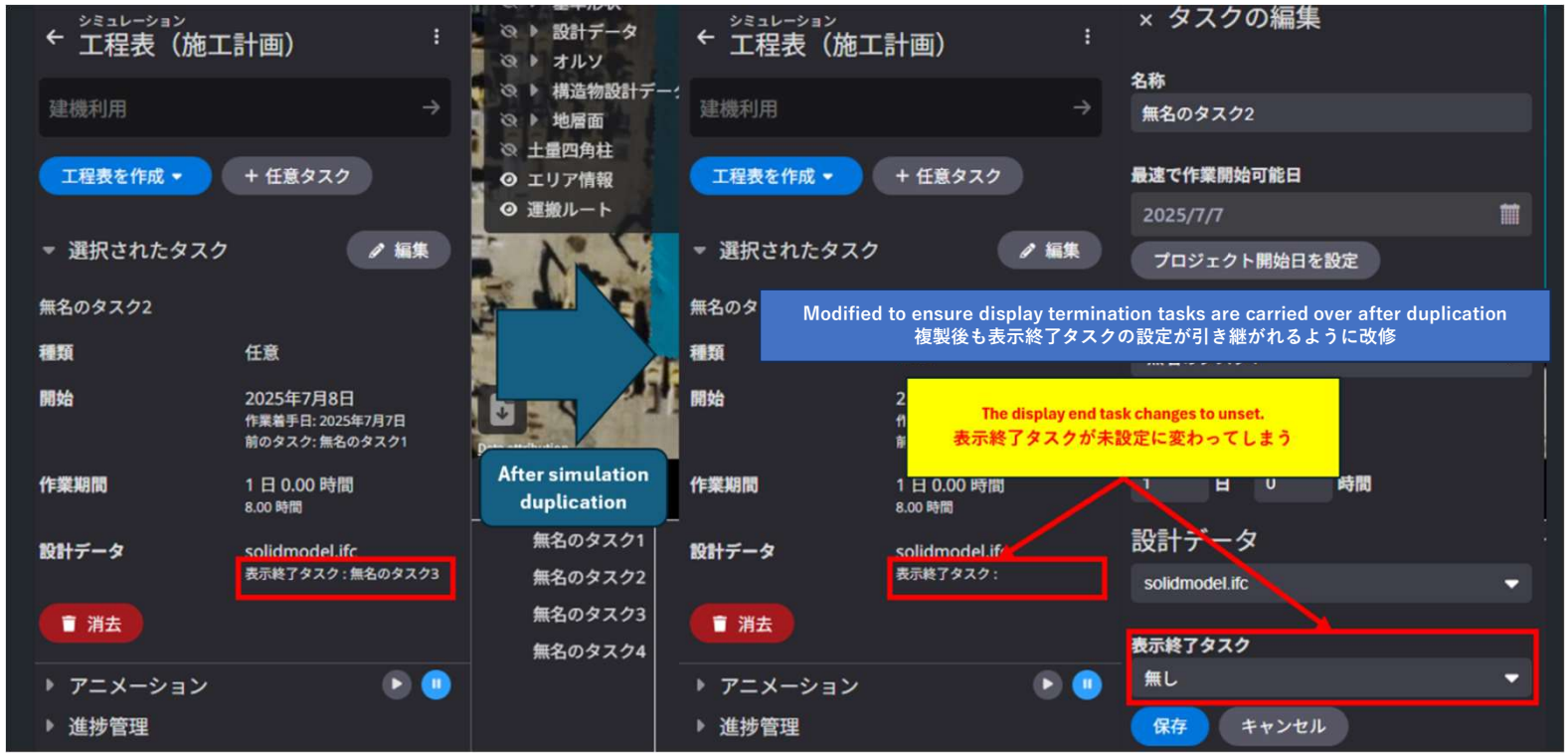
5	Simulation (Bug Repair)	• Overview：Fixed an issue where the task end display setting changed during duplication • Details：Fixed an issue where the display end task setting for custom tasks was reset during simulation duplication.The display end task setting is now correctly retained in the duplicated simulation. 

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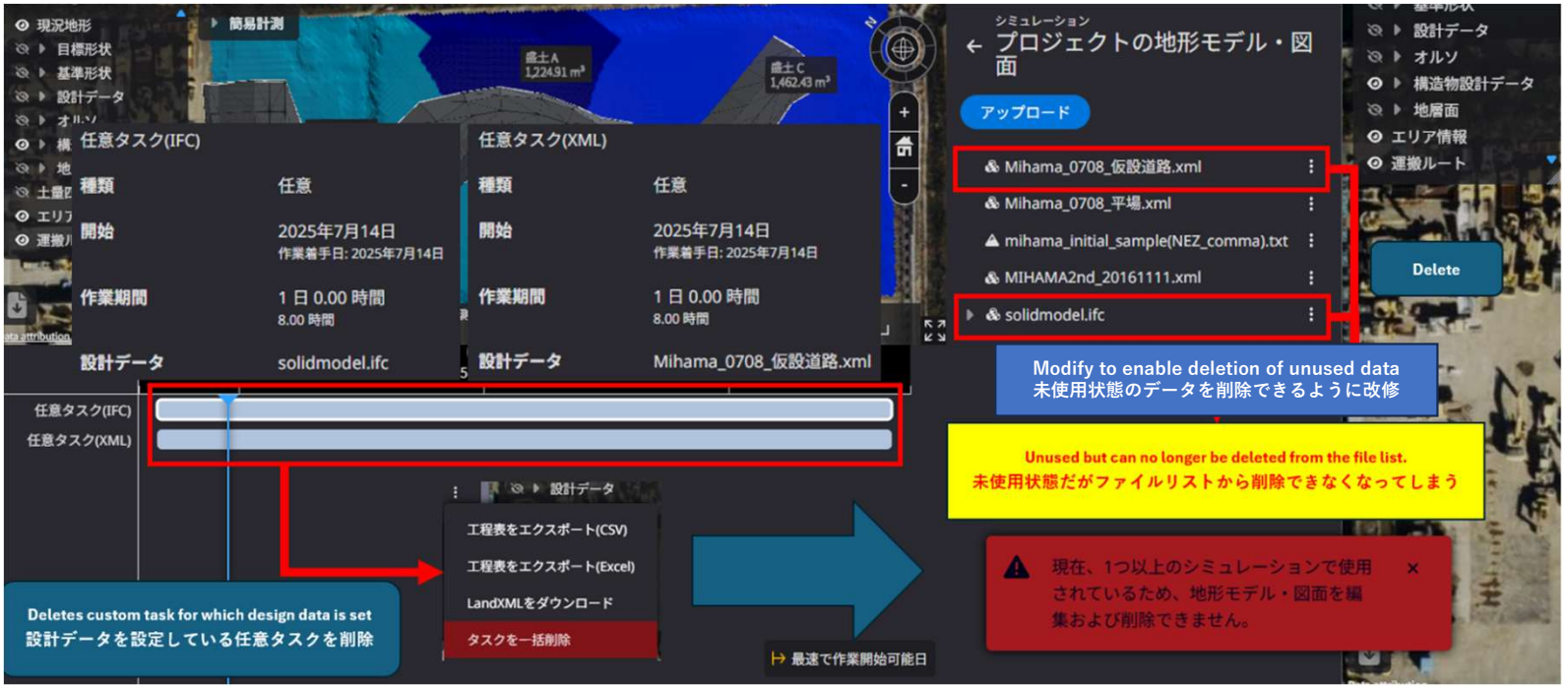

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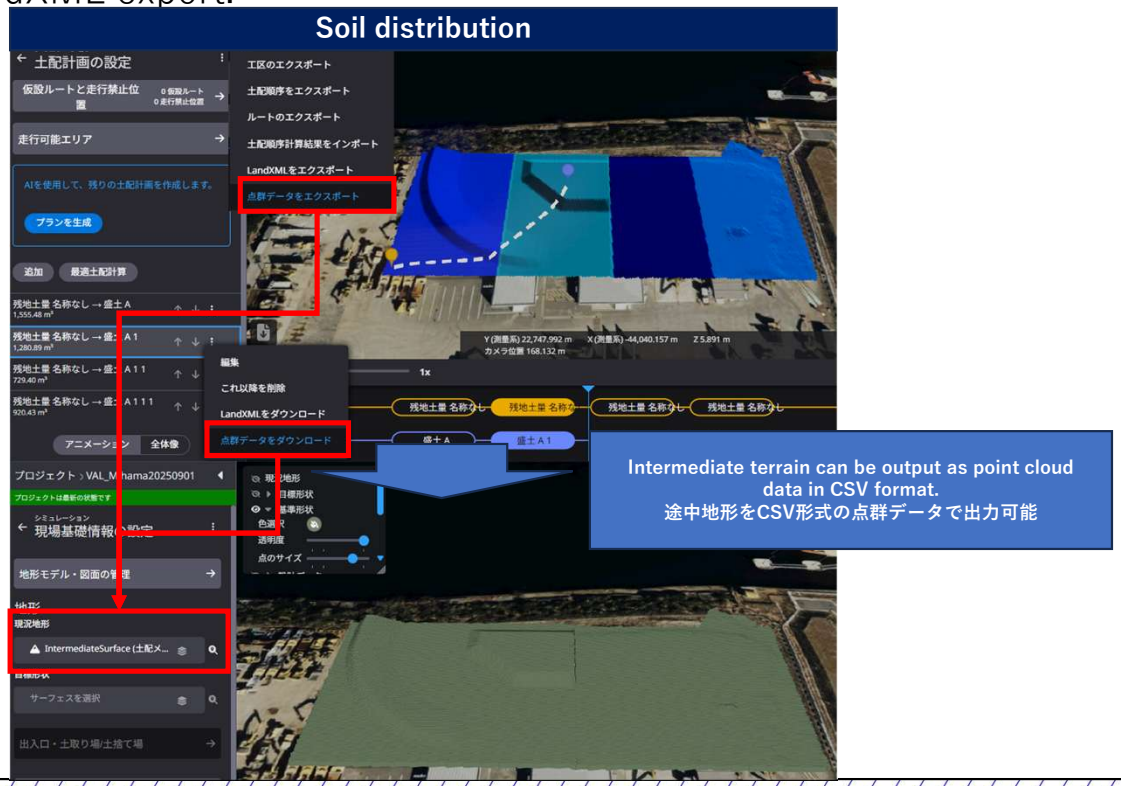
7	Simulation (Function Improvement)	• Overview：Implemented CSV point cloud download functionality for intermediate terrain. • Details：It is now possible to download terrain data from intermediate stages of the simulation as point cloud data in CSV format.Point cloud data can be exported from each menu in both the Earthwork Planning settings screen and the Schedule screen, similar to LandXML export. **Soil distribution** 

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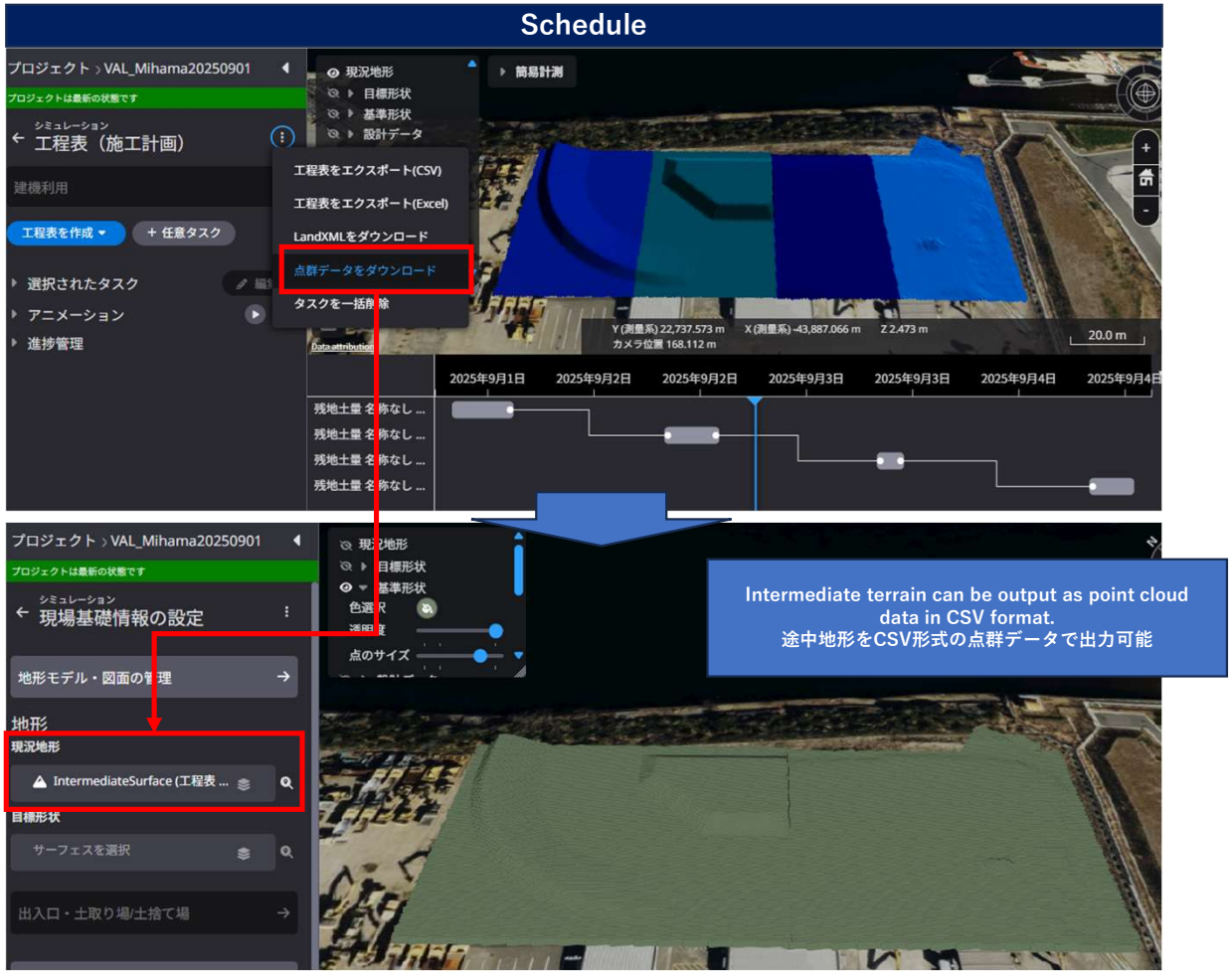
7	Simulation (Function Improvement)	Schedule 

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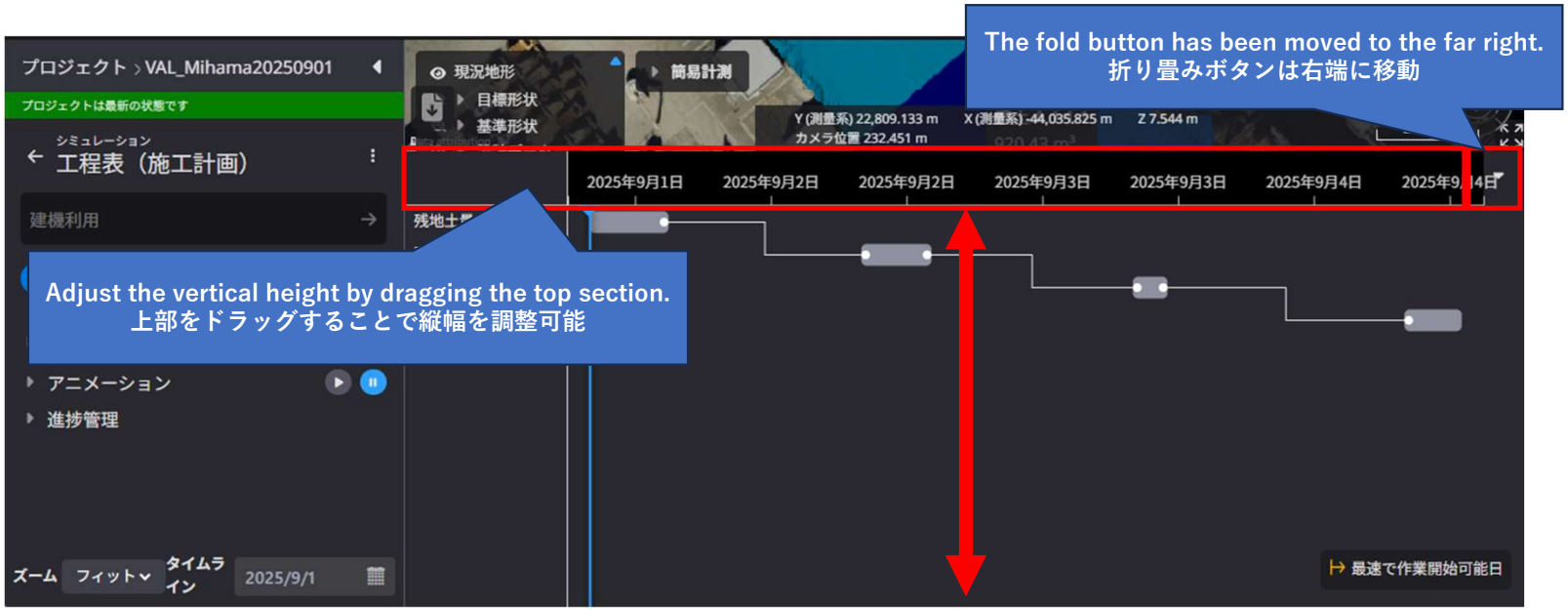
8	Simulation (Function Improvement)	• Overview：Implemented vertical resizing via drag in the Gantt chart view • Details：The vertical height of the Gantt chart view in the schedule menu can now be freely adjusted via drag operation.The collapse button for the Gantt chart view has been relocated to the right edge of the screen. 

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SimulationとFleet情報の紐づけ

Simulationの走路とFleetの作業地点の紐づけ登録を行う機能です。

Simulation	Fleet		
走路	積込地点*	荷降地点*	ルート
走路1	積込地点2	荷降地点1	ルート1
走路2	積込地点2	荷降地点2	ルート2
走路3	忠節河川敷	安八SIC残土置場	なし

Modified to allow saving after creating a temporary storage location
仮置場作成後に保存できるように改修
Can be saved with only one loading/unloading point set
積込/荷降地点のどちらか一方だけ設定した状態で保存可能

Simulation	Fleet		
走路	積込地点*	荷降地点*	ルート
走路1	積込地点2	荷降地点1	ルート1
走路2	なし	荷降地点2	ルート2
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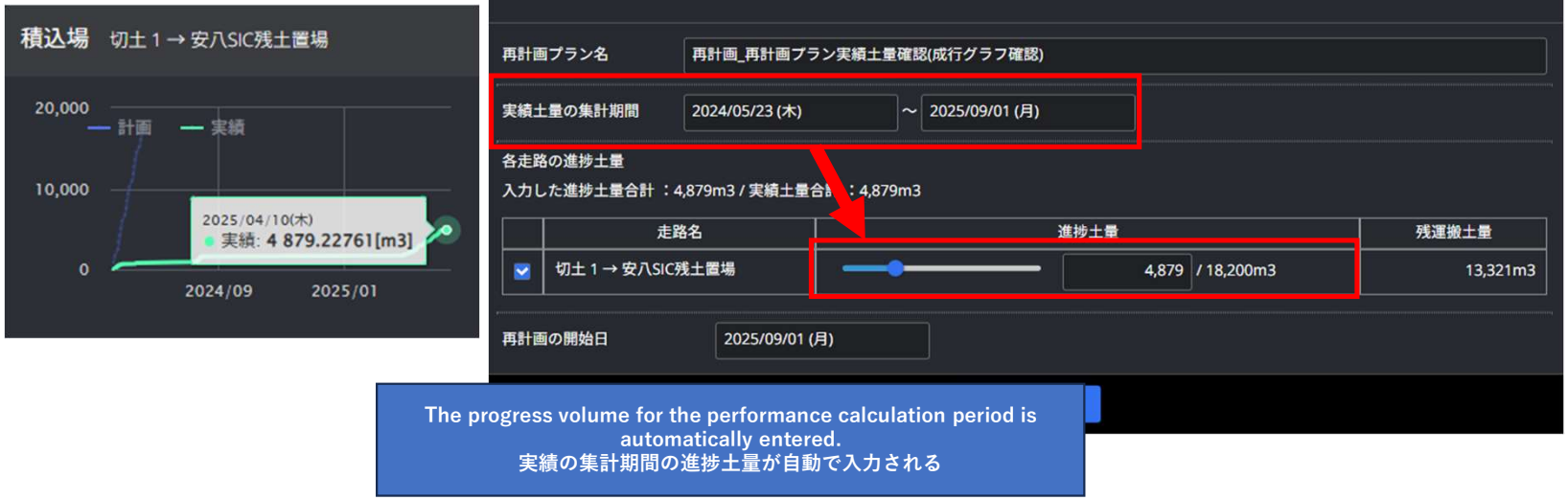

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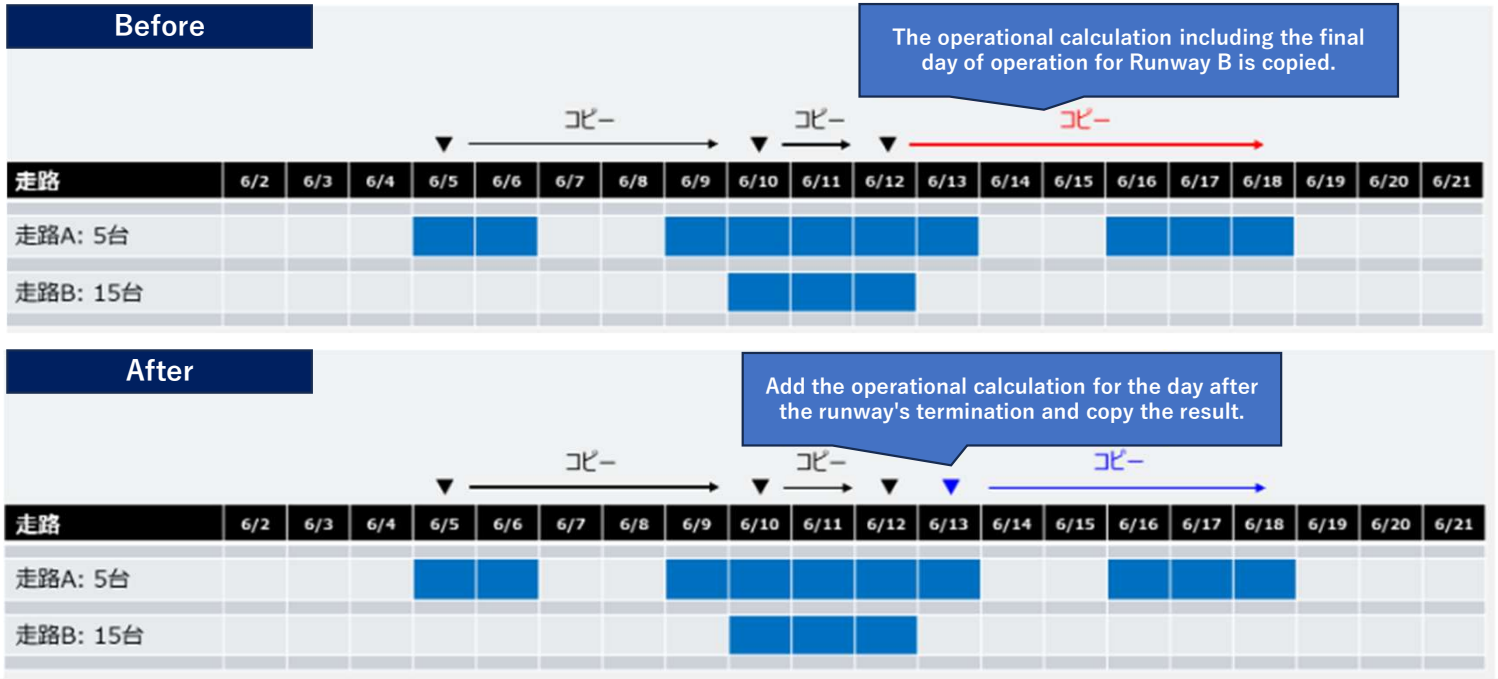

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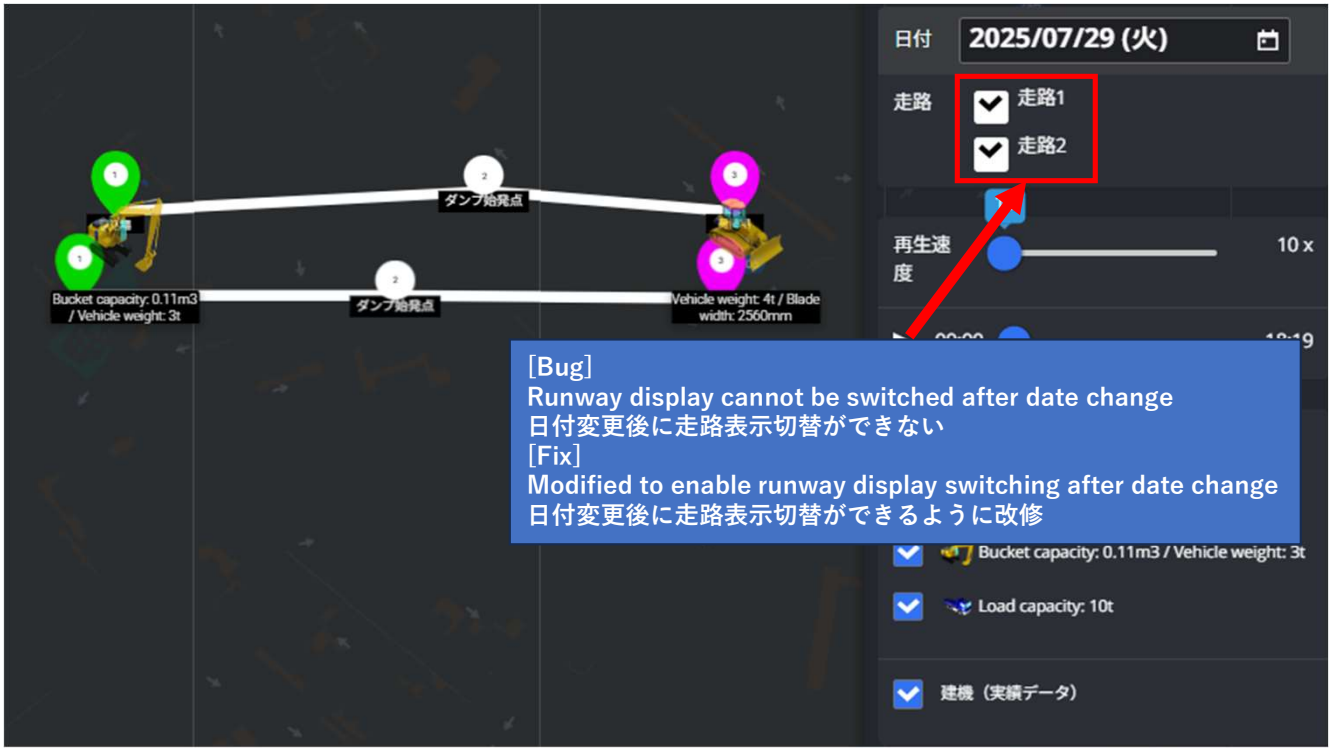
14	Machine Simulation (Bug Repair)	• Overview：Fixed an issue where lane display switching failed after changing the date in the animation playback screen Details：The issue where route display switching did not work after changing the date on the transport animation screen has been fixed.Route display switching now functions correctly after the date is changed. 

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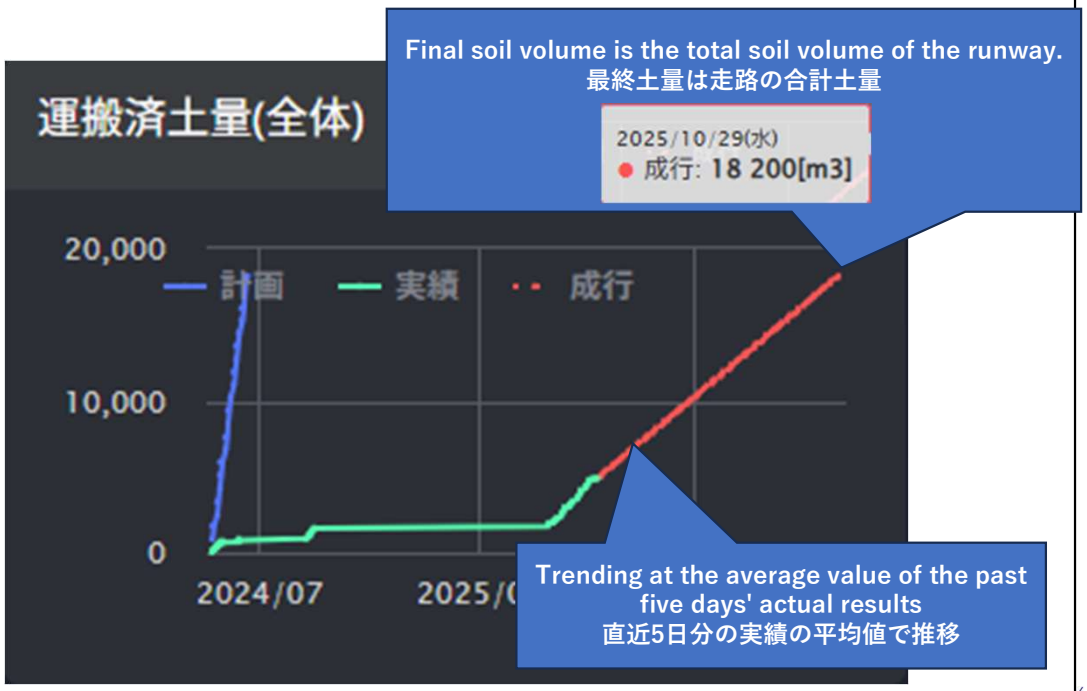

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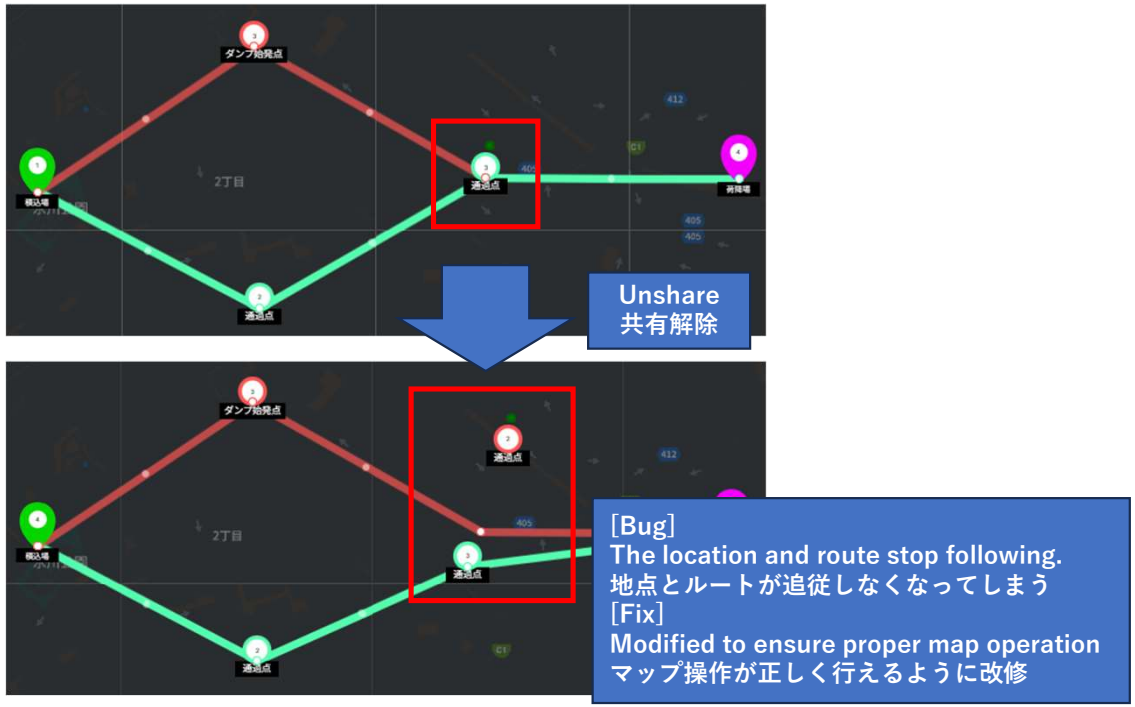
16	Machine Simulation (Bug Repair)	• Overview：Fixed an issue where locations and routes did not update correctly after unlinking shared points between outbound and return paths • Details：Fixed an issue where locations and routes did not update correctly after unlinking shared points between outbound and return paths.Map operations now function properly even after the shared link is removed. 

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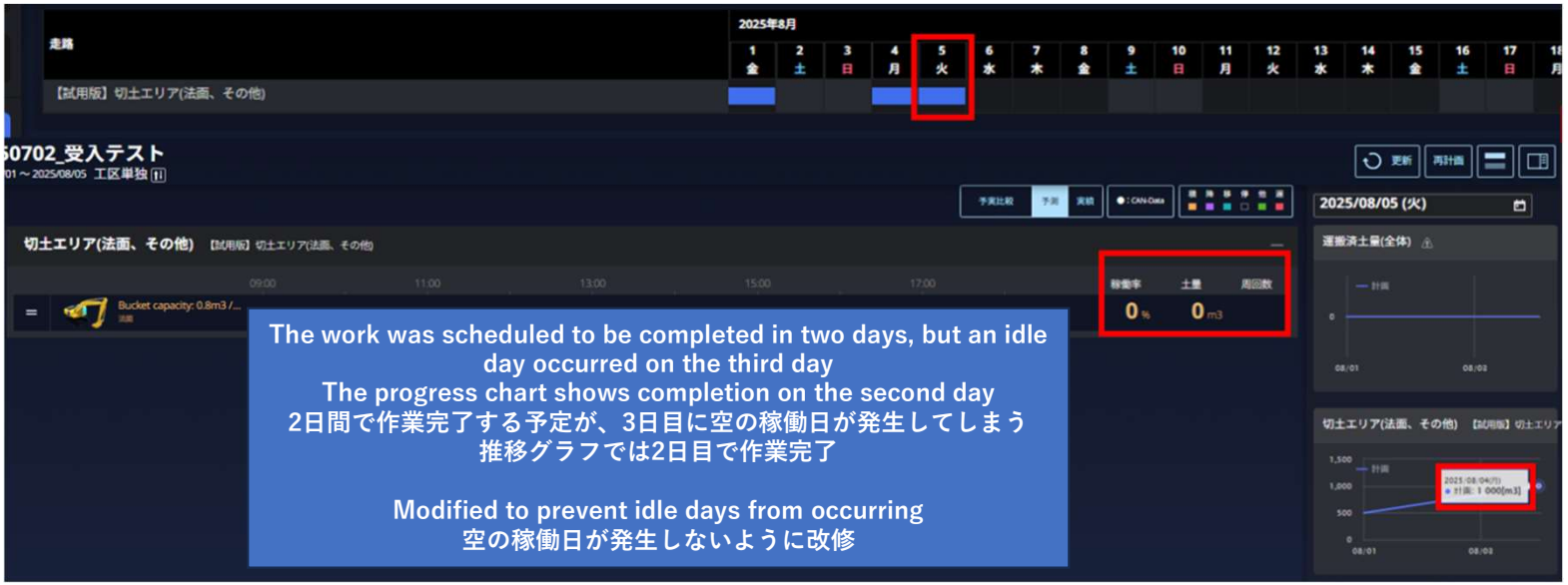
17	Machine Simulation (Bug Repair)	• Overview：Resolved a bug where empty working days were generated in standalone (slope) construction zones • Details：Fixed an issue where empty working days were generated during calculations for standalone (slope) construction zones.Working days without actual progress are no longer displayed. 

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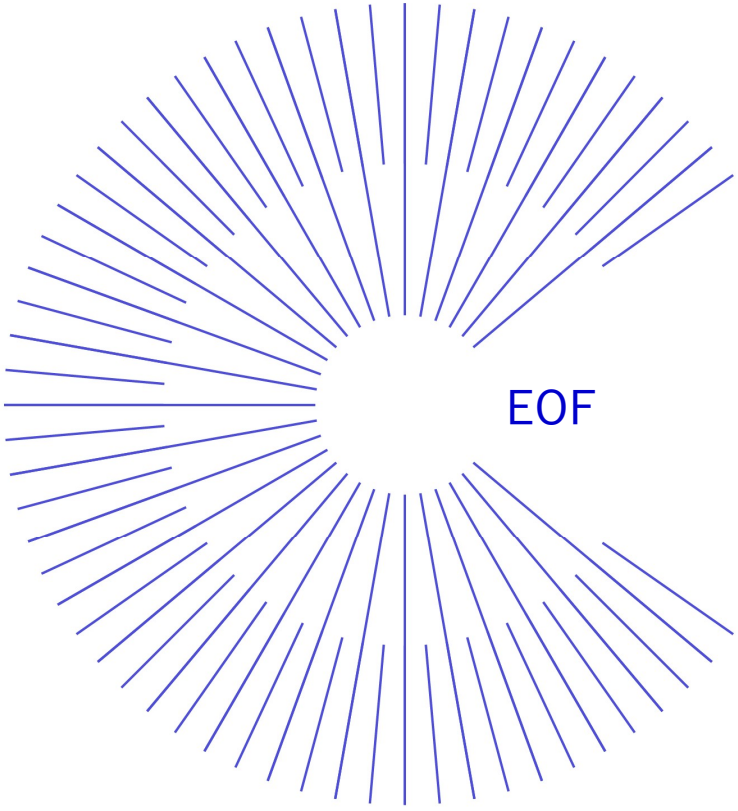
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