

Smart Construction

Smart Construction Fleet User Guide for Web Application

Before You Read This Manual:

I Before you start

- The purpose of the Guide is to explain the functions of Smart Construction Fleet.
- For units of measurement, the International System of Units (SI) is used.
Explanation, numeral values, illustration, etc. are based on the information as of the time this manual was prepared.
- If you have any questions or opinions, please contact Smart Construction Support Center.
- Use the application after understanding the contract conditions, guarantees, and responsibilities stated in the application software terms of service.
- Screen and display of the application may change when updated.
If there are any differences between what is written in this manual and the display on the application screen, operate according to the application display.

In general, company names, product names, etc. written here are business names, trademarks or registered trademarks of each company.

Contents

System Overview	5
What You Need and Recommended Operating Environment	6
Jobsite Registration	7
If the jobsite has been prepared in advance on Customer Portal	12
Snow Removal Mode	
Switch to Snow Removal Mode	13
Preparation	
Vehicle Registration	14
Example: In case of on-load dump truck	16
Example: In case of heavy machinery	17
How to edit information after registering the vehicle	18
Downloading vehicle data	19
Vehicle batch registration	19
Simplified procedures for centralized registration of vehicles	20
Vehicle List Settings	24
Settings for Construction Machine with a Payload Meter	26
Editing of information on construction machine with a payload meter	28
Soil Property Settings	
Soil property settings	29
Soil property editing	30
Traveling Route Settings	
When copying the route from another site	31
When not copying the route from another site	33
Editing of name of the traveling route and change of color	35
Create routes from the travel history	36
Workplace Settings	
When copying the workplace from another site	38
When not copying the workplace from another site	40
Editing of workplace	41
Delete the workplace	43
Manual/Auto Count	44
Alert Point Settings	
When copying the alert point from another site	46
When not copying the alert point from another site	48
Delete an alert point	51
Approach Notification Settings	
When copying the approach notification point from another site	52
When not copying the approach notification point from another site	54
Delete an approach notification point	57
Group Settings	
About grouping	58
Grouping settings of map objects	59
View of the map object of the mobile application	61
Procedure for creating and editing a new group	63
Delete a group	64

Preparation

Approach Alert	65
Attaching Image to Map	66
Job Classification	67
Steps to edit Job Classification	68
Steps to delete Job Classification	69
Linking Ortho Images and Design Linework from Smart Construction Dashboard	70

Daily Use

Integrated Viewer	71
Global Navigation	72
Generating a Login Code	73
Steps to Send a Login Code via Email	74
Real-time Viewer	75
Sending message	79
Change the vehicle's affiliation group	83
Set the affiliation status of the workplace	85
Changing the Role of a Vehicle	86
Loading and Unloading Performance	87
Cycle Time	90
Work History List	93
Work History Correction	98
Procedure for correcting work history	100
Loading Result (Payload)	105
Recalculate Results	106
Edit Map History	107
Edit Map History - Recalculation steps	109
Traveling History	112
Playback driving history video	117
Edit Jobsite Info	118
Login Management	119
Operational Vehicle Daily Report	120
Reports	126
Automatic report transmission	144

Contact	146
---------	-----

Revision History	147
------------------	-----

System Overview

For starting use of Smart Construction Fleet

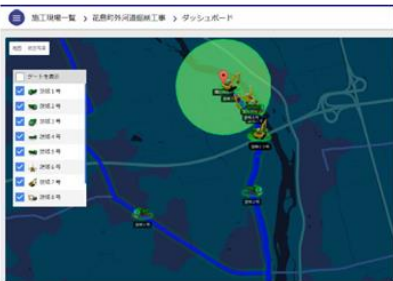
“Smart Construction Fleet” is an application that can share and manage information on the positions of dump trucks, excavators, or bulldozers.

By using “Smart Construction Fleet,” you can easily check the current progress of the construction work on a map.

For example, a construction machine operator can locate individual dump trucks; or a dump truck driver can determine the best unloading point by identifying the positions of individual construction machines in a jobsite.

The application provides various functions such as a real-time viewer, a vehicle approach notification function for construction machine operators, alert functions for dump truck drivers, a counting function at a loading/unloading point, a payload system loading result display function, a work history or traveling history display function, and links to iOS or Android applications.

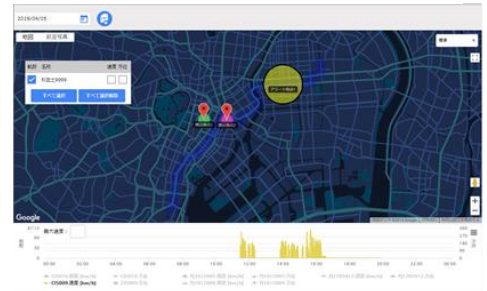
- 1** You can check the location information of construction machines, dump trucks, and guides in real time on your computer.



- 2** The approach notification function allows construction machine operators and guides to know that a dump truck is approaching.



- 3** Display of traveling history
You can manage the daily traveling history of dump trucks.



- 4** Display of work history
You can manage the history of daily loading and unloading operations.



- 5** Registration of dump truck information → Linked with payload system
The loading history recorded using an external payload system can be left on the Web application.


車両ID	車両名	車両種別	車両容量	車両重量	車両高さ
20190107-01-01	20190107-01-01	大型トラック	5,000	5,000	11
20190107-02-01	20190107-02-01	大型トラック	5,000	5,000	11
20190107-03-01	20190107-03-01	大型トラック	5,000	5,000	11

What You Need and Recommended Operating Environment

What you need



Recommended operating environment for the Web application

 ← From Google, download Google Chrome to access the application.

Recommended operating environment for mobile application (terminal whose operation has been checked)

[iOS]

OS16,1

- Smartphone

iPhone SE (3rd generation)

- Tablet

iPad: Not applicable

[Android]

OS12,13,14

- Smartphone

moto g64 5G

- Tablet

Lenovo Tab M10 Plus (3rd Gen) ZAAM0094JP

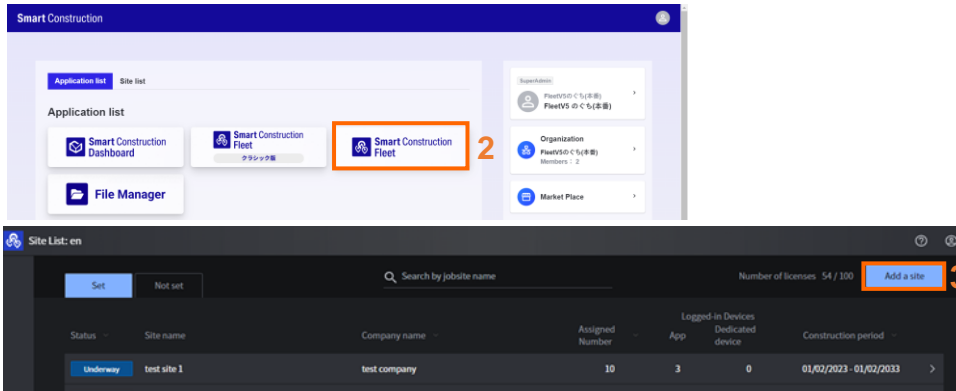
Note

Please note that operation is not guaranteed on the devices that do not meet the above recommended operating environment.

Jobsite Registration

Set up a construction site to use the Smart Construction Fleet.

1. Access <https://portal.smartconstruction.com/>.
2. Start Smart Construction Fleet.
3. Click “Add a site”.



4. Input the address of the site, and click “Search”.
5. Display position: Move the center of the map to the position of the construction site you want to manage.
 - * The time zone in the center area of the map applies.
6. Input the name of the site.
7. The address is automatically input according to the position of the map center of 5.
8. Input the construction period and time.

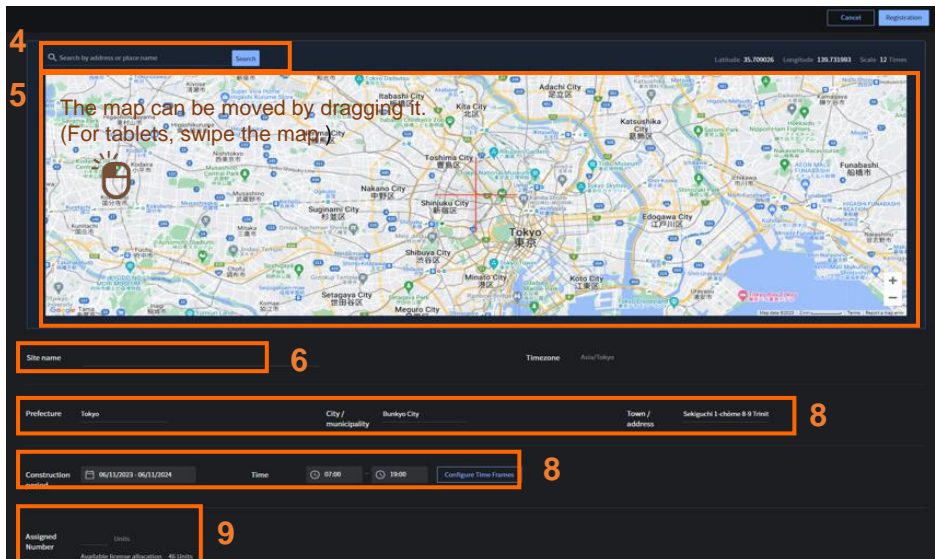
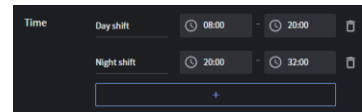
* The application will not send location information outside the set hours.
Setting 00:00 to 24:00 represents a period for 24 hours.

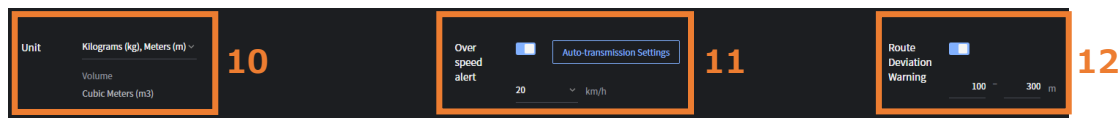
The time frame is between 00:00 and 36:00, and you cannot set a time longer than 24 hours from the start time of use of the first time frame.

9. Input the number of units assigned to the license.

Assign the license owned by the company to the jobsite.

If you use “Smart Construction Fleet Device”, you can log in three units at the same time by assigning one unit.

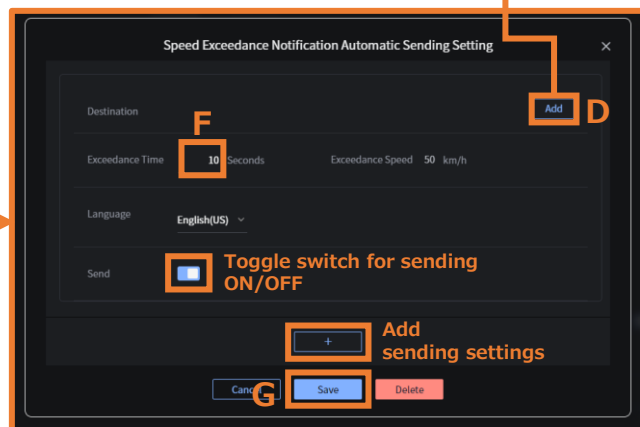
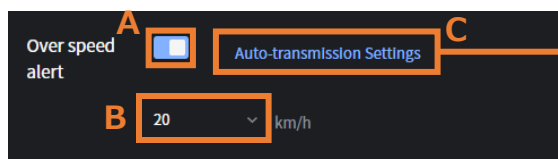




[Speeding Report Transmission Setting]

When this feature is turned ON, speeding reports can be sent to the email addresses of relevant site personnel.

- Turn on "Over speed alert"
This feature is initially set to OFF.
- Select the speed limit from the dropdown menu.
- Click on "Auto transmission Settings"
- Click on "Add"
- Select the email recipient from the list
The accounts registered as members of the respective site will be displayed in a list.
Multiple recipients can be added.
- Enter exceedance time
It will be reported if the speed limit is exceeded for the specified number of seconds.
- Click on "Save"



[Sample of Speeding Report]

A report like the one on the right will be delivered.

The speeding assessment is automatically conducted at 15-minute intervals, but the email may arrive with a few minutes' delay.

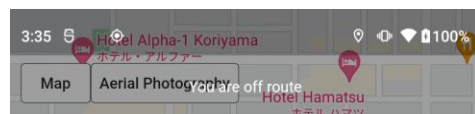


List of vehicles exceeding the speed limit
Display of occurrence time and maximum speed

Display the current settings

10. [Optional] Set the route deviation alert

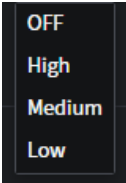
An alert is displayed if the vehicle falls outside the set alert range after the vehicle on the vehicle role "Transport" has entered the route on the mobile application.



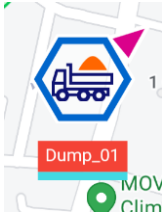
13. [Optional] Set the consideration for application position skipping

The mobile application acquires the position information from the satellite at the span set in "Frequency of sending location information". If the previous and the current location information is apart from each other more than the distance of the set threshold, it is determined that the position has been blown. In this case, an alert is notified, and the label of the vehicle is shown in red. When the position mismatch is resolved, the displayed red vehicle label returns to the original color.

* Select "OFF", "Strong", "Medium" or "Weak" for the consideration for the application position skipping.



OFF: Position skipping is not judged.
Strong: 60 M
Medium: 90 M
Weak: 120 M
* Distance traveled in one second



Display of red vehicle label when position skipping occurs

14. Set frequency of sending location information.

Set the frequency of sending location information on the mobile application.

* The frequency of sending the location information is also used for registration of the work history, route deviation, and position-skipping judgment.

15. Set frequency of receiving location information.

Set the frequency of receiving the location information of other vehicles in the mobile application.

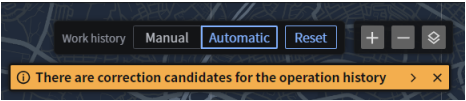
16. Set stop judgment speed.

Use this as the criterion for stopping judgment when registering the work history on the mobile app.

17. Set operation history error notification

Notifications are sent to the real-time viewer in the following cases:

- When the same type of work history is recorded consecutively
- When unloading count is started
- When loading count is completed and the operation is finished



When you click the notification, you will be redirected to the "[Work History Correction](#)" menu.

18. [Optional] Set the company name to be written in the report.

▼ Detailed settings

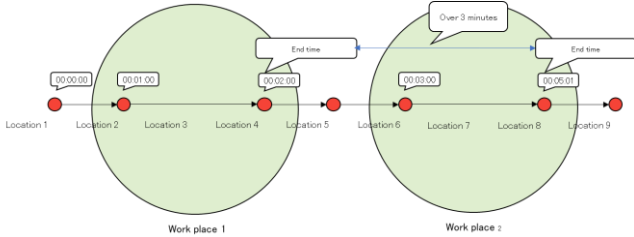
Consider location jumping OFF	13	App Location Information Transmission Frequency 3 Seconds	14	App Location Information Reception Frequency 1 Seconds	15
Stop threshold 2 km/h	16	Operation history error notification <input checked="" type="checkbox"/>	17	Company Name Listed in the Report	18

19. [Option] Set the "Auto Work History Cooldown"

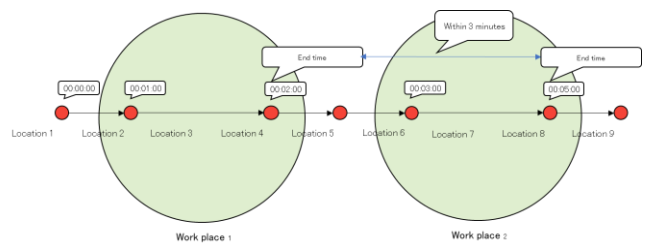
This feature is initially set to OFF. Once an auto work history entry is registered, no new auto work history entries will be registered during the cooldown period you set here.

■ If the cooldown period is set to 3 minutes

Case where a new work history will be registered



Case where a new work history will not be registered



20. Set "Duplicate count correction"

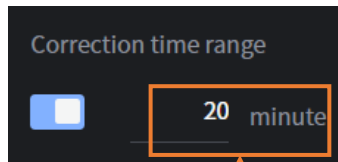
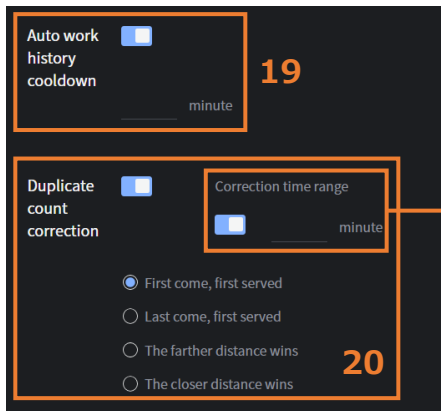
This feature is initially set to OFF.

This is a feature to avoid duplicate automatic work history entries.

If the same type of work history is recorded consecutively, the duplicate entry will be removed.

Duplicate count correction is automatically performed at **5-minute intervals**.

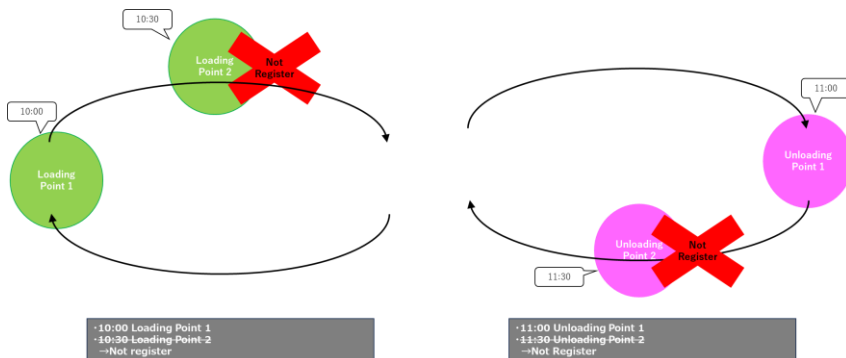
If **loading/unloading** count are consecutive, modifications will only occur once **unloading/loading** count is registered afterward.



If the same type of work history is registered beyond the input time, no correction process will be performed.

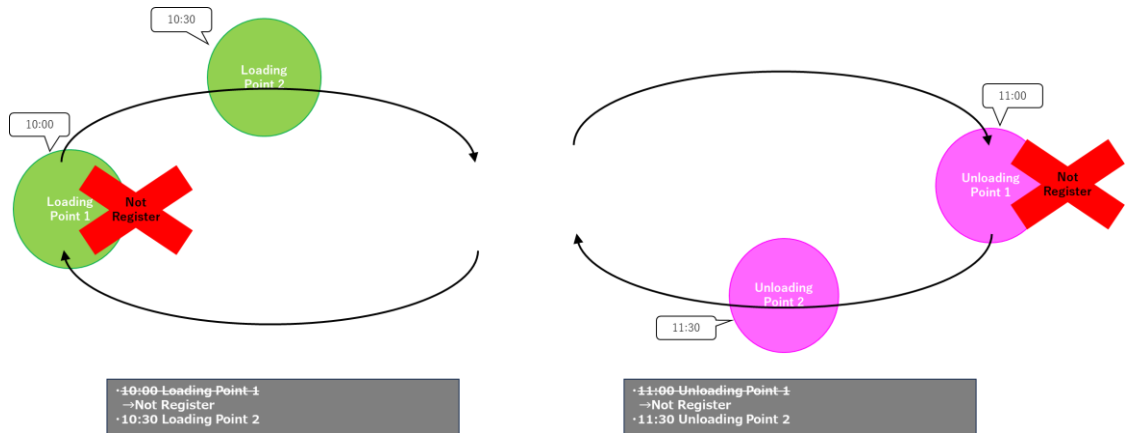
[First come,First served]

Delete the **last** registered work history when the same type of work location's work history is registered in succession



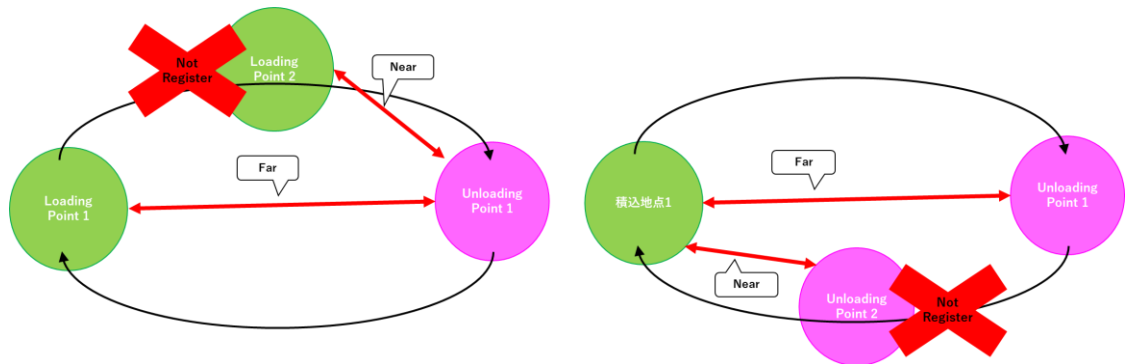
[Last come,first served]

Delete the **first** registered work history when the same type of work location's work history is registered in succession



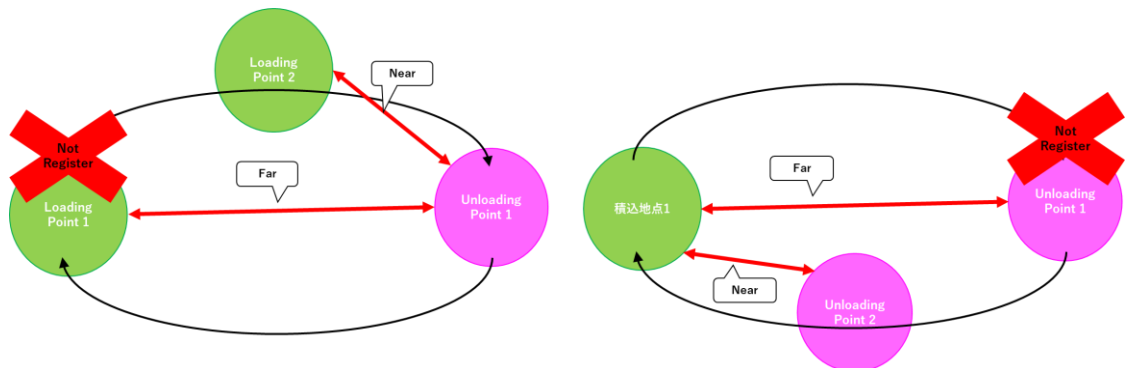
[The farther distance wins]

Delete the **closer** work history from the position where the work history of the paired loading/unloading point was registered when the same type of loading/unloading point's work history is registered in succession

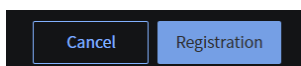


[The closer distance wins]

Delete the **farther** work history from the position where the work history of the paired loading/unloading point was registered when the same type of loading/unloading point's work history is registered in succession

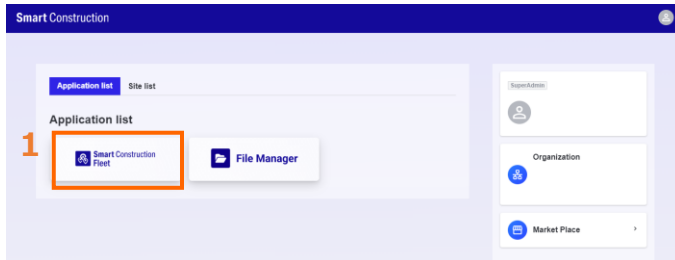


21. Click on the "Register" button located at the top right corner of the screen



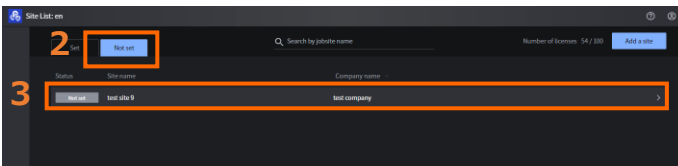
If the jobsite has been prepared in advance on Customer Portal

1. Start SMART CONSTRUCTION Fleet.



2. Select “Not set”.

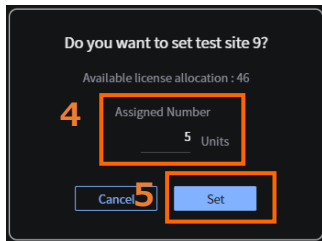
3. When SMART CONSTRUCTION Fleet displays an uninitialized jobsite as “Not set”, click the Jobsite name.



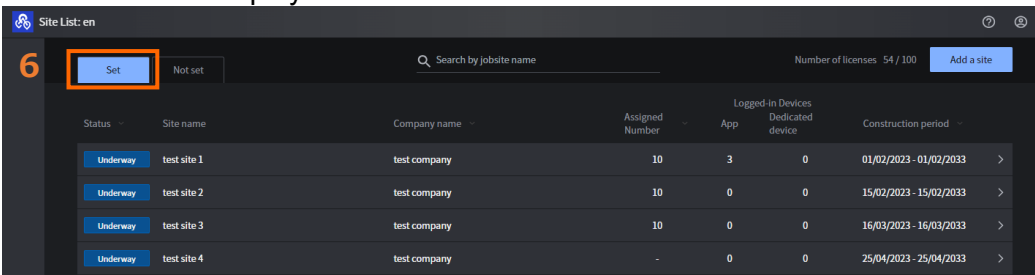
4. Enter the number of licenses to assign.

* If you use “Smart Construction Fleet Device”, you can log in for three units by assigning one unit.

5. Click “Set”.



6. The set site is displayed in “Set” of the Jobsite list.



! The legends of the “Jobsite list” screen are as follows.

- Done → End of construction period
- Underway → Within construction period
- Preparing → Before construction period

Snow Removal Mode

When using Smart Construction Fleet for snow removal and snow removal work, first switch to Snow Removal mode.

Switch to Snow Removal Mode

1. Click the “Project settings” icon.
2. Click “Special settings”.
3. Click “Change to snow removal site”.
4. Click “Change”.
5. Check all the items.
6. Click “Change”.

The “Change to snow removal site” button is greyed out.

You can confirm from the “Soil property” menu that the transported material has changed from “Soil” to “Snow”.

Note

Note that if the Snow Removal mode is set, the existing work history of loading and unloading and the settings of the work point are deleted.

1 Click the “Project settings” icon.

2 Click “Special settings”.

3 Click “Change to snow removal site”.

4 Click “Change”.

5 Check all the items.

6 Click “Change”.

The “Change to snow removal site” button is greyed out.

You can confirm from the “Soil property” menu that the transported material has changed from “Soil” to “Snow”.

Material
Register and manage the names and unit volume mass of transportation materials

Material
Register and manage the names and unit volume mass of transportation materials

Material name	Unit volume mass (loose) (t/m3)
Snow	0.70

Preparation

Vehicle Registration

Registers vehicles (construction machine, dump truck, etc.) and guide for logging into Smart Construction Fleet.

When logging in, select one of the vehicles or guide registered here, and then log in.

Type	Name	Color	Vehicle weight(kg)	Maximum load volume(kg)	Maximum load capacity(m3)	Proximity warning	Proximity warning range(m)	Daily transport plan number	Login code	Use
On-Road Dump Truck	Dump01	Green	11,000	9,800	5.5	On	50			On
On-Road Dump Truck	Dump02	Red	11,000	9,800	5.5	On	50			On
Excavator	Excavator01		20,000	-	-	On	50			On
Excavator	Excavator02		20,000	-	-	On	50			On

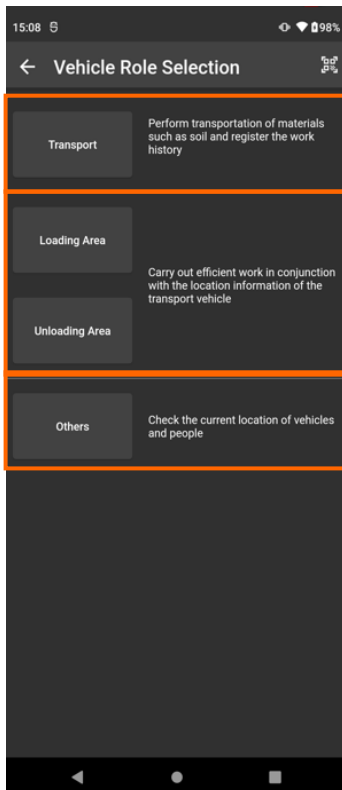
Note

- When registering vehicles, do not use environment-dependent characters for names (e.g.: ①, i, ❶). The characters may not be displayed correctly.

When logging in Smart Construction Fleet, you can select the role (vehicle role) to perform tasks according to the role, regardless of the vehicle type.

* There are four types of vehicle roles, “Transport”, “Loading area”, “Unload area”, and “Others”, each of which has different functions.

! For details on the vehicle role, refer to the separate “SCFleet_New Ver_Vehicle role.xlsx”.



Among the works, vehicle role for vehicles that are engaged in transporting works.

(Mainly dump trucks, etc.)

Work history (loading/unloading history) can only be registered with this role.

























A vehicle role for vehicles that work around the (loading and unloading) point. (Mainly excavators, etc.)

You can belong to the work point and handle your car as a work point. (Distribution work point)

A vehicle role for checking the current position of other vehicles or persons.

(Mainly guide, etc.)

There is no specific function for this vehicle role.

List of vehicle types that can be registered					
On-load dump truck		Off-road dump truck		Other work vehicles	
	Type of vehicle		Type of vehicle		Type of vehicle
	Dump truck		Articulated dump truck		Tank truck
			Crawler dump		Mixer
			Rigid dump truck		Garbage truck
			Motor scraper		Low-floor trailer
			Tractor		Commercial van
					Van
					Bus
					Road patrol vehicle
Heavy machinery		Human		Other	
	Type of vehicle		Type of vehicle		Type of vehicle
	Excavator		Guide		Camera
	Bulldozer				
	Wheel loader				
	Motor grader				
	Road roller				
	Forklift truck				
	Rotary vehicle				
	Snow removal truck				

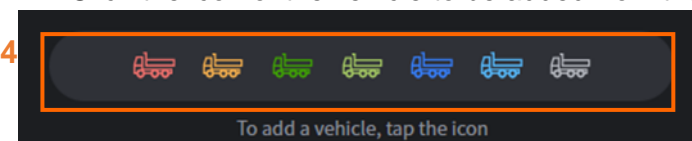
Example: In case of on-load dump truck

■ In case of on-load dump truck

1. Select “Set vehicle”.
2. Select “On-load dump truck”.
3. Click “Add and edit”.

Type	Name	Color	Vehicle weight(kg)	Maximum load volume(kg)	Maximum load capacity(m3)	Proximity warning	Proximity warning range(m)	Daily transport plan number	Login code	Use
On-Road Dump Truck	Dump01	Green	11,000	9,800	5.5	<input checked="" type="checkbox"/>	50			<input checked="" type="checkbox"/>
On-Road Dump Truck	Dump02	Red	11,000	9,800	5.5	<input checked="" type="checkbox"/>	50			<input checked="" type="checkbox"/>

4. Click the icon of the vehicle to be added from the bottom of the screen.



! You can choose the color of the icon only when the vehicle type is “On-road dump truck”.

5. Input the name.

Information such as vehicle weight is automatically input. Change it if necessary.

! A maximum soil volume load input here is converted to a soil volume per loading/unloading.

6. Set the approach alert and approach alert range (m) (optional).

If another vehicle enters the set alerting range, the approach alert is displayed.

7. Set the number of planned daily transportations (optional).

8. Set whether to use the vehicle

* When OFF, it cannot be selected at the time of logging in, and it is not displayed as a loaded vehicle on the payload application.

Type	Name	Preset	Color	Vehicle weight(kg)	Maximum load volume(kg)	Maximum load capacity(m3)	Proximity warning	Proximity warning range(m)	Daily transport plan number	Use
On-Road Dump Truck	Dump01		Green	11,000	9,800	5.5	<input checked="" type="checkbox"/>	50		<input checked="" type="checkbox"/>
On-Road Dump Truck	Dump02		Red	11,000	9,800	5.5	<input checked="" type="checkbox"/>	50		<input checked="" type="checkbox"/>
On-Road Dump Truck	test	10tダンプ	Blue	11,000	9,800	5.5	<input checked="" type="checkbox"/>	50	1	<input checked="" type="checkbox"/>

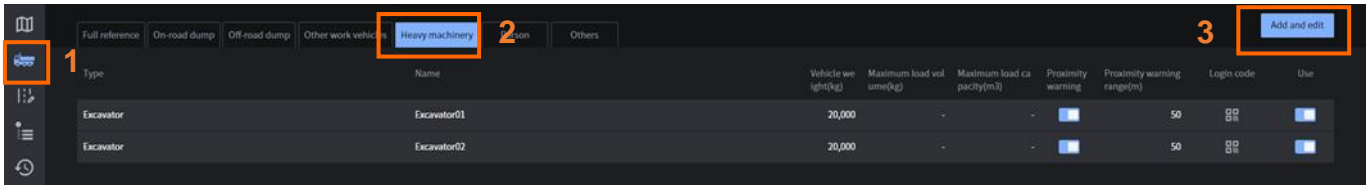
9. Click “Save”.

Type	Name	Preset	Color	Vehicle weight(kg)	Maximum load volume(kg)	Maximum load capacity(m3)	Proximity warning	Proximity warning range(m)	Daily transport plan number	Use
On-Road Dump Truck	Dump01		Green	11,000	9,800	5.5	<input checked="" type="checkbox"/>	50		<input checked="" type="checkbox"/>
On-Road Dump Truck	Dump02		Red	11,000	9,800	5.5	<input checked="" type="checkbox"/>	50		<input checked="" type="checkbox"/>
On-Road Dump Truck	test	OnRoad Truck	Blue	11,000	9,800	5.5	<input checked="" type="checkbox"/>	50		<input checked="" type="checkbox"/>

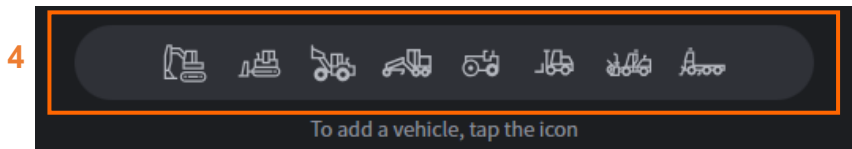
Example: In case of heavy machine

■ In case of heavy machine

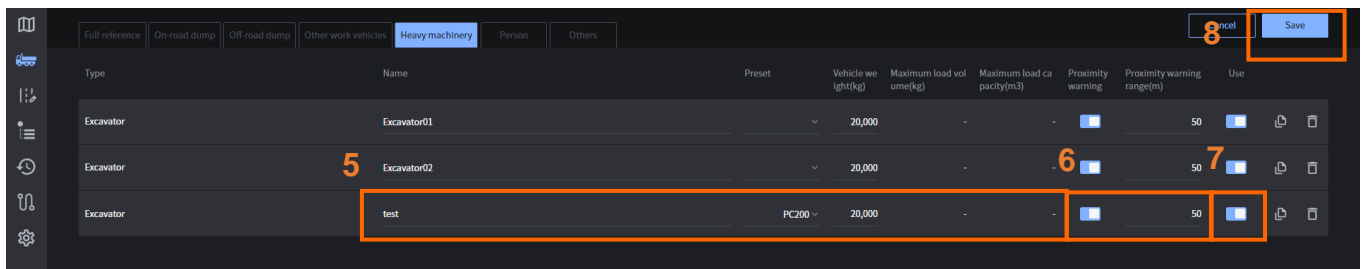
1. Select “Set vehicle”.
2. Select “Heavy machinery”.
3. Click “Add and edit”.



4. Click the icon of the vehicle to add from the lower part of the screen.



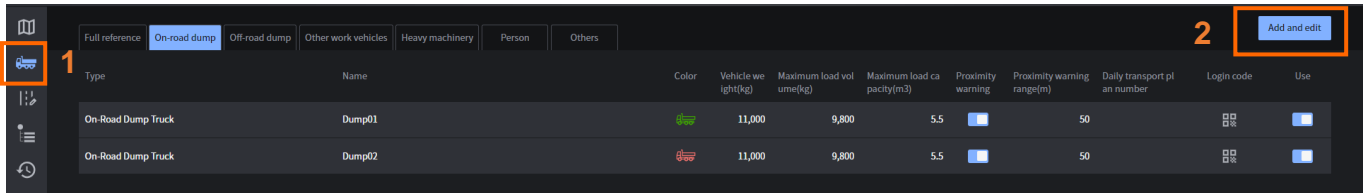
5. Select preset values as a reference and input vehicle information in the fields.
If you select Preset, information such as vehicle weight is automatically input. Change the setting if necessary.
6. Set the approach alert and approach alert range (m) (optional).
If another vehicle enters the set alerting range, the approach alert is displayed.
7. Set whether to use the vehicle.
* When OFF, you cannot select it at the time of logging in.
8. Click “Save”.



How to edit information after registering the vehicle

■ Editing of vehicle information

1. Select “Set vehicle”.
2. Click “Add and edit”.

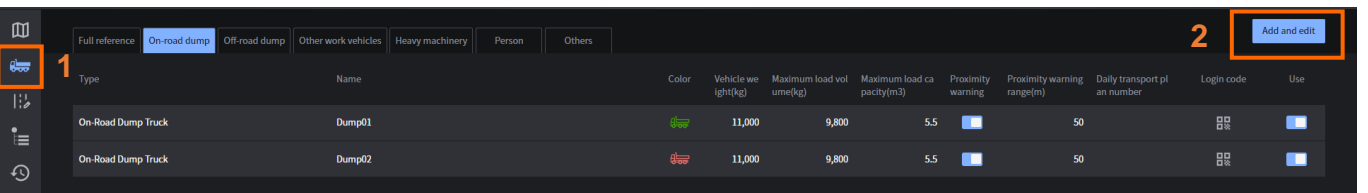


3. Edit the setting information from the items of each vehicle in the list.
4. Click “Save”.

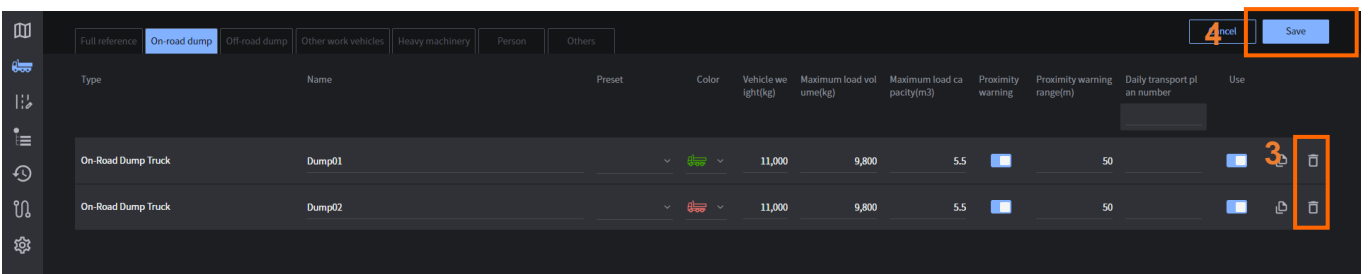


■ Deletion of vehicles

1. Select “Set vehicle”.
2. Click “Add and edit”.



3. Delete from the “Delete” icon of each vehicle in the list.
4. Click “Save”.



Downloading vehicle data

1. Select “Set vehicle”.
2. Select the “Refer to all” tab.
3. Press “Download CSV”.

The screenshot shows a web application interface for vehicle management. At the top, there are tabs: 'Full reference' (highlighted with a red box and number 2), 'On-road dump', 'Off-road dump', 'Other work vehicles', 'Heavy machinery', 'Person', and 'Others'. Below the tabs is a table with columns: Type, Name, Color, Vehicle weight(kg), Maximum load volume(kg), Maximum load capacity(m3), Proximity warning, Proximity warning range(m), Daily transport plan number, Login code, and Use. The table contains three rows of data for 'On-Road Dump Truck' vehicles named 'Dump_01', 'Dump_02', and 'Dump_03'. In the top right corner, there are buttons for 'Download CSV' (highlighted with a red box and number 3) and 'Upload CSV'.

The file is saved as “vehicles-{site ID}.csv”.

The type, name, color, vehicle weight (kg), maximum loading capacity (kg), maximum loading volume (m³), approach alert, approach alert radius (km), number of planned daily transportations, and utilization are output to the CSV file.

種類	名前	色	車重(kg)	最大積載量(kg)	最大積載土量(m3)	接近警告	接近警告半径(m)	日次運搬計画数	利用
ON_ROAD_DUMP_TRUCK	Dump01	GREEN	11000	9800	5.5	TRUE	50	30	TRUE
ON_ROAD_DUMP_TRUCK	Dump02	RED	11000	9800	5.5	TRUE	50	30	TRUE
EXCAVATOR	Excavator01		20000	0	0	TRUE	50		TRUE
EXCAVATOR	Excavator02		20000	0	0	TRUE	50		TRUE

Vehicle batch registration

1. Select “Set vehicle”.
2. Select the “Refer to all” tab.
3. Press “Upload CSV”.
4. The window to select files opens. Select the vehicle information file for batch registration.

The screenshot shows the same web application interface as before. The 'Full reference' tab is still selected. In the top right corner, the 'Upload CSV' button is now highlighted with a red box and number 3, indicating the next step in the process.

Simplified procedures for centralized registration of vehicles

1. Select "Set vehicle".
2. Register all the vehicle types to be used in advance.
You can register one unit for each type.
3. Click "Download CSV".
4. Open the CSV file when it is downloaded.
5. Increase the number of lines up to the number of units to be used (number of people).
Example: 10 dump trucks, 2 excavators, 2 bulldozers, and 2 guides.

3

Full reference On-road dump Off-road dump Other work vehicles Heavy machinery Person Others

Display only usage ☐ **Download CSV** Upload CSV

Type	Name	Color	Vehicle weight (kg)	Maximum load volume (kg)	Maximum load capacity (m3)	Proximity warning	Proximity warning radius (m)	Daily transport plan number	Login code	Use
On-Road Dump Truck	Dump_01	Blue	11,000	9,800	5.5	<input checked="" type="checkbox"/>	50			<input checked="" type="checkbox"/>
Excavator	Excavator_01		20,000	-	-	<input checked="" type="checkbox"/>	50			<input checked="" type="checkbox"/>
Bulldozer	Bulldozer_01		19,230	-	-	<input checked="" type="checkbox"/>	50			<input checked="" type="checkbox"/>
Guide	Guide_01		-	-	-	<input checked="" type="checkbox"/>	50			<input checked="" type="checkbox"/>

2

	A	B	C	D	E	F	G	H	I	J
1	Type	Name	Color	Vehicle weight (kg)	Maximum payload (kg)	Maximum payload volume (m3)	Proximity warning	Proximity warning radius (m)	Daily transport plan count	Usage
2	ON_ROAD_DUMP_TRUCK	Dump_01	BLUE	11000	9800	5.5	TRUE	50		TRUE
3	EXCAVATOR	Excavator_01		20000	0	0	TRUE	50		TRUE
4	BULLDOZER	Bulldozer_01		19230	0	0	TRUE	50		TRUE
5	GUIDE	Guide_01		0	0	0	TRUE	50		TRUE

4

	A	B	C	D	E	F	G	H	I	J
1	Type	Name	Color	Vehicle weight (kg)	Maximum payload (kg)	Maximum payload volume (m3)	Proximity warning	Proximity warning radius (m)	Daily transport plan count	Usage
2	ON_ROAD_DUMP_TRUCK	Dump_01	BLUE	11000	9800	5.5	TRUE	50		TRUE
3	ON_ROAD_DUMP_TRUCK	Dump_02	BLUE	11000	9800	5.5	TRUE	50		TRUE
4	ON_ROAD_DUMP_TRUCK	Dump_03	BLUE	11000	9800	5.5	TRUE	50		TRUE
5	ON_ROAD_DUMP_TRUCK	Dump_04	BLUE	11000	9800	5.5	TRUE	50		TRUE
6	ON_ROAD_DUMP_TRUCK	Dump_05	BLUE	11000	9800	5.5	TRUE	50		TRUE
7	ON_ROAD_DUMP_TRUCK	Dump_06	BLUE	11000	9800	5.5	TRUE	50		TRUE
8	ON_ROAD_DUMP_TRUCK	Dump_07	BLUE	11000	9800	5.5	TRUE	50		TRUE
9	ON_ROAD_DUMP_TRUCK	Dump_08	BLUE	11000	9800	5.5	TRUE	50		TRUE
10	ON_ROAD_DUMP_TRUCK	Dump_09	BLUE	11000	9800	5.5	TRUE	50		TRUE
11	ON_ROAD_DUMP_TRUCK	Dump_10	BLUE	11000	9800	5.5	TRUE	50		TRUE
12	EXCAVATOR	Excavator_01		20000	0	0	TRUE	50		TRUE
13	EXCAVATOR	Excavator_02		20000	0	0	TRUE	50		TRUE
14	BULLDOZER	Bulldozer_01		19230	0	0	TRUE	50		TRUE
15	BULLDOZER	Bulldozer_02		19230	0	0	TRUE	50		TRUE
16	GUIDE	Guide_01		0	0	0	TRUE	50		TRUE
17	GUIDE	Guide_02		0	0	0	TRUE	50		TRUE

5

6. Edit the CSV file as necessary.

- i. **[Required] Enter text information corresponding to the vehicle type.**
For the text to be input in the “Type” column, copy the one input from the original and increase it.
- ii. **[Required] Enter the name.**
Do not use environment-dependent characters, as they are corrugated when outputting as CSV.
- iii. **[Optional] Change the color of the dump truck (on-load dump truck).**
Input in upper case with half-pitch alphanumeric characters.
- iv. **[Required when using payload] Enter the maximum loading capacity of each dump truck (on-load dump truck, off-load dump truck).**
When using the payload, confirm the vehicle inspection certificate before entering the value.
The loading ratio with respect to the input maximum loading capacity is calculated.
- v. **[Optional] Change the maximum loaded soil volume (on-load dump truck, off-load dump truck) .**
In the initial state, it is regarded as 5.5 m³ per load of soil. Change the value as necessary.
- vi. **[Optional] Change ON/OFF of the approach alert function.**
Input in upper case with half-pitch alphanumeric characters.
If you have logged in the smartphone application to the vehicle that has been input “TRUE” in the initial state, the approach alert is activated.
When “FALSE” is input, the approach alert is not activated.
- vii. **[Optional] Change the approach alert radius.**
- viii. **[Optional] Change the number of planned daily transportations (on-load dump truck, off-load dump truck).**
- ix. **[Required] Change the use ON/OFF of the vehicle.**
Input in upper case with half-pitch alphanumeric characters.
The initial state is “TRUE (use)”. Enter “FALSE” to turn this setting off.
While OFF, the vehicle in question will not be displayed in the following cases.
- When logging in on the mobile application or Fleet Device
- When selecting a load dump truck on the payload application (on-load dump truck, off-load dump truck)

7. Upload the CSV file according to the procedure shown in [Vehicle batch registration](#).

i ii iii iv v vi vii viii ix

	A	B	C	D	E	F	G	H	I	J
1	Type	Name	Color	Vehicle weight (kg)	Maximum payload (kg)	Maximum payload volume (m3)	Proximity warning	Proximity warning radius (m)	Daily transport plan count	Usage
2	ON_ROAD_DUMP_TRUCK	Dump_01	BLUE	11000	9800	5.5	TRUE	50		TRUE
3	ON_ROAD_DUMP_TRUCK	Dump_02	BLUE	11000	9800	5.5	TRUE	50		TRUE
4	ON_ROAD_DUMP_TRUCK	Dump_03	BLUE	11000	9800	5.5	TRUE	50		TRUE
5	ON_ROAD_DUMP_TRUCK	Dump_04	BLUE	11000	9800	5.5	TRUE	50		TRUE
6	ON_ROAD_DUMP_TRUCK	Dump_05	BLUE	11000	9800	5.5	TRUE	50		TRUE
7	ON_ROAD_DUMP_TRUCK	Dump_06	BLUE	11000	9800	5.5	TRUE	50		TRUE
8	ON_ROAD_DUMP_TRUCK	Dump_07	BLUE	11000	9800	5.5	TRUE	50		TRUE
9	ON_ROAD_DUMP_TRUCK	Dump_08	BLUE	11000	9800	5.5	TRUE	50		TRUE
10	ON_ROAD_DUMP_TRUCK	Dump_09	BLUE	11000	9800	5.5	TRUE	50		TRUE
11	ON_ROAD_DUMP_TRUCK	Dump_10	BLUE	11000	9800	5.5	TRUE	50		TRUE
12	EXCAVATOR	Excavator_01		20000	0	0	TRUE	50		TRUE
13	EXCAVATOR	Excavator_02		20000	0	0	TRUE	50		TRUE
14	BULLDOZER	Bulldozer_01		19230	0	0	TRUE	50		TRUE
15	BULLDOZER	Bulldozer_02		19230	0	0	TRUE	50		TRUE
16	GUIDE	Guide_01		0	0	0	TRUE	50		TRUE
17	GUIDE	Guide_02		0	0	0	TRUE	50		TRUE



CSV upload file contents

Type	Name	Color	Vehicle weight (kg)	Maximum payload (kg)	Maximum payload volume (m3)	Proximity warning	Proximity warning radius (m)	Daily transport plan count	Usage
ON_ROAD_DUMP_TRUCK	TEST_DUMP	GREEN	11000	9800	5.5	TRUE	50		TRUE
EXCAVATOR	TEST_EXCAVATOR		20000	0	0	FALSE			FALSE

■ On-load dump truck (Dump truck)

<Required items>

“Type”, “Name”, “Color”, “Vehicle weight (kg)”, “Maximum loading capacity (kg)”, “Maximum capacity of soil volume (m³)”, “Approach alert”, “Approach alert radius (m)” *1, “Utilization”

<Optional items>

“Number of planned daily transportations”

<Items that cannot be input>

None

■ Off-road dump truck (Articulate dump truck, crawler dump truck, rigid dump truck, motor scraper, tractor)

<Required items>

“Type”, “Name”, “Vehicle weight (kg)”, “Maximum loading capacity (kg)”, “Maximum capacity of soil volume (m³)”, “Approach alert”, “Approach alert radius (m)” *1, “Utilization”

<Optional items>

“Number of planned daily transportations”

<Items that cannot be input>

“Color”

■ Other work vehicles (Tank truck, mixer, garbage collection vehicle, low-floor trailer, commercial van, one box, bus, road patrol vehicle)

<Required items>

“Type”, “Name”, “Heavy vehicle (kg)” *2, “Maximum load (kg)” *2, “Maximum capacity of soil volume (m³)” *2, “Approach alert”, “Approach alert radius (m)” *1, “Utilization”

<Optional items>

None

<Items that cannot be input>

“Color”, “Number of planned daily transportations”

■ Heavy machinery

(Excavator, bulldozer, wheel loader, motor grader, road roller, forklift, rotary vehicle, snow removal truck)

<Required items>

"Type", "Name", "Heavy vehicle (kg)"*3, "Maximum load (kg)"*4, "Maximum capacity of soil volume (m³)" *4, "Approach alert", "Approach alert radius (km)"*1, "Utilization"

<Optional items>

None

<Items that cannot be input>

"Color", "Number of planned daily transportations"

■ Human

(Guide)

<Required items>

"Type", "Name", "Approach alert" "Approach alert radius (km)"*1, "Use"

<Optional items>

None

<Items that cannot be input>

"Color", "Vehicle weight (kg)", "Maximum loading capacity (kg)", "Maximum loading volume (m³)" , "Number of planned daily transportations"

■ Other

(Camera)

<Required items>

"Type", "Name", "Approach alert" "Approach alert radius (km)"*1, "Use"

<Optional items>

None

<Items that cannot be input>

"Color", "Vehicle weight (kg)", "Maximum loading capacity (kg)", "Maximum loading volume (m³)" , "Number of planned daily transportations"

*1: It is required to input when the approach alert is TRUE.

*2: For "Tank truck" and "Mixer", it is required to be input; for "Waste collection vehicle", "Low floor trailer", "Bus", "One box", "Commercial van" and "Road patrol vehicle", it cannot be input.

*3: For "Excavator", "Bulldozer", "Motor grader", "Road roller", "Wheel loader", and "Rotary vehicle", it is required to be input; for "Forklift truck" and "Snow removal truck", it cannot be input.





*4: For "Wheel loader", it is required to be input; for "Excavator", "Bulldozer", "Motor grader", "Road roller", "Forklift", "Rotary vehicle", and "Snow removing truck", it cannot be input.

Vehicle List Settings

Select each tab and press “Add and Edit”, then you can add vehicles and edit the following items.


■ On-load dump truck

“Name”, “Preset”, “Color”, “Heavy vehicle (kg)”, “Maximum load (kg)”, “Maximum capacity of soil volume (m³)”, “Approach alert”, “Approach alert radius”, “Number of planned daily transportations”, and “Usage” can be set.

Full reference	On-road dump	Off-road dump	Other work vehicles	Heavy machinery	Person	Others	Add and edit				
Type	Name		Color	Vehicle weight(kg)	Maximum load volume(kg)	Maximum load capacity(m3)	Proximity warning	Proximity warning range(m)	Daily transport plan number	Login code	Use
On-Road Dump Truck	Dump_01			11,000	9,800	5.5	<input checked="" type="checkbox"/>	50			<input checked="" type="checkbox"/>
On-Road Dump Truck	Dump_02			11,000	9,800	5.5	<input checked="" type="checkbox"/>	50			<input type="checkbox"/>

■ Off-road dump truck


“Name”, “Preset”, “Heavy cars (kg)”, “Maximum loading capacity (kg)”, “Maximum capacity of soil volume (m³)”, “Approach alert”, “Approach alert radius”, “Number of planned daily transportations”, and “Usage” can be set.

Full reference	On-road dump	Off-road dump	Other work vehicles	Heavy machinery	Person	Others	Add and edit				
Type	Name		Vehicle weight(kg)	Maximum load volume(kg)	Maximum load capacity(m3)	Proximity warning	Proximity warning range(m)	Daily transport plan number	Login code	Use	
Articulated Dump Truck	Articulated_dump_01		35,400	40,000	24	<input checked="" type="checkbox"/>	50		<input checked="" type="checkbox"/>		

■ Other work vehicles

“Name”, “Preset”, “Heavy vehicle (kg)”, “Maximum load (kg)”, “Maximum capacity of soil volume (m³)”, “Approach alert”, “Approach alert radius”, and “Usage” can be set.

* Items of “Vehicle weight (kg)”, “Maximum loading capacity (kg)”, and “Maximum capacity of soil volume (m³)” cannot be set for garbage collection vehicle, low-floor trailer, bus, one box, commercial van, or road patrol



Full reference		On-road dump	Off-road dump	Other work vehicles	Heavy machinery	Person	Others	Add and edit			
Type	Name				Vehicle weight(kg)	Maximum load volume(kg)	Maximum load capacity(m3)	Proximity warning	Proximity warning range(m)	Login code	Use
Tank truck	Tank_truck_01				0	0	0	<input checked="" type="checkbox"/>	50		<input checked="" type="checkbox"/>

■ Heavy machinery

“Name”, “Preset”, “Heavy vehicle (kg)”, “Maximum load (kg)”, “Maximum capacity of soil volume (m³)”, “Approach alert”, “Approach alert radius”, and “Usage” can be set.

* Item of “Vehicle weight (kg)” cannot be set for forklift or snow removal truck.

* Items of “Maximum payload (kg)” and “Maximum capacity of soil volume (m³)” cannot be set for excavator, bulldozer, motor grader, road roller, forklift, rotary vehicle, or snow removing truck.

Full reference On-road dump Off-road dump Other work vehicles Heavy machinery Person Others										Add and edit		
Type	Name					Vehicle weight(kg)	Maximum load volume(kg)	Maximum load capacity(m3)	Proximity warning	Proximity warning range(m)	Login code	Use
Excavator	Excavator_01					20,000	-	-	<input checked="" type="checkbox"/>	50		<input checked="" type="checkbox"/>
Excavator	Excavator_02					20,000	-	-	<input checked="" type="checkbox"/>	50		<input type="checkbox"/>

■ Human

“Name”, “Preset”, “Approach alert”, “Approach alert radius”, “Number of planned daily transportations”, and “Utilization” can be set.

Full referenceOn-road dumpOff-road dumpOther work vehiclesHeavy machineryPersonOthers

Add and edit

Type	Name	Proximity warning	Proximity warning range(m)	Login code	Use
Guide	Guide_01	<input checked="" type="checkbox"/>	50		<input checked="" type="checkbox"/>

■ Other

“Name”, “Preset”, “Approach alert”, “Approach alert radius”, “Number of planned daily transportations”, and “Utilization” can be set.

Full referenceOn-road dumpOff-road dumpOther work vehiclesHeavy machineryPersonOthers

Add and edit

Type	Name	Proximity warning	Proximity warning range(m)	Login code	Use
Camera	Camera_01	<input checked="" type="checkbox"/>	50		<input checked="" type="checkbox"/>

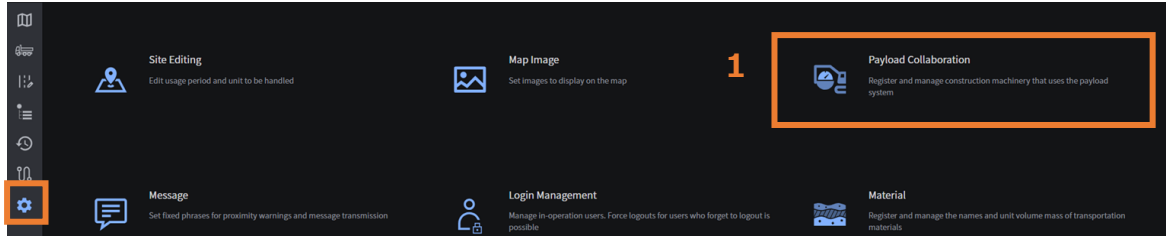
Settings for Construction Machine with a Payload Meter

When you register a construction machine with a payload meter, the loading result of the registered machine is displayed in “Payload results”.

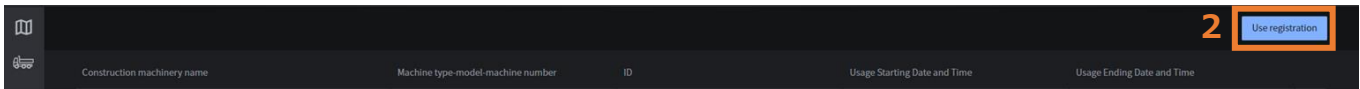
! Please also check the manual of your payload system.

External link : [How to set the payload in “Smart Construction 3D Machine Guidance”](#)

1. Log in with the user ID of the company that owns the construction machine, and click “Payload Collaboration”.

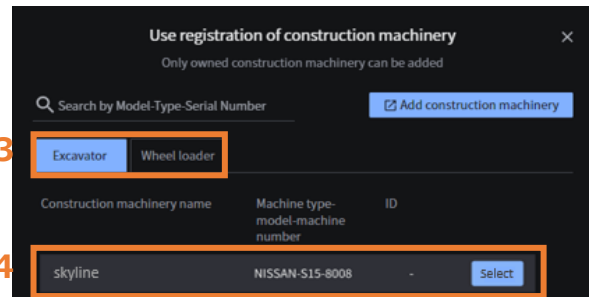


2. Click “Register usage” on the payload linkage screen.



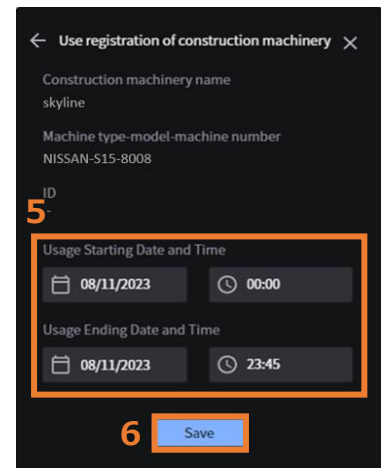
3. Select the type of construction machine.

4. Select the construction machine you want to add.



5. Enter “Usage start date and hour” and “Usage end date and hour”.

6. Ensure that the information to be registered is correct, and click “Register”.



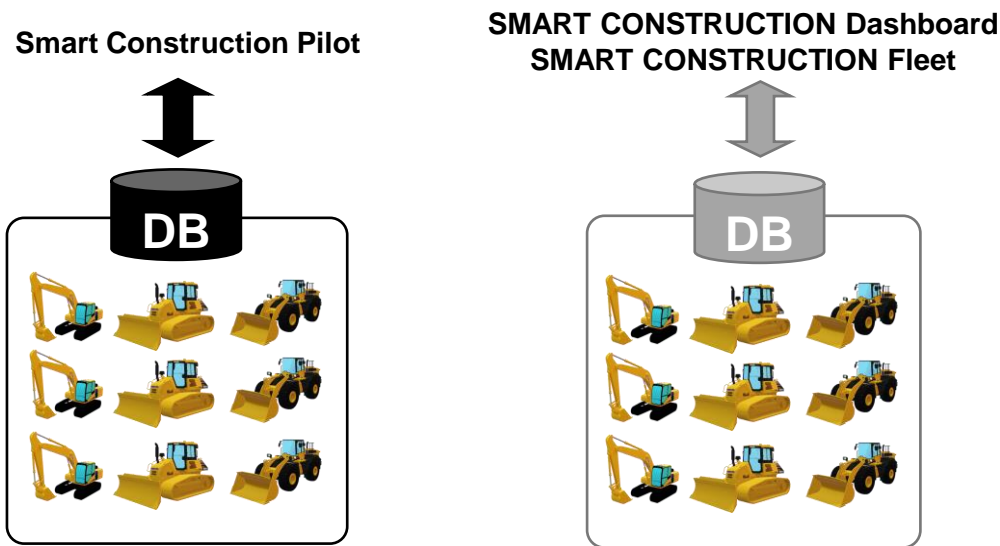
7. The construction machine with a payload meter you have registered is displayed.

Construction machinery name	Machine type-model-machine number	ID	Usage Starting Date and Time	Usage Ending Date and Time	
skyline_01	SILVIA-S15-1234	5678	08/11/2023 00:00	08/11/2023 23:45	:
skyline_02	FAIRLADY-Z13-1833	2254	07/11/2023 00:00	07/11/2023 23:45	:

If there is no registration of the owned construction machine

Note

- You cannot retrieve the information of the construction machine you have selected in the search if you have not registered it yet.
Login with the ID of the user who owns the construction machine, and follow the steps below to register the construction machine.
- Since the construction machine database used by Smart Construction Fleet is separate from those used by Smart Construction Pilot (Web application), new registration may be required even if the owned construction machines are registered in those other applications.
- The construction machine you register here will be registered to the construction machine database shared with Smart Construction Dashboard.



1. Click “Add a construction machine”.
2. Ensure that the information to be registered is correct, and click “Register”.

The screenshot shows a web application interface for registering construction machinery. At the top, a dark header bar contains the text 'Use registration of construction machinery' and a close button. Below this, a search bar is labeled 'Search by Model-Type-Serial Number'. A red box highlights the 'Add construction machinery' button, with the number '1' next to it. Below the search bar, there is a 'Machine List' section with a tab for 'Machine List' and a link for 'Add new machine'. The form contains several fields: 'Machine class' (with a checked 'Komatsu machine' option), 'Model-Type-Serial No.' (with sub-fields for Model, Type, and Serial No.), 'Machine name', 'Machine ID No.', 'Type' (with a dropdown menu), 'Machine Control ?' (with a dropdown menu), 'Purchase Date' (with a calendar icon), and 'Remarks' (with a text area). At the bottom, a red box highlights the 'Apply' button, with the number '2' next to it. A 'Cancel' button is also visible.

Editing of information on construction machine with a payload meter

1. Click “ : ”.

Use registration				
Construction machinery name	Machine type-model-machine number	ID	Usage Starting Date and Time	Usage Ending Date and Time
skyline_01	SILVIA-S15-1234	5678	08/11/2023 00:00	08/11/2023 23:45
skyline_02	FAIRLADY-Z33-1833	2254	07/11/2023 00:00	07/11/2023 23:45
skyline_03	180SX-TYPEX-5042	4863	07/11/2023 00:00	07/11/2023 23:45

- “Edit” allows you to edit the start and end dates.

Edit payload usage period

Construction machinery name
skyline_01

Machine type-model-machine number
SILVIA-S15-1234

ID
5678

Usage Starting Date and Time
08/11/2023 00:00

Usage Ending Date and Time
08/11/2023 23:45

Save

- “Copy to clipboard” copies the information on construction machine with a payload meter.
- “Delete” deletes a registered construction machine with a payload meter.

Deactivating Payload Usage

This Operation Cannot Be Undone

Construction machinery name
skyline_01

Cancel Release

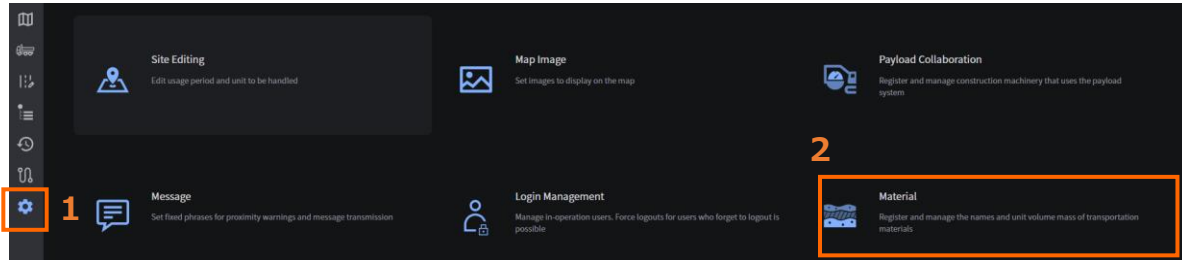
Note

- Note that you cannot register the payload loading result if there is no registration for the payload construction machine or if it is not used during the service period.
- When you have finished using the payload, it is recommended that you cancel the registration of the payload construction machine for the next site you use.

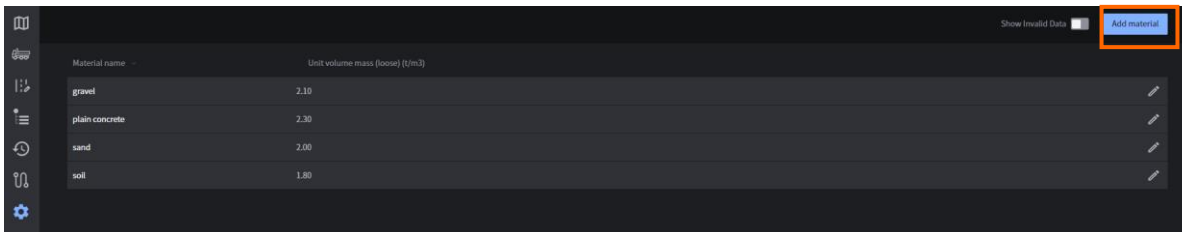
Soil Property Settings

Soil property settings

1. Display the project setting screen.
2. Click on the soil property.



3. Click “Add soil property”.




4. Enter the soil property name.
5. Enter the unit volume mass (loose).
6. Click “Save”.

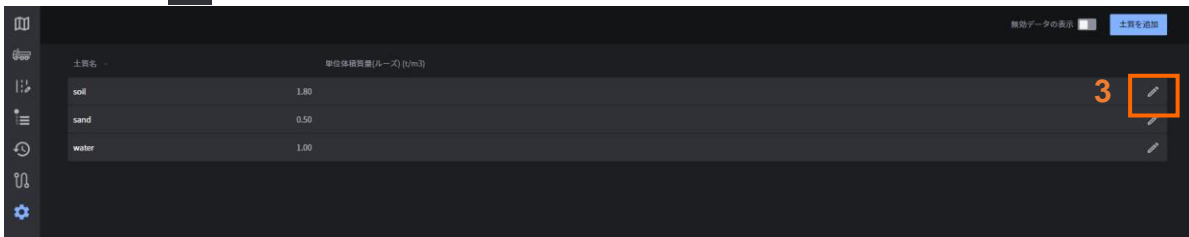
A screenshot of a dialog box titled 'Adding of material'. It contains two input fields: 'Material name' and 'Unit volume mass (loose)'. The 'Unit volume mass (loose)' field has 't/m3' as a placeholder. At the bottom, there is a 'Save' button. The dialog box is highlighted with an orange box and labeled with a large orange number '4'. The 'Material name' field is highlighted with an orange box and labeled with a large orange number '5'. The 'Save' button is highlighted with an orange box and labeled with a large orange number '6'.

Soil property editing

1. Display the project setting screen.
2. Click on the soil property.



3. Click the  of the soil property you want to edit.



4. Set valid/invalid.
5. Enter the soil property name.
6. Enter the unit volume mass (loose).
7. Click "Save".


A screenshot of a dialog box titled '土質の編集' (Edit Soil Property). It contains several fields and a button. Item 4 points to a '有効' (Valid) checkbox. Item 5 points to the '土質名' (Soil Name) text field containing 'soil'. Item 6 points to the '単位体積質量(ルーズ)' (Unit Volume Mass (Loose)) text field containing '1.8 t/m3'. Item 7 points to the '保存' (Save) button.

Field	Value
有効	<input checked="" type="checkbox"/>
土質名	soil
単位体積質量(ルーズ)	1.8 t/m3
保存	Button

Traveling Route Settings

Set it if you want to show the traveling route on the map screen such as the real-time viewer or the mobile application.

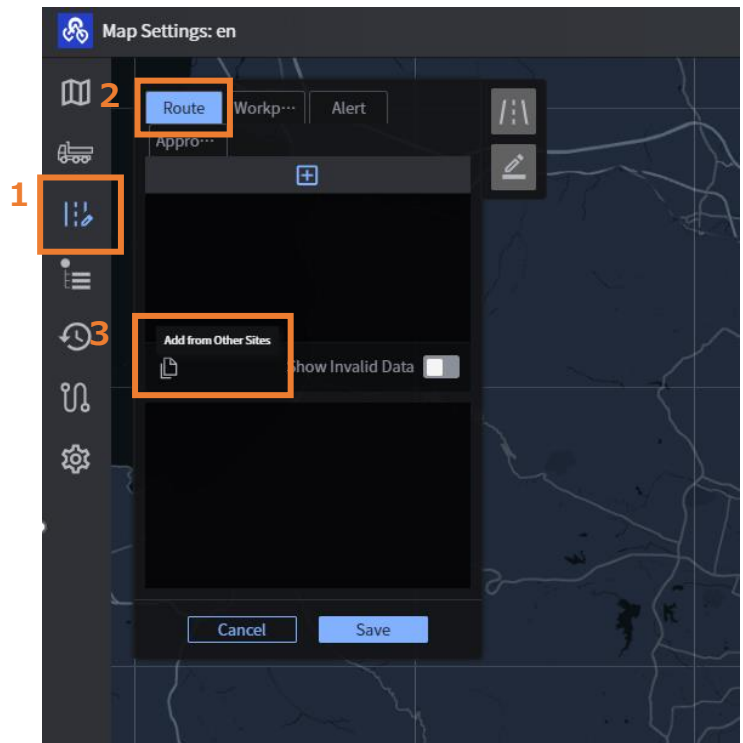
For the jobsite administrator, you can check in real time whether the driver is operating the correct route, and for the driver, whether the route to drive on a daily basis is correct.

 This function shows the traveling route on the real-time viewer or mobile application.
The navigation function is not available.

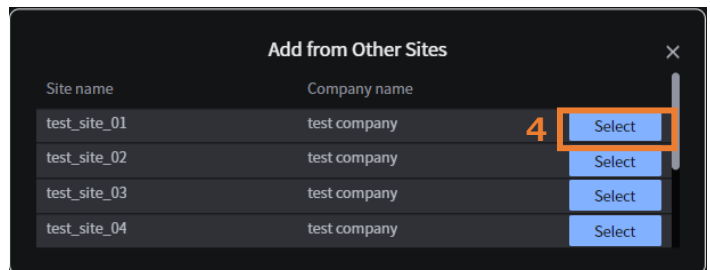
When copying the route from another site

You can copy the route if you have already used Smart Construction Fleet and there is a site where the route has been set.

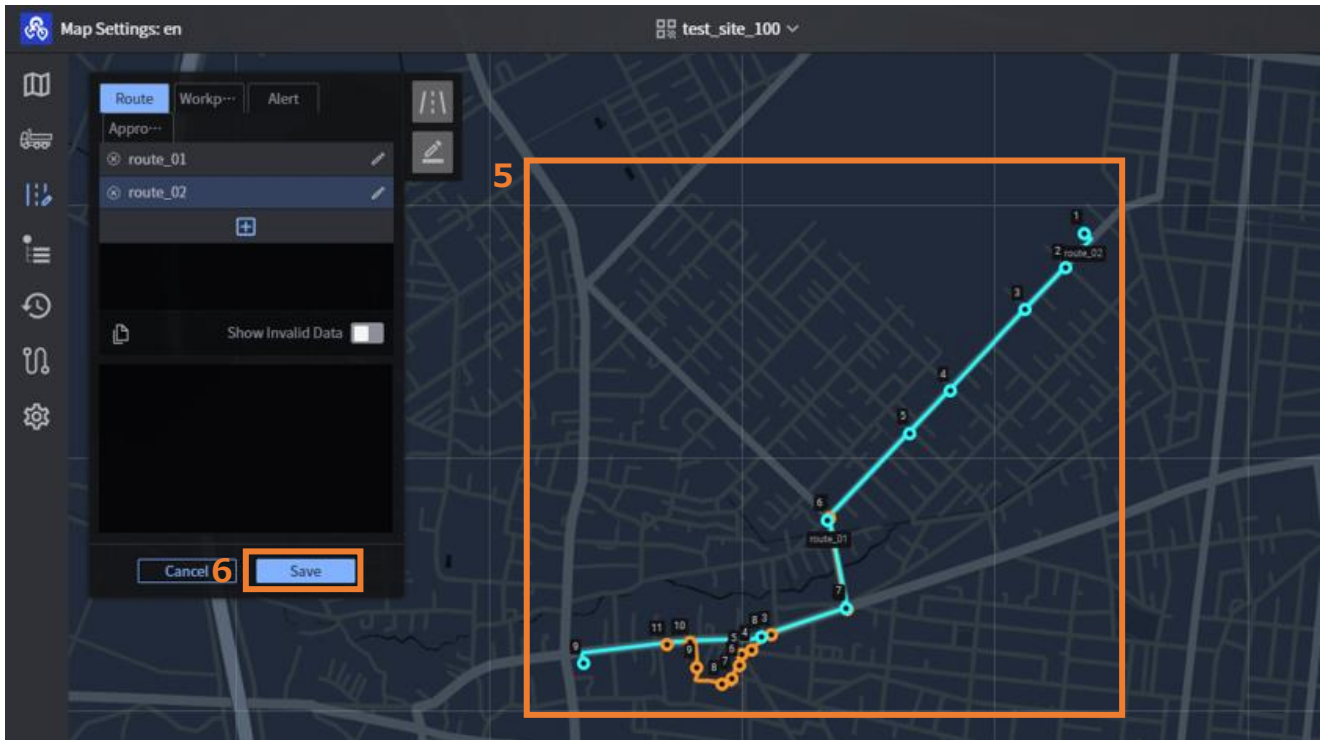
1. Display the map setting screen.
2. Click "Route".
3. Click "Add from another jobsite".



4. Select the jobsite to be copied. Jobsite for which your account is registered as "Site supervisor" is displayed in a list.



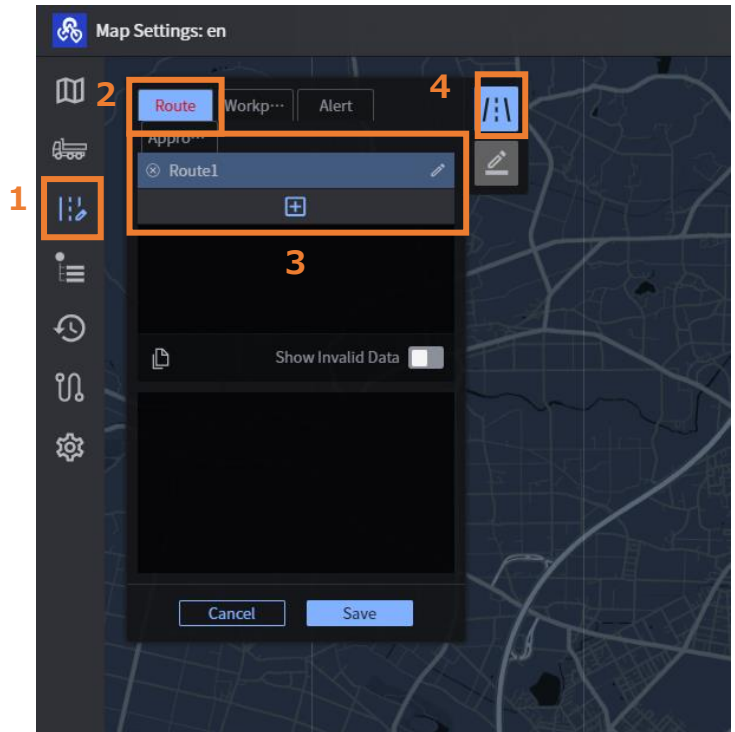
5. The route of the selected jobsite is copied.
The route originally created is not be overwritten.
6. After checking the route, click “Save”.



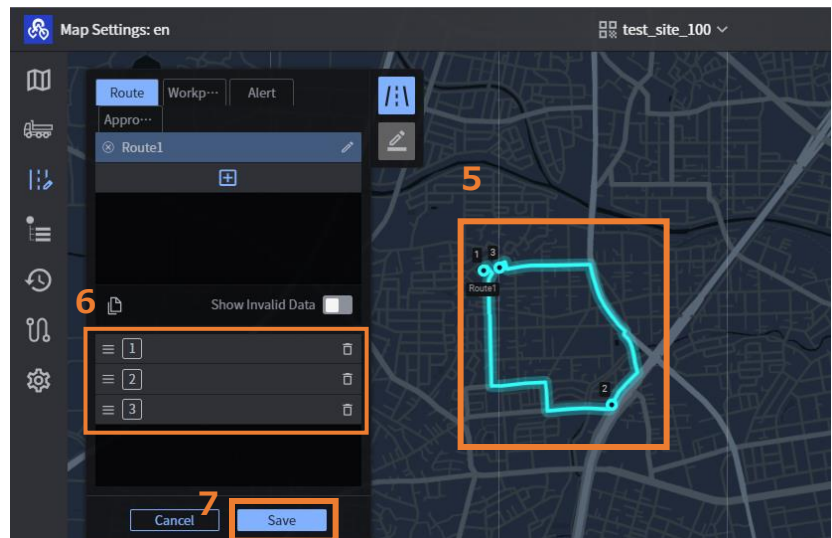
When not copying the route from another site

When creating a route along the road

1. Display the map setting screen.
2. Click "Route".
3. Click "+" to add the new route.
4. Set "Route along road" to ON.

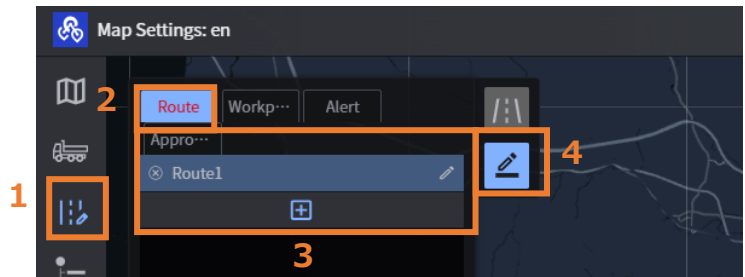


5. Click the starting point ending point of the route.
Each time you click the map, the route between the pins is automatically searched.
Click at an intersection, etc. as necessary to smoothly draw the planned transportation path.
6. You can change the order of clicked pins and delete them.
Change "Pin of gripped number" to "Order corresponding to released number".
Example: If you grab "1" and release it on "3", the pin of "1" will be the third.
7. After inputting the route, click "Save".

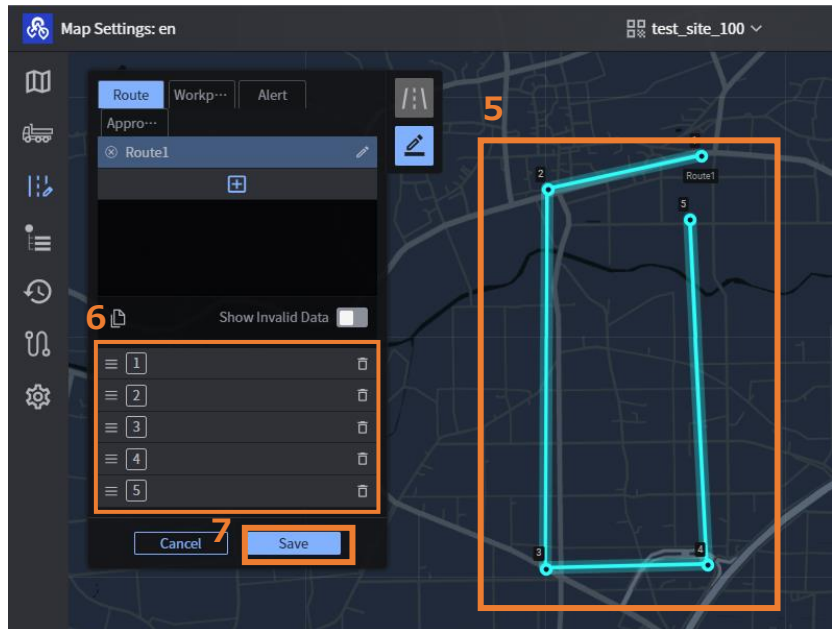


When creating a handwritten route

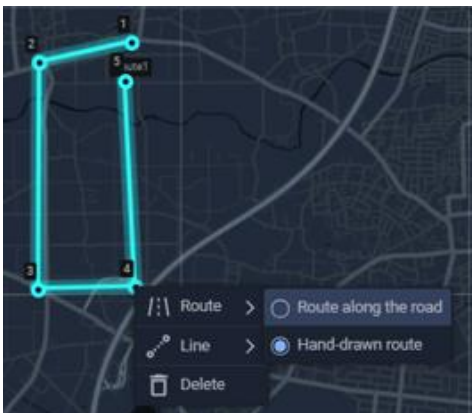
1. Display the map setting screen.
2. Click "Route".
3. Click "+" to add the new route.
4. Set "Handwritten route" to ON.




5. Click the route in order from the starting point.
A straight line is connected between the pins.
Click at an intersection, etc. as necessary to smoothly draw the planned transportation path.
6. You can change the order of clicked pins and delete them.
Change "Pin of gripped number" to "Order corresponding to released number".
Example: If you grab "1" and release it on "3", the pin of "1" will be the third.
7. After inputting the route, click "Save".

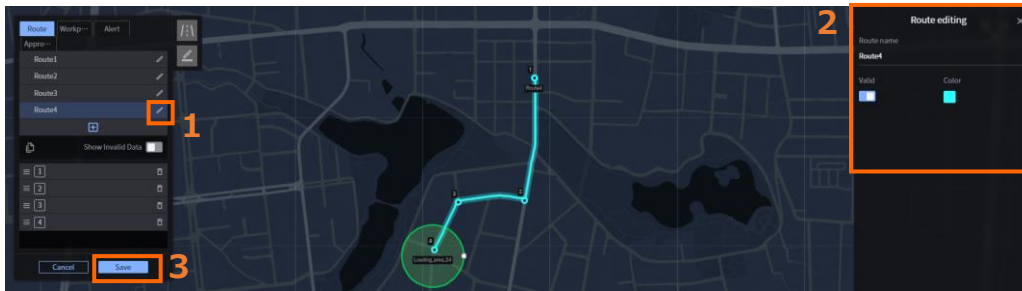


* You can change whether to input "Route along road" or "Handwritten route" by clicking the pin.



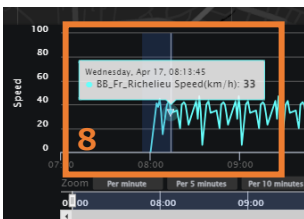
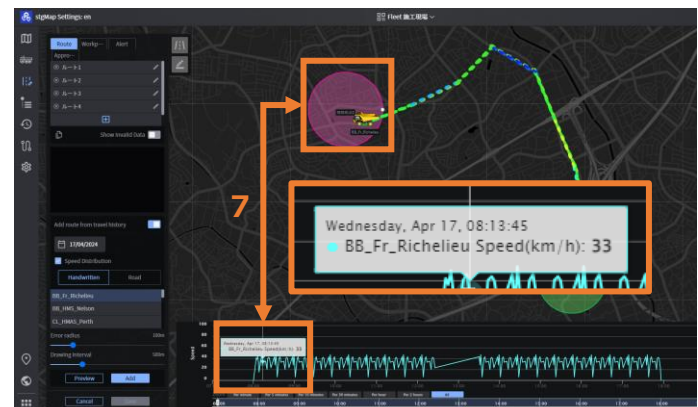
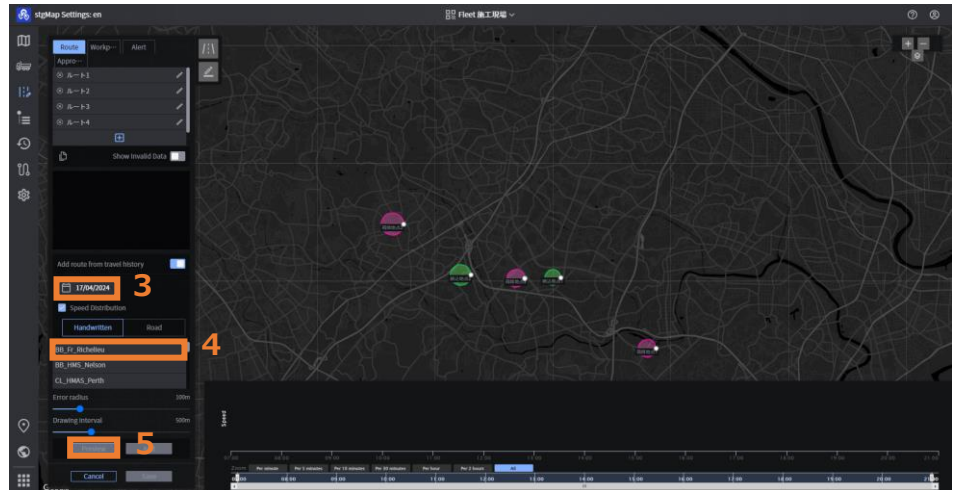
Editing of name of the traveling route and change of color

1. Click the  of the route you want to edit.
2. You can valid/invalid the route name and route, and change the color.
If you make the route invalid, it is hidden from the Web application and mobile application.
3. Click "Save".

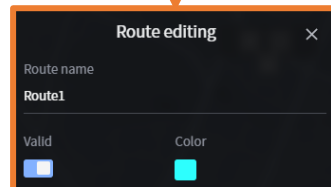
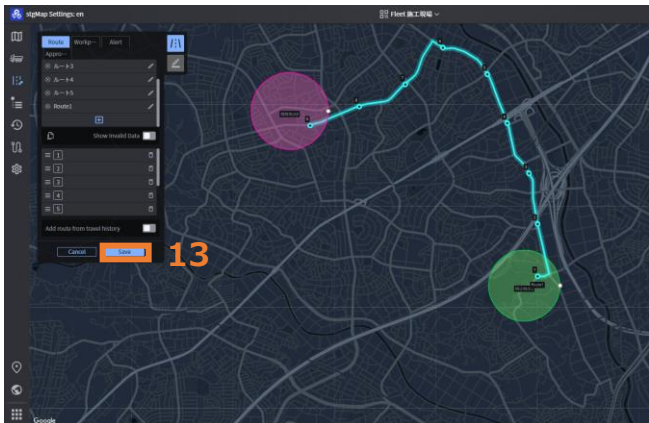
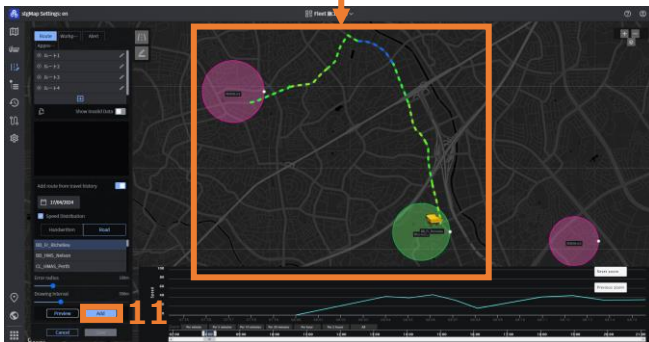
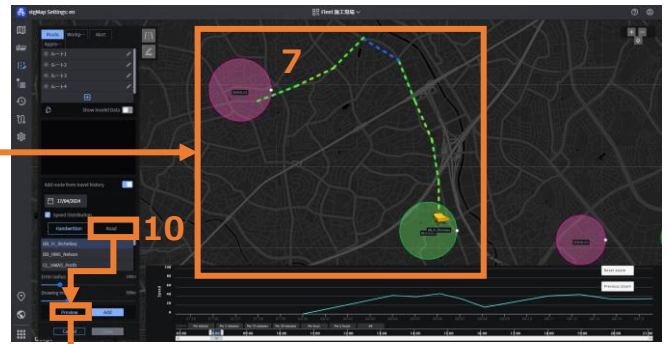


Create routes from the travel history

If there is a travel history recorded by the mobile app or Smart Construction Fleet Device you can create a route based on it.



1. Click on "Map Settings"
2. Turn on "Add route from travel history"
3. Select the date
4. Select the vehicle
5. Click on "Preview"
6. Hover over the graph to display the selected vehicle's travel history, then check the starting point and time of the route on the map
7. Similarly, check the end point and time of the route on the map
8. Drag the graph with the mouse to zoom in on the time confirmed in steps 6 and 7



9. Click on "Preview" as the speed graph zooms
Only the trajectory corresponding to the zoomed time
will be displayed on the map.
Click on "Preview" each time to update the screen display status.
10. Click on "Road" for routes on public roads, then click "Preview."
It will switch to a route that fits the road.
11. To confirm the displayed route, click "Add".
12. Turn off "Add route from travel history"
Please press the edit button as needed to edit the route name or other details.
13. Click on "Save"

The created route will be saved.

Workplace Settings

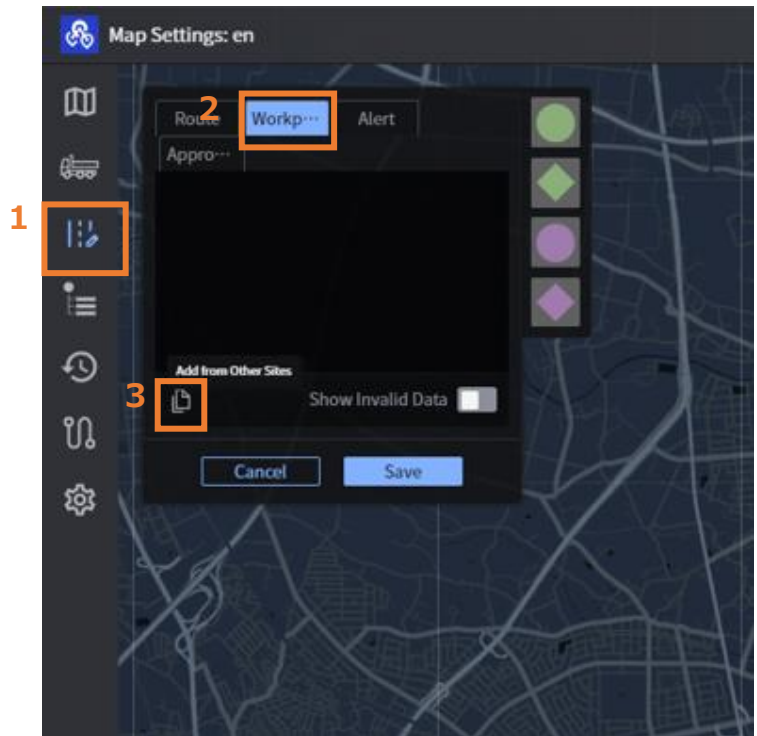
For the vehicle that has been logged in as the role of the dump truck (vehicle role: transport), you can register the work history (loading and unloading history).

! For details on the vehicle role, refer to the separate sheet “SCFleet_New Ver_vehicle role.xlsx”.

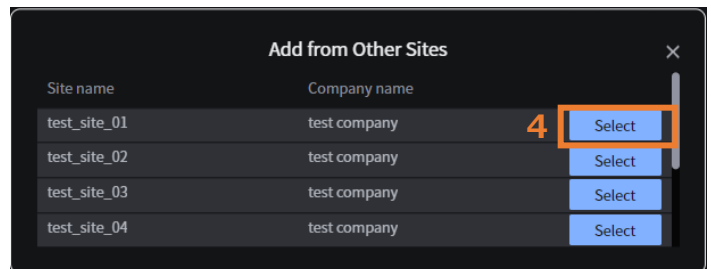
When copying the workplace from another site

If you have already used Smart Construction Fleet and you have a jobsite that has been set as a workplace, you can copy the workplace.

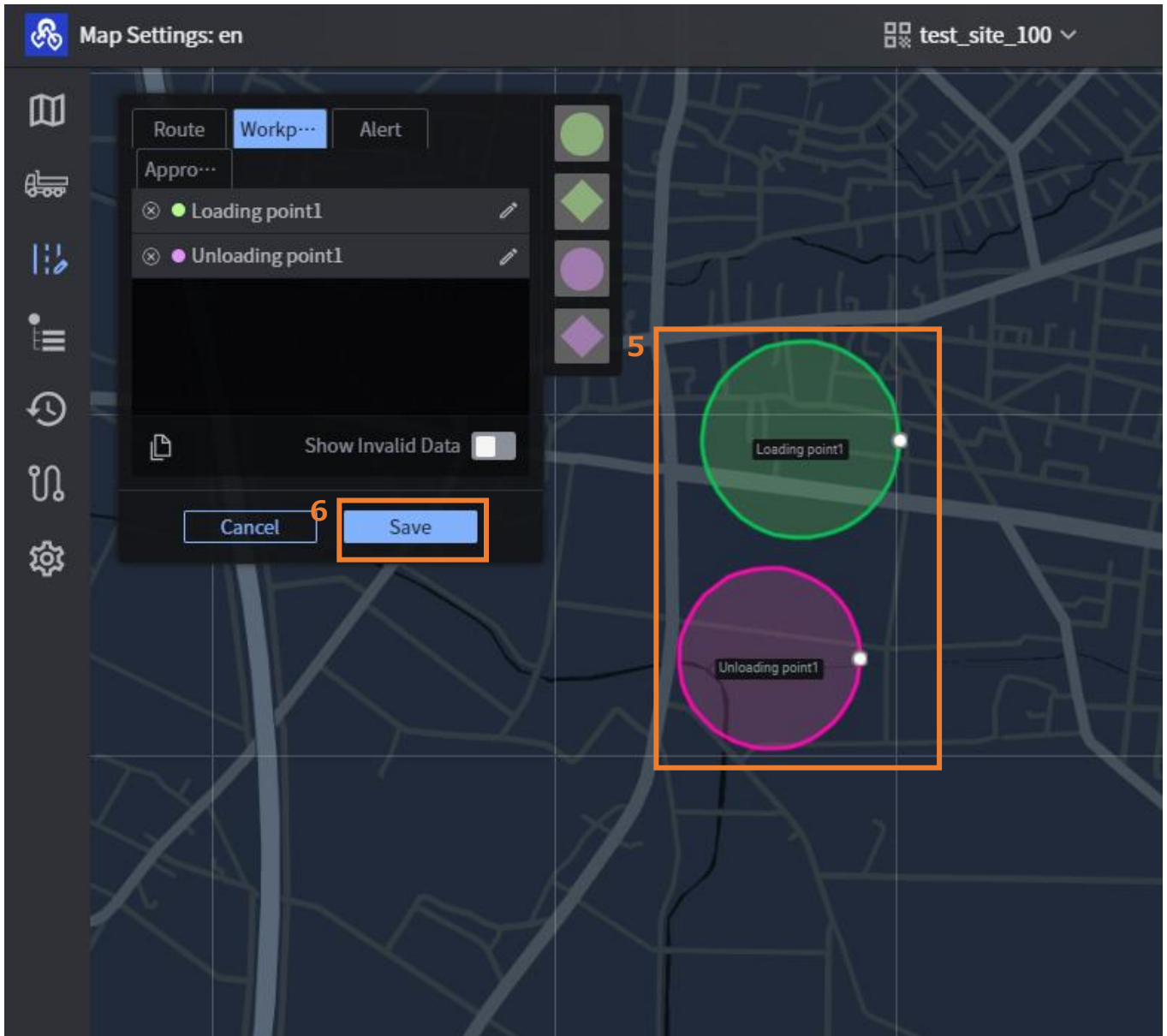
1. Display the map setting screen.
2. Click “Work point”.
3. Click “Add from another jobsite”.



4. Select the jobsite to be copied.
Jobsite for which your account is registered as “Site supervisor” is displayed in a list.

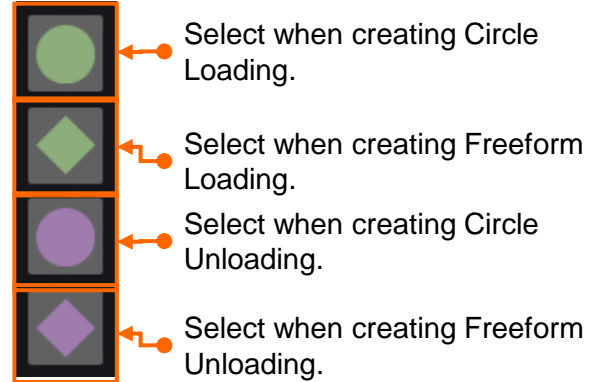
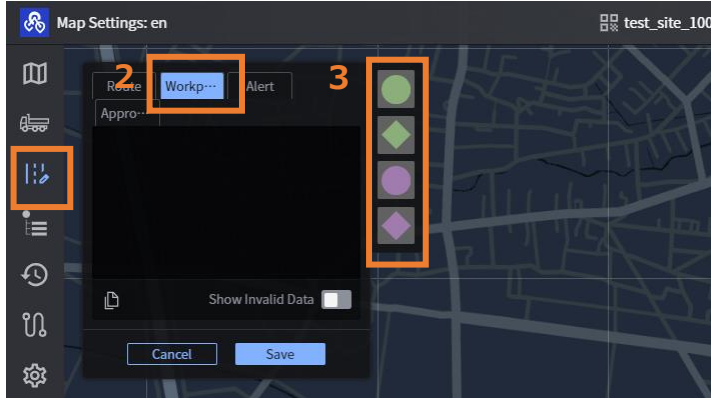


5. The workplace of the selected jobsite is copied.
The workplace originally created will not be overwritten.
6. After checking the workplace, click “Save”.

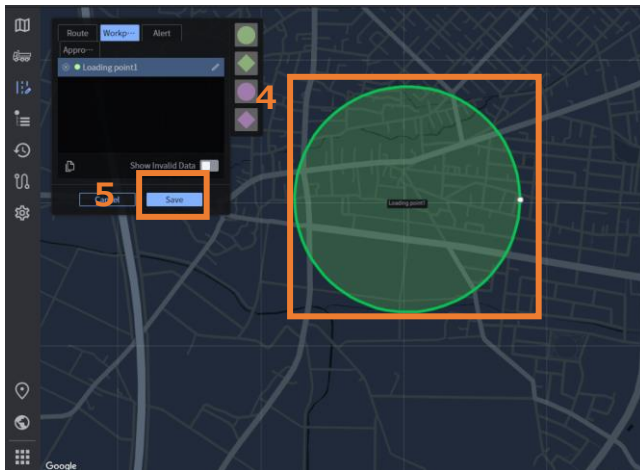


When not copying the workplace from another site


1. Display the map setting screen.
2. Click "Workplace".
3. Select the type of workplace you want to create
(Circle Loading | Freeform Loading | Circle Unloading | Freeform Unloading).

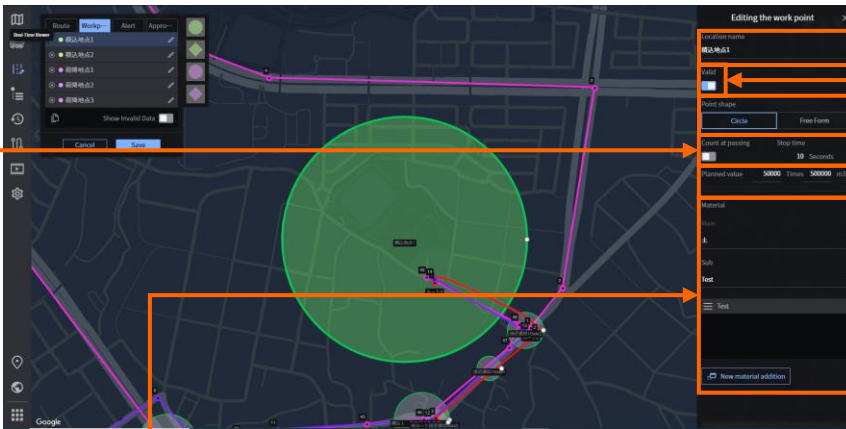


4. Click on the map.
5. After inputting the workplace, click "Save".



Editing of workplace

Click  on the workplace, and the “Edit the work point” menu will open.



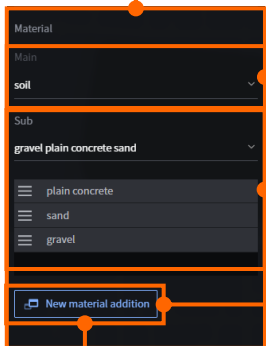
Enter “Location name” and it will be displayed on the work point of the map screen.



You can select valid/invalid of the point.
If it is made invalid, it is hidden from the Web application or mobile application.
You can change the shape of the point to Circle/Freeform.

You can set planned values for the Workplace. Both the number of trips and the soil volume need to be entered.

Set the soil property of the workplace (loading only).




Select the main soil property. (Required)

By default, the soil property is registered when the construction site is added.

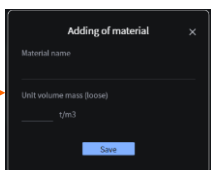
Select the sub soil property. (Optional)

You can select more than one from other than the main soil property, and specify the order.

 If you set the soil property that may be loaded at the workplace as sub soil property, it will be displayed in the list of mobile applications preferentially when selecting the soil property.

You can edit materials.

Click to open the modal for editing materials, input the soil property name and unit volume mass, and click “Save” to newly add the soil property.

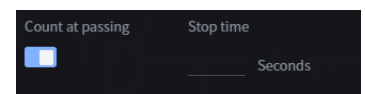


The value becomes the set value of automatic count for registering the work history.

* For the work history registration automatic count, the work history is recorded by approaching the point and leaving.

- When “Count by passage” is ON * Input of the stop time is impossible.

The work history is recorded by approaching the point and leaving, even if the vehicle does not stop.



- If “Count by passage” is OFF and stop time is set:

Approach the point → Stop, and, after the set stop time has elapsed, leave the point to record the work history.

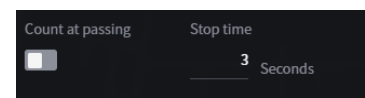


Illustration of circle



Illustration of freeform

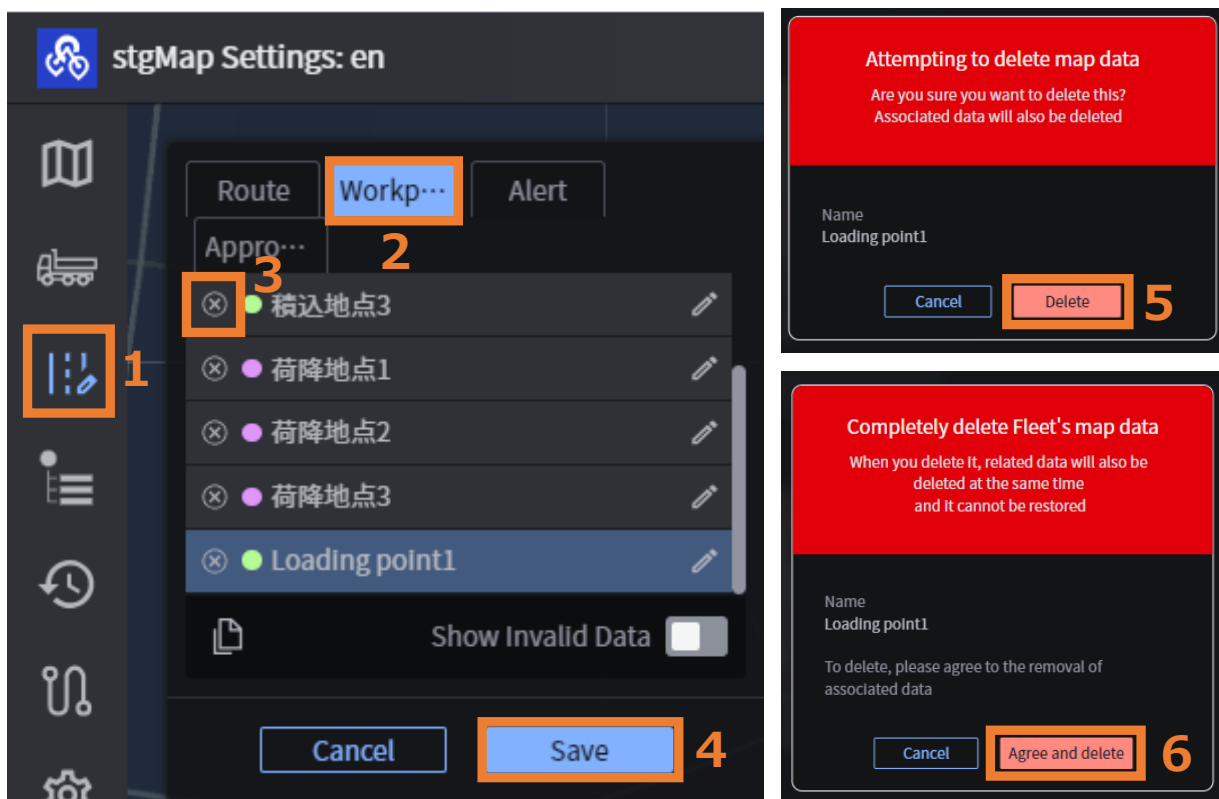


Delete the Workplace

When a workplace is deleted, the work history registered at that location will also be deleted. If you wish to keep the work history, please consider using the valid/invalid toggle function.

1. Click on "Map Settings"
2. Choose the "Workplace" tab
3. Click on "X"
4. Click on "Save"
5. Click on "Delete"
6. Click on "Agree and delete"

When deleting a Workplace, any work history registered at that site will also be deleted.



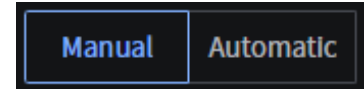
Manual/Auto Count

Record the work history (loading/unloading history) on the mobile application or Smart Construction Fleet Device.

! Vehicle role: Work history can only be registered when logging in during transportation.

● Work history: Manual

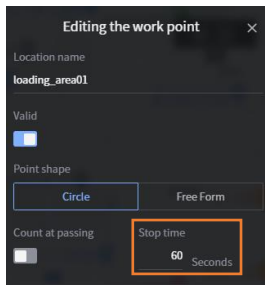
Recorded work history is displayed through approaching the loading/unloading-work-judging area while logging in on the mobile application, and pressing PUSH button.



! For details of how to manually register work history from the mobile application, refer to SMART CONSTRUCTION Fleet User Guide for Mobile Application.

● Work history: Automatic

Automatically recorded work is displayed through approaching and leaving the loading/unloading-work-judging area while logging in on the mobile application or Smart Construction Fleet Device.

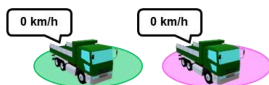


What is the “fixed time” in ②?

→ It is the stop time that can be set for each work place from “Edit work point” on the Map settings.

Flow of manual counting

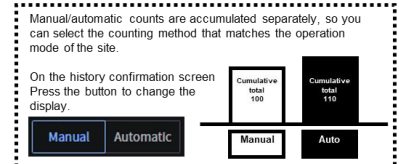
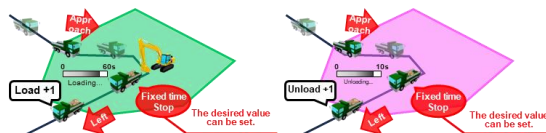
- ① Dump truck (work role: transport) stops at the workplace.
- ② Tap “PUSH” on the mobile application.
Loading (unloading) + 1



Once you enter the workplace, this message is displayed each time you stop the vehicle until the PUSH button is pressed.

Flow of auto counting

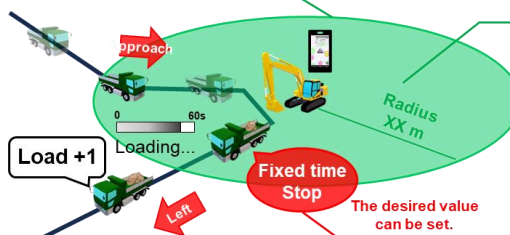
- ① Dump truck (work role: transport) approaches to the workplace.
- ② Stops for a fixed time within the workplace.
“Count by passage” has been set.
No stop is required for the workplace.
- ③ Exit from the workplace.
Loading (unloading) + 1



It is also possible to generate a distribution workplace around the construction machine (work role: loading area/unloading area) (common to manual and automatic operation).

Generate a circular distribution workplace centering on the position information of the construction machine.

The desired value can be set.
(up to : 200 m/600 ft)



Supplemental information

Workplace can belong to the group.

The workplace is displayed on the mobile application and the work history is registered only if it belongs to all groups or to the same group as the log-in vehicle of the mobile application.



For details on the vehicle role, refer to the separate sheet “SCFleet_New Ver_vehicle role.xlsx”.

For details on the grouping, refer to the separate sheet “SCFleet_New Ver_grouping.xlsx”.

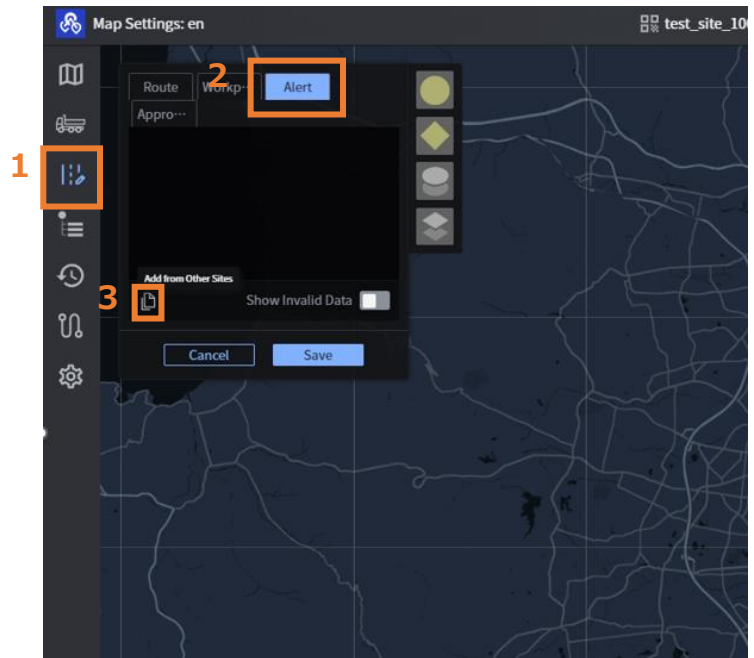
Alert Point Settings

An alert message is notified when a worker who has logged in on the mobile application passes a specific point.

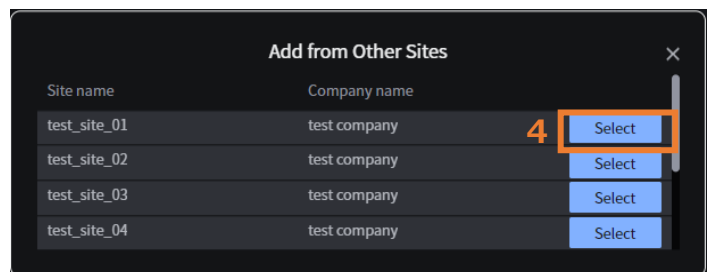
When copying the alert point from another site

If you have already used Smart Construction Fleet and you have already set an alert point, you can copy the alert point.

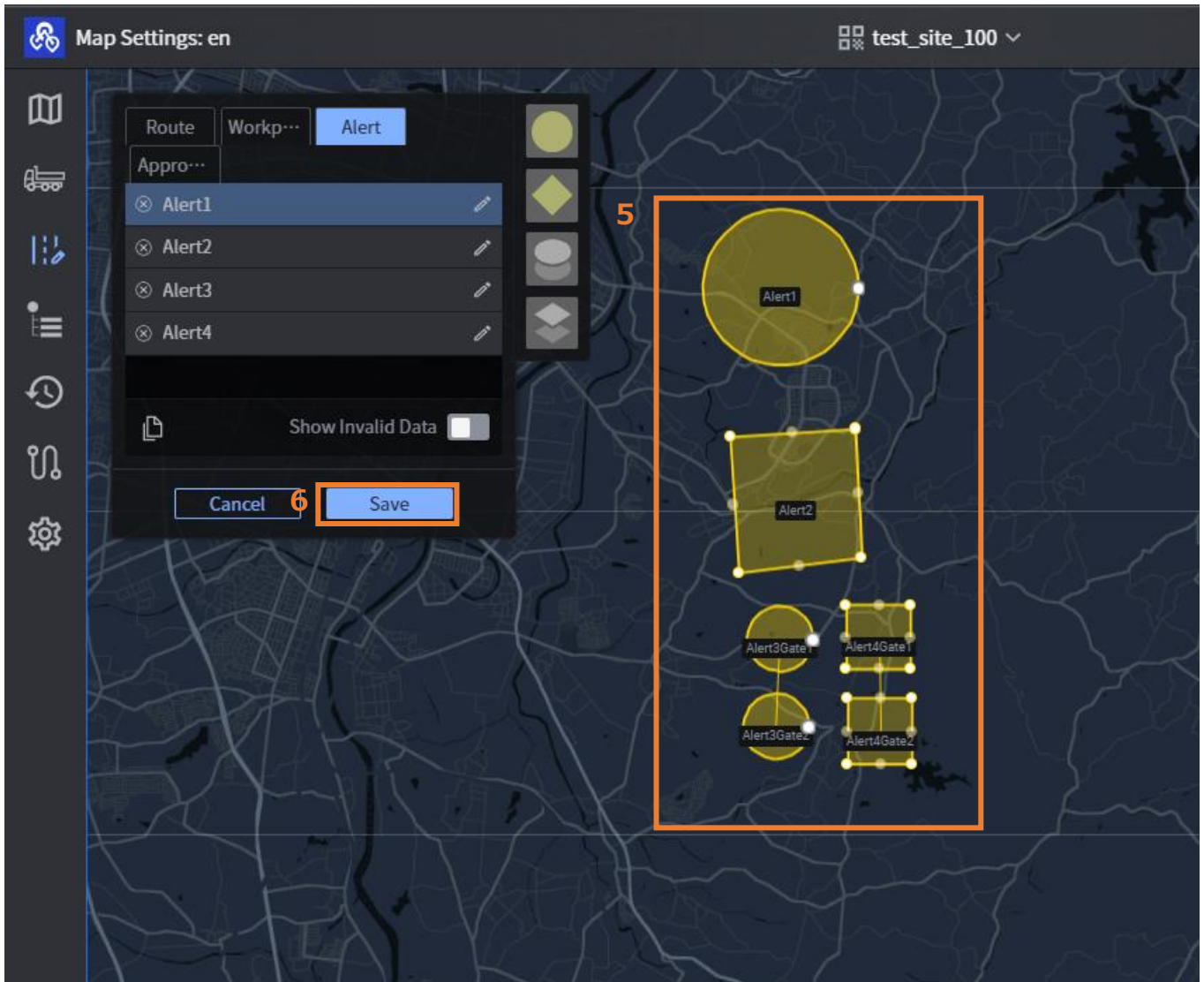
1. Display the map setting screen.
2. Click “Alert”.
3. Click “Add from another jobsite”.



4. Select the jobsite to be copied.
Jobsite for which your account is registered as “Site supervisor” is displayed in a list.

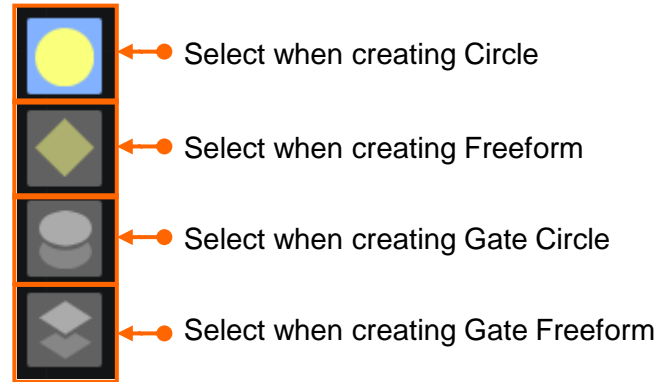
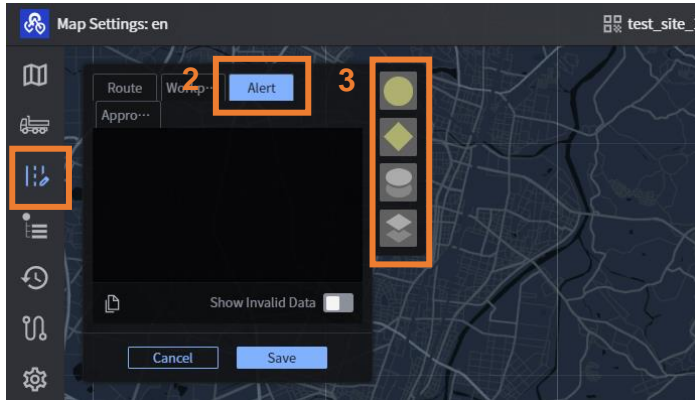


5. The alert point of the selected site is copied.
The alert point that has been created originally is not overwritten.
6. After checking the alert point, click “Save”.

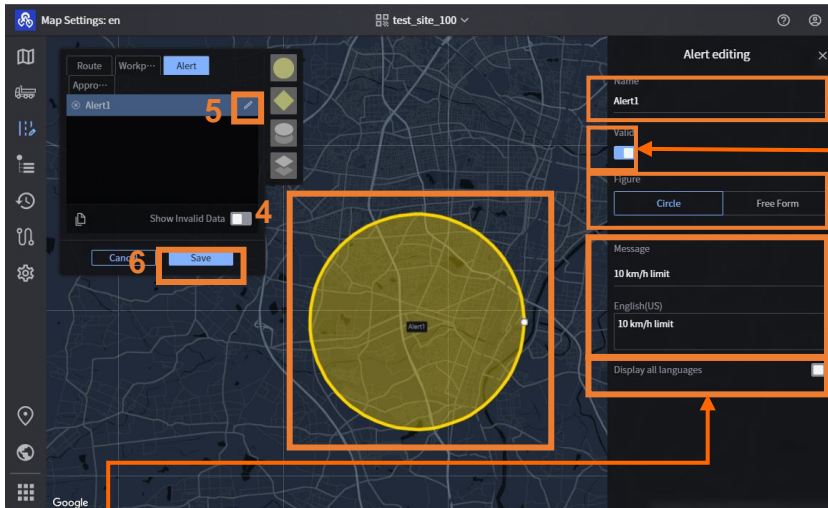


When not copying the alert point from another site

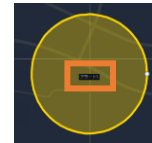
1. Display the map setting screen.
2. Click "Alert".
3. Select the type of alert point you want to create (Circle | Freeform | Gate Circle | Gate Freeform).



4. Click on the map.
5. Click the "✎" mark.
6. After inputting the alert point, click "Save".



Enter "Name" and it will be displayed at the alert point on the map screen.



You can select valid/invalid of the point. If it is made invalid, it is hidden from the Web application or mobile application.

You can change the shape of the point to Circle/Freeform.

When a message is selected from the list of fixed sentences, the read words are automatically input in the column of the language used. Read words can be edited freely.



Turn ON "Show all languages" to display the messages in all languages.

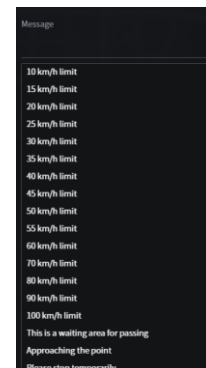


Illustration of circle

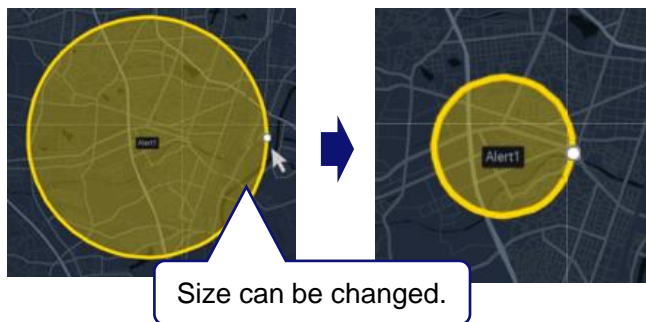


Illustration of freeform

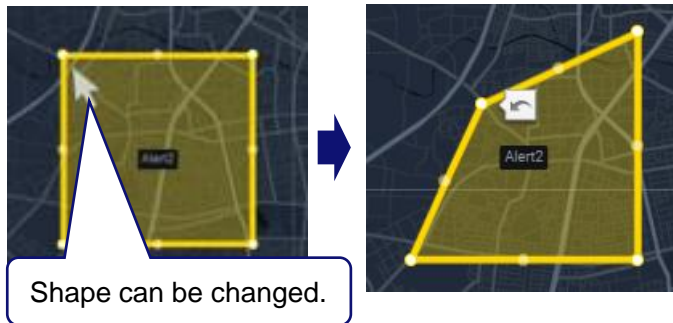


Illustration of gate circle

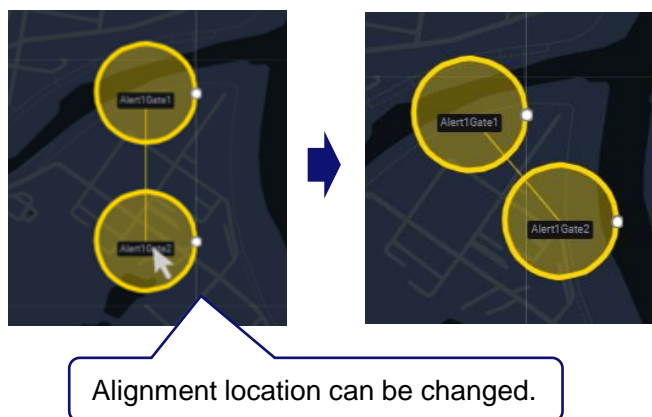
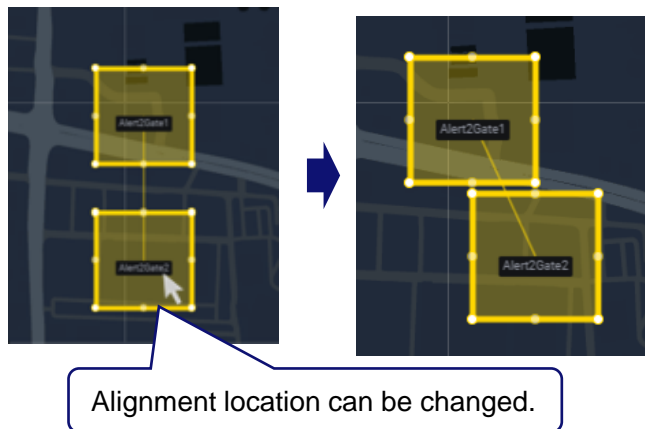
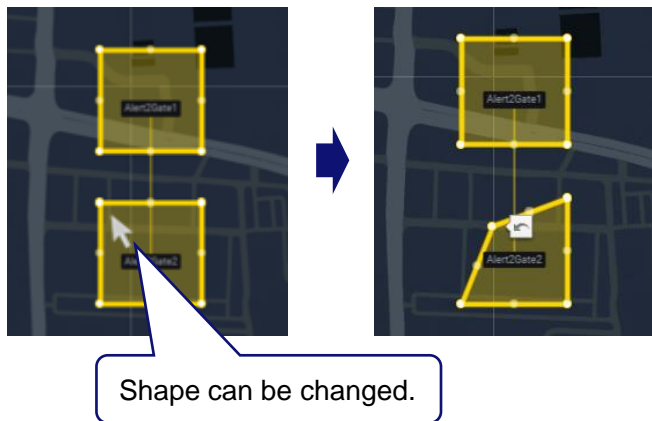
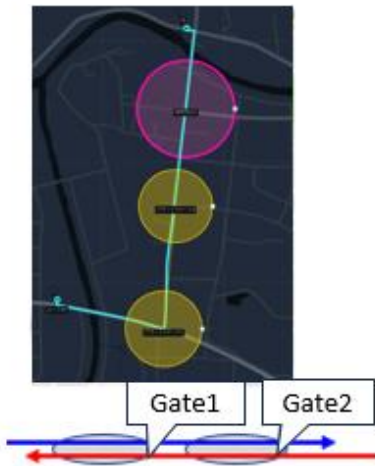


Illustration of gate freeform

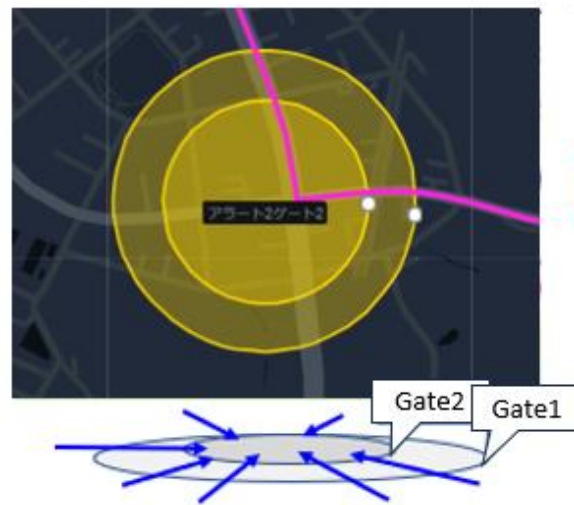


Gate settings (example)

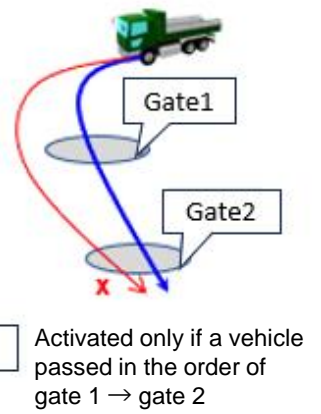
Unidirectional gate



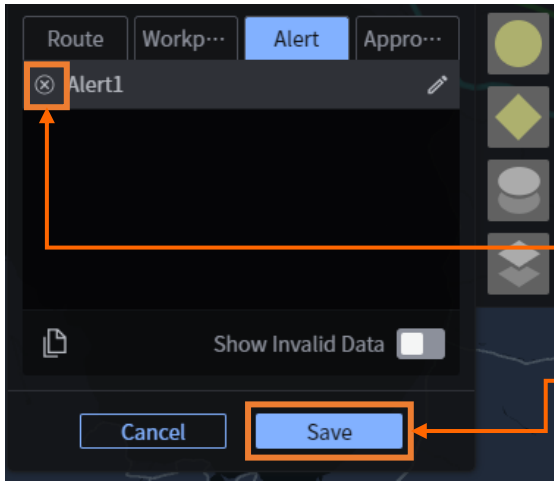
Multi-directional gate




Gate activation rule



Delete an alert point



You can delete the alert point by tapping the  of the alert point you want to Delete.

After completing the delete, click "Save".

Approach Notification Settings

Vehicle role: When the vehicle being logged in for transport approaches the loading/unloading point, the message set on the Web application is notified: for the vehicle being logged in at the loading/unloading area, the message is notified through displaying on the screen and reading it.

Note

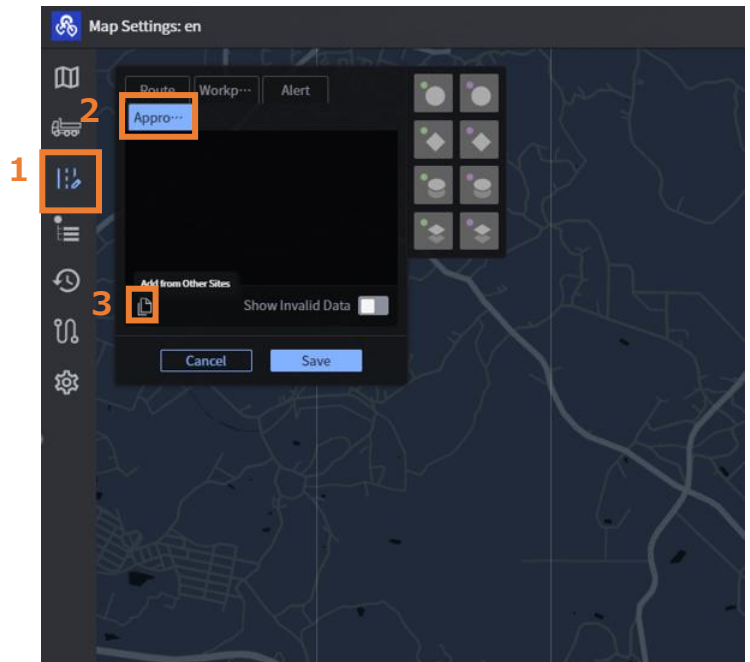
- For the loading approach notification point, the vehicle that is logged in on the vehicle role “Loading area” will be notified.
- For the unloading approach notification point, the vehicle that is logged in on the vehicle role “Unloading area” will be notified.

! For details on the vehicle role, refer to the separate sheet “SCFleet_New Ver_vehicle role.xlsx”.

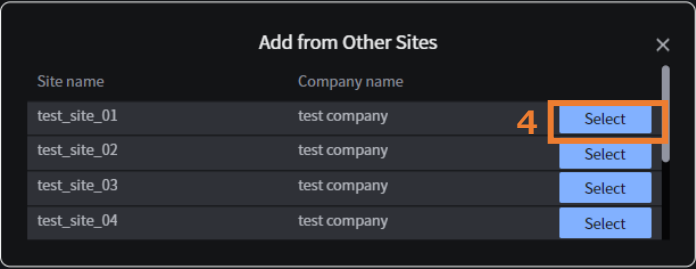
When copying the approach notification point from another site

If you have already used Smart Construction Fleet and you have a jobsite that has been set as an approach notification point, you can copy the approach notification point.

1. Display the map setting screen.
2. Click “Approach notification”.
3. Click “Add from another jobsite”.

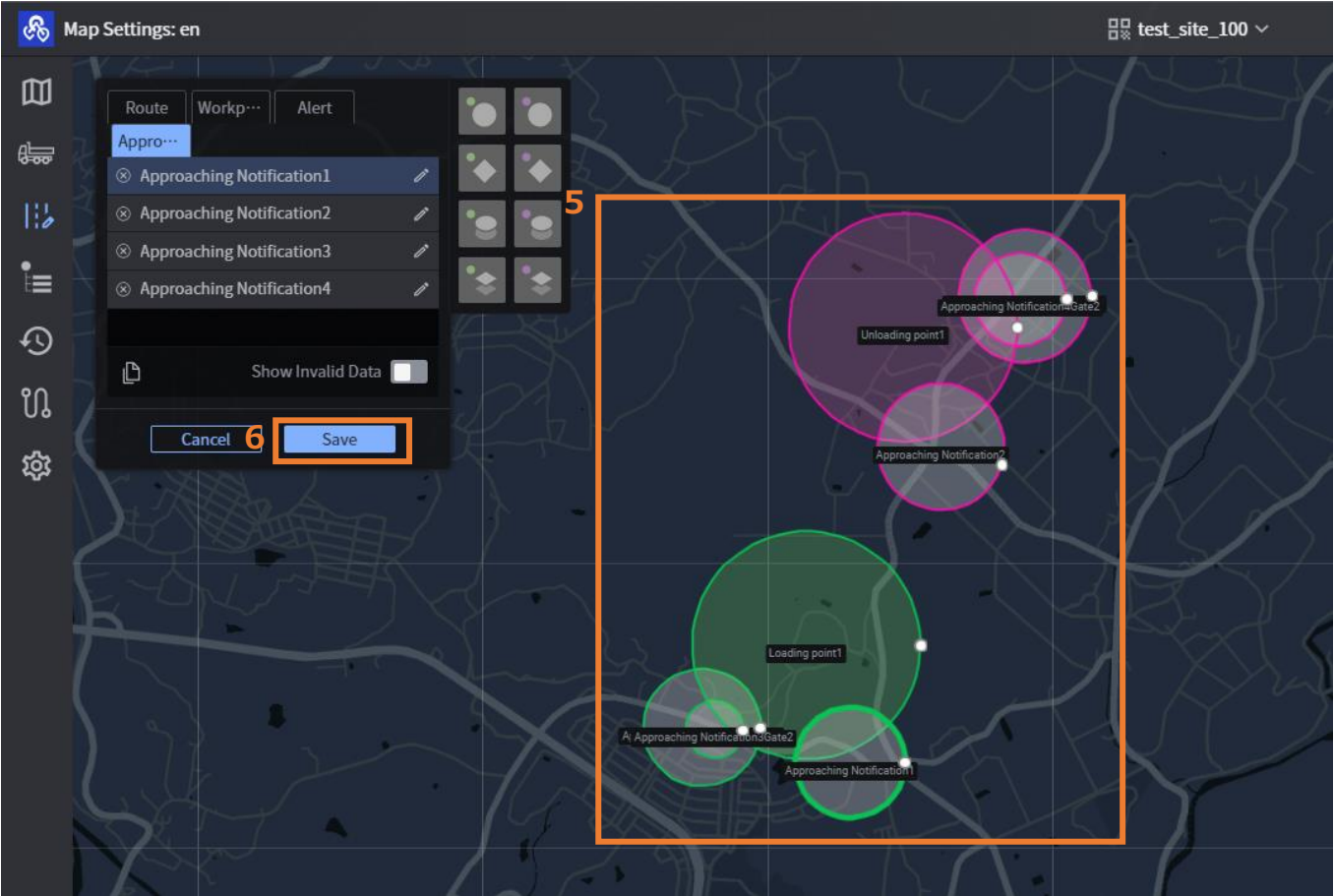


4. Select the jobsite to be copied.
Jobsite for which your account is registered as “Site supervisor” is displayed in a list.



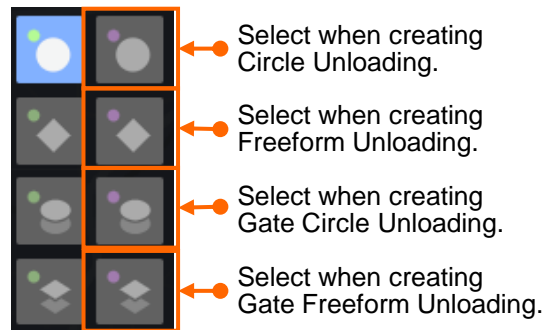
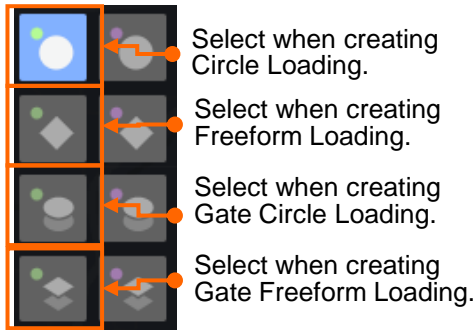
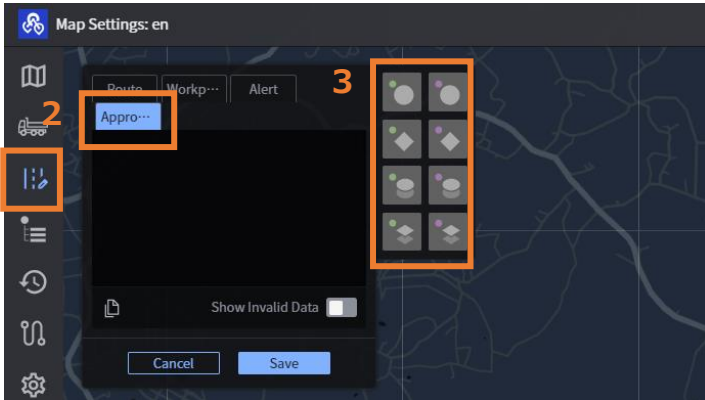
5. The approach notification point of the selected site is copied.
It is not overwritten on the approach notification point that was originally created.

6. After checking the approach notification point, click “Save”.

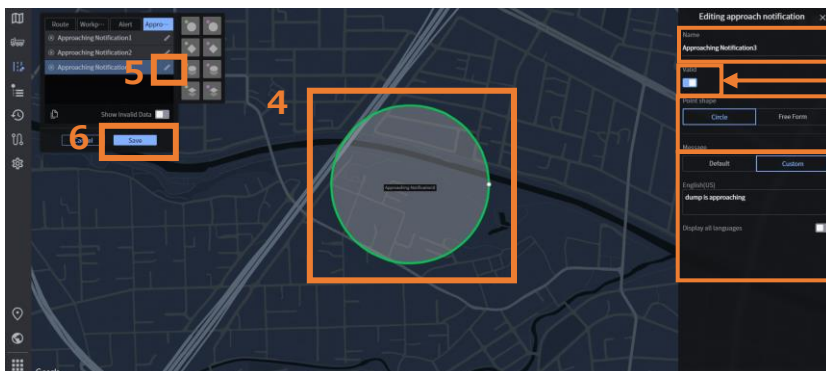


When not copying the approach notification point from another site

1. Display the map setting screen.
2. Click "Approach notification".
3. Select the type of approach notification point you want to create
(Circle Loading | Circle Unloading | Freeform Loading | Freeform Unloading |
Gate Circle Loading | Gate Circle Unloading | Gate Freeform Loading | Gate Freeform Loading)



4. Click on the map.
5. Click the "✎" mark.
6. After inputting approach notification point, click "Save".



Enter "Name" and it will be displayed at the approach notification point on the map screen.



You can select valid/invalid of the approach notification point.

You can change Circle/Freeform.

Select "Custom" to arbitrarily set the words for approach notification.

Illustration of circle



Illustration of freeform

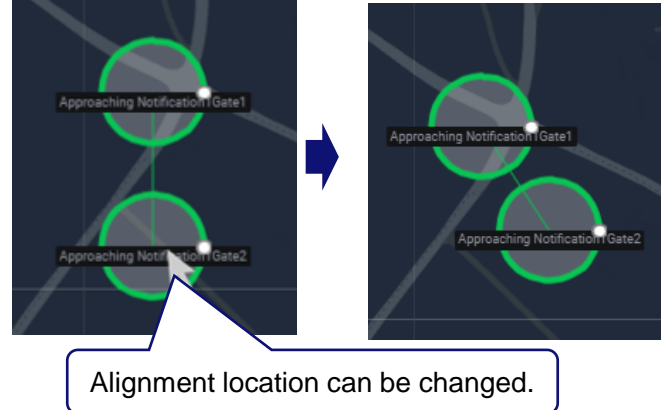
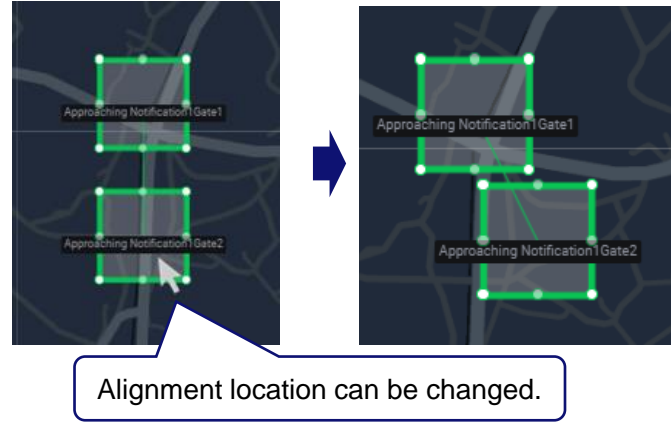
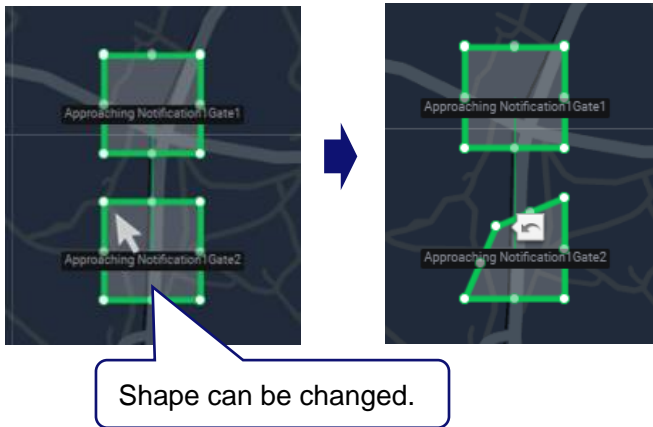
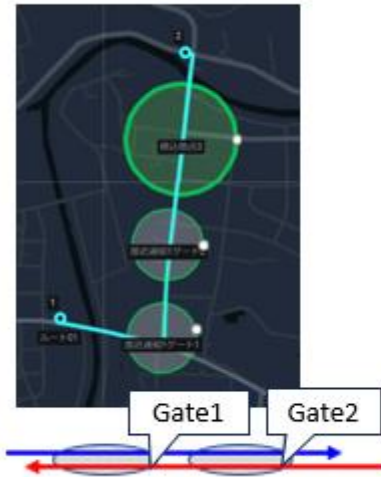


Illustration of gate freeform

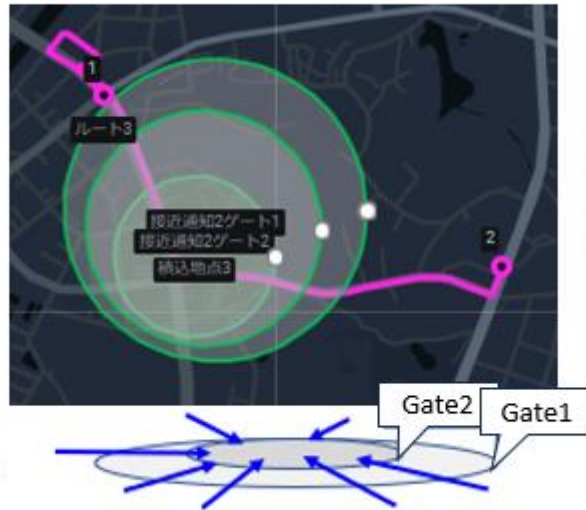


Gate settings (example)

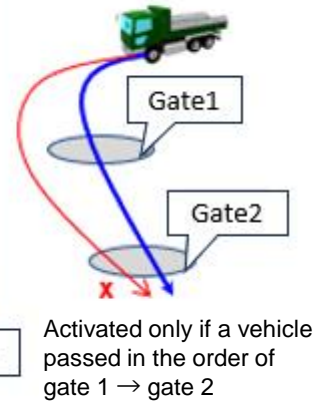
Unidirectional gate



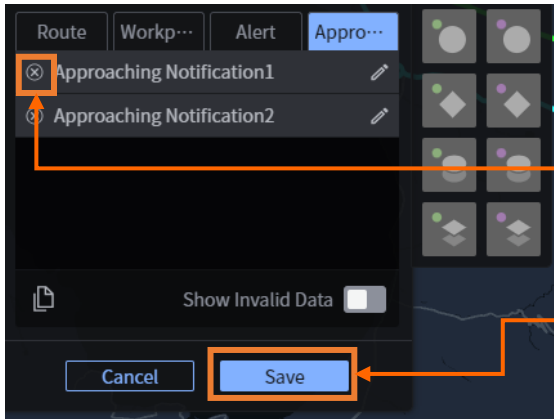
Multi-directional gate




Gate activation rule



Delete an approach notification point



You can delete the approach notification point by tapping  of the approach notification point you want to delete.

After completing the delete, click "Save".

Group Settings

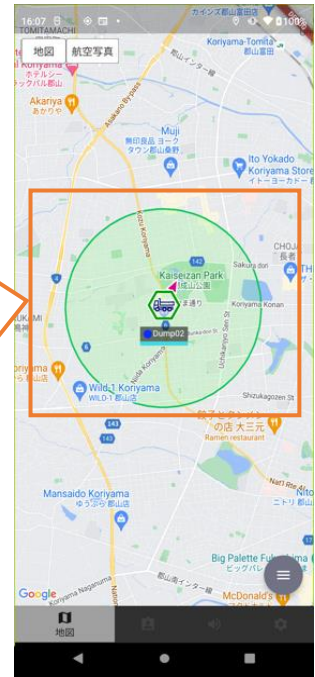
You can set groups of map objects (route, workplace, alert point, and approach notification point). For the vehicle that has logged in the mobile application, only the map object of the specified group is shown. This will never register or notify the work history of other groups. On the web screen, you can narrow down the work results by group and display them.

About grouping

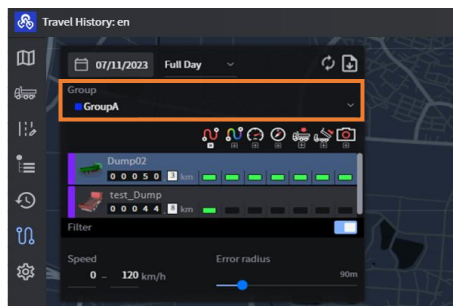
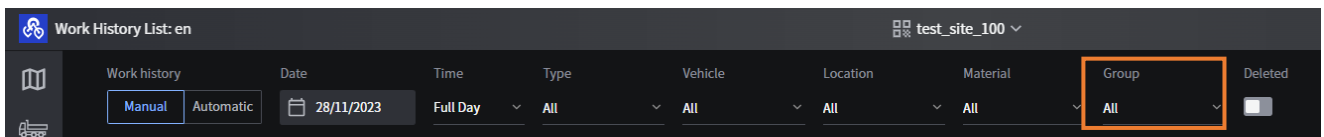


Red group and blue group exist.
The dump truck belongs to the blue group.

On the dump truck screen of the mobile application, only the loading point of the blue group is displayed.



By grouping the map objects, map objects other than the same group as the login vehicle are not displayed, and registration of the incorrect work history is avoided.



When displaying the history on the Web application, you can narrow down the history by group.

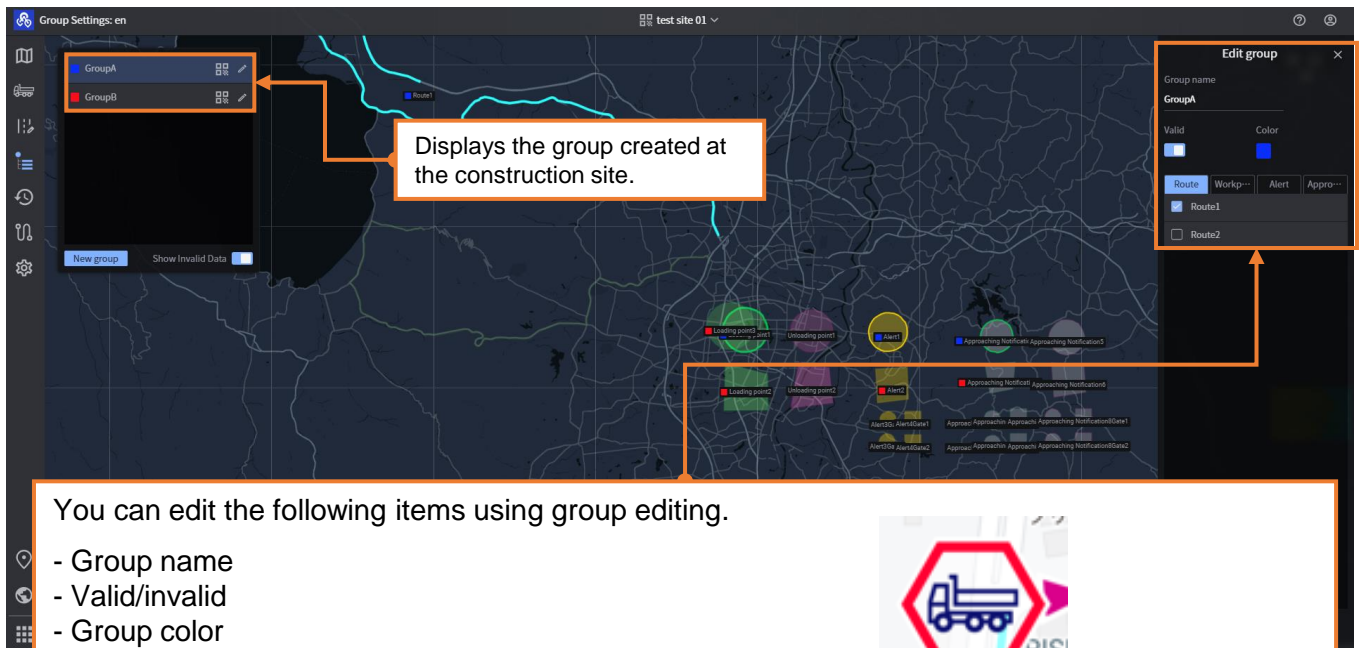
Grouping settings of map objects

[Flow of grouping settings]

1. Create a group on the group setting screen of the Web application.
Assign the map objects (route, workplace, alert point, and approach notification point) to the group.
Map objects (route, workplace, alert point, and approach notification point) can belong to multiple groups.
You can change the group information after creating the group.
2. Add it to the group when logging in the mobile application and perform the work.
The object can belong to multiple groups.
The object can belong to "All groups".
You can change the group it belongs to even after logging in.

[Web application]

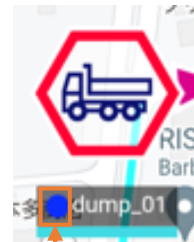
- New/editing/deletion of the group is possible
- Multiple map objects can be added to the group.



You can edit the following items using group editing.

- Group name
- Valid/invalid
- Group color

→ The group color is reflected to the color of the group icon on the label of the vehicle icon of the mobile application.



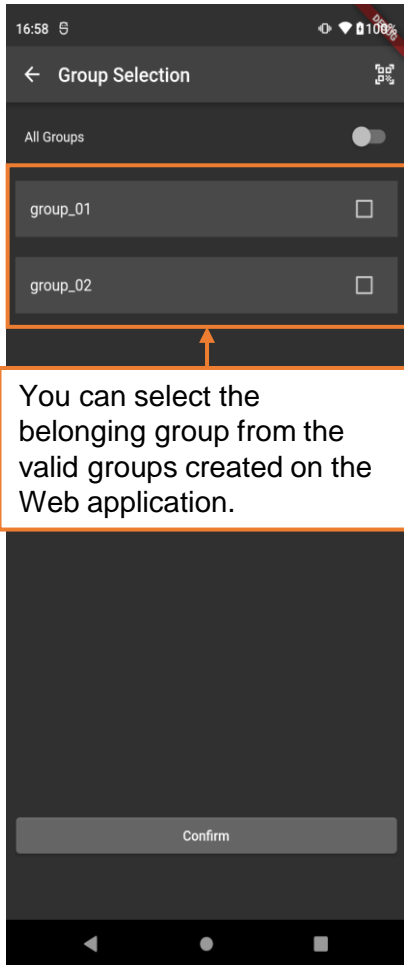
Group color

- Map objects (route, workplace, alert point, and approach notification point) belong to the group.

[Mobile application]

- Select the group the object belongs to at login.
- You can select multiple groups for the object to belong to.

<Select belonging group>

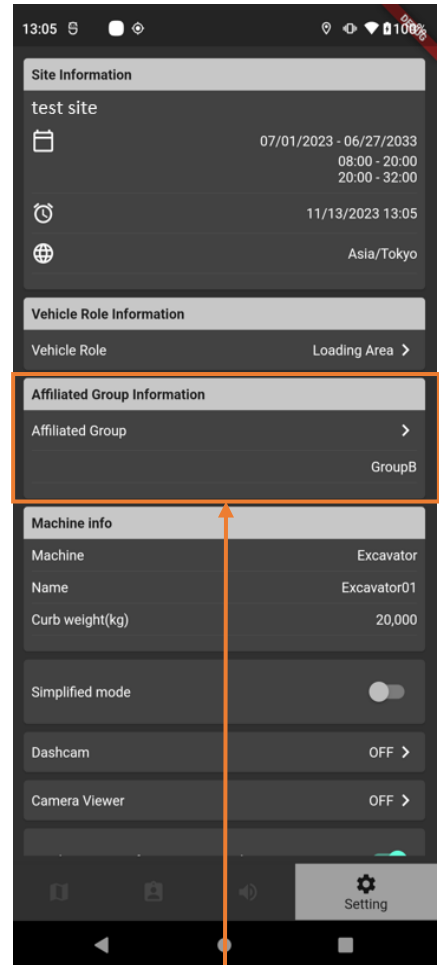


You can select the belonging group from the valid groups created on the Web application.



The object can belong to "All groups".

<Settings>



Tap ">" to belong to the group.
Go to the setting screen.

View of the map object of the mobile application

Table 1 : Display pattern of each map object

- If the login vehicle belongs to the group

Object	Own group	Other groups	Belongs to "All groups"
Other vehicles	✓	✓ (Small icon)	✓
Route	✓	×	✓
Workplace	✓	×	✓
Alert point/gate	✓	×	✓
Approach notification point/gate	✓	×	✓
Waypoint guide path	✓	×	✓

- If the login vehicle belongs to "All groups"

Object	Own group	Other groups	Belongs to "All groups"
Other vehicles	✓	✓	✓
Route	✓	✓	✓
Workplace	✓	✓	✓
Alert point/gate	✓	✓	✓
Approach notification point/gate	✓	✓	✓
Waypoint guide path	✓	✓	✓

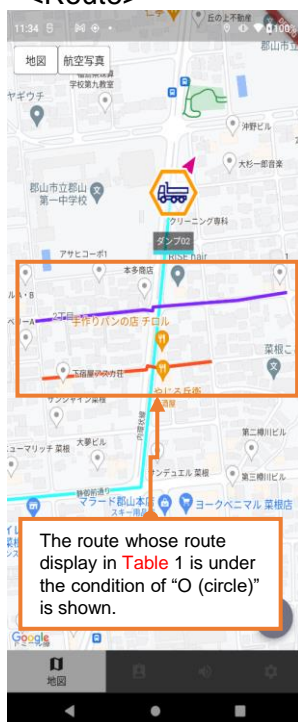
<Other vehicles>

If display of other vehicle's icon in **Table 1** is under the condition of "O (circle)", other vehicle's icon is displayed in the same size as the own vehicle's icon.



If display of other vehicle's icon in **Table 1** is under the condition of "O (small icon)", the other vehicle's icon is displayed in small size.

<Route>



The route whose route display in **Table 1** is under the condition of "O (circle)" is shown.

<Workplace>



The loading/unloading point whose display of the loading/unloading point in **Table 1** is under the condition of "O (circle)" is shown.

Table 1 : Display pattern of each map object

- If the login vehicle belongs to the group

Object	Own group	Other groups	Belongs to "All groups"
Other vehicles	✓	✓ (Small icon)	✓
Route	✓	×	✓
Workplace	✓	×	✓
Alert point/gate	✓	×	✓
Approach notification point/gate	✓	×	✓
Waypoint guide path	✓	×	✓

- If the login vehicle belongs to "All groups"

Object	Own group	Other groups	Belongs to "All groups"
Other vehicles	✓	✓	✓
Route	✓	✓	✓
Workplace	✓	✓	✓
Alert point/gate	✓	✓	✓
Approach notification point/gate	✓	✓	✓
Waypoint guide path	✓	✓	✓

<Alert point (gate)>



<Approach notification point (gate)>



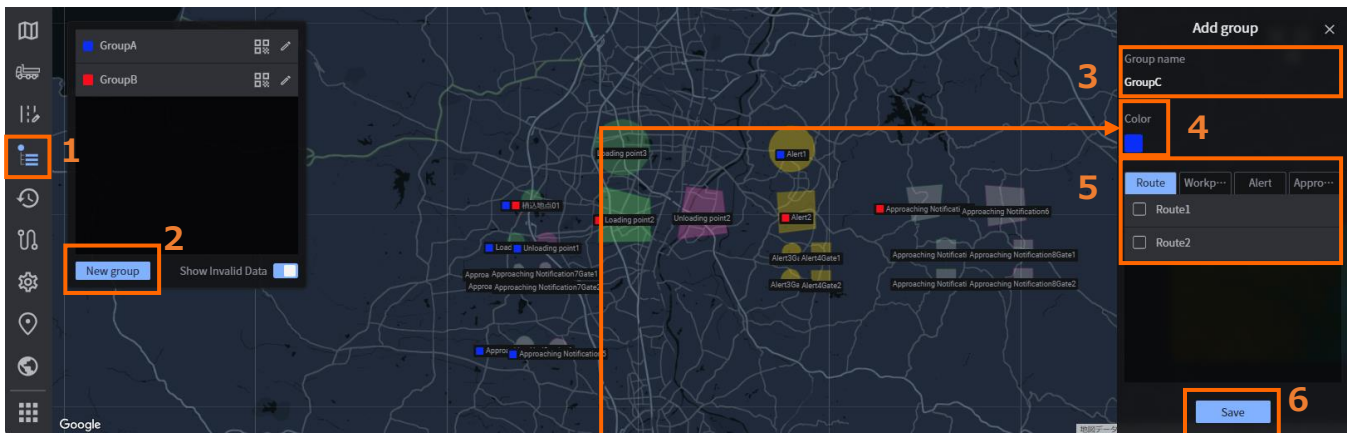
<Waypoint guidance>



Procedure for creating and editing a new group

■ Create new group

1. Display the group setting screen.
2. Click “New group”.
3. Enter the group name.
4. Set Group Color
5. Set each map object (route, workplace, alert point, and approach notification point) as a group.

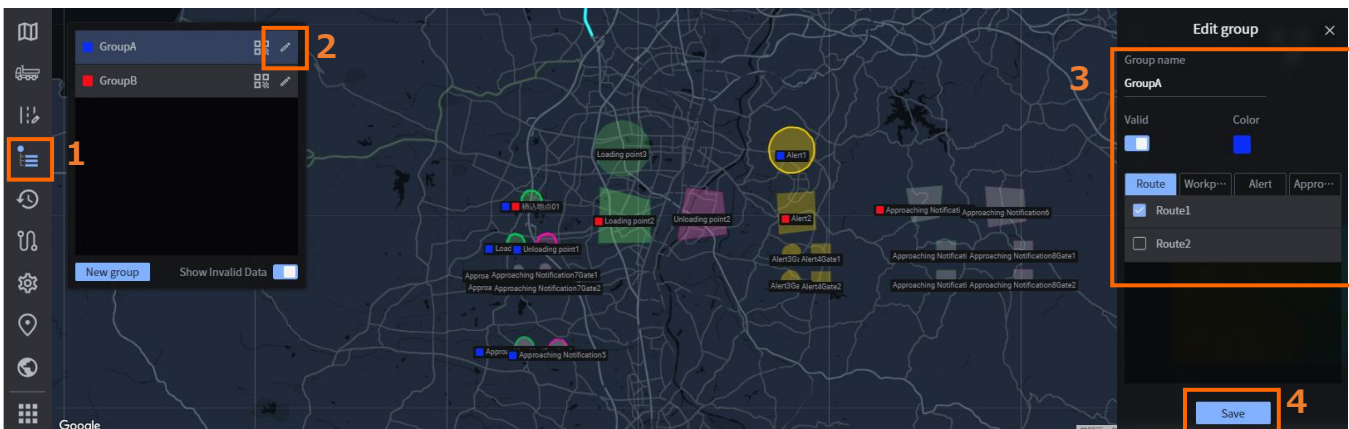


* The group color is reflected to the color of the group icon on the label of the vehicle icon of the mobile application.



■ Group editing

1. Display the group setting screen.
2. Click the editing icon of the group you want to edit.
3. Edit the setting information from the items in each group.
4. Click “Save”.



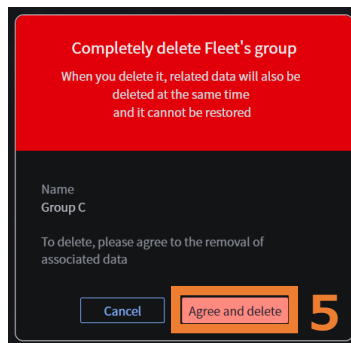
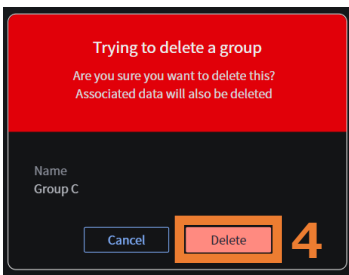
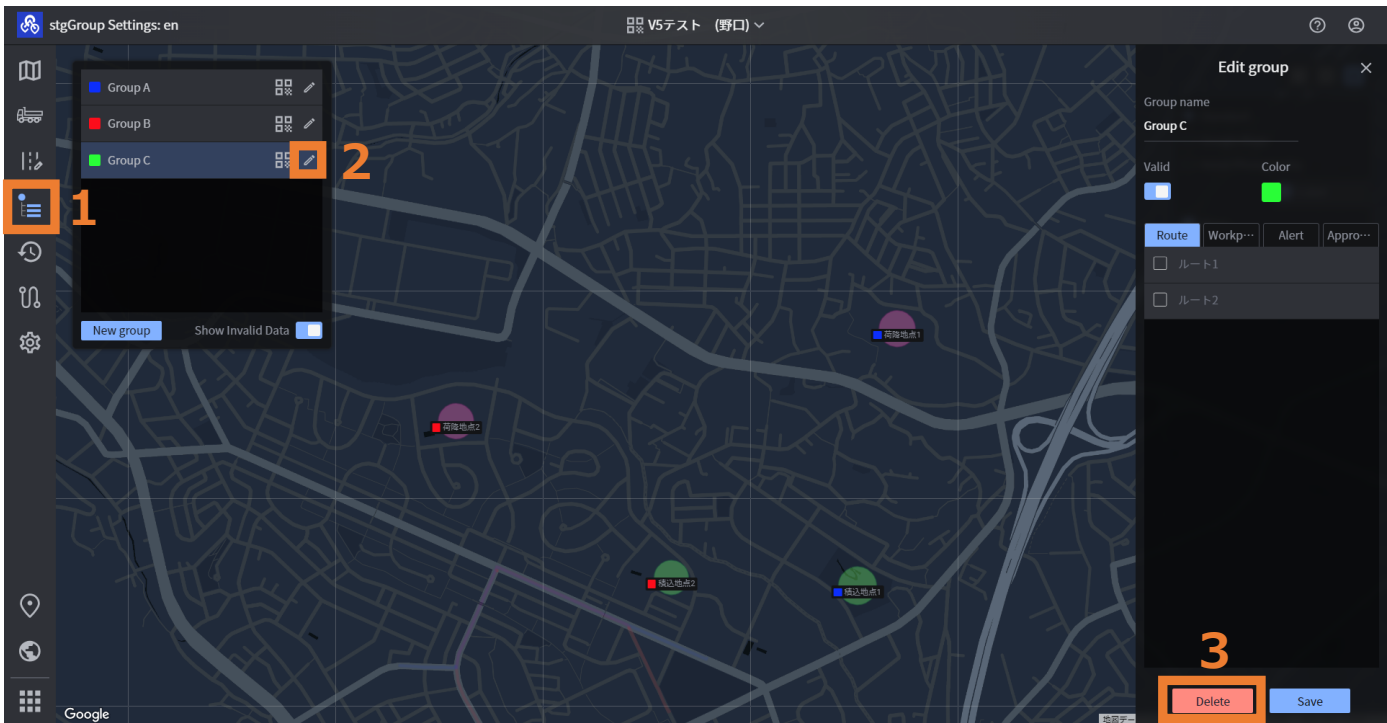
Delete a group

When a group is deleted, the related work history and travel history will no longer contain the group information.

If you wish to retain the group information, please consider using the valid/invalid toggle function.

If a vehicle's group is deleted while it is logged in, that vehicle will automatically be switched to the "All Groups" category.

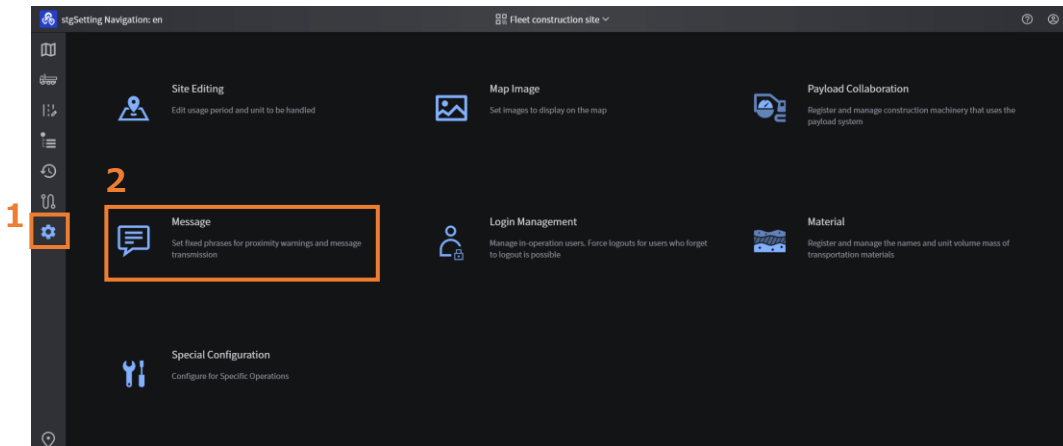
1. Click on the "Group Settings"
2. Click on the edit icon for the group you want to delete
3. Click on the "Delete"
4. Click on the "Delete"
5. Click on the "Agree and delete"




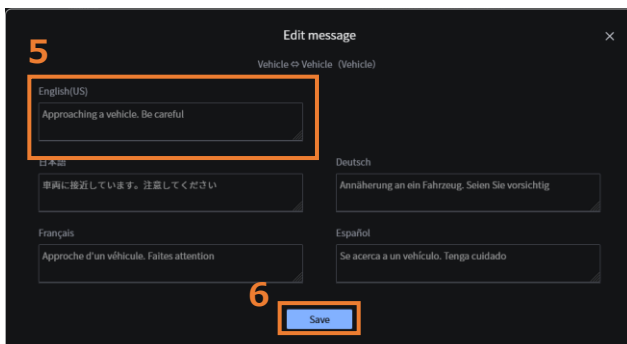
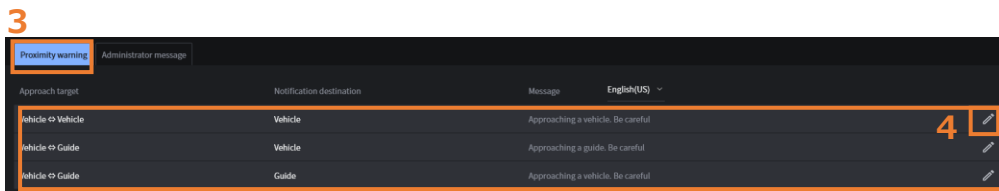
Approach Alert

Detects the approach between vehicles or between a vehicle and a guide, etc., and notifies on the mobile application of the message display/voice reading.

1. Display “Project setting screen”.
2. Click “Message”.



3. Click the “Approach alert” tab.
4. Click  of the approach target you want to edit.

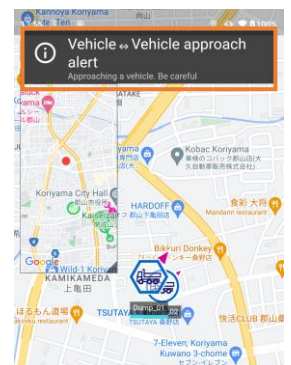


5. Change the message.
You can change the messages for all languages (Japanese, English, French, German, and Spanish).
6. Click “Save”.

Mobile terminal screen

Example:
When an approach occurs
between vehicles

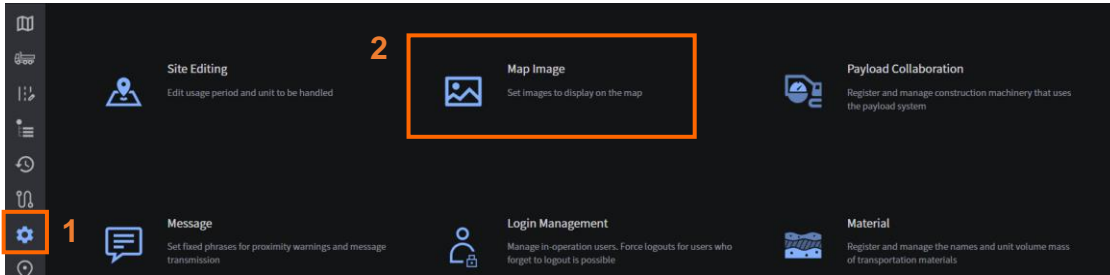
The content specified in
“Edit Jobsite Info” is
reflected.



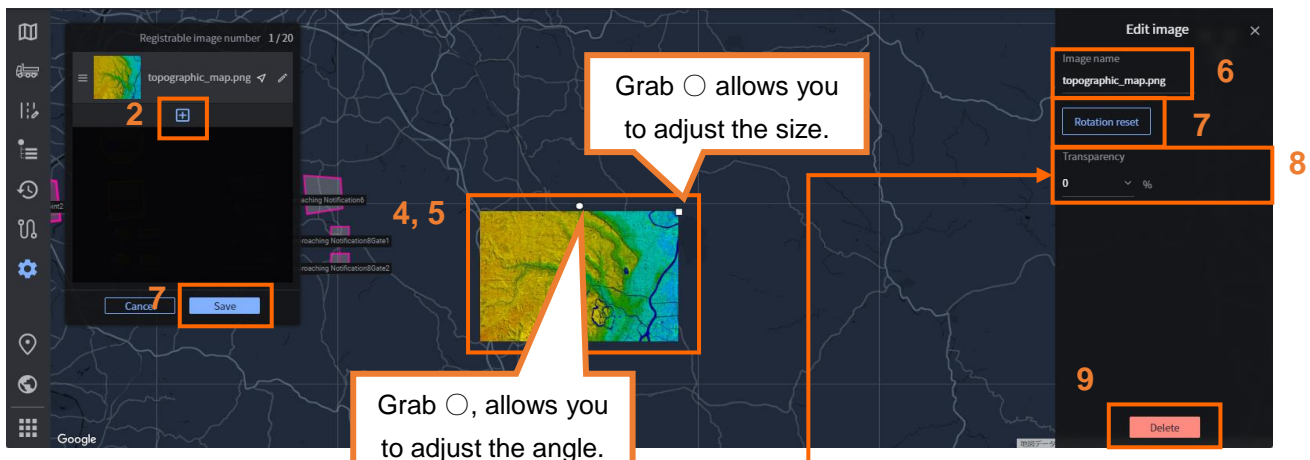
Attaching Image to Map

You can affix on the map an ortho image, design drawing, etc. taken during the construction. The registered image is reflected on the map screen of “Real-time viewer”, “Map settings”, and “Group settings”.

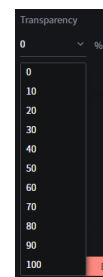
1. Display the project setting screen.
2. Click the map image.



3. Click “+”.
- * Upload the image you want to attach as the image upload window (Explorer) is displayed.
4. Uploaded image is added to the map.
5. You can move this to the desired position.
- * With each handle, you can also resize the image and adjust its angle.
6. Enter the image name.
7. Click “Reset rotation” to return the image to the original angle.
8. Select opacity level of the image.
9. Click “Save”.



* Opacity is selected from the pull-down menu.



Job Classification

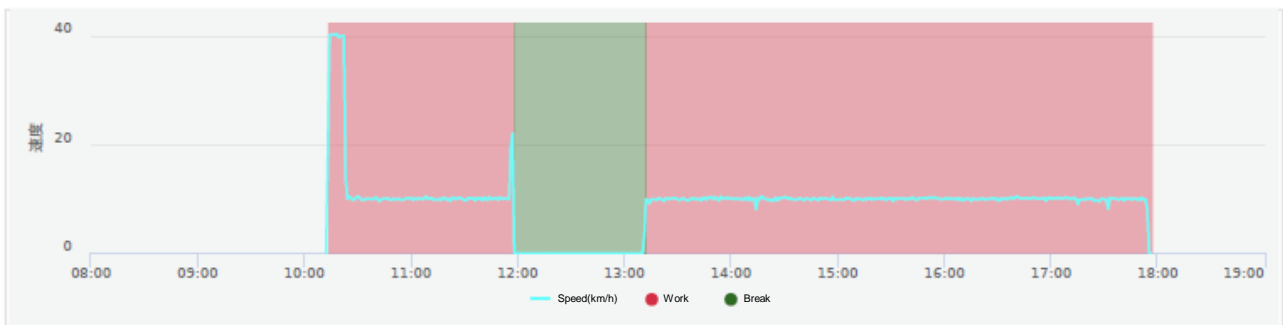
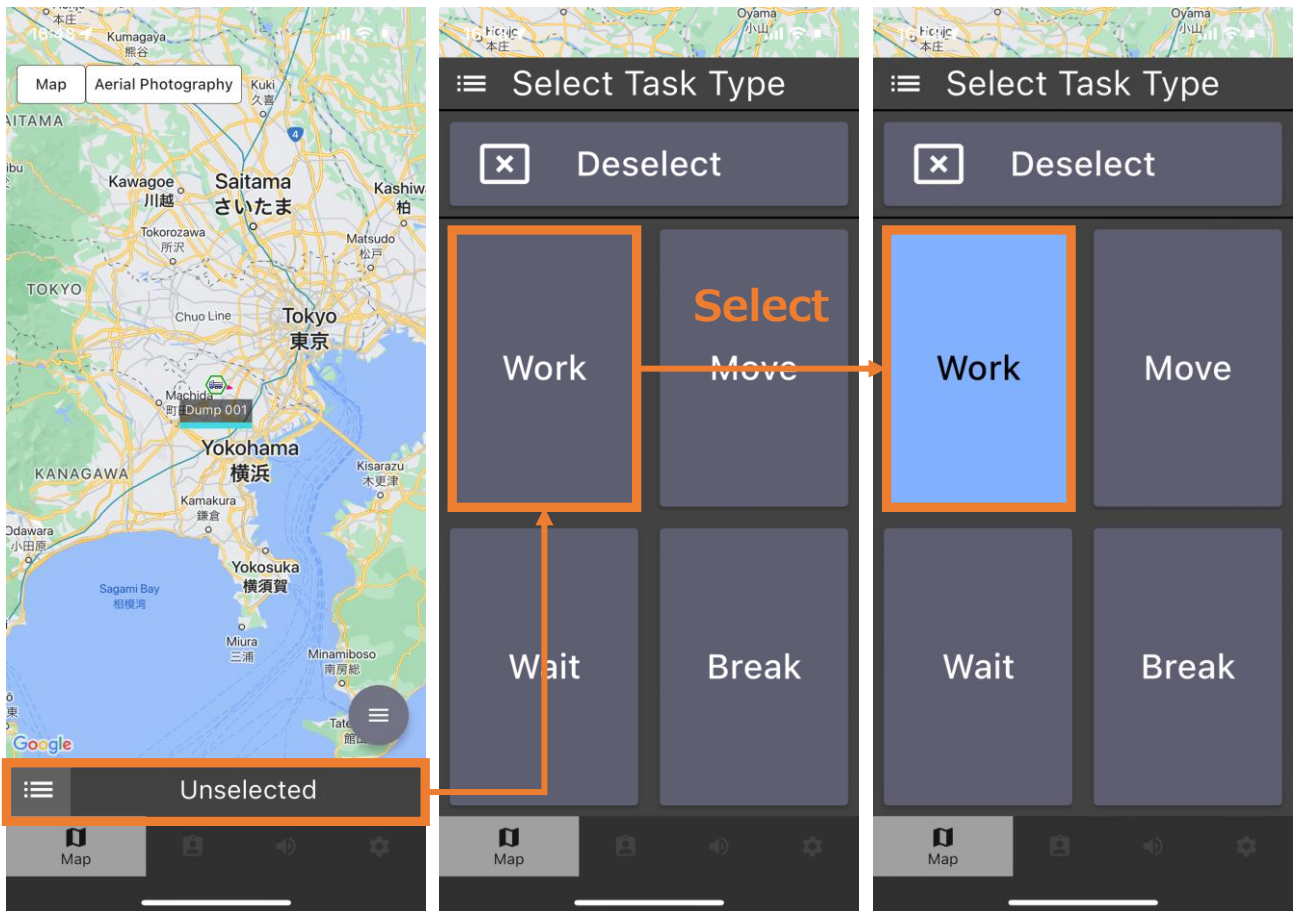
This is a feature in the mobile app that allows operators to record their work status on their own.

It can be used regardless of the vehicle role.

The feature must be enabled in advance through the web app.

[Reference: Procedure for Selecting Work Category in the Mobile App]

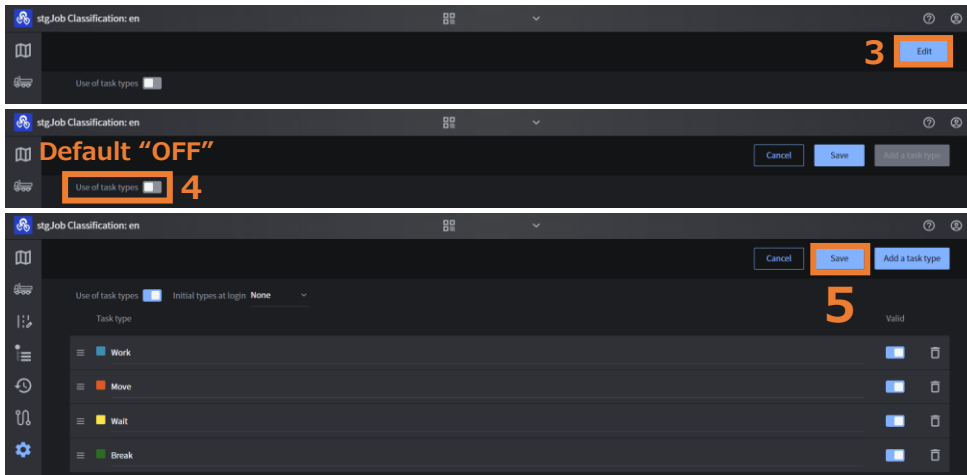
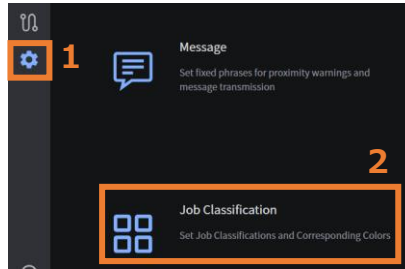
You can switch work categories at any time → The result of the switch will be reflected in the "[Operational Vehicle Daily Report](#)", which can be output from the "Performance" menu.



Steps to edit Job Classification

[Steps to enable Job Classification]

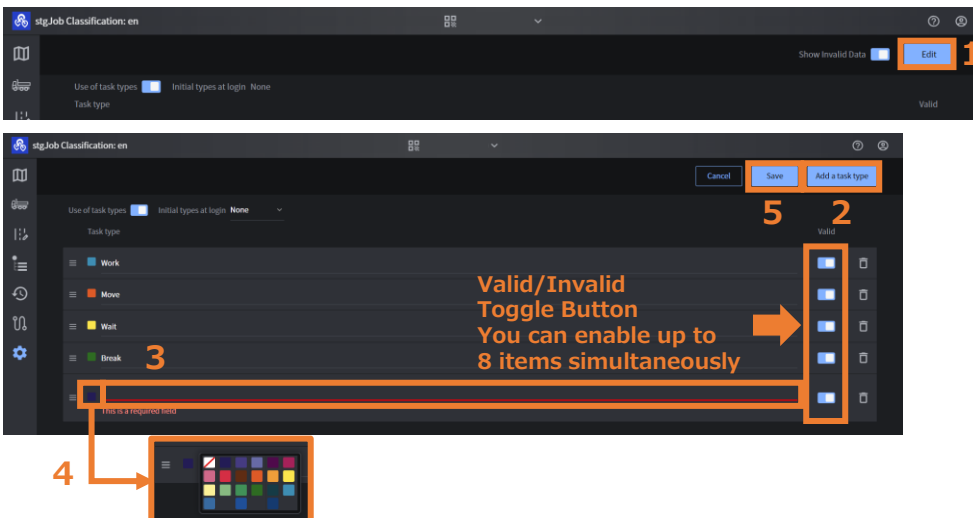
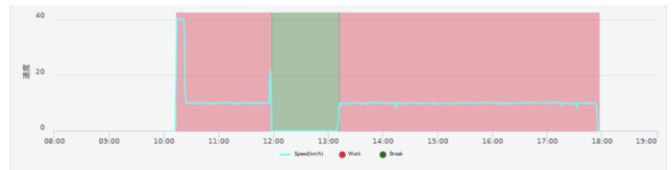
1. Click on "Various Settings"
2. Click on "Job Classification"
3. Click on "Edit"
4. Enable "Use of task types"
5. Click on "Save"



[Steps to add a Job Classification]

1. Click on "Edit"
2. Click on "Add a task type"
3. Enter the name of the Job Classification
4. Change the color if necessary(*)
5. Click on "Save"

*The color you set will be reflected in the "Operational Vehicle Daily Report."



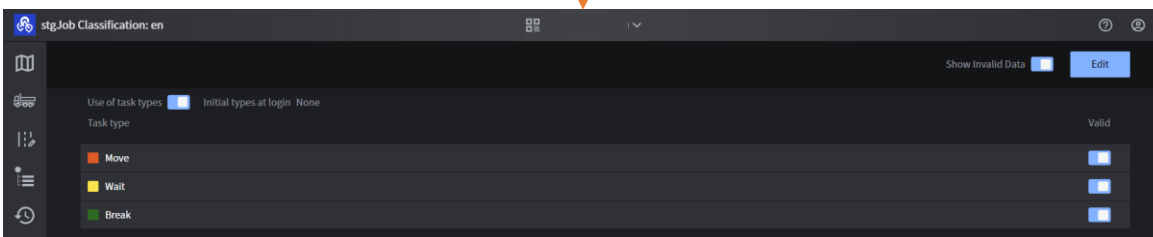
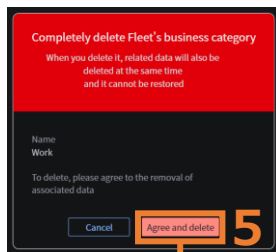
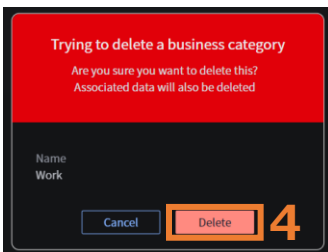
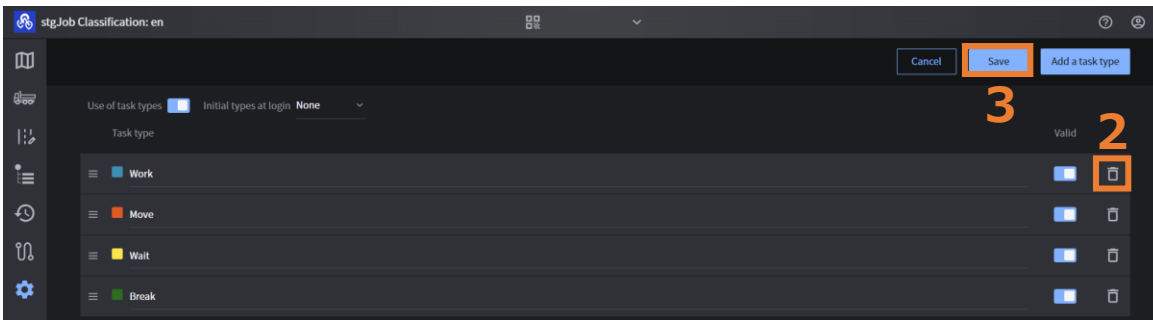
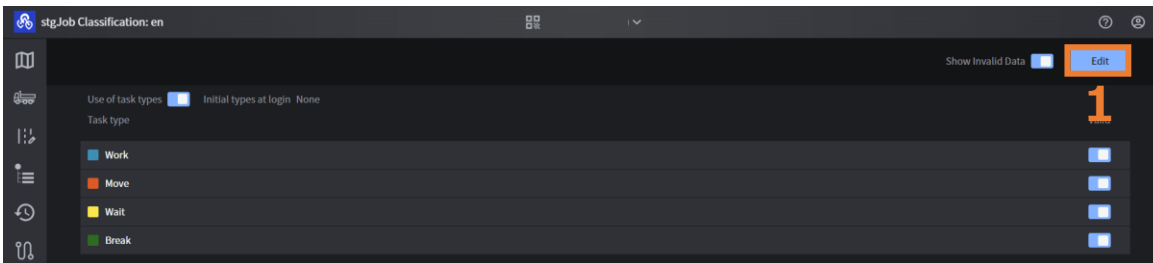
Steps to delete Job Classification



Deleting a Job Classification will also delete the associated data.

Since you can register up to 100 Job Classification, it is generally recommended to use the "Invalid" function.

1. Click on "Edit"
 2. Click on the trash icon
 3. Click on "Save"
 4. Click on "Delete"
 5. Click on "Agree and delete"
- The deletion is complete



Linking Ortho Images and Design Linework from Smart Construction Dashboard

1. Upload ortho images and design linework at Smart Construction Dashboard.
2. It is linked by various map screens on Smart Construction Fleet.

Note

Note that there is no linkage if the site is not the same one created on the portal site.

Smart Construction Dashboard

Projects > 20200410

Project up to date

Data layers

+ Add data layer

Surveys

Points Mesh Both

Import data layer

Import from Smart Construction solutions

Smart Construction Edge 2 Everyday Drone

Upload files

Select files Drop files here

Processing time warning

Cancel Next

Import data layer

Importing files test.tif

Asset type Ortho

Layer name test.tif

Timestamp 1/10/2024 16:42

Distance units Meters (m) US Survey Feet (ft) Feet (ft)

Advanced Settings

Cancel Previous Import

Import data layer

Importing files test.dxf

Asset type Design Linework Survey As built

Layer name test.dxf

Timestamp

Advanced Settings

Cancel Previous Import

Orthos

10 Jan, 2024 4:42PM

test.tif

Surveys

As built

Designs

test.dxf

Map Settings

Map View

Map View

Map View

Map View

Map View

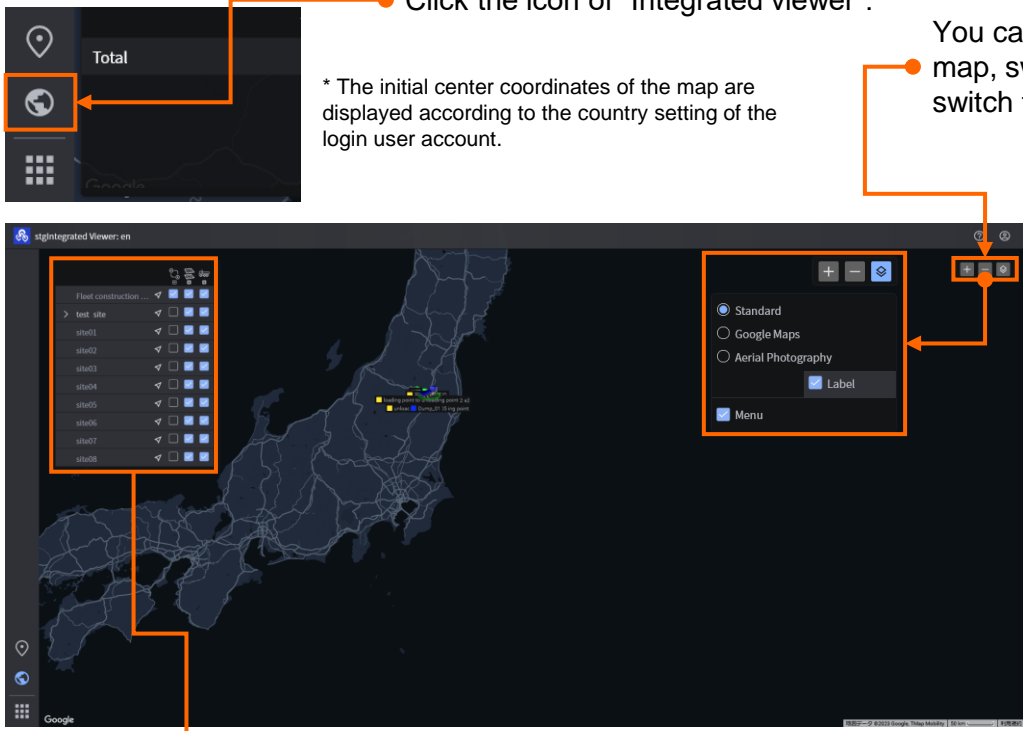
Integrated Viewer

You can display real-time operation status in the jobsites you have arbitrarily selected from those associated with you.

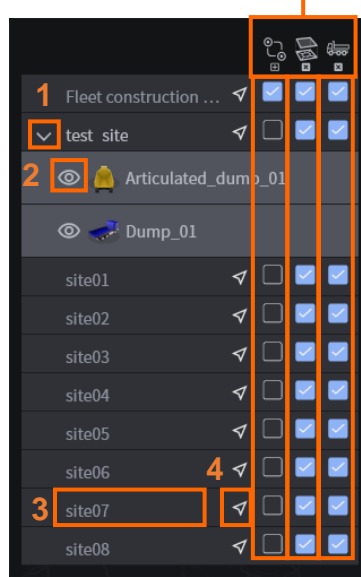
Click the icon of "Integrated viewer".

* The initial center coordinates of the map are displayed according to the country setting of the login user account.

You can zoom in or out the map, switch the map type, and switch the menu display.



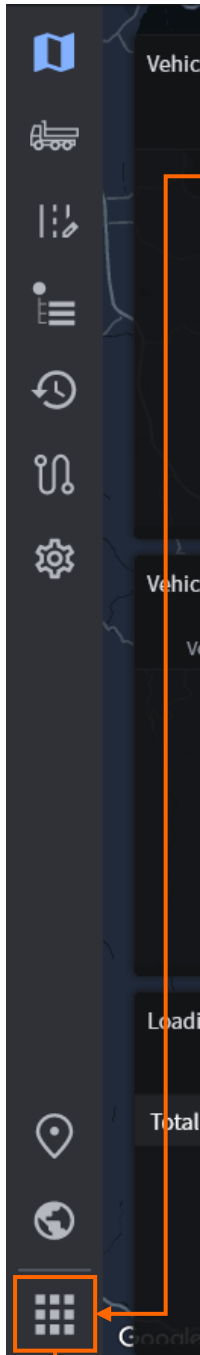
Click the icon on the top of the screen, then you can switch between displaying and hiding each of all the construction sites at once.



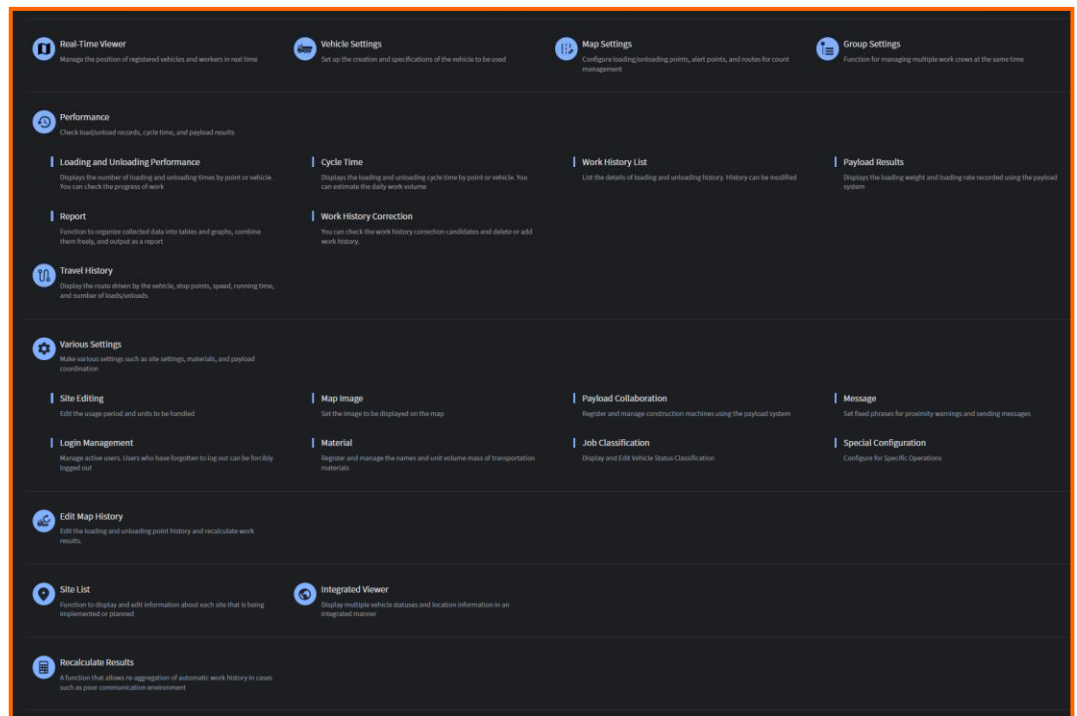
- Shows the vehicle list.
Shows it only when there is a vehicle during login.
- Switches between displaying and hiding the vehicle being logged in.
- Transitions to the real-time viewer of the clicked construction site.
- Changes the display of the map according to the center coordinate of the construction site and the zoom level.
- Switches between displaying and hiding the map objects (traveling route, loading/unloading work point, alert point, approach notification point).
- Switches between displaying and hiding the ortho image, linework image, and peripheral line image.
- Switch between displaying and hiding the vehicle while logging in. If it has been stopped for 24 hours or more, it is grayed out.

Global Navigation

This is the screen on which the list of the available functions on the Web application and which allows the access to each function.



Click "Global navigation".



Generating a Login Code

This explains how to generate a 2D code for logging in using a Mobile App or "Smart Construction Fleet Device".

[How to Generate a Login Code]

There are three ways to generate a login code:

1. **Button to the left of the site name at the top of each menu screen**
2. **Button in the "Group Settings" menu**
A login code containing the group information for the created group will be generated.
3. **Button in the "Vehicle Settings" menu under the "Login Code" column**
A login code containing the vehicle information will be generated.

The first screenshot shows the 'Vehicle list' screen with a map. A red box labeled '1' highlights a button next to the site name 'Fleet 施工現場' at the top right.

The second screenshot shows the 'Fleet1' settings screen. A red box labeled '2' highlights a button in the top right corner.

The third screenshot shows the 'Vehicle list' screen with a table of vehicles. A red box labeled '3' highlights a button in the 'Login code' column for the first vehicle, 'CL_HMAS_Perth'.

Type	Name	Vehicle weight(kg)	Maximum load volume(m³)	Maximum load capacity(m³)	Proximity warning	Proximity warning range(m)	Daily transport plan number	Login code	Use
Articulated Dump Truck	CL_HMAS_Perth	35,400	40,000	24	<input type="checkbox"/>	50	20		<input type="checkbox"/>
Articulated Dump Truck	CL_Hc_Ms_De_Ruyter	35,400	40,000	24	<input type="checkbox"/>	50	20		<input type="checkbox"/>
Articulated Dump Truck	CL_It_G.Garibaldi	35,400	40,000	24	<input type="checkbox"/>	50	20		<input type="checkbox"/>
Articulated Dump Truck	CL_It_L.d.S.D.d.Abruzzi	35,400	40,000	24	<input type="checkbox"/>	50	20		<input type="checkbox"/>
Articulated Dump Truck	CL_SuHMS_Gotland	35,400	40,000	24	<input type="checkbox"/>	50	20		<input type="checkbox"/>
Articulated Dump Truck	CL_USS_Atlanta	35,400	40,000	24	<input type="checkbox"/>	50	20		<input type="checkbox"/>
Articulated Dump Truck	五十鈴	26,185	28,000	17.1	<input type="checkbox"/>	50	20		<input type="checkbox"/>
Articulated Dump Truck	北上	26,185	28,000	17.1	<input type="checkbox"/>	50	20		<input type="checkbox"/>
Articulated Dump Truck	名取	26,185	28,000	17.1	<input type="checkbox"/>	50	20		<input type="checkbox"/>
Articulated Dump Truck	少澤	26,185	28,000	17.1	<input type="checkbox"/>	50	20		<input type="checkbox"/>
Articulated Dump Truck	多摩	26,185	28,000	17.1	<input type="checkbox"/>	50	20		<input type="checkbox"/>
Articulated Dump Truck	大井	26,185	28,000	17.1	<input type="checkbox"/>	50	20		<input type="checkbox"/>
Articulated Dump Truck	大塚	26,185	28,000	17.1	<input type="checkbox"/>	50	20		<input type="checkbox"/>

Steps to Send a Login Code via Email

1. Press "Send Email".
2. Enter the recipient's email address.
You can add more recipients by clicking the "+" button.
3. Press "Send".

The image shows two screenshots of the 'Login code' interface. The left screenshot shows the 'Send email' button highlighted with an orange box and labeled '1'. The right screenshot shows the 'Destination' field highlighted with an orange box and labeled '2', and the 'Send' button highlighted with an orange box and labeled '3'.

[Email Details]

- A) The site name will be automatically included in this section.
- B) Clicking the link will open the Fleet app and navigate to the login screen.
If the Fleet app is not installed on the device,
the link will redirect to the app store page.

Fleet 施工現場 Login code 受信トレイ x

fleet_login_code@smartconstruction.com
To 自分 v

This is the 2D code to log in to SMART CONSTRUCTION Fleet.

If you want to log in on this device, please click [here](#).
If you want to log in on another device, please scan the 2D code.

Fleet 施工現場 A



Real-time Viewer

You can show in real time, such as positions, loading points, unloading points, or alert points, on the construction machine or dump truck equipped with a terminal on which the application is installed. Information on the vehicle position information and the vehicle list is updated at three-second intervals.



For details on the vehicle role, refer to the separate sheet “SCFleet_New Ver_vehicle role.xlsx”.
For details on the grouping, refer to the separate sheet “SCFleet_New Ver_grouping.xlsx”.

Note

If any location information has not been sent from the terminal for 10 minutes or more, the icon of the vehicle or people grays out.

[Typical cases where location information has not been sent for 10 minutes or more]

- No location information is sent due to the expiration of the working hours specified to the job site.
- The terminal has been turned off while it is logged in.
- The terminal battery has been exhausted.
- The communication environment of the terminal is poor.
- The application is frozen for some reason.

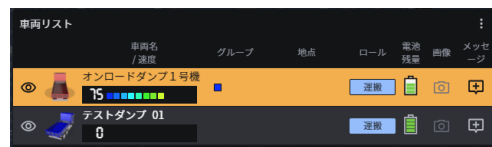
* Vehicles that have been stopped for 24 hours or more become hidden.



(1) Vehicle list

When the [speed alert feature](#) is turned on in the 'Various Settings' > 'Site Editing' menu, any rows corresponding to vehicles that are speeding will be highlighted.

1. Switches between display and hide.
2. Shows the vehicle icon.
The vehicle icon points in the direction of the vehicle.
3. Shows the name of vehicle and running speed.
4. Display/Switch the group to which the vehicle belongs
5. Display/Switch the work site to which the vehicle belongs (only for roles "Loading area" or "Unloading area")
6. Display/Switch the role of the vehicle
7. Shows the battery level of the terminal (only for smartphone and tablet terminal).
8. Shows the images taken by the drive recorder on the mobile application
9. Sends messages (see [Sending message](#)).



(2) Image taken by each vehicle.

The image taken by the drive recorder on the mobile application is displayed.

- !** On the mobile application side,
- Images are taken when "Setting" → "Dashcam" are set to ON.
 - If "Shoot only within point" is set to ON, shooting will only be executed within the loading or unloading point.
 - Recording takes place at intervals of the "Recording interval" setting.
 - Only images as displayed on the application screen are recorded.
 - During image recording, "● REC" is displayed in the upper left of the screen.

(3) Cycle time by vehicle

Shows the number of loading/unloading cycles and loading/unloading times for each vehicle.

(4) Cycle time by point

Shows the time required between the starting point, destination point, and returning point, as well as the cycle time.

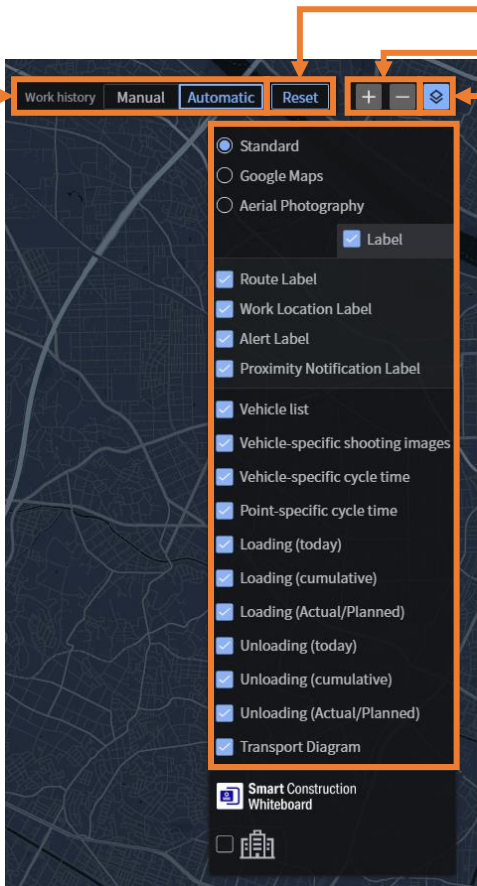
- (5) Sankey drawing
Shows the Sankey drawing on the current day.
You can narrow down the point and change the display of the unit (number of times, volume of soil, and weight).
- (6) Load (day)
Shows the loading record on the current day.
You can switch the display of the unit (number of times, volume of soil, and weight).
- (7) Load (cumulative total)
Shows the cumulative loading result.
Shows the aggregation period in addition to those equivalent to the loading (current day).
- (8) Unload (on the day)
Shows the result of unloading on the current day.
You can switch the display of the unit (number of times, volume of soil, and weight).
- (9) Unload (cumulative total)
Shows the cumulative unloading record.
Shows the aggregation period in addition to those equivalent to unloading (on the day).
- (10) Loading(Actual/Planned)
Displays the loading results for the day, as well as the cumulative loading results/plans.
- (11) Unloading(Actual/Planned)
Displays the unloading results for the day, as well as the cumulative unloading results/plans.

(10)

Loading (Actual/Planned)				
	24/01/2025		Cumulative(23/06/2023 - 31/12/2025)	
	Number of times	Material volume[m3]	Number of times(Performance/Plan)	Material volume(Performance/Plan)[m3]
Total	0	0	62,916 / 80,000	1,539,264 / 2,000,000
抵达地点1	0	0	38,330 / 50,000	374,970 / 500,000
抵达地点2	0	0	24,586 / 30,000	1,164,294 / 1,500,000
Unloading (Actual/Planned)				
	24/01/2025		Cumulative(23/06/2023 - 31/12/2025)	
	Number of times	Material volume[m3]	Number of times(Performance/Plan)	Material volume(Performance/Plan)[m3]
Total	0	0	62,893 / 110,000	1,537,236 / 1,950,000
荷降地点1	0	0	15,491 / 30,000	84,340 / 150,000
荷降地点2	0	0	22,410 / 50,000	1,226,478 / 1,500,000
荷降地点3	0	0	24,992 / 30,000	226,417 / 300,000

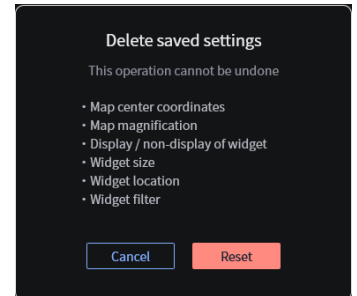
(11)

You can select the registration method of data to display the work history.



You can adjust the zoom level of the map.

The setting information of the real-time viewer is deleted.



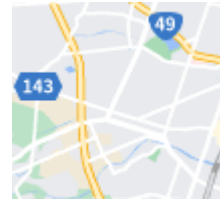
You can perform the following operations:

- Switch between map types (Standard/Google Maps/Aerial photography).
- Toggle the display of map object labels on and off.
- Toggle the display of each widget on and off.

Standard




Google Maps

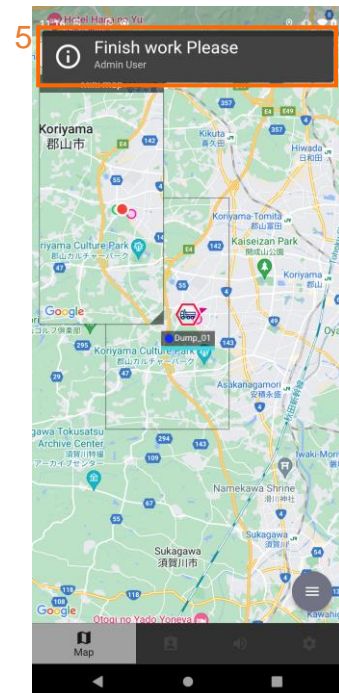
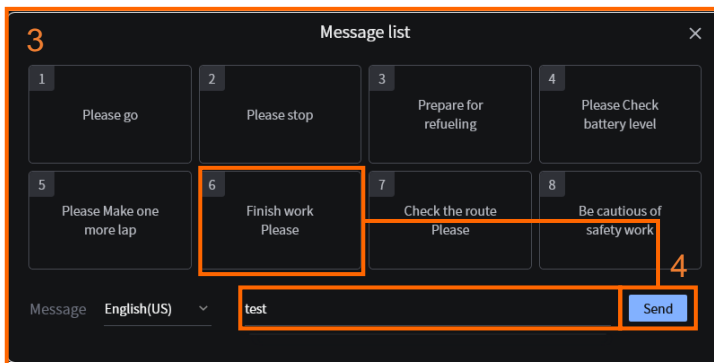
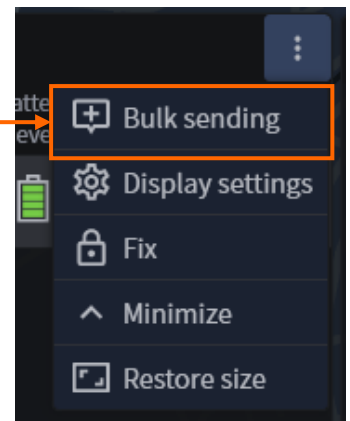
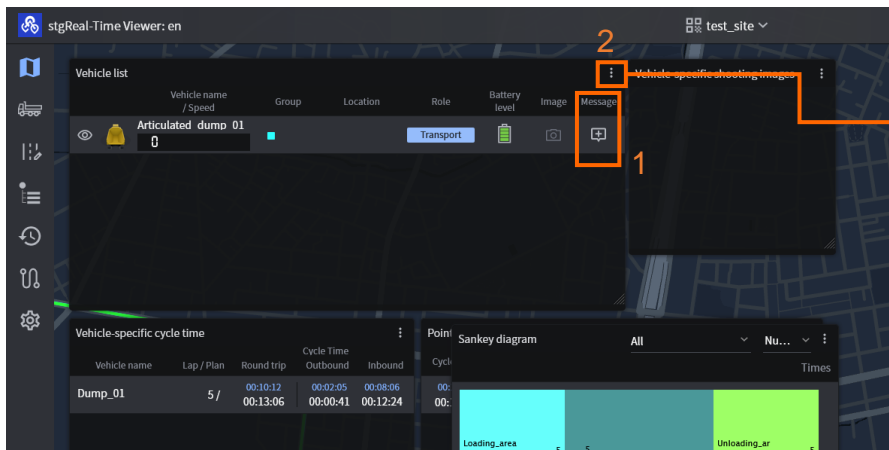


Aerial photography



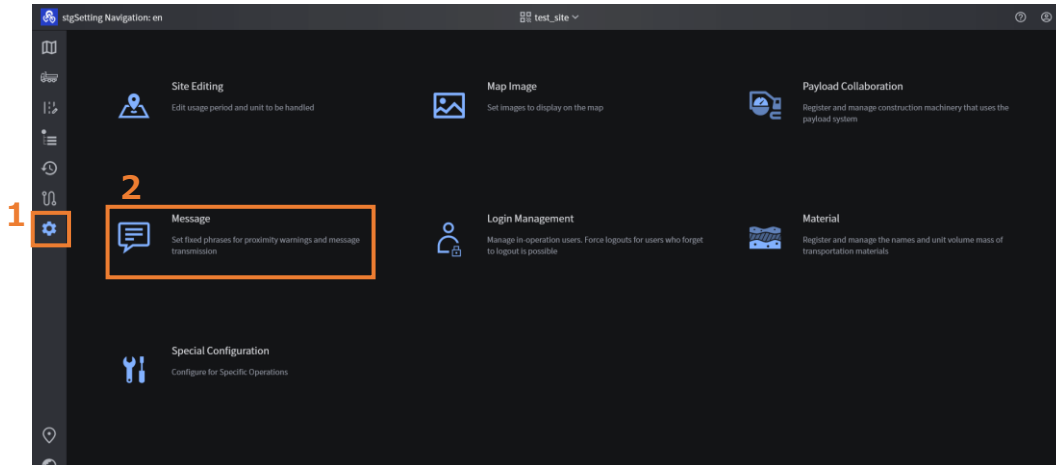
Sending message


1. [Individual send] Click the icon of the other party you want to send a message.
2. [Batch sending] If you want to send the message to the entire, click "Batch sending" from  at the top of the vehicle list.
3. A list of messages that can be sent by clicking one of 1 and 2 is displayed .
4. Select a message or enter a text, and press "Send".
The history of the input text is saved in browser unit.
5. A message is sent to the mobile application possessed by the worker.
Message is displayed on the screen and automatic reading is performed.

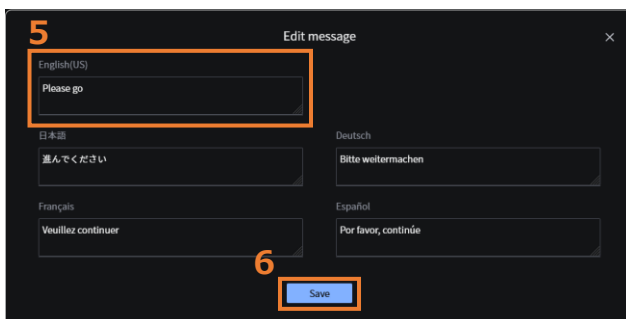
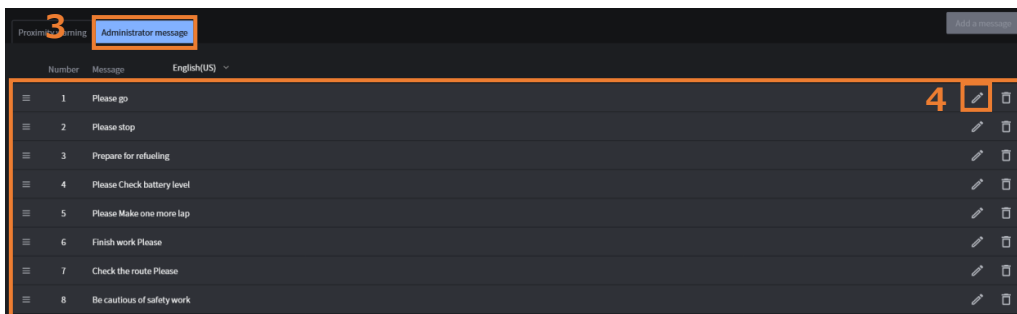


■ Change message

1. Display “Project setting screen”.
2. Click “Message”.



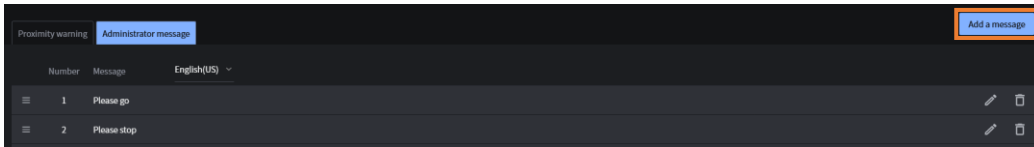
3. Click the “Message for administrator” tab.
4. Click  of the message you want to edit.



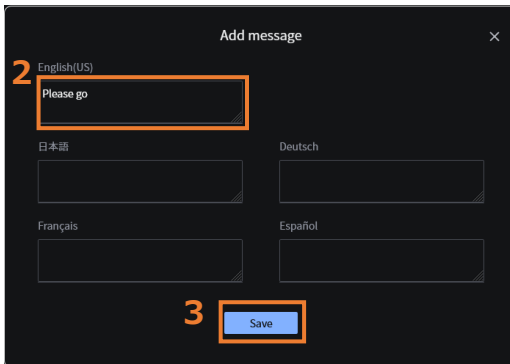
5. Change the message.
You can change the messages for all languages (Japanese, English, French, German, and Spanish).
6. Click “Save”.

■ Add message

1. Click “Add message”.



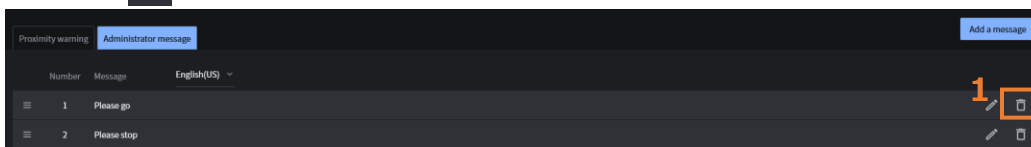
2. Enter the message you want to add.
You can add messages for all languages (Japanese, English, French, German, and Spanish).
3. Click “Save”.



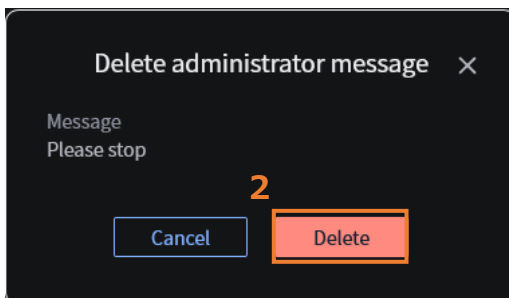
- !** Up to eight messages can be registered.
If eight messages are already registered, you cannot add another message.

■ Delete message


1. Click  of the message you want to delete.

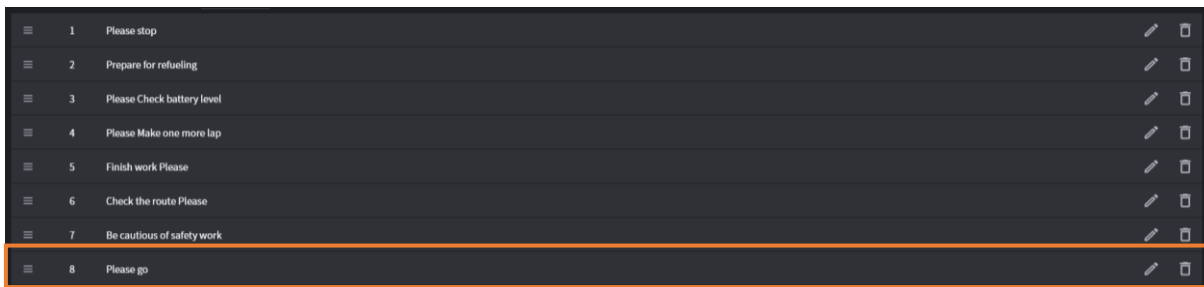
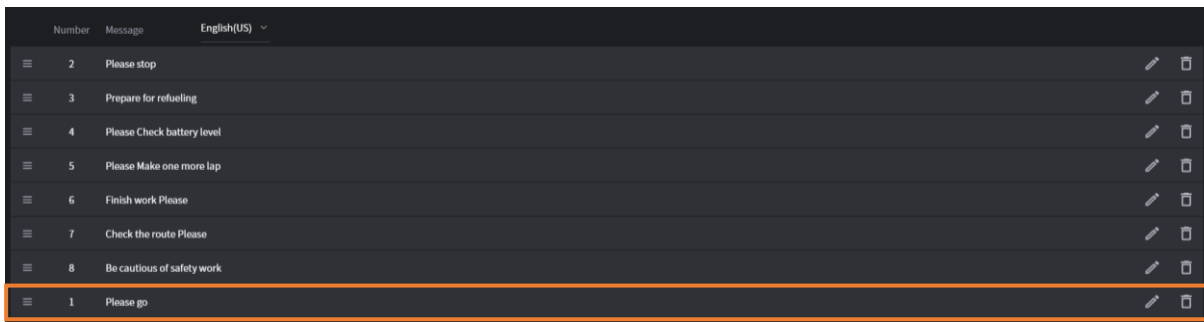
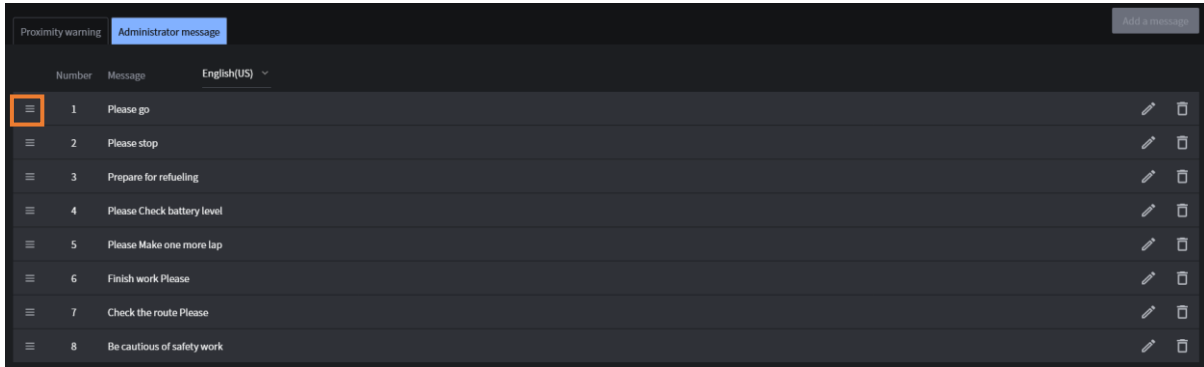


2. Click “Delete”.

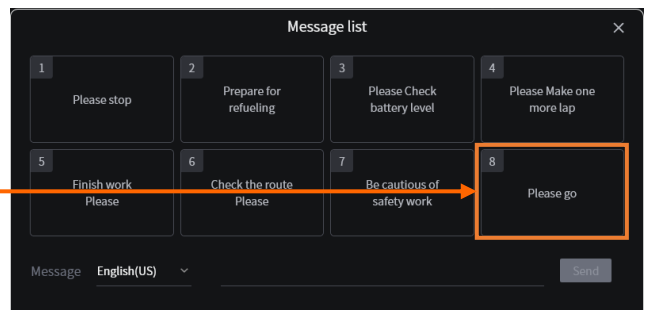
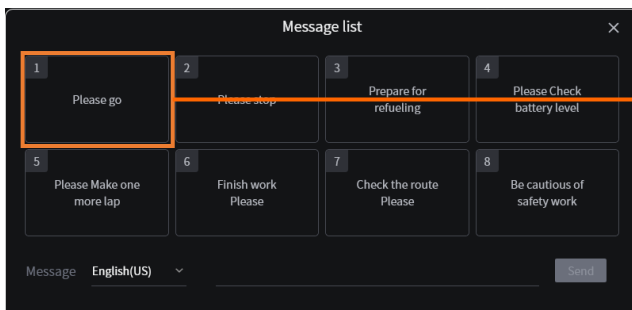


■ Change the order of messages

You can change the order of the messages by dragging (moving while holding)  of the message you want to change the order.



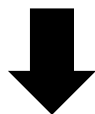
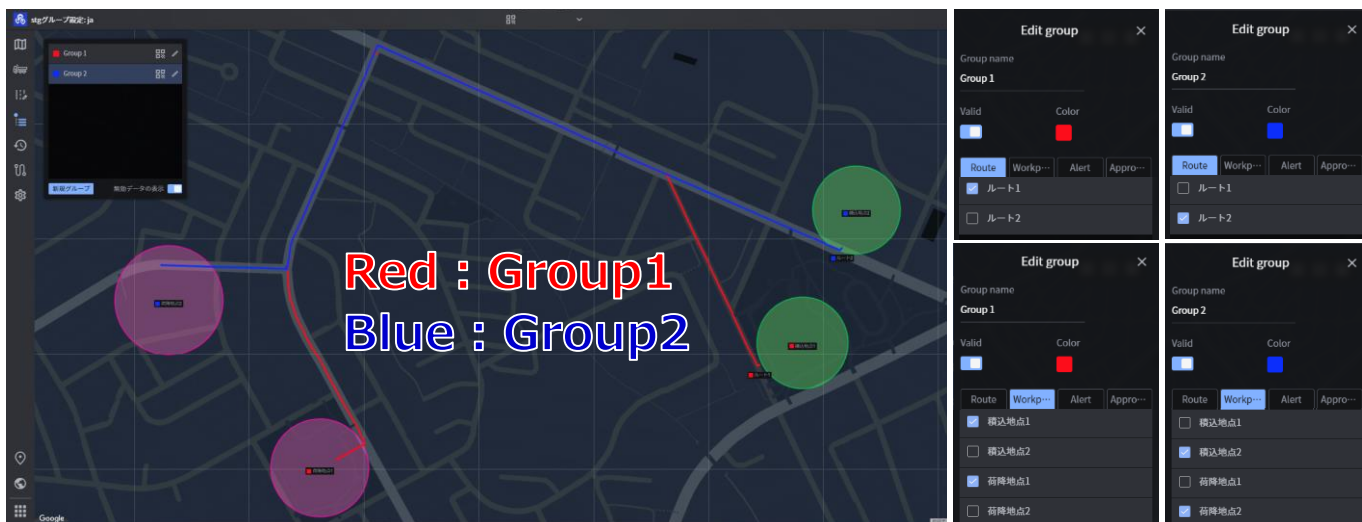
The order of the messages in “Message list” in the real-time viewer is changed.



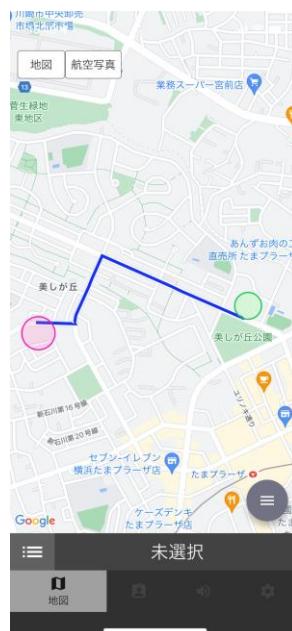
Change the vehicle's affiliation group

By creating a group and linking it with map objects (routes, work points, alerts, approach notification points), only the map objects linked to the group to which your vehicle belongs will be displayed and activated on the map screen when logging into the mobile app.

Changing the group affiliation from the real-time viewer is only possible for users participating in the construction site with 'site supervisor' permissions.

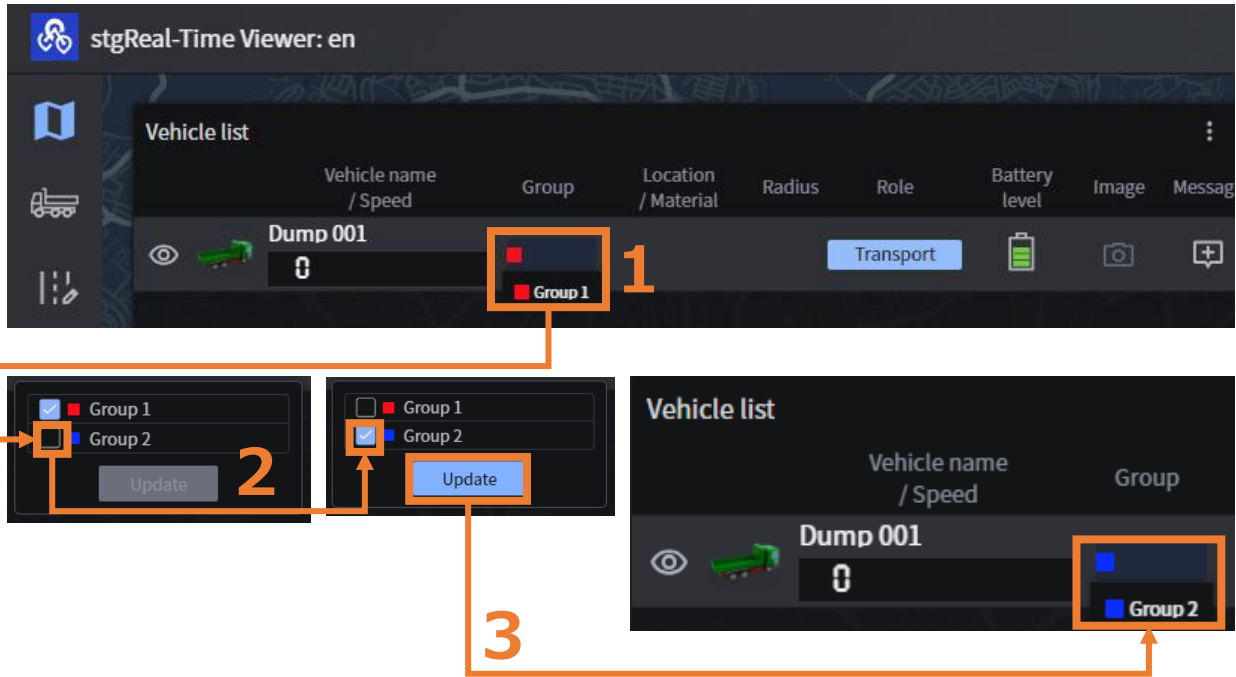


Group1



Group2

1. In the vehicle list of the real-time viewer, click on the 'Group' section.
2. Toggle the checkboxes ON/OFF.
3. Click 'Update' The web page will refresh and the group affiliation will be changed. (A notification will also be sent to the mobile app, and the group affiliation of the target vehicle will be changed.)



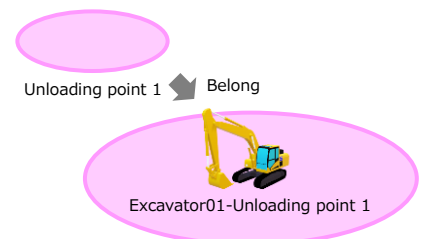
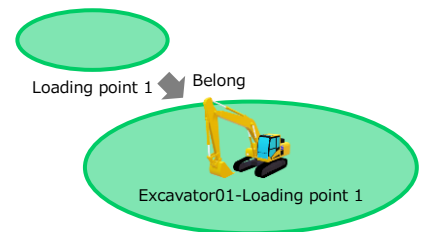
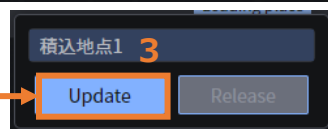
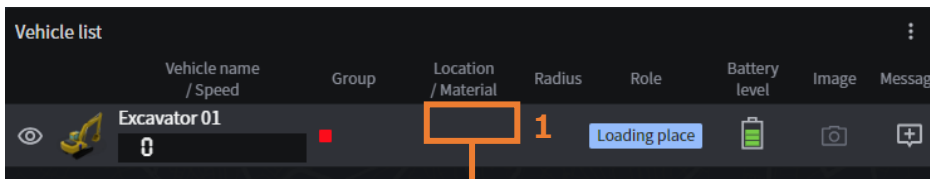
Set the affiliation status of the workplace

When logging in with the vehicle role 'Loading Place,'
the vehicle can belong to the loading point.

When logging in with the vehicle role 'Unloading Place,'
the vehicle can belong to the unloading point.

By belonging to a loading/unloading point, the vehicle will have a designated workplace radius around it and can function as a workplace.

1. Click the top of the 'Location/Material' column for the vehicle you want to assign.
The target vehicles are those logged in with the vehicle role 'Loading Place' or 'Unloading Place'.
2. Select the work point you want to assign to.
3. Click 'Update'.
4. The vehicle will now belong to the selected workplace.
5. [Optional] For loading machines, you can change the loading soil type if needed.
The soil types added in the 'Various Settings' > 'Material' menu will be displayed.
6. [Optional] If needed, you can change the radius of the workplace.



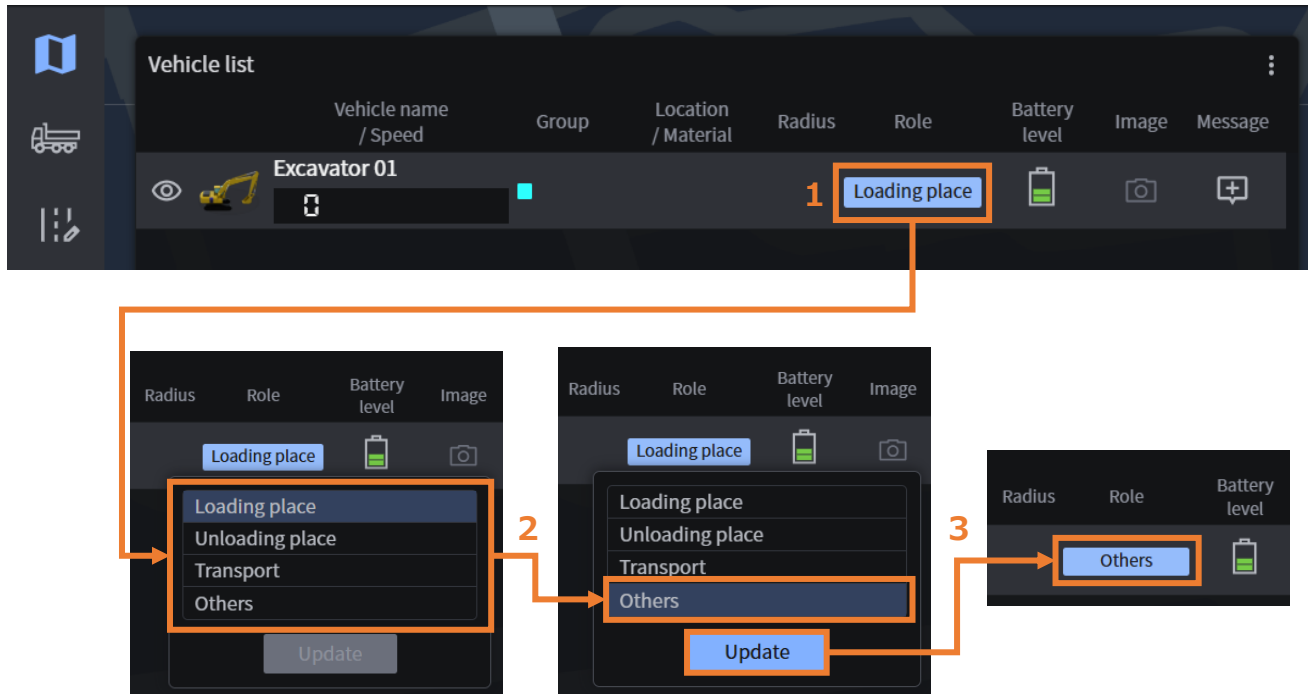
Changing the Role of a Vehicle

Since the available features and data differ depending on the vehicle's role, it is possible to change the role immediately from the Real-Time Viewer if logged in with the wrong role.

[Operating Procedure]

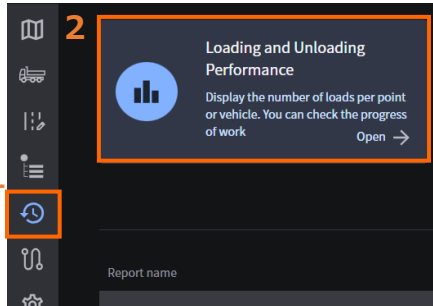
1. Click on the role name of the vehicle whose role you want to change in the "Vehicle List."
2. Select the new role from the role list.
3. Click "Update."

The changes will be applied.

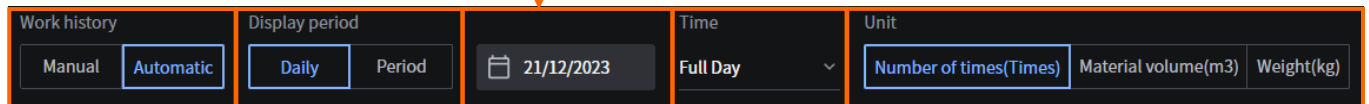
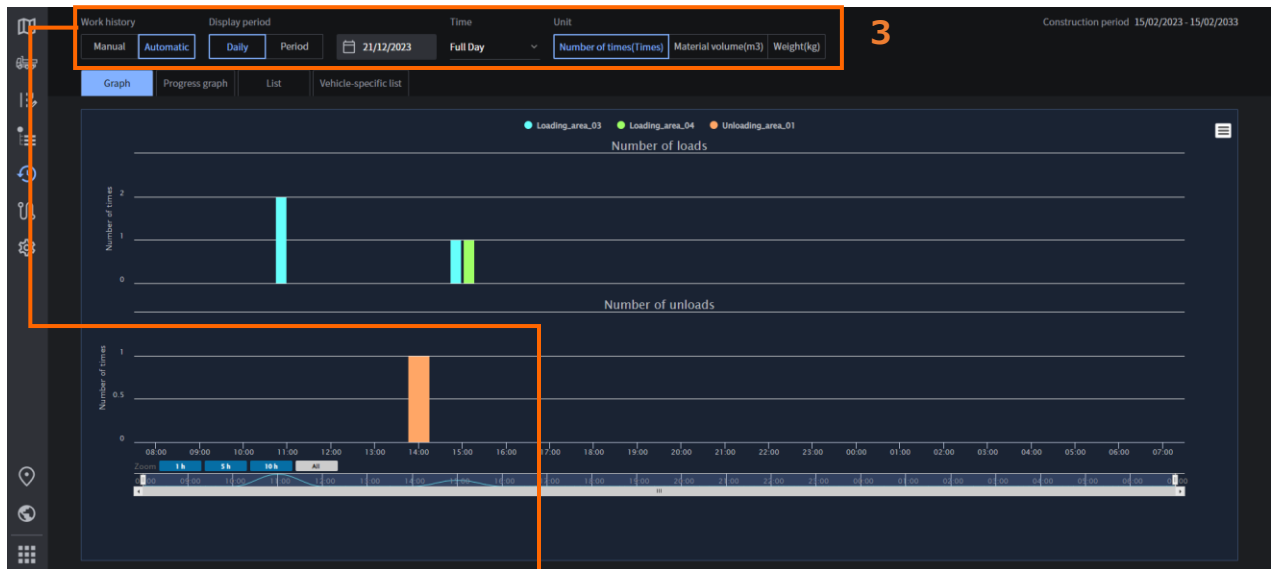


Loading and Unloading Performance

You can show the number of times of loading and unloading by point and vehicle to check the progress of the work.



1. Click the "Results" icon.
2. Click "Results of loading/unloading".
3. Select the work history you want to show the loading/unloading result, or specify the display period to display the loading/unloading result.



Select the display period from daily/period

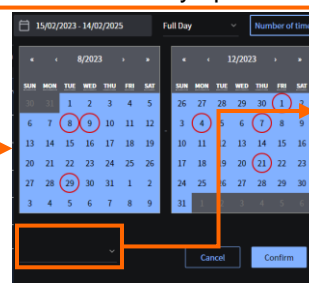
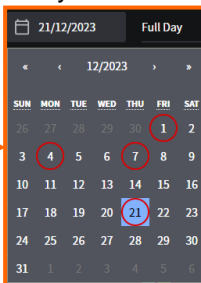
Select date/time Select time frame

Select unit

Display work history.
Select the data registration method

Daily

Period (You can select the period other than arbitrary specification.)



- 1 Month
- 2 Months
- 3 Months
- Half Year
- 1 Year

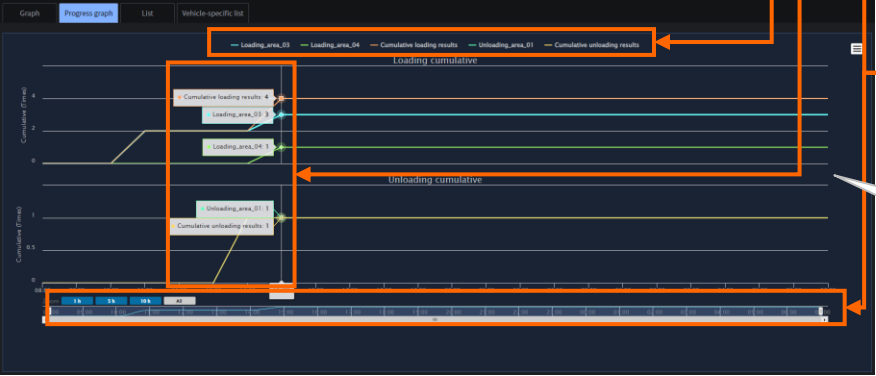
Graph (specified daily)



- You can switch the visibility of the graph by clicking the point name.
- Move the cursor to the graph to display the result value for each hour.

Shows the number of times of loading and unloading on the specified date in a graph for each time and point.

Progress timeline (specified daily)



- You can narrow down the graph at the specified display range or at an arbitrary time using the slider.

Shows the cumulative number of times of loading and unloading on the specified date in a graph for each time and point.

List (specified daily)

Graph	Progress graph	List	Vehicle-specific list					
		Loadin...	Loadin...	Loading subtotal	Unload...	Unloading subtotal	Loading cumulative	Unloading cumulative
Material		soil	soil	*	soil	*	*	*
21/12/2023		3	1	4	1	1	14	4

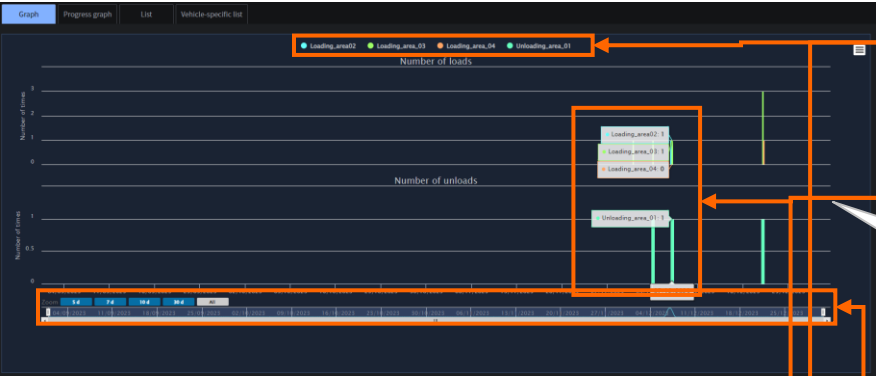
Shows the list of daily loading and unloading results where there are loading and unloading results.

List by vehicle (specified daily)

Graph	Progress graph	List	Vehicle-specific list					
Vehicle	Loadin...	Loadin...	Loading subtotal	Unload...	Unloading subtotal			
Dump_01		3	1	4	1	1		
Total		3	1	4	1	1		

Shows the daily results by vehicle for which there are loading and unloading results.

Graph (period specified)

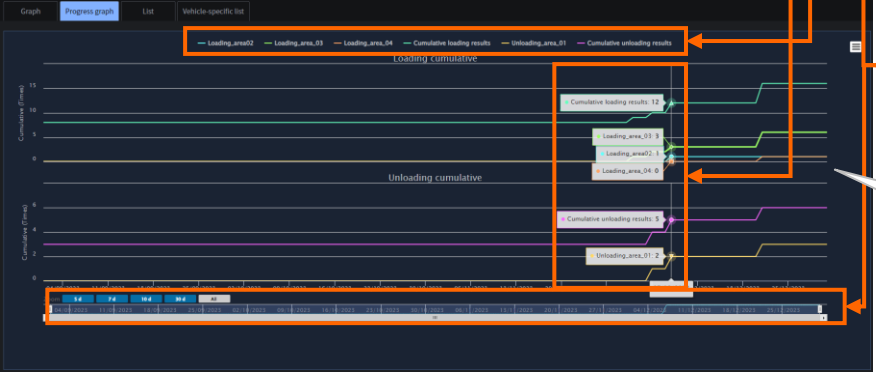


You can switch the visibility of the graph by clicking the point name.

Move the cursor to the graph to display the daily result value.

Shows the number of times of loading and unloading for the specified period on a graph for each date and point.

Progress timeline (period specified)



You can narrow down the graph at the specified display range or at an arbitrary period using the slider.

Shows the cumulative number of times of loading and unloading for the specified period on a graph for each date and point.

List (period specified)

Material	soil	soil	soil	soil	soil	soil	soil	soil	soil
07/12/2023	1	1		2	1		1	8	2
08/12/2023		1		1			0	9	1
09/12/2023	1			1		1	1	10	3
21/12/2023		3	1	4	1		1	14	4
Total	1	6	1	8	2	1	3		

There are results of loading and unloading.
Shows the list of loading/unloading results for the specified period.

List by vehicle (period specified)

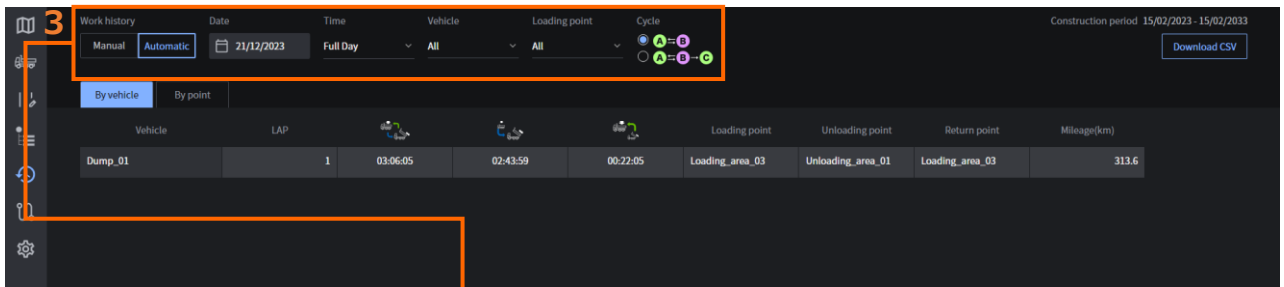
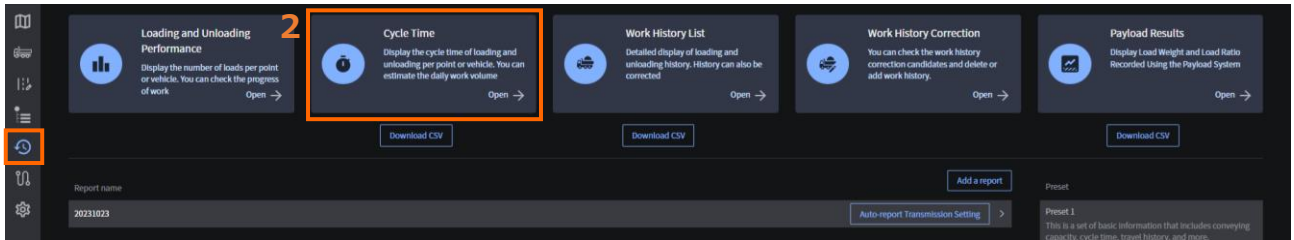
Vehicle	Loadin...	Loadin...	Loadin...	Loadin...	Unload...	Unload...
Dump_01			3	1	4	1
dump1	1		2		3	2
mobile...			1		1	0
Total	1	6	1	8	3	3

There are results of loading and unloading.
Shows the results by vehicle for the specified period.

Cycle Time

Shows the loading/unloading cycle time by point and vehicle.

1. Click the “Results” icon.
2. Click “Cycle time”.
3. Select the work history you want to show the cycle time, or specify the display date, and then the result of loading/unloading is displayed.



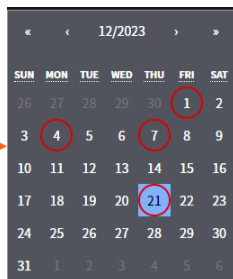
Select display date.

Select time frame.

Select a vehicle.

Select loading point.

Select the aggregation method for the cycle time.



Display work history.
Select the data registration method.

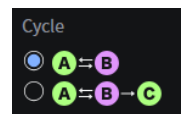
Calculation method of cycle time

- Strict (on image)

A lap of the data returned to the same loading point is counted.

- Ambiguity (lower image)

All cycles of loading, unloading, and loading are counted as a lap.



Cycle time list by vehicle

The list of results of each vehicle whose work results on the day exist in the selected work history (manually or automatically) is displayed by vehicle.

Time taken for one cycle of loading → unloading → loading

Loading → Time taken for unloading

Unloading → Time taken for loading

Loading point: Loading point where the cycle started
Unloading point: Unloading point that has been passed through
Return point: Loading point where the cycle has been completed

By vehicle	By point	Vehicle	LAP				Loading point	Unloading point	Return point	Mileage(km)
		Dump_01	1	00:01:05	00:00:39	00:00:25	Loading_area_03	Unloading_area_01	Loading_area_03	
		Dump_01	2	00:01:54	00:00:18	00:01:35	Loading_area_03	Unloading_area_01	Loading_area_03	
		Dump_01	3	00:00:51	00:00:23	00:00:27	Loading_area_03	Unloading_area_01	Loading_area_03	
		Dump_01	4	00:10:12	00:02:05	00:08:06	Loading_area_03	Unloading_area_01	Loading_area_03	
		Dump_01	5	00:13:06	00:00:41	00:12:24	Loading_area_03	Unloading_area_01	Loading_area_03	

“Loading → Time taken for unloading” + “Unloading → Time taken for loading”
= “Loading → Time taken for one cycle of loading”

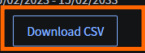
A list of cycle time by point

The list of results of each point at which work results on the day exist in the selected work history (manually or automatically) is displayed by point.

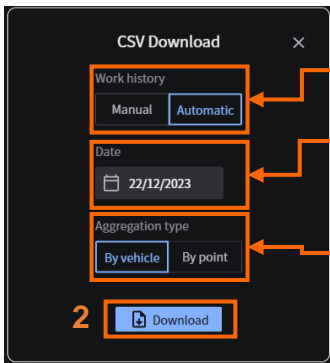
By vehicle	By point	Departure point	Arrival point	Required time	Departure date and time	Arrival date and time	Mileage(km)
		Loading_area_03	Unloading_area...	00:00:39	22/12/2023 14:03:24.988	22/12/2023 14:04:04.851	
		Loading_area_03	Unloading_area...	00:00:18	22/12/2023 14:04:30.353	22/12/2023 14:04:48.777	
		Loading_area_03	Unloading_area...	00:00:23	22/12/2023 14:06:24.603	22/12/2023 14:06:48.101	
		Loading_area_03	Unloading_area...	00:02:05	22/12/2023 14:07:15.703	22/12/2023 14:09:21.138	
		Loading_area_03	Unloading_area...	00:00:41	22/12/2023 14:17:28.012	22/12/2023 14:18:09.804	
		Unloading_area...	Loading_area_03	00:00:25	22/12/2023 14:04:04.851	22/12/2023 14:04:30.353	
		Unloading_area...	Loading_area_03	00:01:35	22/12/2023 14:04:48.777	22/12/2023 14:06:24.603	
		Unloading_area...	Loading_area_03	00:00:27	22/12/2023 14:06:48.101	22/12/2023 14:07:15.703	
		Unloading_area...	Loading_area_03	00:08:06	22/12/2023 14:09:21.138	22/12/2023 14:17:28.012	
		Unloading_area...	Loading_area_03	00:12:24	22/12/2023 14:18:09.804	22/12/2023 14:30:34.420	

■ Save cycle time

1. Click “Download CSV”.
2. Select the registration method, date, and aggregation type of the work history, and click “Download”.



	Loading point	Unloading point	Return point	Mileage(km)
0:25	Loading_area_03	Unloading_area_01	Loading_area_03	
1:35	Loading_area_03	Unloading_area_01	Loading_area_03	
0:27	Loading_area_03	Unloading_area_01	Loading_area_03	



CSV Download

Work history: ☒ Manual ☐ Automatic

Date:

Aggregation type: ☒ By vehicle ☐ By point

2

Select how to register the data of the work history of the cycle time to be downloaded.

Select the date of the cycle time to download.

Select the aggregate type of cycle time.

Calculation type: By vehicle

Export items:

Vehicle, LAP, time required from loading to lading, time required from lading to unloading, time required from unloading to loading, loading point, return point, registration method, and travel distance

Export file name:

“operationHistory-daily-pointHistoryCycles- -{Construction site ID} -{yyyyMMdd}.csv”

Vehicle	LAP	Loading —Loading time	Loading —Unloading time	Unloading —Loading time	Loading point	Unloading point	Return point	Registration method	Travel distance
Dump_01	1	0:01:05	0:00:39	0:00:25	Loading_area_03	Unloading_area_01	Loading_area_03	MANUAL	
Dump_01	2	0:01:54	0:00:18	0:01:35	Loading_area_03	Unloading_area_01	Loading_area_03	MANUAL	
Dump_01	3	0:00:51	0:00:23	0:00:27	Loading_area_03	Unloading_area_01	Loading_area_03	MANUAL	

Calculation type: By point

Export items:

Departure point, arrival point, required time, departure date, departure time, departure time (milliseconds), departure time (time zone), arrival date, arrival time, arrival time (milliseconds), arrival time (time zone), registration method, and travel distance

Export file name:

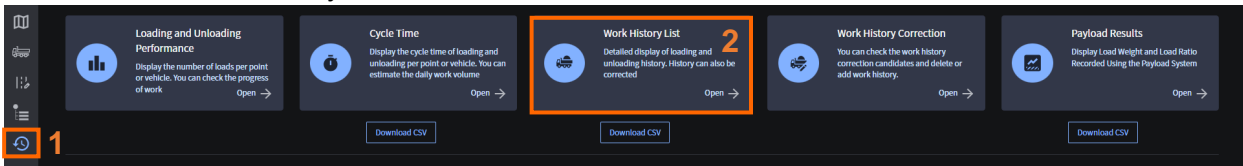
“operationHistory-daily-pointPairCycles- -{Construction site ID} -{yyyyMMdd}.csv”

Departure point	Arrival point	Travel time	Departure date	Departure time	Departure time (milliseconds)	Departure time (time zone)	Arrival date	Arrival time	Arrival time (milliseconds)	Arrival time (time zone)	Registration method	Travel distance
Loading_area_03	Unloading_area_01	0:00:39	2023/12/22	14:03:24	988	+09:00	2023/12/22	14:04:04	851	+09:00	MANUAL	
Loading_area_03	Unloading_area_01	0:00:18	2023/12/22	14:04:30	353	+09:00	2023/12/22	14:04:48	777	+09:00	MANUAL	
Loading_area_03	Unloading_area_01	0:00:23	2023/12/22	14:06:24	603	+09:00	2023/12/22	14:06:48	101	+09:00	MANUAL	

Work History List

Shows the details of the loading/unloading history in the list.
You can also add, edit, and delete the work history.

1. Display the "Performance" menu.
2. Click "Work history List".



You can select the registration method of data to display the work history.

Select the date to display the work history.

You can narrow down the work history.
Conditions:

Type (loading/unloading), vehicle, point, soil property, and group

You can show or switch from the deleted work history.

The screenshot shows the 'Work History List' interface. At the top, there are filters for 'Manual' and 'Automatic' registration methods, a date selector set to '22/12/2023', and dropdown menus for 'Time' (Full Day), 'Type' (All), 'Vehicle' (All), 'Location' (All), 'Material' (All), and 'Group' (All). There is also a 'Deleted' toggle switch. The table below lists work history entries with columns: Type name, Work date and time, Location name, Material name, Unit body weight (t/m3), Vehicle name, Maximum load volume (kg), Maximum load capacity (m3), Loading weight (kg), Load rate (%), Loading and unloading vehicle name, Group name, and Edit category. The table contains 12 rows of data, alternating between 'Load' and 'Unload' types.

Type name	Work date and time	Location name	Material name	Unit body weight (t/m3)	Vehicle name	Maximum load volume (kg)	Maximum load capacity (m3)	Loading weight (kg)	Load rate (%)	Loading and unloading vehicle name	Group name	Edit category
Load	22/12/2023 14:03:24.988	Loading_area_03	soil	1.8	Dump_01	9,800	5.5			-	group_01	
Unload	22/12/2023 14:04:04.851	Unloading_area_01	soil	1.8	Dump_01	9,800	5.5			-	-	
Load	22/12/2023 14:04:30.353	Loading_area_03	soil	1.8	Dump_01	9,800	5.5			-	group_01	
Unload	22/12/2023 14:04:48.777	Unloading_area_01	soil	1.8	Dump_01	9,800	5.5			-	-	
Load	22/12/2023 14:06:24.603	Loading_area_03	soil	1.8	Dump_01	9,800	5.5			-	group_01	
Unload	22/12/2023 14:06:48.101	Unloading_area_01	soil	1.8	Dump_01	9,800	5.5			-	-	
Load	22/12/2023 14:07:15.703	Loading_area_03	soil	1.8	Dump_01	9,800	5.5			-	group_01	
Unload	22/12/2023 14:09:21.138	Unloading_area_01	soil	1.8	Dump_01	9,800	5.5			-	-	
Load	22/12/2023 14:17:28.012	Loading_area_03	soil	1.8	Dump_01	9,800	5.5			-	group_01	
Unload	22/12/2023 14:18:00.804	Unloading_area_01	soil	1.8	Dump_01	9,800	5.5			-	-	
Load	22/12/2023 14:30:34.420	Loading_area_03	soil	1.8	Dump_01	9,800	5.5			-	group_01	

The work history is displayed in the list.

■ Check the deleted work history

When the "[Duplicate count correction](#)" feature is turned on, the reason for deletion is displayed.

The screenshot shows the 'Work History List' interface with the 'Deleted' toggle switch turned on. The table below lists deleted work history entries with columns: Edit category, Reason for deletion, Type name, Work date and time, Location name, Material name, Unit body weight (t/m3), Vehicle name, Maximum load volume (kg), Maximum load capacity (m3), Loading weight (kg), Load rate (%), Loading and unloading vehicle name, and Group name. The table contains 3 rows of data, all marked as 'Delete' with the reason 'Duplicate count correction'.

Edit category	Reason for deletion	Type name	Work date and time	Location name	Material name	Unit body weight (t/m3)	Vehicle name	Maximum load volume (kg)	Maximum load capacity (m3)	Loading weight (kg)	Load rate (%)	Loading and unloading vehicle name	Group name
Delete	Duplicate count correction	Load	27/08/2024 13:25:24.000	测试地点1	土	1.8	Dump 001	9,800	5.5			-	Group A
Delete	Duplicate count correction	Load	27/08/2024 13:26:07.999	测试地点2	土	1.8	Dump 001	9,800	5.5			-	Group B
Delete	Duplicate count correction	Unload	27/08/2024 13:26:27.999	待测地点1	土	1.8	Dump 001	9,800	5.5			-	Group A

■ Add work history

1. Click “Add work history”.

Group

Deleted

Construction period 15/02/2023 - 15/02/2023

All

Download CSV

Add work history

Load (kg)	Maximum load capacity (m3)	Loading weight (kg)	Load rate (%)	Loading and unloading vehicle name	Group name	Edit category
800	5.5			-	group_01	⋮
800	5.5			-	-	⋮
800	5.5			-	group_01	⋮

2. Enter the content.

3. After editing, click “Save”.

2
Add work history

Work date and time
22/12/2023 00:00:00

Location
Loading_area_03

Material
soil

Unit volume mass
1800 t/m3

Vehicle
Dump_01

Maximum load volume
9800 kg

Maximum load capacity
5.5 m3

Loading weight
Load rate
kg

Loading and unloading vehicle
Please select

Group
All

3
Save

Select the work date and work hours. * Required

Select the workplace * Required

Select the soil property * Required if the point selection column is the loading point.

It is displayed only when the point selection column is the loading point.


Select vehicle. * Required

Input the loading weight/loading rate.
It is displayed only when the point selection column is the loading point.

Select the vehicle at the loading/unloading work point.

Select the group to which the work point belongs.

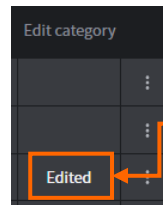
■ Edit the work history

1. Click  on the work history you want to edit, and click “Edit”.

Work history												Construction period 15/02/2023 - 15/02/2023	
Manual Automatic		22/12/2023		Full Day		All		All		All		Download CSV Add work history	
Type name	Work date and time	Location name	Material name	Unit body weight (t/m3)	Vehicle name	Maximum load volume (kg)	Maximum load capacity (m3)	Loading weight (kg)	Load rate (%)	Loading and unloading vehicle name	Group name	Edit category	
Load	22/12/2023 14:03:24.988	Loading_area_03	soil	1.8	Dump_01	9,800	5.5			-	group_01		
Unload	22/12/2023 14:04:04.851	Unloading_area_01	soil	1.8	Dump_01	9,800	5.5			-	group_01		
Load	22/12/2023 14:04:30.353	Loading_area_03	soil	1.8	Dump_01	9,800	5.5			-	group_01		
Unload	22/12/2023 14:04:48.777	Unloading_area_01	soil	1.8	Dump_01	9,800	5.5			-	group_01	Edit	
Load	22/12/2023 14:06:24.603	Loading_area_03	soil	1.8	Dump_01	9,800	5.5			-	group_01	Delete	

2. Edit the contents of the work history.

3. After editing, click “Save”.



After editing the work history, “Edited” is displayed in the editing section.

2 Edit work history

Work date and time
22/12/2023 14:04:30.353

Location

Loading_area_03

Material

soil

Unit volume mass
1800 t/m3

Vehicle

Dump_01

Maximum load volume

9800 kg

Maximum load capacity

5.5 m3

Loading weight

Load rate

kg

Loading and unloading vehicle

Please select

Group

group_01

3 Save

Select the workplace.

Select the soil property

It is displayed only when the point selection column is the loading point.

Select the vehicle.


Input the loading weight/loading rate.

It is displayed only when the point selection column is the loading point.

Select the vehicle at the loading/unloading work point.

Select the group to which the work point belongs.

■ Delete work history

1. Click  of the task history you want to delete, and click “Edit”.

Work history

Manual

Automatic

22/12/2023

Full Day

All

All

All

All

All

Deleted


Download CSV

Add work history

Construction period 15/02/2023 - 15/02/2023

Type name	Work date and time	Location name	Material name	Unit body weight (t/m3)	Vehicle name	Maximum load volume (kg)	Maximum load capacity (m3)	Loading weight (kg)	Load rate (%)	Loading and unloading vehicle name	Group name	Edit category
Load	22/12/2023 14:03:24.988	Loading_area_03	soil	1.8	Dump_01	9,800	5.5			-	group_01	
Unload	22/12/2023 14:04:04.851	Unloading_area_01	soil	1.8	Dump_01	9,800	5.5			-	group_01	
Load	22/12/2023 14:04:30.353	Loading_area_03	soil	1.8	Dump_01	9,800	5.5			-	group_01	
Unload	22/12/2023 14:04:48.777	Unloading_area_01	soil	1.8	Dump_01	9,800	5.5			-	group_01	
Load	22/12/2023 14:06:24.603	Loading_area_03	soil	1.8	Dump_01	9,800	5.5			-	group_01	

2. Confirm the contents and click “Delete”.

 Note that the deleted data cannot be restored.

This work history will be deleted

This operation cannot be undone

Work date and time

22/12/2023 14:04:30.353

Type

Load

Cancel

Delete

■ Save work history

1. Click "Download CSV".
2. Select the method for registering the work history and the exporting period, and click "Download".

The screenshot shows the top section of the application. At the top right, the 'Construction period' is set to '15/02/2023 - 15/02/2033'. Below this, there is a 'Download CSV' button highlighted with a red box and the number '1'. To its right is an 'Add work history' button. Below these buttons is a table with columns: 'load (kg)', 'Maximum load capacity (m3)', 'Loading weight (kg)', 'Load rate (%)', 'Loading and unloading vehicle name', 'Group name', and 'Edit category'. The table contains three rows of data.

The screenshot shows the 'CSV Download' dialog box. It has two main sections: 'Work history' and 'Output period'. In the 'Work history' section, the 'Manual' button is selected. In the 'Output period' section, the 'Date' button is selected, and the date '22/12/2023' is entered. At the bottom, the 'Download' button is highlighted with a red box and the number '2'.

Select the method for registering the work history to download.

Select the period of work history to download.

The date and time are specified, and all the work history is downloaded.

The CSV file displays the type, registration method, work date, work time, work time (milliseconds), time zone, point name, soil property name, unit volume mass (weight unit/volume unit), vehicle name, maximum loading volume (weight unit), maximum loading volume (volume unit), loading weight (weight unit), loading rate (%), loading vehicle, group name, and editing category.

Type	Registration m/Work date	Work time	Work time (milliseconds)	Time zone	Point name	Soil quality name	Unit volume mass (kg/m3)	Vehicle name	Maximum loading capacity (kg)	Maximum loading soil volume (m3)	Loading weight (kg)	Loading rate (%)	Loading vehicle	Group name	Edit category
LOADING MANUAL	2023/12/22	14:03:24	989	+09:00	Loading_area_03	soil		1800 Dump_01	9800		5.5			group_01	
UNLOADI MANUAL	2023/12/22	14:04:04	851	+09:00	Unloading_area_01			Dump_01	9800		5.5				
LOADING MANUAL	2023/12/22	14:04:30	353	+09:00	Loading_area_03	soil		1800 Dump_01	9800		5.5			group_01	UPDATE
UNLOADI MANUAL	2023/12/22	14:04:48	777	+09:00	Unloading_area_01			Dump_01	9800		5.5				
LOADING MANUAL	2023/12/22	14:06:24	603	+09:00	Loading_area_03	soil		1800 Dump_01	9800		5.5			group_01	
UNLOADI MANUAL	2023/12/22	14:06:48	101	+09:00	Unloading_area_01			Dump_01	9800		5.5				
LOADING MANUAL	2023/12/22	14:07:15	703	+09:00	Loading_area_03	soil		1800 Dump_01	9800		5.5			group_01	
UNLOADI MANUAL	2023/12/22	14:09:21	138	+09:00	Unloading_area_01			Dump_01	9800		5.5				
LOADING MANUAL	2023/12/22	14:17:28	12	+09:00	Loading_area_03	soil		1800 Dump_01	9800		5.5			group_01	
UNLOADI MANUAL	2023/12/22	14:18:09	804	+09:00	Unloading_area_01			Dump_01	9800		5.5				
LOADING MANUAL	2023/12/22	14:30:34	420	+09:00	Loading_area_03	soil		1800 Dump_01	9800		5.5			group_01	

Export file name:

Single date designation

"operationHistory- -{Construction site ID} -{yyyyMMdd}.csv"

Output of all items

"operationHistory- - {Construction site ID}.csv"

Work history Correction

Intuitive correction feature for errors in automatic work history

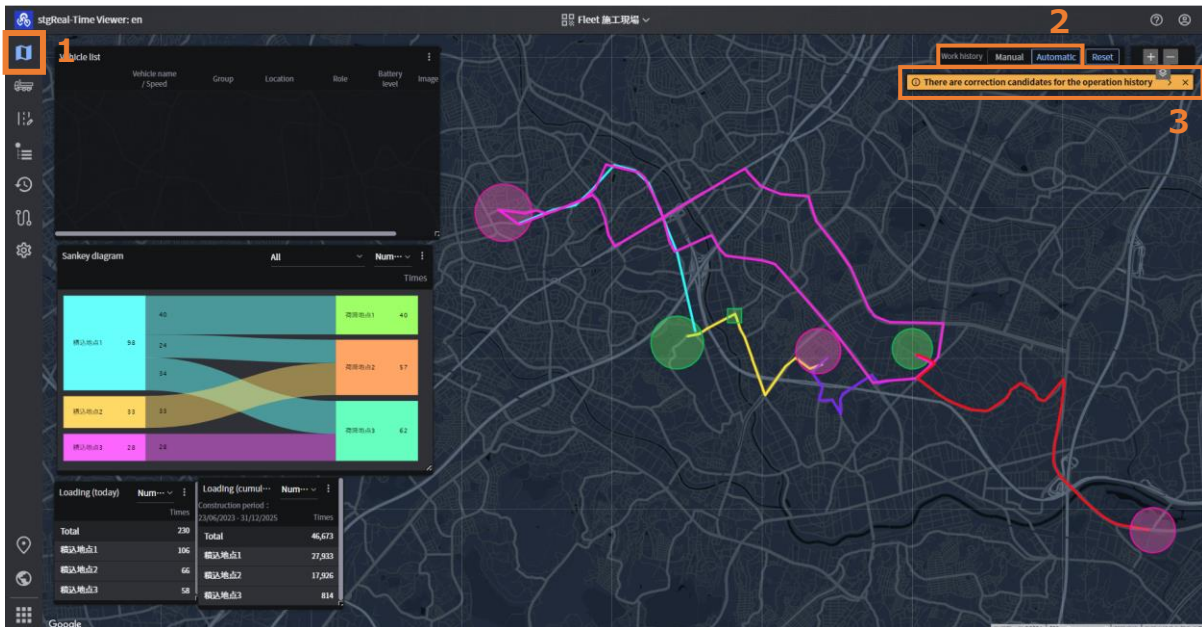
Support for both manual and automatic counting.

You can access the correction screen using one of the following methods.

[Access from Real-time Viewer]

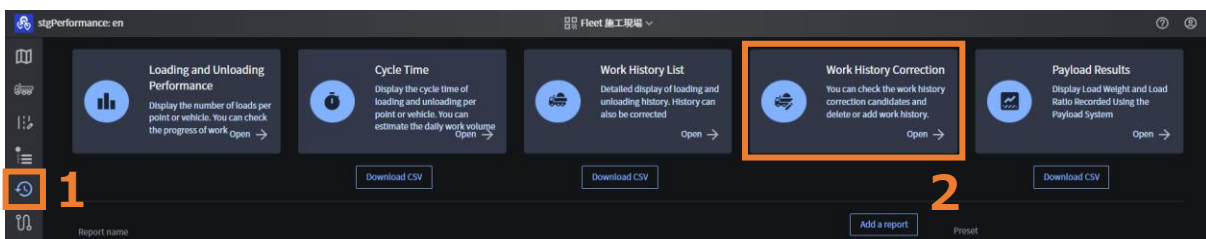
1. Click on "Real-time Viewer"
2. Check whether the 'Manual' or 'Automatic' work history is being displayed.
3. Click on "There are correction suggestions for the operation history".
 - When loading → loading or unloading → unloading, and the same type of work is performed consecutively
 - When unloading work is recorded at the beginning of the day
 - When loading work is recorded at the end of the day

A notification will be displayed in any of the above cases.

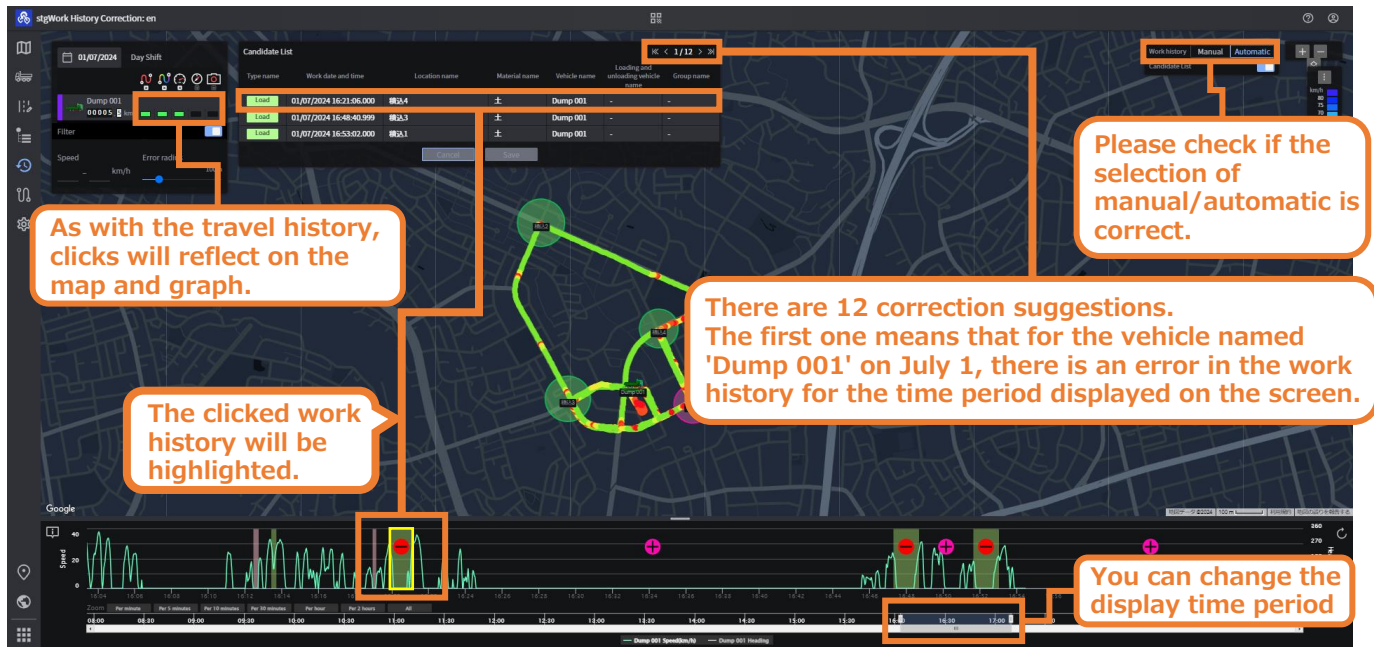


[Access from Performance menu]

1. Click on "Performance"
2. Click on "Work history Correction"



■ Function description



Procedure for correcting work history

[Correction Example (1/4)]

Delete duplicate loading count - Delete the loading history at **16:48:40**.

1-1. Select "Automatic"

1-2. Select the loading history you want to delete.

1-3. Click on "-"

1-4. Click on "Delete"

The screenshot shows the 'stgWork History Correction: en' interface. On the left, there's a sidebar with various icons. The main area displays a map with a green route and a speed graph at the bottom. A 'Candidate List' table is visible, showing two entries for 'Load' at '01/07/2024 16:48:40.999'. A dialog box is open on the right, indicating that the work history will be deleted and that the operation cannot be undone. The 'Delete' button is highlighted.

Type name	Work date and time	Location name	Material name	Vehicle name	Loading and unloading vehicle name	Group name
Load	01/07/2024 16:21:06.000	橋込4	土	Dump 001	-	-
Load	01/07/2024 16:48:40.999	橋込3	土	Dump 001	-	-
Load	01/07/2024 16:53:02.000	橋込1	土	Dump 001	-	-

Delete loading history

The screenshot shows the 'stgWork History Correction: en' interface. The 'Candidate List' table is visible, showing two entries for 'Load' at '01/07/2024 16:21:06.000' and '01/07/2024 16:53:02.000'. The 'Delete' button is highlighted. The speed graph at the bottom shows a peak at 16:48:40, which is highlighted with an orange box.

Type name	Work date and time	Location name	Material name	Vehicle name	Loading and unloading vehicle name	Group name
Load	01/07/2024 16:21:06.000	橋込4	土	Dump 001	-	-
Load	01/07/2024 16:53:02.000	橋込1	土	Dump 001	-	-

[Correction Example (2/4)] Add missing unloading count

1. Move the mouse over the graph to check the times when the dump truck was within the unloading point
2. Click on " + "
3. Set the work time
4. Set the location
5. Click on "Add"



Add Unloading Work History

Work date and time
01/07/2024

Location
Please select

Vehicle
Dump 001

Maximum load volume
9800 kg

Maximum load capacity
5.5 m3

Loading and unloading vehicle
Please select

Group
All

Add

Add Unloading Work History

Work date and time
16:50:22

Location
桥边2

Vehicle
Dump 001

Maximum load volume
9800 kg

Maximum load capacity
5.5 m3

Loading and unloading vehicle
Please select

Group
All

Add



[Correction Example (3/4)]

Delete duplicate loading count - Delete the loading history at 16:53:02.

3-1. Select the loading history you want to delete.

3-2. Click on "-"

3-3. Click on "Delete"

This work history will be deleted ×
This operation cannot be undone

Work date and time: 01/07/2024 16:53:02.000
Type: Load

Cancel Delete

stgWork History Correction: en

01/07/2024 Day Shift

Filter: Dump 001 00005 km

Speed: km/h Error radius: 100m

Type name	Work date and time	Location name	Material name	Vehicle name	Loading and unloading vehicle name	Group name
Load	01/07/2024 16:21:06.000	橋梁4	土	Dump 001	-	-
Unload	01/07/2024 16:50:22.000	橋梁2	-	Dump 001	-	-
Load	01/07/2024 16:53:02.000	橋梁1	土	Dump 001	-	-

Cancel Save

Google

Speed

Zoom: Per minute Per 5 minutes Per 10 minutes Per 30 minutes Per hour Per 2 hours All

Dump 001 Speed(km/h) Dump 001 Heading

[Correction Example (4/4)]

Save the edited content

4-1. Click on "Save"

4-2. Click on "Save"

After saving, the number of correction suggestions decreases

Save Work History ×
Save Work History Correction

Save

stgWork History Correction: en

01/07/2024 Day Shift

Filter: Dump 001 00006 km

Speed: km/h Error radius: 100m

Type name	Work date and time	Location name	Material name	Vehicle name	Loading and unloading vehicle name	Group name
Load	01/07/2024 16:21:06.000	橋梁4	土	Dump 001	-	-
Unload	01/07/2024 16:50:22.000	橋梁2	-	Dump 001	-	-

Cancel Save

Google

Speed

Zoom: Per minute Per 5 minutes Per 10 minutes Per 30 minutes Per hour Per 2 hours All

Dump 001 Speed(km/h) Dump 001 Heading

[Add Loading Work History]

Clicking the green '+' opens an additional window.

1. [Indispensable]Set the work time
2. [Indispensable]Set the Location
3. [Indispensable]Set the Material
4. [Optional]Input "Loading weight" or "Load rate"
5. [Optional]Set the "Loading and unloading vehicle"
This is the field to select 'from which construction equipment the loading was performed.'
6. [Optional]Set the Group
7. Click on "Add"



Add Loading Work History

×

Work date and time

01/07/2024

18:16:27

1

Location

Please select

2

Material

Please select

3

Unit volume mass

0 t/m3

Vehicle

伊勢

Maximum load volume

22400 kg

Maximum load capacity

18 m3

Loading weight

Load rate

4

kg

Loading and unloading vehicle

Please select

5

Group

All

6

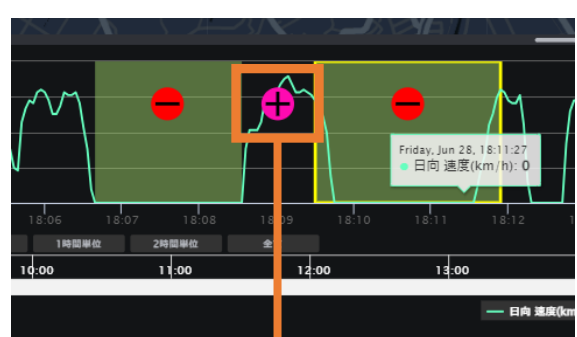
Add

7

[Add Loading Work History]

Clicking the pink '+' opens an additional window.

1. [Indispensable]Set the work time
2. [Indispensable]Set the Location
3. [Optional]Set the "Loading and unloading vehicle"
This is the field to select 'near which construction equipment the unloading operation was performed.'
4. [Optional]Set the Group
5. Click on "Add"



Add Unloading Work History

×

Work date and time

01/07/2024

🕒 16:36:22 1

Location

Please select 2

Vehicle

Dump 001

Maximum load volume

9800 kg

Maximum load capacity

5.5 m3

Loading and unloading vehicle

Please select 3

Group

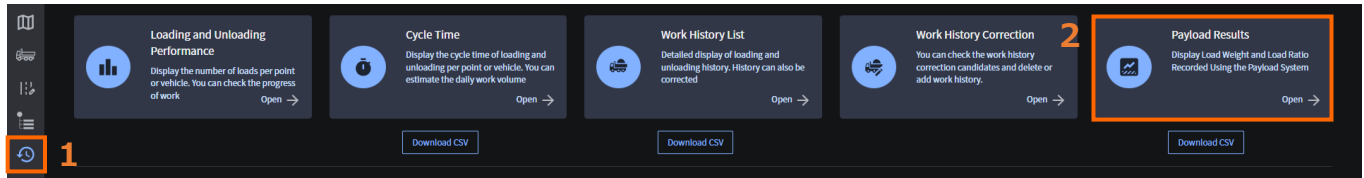
All 4

Add 5

Loading Results (Payload)

■ Show the result of payload loading

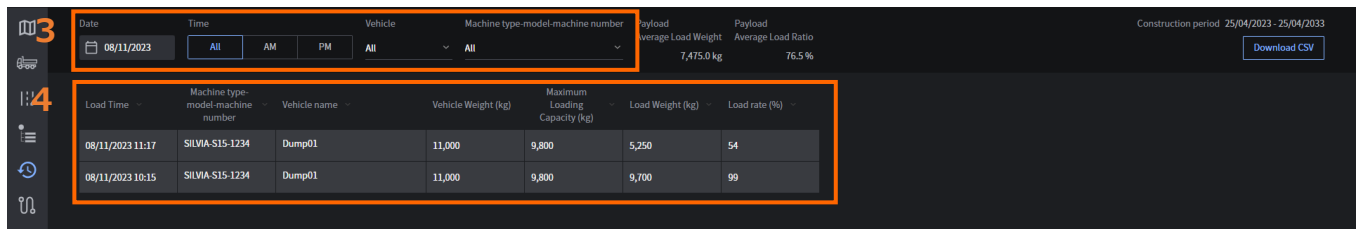
1. Display the result screen.
2. Click the payload result.



3. Select "Date".

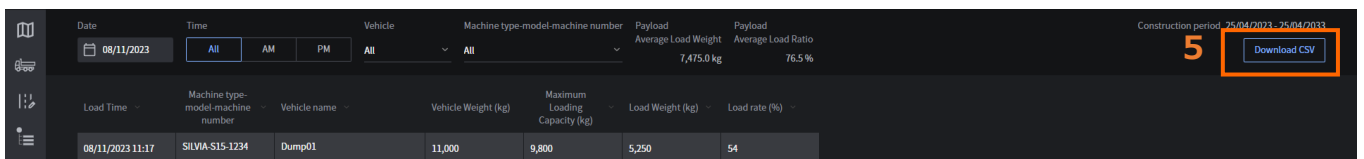
You can also narrow down the display results by selecting "Time", "Vehicle", and "Model-Model type-Serial number".

4. The loading results you have selected are displayed.



■ Save the result of payload loading

5. To save CSV, click "CSV download".



6. Display CSV download modal.

7. Select output period.

Daily : With date input
All : No date input

8. Click "Download".



The loading date, loading time, loading time (millisecond), time zone, Model-Model Type- Serial No., vehicle name, vehicle weight (kg), maximum loading capacity (kg), load weight (kg), and load ratio (%) are output to the CSV file.

Export file name in case of daily : "payload-{Construction site ID}-date.csv"

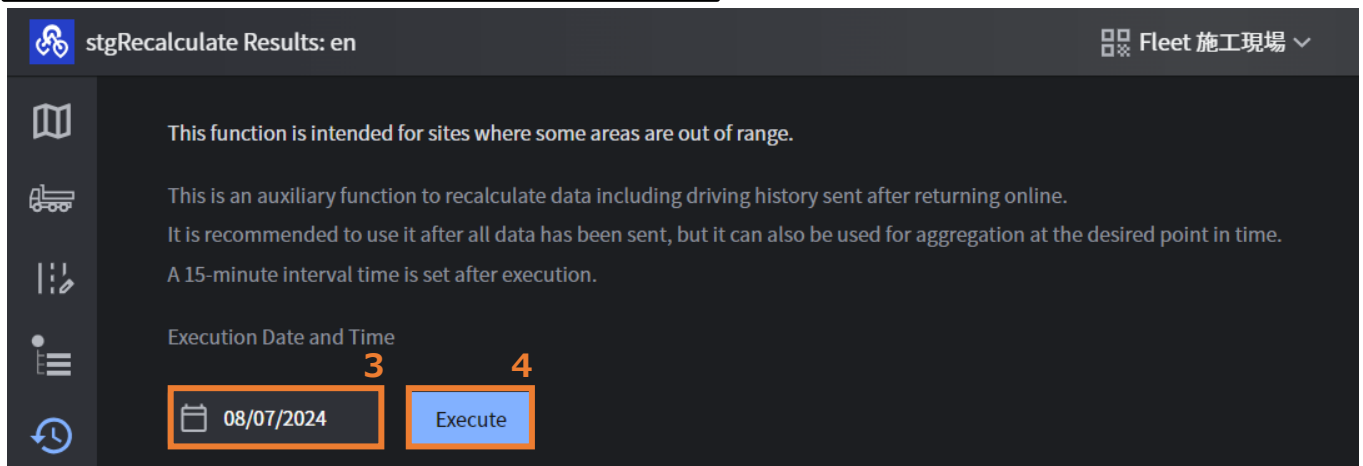
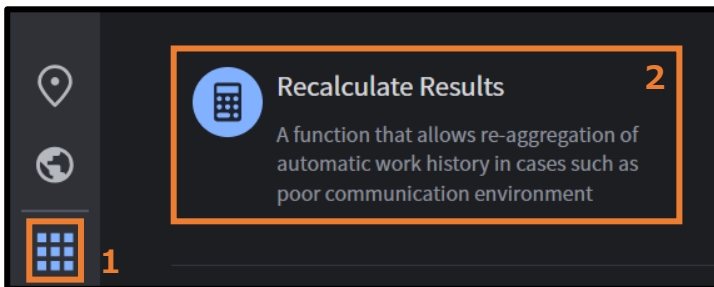
Export file name in all cases : "payload-{Construction site ID}.csv"

Loading day	Loading time	Loading time (milliseconds)	Time zone	Model-Type-Machine number	Vehicle name	Vehicle weight (kg)	Maximum load capacity (kg)	Loading weight (kg)	Loading rate (%)
2023/11/8	11:17:34		536 +09:00	SILVIA-S15-1234	Dump01	11000	9800	5250	54
2023/11/8	10:15:39		256 +09:00	SILVIA-S15-1234	Dump01	11000	9800	9700	99

Recalculate Results

If the communication environment is poor, you can recalculate the automatic work history. If there is data inconsistency after the work is completed, please try “Recalculate Results”.

1. Click on “Global Navigation”
2. Click on “Recalculate Results”
3. Select a date
4. Click on “Execute”



Edit Map History

It is possible to retrospectively change the position, size, shape, validity/invalidity, stop seconds, etc., of the work point and perform a recalculation of the automatic work history.

Note

- The time to complete the recalculation will vary depending on the time range and the number of transport vehicles.
- Please note that recalculation will not be possible for 24 hours after confirmation.

stgWork History List: en

Fleet 施工现场

Work history: Manual Automatic Date: 28/06/2024 Type: All Vehicle: 日向 Location: All Material: All Group: All Deleted: ☐ Construction period: 23/06/2023 - 31/12/2025

Download CSV Add work history

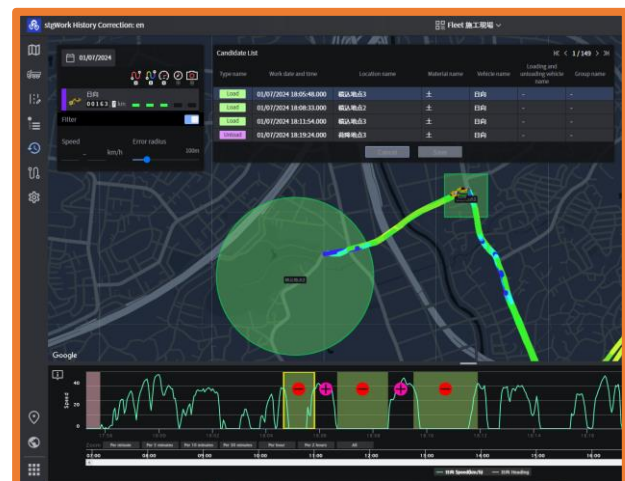
Edit category	Reason for deletion	Type name	Work date and time	Location name	Material name	Unit body weight (t/m3)	Vehicle name	Maximum load volume (kg)	Maximum load capacity (m3)	Loading weight (kg)	Load rate (%)	Loading veh
		Load	28/06/2024 08:03:51.000	抵达地点2	土	1.8	日向	22,400	18			-
		Load	28/06/2024 08:06:00.000	抵达地点3	土	1.8	日向	22,400	18			-
		Unload	28/06/2024 08:13:30.000	离开地点3	土	1.8	日向	22,400	18			-
		Load	28/06/2024 08:21:30.000	抵达地点3	土	1.8	日向	22,400	18			-
		Load	28/06/2024 08:24:15.000	抵达地点2	土	1.8	日向	22,400	18			-
		Load	28/06/2024 08:26:36.000	抵达地点3	土	1.8	日向	22,400	18			-
		Unload	28/06/2024 08:34:06.000	离开地点3	土	1.8	日向	22,400	18			-
		Load	28/06/2024 08:42:06.000	抵达地点3	土	1.8	日向	22,400	18			-
		Load	28/06/2024 08:44:51.000	抵达地点2	土	1.8	日向	22,400	18			-
		Load	28/06/2024 08:47:12.000	抵达地点3	土	1.8	日向	22,400	18			-
		Unload	28/06/2024 08:54:42.000	离开地点3	土	1.8	日向	22,400	18			-
		Load	28/06/2024 09:02:42.000	抵达地点3	土	1.8	日向	22,400	18			-
		Load	28/06/2024 09:05:27.000	抵达地点2	土	1.8	日向	22,400	18			-
		Load	28/06/2024 09:08:00.000	抵达地点3	土	1.8	日向	22,400	18			-
		Unload	28/06/2024 09:15:30.000	离开地点3	土	1.8	日向	22,400	18			-
		Load	28/06/2024 09:23:30.000	抵达地点3	土	1.8	日向	22,400	18			-
		Load	28/06/2024 09:26:15.000	抵达地点2	土	1.8	日向	22,400	18			-
		Load	28/06/2024 09:28:48.000	抵达地点3	土	1.8	日向	22,400	18			-
		Unload	28/06/2024 09:36:18.000	离开地点3	土	1.8	日向	22,400	18			-

[Usage Example]

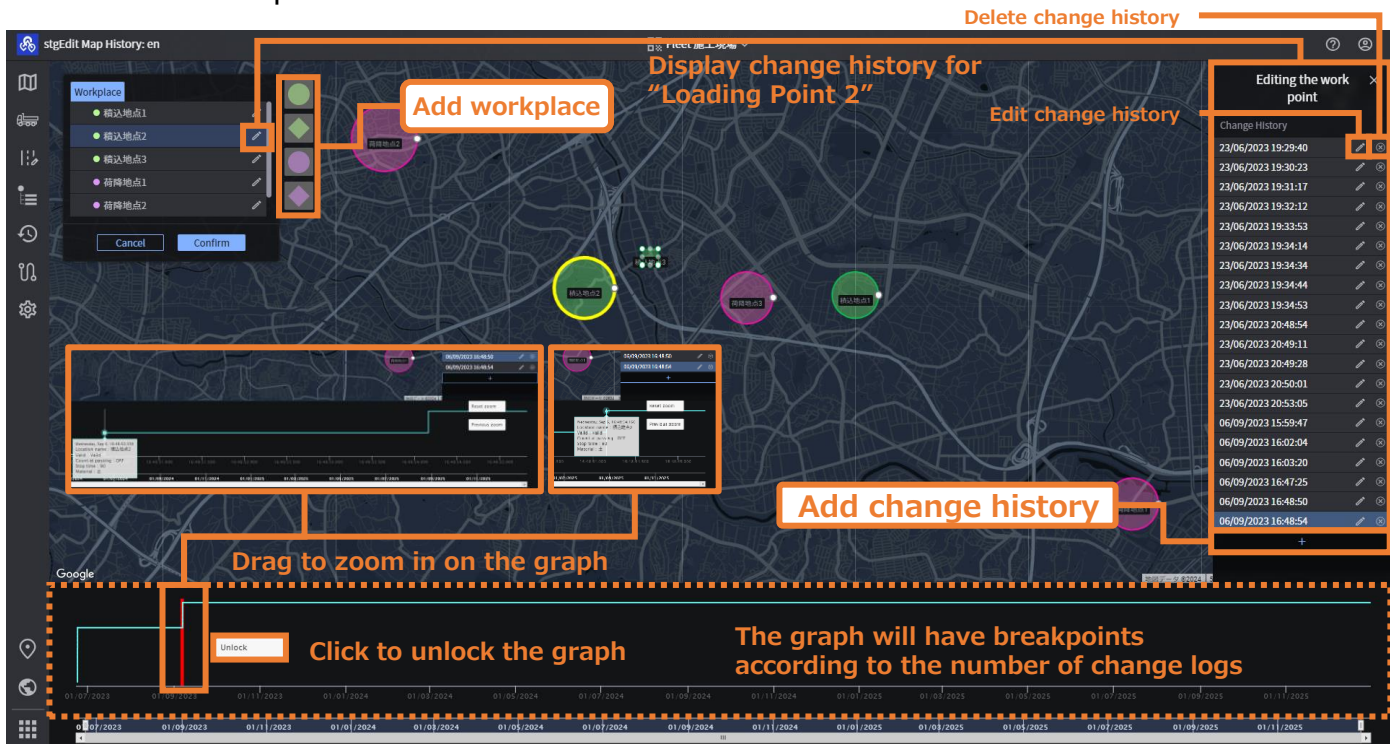
There are many loading histories recorded at 'Loading Point 3,' which is located along the transport route.



I want to mark 'Loading Point 3' as invalid and delete the extra loading histories all at once.

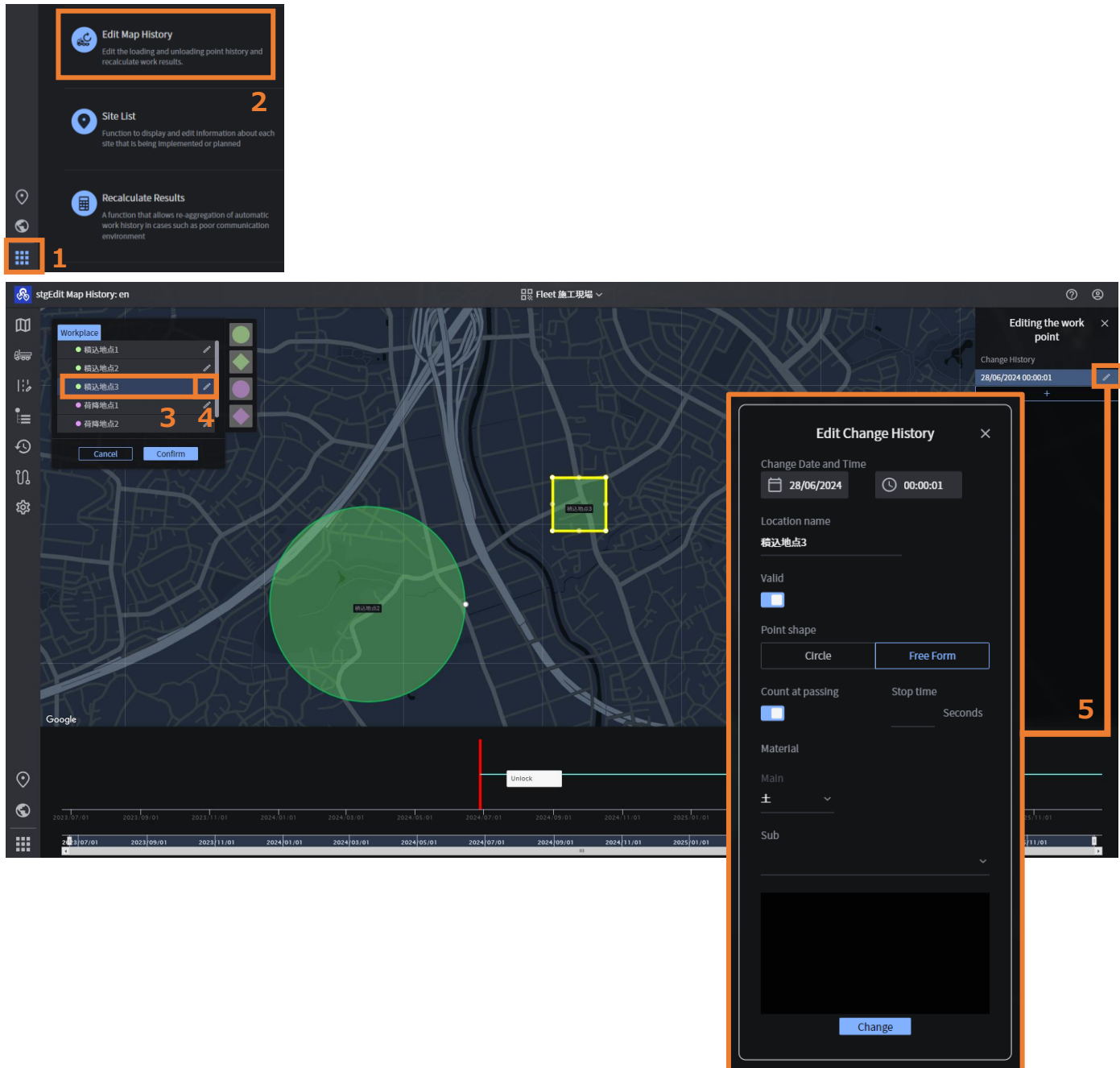


■ Function description

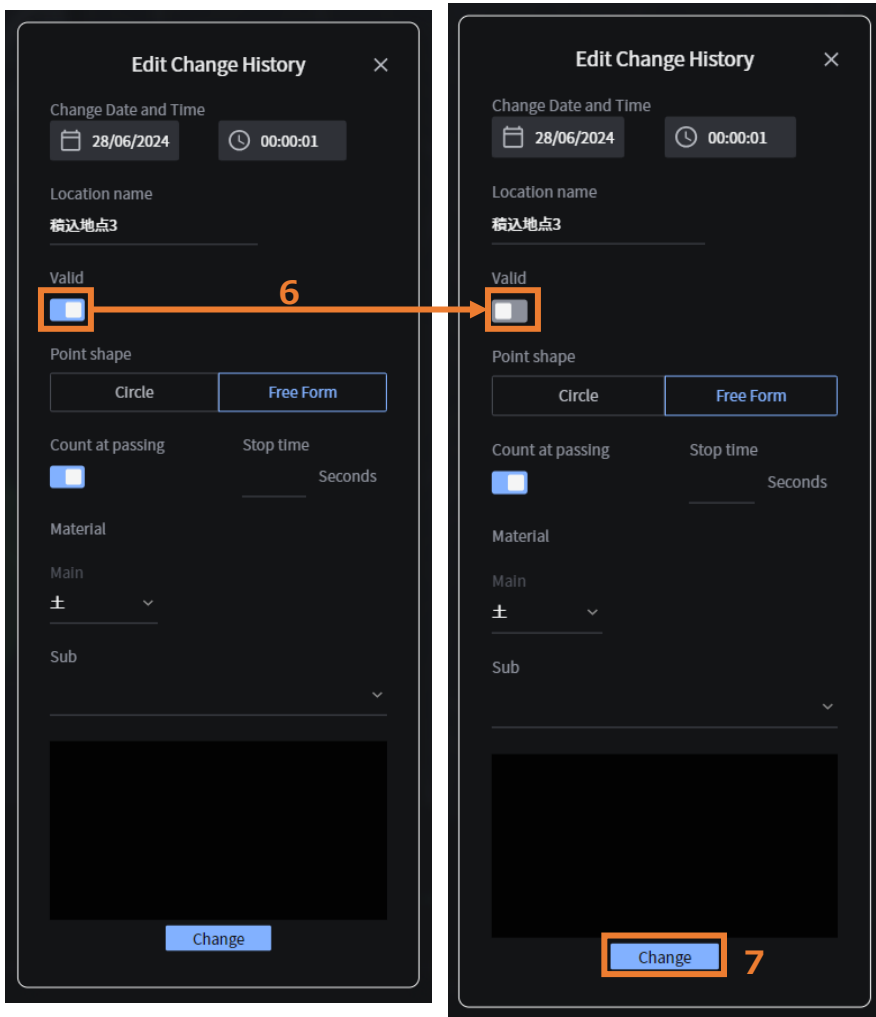


Edit Map History - Recalculation steps

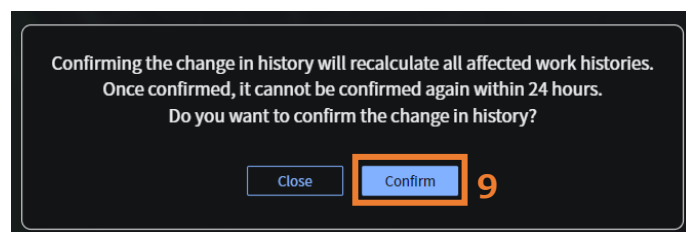
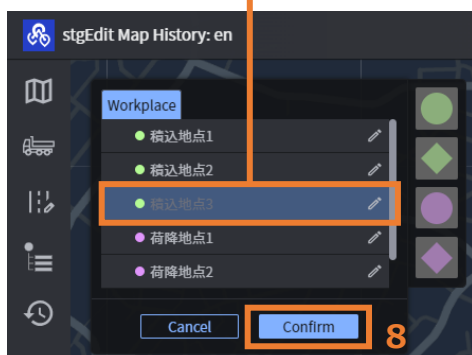
1. Press “Global Navigation” in the bottom left corner of the screen
2. Click on “Edit Map History”
3. Select the work point you want to edit
4. Click the edit icon
5. Click the edit icon for “2024/06/28 00:00:01” displayed in the “Change History”
The change history edit window will open.



6. Toggle the "Valid" switch to Invalid
- Other items can also be changed as needed.
7. Click on "Change"
8. Click on "Confirm"
9. Click on "Confirm"



The text will be grayed out as the workplace has been changed to invalid



Before recalculation

stgWork History List: en

Fleet 施工现场

Work history

Date28/06/2024

TypeAll

Vehicle日向

LocationAll

MaterialAll

GroupAll

Deleted

Construction period23/06/2023 - 31/12/2025

Download CSV

Add work history

Edit category	Reason for deletion	Type name	Work date and time	Location name	Material name	Unit body weight (t/m3)	Vehicle name	Maximum load volume (kg)	Maximum load capacity (m3)	Loading weight (kg)	Load rate (%)	Loading vehicle
		Load	28/06/2024 08:03:51.000	横込地点2	土	1.8	日向	22,400	18			-
		Load	28/06/2024 08:06:00.000	横込地点3	土	1.8	日向	22,400	18			-
		Unload	28/06/2024 08:13:30.000	荷降地点3	土	1.8	日向	22,400	18			-
		Load	28/06/2024 08:21:30.000	横込地点3	土	1.8	日向	22,400	18			-
		Load	28/06/2024 08:24:15.000	横込地点2	土	1.8	日向	22,400	18			-
		Load	28/06/2024 08:26:36.000	横込地点3	土	1.8	日向	22,400	18			-
		Unload	28/06/2024 08:34:06.000	荷降地点3	土	1.8	日向	22,400	18			-
		Load	28/06/2024 08:42:06.000	横込地点3	土	1.8	日向	22,400	18			-
		Load	28/06/2024 08:44:51.000	横込地点2	土	1.8	日向	22,400	18			-
		Load	28/06/2024 08:47:12.000	横込地点3	土	1.8	日向	22,400	18			-
		Unload	28/06/2024 08:54:42.000	荷降地点3	土	1.8	日向	22,400	18			-
		Load	28/06/2024 09:02:42.000	横込地点3	土	1.8	日向	22,400	18			-
		Load	28/06/2024 09:05:27.000	横込地点2	土	1.8	日向	22,400	18			-
		Load	28/06/2024 09:08:00.000	横込地点3	土	1.8	日向	22,400	18			-
		Unload	28/06/2024 09:15:30.000	荷降地点3	土	1.8	日向	22,400	18			-
		Load	28/06/2024 09:23:30.000	横込地点3	土	1.8	日向	22,400	18			-
		Load	28/06/2024 09:26:15.000	横込地点2	土	1.8	日向	22,400	18			-
		Load	28/06/2024 09:28:48.000	横込地点3	土	1.8	日向	22,400	18			-
		Unload	28/06/2024 09:36:18.000	荷降地点3	土	1.8	日向	22,400	18			-



After recalculation

stgWork History List: en

Fleet 施工现场

Work history

Date28/06/2024

TypeAll

Vehicle日向

LocationAll

MaterialAll

GroupAll

Deleted

Construction period23/06/2023 - 31/12/2025

Download CSV


Add work history

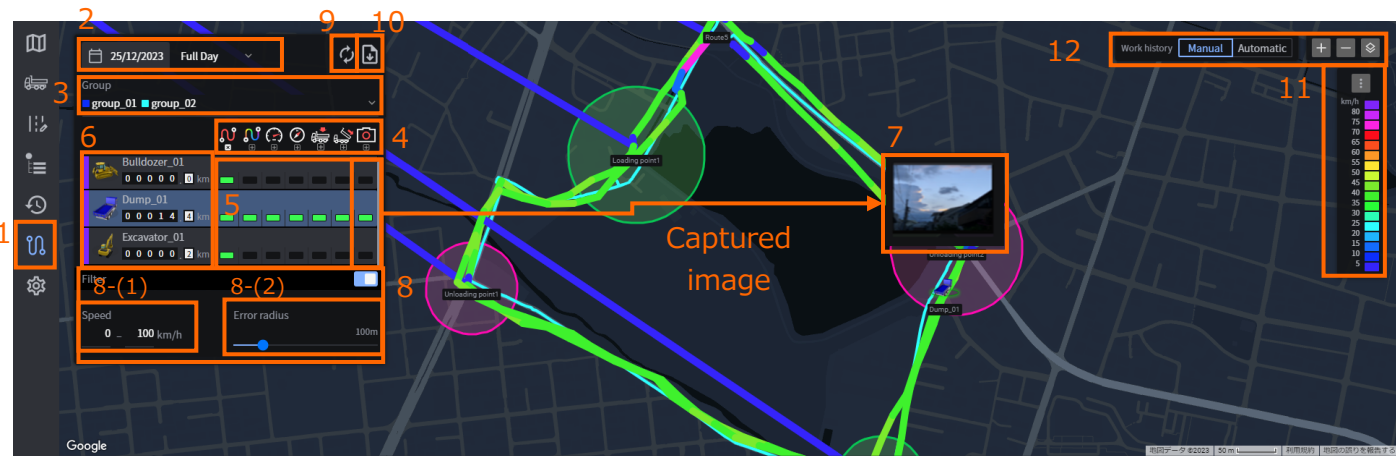
Type name	Work date and time	Location name	Material name	Unit body weight (t/m3)	Vehicle name	Maximum load volume (kg)	Maximum load capacity (m3)	Loading weight (kg)	Load rate (%)	Loading and unloading vehicle name	Group name	Edit cat
Load	28/06/2024 08:03:51.000	横込地点2	土	1.8	日向	22,400	18			-	-	
Unload	28/06/2024 08:13:30.000	荷降地点3	土	1.8	日向	22,400	18			-	-	
Load	28/06/2024 08:24:15.000	横込地点2	土	1.8	日向	22,400	18			-	-	
Unload	28/06/2024 08:34:06.000	荷降地点3	土	1.8	日向	22,400	18			-	-	
Load	28/06/2024 08:44:51.000	横込地点2	土	1.8	日向	22,400	18			-	-	
Unload	28/06/2024 08:54:42.000	荷降地点3	土	1.8	日向	22,400	18			-	-	
Load	28/06/2024 09:05:27.000	横込地点2	土	1.8	日向	22,400	18			-	-	
Unload	28/06/2024 09:15:30.000	荷降地点3	土	1.8	日向	22,400	18			-	-	
Load	28/06/2024 09:26:15.000	横込地点2	土	1.8	日向	22,400	18			-	-	
Unload	28/06/2024 09:36:18.000	荷降地点3	土	1.8	日向	22,400	18			-	-	
Load	28/06/2024 09:47:03.000	横込地点2	土	1.8	日向	22,400	18			-	-	
Unload	28/06/2024 09:57:06.000	荷降地点3	土	1.8	日向	22,400	18			-	-	
Load	28/06/2024 10:07:51.000	横込地点2	土	1.8	日向	22,400	18			-	-	
Unload	28/06/2024 10:17:54.000	荷降地点3	土	1.8	日向	22,400	18			-	-	
Load	28/06/2024 10:28:39.000	横込地点2	土	1.8	日向	22,400	18			-	-	
Unload	28/06/2024 10:38:42.000	荷降地点3	土	1.8	日向	22,400	18			-	-	
Load	28/06/2024 10:49:27.000	横込地点2	土	1.8	日向	22,400	18			-	-	
Unload	28/06/2024 10:59:30.000	荷降地点3	土	1.8	日向	22,400	18			-	-	
Load	28/06/2024 11:10:15.000	横込地点2	土	1.8	日向	22,400	18			-	-	

Traveling History


Traveling history on a selected date can be displayed for each terminal in use.


■ Map screen

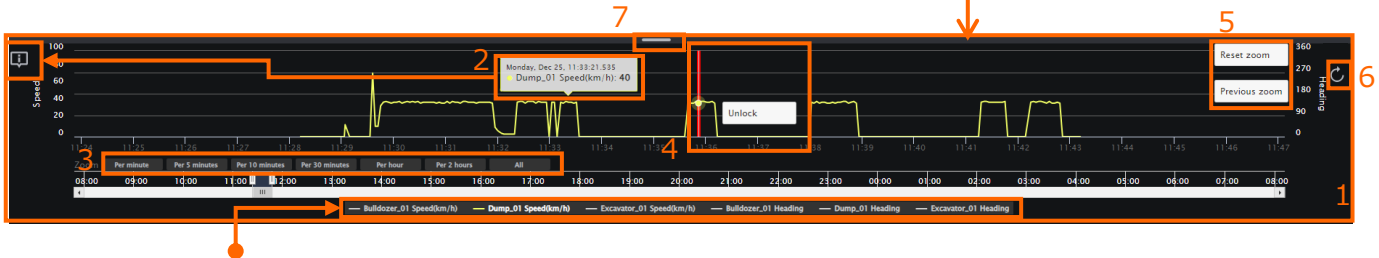
1. Select "Traveling history".
2. Select the date you want to see the traveling history.
You can narrow down the results in a time frame.
3. You can narrow down the vehicle by specifying a group.
4. Clicking the icon allows the collective selection/batch deselection of, from left, "Trajectory", "Speed distribution", "Speed", "Heading", "Load", "Unload", and "Captured image"
 - "Speed distribution" : A color appears on the trajectory according to the speed of the selected vehicle.
 - "Heading" : Shows the orientation of the vehicle. Supposing that the true north is 0, it indicates the direction by a value up to 359 in the clockwise direction.
 - "Load/unload" : Load work time is indicated in **green**, and unloading work time is indicated in **pink**.
 - "Captured image" : Photographed image is displayed when the "Drive recorder" function is turned on in the mobile application.
5. "Video" : The captured images will be output as a frame-by-frame video.
5. You can also put a check mark for each login terminal.
6. The vehicle identification color, icon showing the azimuth angle of the vehicle, name of the vehicle, and the total travel distance are displayed.
You can change the color by clicking the color part for vehicle identification.
7. You can check the camera image shot on the mobile application.
8. Filtering of display contents is possible. Filtering can be performed under the following conditions when this function is set to ON.
 - 8-(1) Only the traveling history within the input velocity range is displayed on the graph (Refer to hiding other than speed in the range.).
 - 8-(2) Low-accuracy position data can be excluded and displayed (Refer to "Error radius".).
The smaller the error radius, the more accurate position information is narrowed down.
9. You can reload the screen while keeping the selected status (displayed only when you are viewing the record of the operation date).
10. Export the traveling history as a CSV file.
11. Legend display of speed distribution
According to the legend, the traveling locus is colored.
You can edit the color of the speed distribution by clicking  on the top of the legend.
12. Allows you to select the method for registering the data to show on the work history, adjust the zoom level of the map, and switch the map type (standard/Google Maps/Aerial photography).



■ Graph

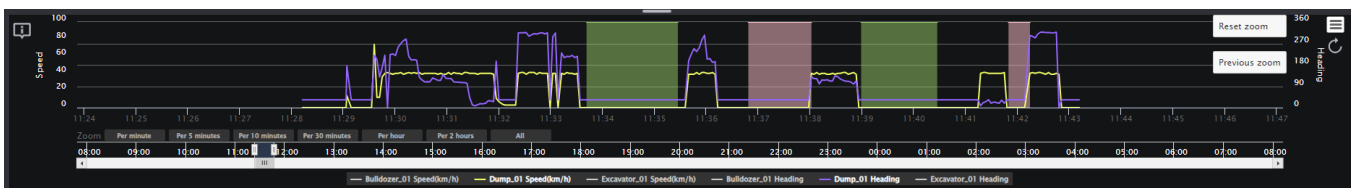
1. The result of checking at 4 and 5 of the map screen is displayed on the graph.
You can zoom in by dragging the graph.
2. Move the mouse cursor to the speed/azimuth graph, and then the velocity/azimuth angle of the time will be displayed.
Click  to switch the visibility of the blowing out of the graph.
3. You can specify the time unit for showing the graph.
4. Click the graph to fix the display time of the map.
5. You can return the zoom level when the graph is enlarged.
Press Previous Zoom to return to the previous zoom level.
Press Reset Zoom to completely reset the zoom level.
6. Click to reset the ratio of the height of the graph to the height of the map.
7. You can adjust the height of the graph.

If you select an arbitrary range in the graph with the mouse, you can display only the range. 



You can switch the visibility of the graph by clicking the legend.

If the graph (speed, azimuth, loading, and unloading) is shown:



Note

- For an excavator, the direction is drawn based on the information of the electronic compass of the smartphone.
If the speed of a vehicle other than an excavator is 10 km/h or more, the direction is drawn based on the latitude and longitude information acquired by satellite communication.
- The speeds of terminals are calculated by their maker's own methods and have nothing to do with the application.
Note that the speed indicated on this screen may differ from the actual speed.

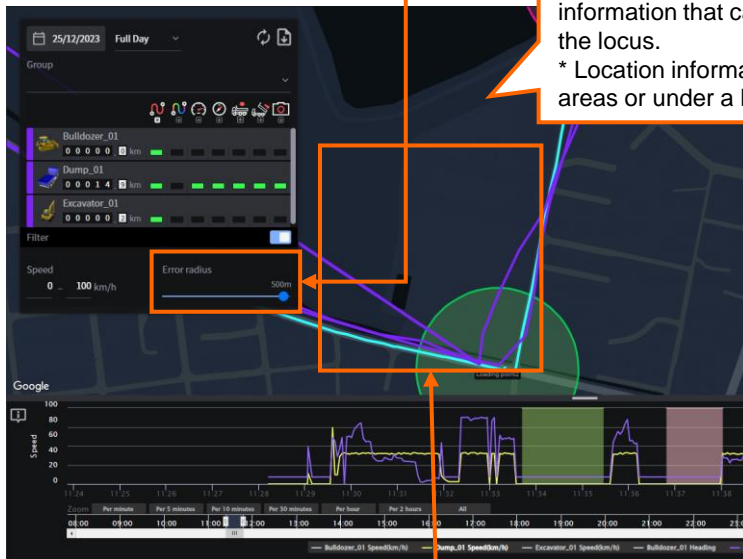
■ Median error radius

Since the location information depends on external factors such as satellite acquisition status, some errors will occur.

By setting the error radius, only the data with higher accuracy can be displayed.

Error radius means “It is likely that the terminal is within that radius centering on the acquired latitude and longitude”. The smaller the error radius is, the higher the accuracy of the positional information becomes.

Error radius: 500 m



For example, if the error radius is set to 500 m, the location information having an error radius of 500 m or more and the location information that cannot be captured by the satellite are excluded from the locus.

* Location information may not be successfully acquired in mountain areas or under a high voltage cable.

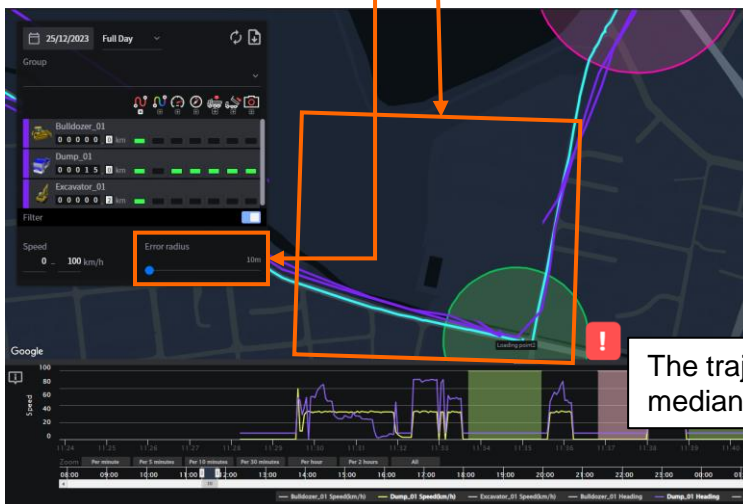
If satellite acquisition is not possible in the first place, the problem may result from some cause other than the application.

The acquired location information is sent to the server through mobile networks.

If satellite acquisition fails, the most recently acquired location information is recorded every three seconds.

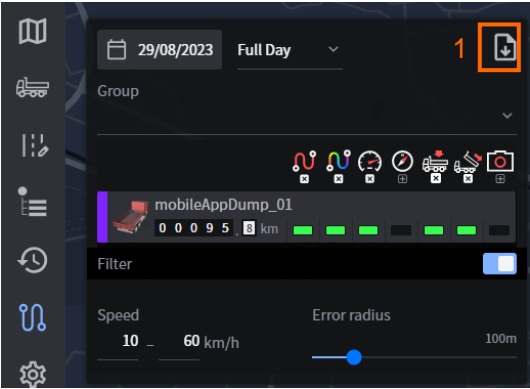
! Even if a machine is traveling under a poor mobile network environment, it is possible to record the traveling history of the machine by moving it to an area that provides a good mobile network before it logs out of the application.

Error radius: 10 m



The trajectory larger than the median error radius will be hidden.

■ Save traveling history



1. Click .

The file is downloaded in ZIP format.
The vehicle ID, vehicle name, maximum loading capacity (kg), traveling date, traveling time (millisecond), time zone, latitude, longitude, error radius (m), speed (km/h), azimuth, battery level (%), and traveling distance (km) are output on the CSV file.

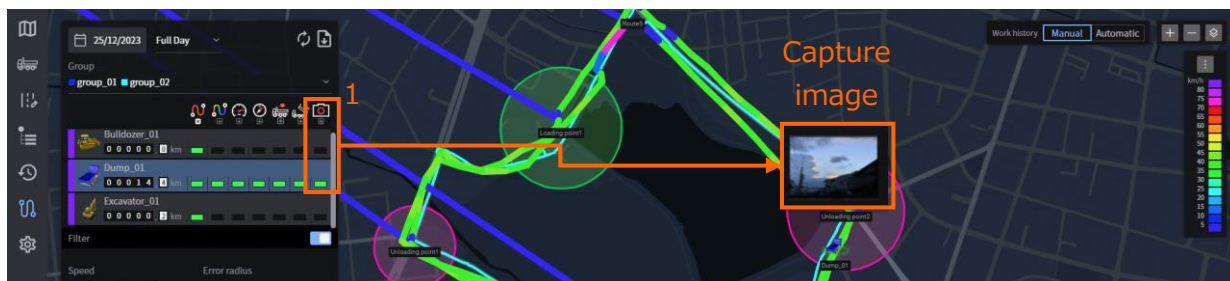
Vehicle ID	Vehicle name	Maximum payload (kg)	Travel date	Travel time	Travel time (milliseconds)	Timezone	Latitude	Longitude	Error radius (m)	Speed (km/h)	Heading	Battery level (%)	Travel distance (km)
303	mobileAppDump_01	9800	2023/8/29	9:03:40	115	+09:00	37.39574	140.329957	20	0	184.1004	100	0
303	mobileAppDump_01	9800	2023/8/29	9:03:43	527	+09:00	37.39578	140.329922	20	2	213.4689	100	0.005
303	mobileAppDump_01	9800	2023/8/29	9:03:47	665	+09:00	37.39574	140.329957		0	183.6187	100	0.01

Export folder name: “drivereport-{Construction site ID}-date.zip”
Export file name: “drivereport-{Construction site ID}-date-{Vehicle ID}.csv”

■ Check the camera image shot on the mobile application

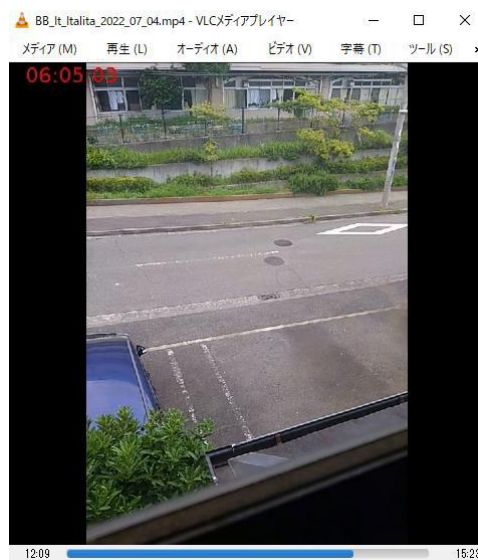
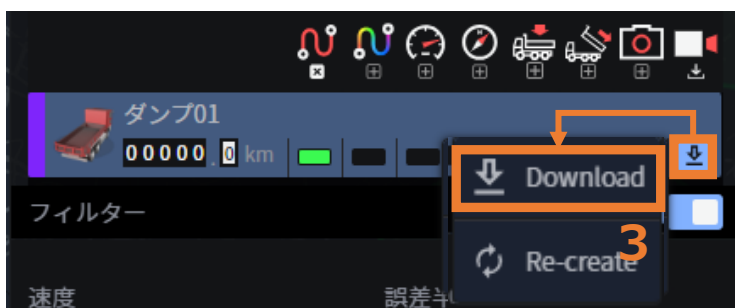
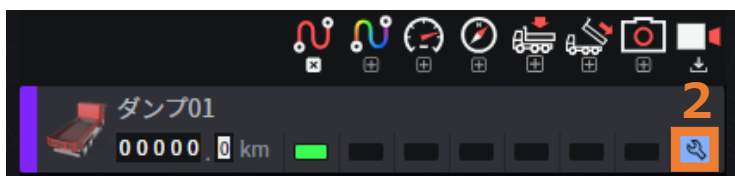
When using the mobile application, you can check the image taken by the camera of the terminal by turning on the drive recorder function from the setting screen of the mobile application.

1. Images taken by the camera of the terminal whose check mark has been inserted are displayed following the icon.



! On the mobile application,

- Images are taken when “Setting” → “Dashcam” are set to ON.
- If “Record only within point” is set to ON, images are recorded only in the loading or unloading point.
- Recording takes place at intervals of the “Recording interval” setting.
- Only images as displayed on the application screen are recorded.
- During image recording, “● REC” is displayed in the upper left of the screen.




2. On the vehicle list of the driving history, you can create a video file. While the file is being created, the icon will change(📷).
3. Once the creation is complete, you can output the video file by pressing the "Download" button.

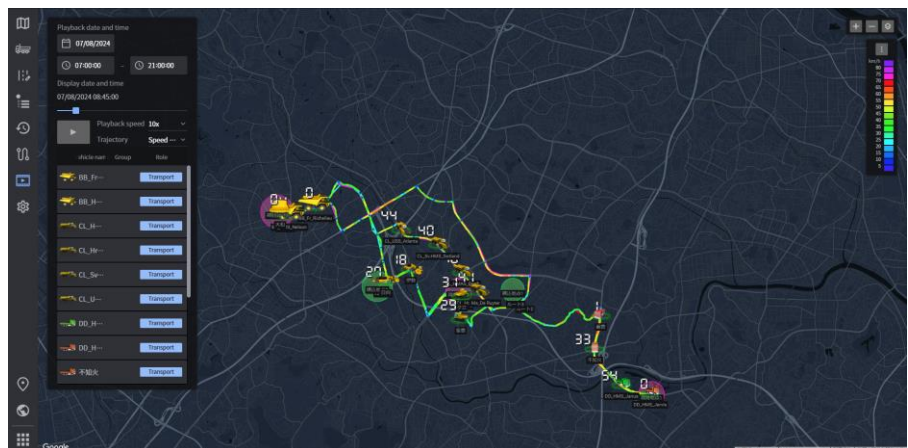
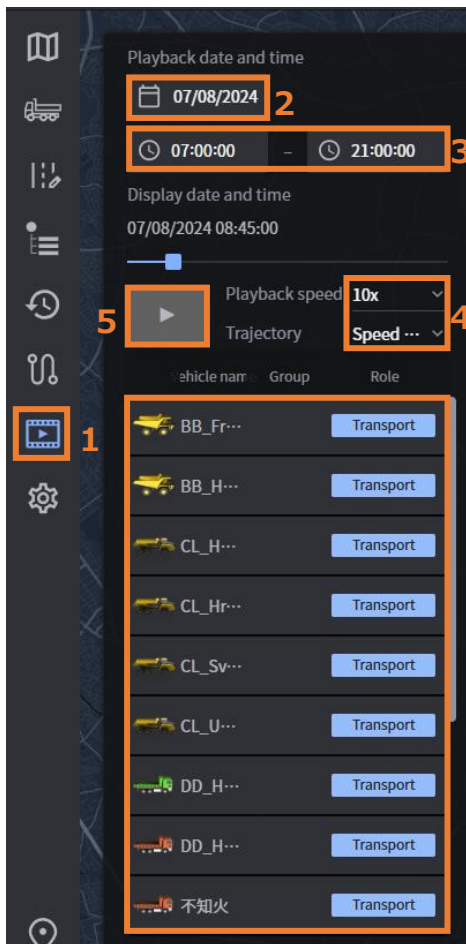
Playback driving history video

You can view the driving history for any selected date in video format.

[Operating Procedure]

1. Press the "Playback driving history video" menu.
2. Select the date.
3. Enter the time period for playback.
4. Adjust the playback speed as needed.
Settings can be changed during playback, but it may cause the screen to respond m
5. Press the play button.
Adjusting the playback time using the seek bar is only possible while the video is pa

 Please note that loading may take time when there are many logged-in vehicles or when the playback duration is long.

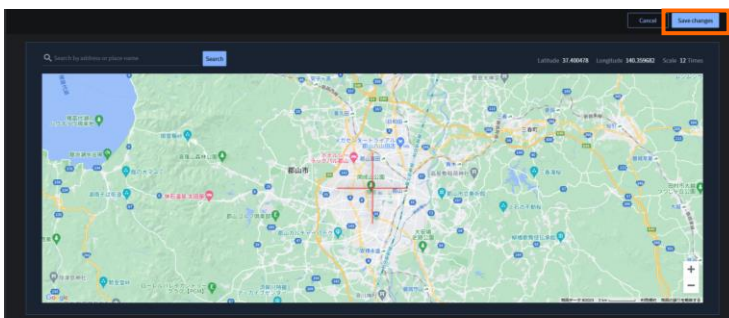
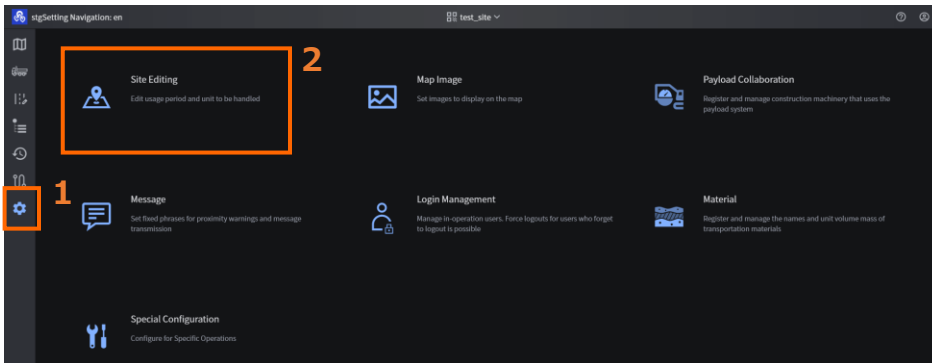


Displays vehicle information for vehicles that logged in on the selected date.

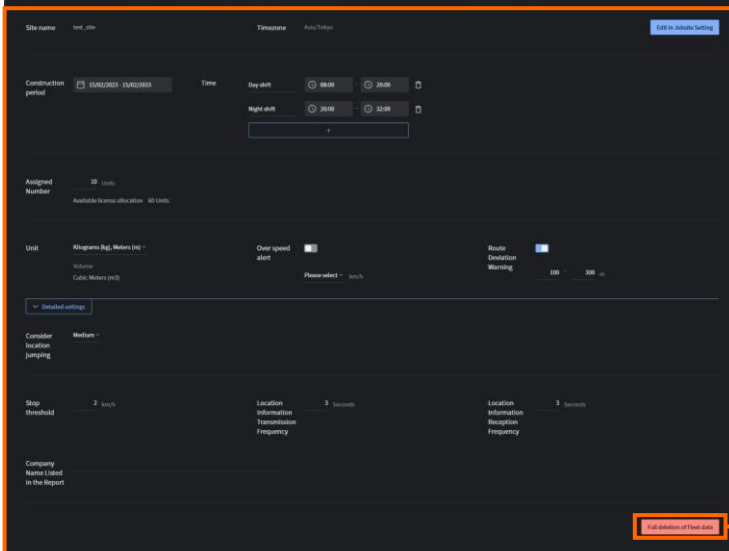
Edit Jobsite Info

You can change various settings of the construction site.

1. Display the project setting screen.
2. Click “Edit jobsite”.



After the change is complete, click “Save change”.

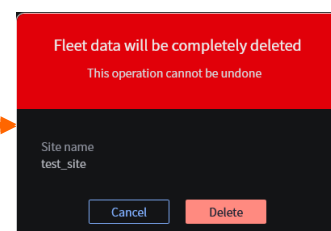


You can change the current setting information.

! For details on the items, refer to [“Jobsite Registration”](#).

Click “Delete” to delete the applicable site.

! **Note that after deletion, you cannot return the screen to its original state.**

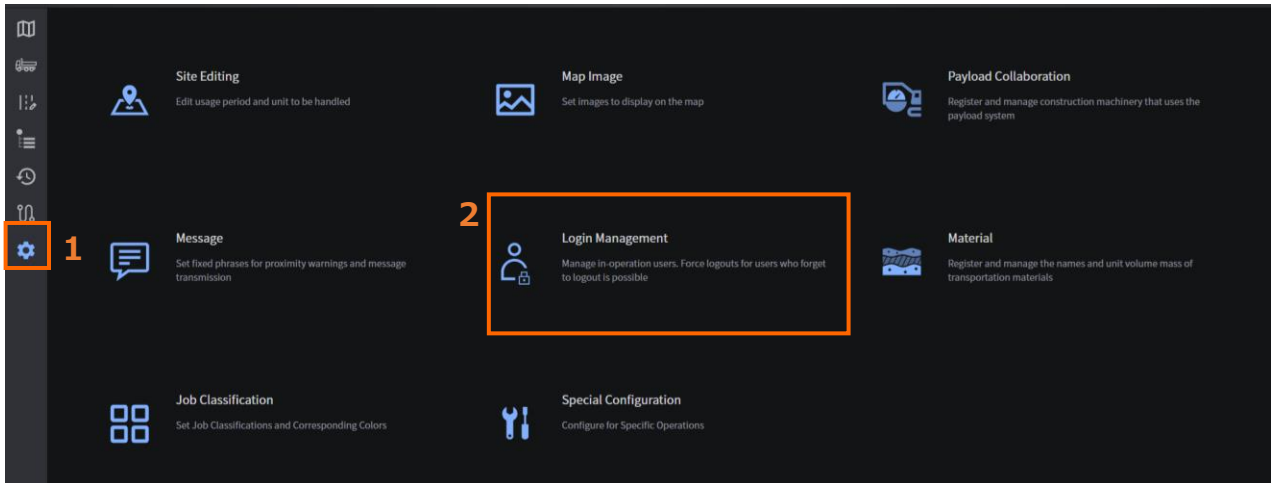


Login Management

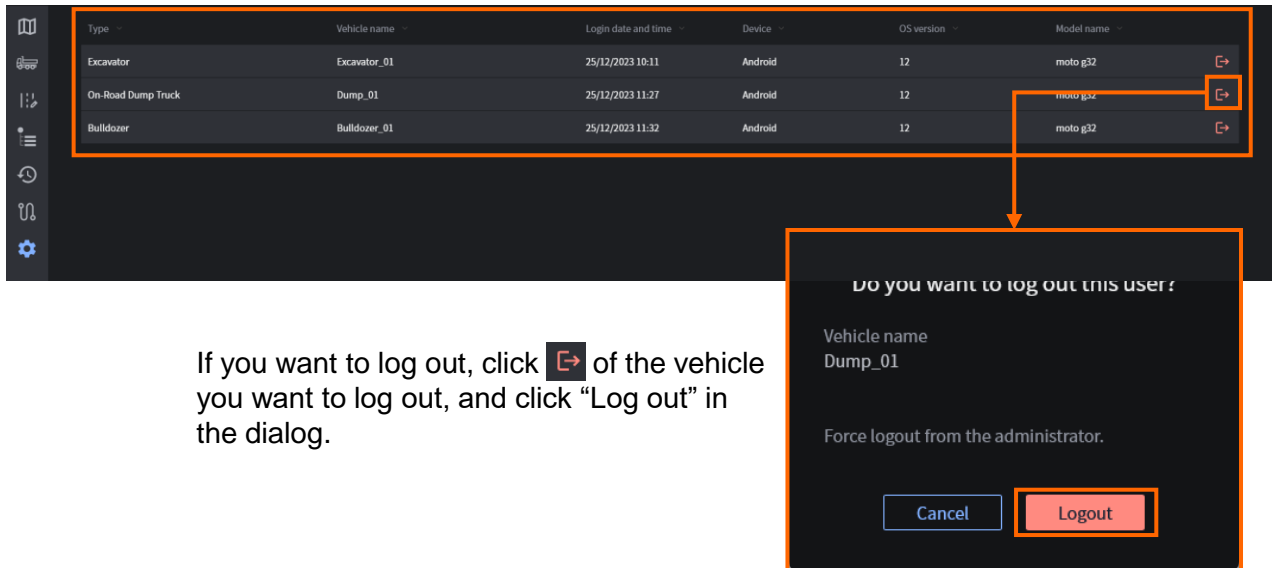
You can manage running users.


Forced logging out of a user who has forgotten to log out is also possible.

1. Click the “Project settings” icon.
2. Click “Manage login”.



The user who is logging in is displayed in the list.



If you want to log out, click  of the vehicle you want to log out, and click “Log out” in the dialog.

Operational Vehicle Daily Report

You can select recipients from the addresses registered as site stakeholders and automatically send a daily vehicle operation report in PDF format as an email attachment.

[How to check “Operational Vehicle Daily Report”]

1. Click on “Performance”
2. Click on “Operational Vehicle Daily Report”

You can check it.

Pressing "Auto-transmission Settings" will navigate you to the [auto send settings menu](#).

1

Report name

ぜんぶ	Auto-report Transmission Setting >
サンプルレポート	Auto-report Transmission Setting >
プリセット 1	Auto-report Transmission Setting >

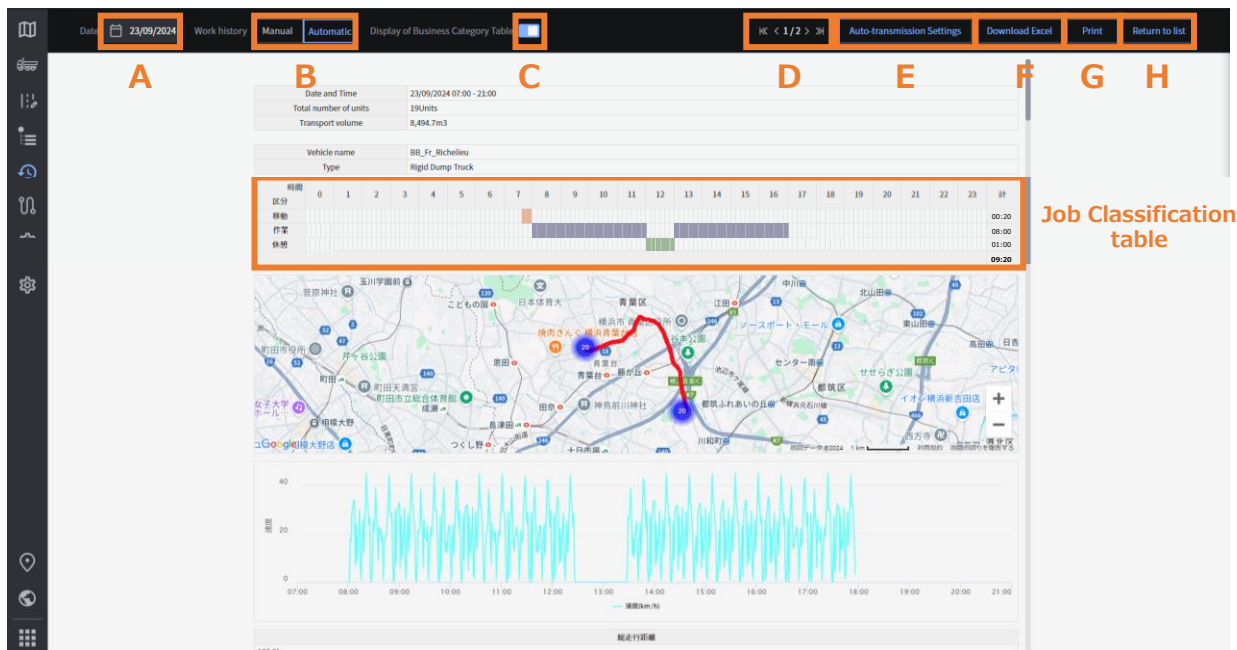
Operational Vehicle Daily Report

Operational Vehicle Daily Report

Auto-transmission Settings >

[Screen description]

- A) Date selection
- B) Toggle between manual/automatic work history
Work history display on the map and unloading history in Excel will reflect the settings
- C) Toggle display of the Job classification table
- D) Next/previous page buttons
If there are more than 10 active vehicles for the selected day, they will be displayed across multiple pages
- E) Open the [automatic transmission settings menu](#)
- F) Download Excel
Details are explained on the "[Excel Download of Operational Vehicle Daily Report](#)"
- G) Print
Printing and PDF downloading are available
- H) Return to list
Returns to the "Performance" menu



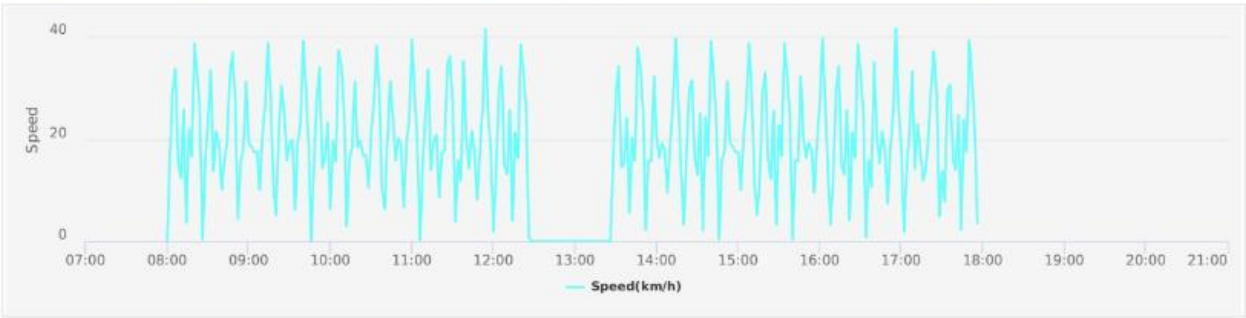
[Specifications of the Operational Vehicle Daily Report]

The report displays the driving trajectory, loading/unloading work history, speed graph, Job Classification, and distance traveled for all vehicles that operated on the output date.

Date and Time	02/09/2024 07:00 - 21:00
Total number of units	19台
Transport volume	7,516.80m3

The total transportation performance of all vehicles operating under the "Transport" role will be displayed

Vehicle name	BB_Fr_Richelieu
Type	Rigid Dump Truck



Total Mileage
186.87km



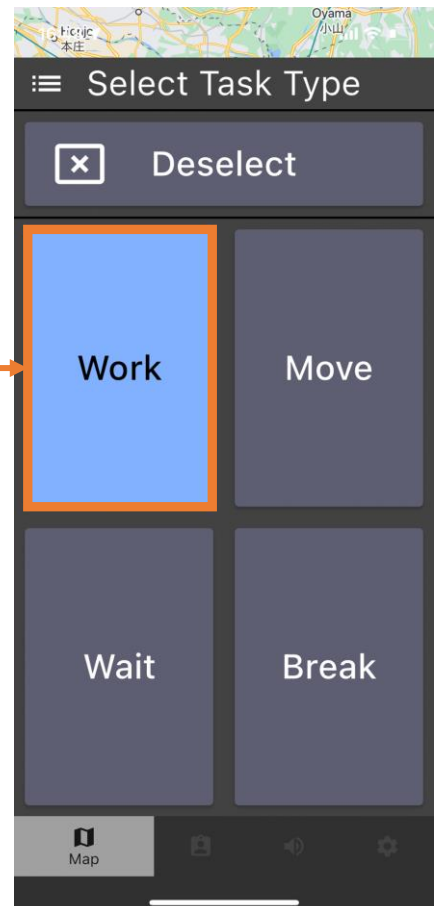
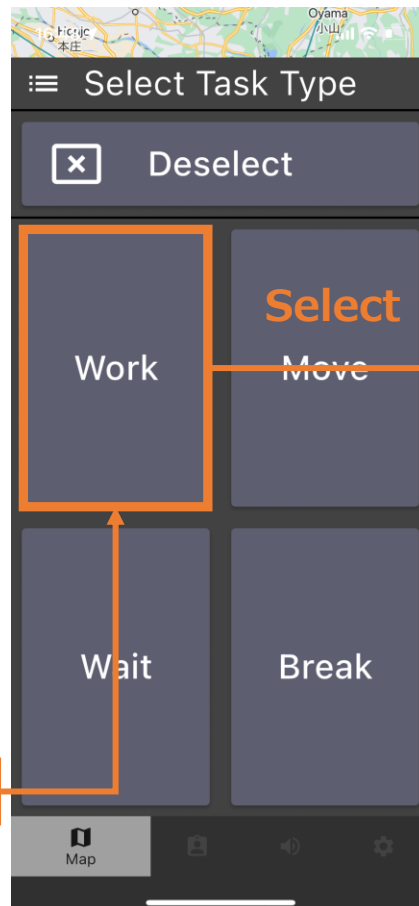
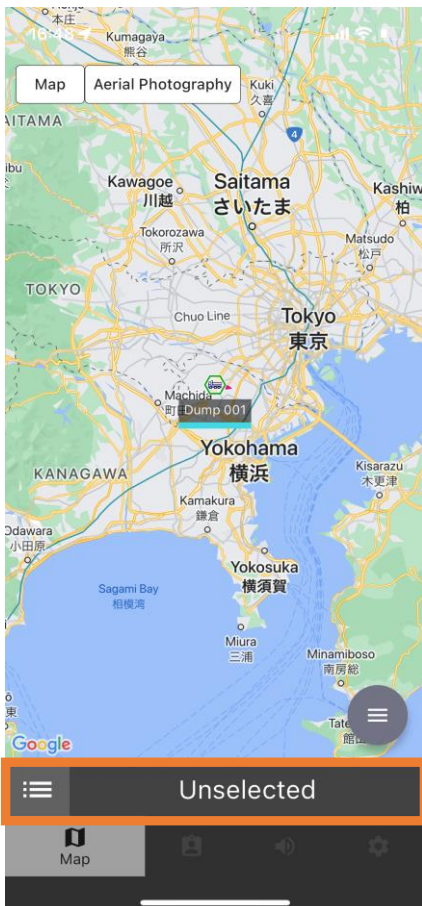
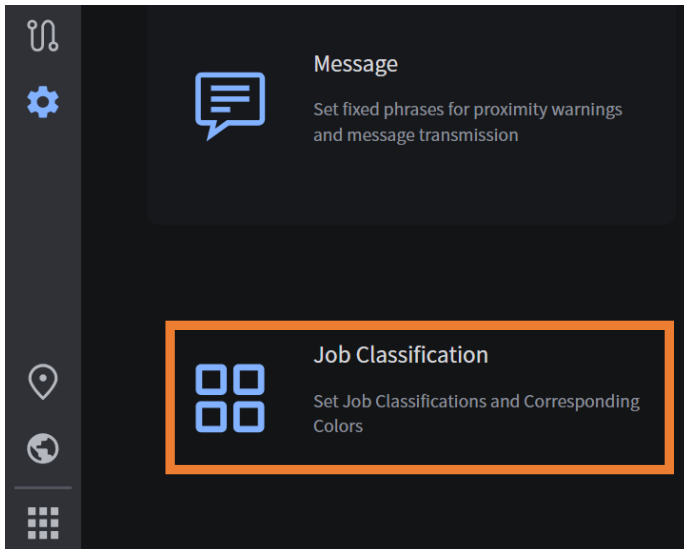
If the use of "Job Classification" is turned on, the driving distance will be displayed by "Job Classification"



Display two vehicles per page

[How to Display Job Classification in the Operational Vehicle Daily Report]

The "Job Classification" selected by the operator in the mobile app will be displayed in the Driver's Daily Report. The "Job Classification" registration feature can be used regardless of the vehicle's role. Please note that the feature needs to be enabled in advance on the Web app, so refer to the "[Job Classification](#)" section for details.



[Excel Download of Operational Vehicle Daily Report]

Operational Vehicle Daily Report (per vehicle)

Vehicle nameBB_Fr_Richelieu

TypeRigid Dump Truck

Type of Work

Model

Management Number

Registration Number

Driver's Name

Assistant's Name

Speed Distribution

Start Date and Time2024/09/29 08:00

End Date and Time2024/09/29 17:56

Task type

Category	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Move																									0:20
Work																									8:00
Break																									1:00
																									9:20

Travel distance

Category	Travel distance(km)
Move	0.5
Work	186.4
Total Mileage	186.9

Unloading History

Date and Time	Unloading Work Location
2024/09/29 08:15	荷役場#2
2024/09/29 08:47	荷役場#2
2024/09/29 09:08	荷役場#2
2024/09/29 09:59	荷役場#2
2024/09/29 10:01	荷役場#2
2024/09/29 10:28	荷役場#2
2024/09/29 10:55	荷役場#2
2024/09/29 11:52	荷役場#2
2024/09/29 11:48	荷役場#2
2024/09/29 12:17	荷役場#2
2024/09/29 13:41	荷役場#2
2024/09/29 14:08	荷役場#2
2024/09/29 14:55	荷役場#2
2024/09/29 15:02	荷役場#2
2024/09/29 15:29	荷役場#2
2024/09/29 15:56	荷役場#2
2024/09/29 16:28	荷役場#2
2024/09/29 16:51	荷役場#2
2024/09/29 17:18	荷役場#2
2024/09/29 17:45	荷役場#2
Transportation Frequency	20

Vehicle information, driver information, etc.

After downloading, you can add or delete fields as needed.

Speed distribution

Start date and time → Time of login

End date and time → Time of logout

Travel distance

Displays the travel distance for each work classification and the total travel distance.

Job classification

When selecting a Job classification in the mobile app, the corresponding color is applied.

Unload history

If unloading work is performed in the "Transport" role, a list of the history is displayed.

The history is displayed according to the "Manual/Automatic" selection status in the web app.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	Time	Speed(km/h)																			
41	08:01:57	0																			
42	08:02:00	0																			
43	08:02:03	1																			
44	08:02:06	1																			
45	08:02:09	3																			
46	08:02:12	6																			
47	08:02:15	7																			
48	08:02:18	25																			
49	08:02:21	20																			
50	08:02:24	12																			
51	08:02:27	3																			
52	08:02:30	0																			
53	08:02:33	7																			
54	08:02:36	14																			
55	08:02:39	15																			
56	08:02:42	18																			
57	08:02:45	33																			
58	08:02:48	42																			
59	08:02:51	47																			
60	08:02:54	50																			
61	08:02:57	51																			
62	08:03:00	50																			
63	08:03:03	51																			
64	08:03:06	49																			
65	08:03:09	45																			
66	08:03:12	41																			
67	08:03:15	31																			

Travel Speed Data Sheet

The speed distribution graph displayed on each vehicle's sheet is created based on the values in the data sheet.

If the data sheet is unnecessary, please hide it.

Smart Construction

124

[Auto-transmission Settings of Operational Vehicle Daily Report]

1. Choose either "Manual" or "Automatic" for the work history to be aggregated
2. Add recipients
The list of accounts registered as site-related personnel is displayed.
3. Select the sending period
4. Select the sending time
5. Specify the sending date or sending day of the week
6. Enter the email subject
7. Enter the email body
8. Click on "Save"

Operational Vehicle Daily Report Auto-transmission Settings

Work history: **Manual** Automatic 1

Destination: Fleet V5 **Add** 2

Transmission Period: 02/08/2024 - 02/10/2024 3

Transmission Time: 19:00 Target time: 07:00 - 18:00 4

Designated Transmission Date: 5

Designated Transmission Day: Sun Mon Tues Wed Thu Fri Sat

Email Title: 6

Email Body: 7

Language: English(US)

You can send a test message to the specified address

Click to add settings for sending

Cancel **Save** Delete 8

Test Send

Recipient List:

- ごまつさぼーと
- ふりーとV5 てすと01
- [B] テストユーザー
- [A] テストユーザー
- EB
- フロント 管理者
- FleetV5 TEST_AU
- FleetV5 TEST_NA

Test Report 受信トレイ ×

fleet_report@smartconstruction.com

To 自分 ▼

日本語に翻訳

Test Report

1個の添付ファイル・Gmail でスキャン済み ①

report.pdf

Email Address: @gmail.com

Cancel Send

Reports

■ About reports

The report sorts the data (loading/unloading history, traveling history) that can be obtained by using SMART CONSTRUCTION Fleet into various tables and graphs, arranges the data into a form that can be easily used as a site, and outputs the data in PDFs.

- From where to where, what, and how much did it transport? (daily/weekly/monthly)
- From where to where what, and how much did it transport? (cumulative total)
- Have the loading/unloading operations been completed as planned?
- Was the loading-to-loading cycle time on time as expected?
- Are there any points where dump trucks stopped significantly frequently in the transportation route?
- What is the percentage of downtime for each dump truck?

This feature allows you to check the following daily without hassle:

■ Expected utilization

Examples of utilizing it in the jobsite

Site manager:

Check whether the loading/unloading operations have been completed as planned.

Check whether the loading-to-loading cycle time was on time as expected.

Check whether there is one or more points where dump trucks stopped significantly frequently in the transportation route.

Check the percentage of downtime for each dump truck.

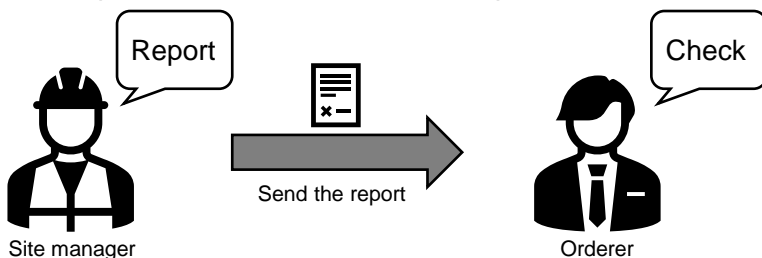


Examples of utilizing it externally

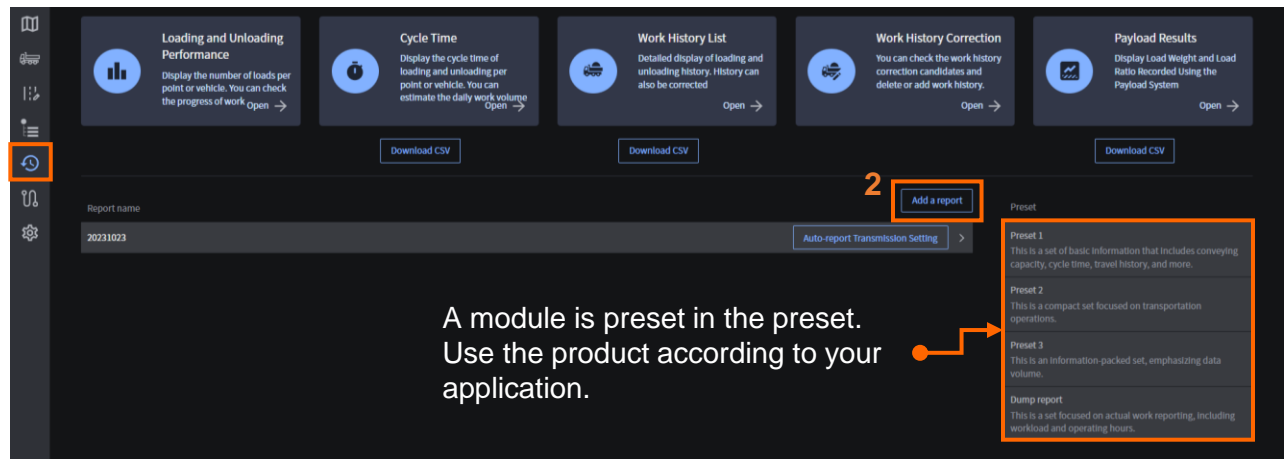
Site manager → Orderer or prime contractor:

Report how much what was transported from where to where (weekly).

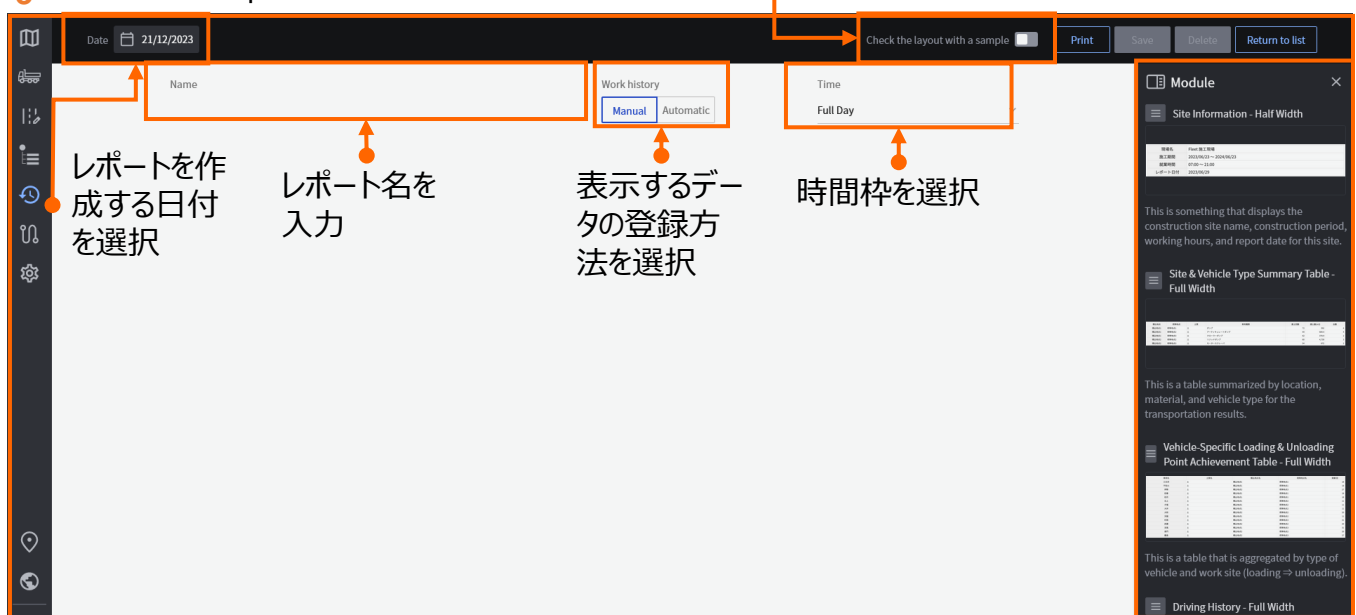
Report how much what was transported from where to where (monthly).



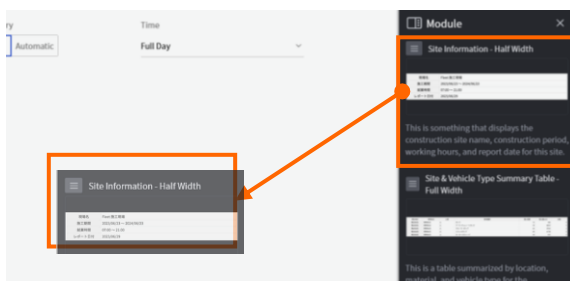
1. Click the “Results” icon.
2. Click “Add report”.
- You can create reports from presets.
3. Create report.



You can check the layout on the sample data.



Click and hold the button to select the module you want to add, then you can add it by drag-and-drop operation.



Module list



Modules are graphs, tables, etc. that can be added to a report.

Site information - Half width

Summary table of points and vehicle types - full width

Results table by loading/unloading point by vehicle - full width

Traveling history - full width

Traveling history - half width

Productivity Indicator - half width

Productivity chart - half width

Production volume progress chart - full width

Transfer drawing - overall width

Transport drawing by soil property - overall width

Operating status table by vehicle - full width

Productivity chart by vehicle - half width

Vehicle working time pie chart - half width

Cycle time histogram - half width

Cycle time table - half width

Operation status of jobsites - half width

Workload table by vehicle - full width

Working time table by vehicle - full width

Working time bar chart by vehicle - full width

Transportation history time chart - full width

Cycle diagram - full width

Ticket for transport - overall width

Image - full width

Image - half width

Daily report by company - Half width

Description of the modules

■ Site information - Half width

Site Information


Site name	Fleet construction site
Construction period	23/06/2023 ~ 23/06/2024
Time	07:00 ~ 21:00
Report date	21/12/2023

■ Summary table of points and vehicle types - full width

Shows the list of loading-unloading point pairs and the list for each soil property.

Site & Vehicle Type Summary Table Daily

Loading point	Unloading point	Material	Vehicle type	Number of material transports	Volume of material transported(m3)	Units
Loading point1	Unloading point1	soil	On-Road Dump Truck	72	392	4
Loading point1	Unloading point2	soil	Articulated Dump Truck	44	684.4	4

 If loading-unloading data cannot be acquired as a pair, it will not be reflected in the schedule.

■ Results table by loading/unloading point by vehicle - full width

Vehicle-Specific Loading & Unloading Point Achievement Table Daily

Vehicle name	Material name	Loading point name	Unloading point name	Performance Times
Vehicle01	soil	Loading point1	Unloading point1	18
Vehicle02	soil	Loading point1	Unloading point1	18

Shows the count, the soil volume, or the weight of the loaded vehicle or the loading/unloading point. The value to view can be switched by display switching.

You can switch the counting unit from date, week, and month from the settings. In addition, narrowing down by vehicle name is possible.

Setting

Display switching of actual values

Number of times

Material volume

Weight

Switching the aggregation unit

Day

Week

Month

Vehicle name ※ Partial match

Apply

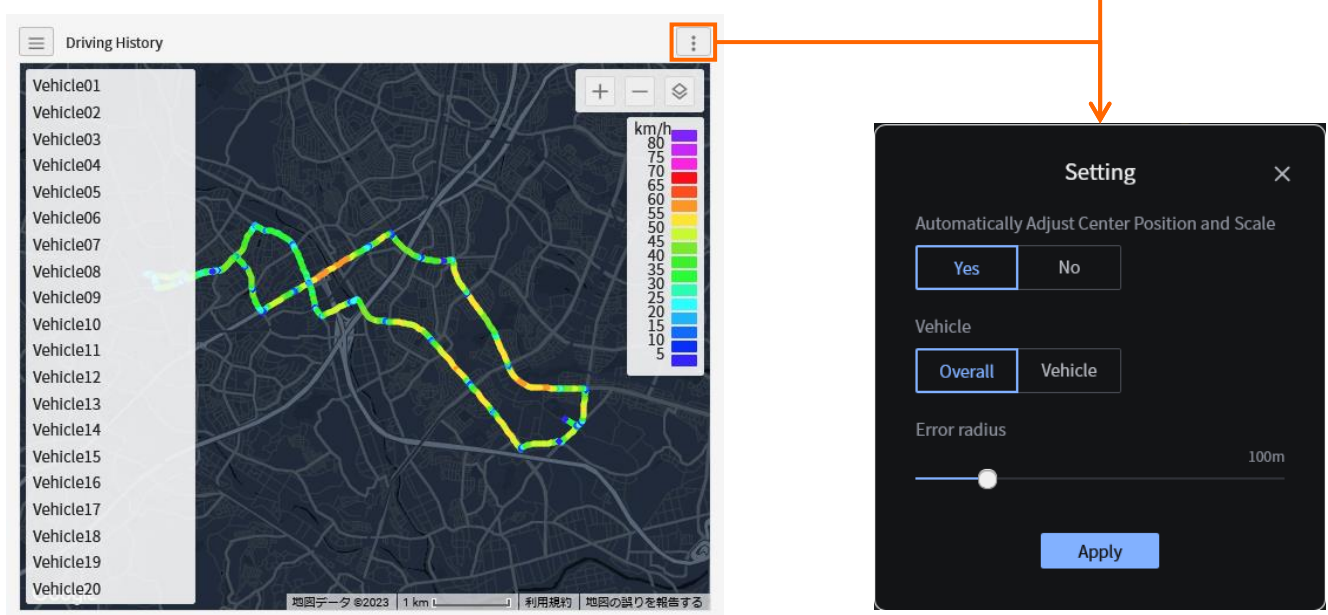
Smart Construction

129

Traveling history - full width

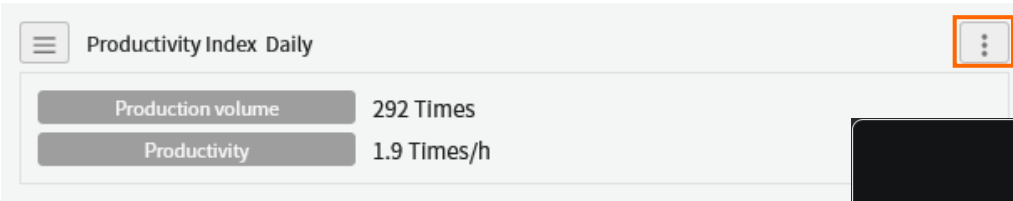


Traveling history - half width



“Automatic adjustment of center position and scale”, “Select vehicles”, and “Radius of error” can be set from the settings.

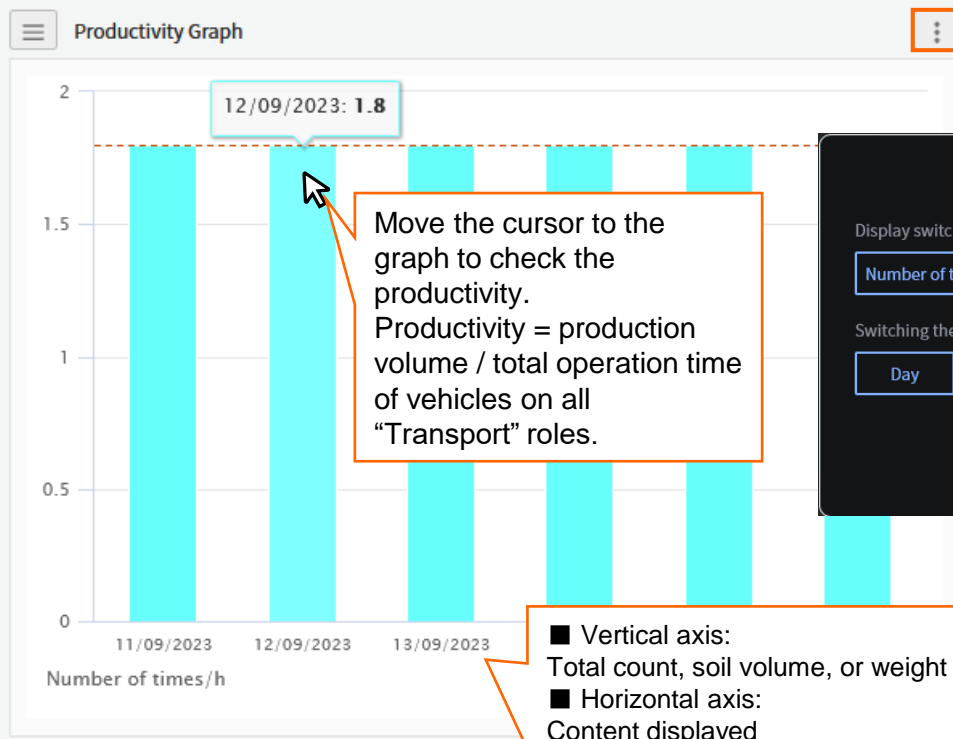
■ Productivity Indicator - half width



“Result value” and “Total unit” can be switched from the settings.

- ! Production volume = Total loading count
Productivity = production volume / total operation time of vehicles on all “Transport” roles.
- ! If data is aggregated on a daily basis with the operation date being specified, and a report is output in the middle of the time frame, the data is not displayed.

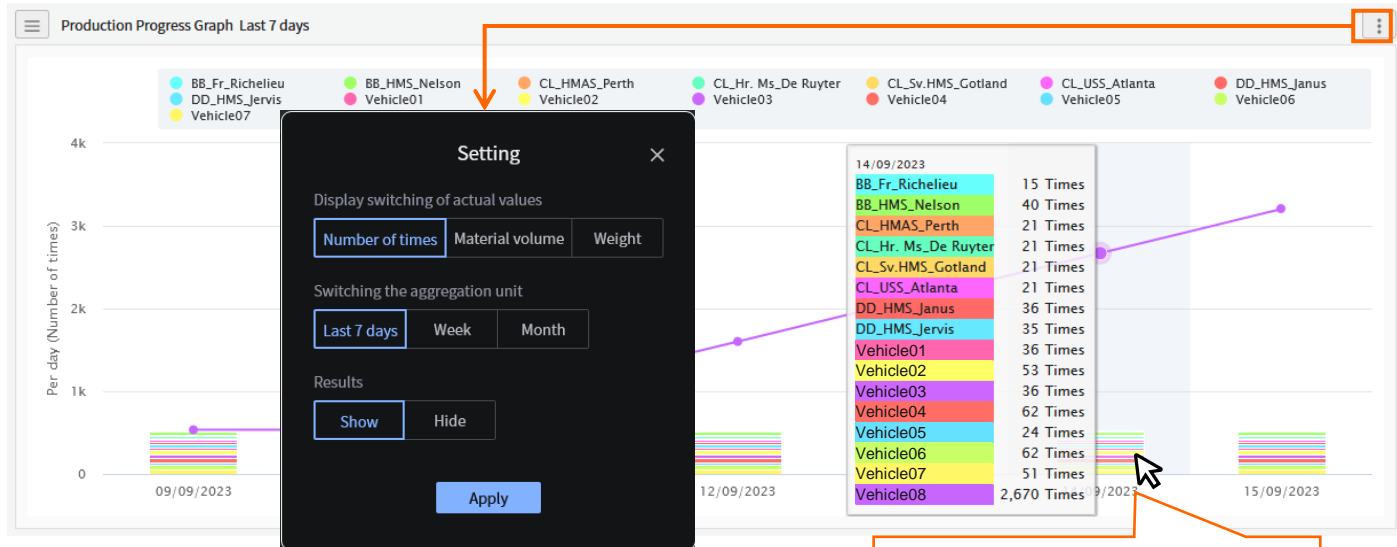
■ Productivity chart - half width



“Result value” and “Total unit” can be switched from the settings.

- Vertical axis:
Total count, soil volume, or weight of the loading result.
- Horizontal axis:
Content displayed
 - By month : Shows the month pointed out and the last seven months.
 - By week : Shows the week of the date pointed out and the last seven weeks.
 - By day : Shows the date pointed out and the last seven days.

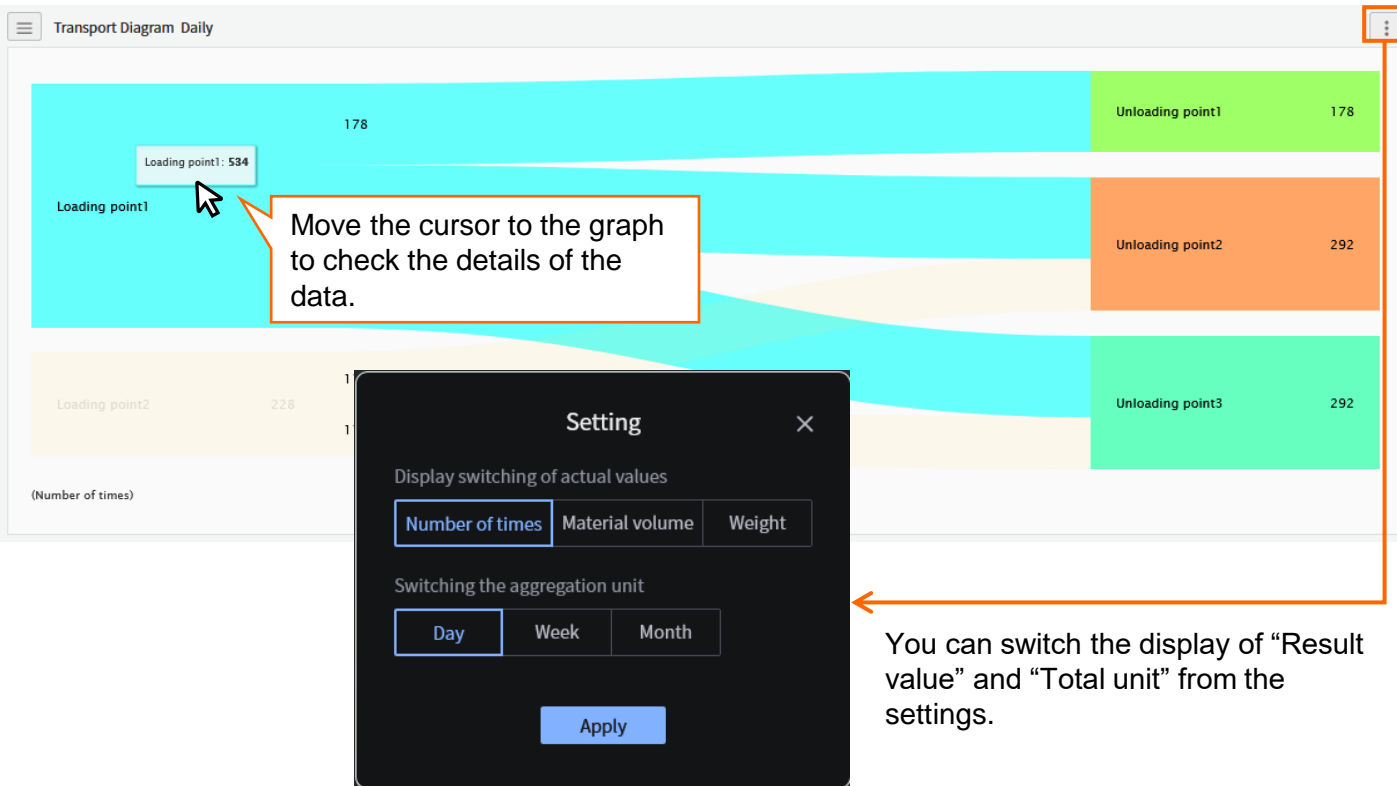
■ Production volume progress chart - full width



You can switch the display of “Result value”, “Total unit” and visibility of “Results” from the settings.

Move the cursor to the graph to check the details of the data.

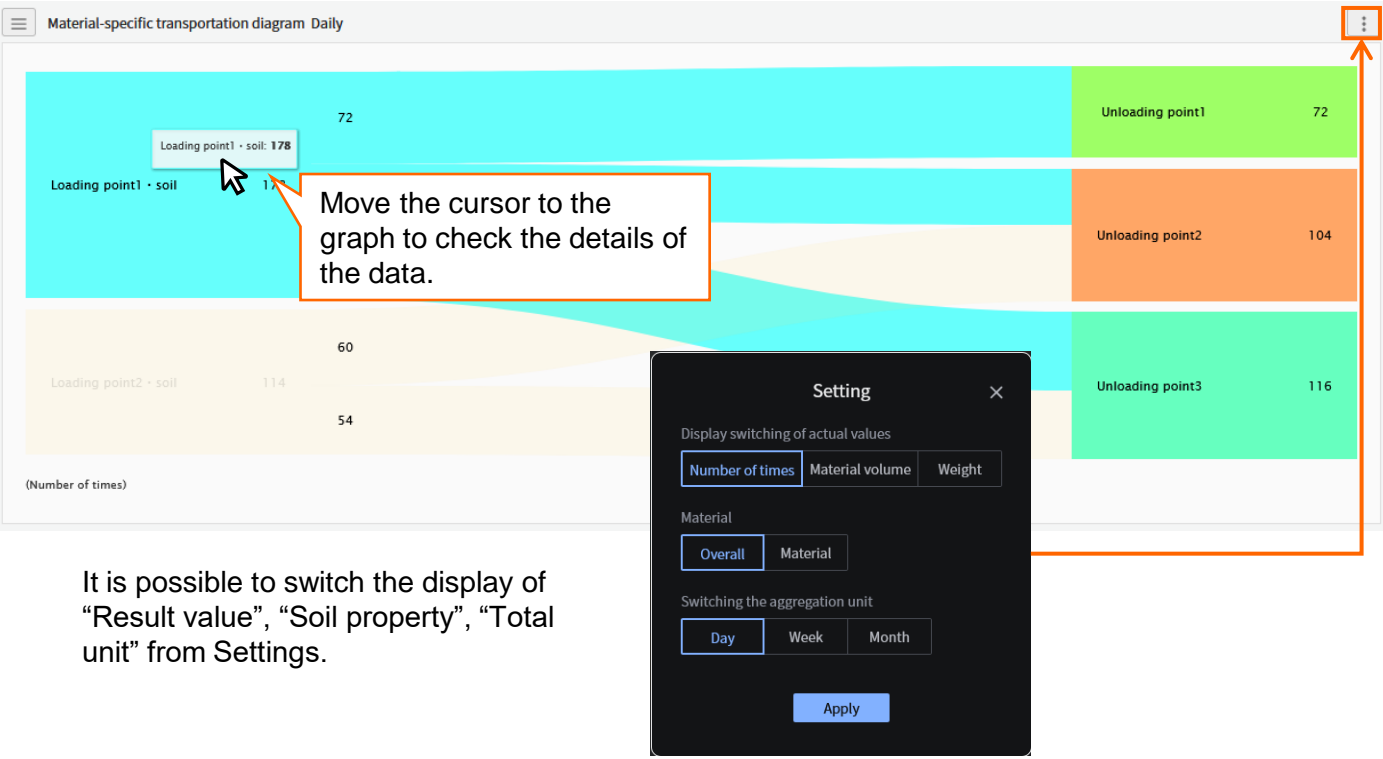
■ Transfer drawing - overall width



Move the cursor to the graph to check the details of the data.

You can switch the display of “Result value” and “Total unit” from the settings.

■ Transport drawing by soil property - overall width



It is possible to switch the display of “Result value”, “Soil property”, “Total unit” from Settings.

■ Operating status table by vehicle - full width

Vehicle	Vehicle type	Start	End	Operating time	Production volume(Num ber of times)	Productivity(Number of times/h)	Idle rate(%)	Average cycle time(%)	Average loading time(min)	Mileage(km)
CL_HMAS_Perth	Articulated Dump Truck	22/12/2023 08:00	22/12/2023 17:51	09:51	11	1.1	24	48	2	187.4
CL_Hr_Ms_De Ruyter	Articulated Dump Truck	22/12/2023 08:00	22/12/2023 17:49	09:49	11	1.1	24	48	2	187.4
CL_Sv.HMS_Gotland	Articulated Dump Truck	22/12/2023 08:00	22/12/2023 17:53	09:53	11	1.1	24	48	2	187.4

Setting

Display switching of actual values

Number of times Material volume Weight

Loading rate

Show Hide

Vehicle name ※ Partial match

Apply

From the settings, you can set the display of “Result value” and “Loading rate” and narrow down by vehicle name.

- ! From the vehicle role, only the vehicle that has been logged in on the vehicle role “Transport” is displayed.
- ! Idle rate = The percentage of stopping time unrelated to loading/unloading work.
- ! If the report is output in the middle of the time frame with the day of operation specified, the data is not displayed.

■ Productivity chart by vehicle - half width



! Out of the result values from the date to five days ago, The maximum and minimum values are displayed as ◆. The result value of the specified date is displayed as ◆.

Setting

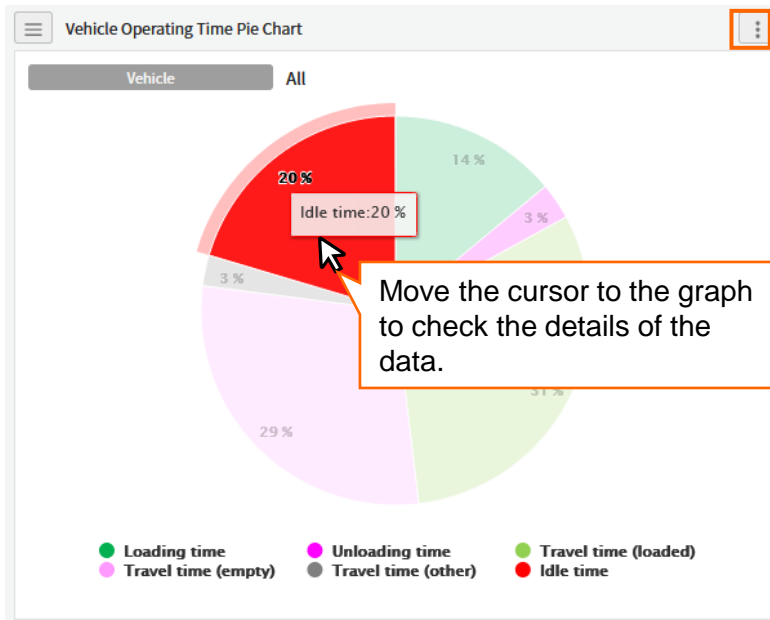
Display switching of actual values

Number of times Material volume Weight

Apply

It is possible to switch the display of the “Result value” in the settings.

■ Vehicle working time pie chart - half width



Setting

Vehicle

Overall Vehicle

Switching the aggregation unit

Day Week Month

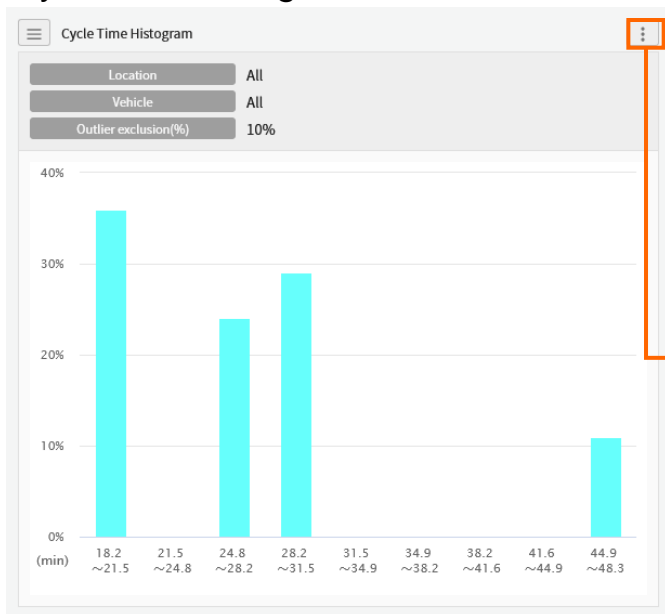
Apply

You can switch the display of “Whole or vehicle” and “Total unit” from the settings.

! From the vehicle role, only the vehicle that has been logged in on the vehicle role “Transport” is displayed.

! If data is aggregated on a daily basis with the operation date being specified, and a report is output in the middle of the time frame, the data is not displayed.

■ Cycle time histogram - half width



You can switch the display of “point” and “vehicle” from the settings, and set “Exception value exclusion”.

Setting

Location: Overall, Location

Vehicle: Overall, Vehicle

Outlier exclusion(%)
※ Possible input from 1 to 50
10 %

Apply

! For example, if you set 10% as the exception value exclusion, the screen displays all the values, excluding 10% at the top and bottom.

■ Cycle time table - half width

Cycle Time Table

Location: All
Vehicle: All
Outlier exclusion(%): 10%

Cycle Time	Number of times
~21.5	81
~24.8	0
~28.2	54
~31.5	64
~34.9	0
~38.2	0
~41.6	0
~44.9	0
~48.3	24

Setting

Location: Overall, Location

Vehicle: Overall, Vehicle

Outlier exclusion(%)
※ Possible input from 1 to 50
10 %

Apply

! For example, if you set 10% as the exception value exclusion, the screen displays all the values, excluding 10% at the top and bottom.

You can switch the display of “point” and “vehicle” from the settings, and set “Exception value exclusion”.

■ Operating status of jobsites - half width

Site Operating Status		
	15/09/2023	Difference(14/09/2023)
Loading actual results	292 Times	28 Times
Average cycle time	27 min	-5 min
Idle rate	20 %	-8 %
Average loading time	2 min	-1 min
Operating time	150.6 h	37.2 h

You can switch the display of “Result value” and set “Exception value exclusion” when calculating the cycle time and loading time.

Setting

Display switching of actual values

Number of times

Material volume

Weight

Outlier exclusion(%)

※ Possible input from 1 to 50

10 %

Apply

For example, if you set 10% as the exception value exclusion, the screen displays all the values, excluding 10% at the top and bottom.

■ Workload table by vehicle - full width

Vehicle Work Volume Table Daily							
	Load		Unload			Total	
	Loading point1	Loading point2	Unloading point1	Unloading point2	Unloading point3	Load	Unload
Vehicle01	18	0	18	0	0	18	18
Vehicle02	18	0	18	0	0	18	18
Vehicle03	0	27	0	0	27	27	27
Vehicle04	18	0	18	0	0	18	18
Vehicle05	18	0	18	0	0	18	18
Vehicle06	11	0	0	11	0	11	11
Vehicle07	11	0	0	11	0	11	11
Vehicle08	11	0	0	11	0	11	11
Vehicle09	0	20	0	20	0	20	20
Vehicle10	11	0	0	11	0	11	11
Vehicle11	31	0	0	0	31	31	31
Vehicle12	0	20	0	20	0	20	20
Vehicle13	31	0	0	0	31	31	31
Vehicle14	0	20	0	20	0	20	20
Vehicle15	0	27	0	0	27	27	27
Total	178	114	72	104	116	292	292

From the settings, you can switch the display of “Total unit” and narrow down by the vehicle name.

Setting

Switching the aggregation unit

Day

Week

Month

Vehicle name ※ Partial match

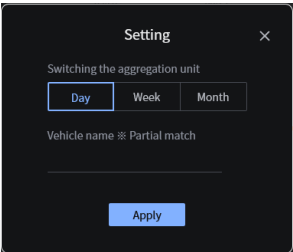
Apply

Common specifications for the following two modules

- From the vehicle role, only the vehicle that has been logged in on the vehicle role “Transport” is displayed.
- If data is aggregated on a daily basis with the operation date being specified, and a report is output in the middle of the time frame, the data is not displayed.

Working time table by vehicle - full width

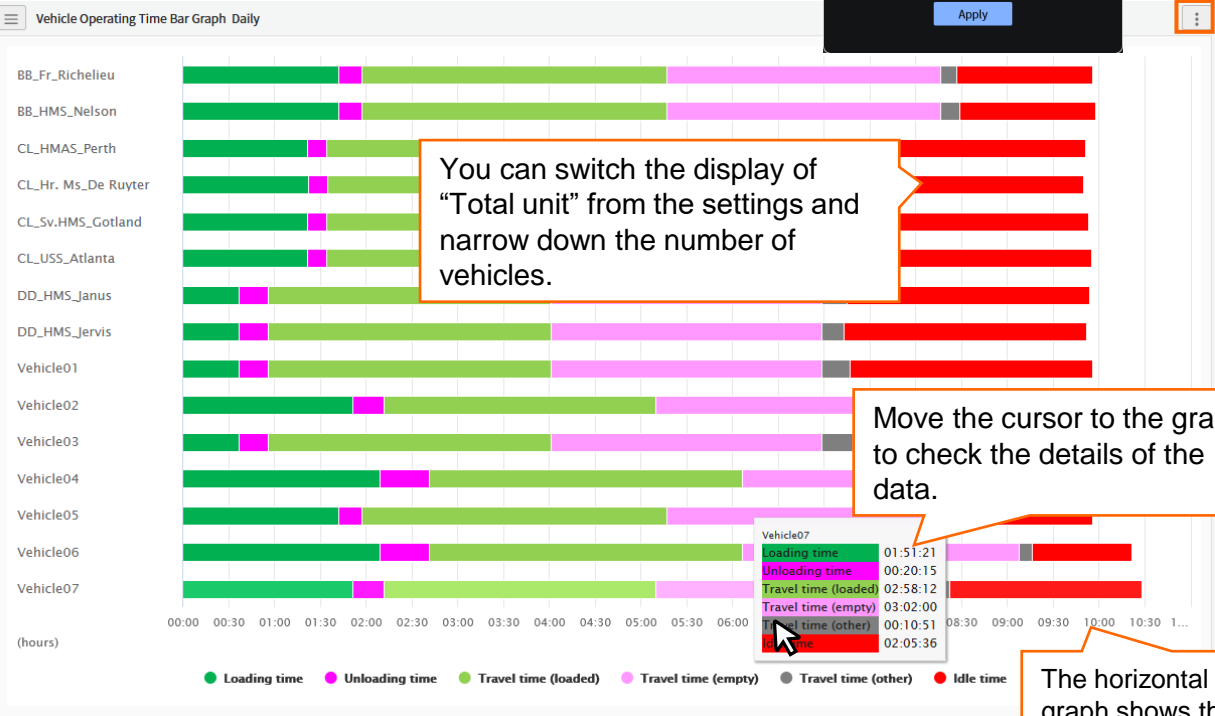
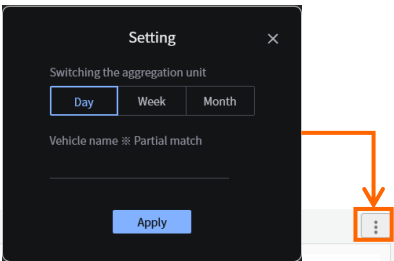
From the settings, you can switch the display of “Total unit” and narrow down by the vehicle name.



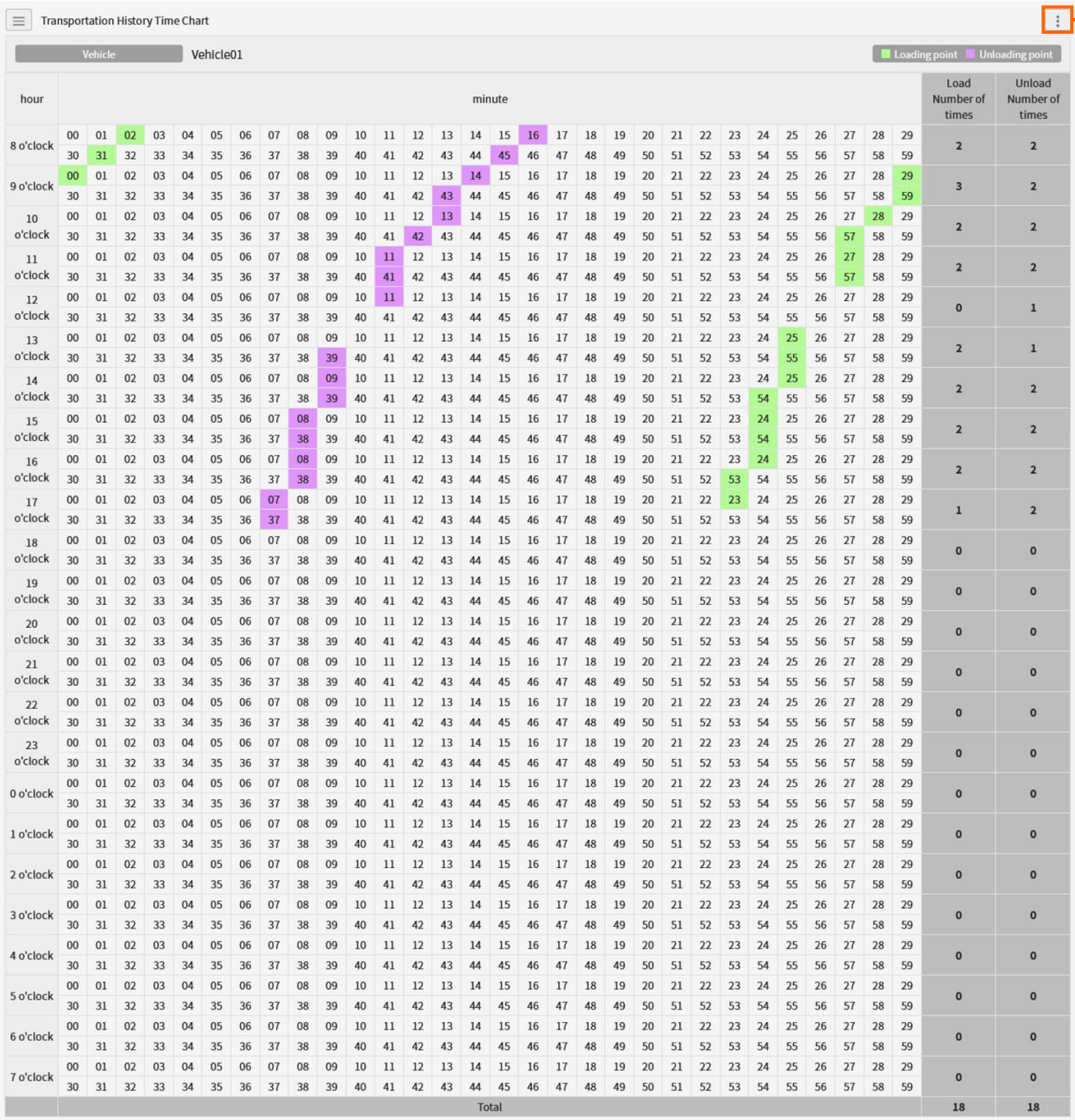
Vehicle Operating Time Table Daily									
Vehicle	Loading time	Unloading time	Travel time (loaded)	Travel time (empty)	Travel time (other)	Idle time	Total time	Mileage(km)	
BB_Fr_Richelieu	01:42	00:15	03:20	02:59	00:10	01:28	09:54	186.9	
BB_HMS_Nelson	01:42	00:15	03:20	02:59	00:12	01:28	09:56	186.9	
CL_HMAS_Perth	01:22	00:12	02:55	02:40	00:22	02:19	09:50	187.4	
CL_Hr.Ms_De Ruyter	01:22	00:12	02:55	02:40	00:20	02:19	09:48	187.4	

Working time bar chart by vehicle - full width

From the settings, you can switch the display of “Total unit” and narrow down by the vehicle name.



■ Transportation history time chart - full width



By default, it will be the “vehicle not selected” state. Select a vehicle in the Setting dialog.

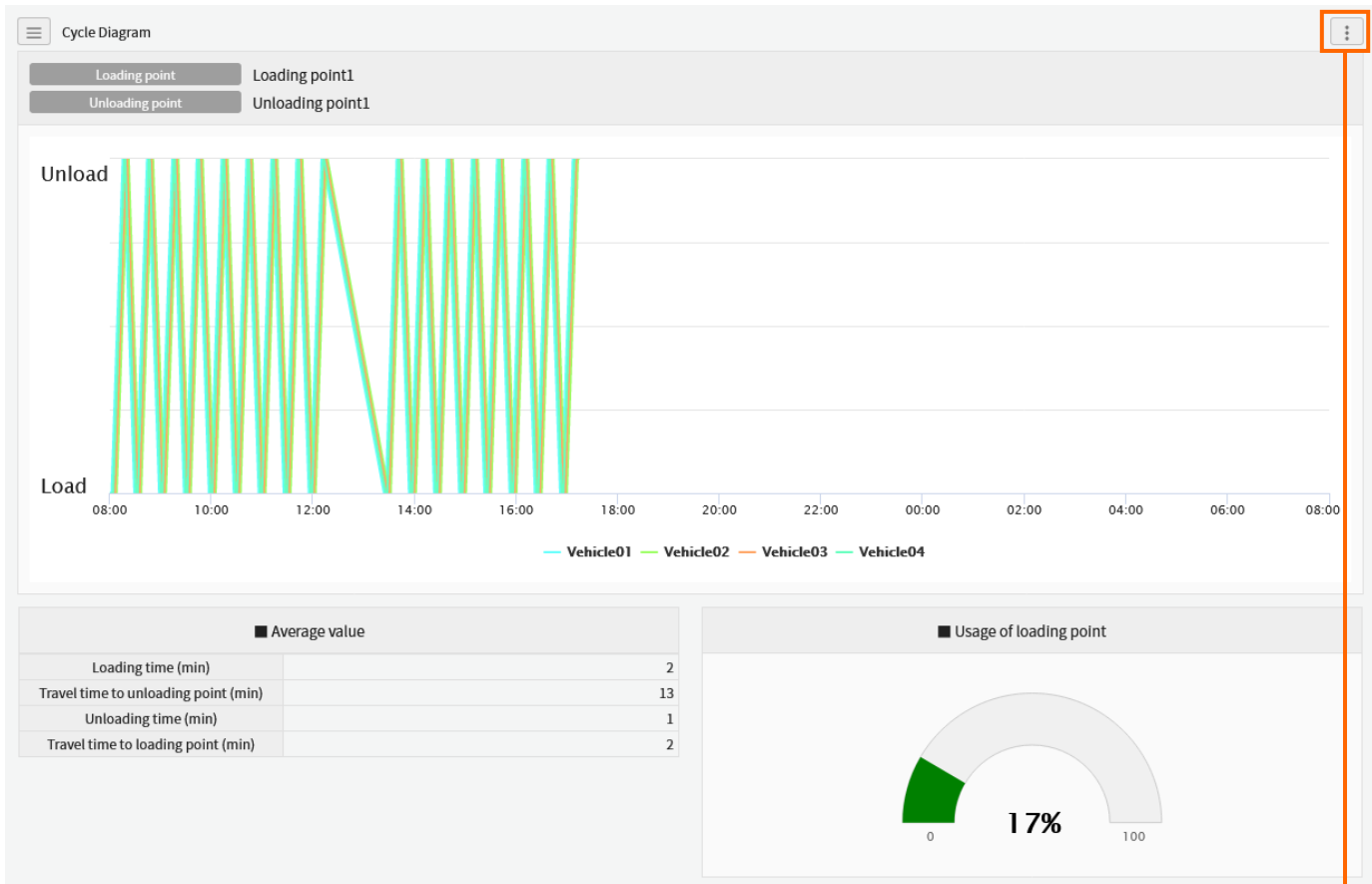
Setting

Vehicle

Please select

Apply

■ Cycle diagram - full width



! Usage status of loading point = Total loading work hours ÷ Working hours.
("Working hours" can be set in the "Edit jobsite" menu.)

In the initial state,
the "Loading point" and
"Destination" states are not selected.
Select the work point from the settings.

Setting

Loading point
Please select

Unloading point
Please select

Apply

■ Ticket for transport - overall width

Transportation Ticket

Site name

Fleet construction site

Date and Time

22/12/2023 07:00 - 22/12/2023 21:00

Company Name

Working Vehicles

BB_Fr_Richelieu

Driver's Name

Transportation Destination

Unloading point2

Day	Hour and Minute
15/09/2023	08:15
15/09/2023	08:42
15/09/2023	09:08
15/09/2023	09:35
15/09/2023	10:01
15/09/2023	10:28
15/09/2023	10:55
15/09/2023	11:22
15/09/2023	11:48
15/09/2023	12:15
15/09/2023	13:41
15/09/2023	14:08
15/09/2023	14:35
15/09/2023	15:02
15/09/2023	15:29
15/09/2023	15:56
15/09/2023	16:23
15/09/2023	16:51
15/09/2023	17:18
15/09/2023	17:45
Transportation Frequency	20

Working Vehicles

BB_HMS_Nelson

Driver's Name

Transportation Destination

Unloading point2

Day	Hour and Minute
15/09/2023	08:17
15/09/2023	08:44
15/09/2023	09:10
15/09/2023	09:37
15/09/2023	10:03
15/09/2023	10:30
15/09/2023	10:57
15/09/2023	11:24
15/09/2023	11:50
15/09/2023	12:17
15/09/2023	13:43
15/09/2023	14:10
15/09/2023	14:37
15/09/2023	15:04
15/09/2023	15:31
15/09/2023	15:58
15/09/2023	16:25
15/09/2023	16:53
15/09/2023	17:20
15/09/2023	17:47
Transportation Frequency	20

“Overall” or “Vehicle” can be selected from the settings. Select “Vehicle”, then you can specify the name of the vehicle.

Setting

Vehicle

Overall

Vehicle

Apply

■ Image - full width

Image

NO IMAGE

The “NO IMAGE” character is displayed in the initial state, so upload the image from the settings and select “Display position of image”, and press “Apply” to reflect it.

Setting

Image

Please select

Select

Image display position

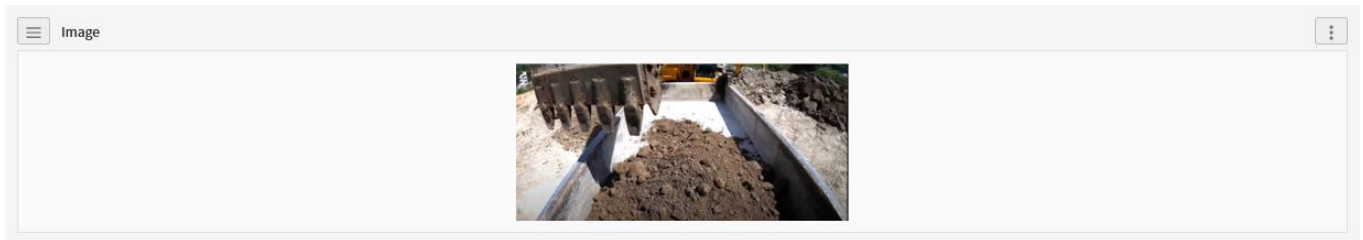
Left

Center

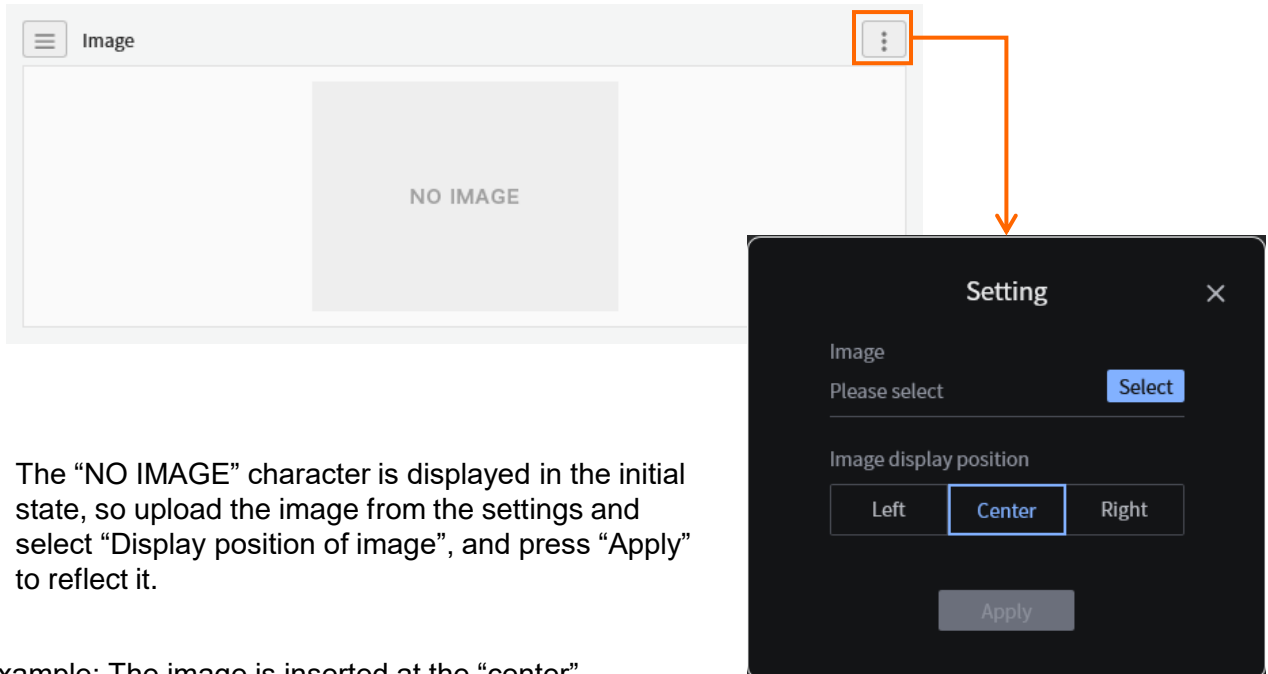
Right

Apply

Example: The image is inserted at the “center”

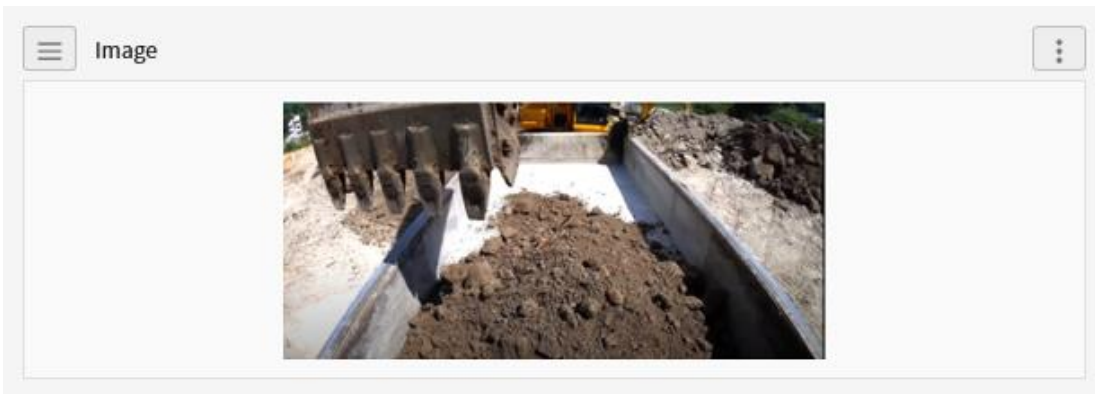


■ Image - half width



The “NO IMAGE” character is displayed in the initial state, so upload the image from the settings and select “Display position of image”, and press “Apply” to reflect it.

Example: The image is inserted at the “center”



■ Daily report by company - half width

Enter “Name of reporting company” on the “Edit jobsite” menu, and the message is displayed in the “Name of company” field.

▼ Detailed settings

Consider location jumping OFF

App Location Information Transmission Frequency 1 Seconds

App Location Information Reception Frequency 1 Seconds

Stop threshold 2 km/h

Operation history error notification ☒

Company Name Listed in the Report

Company-specific Daily Report

Date and Time22/12/2023 07:00 - 22/12/2023 21:00

District NameFleet construction site

Company Name

Vehicle name	Number of times
BB_Fr_Richelieu	20
BB_HMS_Nelson	20
CL_HMAS_Perth	11
CL_Hr. Ms_De Ruyter	11
CL_Sv.HMS_Gotland	11
CL_USS_Atlanta	11
DD_HMS_Janus	18
DD_HMS_Jervis	18
Vehicle01	18
Vehicle02	27
Vehicle03	18
Vehicle04	31
Vehicle05	20
Vehicle06	31
Vehicle07	27
Total	292

Setting

Title

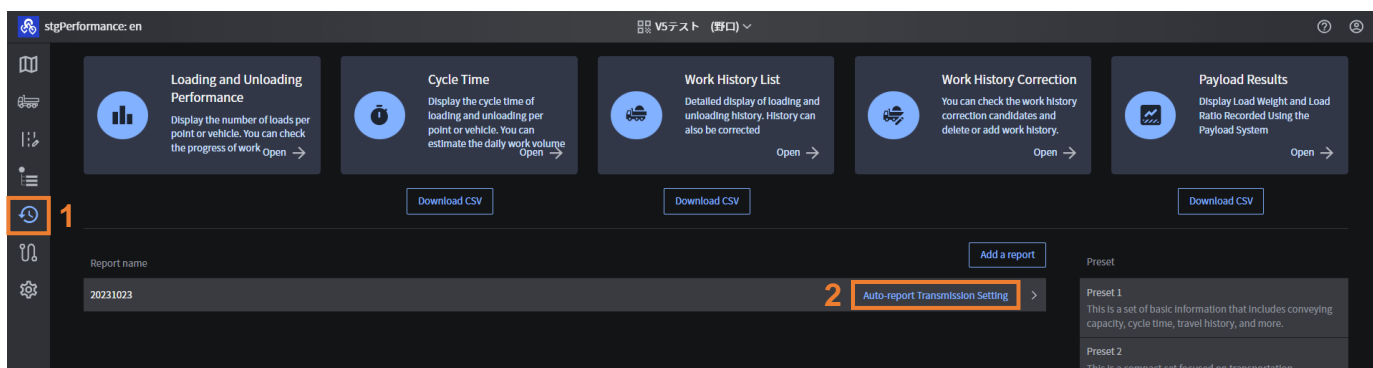
Apply

“Title” can be set from the settings.

Automatic report transmission

You can automatically send a report to an arbitrary address registered as a jobsite staff.
You can freely specify the transmission date, transmission day, etc.

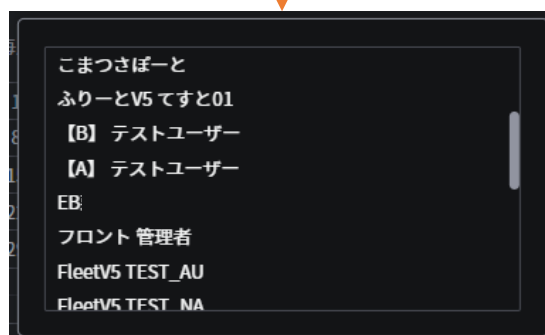
1. Click the “Results” icon.
2. Click “Auto send report transmission settings”.
The settings screen opens.
3. Click “Add” and specify the destination.
The list of accounts registered as site-related personnel is displayed.



The screenshot shows the 'Transmitted Report 20231023' settings form. The 'Add' button is highlighted with a red circle and the number 3. The form includes the following fields and options:

- Destination: [Empty field]
- Transmission Period: 16/08/2024 - 16/09/2024
- Transmission Time: 08:00 - 08:00
- Designated Transmission Date: A calendar grid showing the month of August 2024.
- Designated Transmission Day: Sun, Mon, Tues, Wed, Thu, Fri, Sat
- Email Title: [Empty field]
- Email Body: [Empty text area]

At the bottom of the form are buttons for 'Cancel', 'Save', and 'Delete'.



4. Set various items.

5. Click “Save”.

The report is automatically sent according to the setting.

In case of the example below, the report will be sent to 21:30 on every Wednesday between January 15 and January 31, 2024.

Transmitted Report サンプルレポート

Destination Fleet V5

Transmission Period A report is sent over the specified period.

Transmission Time Times Covered in the Report 07:00 - 21:00 A report is sent at the specified time.

Designated Transmission Date

End of Each Month ☐

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Setting of either “Sending date” or “Sending day” is required.

Designated Transmission Day

Sun Mon Tues **Wed** Thu Fri Sat

Email Title Input the title.

Email Body Input the text as necessary.

Language 日本語

Click to add settings for sending.

5

You can send a test message to the specified address.



Note

Data is aggregated up to the specified transmission time, but if the transmission time is set before the end of the specified time frame for some modules, note that the data is not displayed and becomes blank.

Contact

- **For inquiry on products/ Contact at the time of malfunction**
EARTHBRAIN Ltd.
The URL below brings you to the inquiry site.
<https://www.earthbrain.com/contact/form/>

Revision History

Created/revised date	Description
January 17, 2024	Initial version (Ver5.0)
March 7, 2024	Addition of supplemental explanation and modification of sentence
March 26, 2024	Job Classification , Operational Vehicle Daily Report , Operational Vehicle Daily Report, Auto work history cooldown , Feature to Highlight Speeding Vehicles in real-time viewer
May 7, 2024	Feature to create routes from the travel history , Duplicate count correction , Operation history error notification, Deletion function for "Route," "Workplace," and "Group"
May 28, 2024	Automatic sending of excessive speed notification emails
July 9, 2024	Recalculate Results, Integration with Smart Construction Portal, Option to hide map object labels in the real-time viewer, Work History Correction, Edit Map History
July 30, 2024	Function to change the vehicle's affiliation group/workplace in the real-time viewer
October 1, 2024	Editing screen for the Operational Vehicle Daily Report,Excel download functionality for the Operational Vehicle Daily Report,The ability to send login links and 2D codes via email,Setting planned values (number of loads and soil volume) for work locations,Adding widgets for loading (actual/planned) and unloading (actual/planned) to the Real-Time Viewer
January 7, 2025	Video playback functionality for driving history,The ability to change vehicle roles in the Real-Time Viewer