

Smart Construction 3D Machine Guidance



Smart Construction **Pilot**

Smart Construction Pilot Web Manual

For System Management



- Be sure to read this document before using this product.
- Please keep this document in a safe place so as not to lose it.

April 2024

LL-1001-00-01-0601

Introduction

- This manual describes how to use the Smart Construction Pilot web application for the Smart Construction 3D Machine Guidance Kit. For the devices and functions not covered by this manual, refer to the respective the Operation & Maintenance Manual for the Smart Construction 3D Machine Guidance Kit and the machine equipped with the Kit.
- A screen view or displayed content of the application may change by updating.
 If there is a difference between the content described in this manual and that displayed on the screen of the application, follow the latter.

Trademarks in this manual

- Smart Construction, SMART CONSTRUCTION Retrofit, SMART CONSTRUCTION Pilot, Smart Construction Pilot and Smart Construction 3D Machine Guidance are trademarks or registered trademarks of Komatsu Ltd.
- Android and Google Chrome are registered trademarks of Google LLC.
- docomo is a registered trademark or trademark of NTT DOCOMO, INC.
- iPad and Safari are registered trademarks of Apple Inc.
- iOS is the OS name for Apple Inc. iOS is a registered trademark or trademark of Cisco Systems, Inc. or its affiliated companies in the United States and other countries and is used under license.
- Internet Explorer is an international registered trademark of Microsoft Corporation.
- Firefox is a registered trademark of the Mozilla Foundation.
- * Other names such as company names and product names used in this manual are generally trade names, registered trademarks, or trademarks of the appropriate companies.

Contents

Ί.	2111	art (Jonstruction Pilot web Application	ა
	1.1		at is Smart Construction 3D Machine Guidance ?	
	1.2	Оре	erating environment	4
	1.3	Flov	w up to use of Smart Construction Pilot web	5
2.	Dis	play	the main screen	6
3.	Set	Up	the Jobsite	8
	3.1	Dis	play the jobsite list	8
	3.2	Dis	play machine information about the jobsite	9
	3.2	2.1	Add a machine	11
	3.2	2.2	Display/delete machine detail information	. 12
	3.3	Dis	play bucket information about the jobsite	. 13
	3.3	3.1	Add a bucket	. 14
	3.3		Display/edit/delete bucket detail information	
	3.4	Dis	play the jobsite project information	
	3.4	1.1	Create/edit a project	. 17
			uire the construction result data about the jobsite	
	3.5	5.1	Create construction result data	20
4.	Set	Up	the Machine	21
	4.1	Mad	chine List	. 21
	4.2	Dis	play machine details and add it to the jobsite	. 22
	4.3	Dis	play machine rental information	. 24
	4.3	3.1	Register machine rental information	25
	4.3	3.2	Display/edit machine rental information	. 26
5.	Set	up 1	the bucket	27
	5.1	Buc	ket list	. 27
	5.2	Add	d a bucket	. 28
	5.3	Dis	play/delete/edit bucket detail information	. 29
	54	Rec	nister a hucket share	30

1. Smart Construction Pilot Web Application

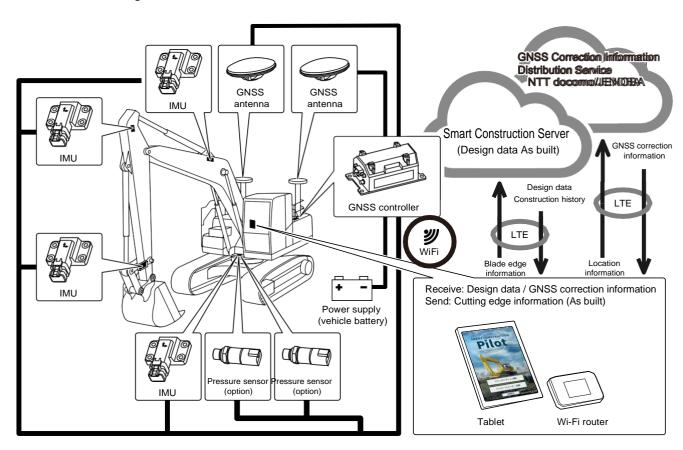
The Smart Construction Pilot web application is for checking and setting various information used in the Smart Construction 3D Machine Guidance and for sending the data necessary for work.

1.1 What is Smart Construction 3D Machine Guidance?

A retrofit kit to provide ICT functionality to an existing hydraulic excavator. Being equipped with the Kit allows the use of the following functions, thus enabling machine of a conventional type to perform ICT construction.

- 3D machine guidance function (*1)
- · Function of acquiring 3D construction history data
- Payload Meter (option) (*2)
- *1 Machine guidance: A function to acquire the machine location information by GNSS and provide a cab tablet device with the difference between design data of the construction area and location of the bucket edge.
- *2 A function to measure the weight of soil to be loaded with the bucket of the hydraulic excavator.

☐ Schematic diagram



1.2 Operating environment

	os	Recommended browsers
For personal computer	Windows 7 or greater (The Memory is 3 GB or more)	Google Chrome Official Latest VersionMozilla Firefox Official Latest Version
For tablet device	iOS, Android	Safari Official Latest VersionGoogle Chrome Official Latest Version

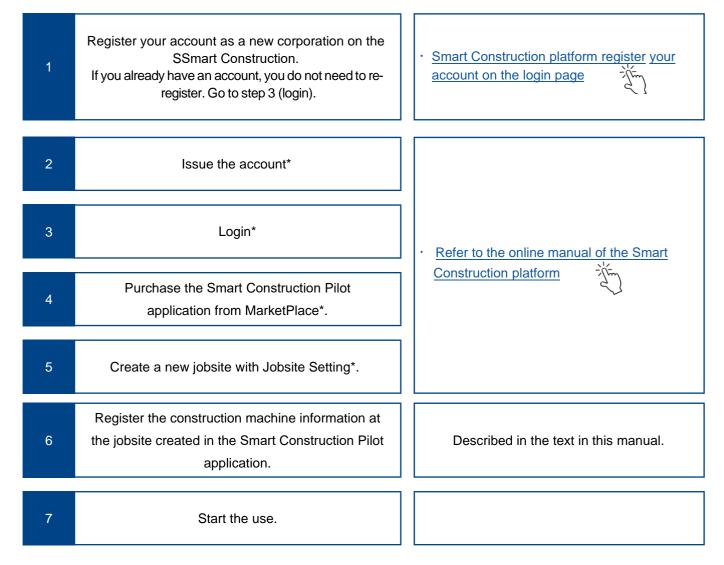
Supplementary explanation

This system may not work normally with Internet Explorer or Microsoft Edge. Use a recommended browser.

1.3 Flow up to use of Smart Construction Pilot web

To start using the Smart Construction Pilot web application, you need to register your account on the Smart Construction.

Use the following procedure to start the use:

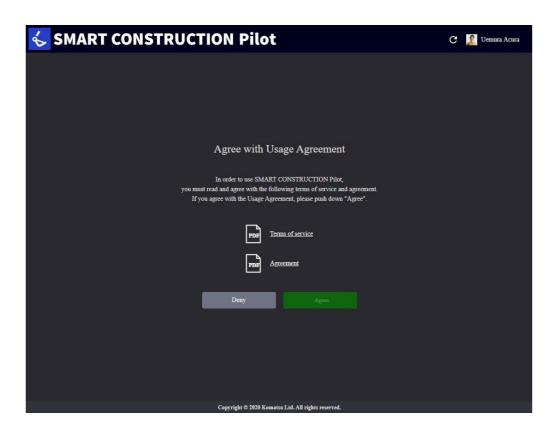


^{*} These must be operated on either the Smart Construction that you registered your account as a corporation.

2. Display the main screen

When using it for the first time, you see the Usage Policy.

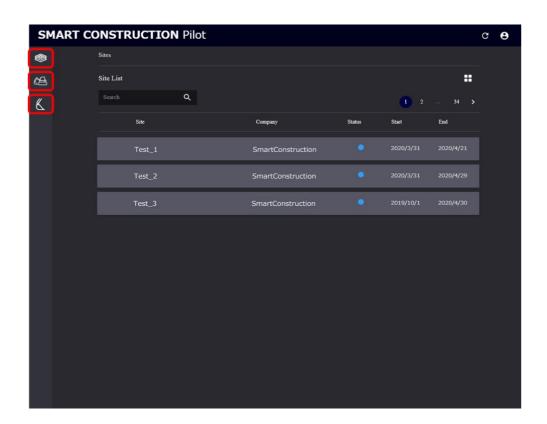
To use the Smart Construction Pilot web application, you must agree to it. Read it thoroughly.



- 1. Click "Terms of service" and "Agreement" to check the contents.
- 2. Click "Agree".

Below is the top page of the Smart Construction Pilot web application.

From this screen, you can browse the jobsite list information or move to a screen such as Jobsite, Machine, or Bucket.



Icon	Name	Function
	Jobsite	Displays the Jobsite screen (see "3. Set Up the Jobsite"). Allows you to set the machine, bucket, project, and construction result settings for each jobsite.
	Machine	Displays the Machine screen (see "4. Set Up the Machine"). Allows you to check the machine detail information or set up the rental of machine.
K	Bucket	Displays the Bucket screen (see "5. Set up the bucket"). Allows you to create or edit bucket information or set up bucket rental registration.

3. Set Up the Jobsite

These screens set up the machine, bucket, project, and construction result settings for each jobsite.

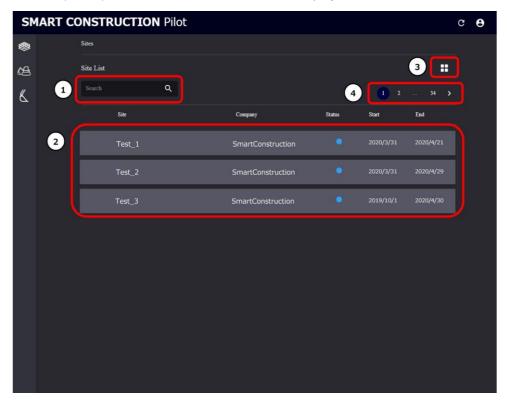
(Supplementary explanation)

Create a jobsite with Jobsite Setting on each platform in advance.

3.1 Display the jobsite list

This screen lists the already created jobsites.

Click the Jobsite icon () on the left side of the screen to display the list.



No.	Name	Function
1	Search	Searches for the target jobsite by inputting the desired keyword.
	Jobsite	The already created jobsites are listed.
		After selecting the jobsites, you can set up the following for each site:
		Machine (see "3.2 Display machine information about the jobsite")
2		Bucket (see "3.3 Display bucket information about the jobsite")
		Project (see "3.4 Display the jobsite project information")
		Construction result (see "3.5 Acquire the construction result data about the jobsite")

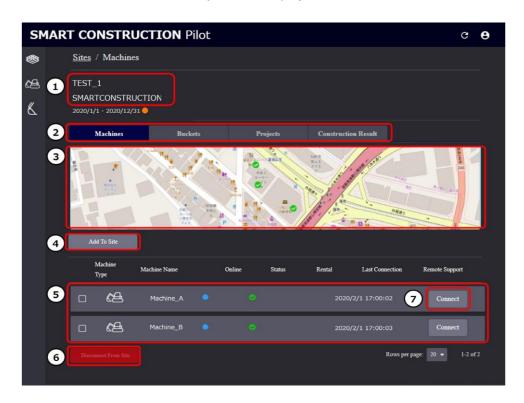
No.	Name	Function
3	Display format	Changes the display format of the jobsite list.
4	Page	Selects the page to display.

3.2 Display machine information about the jobsite

This screen displays the machine information about the selected jobsite.

- 1. Click the Jobsite icon () on the left side of the screen.

 The jobsite list is displayed.
- **2.** Select the target jobsite from the jobsite list. The machine information about the selected jobsite is displayed.

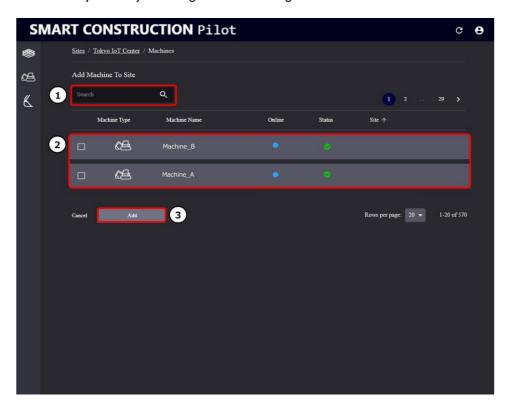


No.	Name	Function
1	Jobsite name	Displays the name of the selected jobsite.
2	Machine /Buckets /Projects /Construction Result	 Switches the screen view. Machine (above screen) Bucket (see "3.3 Display bucket information about the jobsite") Project (see "3.4 Display the jobsite project information") Construction result (see "3.5 Acquire the construction result data about the jobsite")
3	Мар	Displays the machine position and online information on the map.
4	Add To Site	Adds a machine to the jobsite (see "3.2.1 Add a machine").
(5)	Machine	Allows you to check the machine detail information (see "3.2.2 Display/ delete machine detail information"). Online information about the machine is displayed with the following marks: • (Online) / (Offline) • (Normal) / (Error)
6	Disconnect From Site	Deletes the checkbox selected machine from the jobsite.
⑦	Connect	Displays the "Connect" button when the tablet device for this kit equipped on the machine is online. By clicking the "Connect" button, the tablet screen can be displayed on the Management screen. * No remote operation is available.

3.2.1 Add a machine

This screen adds a machine to the selected jobsite.

- **1.** Display machine information about the jobsite. See "3.2 Display machine information about the jobsite".
- **2.** Click "Add Machine". The Add Machine screen is displayed.
- **3.** Add a machine to the jobsite by referring to the following:

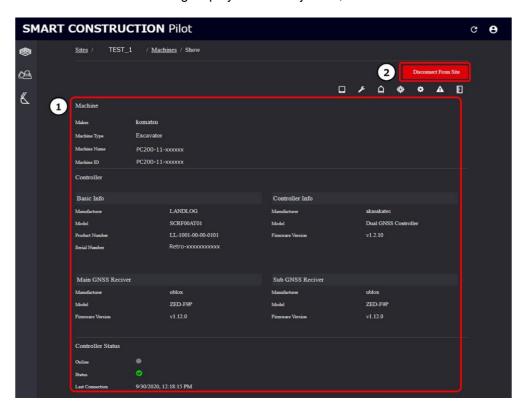


No.	Name	Function
1	Search	Searches for the machine to add, by inputting the desired keyword.
2	Check box	Selects the machine to be linked to the jobsite, from the list of the machines registered for the company.
3	Add	Adds the selected machine to the jobsite.

3.2.2 Display/delete machine detail information

This screen displays detail information about the selected machine.

- **1.** Display machine information about the jobsite. See "3.2 Display machine information about the jobsite".
- **2.** Select the target machine. Detail information about the selected machine is displayed.
- 3. To unlink between the machine being displayed and the jobsite, click "Unlink with Jobsite".



No.	Name	Function
1	Detail Information	Detail information about the selected machine is displayed.
2	Disconnect From Site	Unlinks between the machine being displayed and the jobsite.

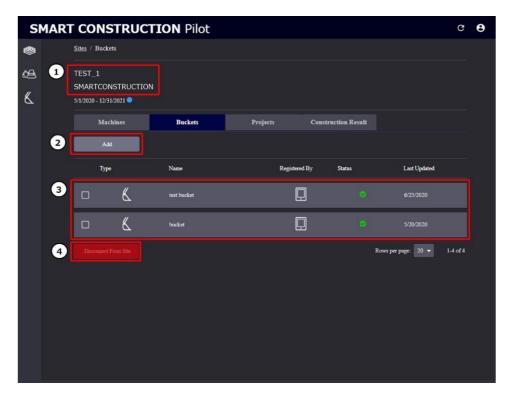
3.3 Display bucket information about the jobsite

This screen displays the bucket information about the selected jobsite.

- 1. Click the Jobsite icon () on the left side of the screen.

 The jobsite list is displayed.
- **2.** Select the target jobsite from the jobsite list.
- **3.** Click the "Buckets" tab.

 The bucket information about the selected jobsite is displayed.

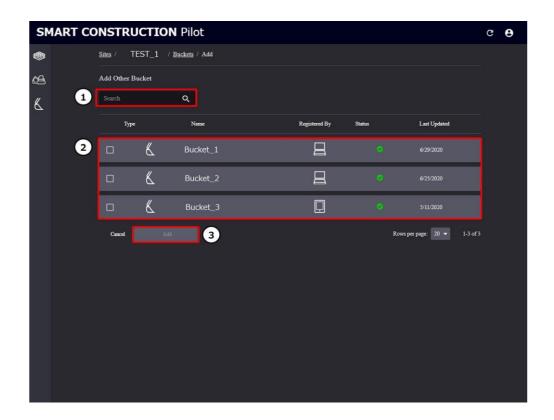


No.	Name	Function
1	Jobsite name	The name of the jobsite being selected is displayed.
2	Add	Adds the bucket to the jobsite being selected (see "3.3.1 Add a bucket").
3	Bucket	Displays the bucket detail information (see "3.3.2 Display/edit/delete bucket detail information"). The displayed bucket can be edited or deleted.
4	Disconnect From Site	Deletes the checkbox selected bucket from the jobsite.

3.3.1 Add a bucket

This screen adds a bucket to the jobsite being selected.

- **1.** Display jobsite bucket information. See "3.3 Display bucket information about the jobsite".
- **2.** Click "Add". The Add Bucket screen is displayed.
- **3.** Add a bucket to the jobsite by referring to the following:



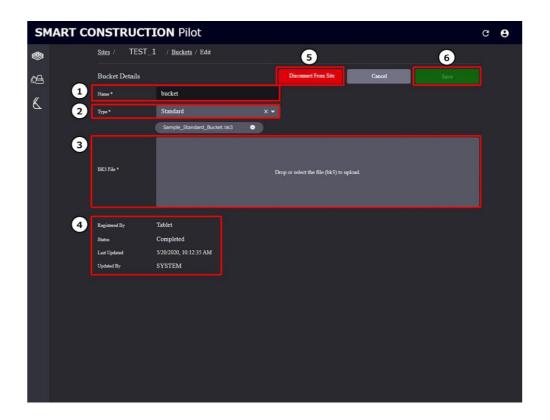
No.	Name	Function
1	Search	Searches for the bucket to add, by inputting the desired keyword.
2	Check box	Selects the bucket to add, from the list of buckets registered for the company.
3	Add	Adds the selected bucket to the jobsite.

3.3.2 Display/edit/delete bucket detail information

This screen displays detail information about the selected bucket. The bucket information is editable.

After the detail information is checked, the corresponding bucket can be deleted.

- **1.** Display jobsite bucket information. See "3.3 Display bucket information about the jobsite".
- **2.** Select a bucket. The detail information about the selected bucket is displayed.
- **3.** Edit the bucket information or delete the bucket by referring to the following:



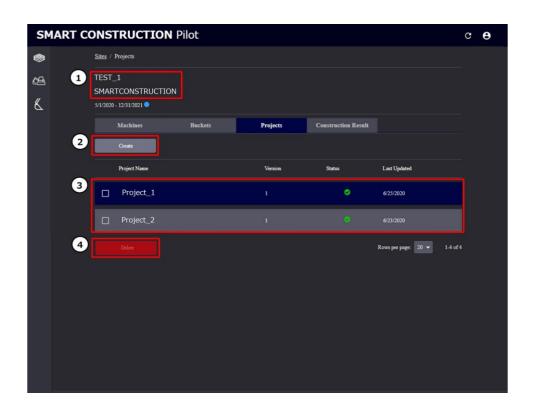
No.	Name	Function
1	Bucket name	Inputs the bucket name.
2	Bucket type	Selects the bucket type.
3	BK3 File	If you have a BK3 file created with Komatsu IMC Construction Machinery, you can use it. Drag and drop the file, or select and register it.

No.	Name	Function
4	File information	The information in the bucket file is displayed.
(5)	Disconnect From Site	Unlinks between the machine being displayed and the jobsite.
6	Save	Saves the edited bucket information.

3.4 Display the jobsite project information

This screen displays the project information about the selected jobsite.

- 1. Click the Jobsite icon () on the left side of the screen. The jobsite list is displayed.
- 2. Select the target jobsite.
- **3.** Click the "Projects" tab. The project information about the selected jobsite is displayed.



No.	Name	Function
1	Jobsite name	Displays the name of the selected jobsite.
2	Create	Creates a project in the jobsite to add it thereto (see "3.4.1 Create/ edit a project").
3	Project	Displays detail information about the already created projects (see "3.4.1 Create/edit a project").
4	Delete	Deletes the checkbox selected project from the jobsite.

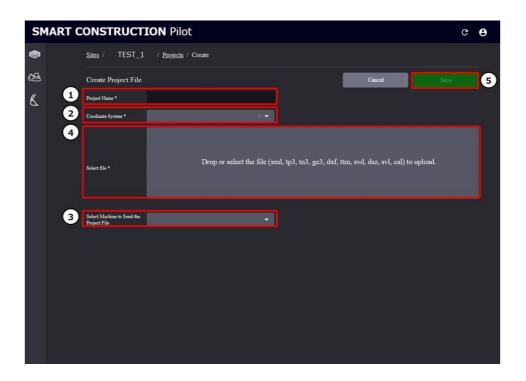
3.4.1 Create/edit a project

This screen creates a project in the selected jobsite and adds it thereto, or displays and edits it an already created project.

- * Localization or design data is registered as a project. In addition, the created project can be downloaded from the Smart Construction Pilot tablet application.
 - **1.** Display the jobsite project information. See "3.4Displaythejobsiteproject information".
 - **2.** Do one of the following:
 - · Click "Create".
 - Select an already created project.

The Edit screen for the project is displayed.

3. Create or edit the project by referring to the following:



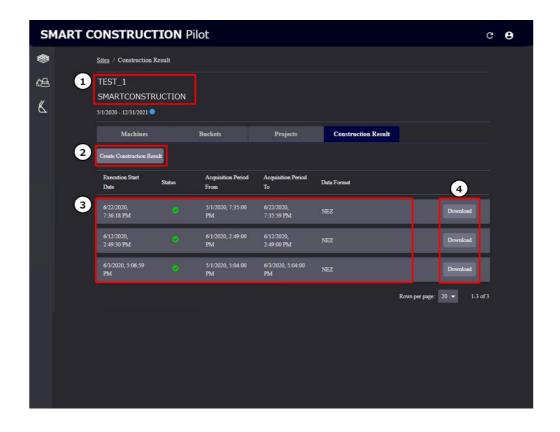
No.	Name	Function
1	Project Name	Inputs a project name.
2	Coordinate System	Selects the coordinate system (Localization or Projection). For Projection, select the following items: Region Projection Geodetic Reference System Geoid
3	Machine	Selects the machine to which to send the project data.
4	Select file	Register the project file (xml, tp3, tn3, gc3, dxf, ttm, svd, dsz, svl, cal). Drag and drop the file, or select and register it.
(5)	Save	Saves the edited project information.

3.5 Acquire the construction result data about the jobsite

This screen acquires the construction result data about the selected jobsite.

- 1. Click the Jobsite icon () on the left side of the screen. The jobsite list is displayed.
- 2. Select the target jobsite.
- **3.** Click the "Construction Result" tab.

 The construction result data about the selected jobsite is displayed.

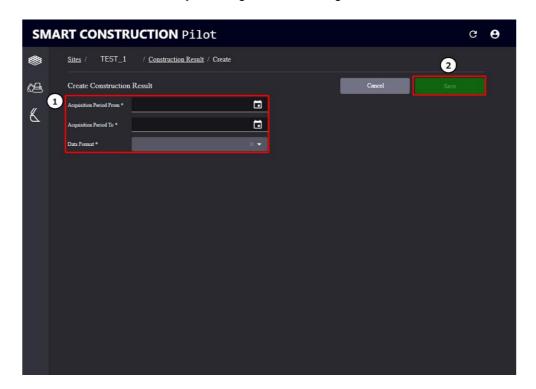


No.	Name	Function
1	Jobsite information	The information about the jobsite being selected is displayed.
2	Create Construction Result	Specifies the period and moves to the screen to which to acquire the construction result data (see "3.5.1 Create construction result data").
3	Construction Result List	Displays the list of the acquired construction results (see "3.5.2 Download the construction result").
4	Download	Downloads the construction result as CSV data (see "3.5.2 Download the construction result").

3.5.1 Create construction result data

This screen creates the construction result data about the selected jobsite.

- Display the construction result data information about the jobsite. See "3.5 Acquire the construction result data about the jobsite".
- **2.** Click "Create Construction Result". The Create Construction Result Data screen is displayed.
- **3.** Create the construction result data by referring to the following:



No.	Name	Function
1	Create Construction Result	Set all the following and acquire the construction result. • Acquisition period start date • Acquisition period end date • Data format (Select NEZ or ENZ.)
2	Save	Creates the construction result data (.csv) with the set acquisition period and format.

4. Set Up the Machine

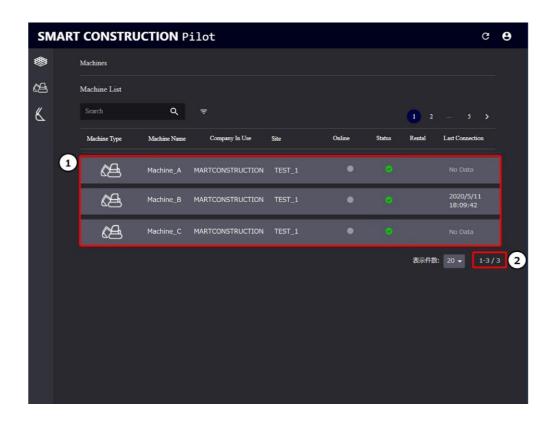
These screens display the list of the registered machines or detail information about each machine or add a machine to the jobsite.

They also set up the machine rental registration.

4.1 Machine List

This screen lists the registered machines.

Click the Machine icon () on the left side of the screen to display the list.



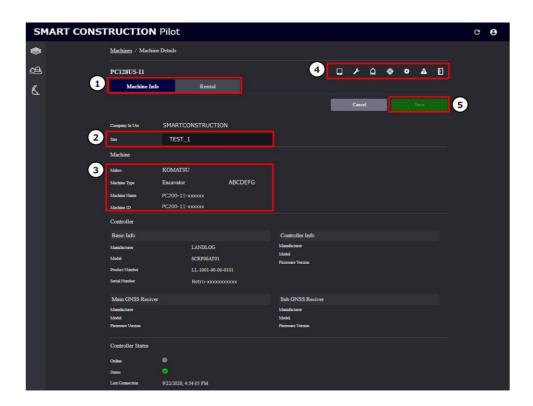
No.	Name	Function
1)	Machine List	Displays a list of the machines registered for the company. By selecting the machine, you can check the detailed information (see "4.2 Display machine details and add it to the jobsite"). You can add a listed machine to the jobsite you have selected in advance.
2	Page	Selects the page to display.

4.2 Display machine details and add it to the jobsite

This screen displays detail information about the selected machine.

In addition, a machine about which detail information was checked can be added to the jobsite you have selected.

- 1. Click the Machine icon () on the left side of the screen. The Machine List is displayed.
- **2.** Select the target machine from the Machine List. Detail information about the selected machine is displayed.



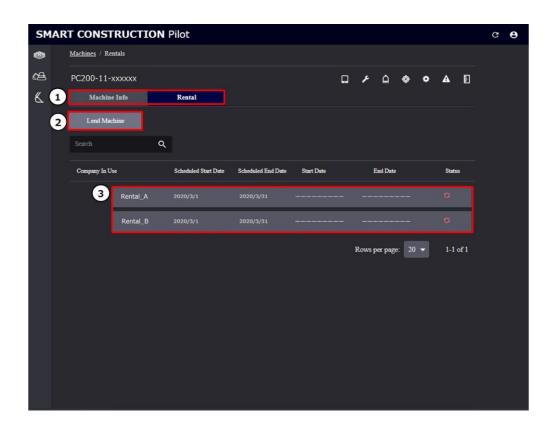
No.	Name	Function
1)	Machine Info /Rental	Toggles between the Machine Details and Machine Rental screens. For the Machine Rental screen, see "4.3 Display machine rental information".
2	Site	Selects the jobsite to which to add the selected machine or the destination jobsite to which to reposition the machine.
3	Machine details	Detail information about the selected machine is displayed. To add the machine to the jobsite or change the jobsite where the machine has been added, select the target jobsite from the "Jobsite".
4	Check the Data	Allows you to check the data uploaded from the tablet, including the setting information, calibration data, and errors.
(5)	Save	Saves your settings changes.

4.3 Display machine rental information

This screen displays rental information about the selected machine.

- 1. Click the Machine icon () on the left side of the screen. The Machine List is displayed.
- **2.** Select the target machine from the Machine List. Detail information about the selected machine is displayed.
- **3.** Click the "Rentals" tab.

 Rental information about the selected machine is displayed.

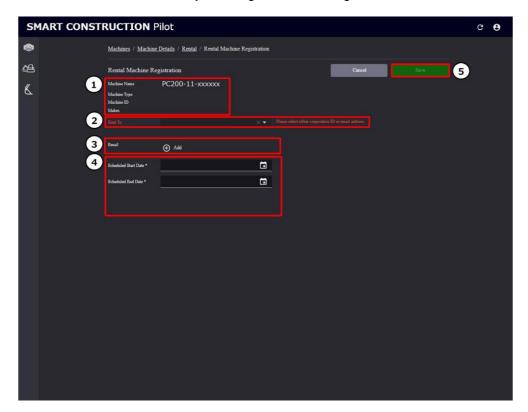


No.	Name	Function
1)	Machine Info /Rental	Toggles between the Machine Rental and Machine Details screens. For the Machine Details screen, see "4.2 Display machine details and add it to the jobsite".
2	Lend Machine	Registers rental information about the selected machine (see "4.3.1 Register machine rental information").
3	Rental Information	Rental information about the selected machine is displayed. After selecting the rental information, you can display and edit the details (see "4.3.2 Display/edit machine rental information").

4.3.1 Register machine rental information

This screen registers machine rental information.

- **1.** Display machine rental information. See "4.3 Display machine rental information".
- 2. Click "Machine Rental".
- **3.** Registers machine rental information by referring to the following:

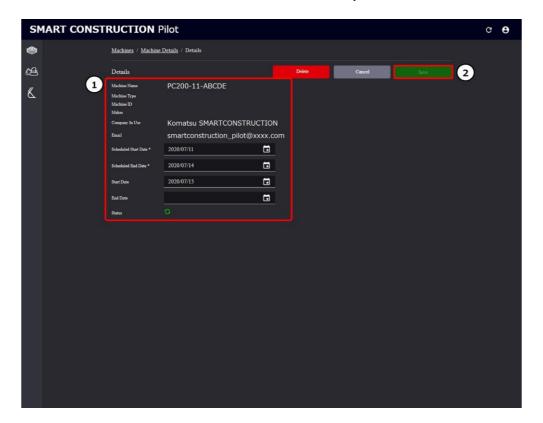


No.	Name	Function
1	Machine Information	Information about the selected machine is displayed.
2	Rent To	Selects the rental destination. The company invited by the member is displayed in the rental destination field.
3	Email	Inputs the Email address (account ID) information that has been registered for the rental destination company.
4	Scheduled Start Date / Scheduled End Date	Sets the scheduled start and end dates of rental.
(5)	Save	Saves the machine rental registration.

4.3.2 Display/edit machine rental information

This screen displays rental information about the selected machine. The rental information is editable.

- **1.** Display machine rental information. See "4.3 Display machine rental information".
- **2.** From the rental information list, select the information for which you want to check or edit the details.



No.	Name	Function
1	Rental Details	Displays details of machine rental information. The following are editable: • Scheduled rental start date • Scheduled rental end date • Rental date • Return date
2	Save	Saves machine rental information.

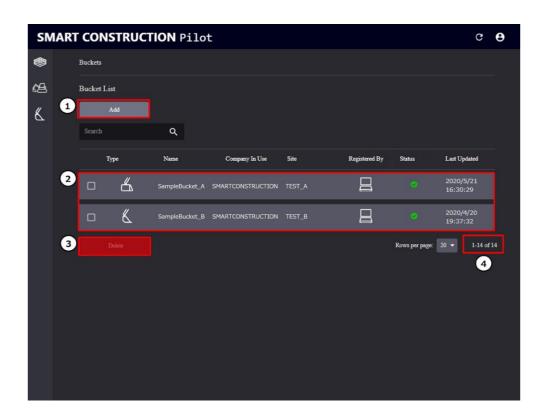
5. Set up the bucket

These screens create, edit, or delete bucket information or set up bucket rental registration.

5.1 Bucket list

Display information about the already created buckets.

Click the Bucket icon () on the left side of the screen to display the list.

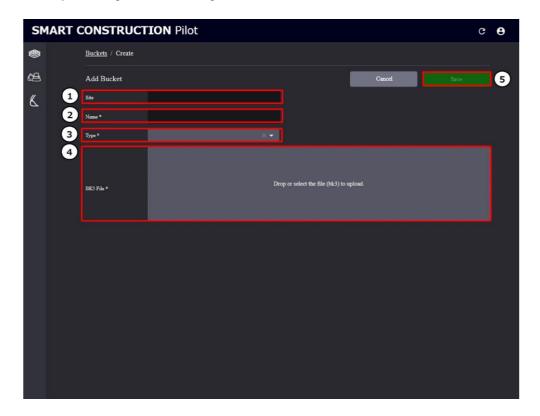


No.	Name	Function
1	Add	Creates and adds bucket information (see "5.2 Add a bucket").
2	Bucket Information	Displays information about the already created bucket. By selecting a bucket, the following can be done: • Display/edit/delete detail information (see "5.3 Display/delete/edit bucket detail information"). • Rental registration (see "5.4 Register a bucket share"). The bucket status is displayed with the following marks: • (Upload completed) • (Already converted) / (Error)
3	Delete	Deletes the checkbox selected bucket information.
4	Page	Selects the page to display.

5.2 Add a bucket

This screen adds a bucket by using the BK3 file created with Komatsu IMC Construction Machinery.

- 1. Click the Bucket icon () on the left side of the screen. The bucket list is displayed.
- 2. Click "Create".
 The Add Bucket screen is displayed.
- **3.** Add a bucket by referring to the following:

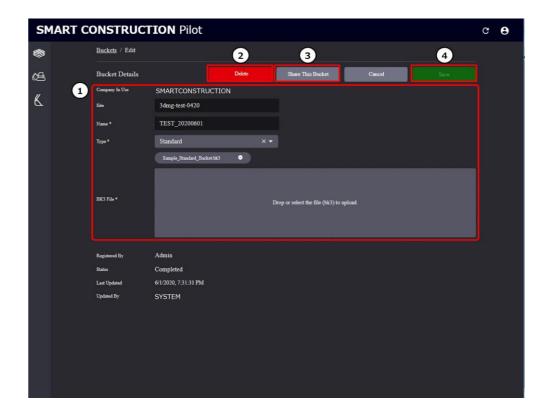


No.	Name	Function
1	Site	Selects the jobsite to which to add the bucket.
2	Name	Inputs the name of the bucket to add.
3	Туре	Inputs the type of the bucket to add.
4	BK3 File	If you have a BK3 file created with Komatsu IMC Construction Machinery, you can use it. Drag and drop the file, or select and register it.
(5)	Save	Saves the bucket information.

5.3 Display/delete/edit bucket detail information

This screen displays detail information about the selected bucket. The detail information is deletable and editable.

- 1. Click the Bucket icon () on the left side of the screen. The bucket list is displayed.
- **2.** Select a bucket. The detail information about the selected bucket is displayed.



No.	Name	Function
1	Bucket Detail Information	Displays the details of the bucket information being edited. The bucket information is also editable.
2	Delete	Deletes the bucket information being selected.
3	Share This Bucket	Allows the information about the bucket being selected to be shared with another company (see "5.4 Register a bucket share").
4	Save	Saves the edited bucket information.

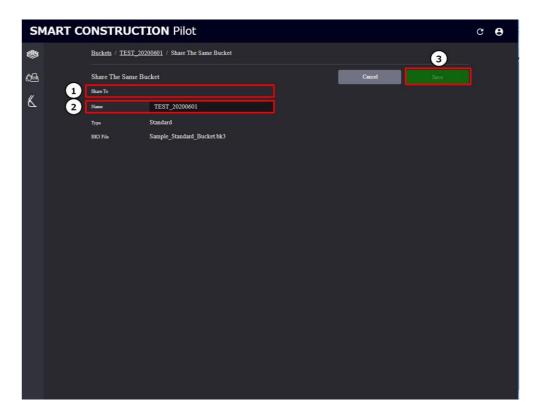
5.4 Register a bucket share

This screen registers the company with which to share the selected bucket.

(Supplementary explanation)

Before using this, you need to be invited by a member of the company with which you want to share the bucket information.

- 1. Click the Bucket icon () on the left side of the screen. The bucket list is displayed.
- **2.** Select the target bucket. The bucket detail information is displayed.
- 3. Click the "Share The Same Bucket".



No.	Name	Function
1)	Share To	Selects the company that shares the bucket. The company invited by the member is displayed in the shared destination field.
2	Name	Inputs the bucket name that is used for sharing.
3	Save	Saves the bucket share information.