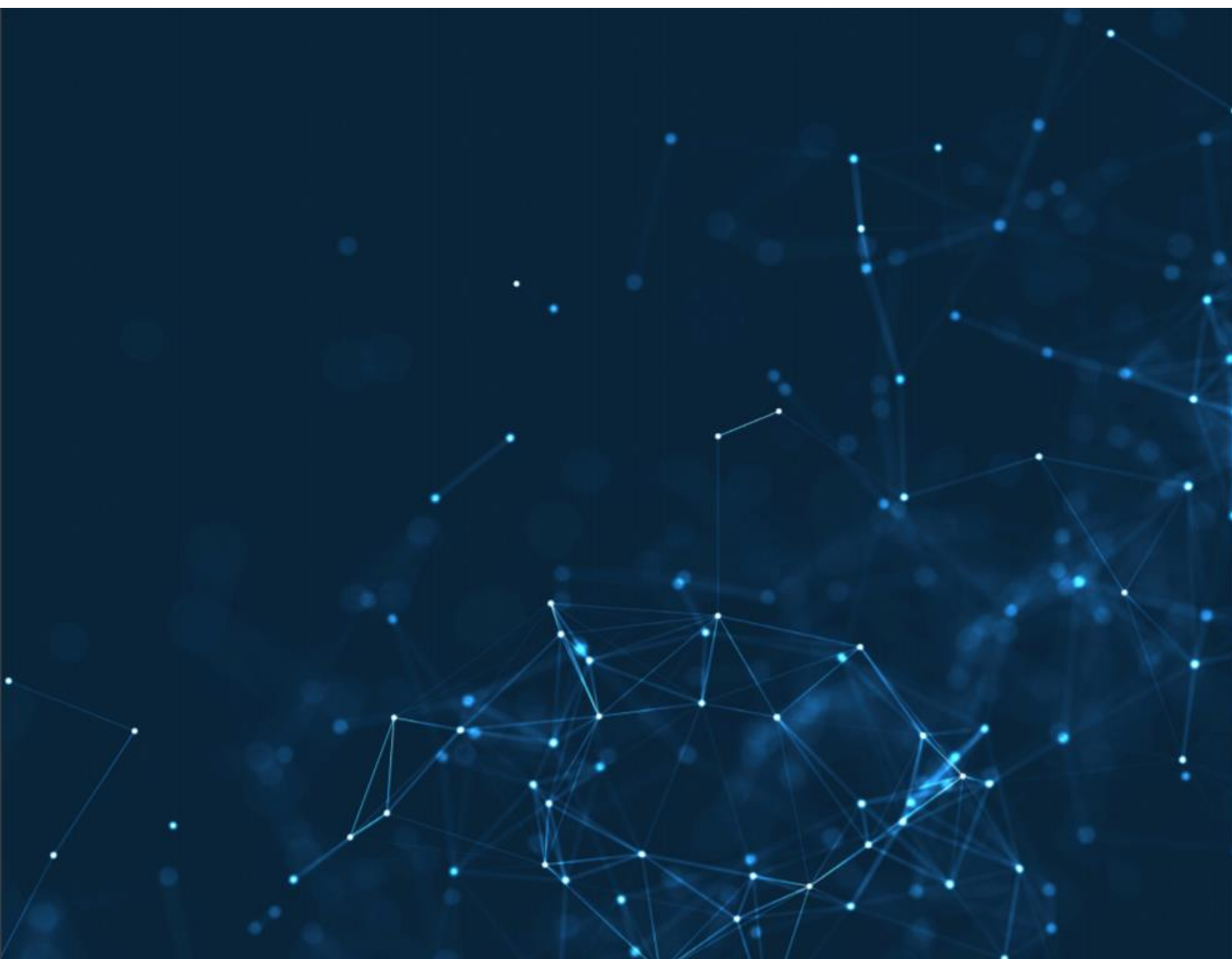# VIRNECT View 1.1

User's Manual **for Hololens 2 Device**

AR Visualization of Information and Data

Table of Contents

VIRNECT

1 Overview

1.1 Introduction

By visualizing task information using AR directly on the site or equipment, VIRNECT View helps intuitively understand the exact task location and method. The performance of the task is automatically recorded and reported, and issues can be reported.

* If AR task information created with VIRNECT Make is assigned as a job in *VIRNECT Workstation, the information can be immediately seen on the site with VIRNECT View.
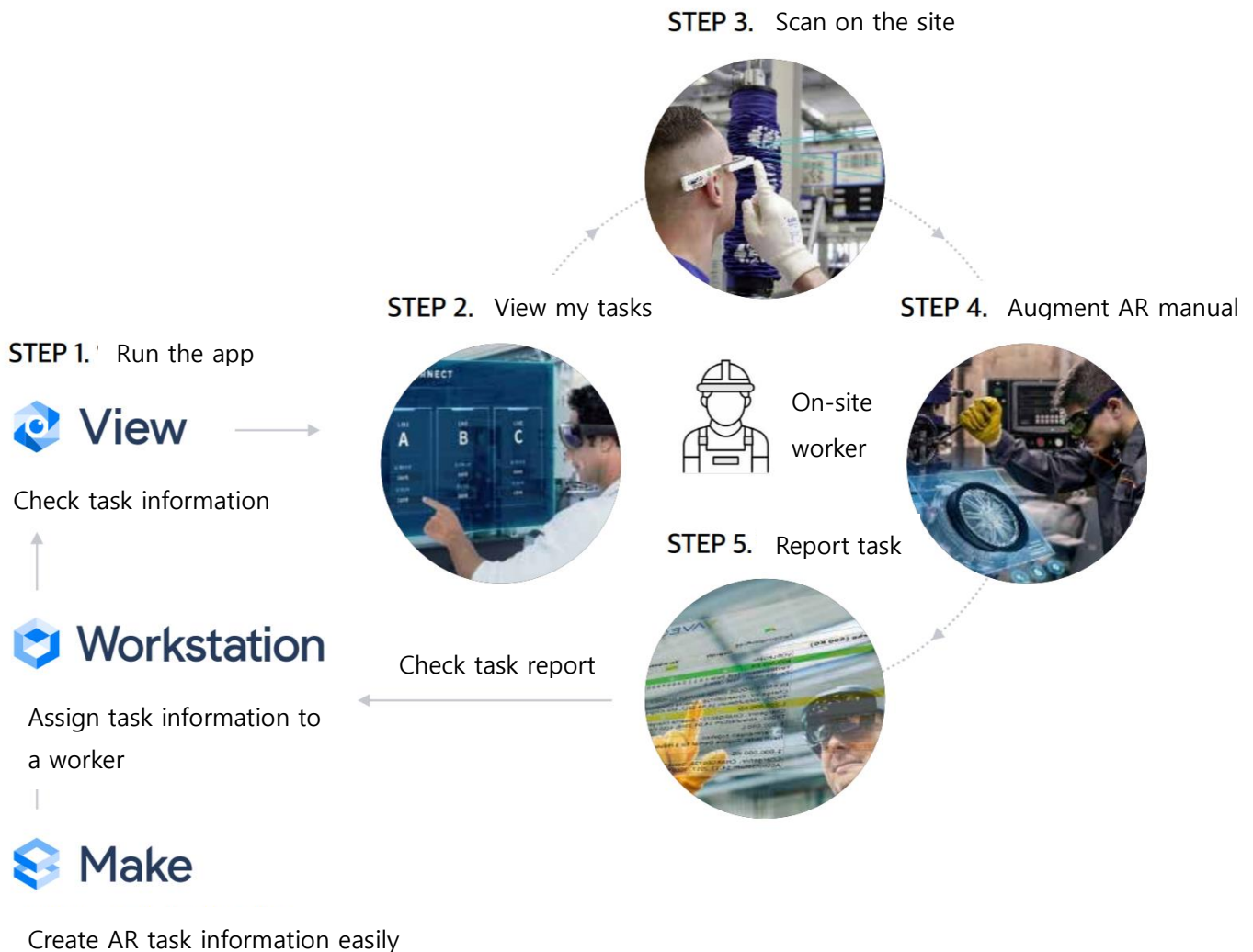
* VIRNECT Make allows you to create AR information for on-site tasks in a quick and easy way.

* VIRNECT Workstation integrates and manages VIRNECT's AR/DT (Digital Twin) services efficiently.

> ※ The features provided vary depending on your plan (product voucher).
>
> Please see the plan policy for features provided for each plan.
>
> ※ Check the updated User's Manual on the VIRNECT homepage (https://virnect.com).

STEP 3. Scan on the site

STEP 2. View my tasks

STEP 1. Run the app

View ⟶

Check task information

STEP 4. Augment AR manual

On-site worker

STEP 5. Report task

Workstation

Check task report

Assign task information to a worker

Make

Create AR task information easily

1.2 User Environment

1. Tablet Specifications

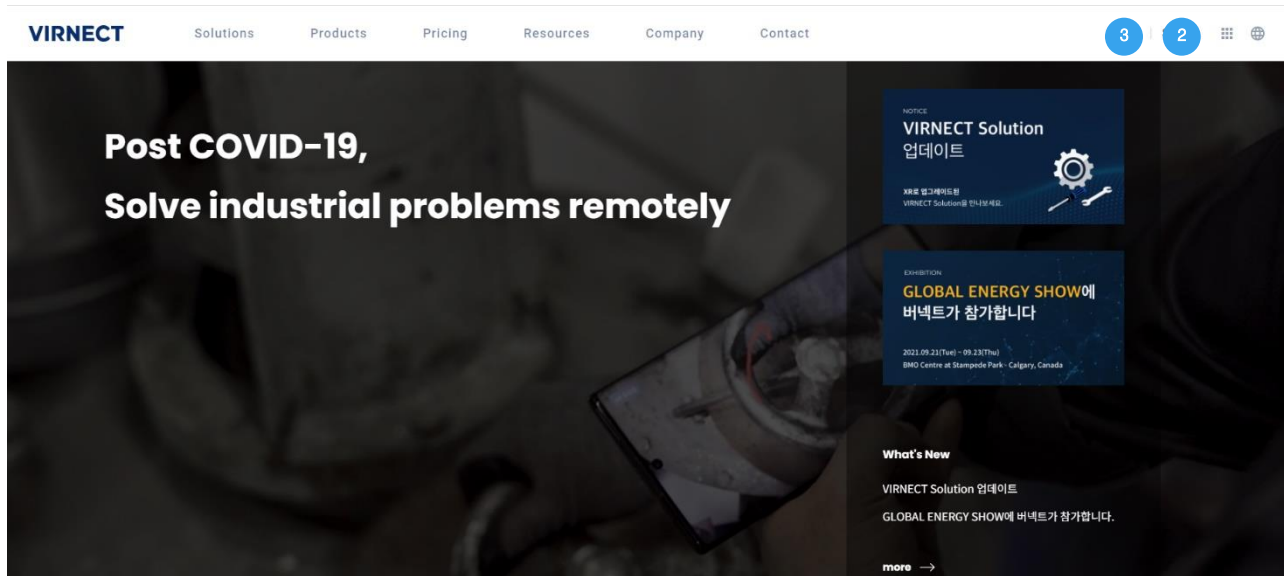|	Minimum specifications (Equivalent required)	Recommended specifications (Equivalent or higher)
CPU	Qualcomm Snapdragon 835	Qualcomm Snapdragon 855
GPU (Graphic card)	Qualcomm Adreno 540	Qualcomm Adreno 640
Memory	6GB LPDDR4X SDRAM	-
OS	Android 9.0	-
Recommended models	Samsung Galaxy Tab S4 (Android 9.0 or higher)	Samsung Galaxy Tab S6

2. AR Glass Specifications

- Supported model: Hololens 2

- Recommended OS Version: Windows Holographic Version 21H1

* This User's Manual is written based on 21H1.

3. Network Environment

Network speed affects video call quality. A minimum 3 Mbps (recommended 100 Mbps) of network environment is required.
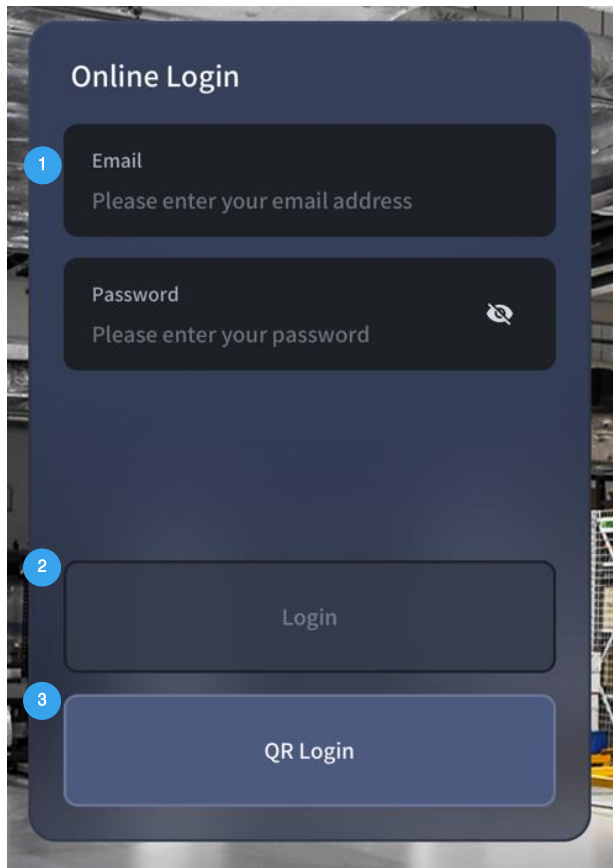
VIRNECT

2   Getting Started

2.1   Sign Up

1. In order to use VIRNECT View, you must purchase a VIRNECT View plan (product voucher) from *VIRNECT Workstation or receive a plan by participating as a Member in another *Workspace that has plans.

2. To use VIRNECT Workstation, sign up on the VIRNECT webpage (https://virnect.com) in your Google Chrome browser.

3. After log-in, download the product. ▶ 2.2

> Enter your ID (email format: 000@000.000) and password to log in. A password must be between 8 and 20 characters and contain at least 3 combinations of uppercase/lowercase letters, numbers, and special characters (.,!,@,#,$,%, etc.). Consecutive numbers or 4 or more same letters cannot be used as a password.

* VIRNECT Workstation: For detailed information about VIRNECT Workstation, please see the VIRNECT Workstation User's Manual.
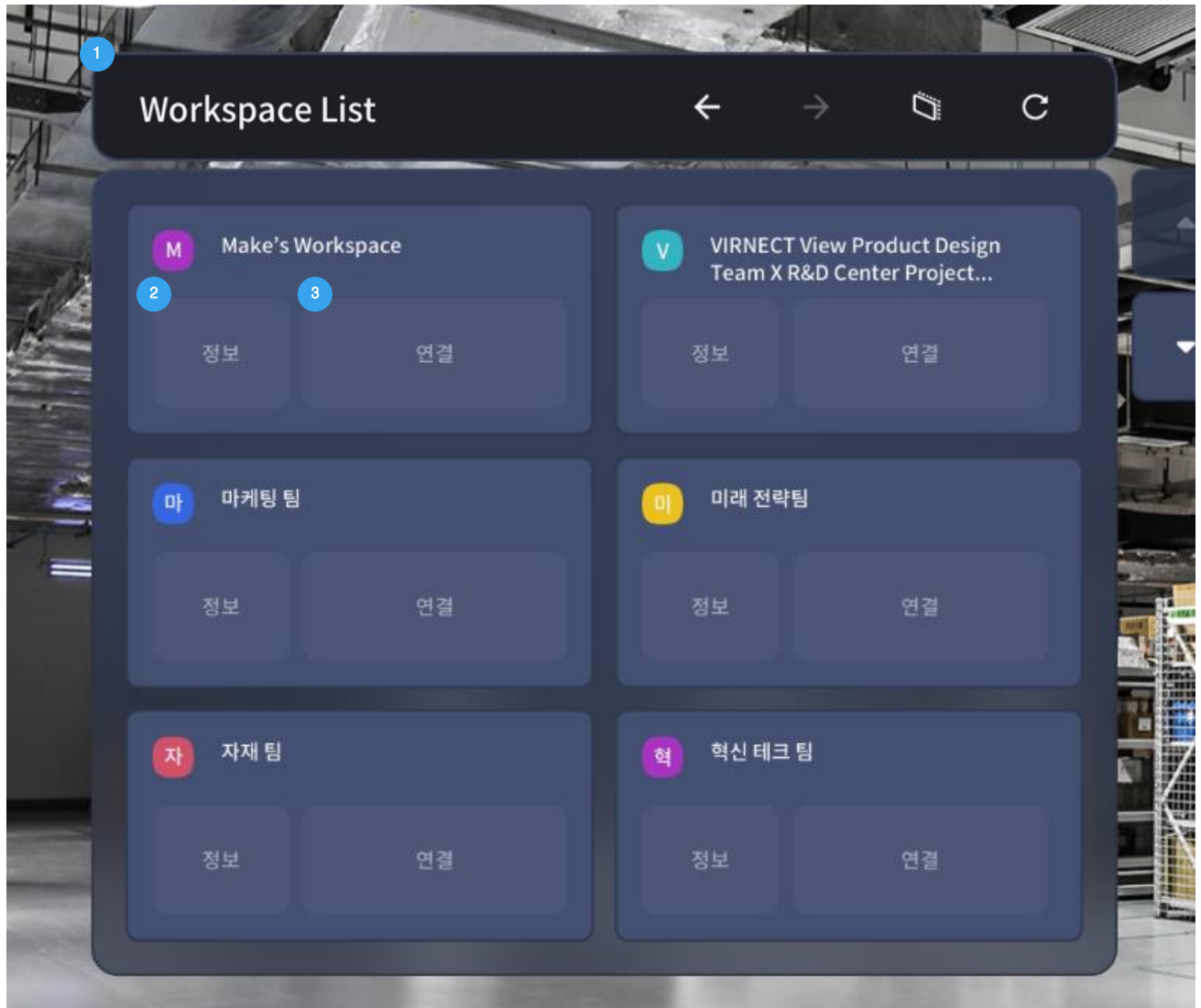
* Workspace: A collaboration group that uses VIRNECT products on VIRNECT Workstation to share content or use content-based services.

VIRNECT

2.2 Login(Online, Offline)

1. Launch VIRNECT View and log in to your VIRNECT account (Username in an email format and password).

2. Enter your ID and password to log in.

3. You can also log in with a QR code.
*Access to the QR code via [VIRNECT Homepage – QR Login Center]

4. Change the offline login mode in Settings in the Hand Menu. [Online – Offline] ▶ 2.4

VIRNECT

2.3 Selecting Workspace
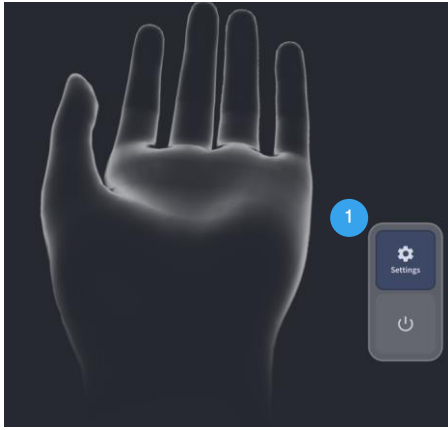

1. You can see [Workspace] from [Workspace List]

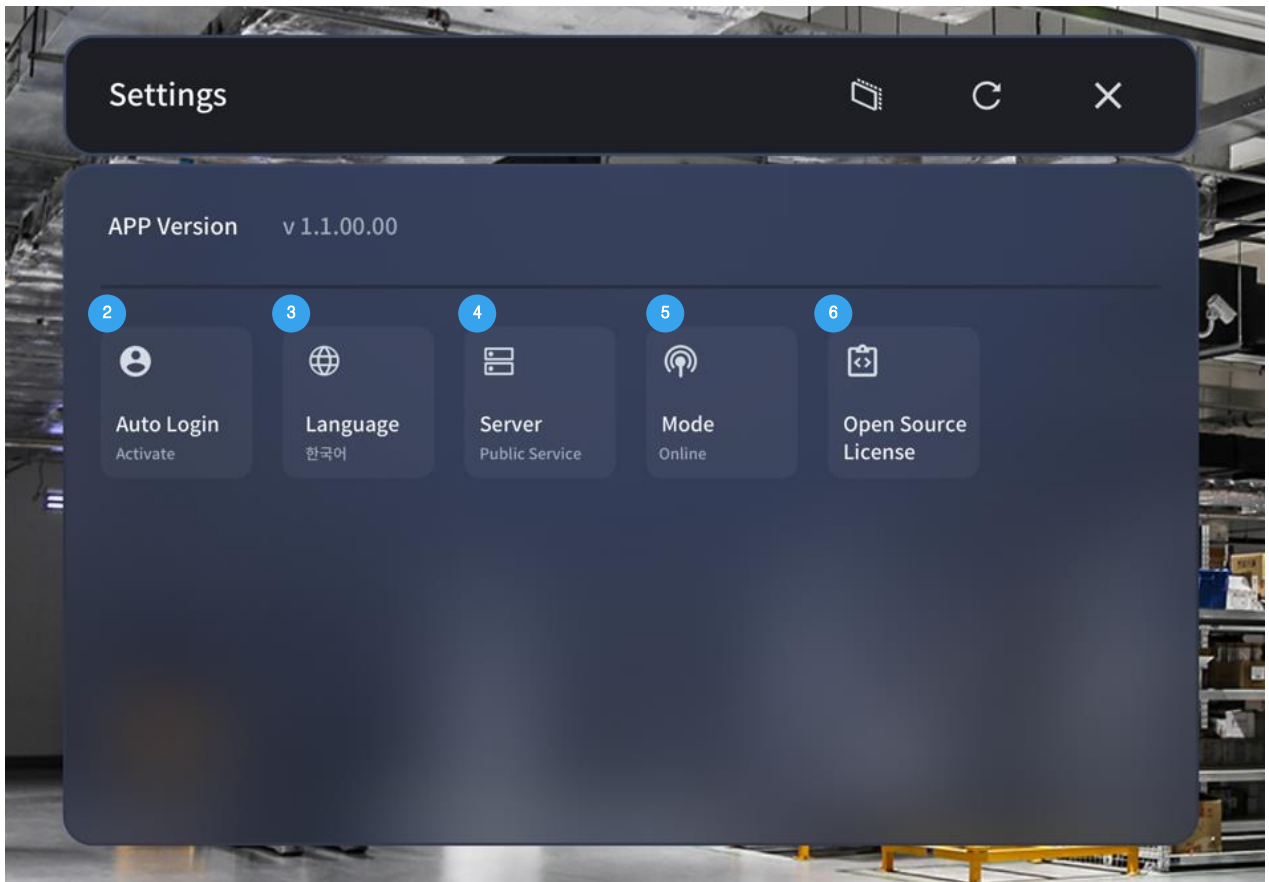2. Click the [Information] icon to check the detailed information of the selected workspace.
* See [Workspace Profile Image, Workspace Name, Workspace Master Profile, Workspace Master Nickname, Workspace Description].

3. Select the desired [Workspace] to connect.

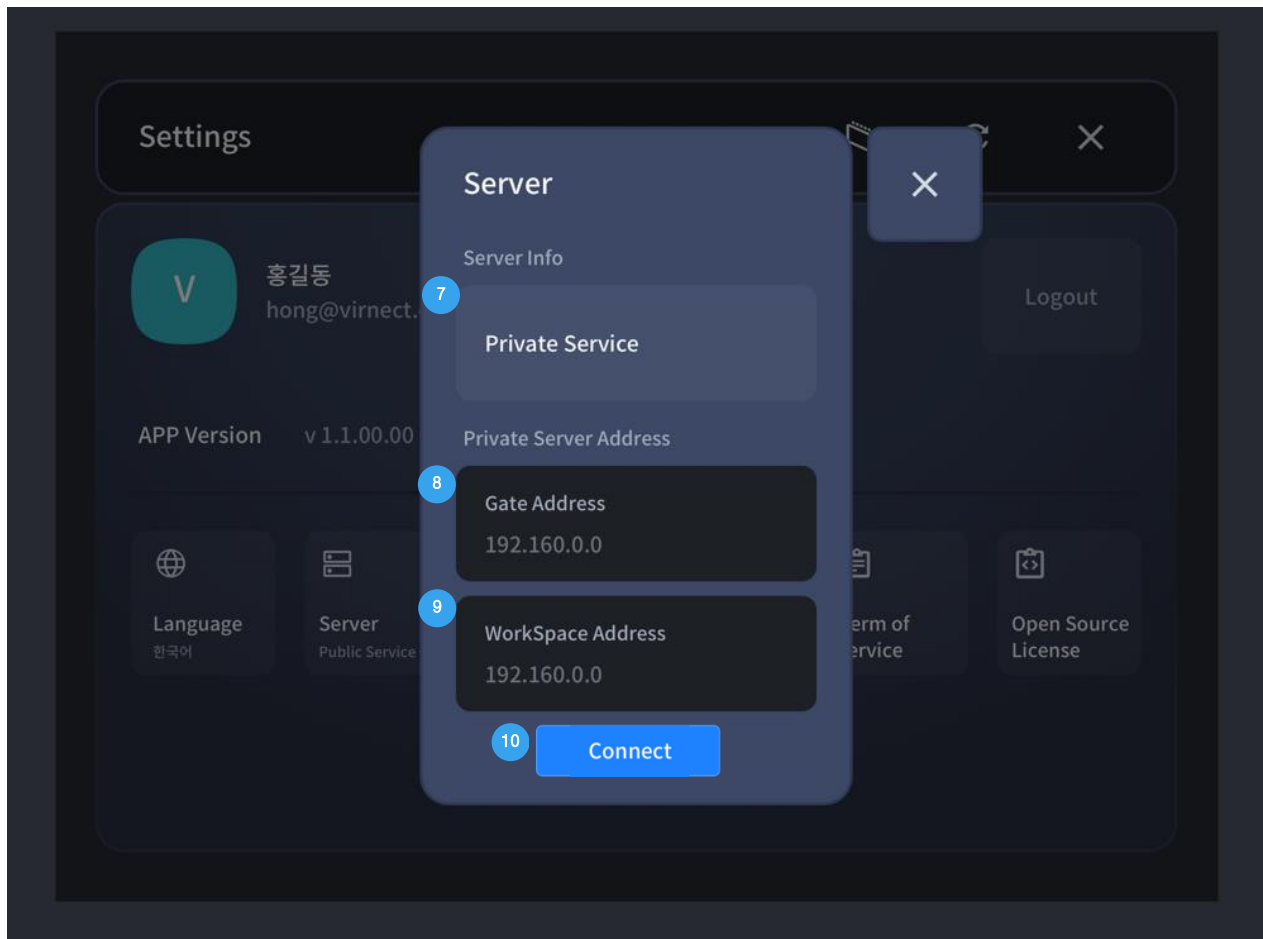**VIRNECT**

2.4 Login-Settings

1. On the Login screen, flip your palm over to pop up the Hand Menu. Select to open Settings.

2. [Auto Login]: Enable/Disable the automatic login function.

3. [Language Settings]: Set the language to use for VIRNECT View. The language currently in use is shown.

4. [Server]: Check the server currently in use. To change the server to use, select the [Settings] button to move to Server Settings.

5. [On/Offline Mode]: Set the mode of VIRNECT View.
* Online: When a network is available on the device.
* Offline: When the device is disconnected from a network. You can only log in to the account you used most recently, and only content downloaded in advance from VIRNECT Workstation is available.

6. [Open Source License]: View information on open source license.
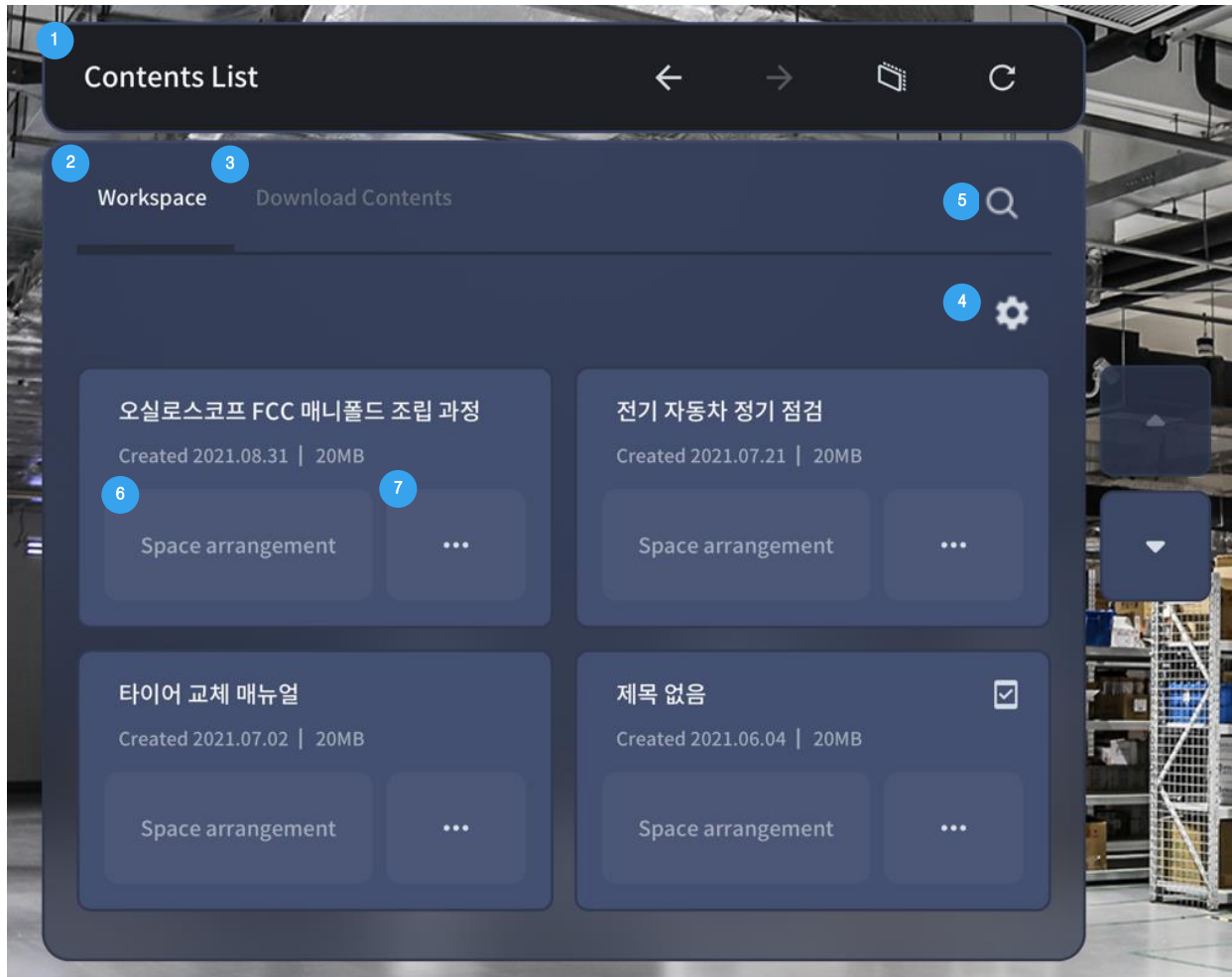
VIRNECT

7. Select [Public Service] to access public service or [Connect to Private Service Server] to access private service.

8. Enter your [Gate Address].

9. Enter your [Workspace Address].

10. After providing all necessary data, click [Connect].

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3 Home

3.1 Home

1. [Content List]: See the list of the entire contents.

2. [Workspace]: A list of contents registered in the Workspace with the sharing status enabled.

3. [Downloaded Contents]: A list of contents registered in the workspace that have been directly downloaded to HoloLens 2. You can download content by clicking [See More]. ▶ 3.3

4. Set detailed options.
*Sort: The content list is sorted by the selected condition.
*View only QR targets: When activated, only contents that support QR Target are displayed in the list.
*View only my contents: When activated, only the contents you have uploaded are displayed in the list.

5. Search uploaded content by name and username.

6. Space Layout: Used to visualize content (task) registered in Workspace by scanning user space.
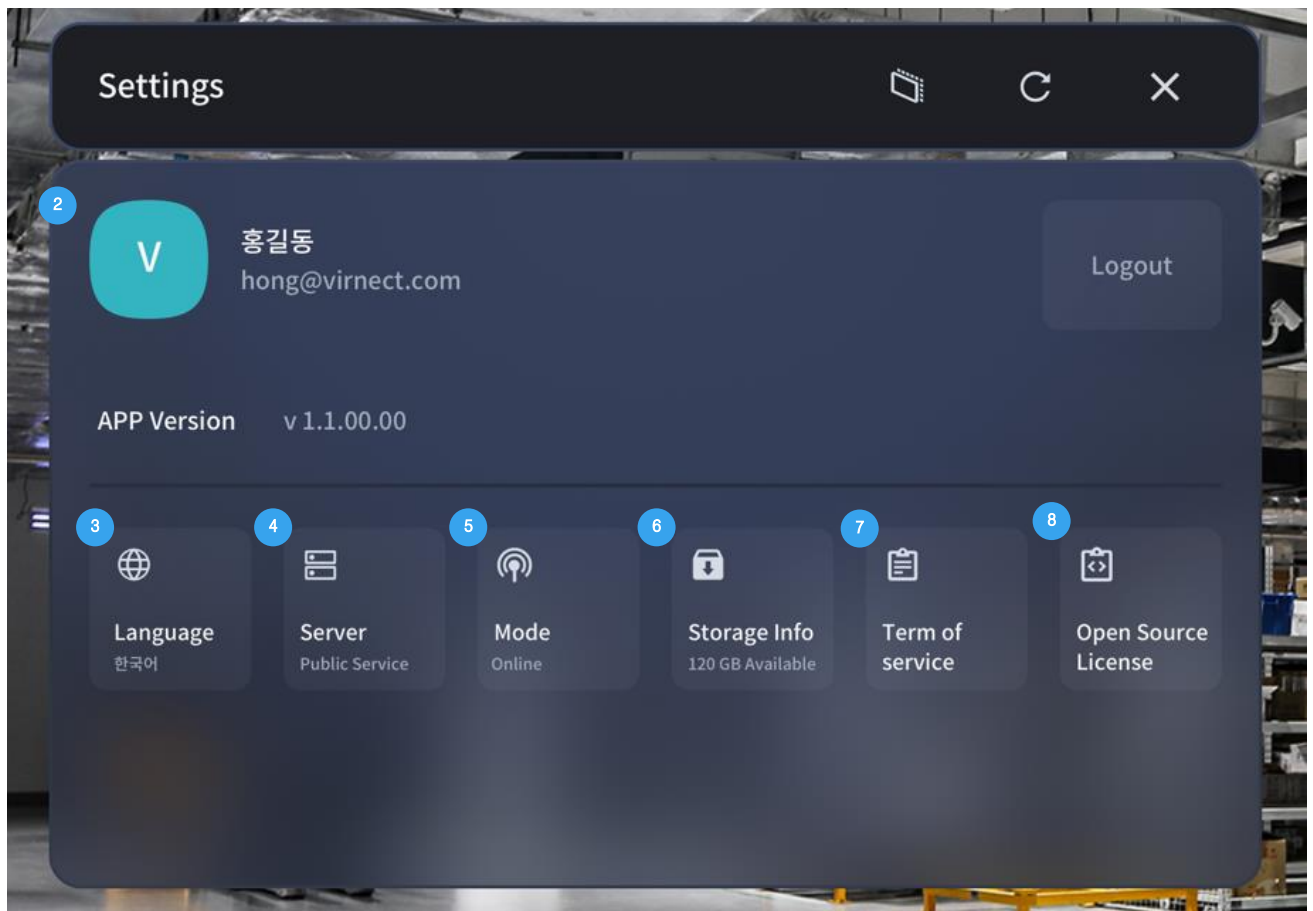*Use Hand Menu to use QR Target. ▶ 4.1

7. [See More]: View more information on the content.

* [Content Information] shows [Content ID, Content Name, Uploader, Content Sharing Status, Content Target Type].

VIRNECT
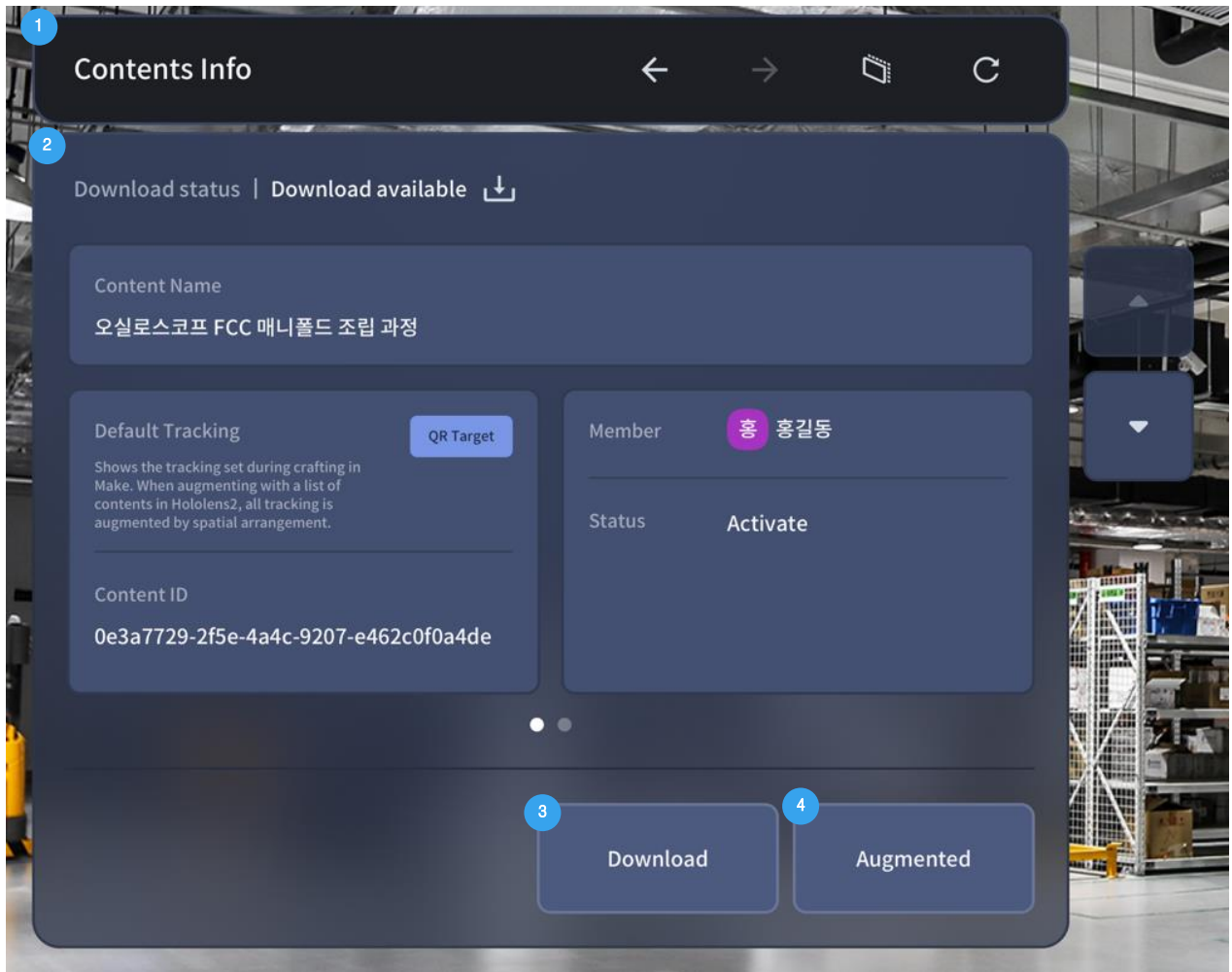
3.2 Home-Settings

1. Turn your palm over to pop up the Hand Menu and select Settings.

2. Shows the user account information and the version of the App. You can also log out.

3. [Language Settings]: Set the language to use for VIRNECT View. The language currently in use is shown. Korean and English are available.

4. [Server]: Check the server currently in use.

5. [Mode]: Set the mode of VIRNECT View.
* Online: When a network is available on the device.
* Offline: When the device is disconnected from a network. You can only log in to the account you used most recently, and only content downloaded in advance from VIRNECT Workstation is available. ▶ 3.3

6. [Storage Info]: View the available capacity of Hololens 2.

7. [Terms of Service]: View the Terms of Use of VIRNECT View.

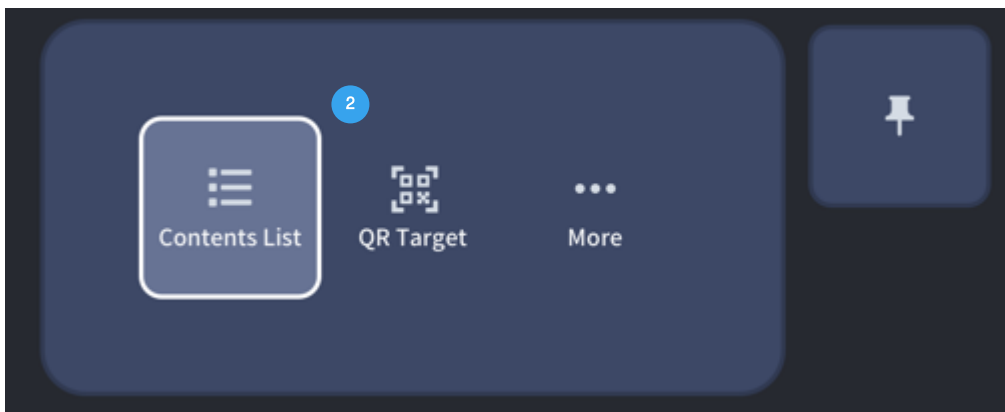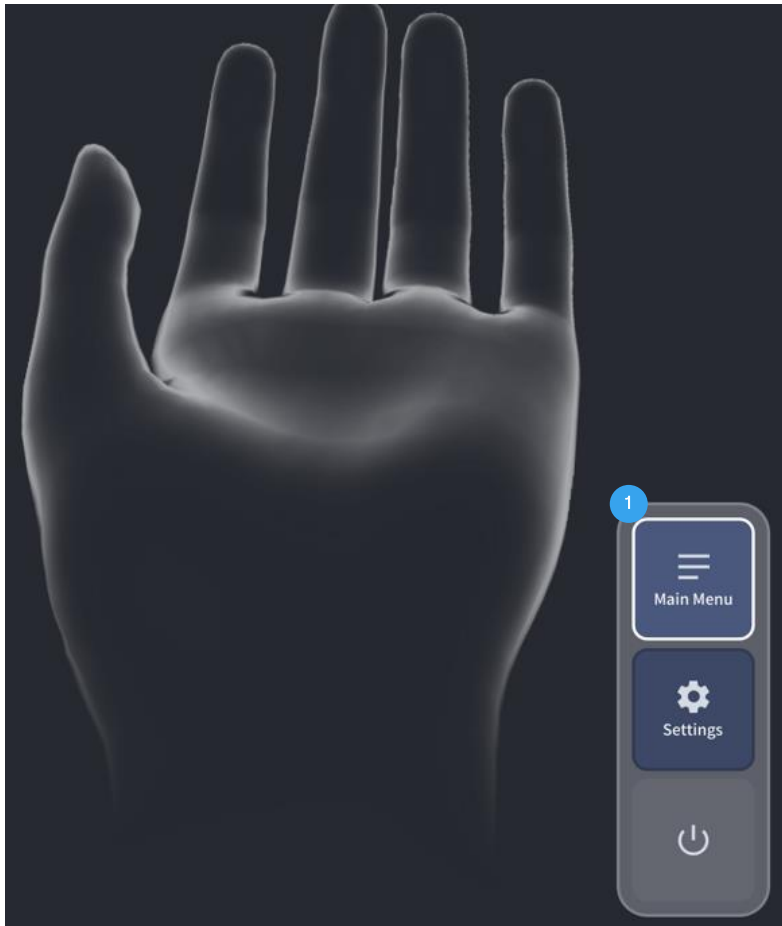6. [Open Source License]: View information on open source license.

VIRNECT

3.3 Content Download

1. You can see content information in the Content Information window by selecting the [More] option.

2. View the download status of the current content.
* Download available: Content that can be downloaded.
* Downloading: The content is currently being downloaded.
* Download completed: The content has been downloaded.

3. [Download]: Download the content directly to HoloLens 2. On the offline mode, you can only use content that has been downloaded.

4. [Augment]: Augment a downloaded content.

VIRNECT

4 Selecting Targets

4.1 Selecting Targets

1. Turn your palm over to pop up the Hand Menu, and then select [Main menu].

2. Select [QR Target].

5 Scanning Targets

5.1 Checking User Environment

How to use VIRNECT View in the right environment

For stable use of VIRNECT View, you need the right environment and method.

Use in a bright environment.

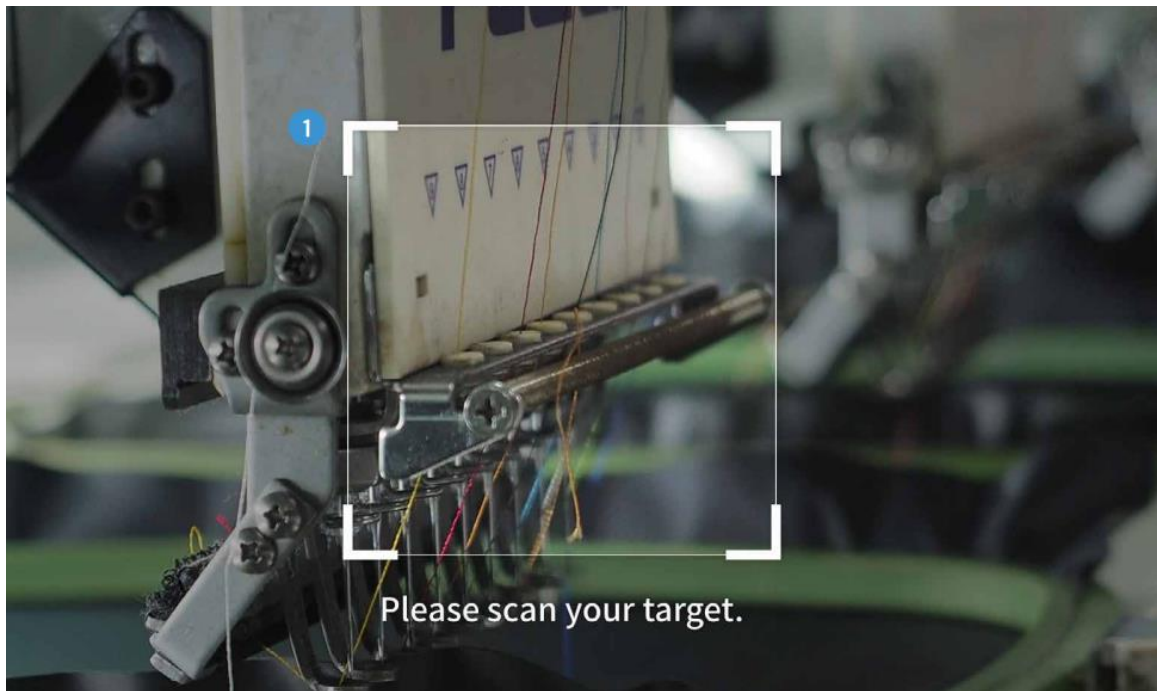It is recommended to use it on surfaces with clear boundaries.

Avoid objects with white, shiny, or reflective surfaces.
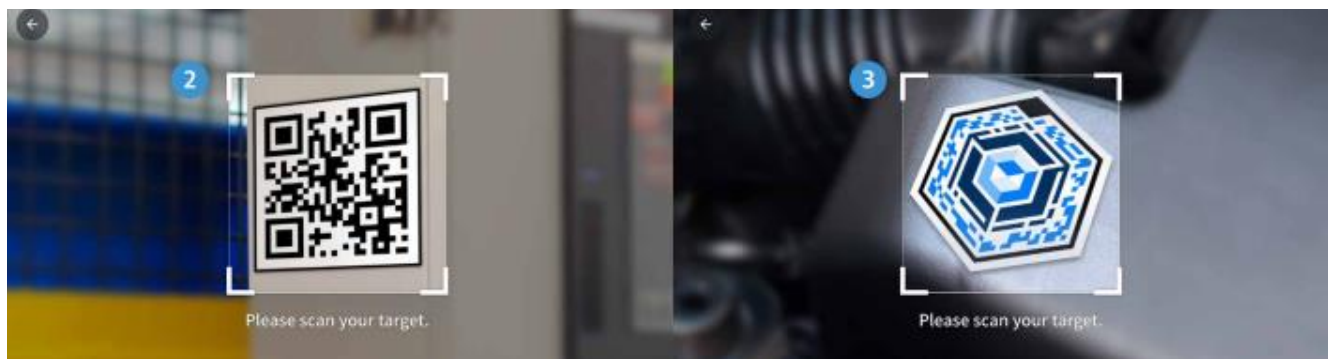

※ Learn more for stable use

*VIRNECT View can be used in a dark environment, on surfaces without defined boundaries, or for objects with white, shiny, or reflective surfaces; however, content visualized in such environments can easily be distorted.

*If AR content is moved too quickly or if the camera that the device is facing is moved too quickly after visualizing, the visualized content may be distorted.
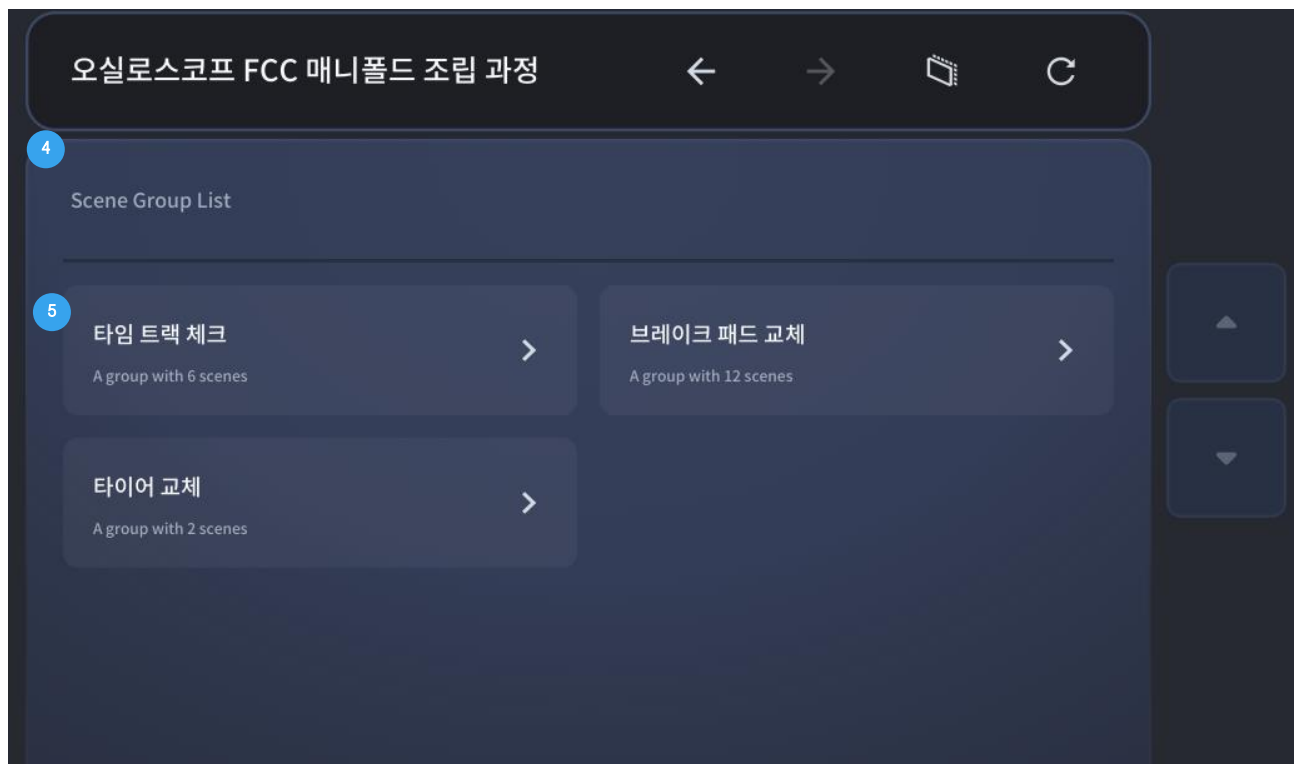
5.2   Scanning QR Targets

1. After placing a target in the target scanning frame, fix the camera of the device to face the target.

2. Once the target is scanned, [Download Content] begins. The download progress in shown in percentage (%).

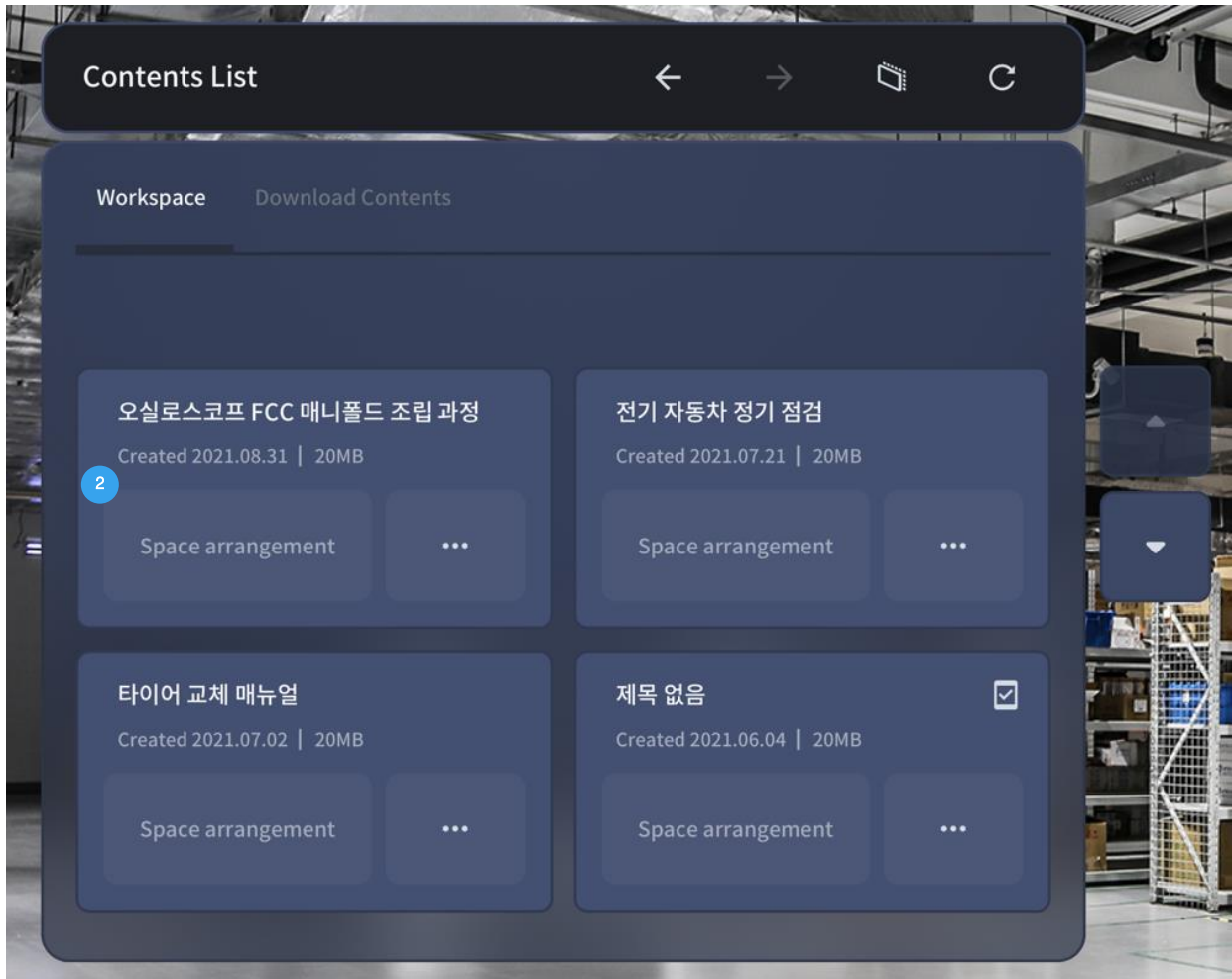3. After completing [Download Content], content visualization begins.

VIRNECT

4. A list of scenes of scanned contents will appear.

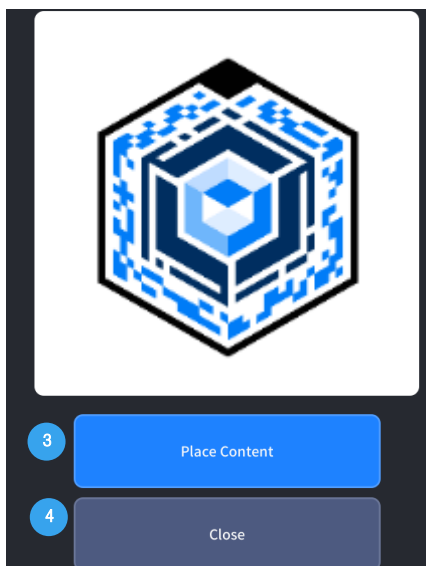5. Select the scene you want to display in the content.

VIRNECT

5.3   Space Layout

1. Space Layout is used to scan the space and arrange AR content on the scanned space.
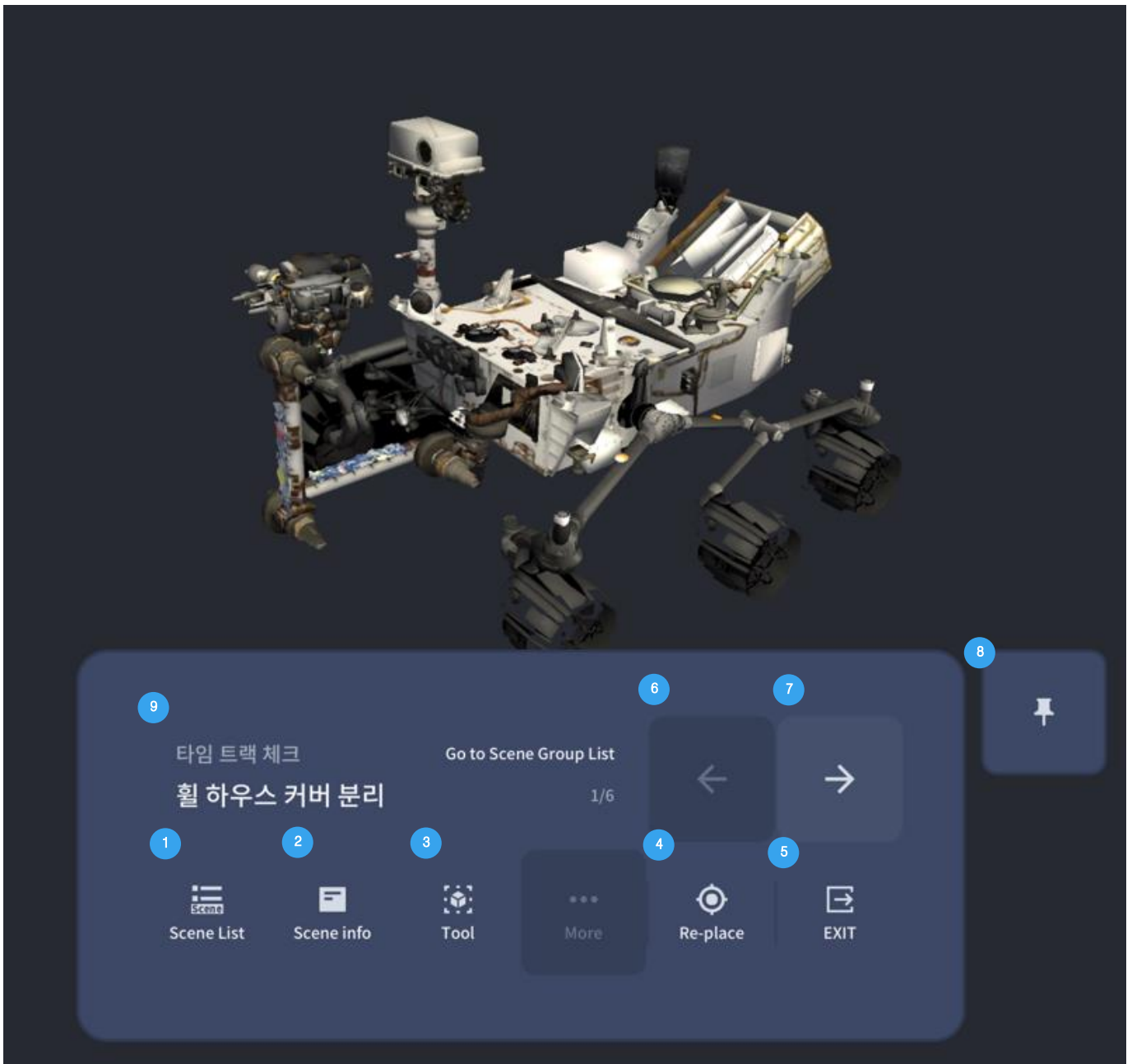

2.   [Space arrangement]: Select Space Arrangement to augment AR content.

3. If you select [Space Layout], the window below will pop up. After positioning the window at the location where you want to augment AR content, select [Place Content] to augment AR content.

4. Close the [Place Content] window.

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6 Visualizing Content

6.1 Scene information window

1. [Scene list]: Displays the list of scenes. ▶ 6.2.1

2. [Scene Info]: Open a scene information window. ▶ 6.2.2

3. [Tool]: Functions to enlarge, reduce, move, and rotate augmented AR content using hand gestures.

4. [Re-Place]: Reset the coordinate of content to be augmented by scanning a new target coordinate.

5. [Exit]: Close the Scene.

6. Go to the previous scene (=step). If the scene is the first one, the button is disabled.

7. Go to the next scene (=step). If the scene is the last one, the button is disabled.

8. [Pin]: Fix the scene information window using the pin.
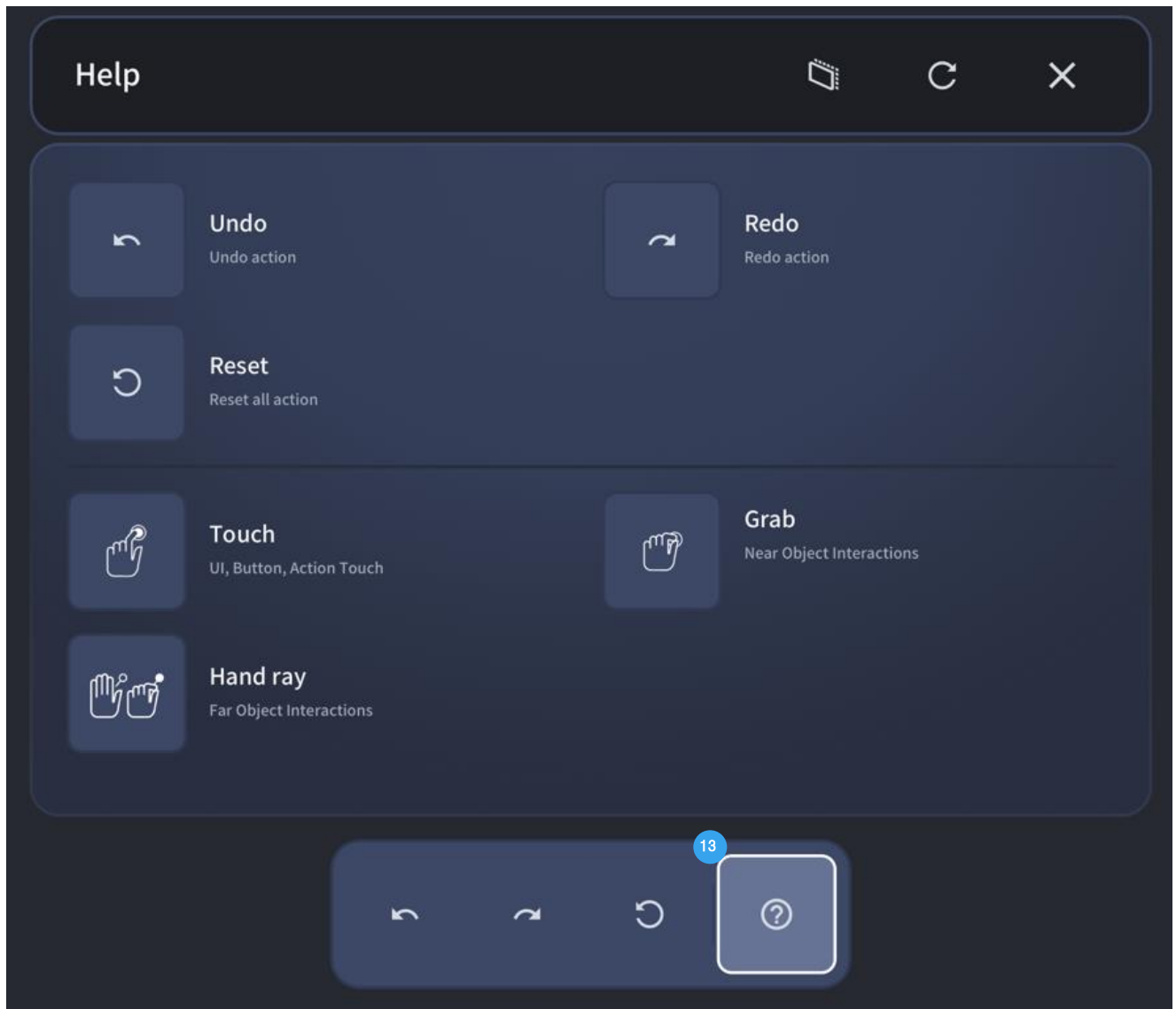
VIRNECT

9. [Help for content tools] shows the function of each content tool.

10. [Undo]: Cancel the recent change to the object.

11. [Redo]: Restore the recently undone change.

12. [Reset]: Cancel all object changes.

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13. Following hand gestures can be used in [Help for content tools]:

*Touch
Select the object to edit by clicking anywhere on the object.
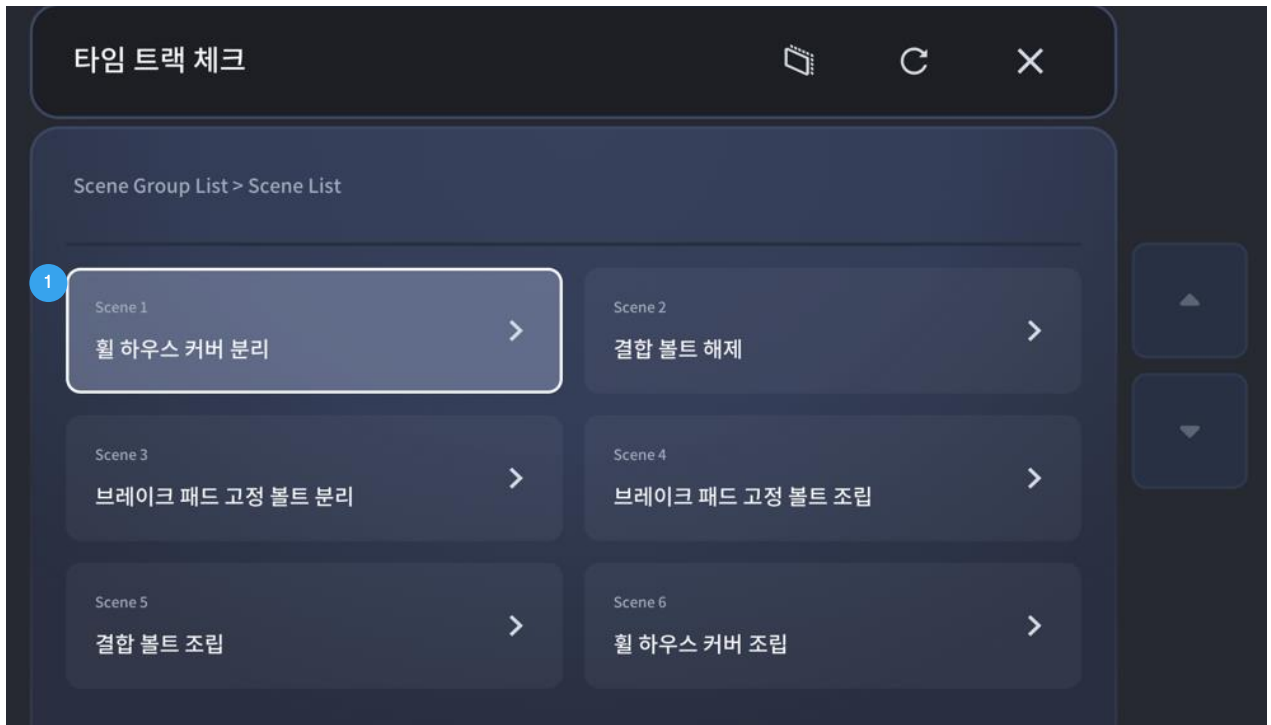Tap anywhere on the screen to deselect the object.

*Hand ray
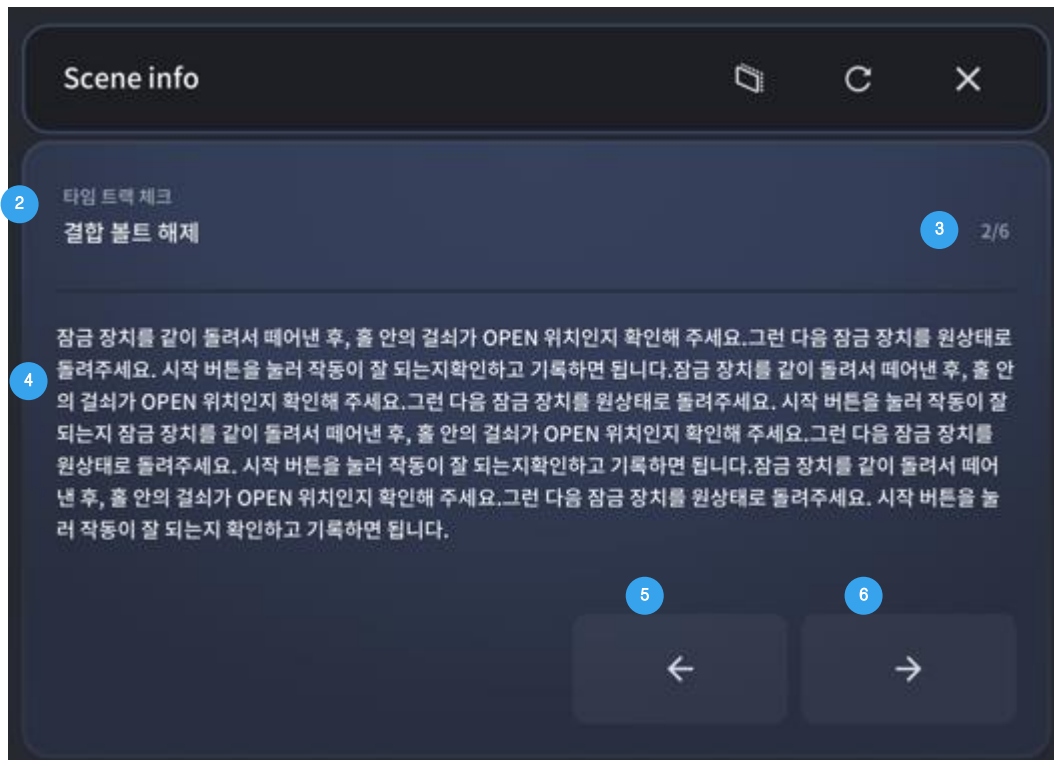Point one finger at a distant object and select it as if pinching with two fingers.

*Grab
Hold an object as if pinching with two fingers and move it to the desired location.
You can adjust the size by holding a corner and rotate it by holding a side.

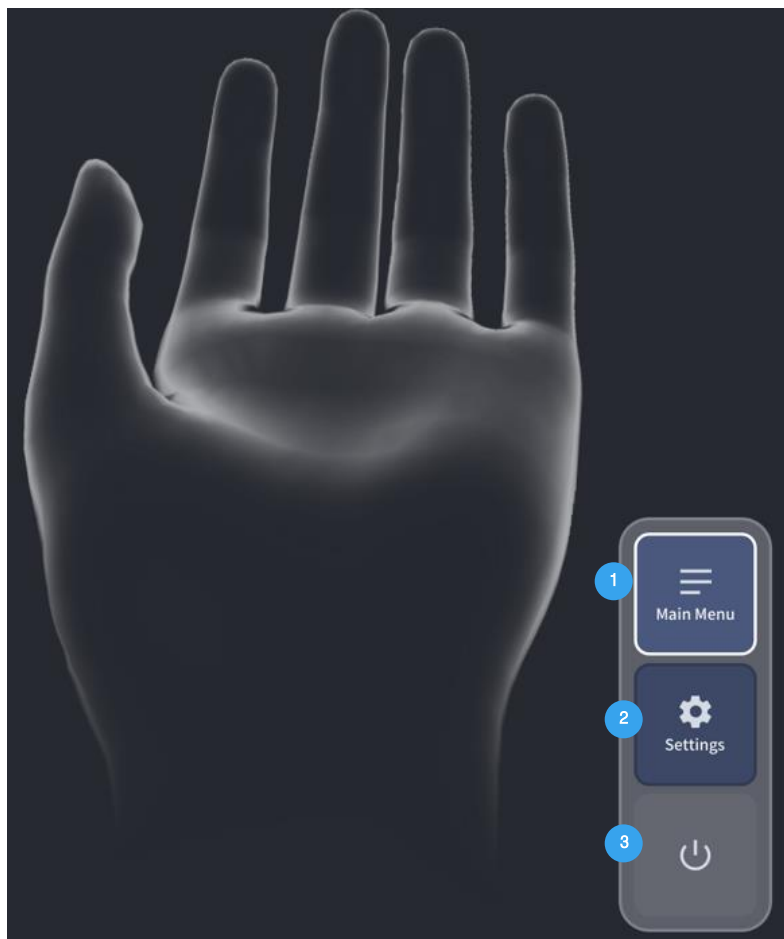**VIRNECT**

6.2 Scene List (Information) Window

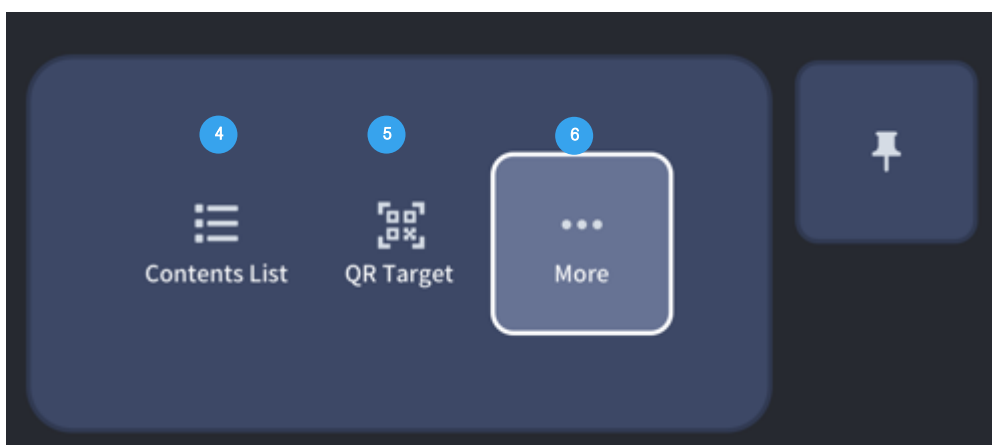1. Select a scene to visualize from the Scene List.

2. View the name and title of the selected scene group (content service) or sub-task (task service).

3. View the scene order and steps of the selected scene group (content service) or sub-task (task service).

4. View the information of the scene.

5. Go to the previous scene (=step). If it is the first scene, the button is disabled.

6. Go to the next scene (=step). If it is the last scene, the button is disabled and a window asking if you want to close the content will appear.
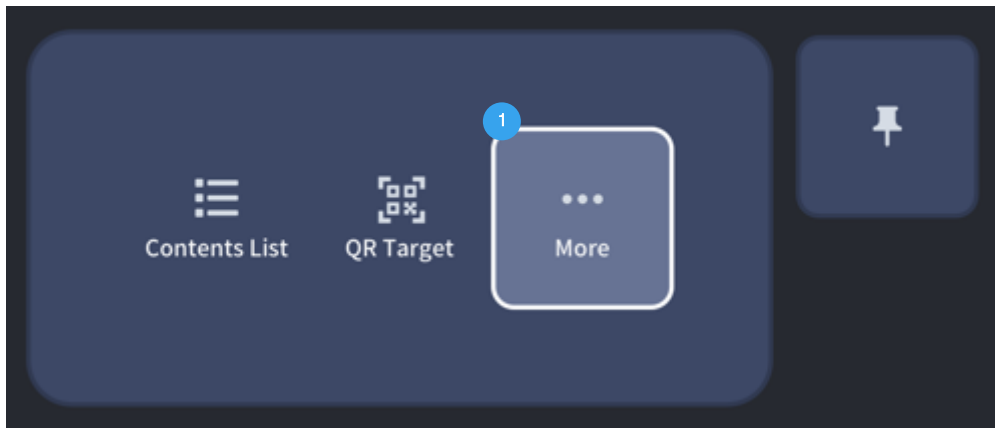
VIRNECT

6.3　Hand Menu

* Raise your hand showing your palm to augment the hand menu.

1. [Main Menu]: Open the Main Menu window.

2. [Settings]: Open the Settings window. ▶ **3.2**

3. [Exit]: Close the VIRNECT View program. When selected, an exit window pops up.
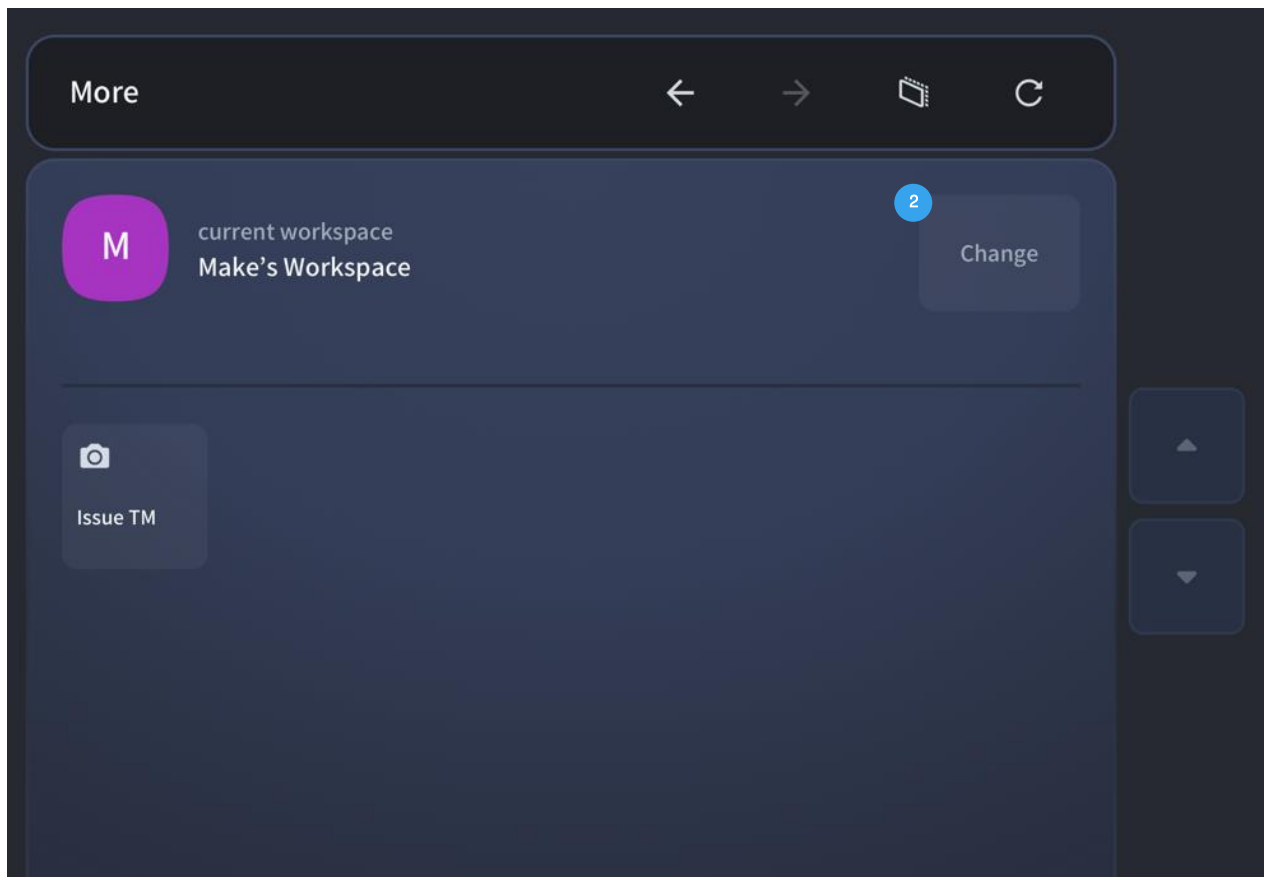

4. [Contents List]: Open the Content List.

5. [QR Target]: Change the target scanning method to QR target. ▶ **4.1**

6. [More]: Open the See More window. ▶ **6.4, 6.5**

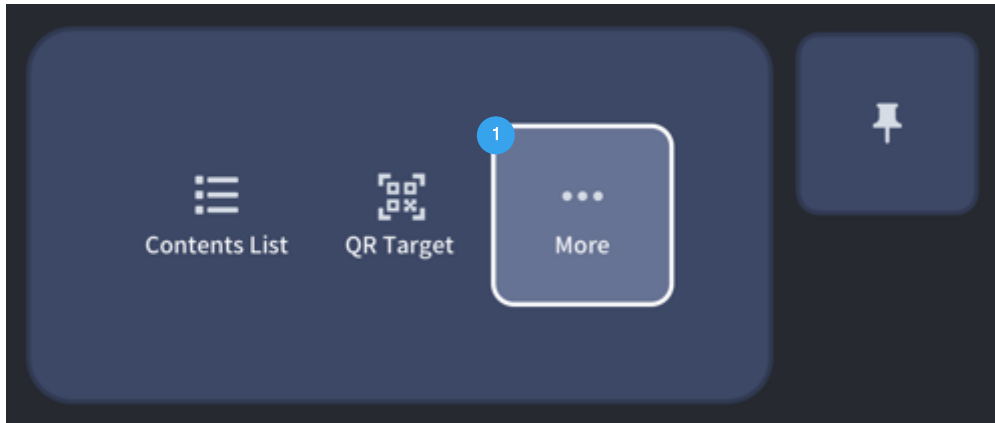**VIRNECT**

6.4 Change Workspace

1. Select [More] to open the See More window.
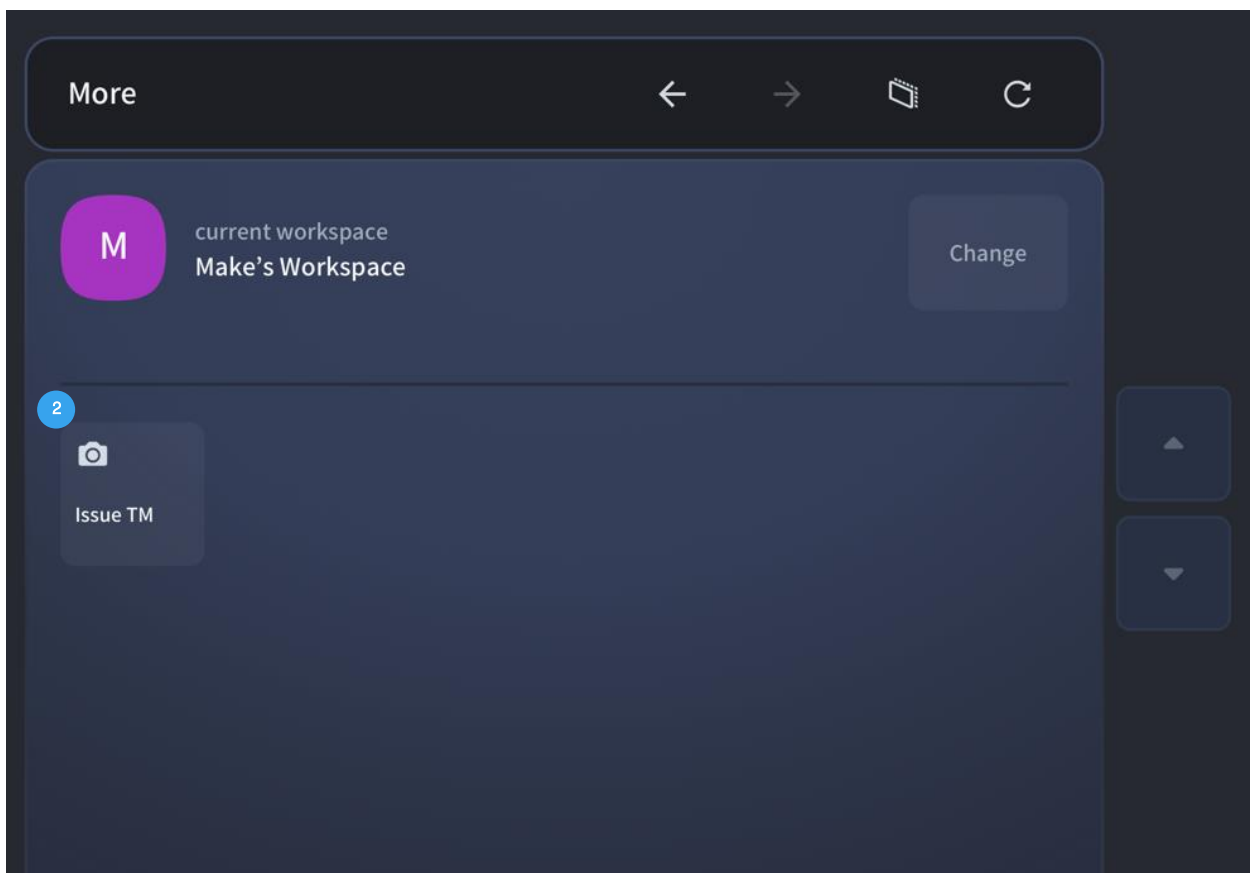

2. Select [Change] to change the current Workspace.

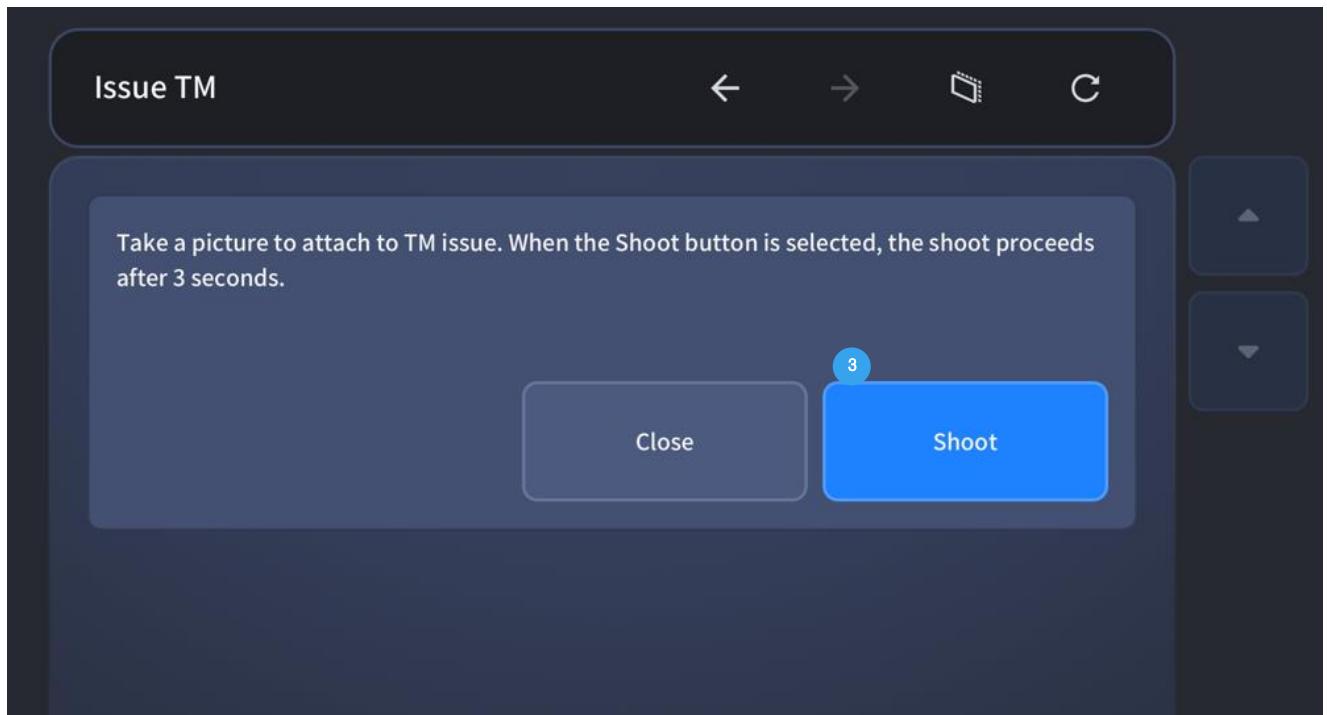**VIRNECT**

6.5 Trouble Memo (TM)

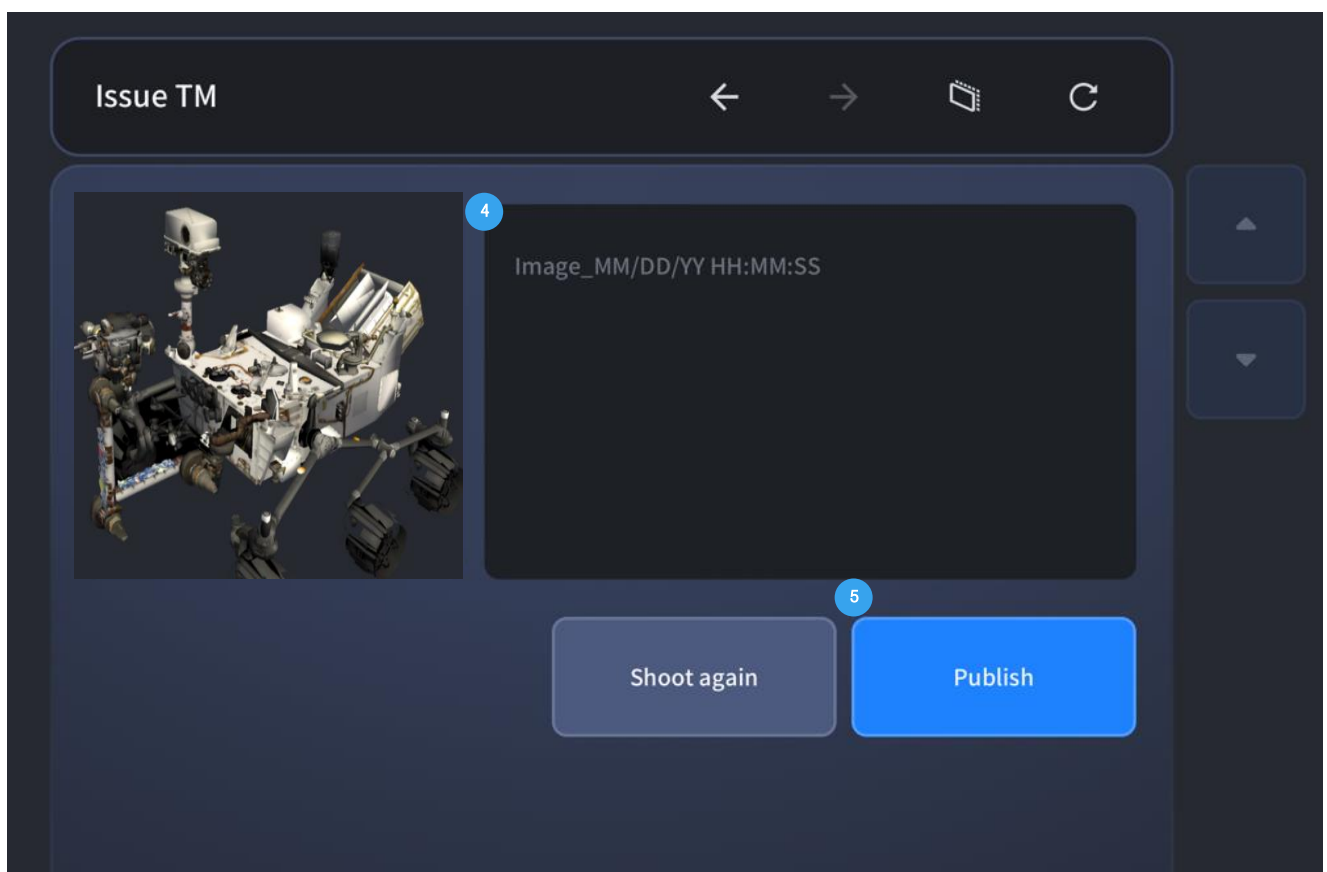1. Select [More] to open the See More window.

2. Select [Issue TM] to issue a TM.

3. [Shoot] : Take a photo to be attached to the issued TM. A photo will be taken 3 seconds after you click the Shoot button.

4. After taking a photo, enter text and issue a TM.
The date and time of the photo are entered automatically. If you need to provide more information, edit the text.

5. Review the photo and text and report it to the manager (workspace) by clicking the [Issue] button.
[Issued] photos and text can be found in [Workstation - Workspace Home - Task Management - Trouble Memo (TM)].

VIRNECT

REDEFINING
IMMERSIVE
XR TECHNOLOGY

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