





# **USER MANUAL**

Chapte	r 1.Syste	m Specification	3
1-1	. MAK	AR XR Editor	3
1-2	. MAK	AR XR APP	3
Chapte	r 2. Insta	ll & Sign Up	5
2-1	. Dowr	nload & Install MAKAR Editor	5
2-2	. MAK	AR account	9
2-3	. Chan	ge MAKAR ID	16
	2-3-1	MAKAR Editor	16
	2-3-2	MAKAR Official Website	17
Chapte	r3.Basic	Interface	19
3-1	. Logir	ı Page	19
3-2	. Serial	Key Binding & Unbinding	22
3-3	. MAK	AR Drop-down List	24
3-4	. Wind	ow Drop-down List	32
	3-4-1	My Resources	32
	3-4-2	Target Image	36
	3-4-3	Help	37
	3-4-4	Account Settings	38
Chapte	r4. Intera	active feature	41
4-1.	AR Inte	ractive feature:	41
1.	Link to	Webpage	42
2.	Calling	Phone	42
3.	Send Er	nail	42
4.	Play Mu	ısic	43
5.	Animat	ion Switch	43
6.	Show Ir	nage	44
7.	Show M	1odel	45
8.	Show V	ideo	46
9.	Show T	ext	47
10.	Close	with Child	47
11.	Matti	ng(only for 2D material)	48
4-2.	VR Inte	ractive feature	50

## MAKAR

	Sce	ne Switching	0
4-3	•	Scene object property control	1
	1.	Scene object and basic object property5	1
	2.	General object of scene object	1
	3.	Group structure	2
	4.	Trigger objects of scene objects (including trigger event group structure) 5	2
	5.	Interactable	4
Cha	pter	5. Project creation	5
	5-1.	Project mode of operation5	5
	5-2.	3D interface operation	5
	5-3.	3D VR preview mode switching5	8
	5-4.	2D Interface operation	9
Cha	pter	6. Build up basic projects	2
	6-1.	AR Image Project - AR Dinosaur Cookie	2
	6-2.	AR Video Project	7
	6-3.	VR (Virtual reality) project creation concept7	2
	6-4.	MR project creation concept7	5
	6-5.	GPS feature open	0
Cha	pter	7. Method of using APP	2
	7-1.	Project Search Method	2
	7-2.	Project collection method	3
	7-3.	Image recognition experience method8	3
	7-4.		
	7-5.	VR virtual reality project using method	8
Cha	pter	8. Module system	2
	8-1.	Scratch card module9	2
		FAQ about scratch-card	0
	8-2.	Point card module	1
		FAQ About point card	
Cha	pter	<b>9. Hot key</b>	6



# [Introduction of MIFLY]

MIFLY was founded in 2014, with technology as the core, having a number of inve ntion patents and utility model patent technology projects, including: Graphic vision t echnology, AI recognition technology, spatial orientation and cloud to local AVR and other technical content, provide MAKAR SDK professional technical support, launched the only AR/VR/MR development engine "MAKAR Editor" in 2018 in Taiwan. With the advent of the 5G generation, we are leading the trend of digital transformation, integr ating diversified soft and hard integration, providing new and perfect AR/VR/MR solut ions, supporting all kinds of AR glasses, VR headsets, mobile phones, tablets and intell igent robots and other devices. Furthermore, to response to the impact of digital trans formation of globalization, in order to reduce the barrier from App-downloading, MA KAR proposed "Web XR technology service" to accelerate the marketing process. FB, L INE, IG or client' s own official websites can all be put into Web AR/VR technology. A t present, MAKAR has landed and been promoted in China, Philippines, Canada, Kore a, Japan, etc.

# [Introduction of product]

AR/VR/MR has been paying more and more attention to all kinds of e-learning ap pliances in recent years. The contents were widely used in various fields including med ical treatment, education, driving safety, government propaganda, environmental edu cation, construction tours, etc. MAKAR provides professional digital teaching material s for teachers, students, businesses and organizations to effectively learn and create d igital learning content.

"MAKAR XR Editing Platform"allows you to create a variety of XR digital content, i ncluding: AR image recognition module, AR spatial orientation module (MR mixed rea lity), VR virtual reality module, digital action learning material production system and I earning process analysis, etc, and also support various mobile devices (AR glasses, VR headset, tablet, mobile phone, web browsing, etc).



# [Uniqueness of product]

- Fast Development: ten minute for finishing one XR project
   Easy editing and operation mode, so that creators do not need to learn program
   ming. After login in can quickly produce AR/VR/MR projects within 10 minutes, ed
   it projects and press publish to upload, mobile devices can instantly update the ex
   perience, so that your creativity is not limited.
- Easy to learn: Short Learning Curve for Any age group Both students and people in society can learn to make and develop quickly. With diversified teaching videos and resources, learning can be easier and become mo re creative with makers.
- 3. Applies to all industries: Any industry can quickly connect to Augmented Reality Quickly connect to the industry, and use AR/VR to conduct various advertising ca mpaigns, fun and intuitive interactive content, which makes user's industries mor e visible than others.
- 4. New WebXR service: Experience AR/VR project without downloading App Complete XR editing in MAKAR, and turn on the Web function support, get the W ebAR/VR experience link immediately. Users do not need to download the App, ju st start up or use QR code to enter XR digital experience. This feature integrates e xisting websites and communities to reduce bounce rates, and increase project pa rticipation. The experience process is more convenient and intuitive.
- 5. Perfect equipment resources: Provide fast and convenient 360 and 3D scanning s ervice

Fast doing shooting and editing, let various industries are able to import AR/VR sc ene applications quickly. Advertising marketing, retailers and schools are MAKAR' s main application markets. Through MAKAR editor, we can effectively enter AR/V R/MR applications and enhance the competitiveness of digital transformation.

6. ARVR hardware integration : Combine AR/VR glasses development Supporting AR glasses and VR headsets on the market, and integrate diversified h ardware technology experience, developers no longer need programming to dev elop advanced hardware content. Through MAKAR AR/VR/MR editing tools, you c an develop and update projects at any time, making digital content creation easie r, and effectively solve the difficulty of purchasing hardware without developmen t.



### Chapter 1.System Specification

MAKAR XR Editing Platform allows users to create their own XR content through MAKAR Editor & MAKAR APP. MAKAR also supports multiple devices including deskt op, laptop, tablet, mobile phone, AIO, AR headset etc.

1-1. MAKAR XR Editor

- Download the MAKAR Editor installer on MAKAR's official website. Available on Windows(32-bit, 64-bit) and macOS. Editor needs to be installed on a PC device.
- 2. System requirements

Minimum
Processor: Intel® Core™ i3 or AMD Phenom™ X3 8650
Graphics: Intel® HD Graphics 4400 or over
Network: 1.5M / ADSL
Recommended
Processor: Intel® Core™ i7 or AMD Phenom™ II X3 or over
Graphics: NVIDIA® GeForce® GTX 750 or over
Network: 20M / ADSL

#### 1-2. MAKAR XR APP

1. Fully compatible with both Android and iOS device

GooglePlay (Android)		
OS: Android Lollipop (5.0) or over		
Storage: 36MB available space		
Network: 4G or wifi		
Apple Store (iOS)		
OS: iOS 8.0 or over		
Storage: 140.7MB available space		
Network: 4G or wifi		



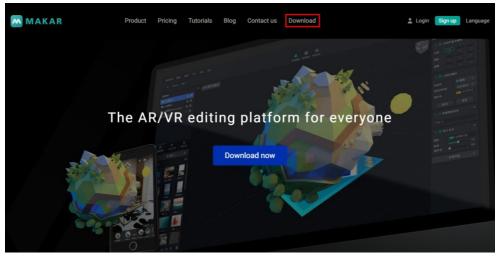
### 2. Supported Mobile Device List

Model	Туре	External	Support
HTC Focus / Focus Plus	AIO-VR	-	VR
Oculus Quest 2	AIO-VR	-	VR
XRSPACE	AIO-VR	-	VR
Cardboard	Mobile VR	Mobile Phon e	VR
EPSON AR Glass	AR Glass	Controller / C amera	AR / VR
Phone / Tablet	Support Space Recognition	-	AR / VR / MR
Phone / Tablet	Gyroscope	-	AR / VR



## Chapter 2. Install & Sign Up

- 2-1. Download & Install MAKAR Editor
  - 1. Go to MAKAR's official website and click "Download".

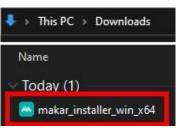


2. Please choose the installer that matches your system. We provide three optio ns: Windows 32-bit, Windows 64-bit and iOS for Mac. This tutorial will be bas ed on installing with Windows 64-bit.

#### MAKAR Download

MAKAR 2021	Download (Win) 🕶	Download (Mac)
MAKAR User Manual	Windows 32bit Windows 64bit	English
MAKAR SDK	Download	

3. Click the installer after the download is completed.



4. The installation screen will appear.





5. Click "..." to choose the file location. Check the box if you agree to the License terms and conditions, then click "Next".



6. After checking where the shortcuts will be, click "Install".

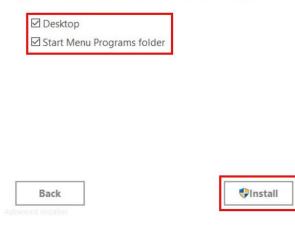


 $\times$ 



Create application shortcuts

Create shortcuts for MAKAR in the following locations:



7. The installation will be completed in seconds, please wait.





Please wait while the Setup Wizard installs MAKAR. This may take several minutes.

Status:		
Executing file remova	aparahana	-

8. MAKAR editor will automatically activate at once.



9. If the MAKAR editor does not automatically activate, double-click this icon.

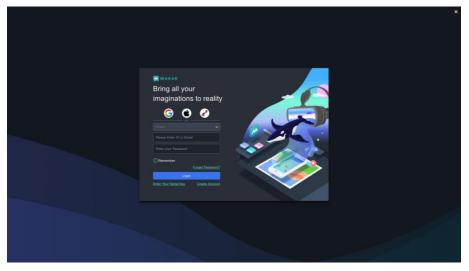




10. Check whether it's the latest version, click "Continue" if there are no further q uestions.



11. The login screen will now appear. Enter your ID and password, or login with a third-party software to start creating your own AR/VR works now!



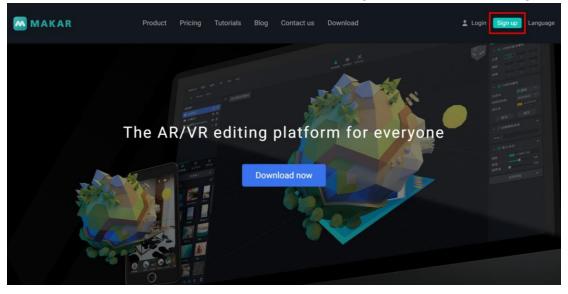
2-2. MAKAR account



There are three different ways to create a MAKAR account.

#### 2-2-1 Register Online with Email Address

1. Go to MAKAR's official website, and click "Sign up" in the upper-right corner.

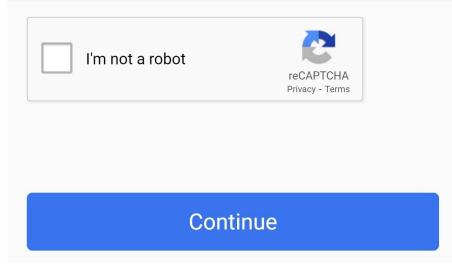


- 2. Enter the Member Sign Up page and fill out the f orm.
  - A registration notification letter will be sent t o your registered email address.
  - (2). Username will be your "MAKAR ID", this can be changed only ONCE after the sign up pro cess.
  - (3). Please read our Terms of Service in depth.
  - (4). Mark the box if there are no further question s about <u>Terms of Service</u>.

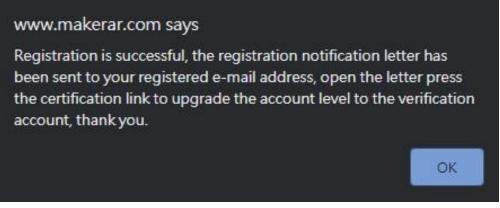
*Email	
*Username	
*Password	
*Confirm password	
*Full name	
Enter your name	
*Gender	
Please choose an option	~
*Date of birth	
日/月/年	
*Country	
Please choose an option	~
*Industry	
Please choose an option	~
□ I have read and agree to the Terms of Ser	rvice.



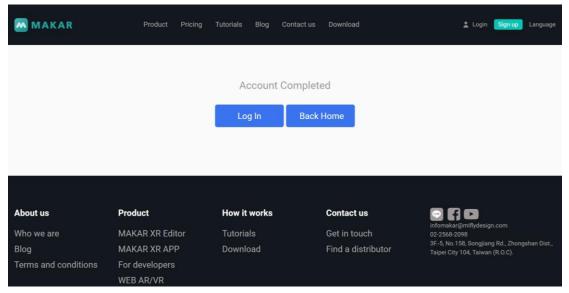
3. After checking "I'm not a robot", click "Continue".



4. A registration notification letter will be sent to your registered email address. Click the certification link to verify your account.



5. If sign up is successful, the screen should say "Account Completed". You may login to check your account info, or activate MAKAR editor to create your ow n AR/VR works now!





### 2-2-2 Register in MAKAR Editor

There are three different types of sign in with third-party software: by using Google, A pple ID and OpenID. This can be also done on MAKAR's <u>Member Login</u> page. If you w ant to sign up with an email address, click "Create Account" to register online .

Bring all your	
imaginations to reality	
Plase Enter ID or Enal	
Enter your Password	
Forget Passeord2	
Loph Erier Your Senil Key Cream Account	

#### 2-2-3 Sign In with Google

1. Activate MAKAR editor, click the "Google icon".

Makar.	- 0	×
MAKAR Bring all your imaginations to reality CO Encode Please Enter 10 or Enal		
Enter your Password  Create Dataset  Const. Dataset  Const. Dataset  Const. Dataset  Const. Const.  Const. Const. Const.  Const. C		



2. This will automatically direct to Google Sign-in page, after entering account a nd password, click "Next".

	Si	gn in		
		ue to MAKAR		
Em	ail or phone			
Forgot	t email?			
Creat	e account	1	Next	

3. If login is completed, this message should appear (figure), you can now close the browser.

Login Complete.

You can close the browser and return the App.

MAKAR Window Help M Home	Projects Tutorials	C MAKAR makarclass02
+ New Project   Project Amount : 0		<i>≡</i> All ✓ 🗰 🗄
Published Projects Published amount : 0 / 100		
MA	AKAR, Welcome to MAKAR drop the project here for publishing	
Unpublished Projects		



#### 2-2-4 Sign In with Apple ID

1. Activate MAKAR editor, click the "Apple icon".

Bring all your		
imaginations to	reality	
<b>G</b>	2	
		~ ~
🗹 Remember		
Forge	at Password?	

 This will automatically direct to the Apple ID Sign-in page, after entering ID a nd password, click "→".

Use your Apple ID	to sign in to MAKAR.
Apple ID	۲
Forgot Apple ID	) or password? >
	-
interactions with Apple and	pple, information about your I this device may be used by aud. See how your data is

- 3. Signing in with Apple ID requires Two-Factor Authentication activated. Follow the instructions to complete this setting, then click "OK". (Note: This page will not appear if the authentication has already been activated.)
- 4. To completely sign in, you need a six-digit verification code which will be sent to your trusted device or phone numbers.

					~			
		Two	o-Fac	tor A	uthen	ticat	ion	
A me	ssade	with	a ver	ificat	ion co	de h	as b	een sent
					he co			
		Did	n't get	a ver	ificatio	n cod	e?	



- After enter the verification code, it will direct to this page (see figure), click "T rust a. (Note: This page will not appear if this device has already been truste d.)
- 6. It will inform you of the issues of signing in with Apple ID. If there are no othe r questions, click "Continue".

	Sign In with Apple
ę	Fast and easy Sign in to apps and websites with the Apple ID you already have.
	Respects your privacy Apps can only ask for name and email. Apple will never track you.
2.	Hide your email Keep your email address private, but still receive messages from the app.
	Cancel Continue

7. Confirm your Apple ID, modify your account name, and confirm whether to s hare your email address or not. Lastly, click "Continue".

Create an account for MAKAR using your Apple I	D " @icloud.com".
NAME	Edit
MAKAR Official	
EMAIL	
Share My Email	
@icloud.com	
<ul> <li>Hide My Email</li> </ul>	
@icloud.com	

8. If login is completed, this message should appear (figure), you can now close the browser.

Login Complete.

You can close the browser and return the App.



#### 2-3. Change MAKAR ID

2-3-1 MAKAR Editor

1. Activate MAKAR Editor, and click the user information in the upper-right corner.

MAKAR Window Help	Projects Tutorials	A MAKAR makarclass02
+ New Project   Project Amount : 0		F AI V III 🗄
Published Projects Published amount : 0 / 100		
	MAKAR, Welcome to MAKAR drop the project here for publishing	
Unpublished Projects		

### 2.Click "Account Settings".

MAKAR Window Help M Home	Projects Tutorials	C MAKAR makarclass02 ID: makarclass02
+ New Project   Project Amount : 0		All     All     All
Published Projects Published amount : 0 / 100		Cloud Usage
	MAKAR, Welcome to MAKAR drop the project here for publishing	3 Logout
Unpublished Projects		

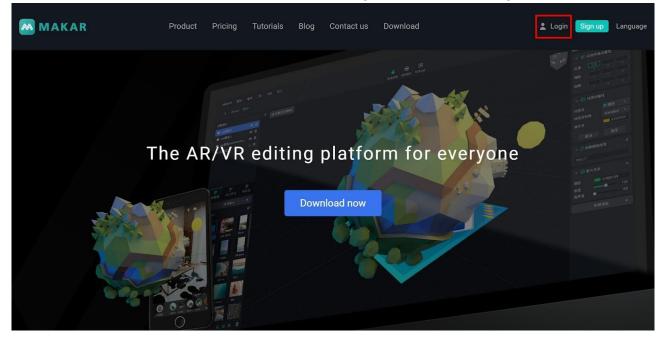


3. Fill in your new MAKAR ID inside "Username". (Note: Please be reminded that MAK AR ID can be changed only **ONCE**.)

	Personal information ×	
MAKAR	Account makardbaso02 Account can only be changed once, please think carefully Name MAMAR	
ID:makarclass02 Plan: VIP Upgrade	Caroor Student	
My Account		
Data Usage QR Code Data Analysis		
	Cancel Save	

### 2-3-2 MAKAR Official Website

1. Go to MAKAR's official website, and click "Login" in the upper-right corner.





2. Login to the account which the MAKAR ID belongs to.

MAKAR	Product	Pricing	Tutorials	Blog	Contact us	Download	💄 Log	in Sign up	Language
		Logir	ı						
			G		d <sup>p</sup>	Ú			
		*Userna	me		OR				
		*Passwo	ord						
					Submit				

3. After logging in, you will be automatically directed to the Member Zone.

Click "Update Account" and fill in your new MAKAR ID inside "Username". (Note: Pleas e be reminded that MAKAR ID can be changed only **ONCE**.)

MAKAR	Product Pricing Tutorials Blog Contact us Download	💄 Member 🛛 Logout 🛛 Language
Member Zone		
Records Update Account	Update account infomation	
Change Password Analytics	*Username makarclass02	
	Send re-verification le	
	*E-mail(account not verified) makarclass02@miflydesign.info	
	*Full name MAKAR	
	*Gender	
	+Data of high	



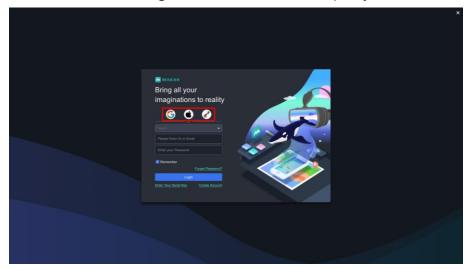
## Chapter3.Basic Interface

### 3-1. Login Page

1. Activate MAKAR editor, check MAKAR's latest version and current version on device, scroll down the note to see all update history.

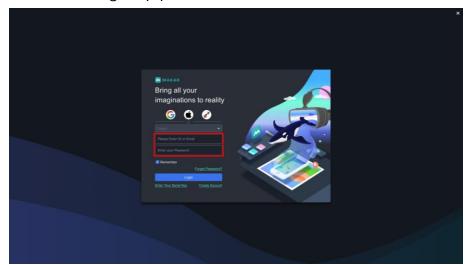


2. Click the related icon to login with different third-party software.

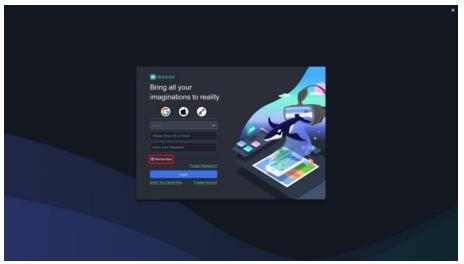




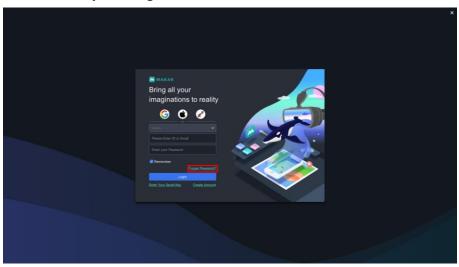
3. Fill in your MAKAR ID or registered email address as username, and the passw ord you set in the sign-up process.



4. Check "Remember" to autofill the password when next time you login (Be c areful about using this function on public or shared computers.)



5. By clicking **"Forget Password?"**, you can change your password for security re asons or reset it if you forget it.

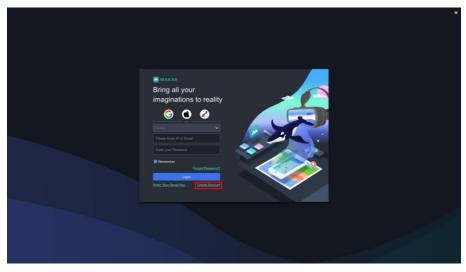




6. Click "Enter Your Serial Key" to switch to the Serial Key Binding page.



7. If this is your first time using MAKAR, click "**Create Account**" to register onlin e with an email address.

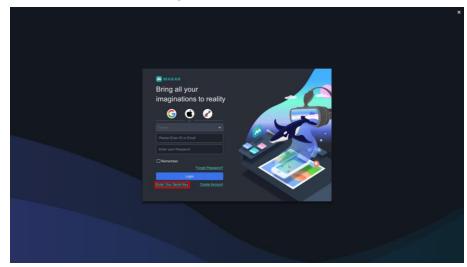




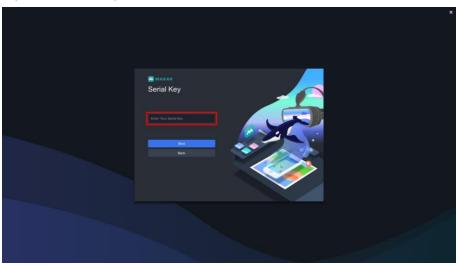
- 3-2. Serial Key Binding & Unbinding
  - Active MAKAR editor, make sure it's updated to the latest version, then click " Continue".



2. Click "Enter Your Serial Key".

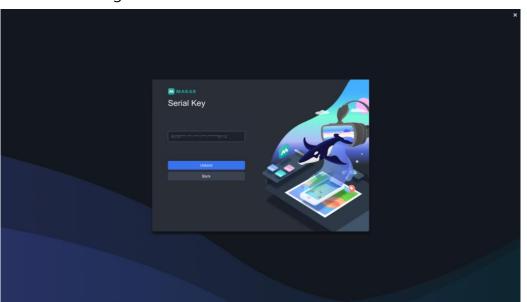


3. Enter your serial key, then click "Bind".





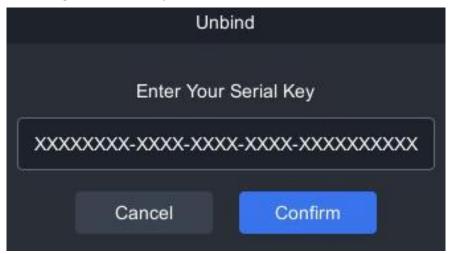
4. When the field is locked means the binding process was successful, click "Bac k" to start using it.



5. If you need to unbind the serial key, click "Unbind".

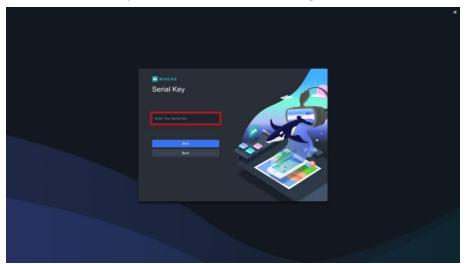
		x
Serial Key		
Back	*	

6. Enter the original serial key, then click "Confirm".



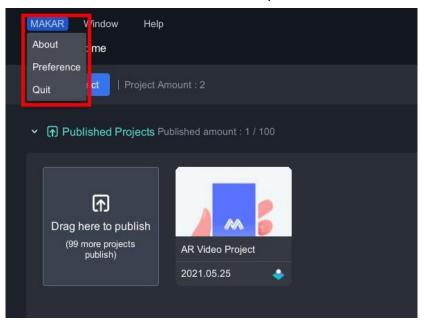


7. If the field was empty, it means the unbinding process was successful.



#### 3-3. MAKAR Drop-down List

 Click "MAKAR" in the upper-left corner to expand the drop-down list. This inc ludes "About", "Preference" and "Quit" options.

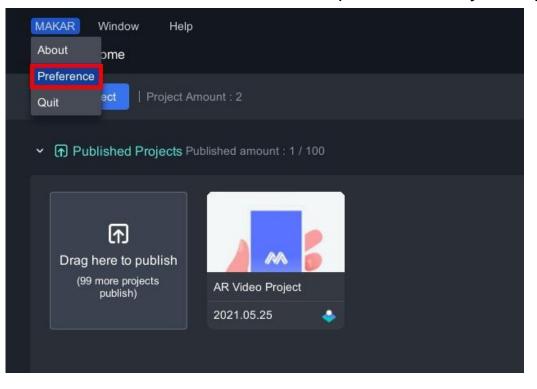


- 2. Click "About" to check our Legal Notes and the MAKAR version on this devic
  - e.





3. Preference includes "General", "User", "Graphic" and "Hotkey" settings.



 General : Switch your interface language here. MAKAR currently support s English, Traditional Chinese, Simplified Chinese, Japanese and Korean in terfaces.

Preference				
General	Interface			
User	Language Setting           English         ~			
Graphic	English 繁體中文			
Hotkey	简体中文			



- 2. User
  - 2-1. "Object Generate Position" can decide the position while the objects are dropped.
    - Free: Generate objects at the drop position(z-axis = 0.)
    - Center: Generate objects at the world center.

	Preference
General	Edit
User	Object Generate Position Free
Graphic	Free Center
Hotkey	VR Project Preview Mode Third person of view
	Third person of view ~

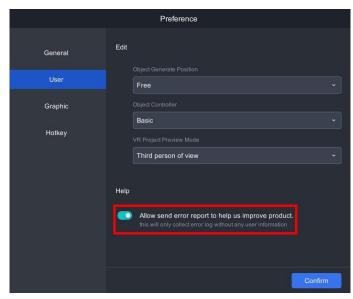
- 2-2. "Object Controller" contends Basic and Advance two types, choose t hem by demand.
  - Basic : When editing a project in 3D space, you can adjust one a xis at a time.
  - Advance : When editing a project in 3D space, you can adjust all three axes at the same time.

	Preference	
General	Edit	
User	Object Generate Position	
Graphic	Object Controller Basic ~	
Hotkey	Basic Advance	
	1 <u> </u>	

- 2-3. Click "VR Project Preview Mode" and decide using Third person or First person of view while previewing VR projects.
  - First person : Edit VR projects under first-person of view. The edi ted screen is the result that you will see when you browse the pr oject in App.
  - Third person : Edit VR projects under third-person of view. The edited screen is the work area, and the PIP box in bottom right c orner is the result that you will see when you browse the project in App.

	Preference
General	Edit
User	Object Generate Position
Graphic	Object Controller Basic
Hotkey	VR Project Preview Mode Third person of view First person of view
	Hist person of view Help
	Allow send error report to help us improve product. this will only collect error log without any user information

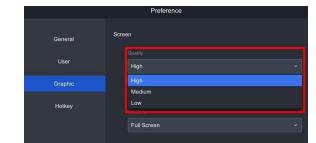
2-4. Please switch on to allow the editor to send error reports for better e xperience on MAKAR.





5. Graphic

(5-1). Adjust the graphic quality based on your needs.



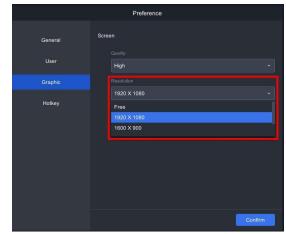
(5-2). Maximum details and shadows produced by light can be seen und er "High" quality.



(5-3). Minimize details and disable shadows and details in order to save power under "Low" quality.







(5-4). "Resolution" in the drop-down list can adjust MAKAR's resolution.

- (5-5). "Window" can switch MAKAR between Full Screen mode or Windo
  - General
     Screen

     User
     User

     Graphic
     Resolution

     Hotkey
     Full Screen

     Full Screen
     Full Screen

     Full Screen
     Windows

     Full Screen
     Full Screen

     Full Screen
     Full Screen

     Full Screen
     Full Screen

     Full Screen
     Full Screen

     Full Screen
     Full Screen
- (5-6). Window: to scale, minimize or close window.



w mode.



(5-7). Full Screen: Window options disabled. Free scale, minimize and c lose window unavailable.



6. Hotkey

(6-1). All provided hotkeys can be seen here.

- Input 1 for Windows users.
- Input 2 for iOS users.

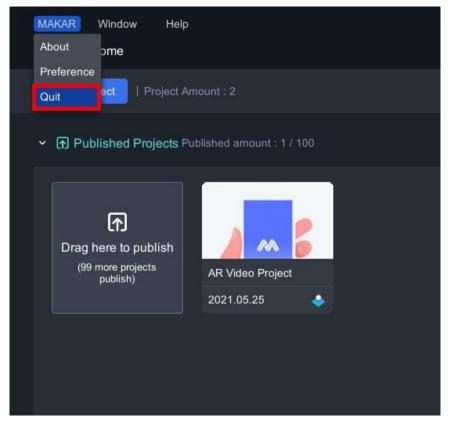
	Preference		
General	Features	Windows Input 1	IOS Input 2
User	Selection mode	Q	
Graphic	Position mode	w	
Hotkey	Rotation mode	E	
HUIKEy	Scale mode	R	
	Back to initial position	Н	
	Focus	F	
	Coordinate Switch	z	
	Undo	Ctrl + Z	Cmd + Z
			Confirm



Preference				
General	Cancel Multiple Select	Alt + LB Option + LB		
User	Area selection	Shift + LB		
Graphic	Left click select	LB		
Hotkey	Select item within selection area	LB (Hold)		
	Zoom Camera	Scroll		
	Orbit	RB (Hold)		
	Truck and pedestal	Space + LB Scroll + LB		
	Zoom In			
	Zoom Out			
		Confirm		

(6-2). After finishing all adjustments, click "Confirm" to apply settings.

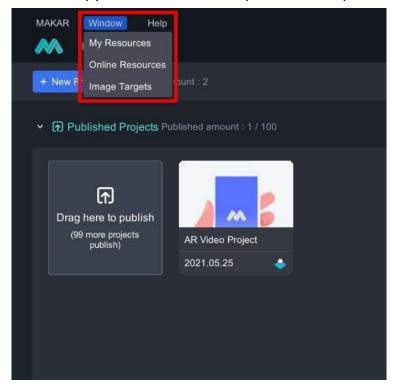
(7). If you want to exit MAKAR, click "Quit" to close MAKAR.





#### 3-4. Window Drop-down List

Click "Window" in the upper-left corner to expand the drop-down list.



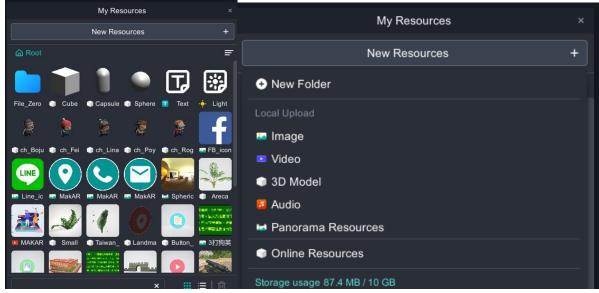
#### 3-4-1 My Resources

MAKAR current support list:

Term	Description	Support file ext ension	
Video	video file within specifications (size under 20 MB)	.mp4 / youtube l ink(without Cont ent ID claim)	
Audio	Audio file within specifications (size under 5 MB)	.mp3 / .wav / .og g	
Image	Image file within specifications (size under 5 MB)	.jpg / .png /.gif	
3D Model	Support upload and edit 3D model file (siz e under 10 MB)	.fbx	



 Select "My Resources" to preview all built-in resources. Click "New Resources" to upload local resources, options include image, video, 3d model, audio, panorama video or photos.



2. It's best to add new folders according to the requirements of sorting. Double-click on the file name to rename the folder.

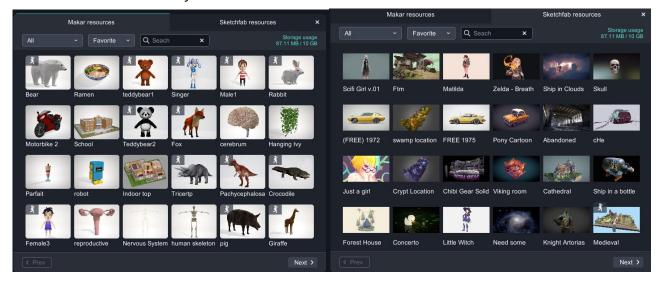
My Resources	×			My Res	sources		×
New Resources	+	New Resources			+		
• New Folder							
		Root					Ŧ
🔤 Image							
Video						T	
3D Model				her:			
🧧 Audio		File_Zerd	🕥 Cube	🕥 Capsule	Sphere	🔟 Text	🔶 Light
🖬 Panorama Resources					4		C
Online Resources		×.			<u>8</u>	<b>K</b>	
Storage usage 87.11 MB / 10 GB		) ch_Boju	💿 ch_Fei	) ch_Lina	Ch_Poy	) ch_Rog	FB_icon

3. If you are lacking resources, click "Online Resources" to preview and download re sources provided by MAKAR or Sketchfab.

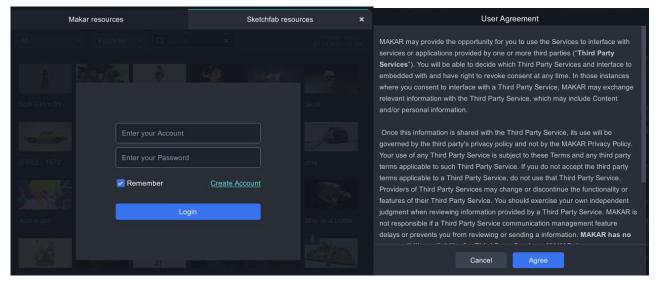


## MAKAR

4. Click "Next >" to view more resources through pages, expand the drop down list i n the upper left corner to view through sorts, or type the keywords in the search b ox to search directly.

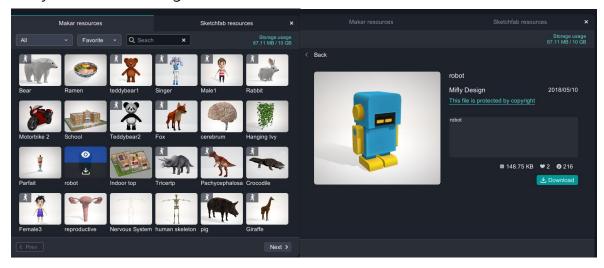


5. Accessing Sketchfab resources requires a Sketchfab account. Click "Create Account" will direct you to Sketchfab's official website account create page. After finishing the process, return to MAKAR and login with your Sketchfab account.(You must agree to our User Agreement.) •

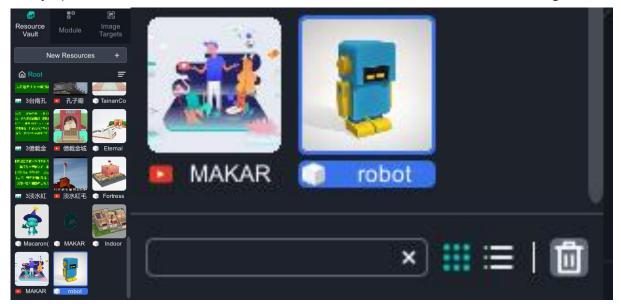




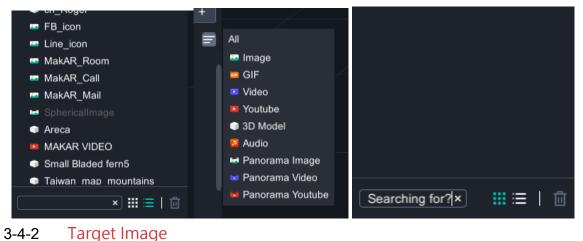
 Click "
 " on the resource to zoom in for more details, and click "Download" to a dd it in your resource vault. You can also click the download icon to download dir ectly without zooming in.



7. All downloaded resources can be seen in the resource vault. If you want to delete any spare resource, select it and click the trash bin icon in the bottom right corner.



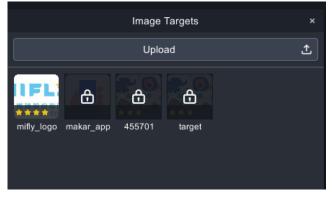
 According to personal needs, you can switch the view between icon mode (defaul t) and list mode, expand the drop down list in the upper right corner to view throu gh sorts, or type the keywords in the search box to search directly.



1. Manage your target image in "Image Targets", you can upload and delete target i mages for both new and previous projects.

Online Resources     How Pr Image Targets	
✓  Published Projects Published amount : 2 / 100	
Image: Big projects publish (98 more projects publish)       AR video project       AR Video Project         2021.07.29       ▲       2021.05.25	

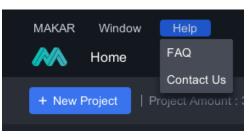
- 2. In use target image & Not in use target image
  - In use : Image will be locked, you only can modify it in the associate project.
  - Not in use : Image will not be locked, you may modify it right here.





3-4-3 Help

 Click "Help" in the upper-left corner to expand the drop-down list. This includes " FAQ" and "Contact Us".



### 2. FAQ

This part will show you some common problems that users might encounter, sele cting the solution will direct you to its setting section.

FAC	2
Problem	Solution
I can't find any downloaded or uploaded assets in My Assets?	Try it Reset
Not enough space on the hard drive?	Try it Clear cache
After the import of my model into MAKAR, the animation becomes strange.	Try it High Quality
	Exit

3. Contact Us

If you encounter any problem or question that can not be solve, a single click will direct you to the contact form page of our official website. Fill up the form then cli ck **"Send"**, we will get back to you promptly.

MAKAR	Product Pricing	Tutorials Blog	Contact us Downloa	\$.	Login Septer Language
and a			Contact us	- 1	
	Fill up the form with		ward to hearing from or feedback and we w	you. ill get back to you promptly.	
	*Your company				
	*Your name				
	*Your phone number				
	*Your email				
	Your message				



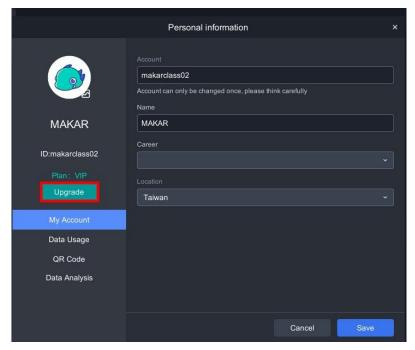
#### 3-4-4 Account Settings

1. Click "MAKAR ID" in the upper-right corner to expand the drop-down list, then cl ick "Account Settings".

MAKAR Window Help	Projects Tutorials	Ą	MAKAR makarclass02
+ New Project   Project Amount : 3			ID: makarclass02
f Published Projects Published amount : 2 / 100			<ul> <li>Cloud Usage</li> <li>Tutorials</li> </ul>
			Logout
Prag here to publish (# more project publish)       Af wideo project 2021.07.29       Af Wideo Project 2021.06.25			
Q Unpublished Projects			
GPS TEST 2021.06.11			

2. My Account

Check and edit your personal account informations here. Click "Upgrade" to upgr ade the account level, you may unlock multiple & extra features by purchasing dif ferent plans.





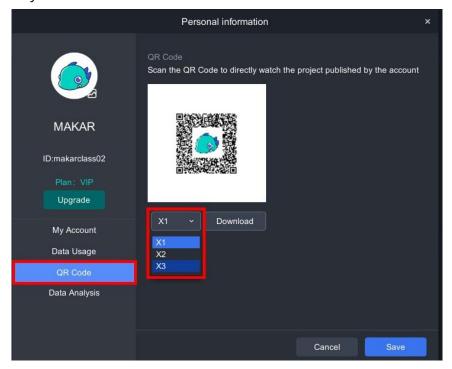
#### 3. Data Usage

All maximum values will vary due to the current plan, check our <u>Plan Options</u> for m ore details.

	Personal information	×
	Current plan VIP (3395 days left) Project storage quantity Unlimited	
MAKAR	Published Project Counts 2 Project(s) / 100 Project(s)	
ID:makarclass02	Storage Usage 87.4 MB / 10 GB	
Plan: VIP	•	
Upgrade	Target Image Usage 4 / 50	
My Account	and the second sec	
Data Usage		
QR Code		
Data Analysis		
	Cancel Save	

4. QR Code

See this QR Code as your business card, download and share it to let people expe rience all projects you've created. Expand the drop-down list to adjust the square size manually.





## 5. Data Analysis

This will direct you to the analysis database page of our official website.

	Personal information	×
	Account makarclass02 Account can only be changed once, please think carefully Name	
MAKAR	MAKAR	
ID:makarclass02 Plan: VIP Upgrade	Career Location Taiwan	
My Account		
Data Usage		
QR Code		
Data Analysis		
	Cancel Save	

## 6. Change Avatar

Click the avatar to upload your local image file. (128 x 128, supports .jpg, .jpeg an d .png files.)

	Personal information	×
	Account makarclass02 Account can only be changed once, please think carefully Name	
MAKAR	MAKAR	
ID:makarclass02 Plan: VIP Upgrade	Career Location Taiwan	
My Account		
Data Usage		
QR Code		
Data Analysis		
	Cancel Save	



# Chapter4. Interactive feature

MAKAR offers a full range of digital textbook creation and editing, eliminating the nee d for tedious programming, and importing the existing multimedia materials. Creating XR content by MAKAR is as easy as editing powerpoint. The full range of interactive fe atures provide creators with the ability to create real content without learning progra mming. These features include: animation cut, event trigger , animation switch, music display, video and question and answer system, enabling users to record learning pro cess, and effectively analyzing data content, providing the most complete XR data coll ection.

## 4-1. AR Interactive feature:

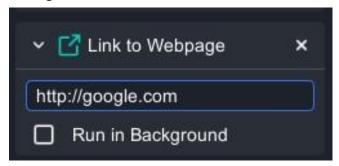
MAKAR editor provides the feature to quickly create AR interaction. After selectin g the object in the scene, click the Add Action button in the material properties wi ndow on the right. The interactive features include: Link to Webpage, calling phon e, send email, play music, animation switch, show image, show model, show vide o, show text, matting (2D objects) and close with child, etc.

☑ Link to Webpage
☑ Calling Phone
☑ Send Email
☑ Play Music
☑ Play Music
☑ Animation Switch
☑ Show Image
☑ Show Video
☑ Show Video
☑ Show Text
☑ Close with Child



1. Link to Webpage

Click on the object to link to the preset webpage on the device. Enter the url of th e webpage you want to go to.



## 2. Calling Phone

Click on the object to activate the call feature on the device. Enter the number you want to call.

✓	×
886987654321	

## 3. Send Email

Click on the object to activate the emailing feature. You can also pre-set the recipi ent, subject and text. Emails are sent from the mail account bound to the project u ser device.

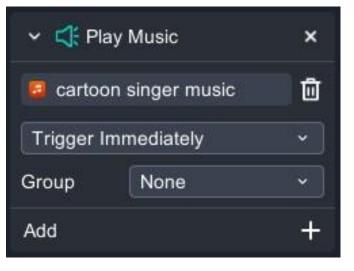


🛩 🔀 Ser	nd Email 🛛 🗙
Receiver	mifly@miflydesign.c
Title	
Content	

4. Play Music

Click on an object to play a music file (support MP3, WAV, OGG), which can be set up to be triggered immediately or delayed as required.

- Trigger immediately : Click on the App and trigger to play it immediately.
- Delayed : Click on the App and trigger to play it after about a second.



5. Animation Switch

Animation cutting has to be set first. Any object can be selected as the button to t rigger the event to switch animation. After finishing setting, select the model and animation name to switch.

• The fields are: model name, action name and play mode.



- Model name : According to the model that contains animation to diplay in the scene.
- Animation name : According to the selected model, show the animation name after cutting.
- Loop : After clicking on the App to trigger playing animation immediatel
   y · the loop will continue.
- Once : After clicking on the App to trigger playing animation immediate ly, play only once and stop.
- Reset after finished : After clicking on the App to trigger playing animati on immediately, play only once and reset.

Animation	
Name stop	· 1
Timeline 0 ~ 0	0 C
✓ □ Animation Switch	×
macaron(0925)	~
stop	~
Once	~
Reset after finished	

6. Show Image

Click the object to show the image (support JPG, PNG, GIF), display mode include s: trigger immediately and delay.

• Trigger immediately : After clicking on the App to trigger and show the imag e immediately.

- Trigger delay : After clicking on the App to trigger and show the image delay ing about a second.
- Turn on and off : Click on the App to turn on or off, and also can set multiple i mages to appear at the same time.
- Group : Set the images that you don' t want them to display at the same tim e to be in the same group, so when you turn on image1, image2 will turn off.

🛩 🛃 Show	Image	×
🌄 image1		Ū
Trigger Imm	ediately	×
Group	None	~
🌇 image2		۵
Trigger Imm	ediately	~
Group	None	~
Add		s <del>d</del> et
A	dd Action	+

7. Show Model

Click on an object to show 3D models (FBX). The display mode includes: trigger im mediately and delay.

- Trigger immediately : After clicking on the App to trigger and show the mod el immediately.
- Trigger delay : After clicking on the App to trigger and show the model delay about a second.
- Turn on and off : Click on the App to turn on or off, and also can set multiple models to appear at the same time.
- Group : Set the models that you do not want them to display at the same tim e to be in a group. When you turn on model1, model2 will turn off.



🛩 😭 Sho	ow Model	×
Sphere	Э	Ū
Trigger Immediately		~
Group	None	~
Add		+

## 8. Show Video

Click on an object to show the video (MP4, YouTube). The display mode includes: trigger immediately and delay.

- Trigger immediately : After clicking on the App to trigger showing the video i mmediately.
- Trigger delay : After clicking on the App to trigger showing the video delay a bout a second.
- Turn on and off : Click on the App to turn on or off, and also can set multiple videos to appear at the same time.
- Group : Set the videos that you do not want them to display at the same time to be in a group, when you turn on video1, video2 will turn off.

Y 💽 Sho	×		
📧 MAKAI	0		
Trigger In	Trigger Immediately		
Group None		~	
Add		+	



9. Show Text

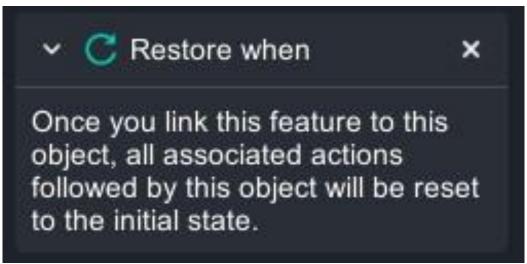
Click the show text feature, set the text, color, border and chamfering on the right, and the text can be shown after clicking on the App and the button is triggered.

- Turn on and off : Click on the App to turn on or off, and also can set multiple text groups to appear at the same time.
- Group : Set the text that does not want to appear at the same time as the gro up, when turn on text1, turn off text2.



10. Close with Child

In the trigger feature of MAKAR, six levels of interactive action can be set. The new feature "Close with Child" can close the current trigger events and reset to the init ial state, then the interactive action can be experienced again when triggered.

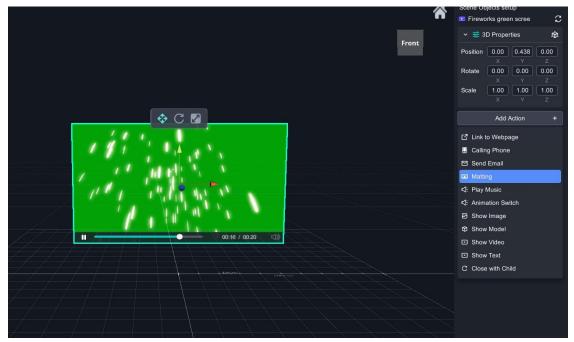




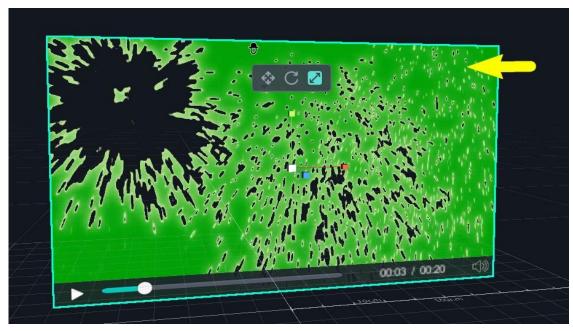
11. Matting(only for 2D material)

Image material (JPG, PNG, GIF) and video material (MP4,youtube link) can use the "matting" feature. After selecting the material, user can remove the background b y using dropper or selecting a specific color.

(1). Import 2D material · Add Action > Matting.



- (2). Select the matting feature window and set the filter color.
  - Click on the filter color, through the dropper to select the color which you wa nt to remove.

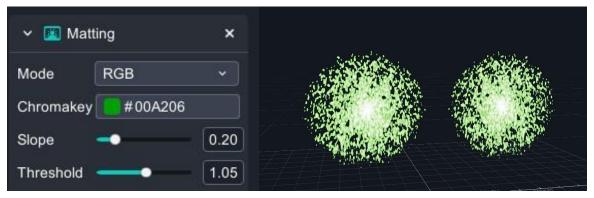




• Click the filter color block and select the color you want to remove.

✓ I Matting	× ×	Matting		×
-	Mode	RGB		~
Mode RGB	Chron	nakey 🦲 #0:	2A206	
Chromakey #FFFFF	R	•	2	0.20
Slope	с 0.20 в		162 6	0.80
Threshold	0.80			
The RGB Mode has a good performance in removing bla	ick	# 02/	A206F	+

 Adjust the slope and threshold value according to the demand to make the e ffect of matting perfectly. The following image shows the results of matting c ompleted in the previous steps.





### 4-2. VR Interactive feature

MAKAR editor provides the feature to quickly create VR interaction, after selecting an object in the scene, click the "Add Action" button in the material properties window on the right. The interactive features include: Link to Webpage, play music, animation switch, scene switching, show image, show model, show video, show text and close wi th child, etc. Different from AR, VR adds the "Scene Switching" and deletes the "Calling Phone" and "Send Emails".

According to the VR 360 scene created by multiple scene images in VR, "Scene Switching" is required for different scenes. Therefore, "Scene Switching" is added to enable e diting VR to have multiple scenes for virtual reality navigation and interactive plannin g. The "Scene Switching" will be explained below.

#### Scene Switching

After setting the scene switching, the scene and execution mode for switch need to be set. The biggest difference between VR and AR(MR) is that the event needs to b e triggered through the "view point". Therefore, when experiencing VR projects in t he App, through the viewpoint to trigger all interactive feature events.

- Trigger immediately : Viewing the "viewpoint" in the App to trigger the scene switching immediately. (switch from scene 1 to scene 2).
- Trigger delay : Viewing the "viewpoint" in the App to trigger the scene switch ing and delaying about a second, trigger delay in VR can be set for optional o bjects. (switch from scene 1 to scene 2).
- To use this feature, at least two VR scenes must be created in a VR project.

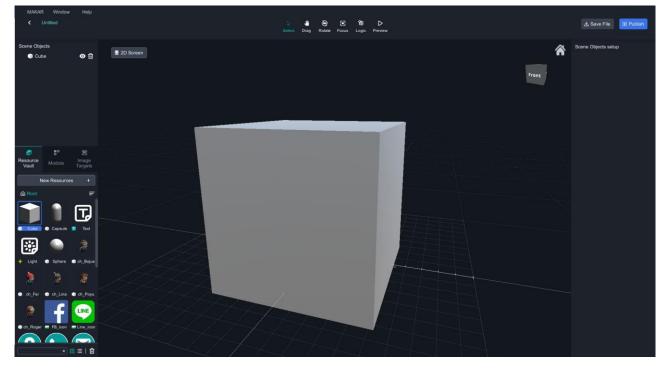
Scene Switching	×
Scene 1	*
Trigger Immediately	~



### 4-3. Scene object property control

1. Scene object and basic object property

In the MAKAR editor, scene object is on the left side of the screen, object property is on the right side of the screen. When you select any objects in the scene, "Sce ne Object Setup" will appear for numeric settings.



- 2. General object of scene object
  - (1). The scene object is the general object in the scene. When any project is start ed, it will appear on the screen by default and play or present in the original mode.
  - (2). GIF, video will play automatically.
  - (3). The model will play automatically if it contains an animation.
  - (4). Other non-animated objects will be displayed on the screen.



#### 3. Group structure

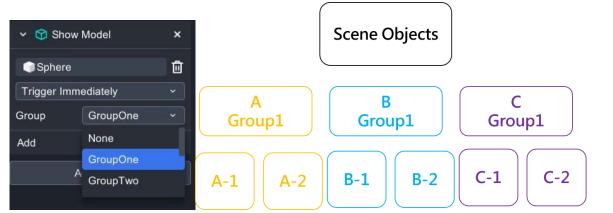
The scene object can be set up as a group structure. Select the scene object list to select the objects, take capsule as the main object, select other objects and drag t hem to the top of capsule to place the object under it, make capsule become a group, and see present that the objects successfully drag into the capsule to become a group. To cancel, hold the objects and leave them blank.

Scene Objects		Scene Objects		Scene Objects	
Capsule	◙ ₫	Capsule	<b>⊙</b> ₫	🔻 🇊 Capsule	◙ ₫
Light	<b>⊙</b> ⊡́	🕂 Light	◙ ₪	-•/- Light	0
🔟 Text	◙ ₪	🔟 Text	o 🗓	Text	◎ ₫
🌄 Line_icon	◙ ₪	🌄 Line_icon	◙ ₫	Line_icon	◎ 🖞
🔲 MAKAR VIDEO	◙ ₪	📕 MAKAR VIDEO	◙ ₪	MAKAR VIDEO	•

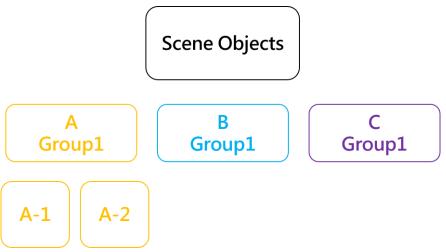
- 4. Trigger objects of scene objects (including trigger event group structure) The scene objects include general object and trigger object. Select any object in t he scene object and click the "Add Action" button to become the trigger object. T he scene object group controls the group structure only for the object, but the tri gger object group can control trigger objects on or off the group function to each other.
  - A. Trigger group structure

Triggering group structures can only occur on scene objects with "Add Action ", which can be called "triggering events". Trigger group can be set on each tr igger event. Under the structure of the trigger group, only one object in the s ame group can be displayed, and the other one will be closed. For example, a fter creating a general scene object, trigger events of "Add Action" can be cre ated for it. Each trigger event can be set to "group", and a total of seven trigg er groups can be set.

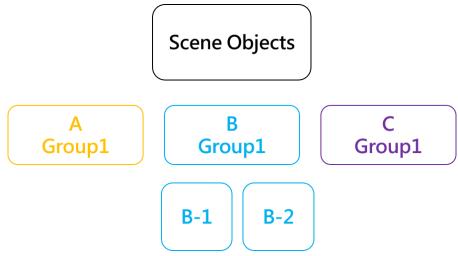
# MAKAR



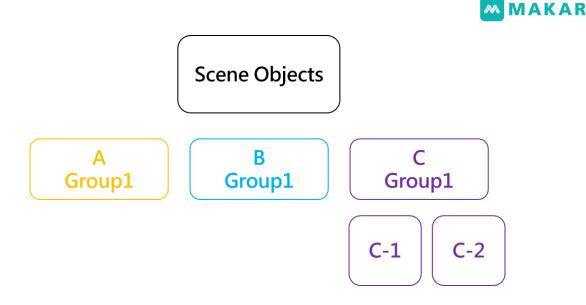
B. When triggering events A, B and C are set to group 1, B and C will be clos ed as triggering A in the MAKAR App.



C. When triggering events A, B and C are set to group 1, A and C will be clos ed as triggering B in the MAKAR App.



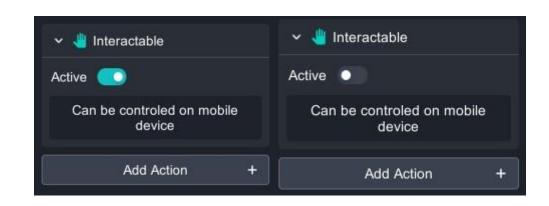
D. When triggering events A, B and C are set to group 1, A and B will be clos ed as triggering C in the MAKAR App.



## 5. Interactable

When a scene object (trigger object) is created, MAKAR App can control the mov ement, rotation and scaling of the virtual object according to the user's current pr eset situation.

- turn on : Move, rotate and scale the selected object in the MAKAR App.
- turn off : Can not move, rotate and scale the selected object in the MAKAR A pp.
- •



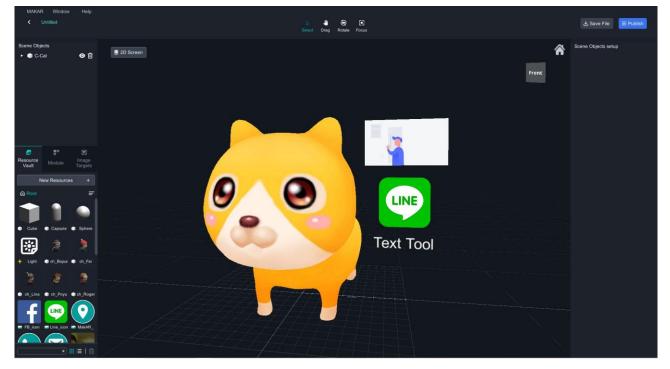


# Chapter5. Project creation

5-1. Project mode of operation

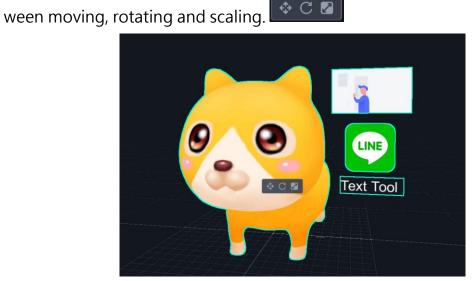
MAKAR includes AR/VR/MR editing and creation functions, which can support edit ing in 2D and 3D interface, due to different operation and editing ways, and the se lection of materials will be slightly different.

- 4-1. 3D models, videos and other materials cannot be used in 2D interface operatio ns.
- 4-2. Although 2D and 3D mode are separate edit, but when 2D and 3D objects are created in the same project and be published, they will exist at the same time o n the App.
- 5-2. 3D interface operation
- 1. In the 3D operation interface, all multimedia material can be used, including: audi o, video, image, model and text tool.

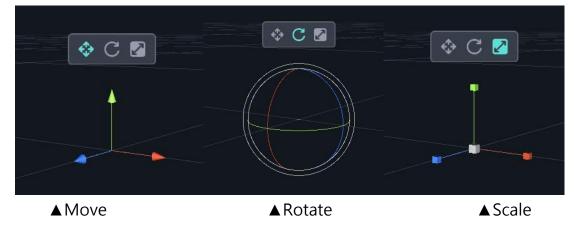




2. According to your need, select the object you want to edit, and click to switch bet



- 3. The style of the tool is as follows: Move, rotate and scale. By default, red is the X a xis, green is the Y axis, blue is the Z axis, and the axis will change according to the editing situation.
  - Key Z : Through Z to switch direction to the world center or object center for adjusting.
  - Move : According to the requirements of object movement, select the corres ponding direction arrow for adjustment.
  - Rotate : According to the requirements of object rotation, select the corresp onding color for adjustment.
  - Scale : According to the requirements of object scaling, select the correspon ding color for object scaling adjustment. For scaling, it is recommended to sel ect the "white square" in the center of the object for equal scaling. If you adju st the color of one axis, the object will become unequal scaling.







▲ Moving example : The left image is before adjustment, and the right image is move d to the right through the Move.



▲ Rotation example



▲ Scaling example

- Set and control the scene display mode through the left, middle and right mouse. 4.
  - left mouse : For object selection, such as dragging an object, rotating movem • ent, or clicking a menu or button on the screen.
  - middle mouse pressing : Translating scene viewing angle.
  - middle mouse rolling : Zooming in or out the scene viewing angle.
  - right mouse : Rotating the scene viewing angle.
  - When lost, selecting on the top right corner to return to the initial screen.



▲ Rotation viewing angle

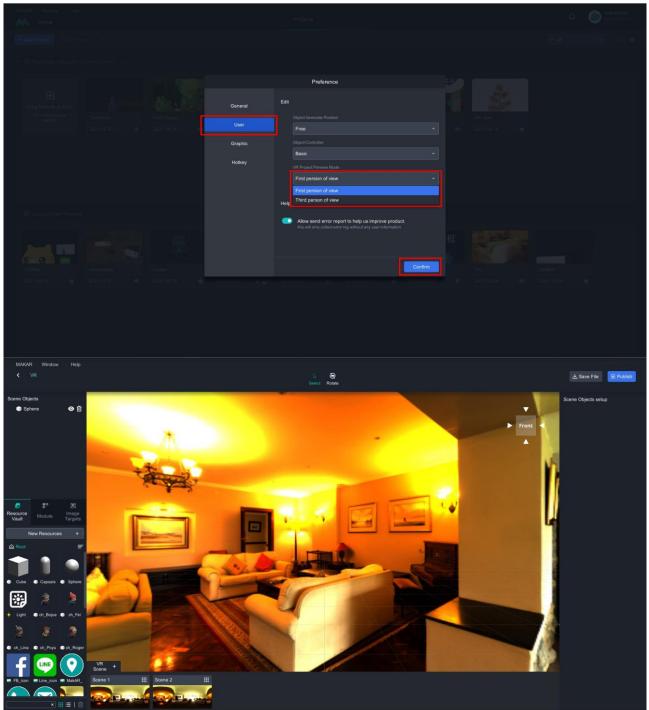
57



5-3. 3D VR preview mode switching

Select "MAKAR > Preference" on the top toolbar to change the setting · click User > VR Project Preview Mode to set up.

• First person of view (without VR Camera in the scene)

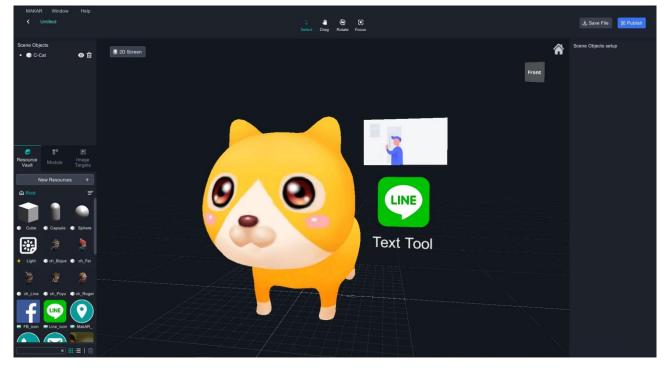






• Third person of view (with VR Camera to adjust)

- 5-4. 2D Interface operation
- 1. In the preset 3D editing mode, you can move, rotate and scale the object's in thre e axes (X,Y,Z) through the selection tool. The 2D screen conversion button can be seen on the top left, click it on to switch to the 2D screen.

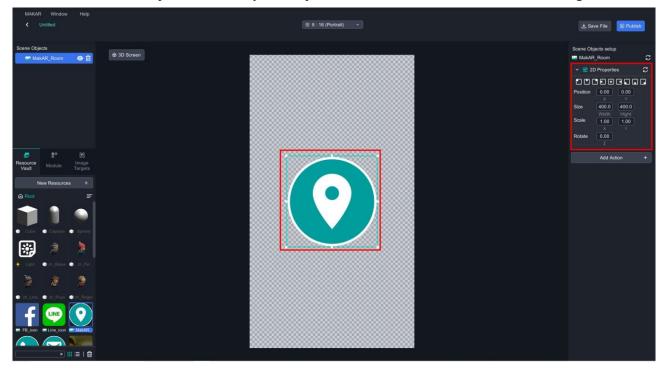




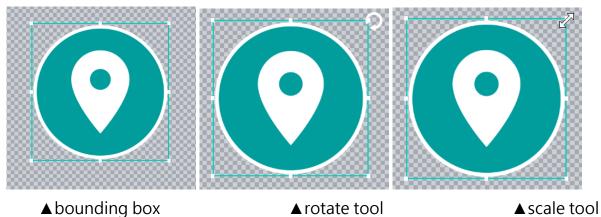
2. After switching, you can see the straight grid (this is transparent).

MAKAR Window Help <b>&lt;</b> Untitled		⊞ 9 : 16 (Portrait) v	🕁 Save File 🕞 Publish
Scene Objects	di 30 Screen		Scane Objects setup
Resource Module Image Vault New Resources +			
Code Code Code Code Code Code Code Code			
Lope • in_Baye • in_Fe			
Image: Second			
IF FB (con Inc. Line, (con Inc. MakAR)			

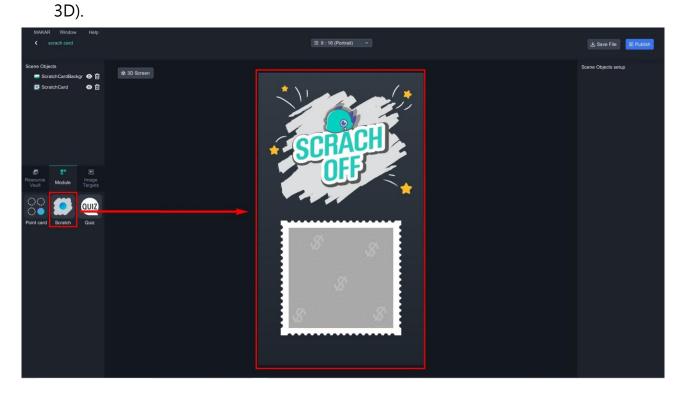
3. In 2D mode, objects can only be adjusted between 2 axis (x width, Y height).



- 4. In 2D editing mode, objects can be moved by clicking the right mouse button, an d a bounding box will appear around the object.
  - The scale tool appears when the mouse moves to any white point on the box.
  - When the mouse moves out of the bounding box, the rotate tool appears.



5. Switch to the page of "Module" in 2D mode, and you can drag the module into th e edit scene. The module includes: scratch card (2D), point card (2D) and quiz (2D,





# Chapter6. Build up basic projects

6-1. AR Image Project - AR Dinosaur Cookie



1. Click "+New Project" in the upper-left corner to build a project.

MARA Wadow Help Properts Tudotels	다. 🎯 MAKAR教學 class02
L. New Privat	<b>₽ A</b> I
← ⊕ Published Projects Published answell: 9 / 100	
Constants to public      Provide to a constant     Provide to a	#¥編物性 <sup>#単数件</sup> 2020 05 61
植物. ** ***	
✓ B) Unpublished Projects	

2. Fill in the project info, click "Upload" and select the target image that will be used later on. Click "Ok" to continue the building process.

- Marian - Marine   - Marine - Marine			
Constanti Constanti I	Build project		
	AR VR		
Regress en states. Parageneral	Coose tempore 2	Cruent and Cruent	
		Oran to get in the second	



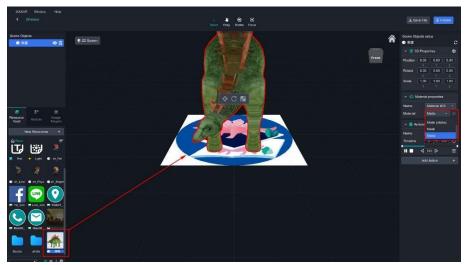
3. Click New Resources > Online Resources



4. Search for "Stegosaurus" and click "Download", it will be added into the resource vault, you can now see its thumbnail in the bottom left corner.

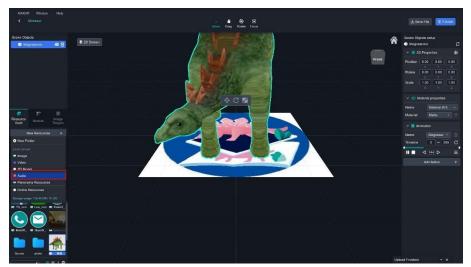
Autoritati, Alfredini (1999) (1993 - Etallinitia)				
Bolene (Bulgerin				
	Makar resources	Polyresources	Sketchfab resources Sampa under 120 817 1081 107 da	

- 5. Drag and drop the Stegosaurus into the scene.
- 6. Switch material form to "Matte".

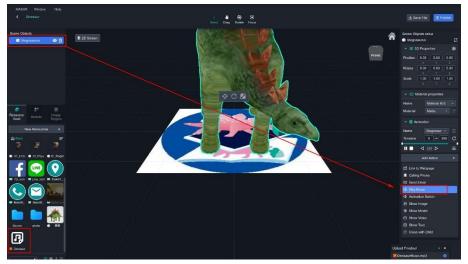




Click New Resources > Audio to upload "DinosaurMusic.mp3". (Or any local au dio file.)



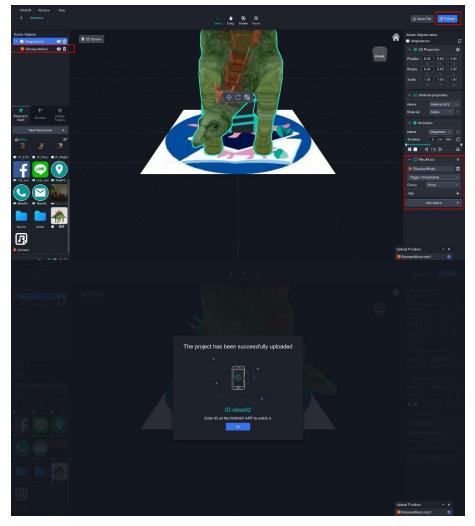
8. Select the Stegosaurus in Scene Objects, then click Add Action > Play Music.



9. Choose file "DinosaurMusic.mp3" and click "Confirm".



The process is successful if you see your music resource on the object. Click "Publ ish" in the upper right corner when the project is finished.





- 11. How to experience this project? Hold your mobile device, enter your ID and start experiencing after scanning the target image.
  - Install MAKAR App
  - Click the <u>Link</u> to trigger / Scan the QR code below.









#### 6-2. AR Video Project

1. Click "+New Project" in the upper-left corner to build a project.

MASAR Window Help Mane	Projects Tomores	MAKAR malantisset2
Read Project     Project Amount: 0		• = =
Published Projects Automation 0 / 25		
	, Welcome to MAKAR the project here for publishing	

2. Select AR > AR Target, fill in the project info, then click "Blank project".

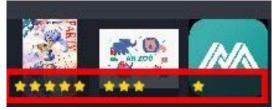
Didt	proped of the sector and sector a	
	Canad	

3. Use the default image as cover, or click "Custom" to upload your own image.

Manada Manada Panja An Home			
+ New Project   Project Amount   1	Build project		
Providenced Pressects Potential account 11/10	AR VR		
CopenFile	×	AR video project Custom V	
← → ∽ ↑ 📜 - MAKAR Official Tut_ > AR Vide	eo Project 🗸 🖸 🔎 Search AR Video Project		
Organize - New folder	🖻 · 🔳 🧕		
<ul> <li>The PC</li> <li>B) O Opiess</li> <li>Destrop</li> <li>Dournents</li> <li>Muric</li> <li>Pictures</li> <li>V Vales</li> <li>O S (C)</li> <li>D DATA (D)</li> <li>Network</li> </ul>		Control target  Status  Control target  Status  Control target  Control target  Control target  Control  Contr	
File name: makar_app	✓ [Image Files(*jpg.*jprg.*prg] ∨     Opm Cancel 4		
		Cancel Cx	

4. Click "Upload" and select the target image that will be used later on. Click "Ok" to f inish the building process.

The stars under each target image represents its recognizability. The higher it goes, the lesser response timing. (All shown ratings are for reference only, actual recogni zability may vary due to influence factors.)



5. Click New Resources > Video > Youtube.

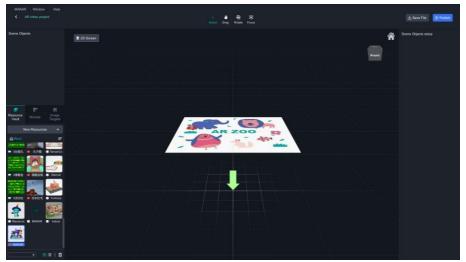


Fill the link inside the lower text field, edit the video's name in the upper text field.
 Click "Confirm" to create this video resource.





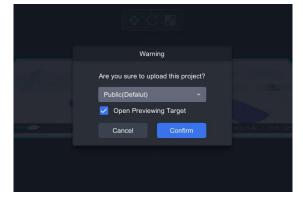
7. Drag the resource from the vault and drop it in the scene. The arrow represents the center position.



8. The preset direction of all video resources is vertical, you can use Position, Rotate a nd Scale to change its properties.



- 9. Click "**Publish**" in the upper right corner when the project is finished. Switch betwe en **Public** or **Private** as required, then click "**Confirm**" to finish the process.
  - **Public**(Default) allows everyone to view this project in the **Creation Hall**.
  - **Private** only allows those who know your account to view this project.



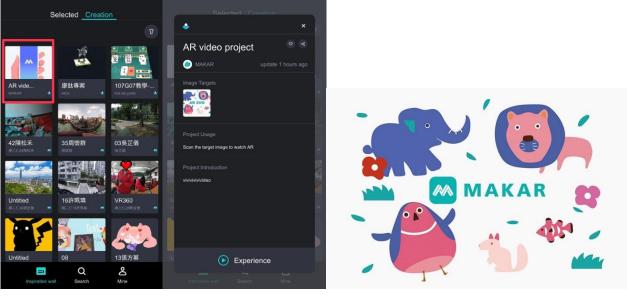


10. After uploading successfully, this screen will pop out. You may now view your proj

ect.



11. Activate the MAKAR app on your mobile device, switch to "Creation" and find th e project, click "Experience" to start the project.



▲辨識圖



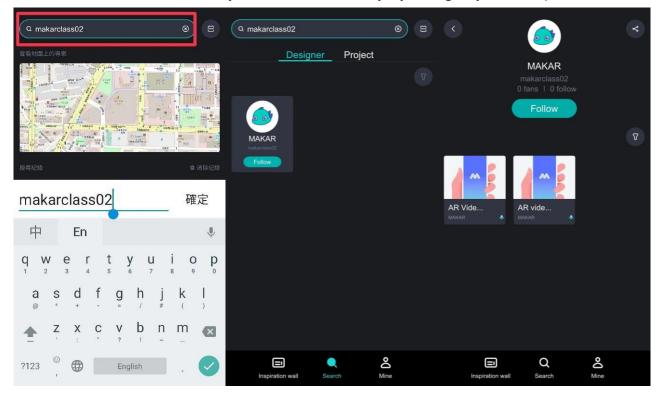
12. Move your device to scan the target image through the camera, the video will pop out right after the scan finishes.



▲ Target Image

▲ MAKAR APP triggered and play

13. Switch to "Search" to find your account directly by filling in your unique MAKAR ID.





6-3. VR (Virtual reality) project creation concept

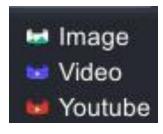
1. Click "New project" in the top left on the home page.

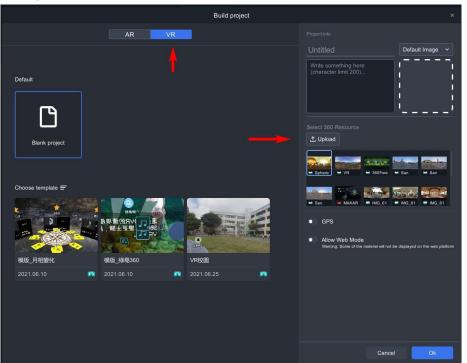


2. Switch to the VR tag, set the project name or cover imag

e. VR project preset to no template and use the preset livi ng room image.

VR needs to upload the panorama resource, including pan orama images (JPG 360 images), panorama videos (MP4 3 60 videos), or 360 Youtube videos (uploaded youtube 360 video' s link).



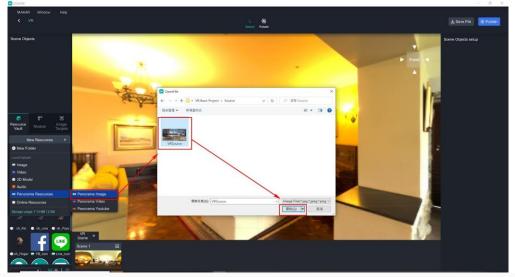




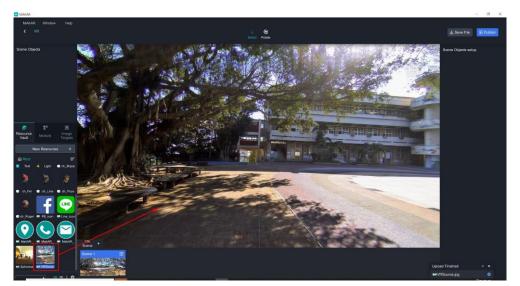
3. After the VR project is created, the preset living room VR 360 material will be displayed when entering the project.



4. Add Resources > Panorama Resources > Panorama Image, user can upload their o wn material in computer.

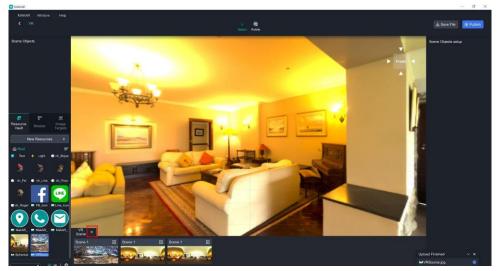


5. Drag the uploaded material on the left side into the scene to finish VR scene creat ion.

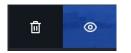




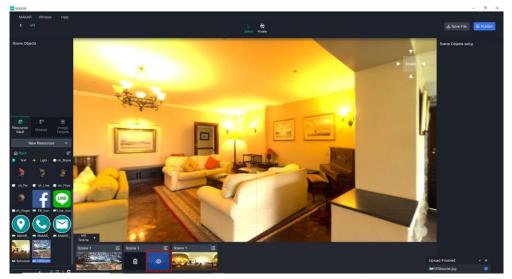
6. After finishing the creation, select the "+" icon beside the "VR Scene" to add the VR scene.



- In the created VR scene, move the mouse over the added scene, and you' II see t he "Trash can" and " Eye" icon.
  - Trash can : Click to delete the scene.

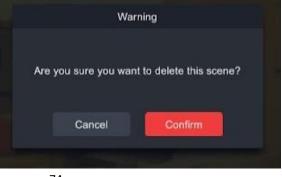


• Eye : Click to enter the scene.



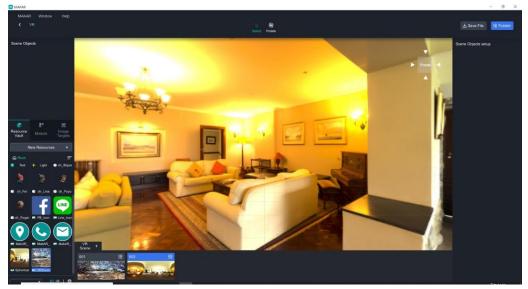
8. After clicking the trash can, the scene can be deleted and the system will remind y ou repeatedly whether to delete the scene.



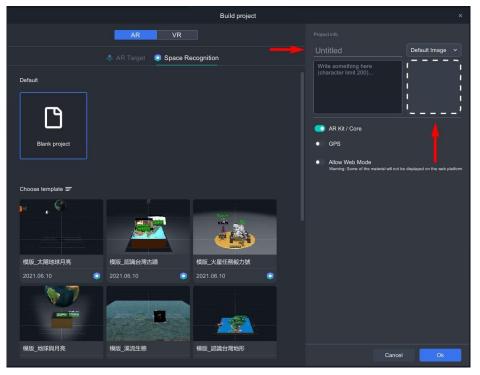




9. After deletion, the 003 scene will disappear.



- 6-4. MR project creation concept
- 1. Select AR tag, switch to Space Recognition, set the project name or cover image, a nd click to no template option..
  - Preset to enable the ARKit/Core function, this function will preset virtual obje cts that can be located on the space plane.
  - Turning off the ARKit/Core, it will switch to the gyroscope feature which cann ot locate virtual objects in the space plane.





2. Create a preset MR project, enter the edit scene and download any model from th e online resources.

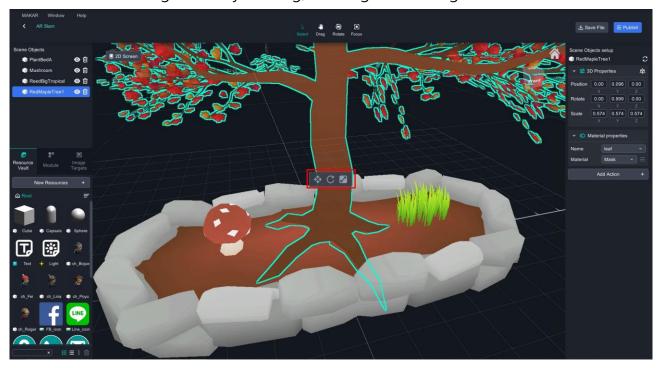


3. Drag the material into the scene, you can see the drag arrow on the screen. Hold down and release to create the virtual object.

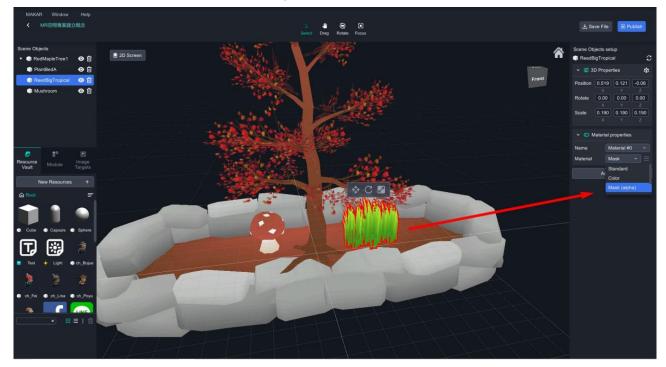
MAKAR Window Help K AR slam	5 🌰 😨 🚱 Sielical Drag Robain Focus	🕁 Save File 🕢 Publish
Scene Objects	2 2D Screen	Scene Objects setup
Basedources Resources New Resources New Resources R		



4. Repeat the above actions, drag and drop other resources into the scene, and adju st them to the right size by moving, rotating and scaling.



5. By changing all the materials to "Mask", the materials will appear in a no light mo de, that is more like a cartoon style.





6. Select all objects, press Ctrl and click the tree. On the contrary, click again to canc el selection. Drag the selected objects into the tree to make them become its chil d items.



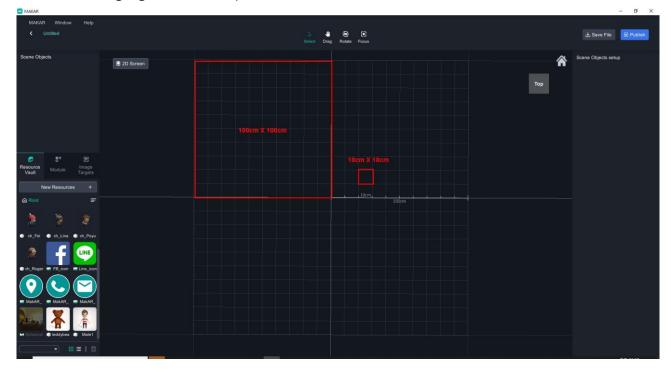
7. After completing the project, open the App to experience.





### • Explanation of the MR world

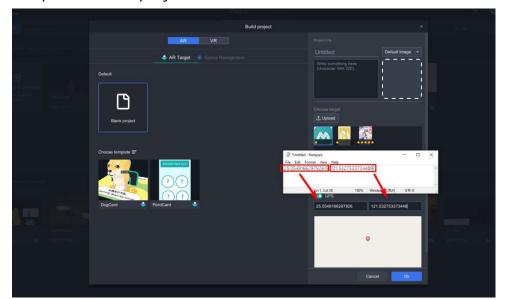
- 10cm in a small grid is equal to 10cm in real life.
- A large grid size is equal to 100cm\*100cm





#### 6-5. GPS feature open

1. When creating the project, open GPS recognition and input landmark information to start the project positioning feature. If the user is not in that location, he or she can not experience the project.

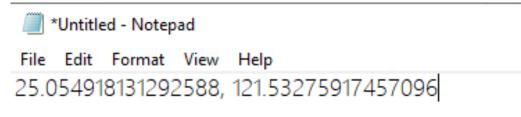


2. Open Google Map and enter the location to get the information, press the mouse right button to bounce the location information, and press the right button to co

ру.



3. Create a ".txt" file or "Word" file, paste the value (Ctrl+V), copy(Ctrl+C) 25.05 5178060934093 and 121.5334084568162 respectively and paste it on MAKAR.





- 4. After public, open the project on App to experience
  - If it is not at the specified location, "Need to be turned on within the range of GPS" will display.
  - If it is at the specified location, "Experience" will display.

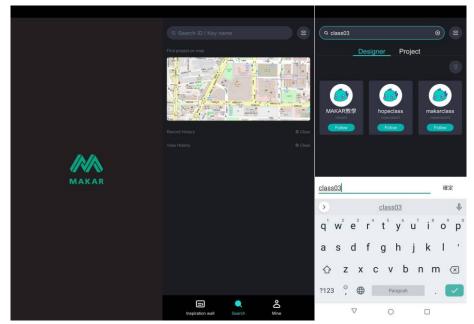




# Chapter7. Method of using APP

MAKAR XR editor provides development tools for creating and editing AR/VR/M R, MAKAR App provides users with XR project experience. MAKAR APP supports b oth iOS and Android, as well as multi-platform vehicles, including mobile phones, tablets, VR headset and AR glasses.

- 7-1. Project Search Method
- 1. Open the MAKAR App and click the search icon below, then enter a project name or MAKAR ID.



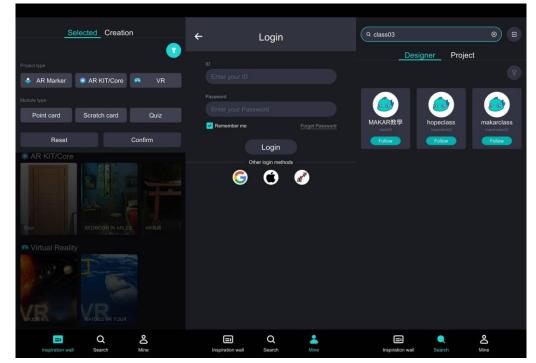
2. Click on the search results, select the project you want to experience, and then cli ck on "Experience" below.

			_		
Q class03				×	×
<u>Designer</u> Projec	at 🕜		MAKAR教學 class03		AR漫畫圖書-卡通歌手 <sup>◎</sup> <
(1) MAKAR教學 hopeclass	makarclass		8 fans 1 0 follow Follow	•	MAKARWM update 501 days ago
clau33 Processor Follow Follow	Follow	Project type AR Marker Module type	AR KIT/Core	R VR	Project Usage
		Point card	Scratch card	Quiz	Scan the target image to watch AR Project Introduction
		Reset		Confirm	8
				有其做答	
					Experience
Inspiration wall Search	<b>℃</b> Mine	Inspiration wall	Q Search	<b>O</b> Mine	Inspiration walk Search Mine

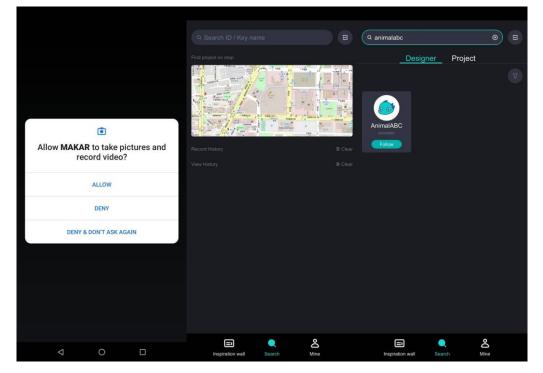


7-2. Project collection method

After logging in app, you can follow your favorite projects or authors and watch their l atest works.

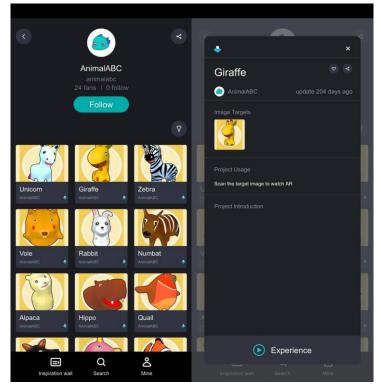


- 7-3. Image recognition experience method
- 1. Open App and allow MAKAR to take pictures and record video
- 2. Click search, input MAKAR ID : animalabc
- 3. Click on the authors whose projects you want to experience

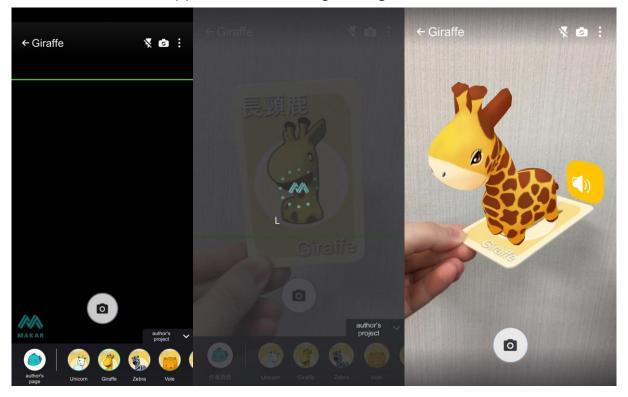




- 4. Click on the project you want to experience after entering the page. This time we will take Giraffe as an example.
- 5. After the project is started, the AR augmented reality needs to be triggered by sca nning the target image.



- 6. Enter the AR camera.
- 7. After the screen appears, scan the target image to watch AR.





8. Follow the steps to scan and experience, download more images <u>here</u>!









### 7-4. Space recognition project experience method

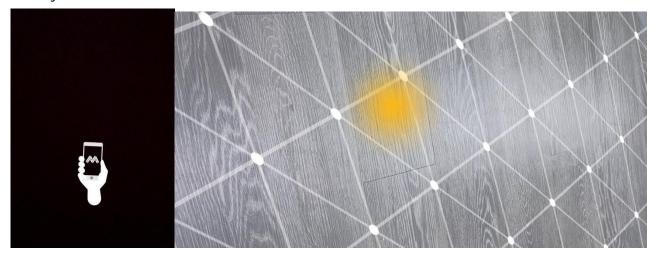
Space recognition supports Arkit&ARCore feature, which can locate virtual object s through scanning plane space. Users can interact with virtual objects in the plan e. Please check system platform information for support. If the phone does not su pport the space recognition feature, it will automatically switch to gyroscope feat ure.

- <u>AR Kit</u> : Support iPhone6s and above or iOS11 and above.
- <u>ARCore</u> : Please refer to Google official phones and upgrade to the specificat ion.
- Gyroscope : Mobile phones need to support gyroscope features to execute AR gyroscope and VR360.
- 1. Start AR ZOO project, scan QR CODE to enter(or search for AR ZOO in AR space re cognition of selected projects)



# MAKAR

2. After selecting the space recognition project, the camera will be activated, and th e screen will show shaking the phone from side to side. Please scan the floor horiz ontally. After the grid appears, you can click the screen to create a spatial virtual o bject.



3. After completing the virtual space of MR (mixed reality), you can walk around in t he real space and click on the objects in the screen to trigger interactive items, su ch as sound.





- 7-5. VR virtual reality project using method
- 1. Start VR project, scan QR CODE to enter (or search in VR selected project)



2. After entering the VR project, the mobile device will switch to landscape mode. Us ers can choose appropriate mobile devices according to their needs, such as VR m obile headset, VR headset all-in-one or AR glasses, etc. MAKRA officially supports APK downloads for a range of mobile devices, including HTC VIVE FocusPlus, XRS PACE, EPSON series, etc.

MAKAR Product Pricing Tutorials Blog Contact us Download 🙎 Login Sign up Language	MAKAR	Product	Pricing	Tutorials	Blog	Contact us	Download	😩 Login 🛛 Sign up 🛛 Li	anguage
---	-------	---------	---------	-----------	------	------------	----------	------------------------	---------

#### **MAKAR** Download

MAKAR User Manual Chinese English MAKAR SDK Download AR/VR Glasses  Download  CPSON BT300 EPSON BT300	MAKAR 2021	Download (Win) ~ Download (Mac)
AR/VR Glasses	MAKAR User Manual	Chinese English
EPSON BT300       EPSON BT350       EPSON BT35E       HTC VIVE FocusPlus       XR SPACE	MAKAR SDK	Download
EPSON BT35E HTC VIVE FocusPlus XR SPACE	AR/VR Glasses	
Tutorials Contact us		
Tutorials Contact us		
		XR SPACE
	Tutorials Need help? Access our knowledge base page	Contact us Questions? We are here to help



 Product	Pricing	Tutorials	Blog	Contact us	Download	💄 Login	Sign up	Language

### **MAKAR Download**

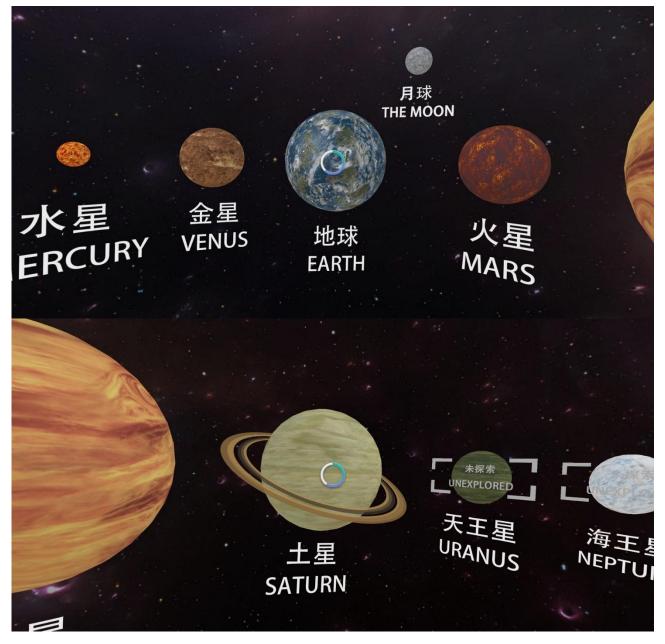
MAKAR 2021	Download (Win) + Download (Mac)
MAKAR User Manual	Chinese English
MAKAR SDK	Download
AR/VR Glasses	Download 👻
	EPSON BT300 EPSON BT350
	EPSON BT35E
	HTC VIVE FocusPlus
	XR SPACE

- 3. When viewing a VR project, there is a viewpoint at the middle of your screen.
  - Place the viewpoint at specific assets to trigger interactivities.
  - The interactive trigger can be set as an immediate trigger or delay trigger.
  - As triggering a delay trigger type, the viewpoint will perform a loading anima tion to indicate the delay timing.





- 4. VR experience can be watched in 360 environment through gyroscope of the pho ne, or use your finger to rotate the 360 screen to watch, and the viewpoint on the screen slowly changes from white to blue, which means that you are in the switchi ng status.
  - Viewpoint switching Trigger immediately : View interactive object triggers i mmediately.
  - Viewpoint switching Trigger delay : View interactive object waiting for trigg er 1-3 seconds.





5. When experiencing a VR project, your phone can match the GOOGLE CARDBOAR D or SAMSUNG VR BOX and some similar devices. Turn on the dual-lens mode to turn the phone into an immersive VR wearable.





## Chapter 8. Module system

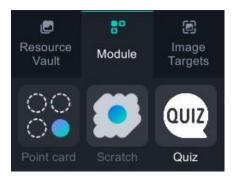


### Features



The MAKAR system currently offers point cards, scratch cards, and quiz modules that allow creators to create di verse interactive design features.

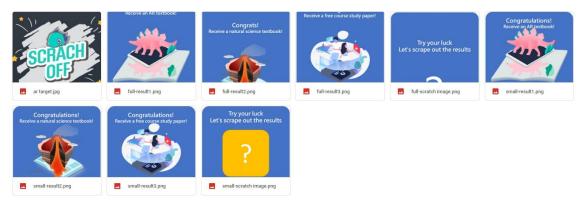
- 2D editing screen support: point card module, scrat ch card module and quiz module.
- 3Dediting screen support: quiz module.



### 8-1. Scratch card module

MAKAR provides an interactive AR scratch card module, this module can only be used in "2D interface" for editing. Download the <u>teaching material</u>, which contains the outp ut of AR scratch card material (.png) and target image material (.jpg), and provide the PPT of material production, convenient for editing and using. The course content will explain the method of PPT material making (using a smaller version as an example).

 Open the PPT for material editing, and you can set up relative objects according t o your needs.

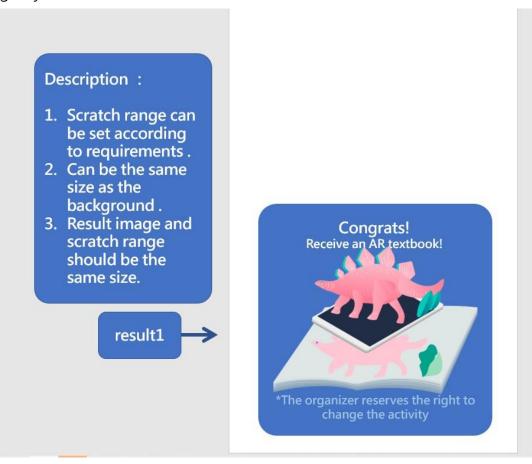




2. AR scratch card materials are divided into background image, scratch image, and result image.

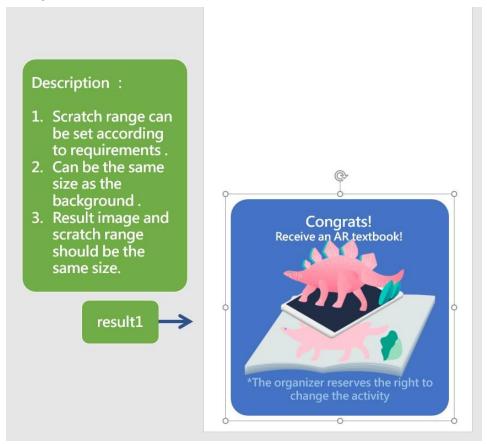


3. Select the result picture material page, you can change the text and picture accor ding to your needs.

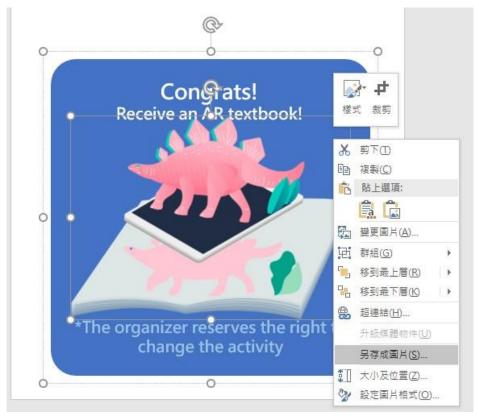




4. After editing, please select all the material components.



5. Right-click> Save





- P3 存成圖片  $\times$ ← → \* ↑ 
  ✓ 15\_resource > resource ✓ Ů 2 授尋 resource 新增資料夾 組合管理 🔻 -0 Ċ Ŧ full-result2.png full-result1.png full-result3.png full-scratch image.png g all-result2 nr all-r sult3 all-scratch 檔案名稱(N) small-result1.png 存檔類型(T) 可攜式網路圖形格式 (\*.png) 作 標籤: 新増標記 工具(L) ▼ 儲存(S) 取消 ▲ 隔藏資料夾
- Select png format (Portable Network graphics) 6.

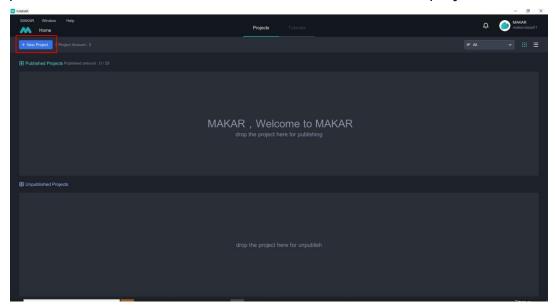
Complete material output. 7.

full-result1.png	full-result2.png	full-result3.png	full-scratch	small-result1.pn
small-result2.pn	small-result3.pn	Prysour lost lart scrape nut the mode Prove the scrape of the scrape small-scratch image.png	image.png	g
P.存成圖片				×
← → × ↑ 📙	<< AR02 > 刮刮+	≂滿版素材 🗸 ひ	搜尋 刮刮卡滿	版囊材 🔎
組合管理 ▼ 新均	曾資料夾			<b>•</b> • <b>(</b> )
▲ OneDrive	^	沒有符合搜	尋條件的項目	
↓ m				
進不 👃	<b>~</b>			
檔案名稱(N):	辨識圖			~
存檔類型(T):	JPEG 檔案交換格式 (*.)	ipg)		~
作者:	user	槽籤:	新増標記	
▲ 隔藏資料夾		工具(L)	▼ 儲存(S)	取消

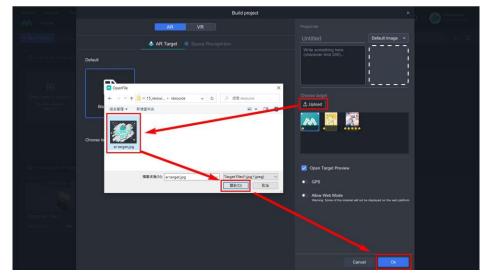
TIPS: The materials can be jpg or png, but the target images must be unified in jpg for mat.



8. Import to MAKAR and make the scratch card, create a new project.



9. Upload and select the target image.

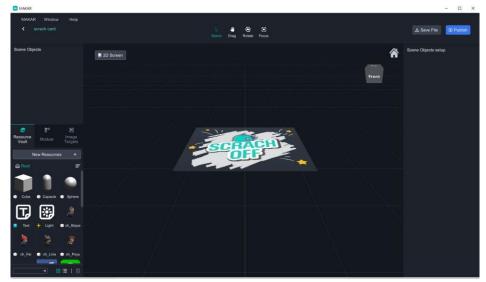


10. Name the project and confirm.

ALARDA INTERA (AL	Build project		
AN Honse	AR		
A description of the solution	AR Target Space Recognition	scrach card Default Image ~	
<ul> <li>Polarowsky Polypeith (</li> <li>Epity how to publish (</li> <li>Call how to publish (</li> <li>Call how to publish (</li> </ul>	Default	(character lim 200) Choose target € Upland	
Page Industrial Page		Copen Target Preview GPS Allow Web Mode Wurning, Some of the nuclearie wit not be display. Or the web plantom	
		Cencel	



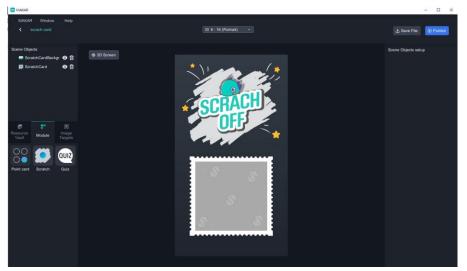
11. Enter the editing screen (default is 3D), select the upper left corner to switch to 2D mode.



12. Select "Function Module" in the left column and drag the scratch card to the right editing screen.

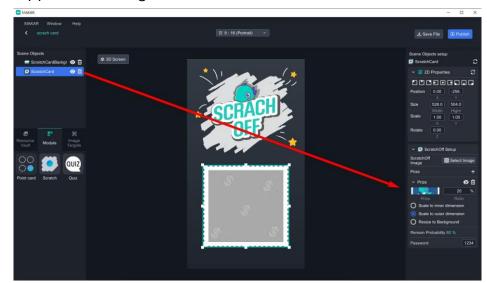
MAKAR				- 🗆 ×
MAKAR Window Help scrach card		⊞ 9 : 16 (Portrait) ~		B Publish
Scene Objects  Personne Module Personne Personne Personne Personne Scratch Out	6 30 Soren	Ayaj kenjada	Scane Objects setu	

13. Complete the creation of the scratch card module.





14. Select "Scratch card" in the "Scene Objects" on the left, and the scene object setti ngs will appear on the right.



15. New material > picture > Upload scratch card material.

MAKAR Window Help <b>〈</b> scrach card		
Scene Objects  ScratchCardBackgr  ScratchCard  ScratchCar	A 3D Screen	SCRACH
Resource Module Image Vault New Resources +		
<ul> <li>New Folder</li> <li>Local Upload</li> <li>Image</li> <li>Video</li> <li>3D Model</li> <li>Audio</li> <li>Panorama Resources</li> <li>Online Resources</li> </ul>		
Storage usage 54.03 MB / 2 GB		



 After uploading is complete, select the scene object settings on the right: Scratch Card Picture>Select Picture.



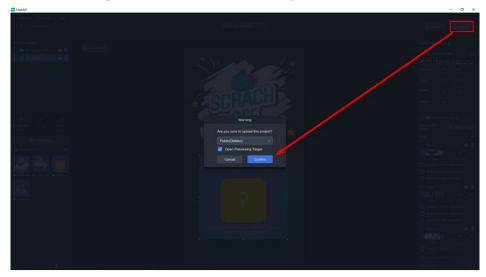
17. Select the relative material and click enter.



18. Select + next to the award to add an award, and select the award icon to update.Enter the probability of winning for each award (100% in total)







19. Choose the upper right corner > publish project

FAQ about scratch-card

Q1:Can it be exchanged repeatedly ?

A1:The scratch card can record the mobile phone carrier and account after login, users can only exchange it once.

Q2:If users delete the App and reinstall it, can they play and exchange it again? A2:Yes, when the user deletes the App, all the data recorded in the data application wi II be deleted, so the user can play again.

Q3:If the users log in the App account and delete it, can they play again? A3:No, because the user's login account has been recorded, even if you delete the Ap p data, you cannot play again.

Q4:Why do I need to enter my password when exchanging? A4:To avoid users mistakenly touching it, resulting in completed exchange status.

Q5:Do I have to set the exchange password ? A5:You may choose not to set it, but problems with Q4 may occur.

Q6:Can I see how many times the user has played? A6:Yes, professional version A and above can view the playing data in the database.



Q7:Can I limit the times of user play? A7:Refer to Q1,Q2,Q3, etc.

Q8:Can I limit the times of users redeem their prizes?

A8:Since the system does not set the jackpot function, it is suggested that developers control the number of prizes by themselves. If the exchange times have reached, the w inning picture will be deleted and removed from the shelves.

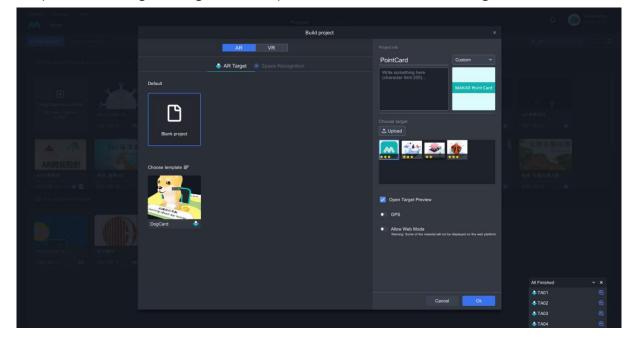
Q9:What if the prizes have been exchanged?

A9:If it has reached the times of exchange, the winning picture will be deleted and rem oved.

8-2. Point card module

MAKAR provides interactive AR point card module, this module can only be used in th e "2D interface" for editing, download this teaching material including the output of p oint card material (.png) and target image material (.jpg), and provide the material PP T, easy to edit and use later.

- 1. Click "New project" on the top left, select the AR tag, switch to "AR target", set the project name or cover, and click "No Template".
- 2. Upload the target image file and press Ok to enter the editing scene.

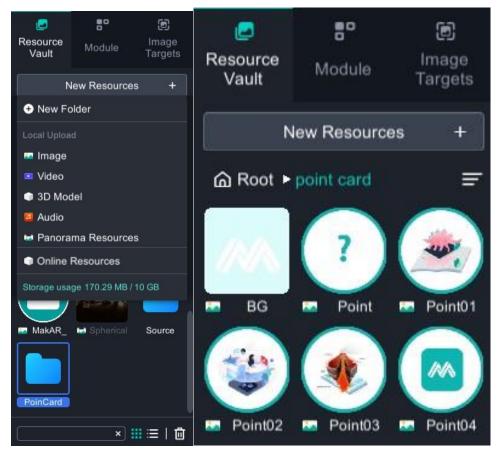




3. Switch to "2D screen" on the top left, and select "Module" in the left navigatio n, hold and drag "Point card module" into the 2D scene to create the module.



4. After the module is created, click New Resources > New folder and double-click t he folder text to rename: PointCard. When finishing the renaming, double-click to enter the folder, and upload all the materials for this point card, New Materials > I mages.





- 5. Select the point card module in the scene objects and set up the objects on the ri ght.
  - (1). Select the background image:BG.jpg
  - (2). Click the the button besides the point card, add the points of the point card a nd select the corresponding target images (refer to the screenshot below).



- 6. Select the point card module in the scene objects and set up the objects on the right.
  - (1). Set the image before get point, click before get point, change all points to po int.png
  - (2). Set the image after get point, click the get point, and change all points to the corresponding target image file point1-4.png
  - (3). Set the number of points for exchange, this project can have a maximum of f our points, and at least one point for collecting, the number of points can be set according to requirements.
  - (4). Setting exchange passwords can help users to solve the problem of accident al exchange. If the number is deleted, the password is not in the state.



MAKAR Window Help C PointCard	⊞ 9:16 (Portrait) v	ن Save File 😗 Publish
Some Objects	MAKAR Point Card	Scene Objects setup       2         ▼ ₹ 20 Properties       2         Position       0.00       0.00         X       720.0       1280.         Wattin       1.00       1.00         Scale       1.00       V         Rotate       0.00       2
Resource Vault Module Image Vault New Resources + Resources + Resources = Resources percent	? ?	<ul> <li>✓ Select Image</li> <li>Background</li> <li>Select other</li> <li>Point</li> <li>Point</li> <li>Point</li> <li>Point</li> <li>Before</li> <li>After</li> <li>Targets</li> <li>Point</li> </ul>
<ul> <li>por a rotation</li> </ul>	(?)(?)	Innage Targets Point Parage Bafore After Targets Point
	MAKAR reserve the right to change specifications	Image Before After Targets Redeem quantity 3 Redeem password 6666

7. After finishing the process, click the publish on the top right for project experienc e, scan the QR below to enter the project and start to experience.



8. The target images are below, scan to collect the point.





FAQ About point card

Q1:Can it be played repeatedly?

A:The point card module can only be played once per phone. If you need to play multi ple times, you need to set up multiple projects.

Q2:Can the password not be entered? A:Yes, please delete the password in dialogue.

Q3:Is there a limit to the number of points? A:According to the number of target images setup, 6 points are recommended.

Q4:Whether there will be a background record for the limit of exchanging times? A:Currently, MAKAR does not provide this service, because of some disputes. As the r esult, It is not recommended to use this service to exchange high-price gifts. If you ha ve any requirements, please contact MAKAR customer service to provide customized service.

Q5:Whether there will be a background record of play times or exchange status? A:Currently, MAKAR provides versions of standard and above with the authority of dat a analysis. After logging in the background, users can watch the exchange status.



# Chapter 9. Hot key

功能	操作		
Set to object scale mode	R		
Set to object select mode	Q		
Set to object move mode	W		
Set to object rotate mode	E		
Moves the locked object to the display screen	F		
Sets the selected object operation	Q		
Delete the object	Delete / BackSpace		
Undo the previous step	Ctrl / Command + Z		
Repeat the previous step	Ctrl / Command + Y		
Save	Ctrl / Command + S		
Copy objects	Ctrl / Command + C		
Paste objects	Ctrl / Command + V		
Copy and paste objects	Ctrl / Command + D		
Select all	Ctrl / Command + A		
multi-select	Left Ctrl / Command + left-click		
Cancel the multi-select	Alt / Option +left-click		
Select the range	Left shift + right-click		
Click the object	right-click		
A selection box appears and selects the object in the range	left-click + drag		
Zoom in/out to show the screen	The middle roller slides		
Rotate the whole screen	General condition + right-click dr ag		
Drag the whole screen	Blank key hold + left-click drag		
Zoom in the frame	+		
Zoom out the frame	-		

