



# Lecture notes

# Wonda manual

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Disclaimer. This document was compiled by partially using material (texts and images)

available at <https://help.spaces.wondavr.com/en/>. The intellectual rights of this material belong to the Wonda VR company and the respective authors of the "User Guide," "FAQ," and "How to" articles.



Many images illustrate processes described in the text using animated GIFs. However, please

note that this feature is not supported in PDF files. To view their animation, you have to click on them. The images that include animations are explicitly labeled with the word "animated" directly beneath them.



# The basics

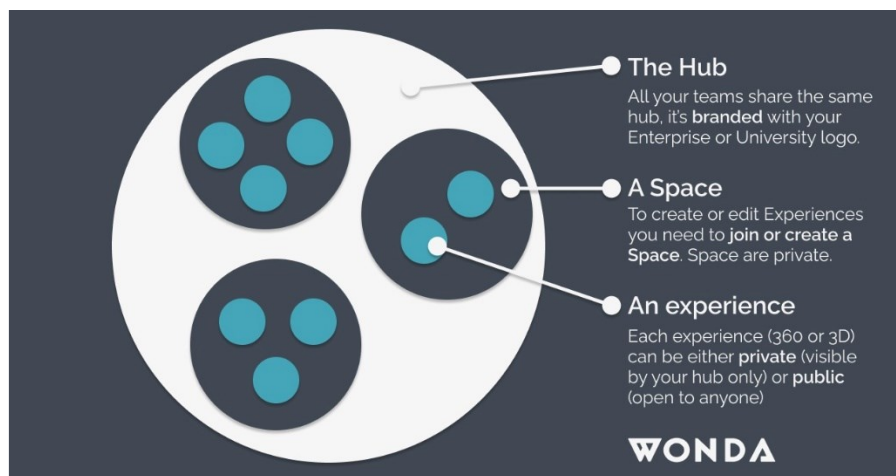
## Introduction to Wonda

Wonda is an advanced VR learning and collaboration platform that enables users to effortlessly edit, share, and access immersive learning experiences utilizing 2D, 3D, and 360° media, all accessible through a variety of devices including HMDs, mobile phones, tablets, and desktops. The platform is structured into three foundational levels. Hub, Spaces, and Experiences.

**Hub.** The Hub serves as the centralized access point where users and their team members can manage all the Spaces and Experiences created within their organization. It provides a comprehensive overview, allowing for efficient access, editing, and sharing of immersive experiences. Functioning as the main gateway, the Hub offers a holistic perspective of organizational activities and engagement.

**Space.** Nested within the Hub, multiple Spaces facilitate the collaborative creation and management of immersive experiences. Each Space is a private enclave where users can generate and oversee an unlimited number of Experiences, inviting specific participants for collaboration. The inherent privacy setting ensures that only invited users can view and co-edit the content within a Space.

**Experience.** Situated within each Space, Experiences are developed using the Wonda Editor, an intuitive, web-based authoring tool. These Experiences are dynamic, multi-user 3D environments where participants can meet, present, and engage with immersive 360° media. The editor supports the seamless integration of interactive elements such as annotations and quizzes atop various media types, allowing for the creation of both simple and complex educational and gaming scenarios. Experiences can be shared synchronously through multiplayer mode or asynchronously in single-player mode and are easily embeddable on any webpage, accessible on all devices including desktops, HMDs, and mobile devices.



Engaging participants in a manner similar to Skype or Zoom, a multiplayer session in Wonda facilitates real-time interaction with up to 50 users in an immersive 3D setting. Unlike traditional video calls, participants control avatars within the shared environment, enhancing interaction. The simplicity of organization is another strength; participants can join sessions via a straightforward URL provided in the editor, with no need for additional application downloads. This URL can be disseminated through various communication platforms, such as the Facebook and email.

👉 Note. Wonda uses the term "annotations" when referring to assets that you can add to an Experience.

## Browsers, desktop, and VR device compatibility


### Best browsers for editing an Experience

For the most effective experience editing, it is strongly recommended to use the latest desktop versions of Google Chrome and Mozilla Firefox. Users on Windows platforms can also utilize Edge, while Safari is recommended for those on iOS devices.

### Recommended browsers for viewing an Experience

- Desktop viewing. For desktop users, it is advised to use the latest versions of Google Chrome or Mozilla Firefox. On Windows, Edge is also a viable option. It is important to note that support for Safari remains experimental due to the inherent limitations of the browser.
- Virtual Reality viewing. For VR experiences, it is recommended to use Meta Quest 2 or higher, in conjunction with the Meta Browser.
- Mobile and tablet viewing. Support for mobile and tablet devices remains in beta. While any Android device can be used, iOS compatibility is currently limited to single-user experiences.

	Editor	Player Solo	Player Multi	
<b>Desktop / Laptop:</b>				Notes:
Chrome	✓	✓	✓	Recommended
Brave	✓	✓	✓	Supported
Firefox	✓	✓	✓	Limited support
Edge	✓	✓	✓	Not supported
Safari	x	x	x	
<b>VR Headsets:</b>				
Meta Quest 2, 3, Pro		✓	✓	
Meta Quest 1		✓	✓	
Oculus Go (deprecated)		x	x	
Pico Neo 3		✓	✓	
Pico Neo 2		✓	✓	
Pico G2 (deprecated)		x	x	
<b>Mobile / Tablet:</b>				
Android (beta)		✓	✓	
iPhone / iPad (beta)		✓	x	


 Notes. It is crucial to note that Wonda is exclusively compatible with standalone headsets. The application cannot be launched via mobile cardboards, Google Cardboards, or when connected to desktop HMDs. Furthermore, VR experiences are feasible only with the use of controllers, as hand tracking is not supported. The only compatible headsets are explicitly listed above. Currently, Artificial Intelligence (AI) experiences are limited to single-player mode and are compatible solely with desktop environments.

## Media requirements

To achieve optimal performance with your media assets, follow the specifications listed below.

### *360° videos*

Format. MP4.  
Codec. H.264.  
Frame rate. 30 fps.  
Maximum input resolution. 8K.  
Maximum streaming resolution. 3840 x 1920 pixels (4K).  
Maximum bitrate. 20 Mbps.  
Stereoscopic support. Top/Bottom & Left/Right.

 Notes. Uploading a 360° video may require several minutes before it is fully processed and available in optimal quality. For Stereoscopic videos, append "\_TB" (top-bottom) or "\_LR" (left-right) to the file name (e.g., demoVideo\_LR.mp4).

### *2D videos*

Format. MP4.  
Codec. H.264.  
Frame rate. 30 fps.  
Maximum resolution. 1080p (higher resolutions will be downscaled to 1080p).  
Maximum bitrate. 20 Mbps.

### *360° images*


Format. JPG or PNG.  
Maximum input resolution. 8K.  
Maximum output resolution. 6K.  
Maximum file size. 2MB.  
Stereoscopic support. Top/Bottom & Left/Right.

### *2D images*

Format. JPEG compressed for Web.  
Maximum resolution. 1080p.  
Maximum file Size. 1MB.

### *3D objects*

Format. GLB or GLTF.  
Maximum polygon Count. 10,000.  
Maximum number of different textures. 10.  
Maximum texture resolution. 4K.  
Materials. Minimized (each material creates one draw call at runtime).  
Maximum file size. 5MB.

 Note. If modeling adjustments are required, third-party tools like RapidCompact may be utilized (refer to the section "[How to optimize your 3D assets \(using RapidCompact\)](#)" for further details).

### *Audio*

Format. MP3.  
Maximum file size. 10MB.

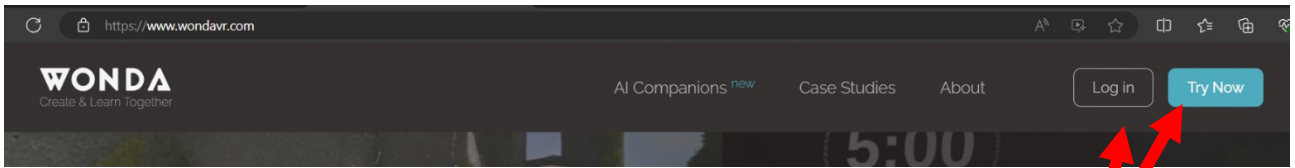


# First steps



## Create an account/log in

Before you start, you have to create an account or login using your Google/Microsoft account. Go to <https://www.wondavr.com/> to start the process. To create an account, click on "Try Now." For any subsequent connection click on "Log in."



👉 Note. It is much easier to register/log in using your Google account.

A screenshot of the "LOGIN TO YOUR ACCOUNT" page. It features input fields for "Email" and "Password", a "Remember Me" checkbox, and a "LOGIN" button. Below these is an "OR" separator, followed by three social login buttons: "LOGIN WITH GOOGLE", "LOGIN WITH MICROSOFT", and "LOGIN WITH SSO". At the bottom, there is a "Forgot your Password?" link and a "Register" link. A red arrow points from the "Login with Microsoft" button towards the text above.

## Choose an account

to continue to [eu-prod-spaces.firebaseio.com](https://eu-prod-spaces.firebaseio.com)



Use another account



## Σύνδεση με το eu-prod-spaces.firebaseio.com

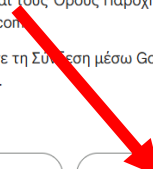


Εάν συνεχίσετε, η Google θα κοινοποιήσει το όνομα, τη διεύθυνση ηλεκτρονικού ταχυδρομείου, την προτίμηση γλώσσας και τη φωτογραφία προφίλ σας στο eu-prod-spaces.firebaseio.com. Δείτε την Πολιτική απορρήτου και τους Όρους Παροχής Υπηρεσιών του eu-prod-spaces.firebaseio.com.

Μπορείτε να διαχειριστείτε τη Σύνδεση μέσω Google στον [Λογαριασμό σας Google](#).

Ακύρωση

Συνεχίστε



You have to name your Hub, select its type (preferably, Personal or University), and upload an image as your Hub's logo.

## Welcome!

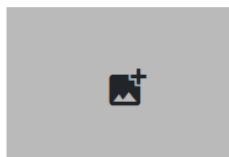
Let's set up your hub

Name your Hub

Hub type

Enterprise

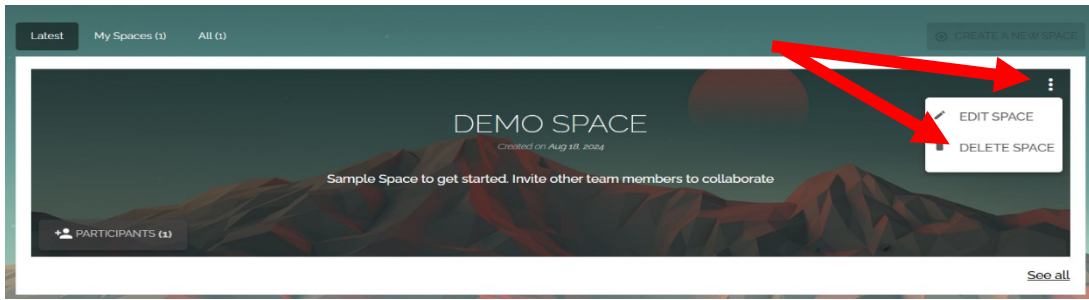
Upload a logo



We recommend transparent png

CREATE YOUR HUB

Notes. You have to upload a poster image to be able to create the Hub. If the button "Create your Hub" is not activated, try another name for your Hub. When creating your Hub for the first time, Wonda creates a demo space as well. You can safely delete it.



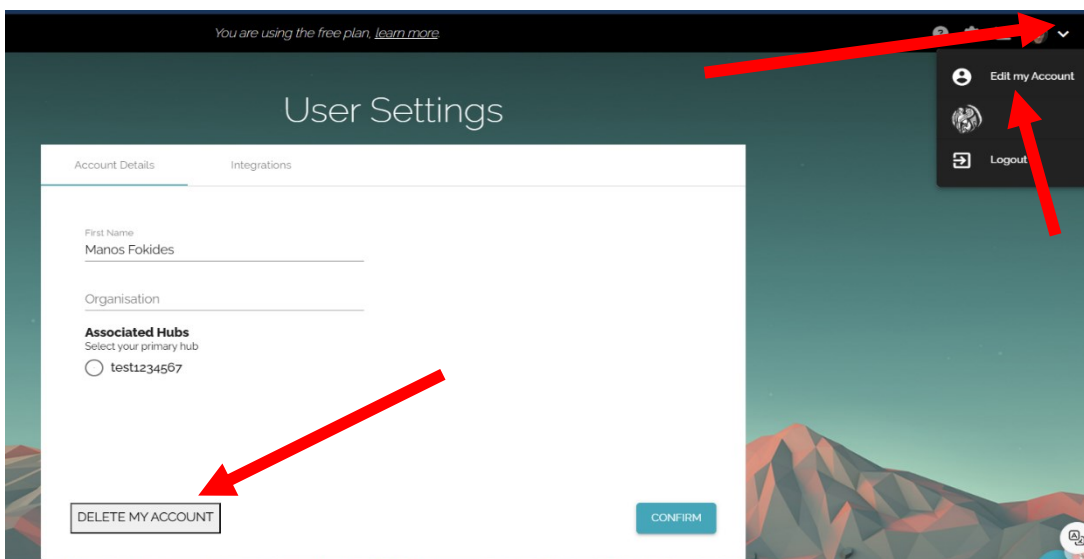
## Demo Space

Are you sure you want to delete this space?

CANCEL

OK

You can also edit your account details or delete it altogether.

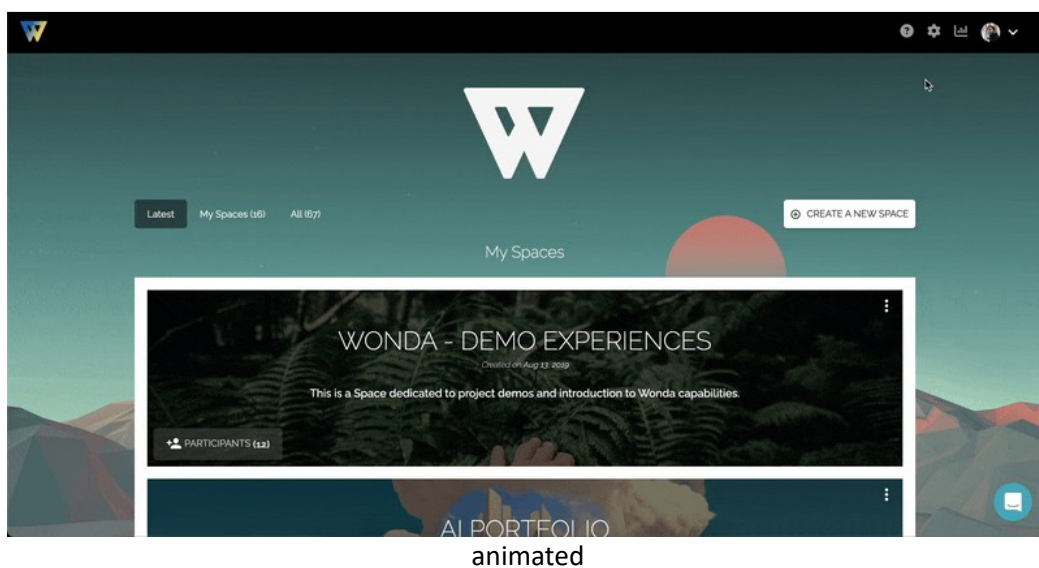


## Edit your Hub settings

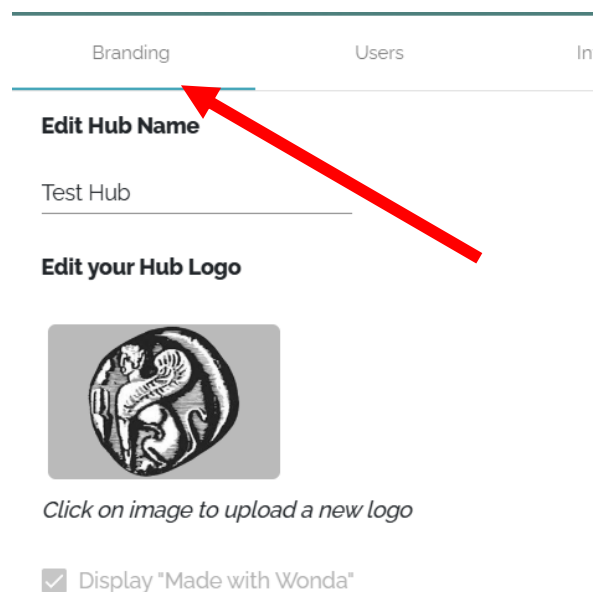
As a Hub Administrator, you can effectively oversee all Spaces and users associated with your organization, whether it be a company or university setting. Your administrative privileges enable you to:

- Access and manage the list of users, including the assignment of administrative permissions.
- View and analyze Hub-wide analytics, complementing the analytics available for individual Spaces.
- Modify the Hub's branding elements, such as the title and logo, that are displayed on every experience created within your Hub.
- Configure third-party integrations, including Kaltura, Learning Tools Interoperability (LTI), or Single Sign-On (SSO) settings.
- Review and manage the Hub's billing information.
- Access all Spaces and Experiences created within the Hub.
- Remove Spaces and experiences created by other users.

The general settings of the Hub include altering the branding, inviting new users, and managing various Hub integrations.

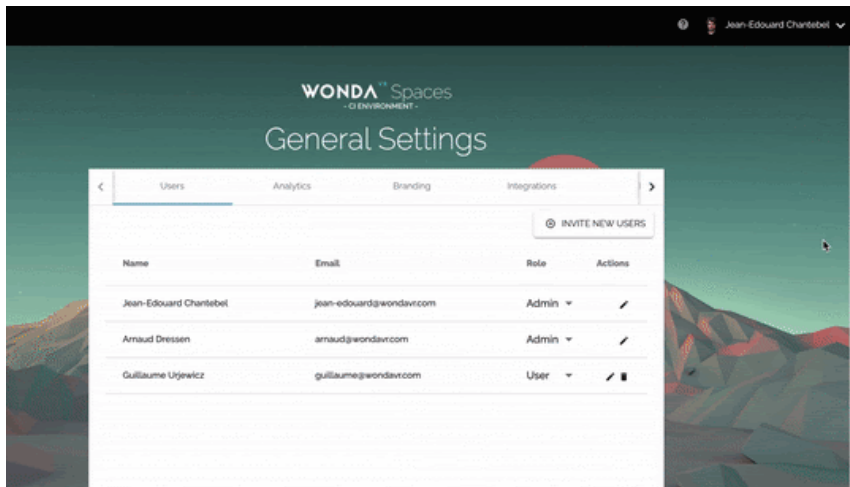


👉 Note. In the free version of Wonda, you can only change the branding of your Hub.




When it comes to inviting new users to the Hub (paid versions), administrators can proceed via two primary methods:

- Sharing the Hub secret invitation link. This unique and permanent URL allows individuals to directly join your organization's Hub. By default, new users joining through this link can create new Spaces or request access to existing ones.

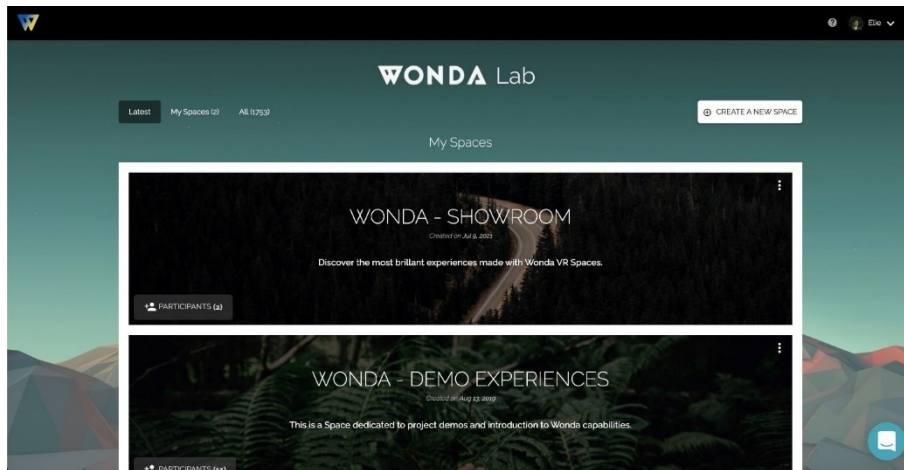


animated

- Sending individual invitations via email. This method is ideal for inviting other administrators or granting direct access to selected Spaces upon registration. It includes the option to provide immediate administrative rights to invitees.

 **Note.** Any participant within a Space also has the ability to invite new users to join and access the Space. All media assets used in any of the Experiences, including 2D, 3D, and 360° media, are, by default, shared among all participants within the Space.

## Create and edit a Space



Upon logging in, users gain access to the various Spaces within their Hub, which can be sorted in three distinct ways:

- Latest Spaces. Provides an overview of the 10 most recently modified Spaces within your Hub, including those to which you may not have been invited.
- My Spaces. Displays only the Spaces in which you are actively participating. Users can access, modify settings, and update Experiences in these Spaces.
- All. Lists all the Spaces available within the Hub.

### Creating a Space

To create a new Space, click on the "+ Create a New Space" button located at the top right of the window.

A screenshot of the 'Space edition' form. At the top, there is a 'CREATE A NEW SPACE' button. Below it, the form is titled 'Space edition' and contains three main sections: 'Title' with a text input field and a character count of '0/50'; 'Description' with a text area and a character count of '0/500'; and 'Poster image' with a placeholder image icon and a red error message '(Poster image is required)'. At the bottom right of the form, there are 'CANCEL' and 'SAVE' buttons.

- Title. Typically, the title should correspond to the name of your department; however, it may also reflect the overarching theme of the Experiences contained within that Space.
- Description. Similar to the title, the description is publicly visible to anyone with access to the Space. It offers a general overview of the various Experiences that participants can expect to find.
- Poster image. Select an image or a logo to uniquely brand your Space, preferably in JPG format.

👉 Note. You have to upload a poster image to be able to create your Space.

### Editing a Space

To make modifications to a Space, click on the three dots located at the top right of the Space banner.



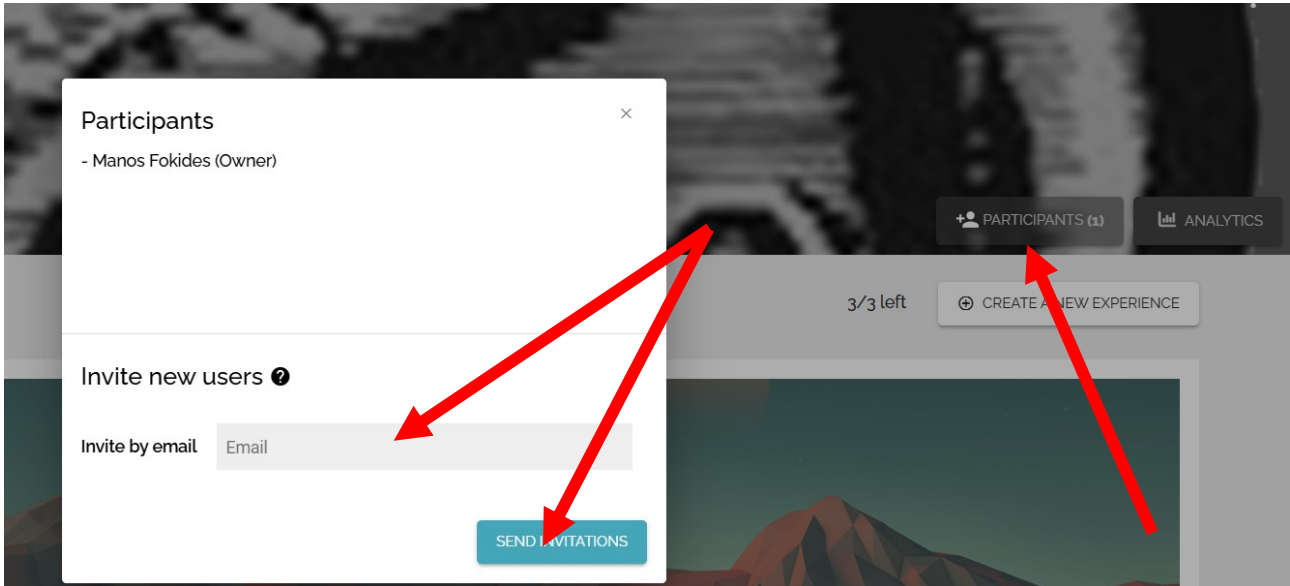
Options include:

- Edit. Allows for the revision of all information entered during the creation of the Space, such as the title, description, and poster image.
- Delete Space. Permanently removes the Space along with all its associated Experiences.

## Invite or join a Space

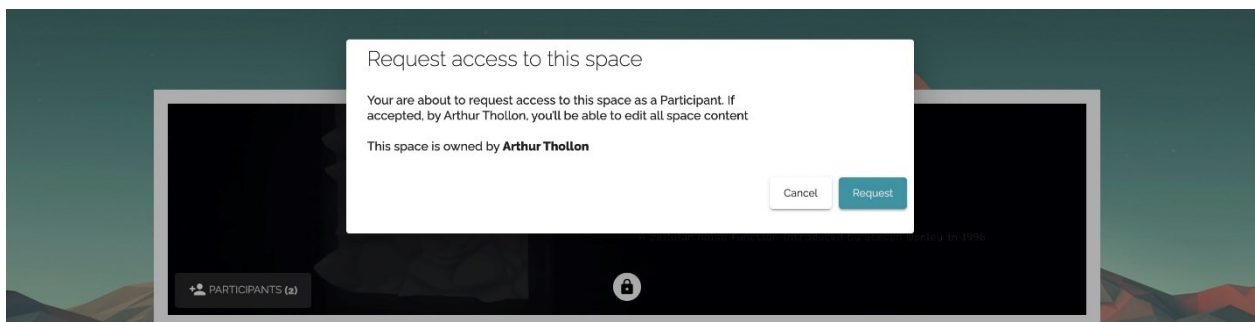
There are two methods for gaining access to a Space:

- Inviting a participant. As an existing participant of a Space, you have the capability to invite others by navigating to the "Participants" section and entering their email addresses.



Once invited, new participants will possess the default permissions to:

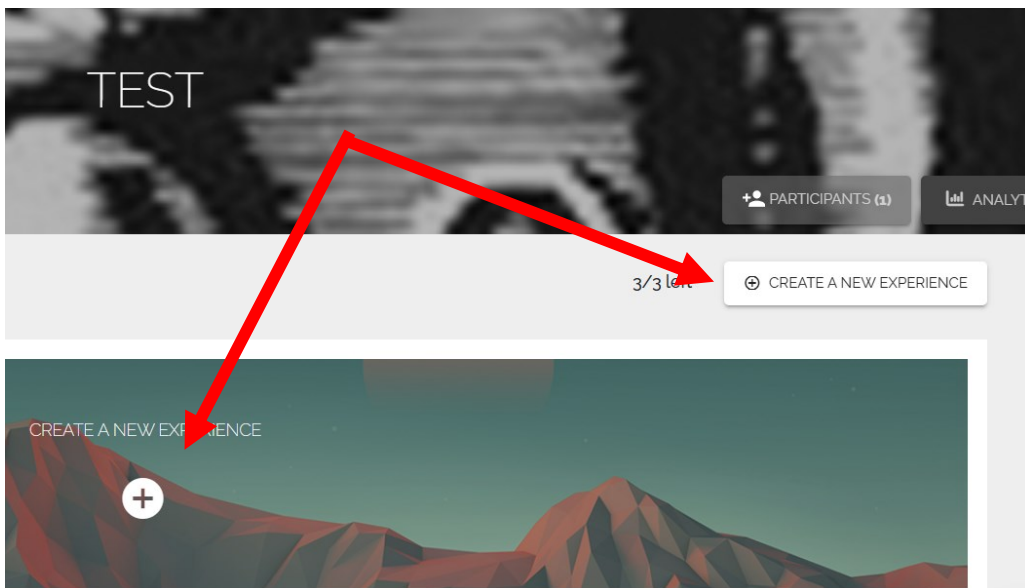
- Modify the general settings of the Space.
  - Access all experiences within the Space.
  - Edit all Experiences within the Space.
  - Add new Experiences.
- Request access. If you have not received an invitation to a Space and do not hold administrative privileges within the Hub, you will see a lock icon on the Space's poster. By clicking the lock icon, a request is sent to the Space owners. The owners will then receive an email notification to either approve or deny your request. Upon approval, the Space will subsequently appear under the "My Spaces" category for your access.





## Create an Experience

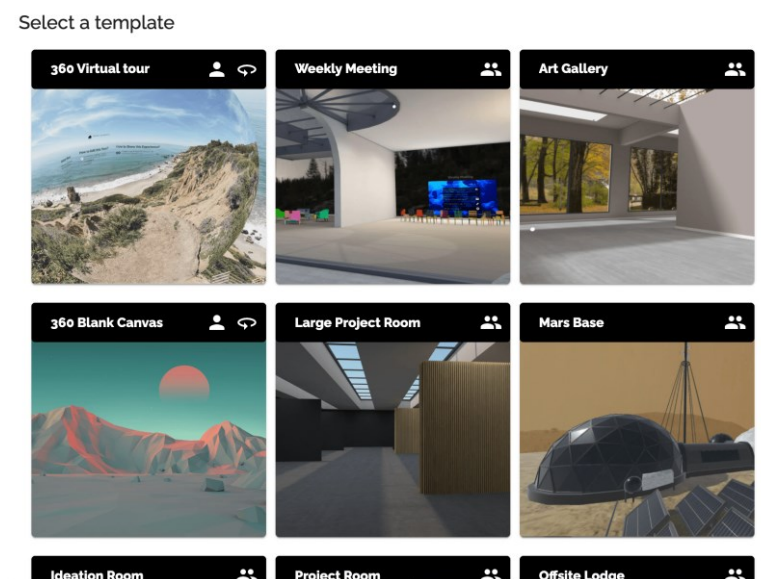
To create a new Experience, begin by selecting the "Create a new Experience" button located at the top of your Space. You can also click the big "+" button.



👉 Note. In the free version of Wonda, you can create only three Experiences.

You will then choose from an array of templates.

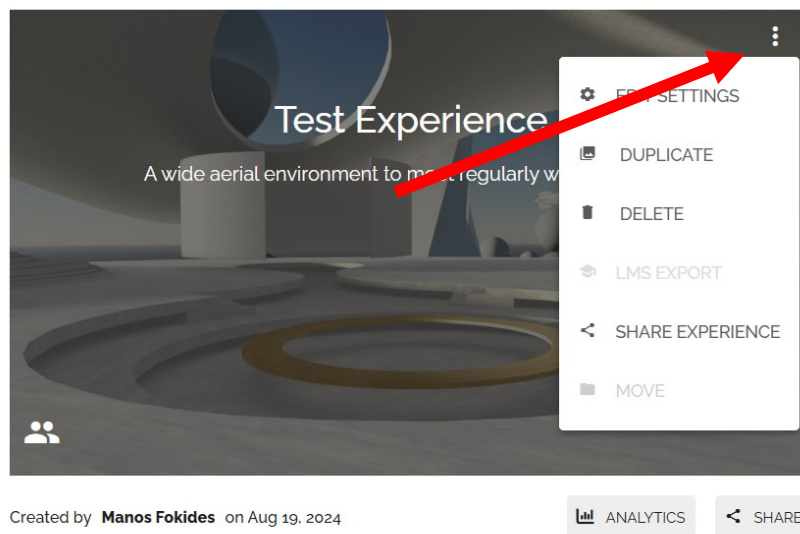
- 3D rooms (Weekly meeting, Art gallery, etc.). These templates facilitate the organization of immersive meetings, events, or galleries by allowing customization of the room's assets and using a main screen to share content. Additionally, 360° media can be incorporated into your presentation.
- 360° virtual tour. This includes Sample Virtual Tour Assets comprising 360° images and videos. It demonstrates how to implement interactive Hotspots, Quizzes, and Scorecards.
- 360° blank experience. This template is an empty project with default settings specifically for 360° experiences.



Upon loading a template, you have the option to either launch your Experience immediately to observe its appearance or begin crafting a distinct and impactful presentation by editing it.

## Duplicate, move, delete, and share an Experience

To access functions such as the reuse of existing content or taking a backup of your Experiences, simply click on the three dots associated with any experience at the Space level.



### Edit settings

Please refer to the section "[Changing the settings of an Experience](#)" for further details.

### Duplicating an Experience

To duplicate an experience, select the "Duplicate" option. This action generates a copy of the original experience but with a distinct URL. Duplicating experiences can be beneficial for various purposes, such as utilizing an Experience as a template, creating a backup prior to testing, or facilitating simultaneous participation by multiple groups in the same Experience.

### Deleting an Experience

If an experience is no longer required, you can remove it by selecting the "Delete" option. This capability is restricted to instances where the user is the creator of the experience or possesses admin privileges. It is crucial to recognize that this action is irreversible.

### Moving an Experience (not available in the free version of Wonda)

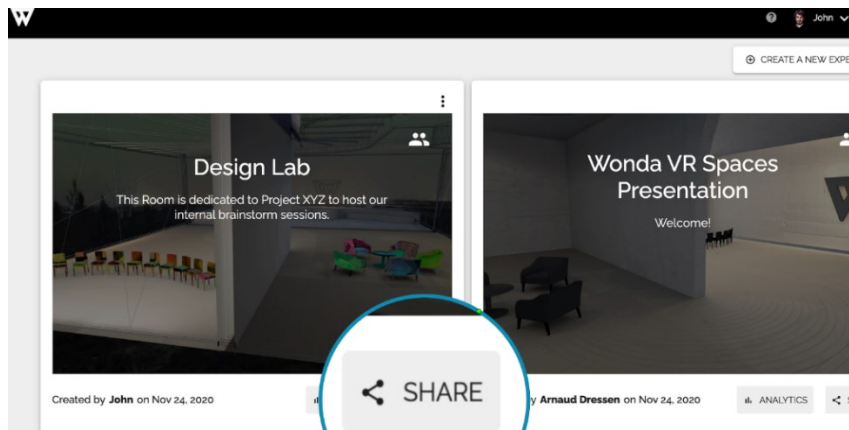
The "Move" option allows you to relocate any experience to a different Space that you have access to. This functionality facilitates the reorganization of your content across multiple Spaces, such as distributing a demo Experience to several departments.

### LMS export (not available in the free version of Wonda)

This option allows you to integrate your Experience into an LMS platform (e.g., Moodle).

### Sharing the Experience

Wonda is an entirely web-based platform, facilitating the seamless sharing of your Experiences via a simple link. Users have the discretion to designate their content as either private or public. To acquire the link to your Experience, click the "Share" button to access the sharing options. This functionality is available both in the viewing and editing interfaces.



## Sharing options

Who can view this experience? ⓘ

- Private** : Only people with the link who belong to my organization
- Open** : Everyone with the Link

🔗 **Direct Link**  📄 📄 VR 099-7551

<> **Embed code**

```
<iframe
allowfullscreen="yes"
allowvr="yes"
frameborder="0"
```

 📄

Advanced Publishing Options

Enable Versioning ⓘ

The visibility of your project is contingent on your chosen sharing method.

- **Private.** The experience will be accessible solely to individuals who possess a Wonda account within your Hub (invite users to your Space).
- **Open.** The experience is publicly accessible, and login credentials are not mandatory. However, non-logged visitors will be counted against guest passes. If guest passes are depleted, the experience will automatically revert to Private mode.
- **Presenter/Learner.** Choose the link depending on the users' roles.

👉 **Note.** Depending on the devices the users use, you can copy the link (for desktop users) or the code on the right of the VR headset (for users using head-mounted displays, HMDs).

VR 099-7551

- **Embed code.** To embed your Experience into a webpage, copy the code provided in this field and paste it into the code of your desired webpage.
- **Advanced publishing options** (not available in the free version of Wonda).

👉 **Note.** The Embed code option is available only for single-player Experiences.

👉 **Note.** Sharing options affect both single and multiplayer session links.

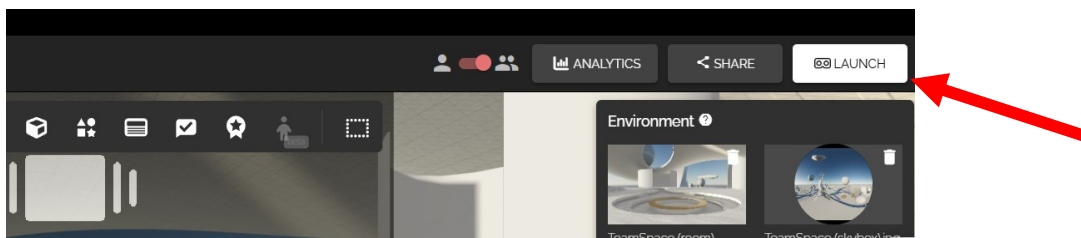
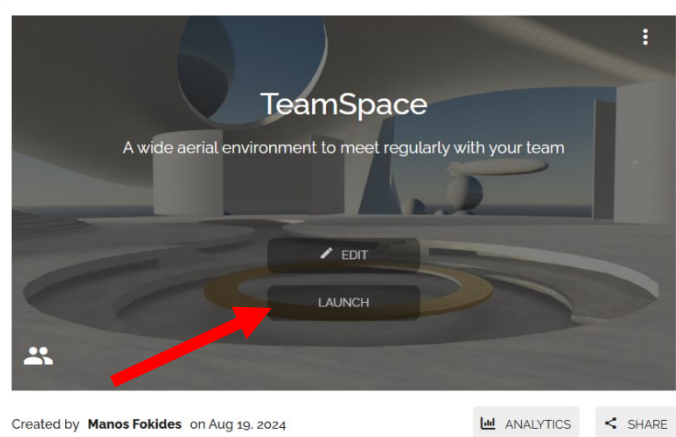


# The viewing mode

## The viewing mode interface

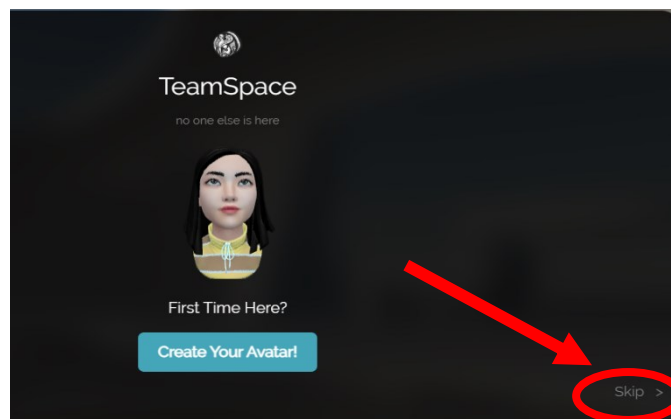
There are two interfaces in an Experience; one when viewing it and one when editing it. This section deals with the former case.

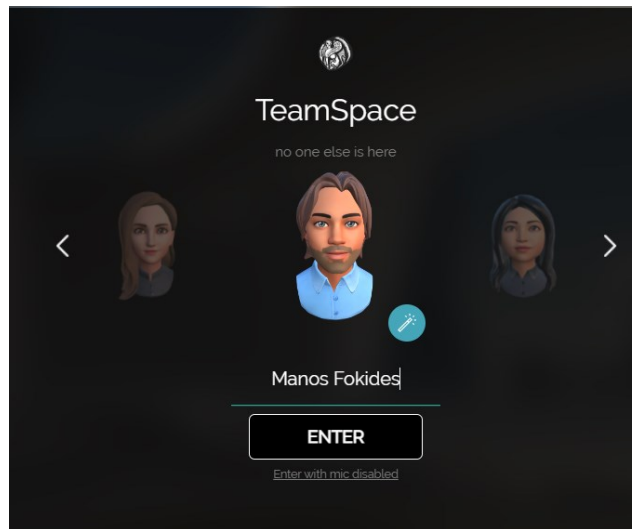
There are two ways to launch an experience (meaning to view it). The first is to directly launch it at the Space level. The second is to launch it while in editing mode.



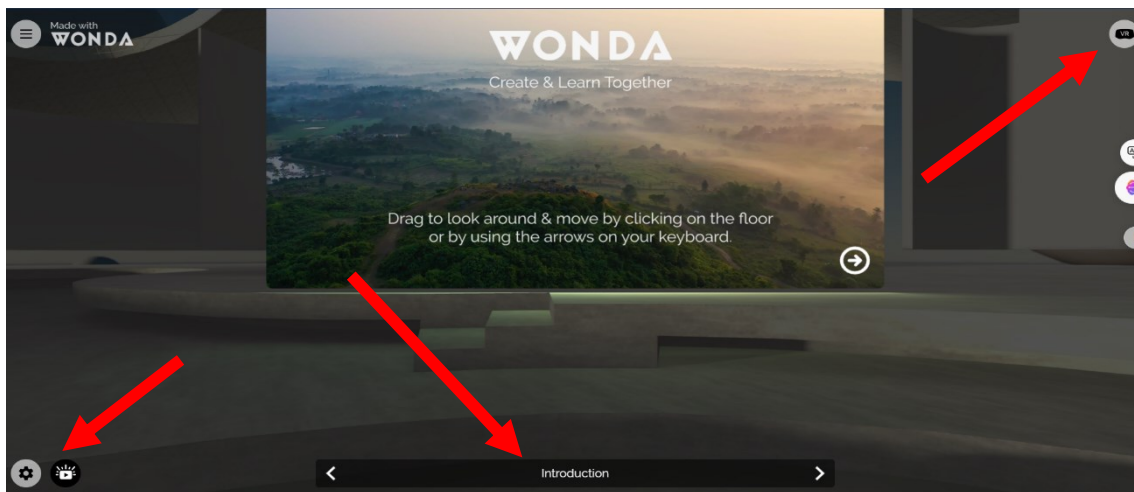
When launching an Experience, you will be asked to select or create your avatar.

**Note.** At the time of writing these notes, the "Create your avatar" option was not working properly. Therefore, click on the "Skip" button and select one of the available avatars.

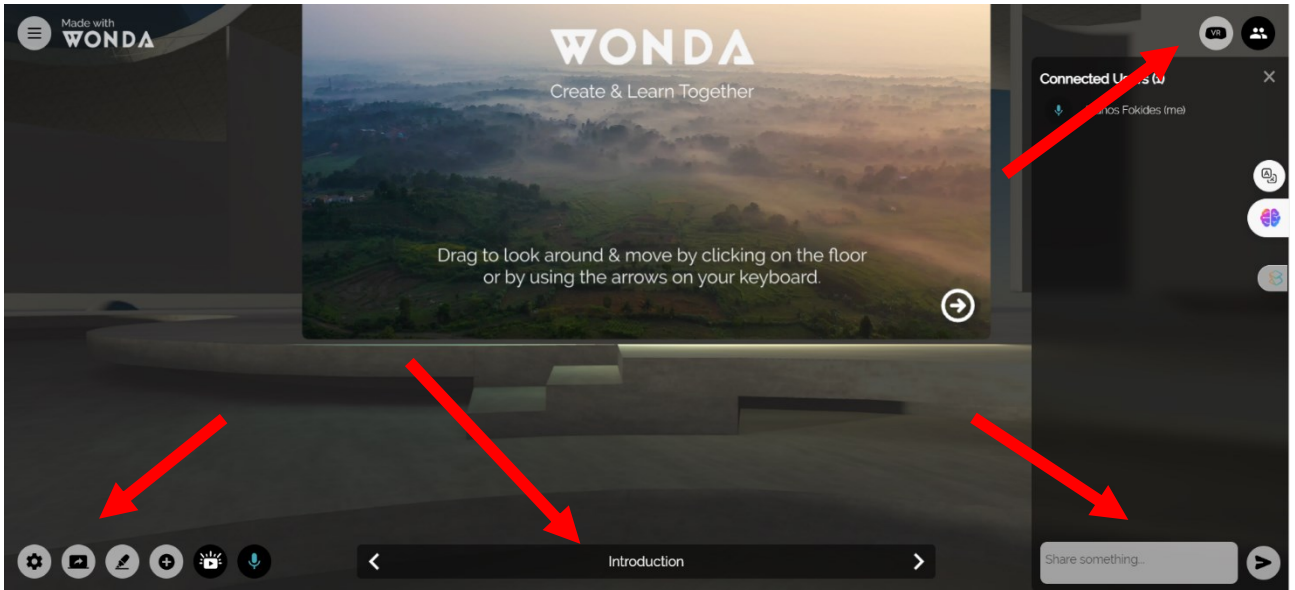




The available options in viewing mode depend on whether the Experience is single or multiplayer. If it is a single-player one, you can only switch on or off the Backlight Effect (refer to the section "[Emphasize content with the Backlight Effect](#)" for details about this feature), switch back to editing mode, navigate through the Scenes of the Main Display (for details about this feature refer to the section "[The Main Display](#)") and switch to VR mode (by clicking the HMD on the top right corner).



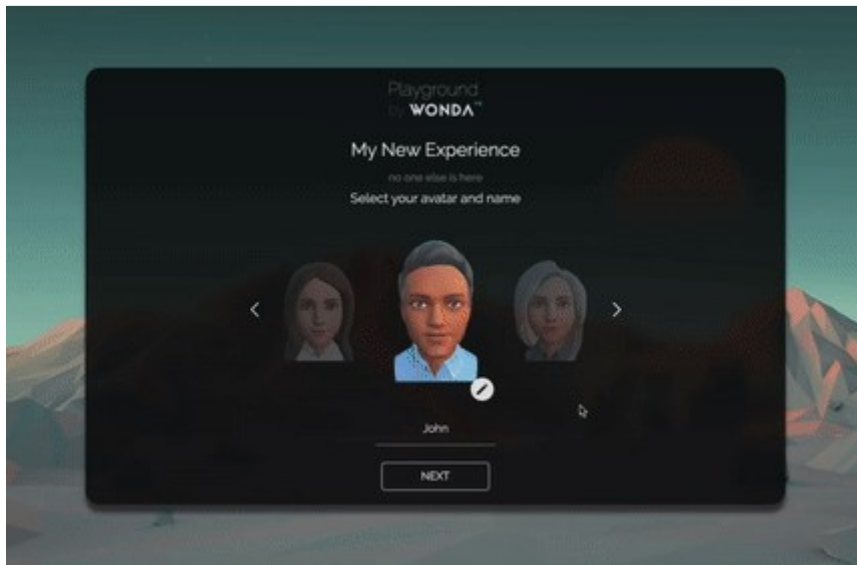
If the Experience is a multiplayer one, the same options/functions are available, plus some additional ones such as the chat area, mute/unmute the microphone, start a screen share (refer to the section "[Share your screen in multiplayer viewing mode](#)" for further details), start drawing (refer to the section "[Draw with the virtual pen in multiplayer viewing mode](#)" for further details), and add annotations (refer to the section "[Add images and 3D objects in multiplayer viewing mode](#)" for further details).



## Select or edit your avatar in a multiplayer session

👉 Note. At the time of writing these notes, the "Create your avatar" option was not working properly.

When initiating a multiplayer session, participants are invited to create their personalized avatar through our collaboration with ReadyPlayerMe. By default, there are some avatars available. Participants accessing the platform via desktop or mobile devices have the opportunity to create their own avatars, which can be utilized across all multiplayer sessions. For those who have previously generated an avatar using ReadyPlayerMe, the same avatar can be seamlessly integrated into the Wonda environment by simply providing the corresponding email address.



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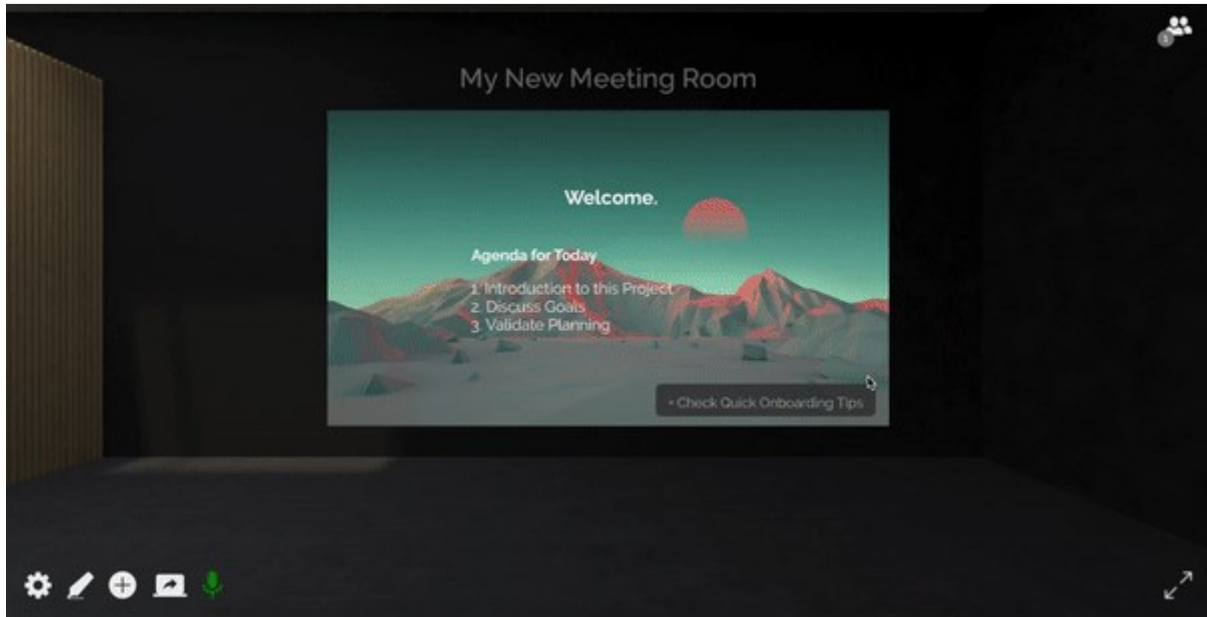
👉 Note. In order to enhance the immersive experience, avatars are not displayed in 360° scenes. In this case, to have avatars within your Experience, consider incorporating a 2D image or video scene.

👉 Note. Avatar customization is not supported in incognito web browser windows unless cookies are enabled.




## Share your screen in multiplayer viewing mode

Individuals granted Presenter rights have the capability to share their screen with all participants at any point during a multiplayer session.



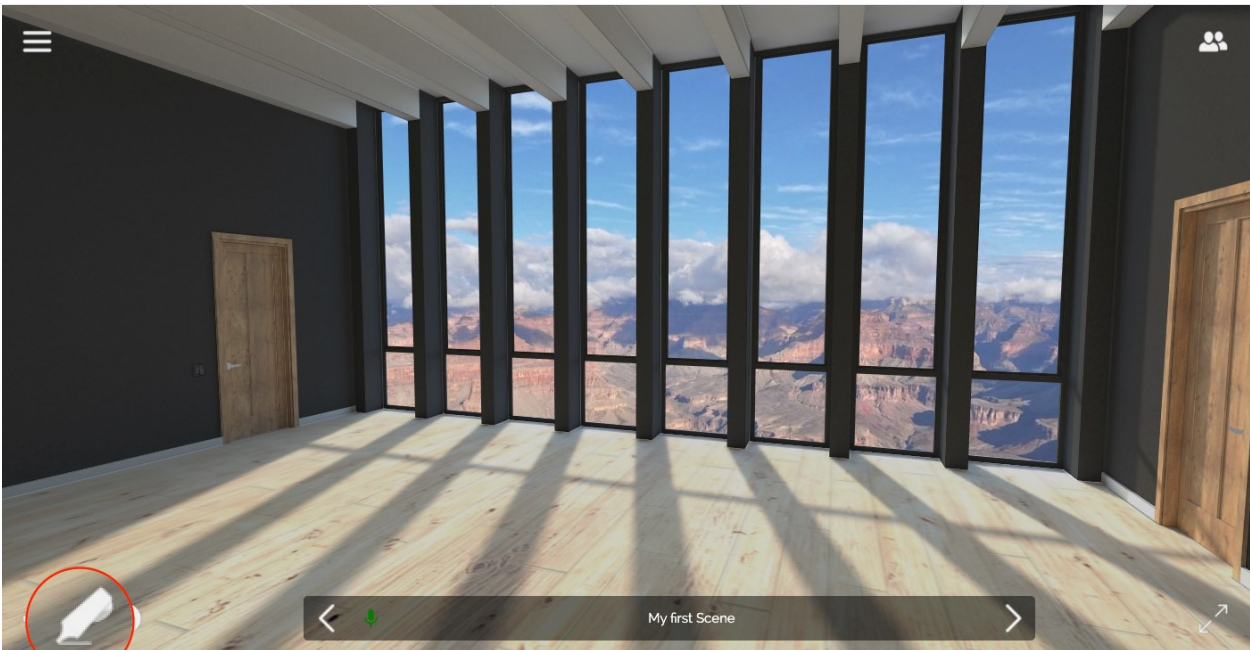
animated

 Note. While participants may utilize any device, the Presenter is required to use Mozilla Firefox or Google Chrome on a desktop computer.

## Draw with the virtual pen in multiplayer viewing mode

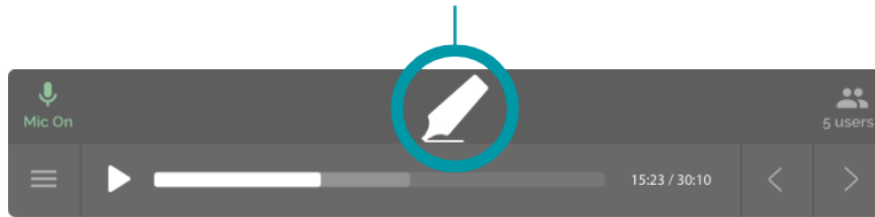
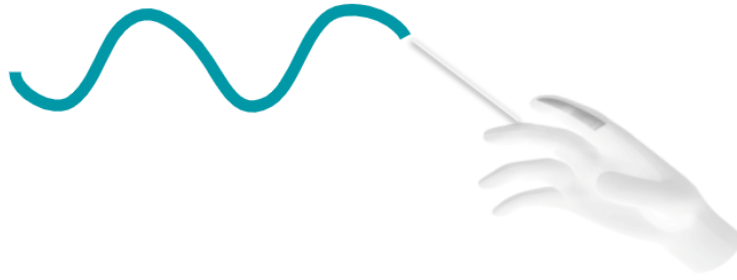
The virtual pen can be utilized for drawing and writing activities during a multiplayer session by both authenticated users and anonymous participants granted Presenter permissions, accessible via desktop and VR platforms. It is important to note that any drawings or writings created with the virtual pen are ephemeral, persisting only for the duration of the current session. Upon the departure of the final participant, all such creations are automatically erased.

For users operating on a desktop, the Pen icon is conveniently located at the lower-left corner of the interface. Activating the drawing mode provides several functional options tailored to user needs.



ESC		Drop Pen
C		Change Pen Color
CMD CTRL	+	Z Undo Last Draw
Shift	+	[Slider] Change Pen Scale

In the context of VR, to engage the pen feature within both 3D rooms and 360° Scenes, users must first reveal the control panel by pressing the trigger with their index finger on the controller. Once the control panel is displayed, the drawing initiation button is prominently situated at the top center of the control panel.



	Meta Quest 1 & 2 / Pico Neo 2 & 3	Oculus GO / Pico G2
<b>START DRAWING</b>	Trigger button	Trigger button
<b>DROP THE PEN</b>	Grip button	Thumbstick down
<b>CHANGE COLOR</b>	Right thumbstick - move Right	Thumbstick left / right
<b>CHANGE SIZE</b>	Right thumbstick - move Up & Down	Swipte down / up with thumb
<b>CHANGE DRAWING DISTANCE</b>	A Button	n/a

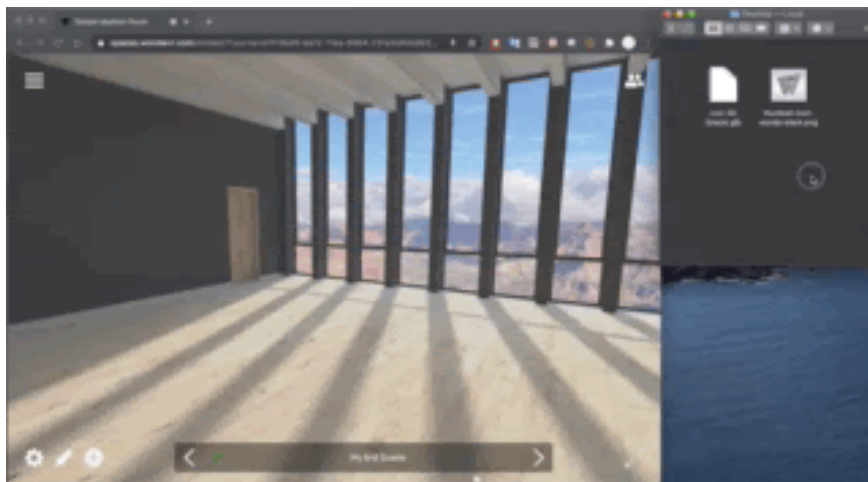
## Add images and 3D objects in multiplayer viewing mode

In a multiplayer session, users can integrate photos, videos, and 3D objects as dynamic annotations within the Experience through two primary methods:

- On-the-fly addition. This method is applicable to desktop users who can drag-and-drop media files (such as .png or .glb) directly from their desktop finder.
- Media Library import. This method is accessible to both desktop and VR users, facilitating the importation of pre-existing media from the Media Library.

### Adding a new 3D object or image "on-the-fly"

Desktop users can seamlessly introduce a 3D object or image into the multiplayer mode by dragging and dropping items from their local machine into the web browser window. Upon completion of the loading process, the 3D object will immediately appear in the Experience, ready for interactive manipulation.



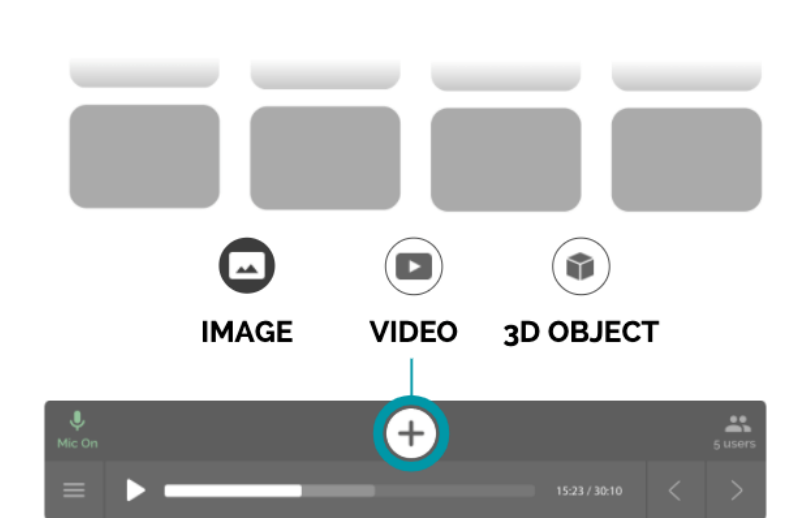
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### Adding a new video annotation

To incorporate a new video, it is imperative first to upload the video within the presentation on the Editor side, necessitating either a Hub or Space participant role. Once uploaded, videos are subsequently accessible in the Media Library.

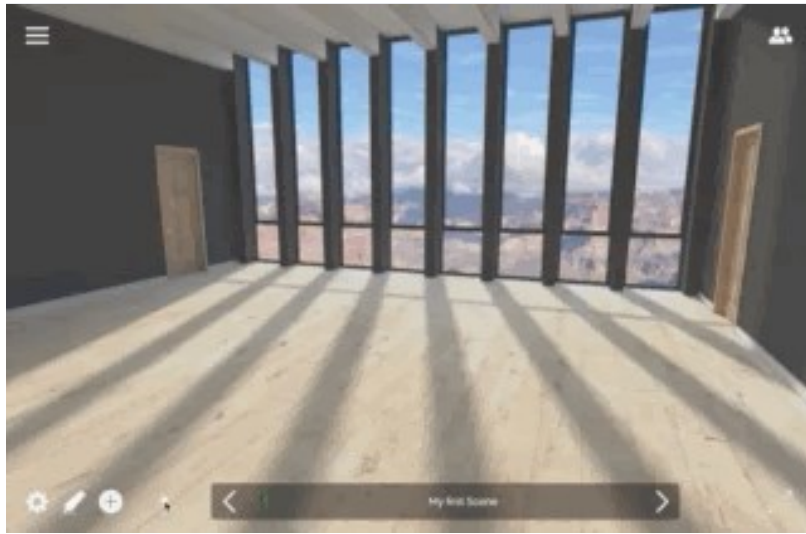
### Media addition from the Media Library

All items that are introduced into the Experiences are concurrently cataloged in the Media Library. This gallery, available upon entering an Experience but not in a 360° scene, is categorized into images, videos, and 3D objects.



### Desktop procedure

For desktop devices, logged-in users can locate the "+" button at the bottom-left corner of the window to add media.



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### VR procedure

VR users should display the control panel by pressing the controller trigger with their index finger. Within the control panel, the button to add a new annotation in the Experience is situated at the top center, accessible only to logged-in users.



### Editing dynamic annotations

Both desktop and VR users can manipulate unlocked annotations by selecting and dragging them within the Experience. A simple click on any annotation (3D object, image, or video) reveals several options:



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- Lock/Unlock. Locking an annotation prevents non-logged-in users from selecting or moving it.
- Delete. This option removes the annotation from the Experience while retaining it in the Media Library.
- Scale adjustments. Users can increase or decrease the scale of the annotation.

### VR specific manipulations

In VR, annotations can be scaled or rotated by pressing and holding the grip button on the controller with the middle finger.

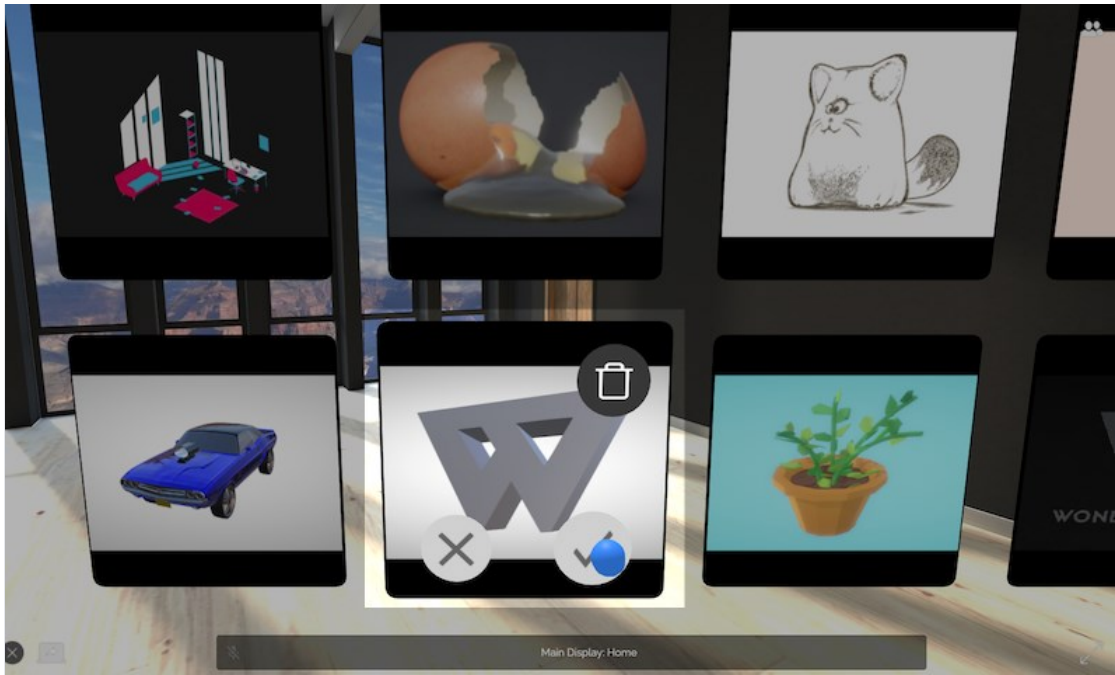


Utilizing the grip functionalities:

- Pressing one grip allows the rotation of media.
- Simultaneous pressing of both grips enables the scaling of objects.
- Users can also select annotations at a distance by pressing the right trigger and utilizing the multidirectional joystick for repositioning.

### Deleting annotations

For both desktop and VR platforms, hovering over a thumbnail in the Media Library will display a trash icon. Selecting the trash icon initiates a confirmation process where users can permanently delete annotations by selecting "✓".

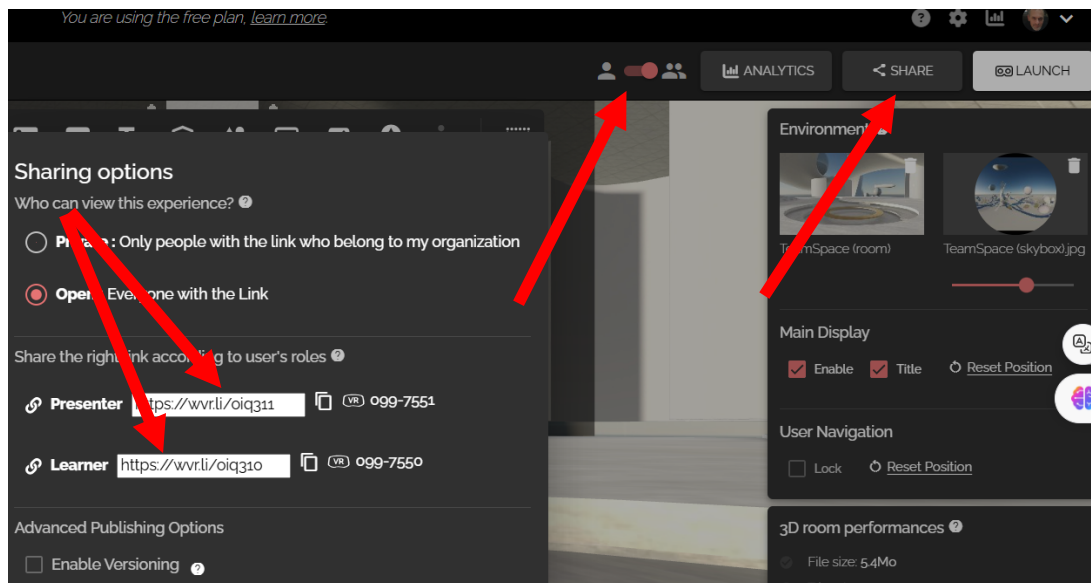


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👉 Note. All instances of this media will be deleted.

## View and navigate your experience on desktop

Users can access an Experience created with Wonda on their desktop computers or laptops Using Google Chrome, Mozilla Firefox, Microsoft Edge, and iOS Safari. Refer to the section "[Browsers, desktop, & VR device compatibility](#)" for details about some considerations. Users should use the invitation code available within the sharing settings of each experience created with Wonda. Refer to the section "[Duplicate, move, delete, and share an Experience](#)" for further details.



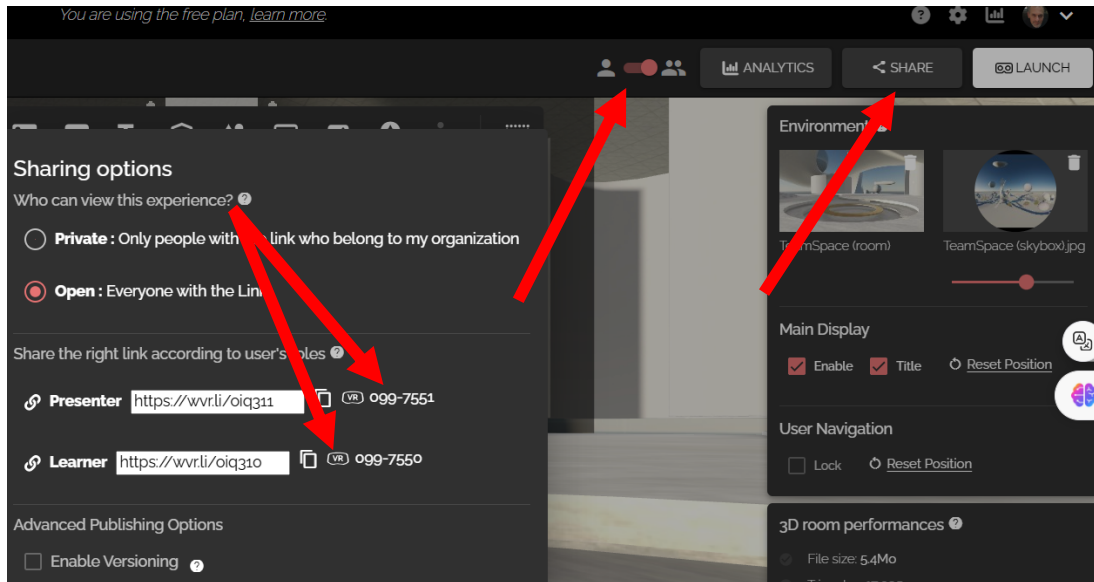
The arrow keys and WASD keys facilitate movement within the application. Users can achieve avatar rotation by left-clicking and dragging the mouse. Additionally, by left-clicking on a specific location, users can teleport instantly to that designated spot.



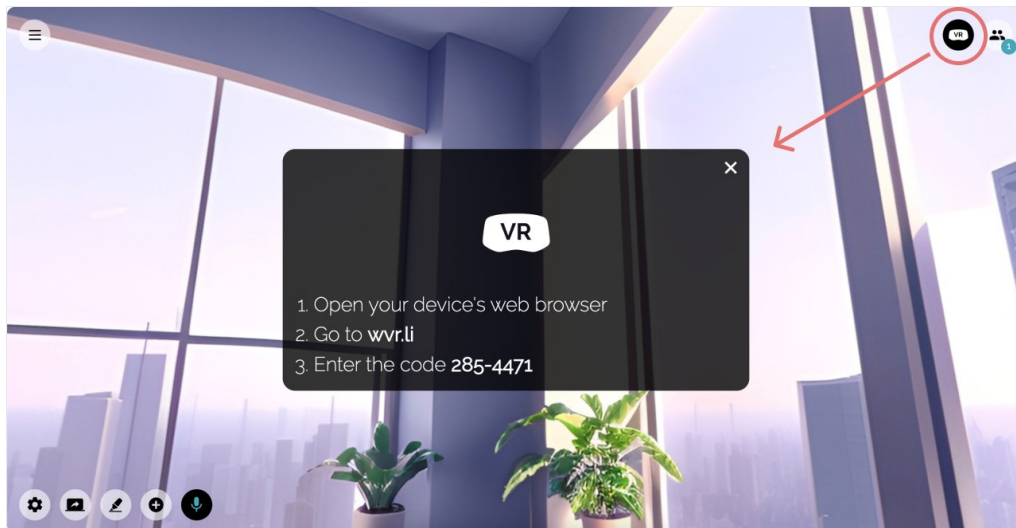


## View and navigate your experience in VR

Virtual reality (VR) Experiences created with Wonda can be accessed using HMDs (Meta Quest 2 and above, Pico Neo 2 and above) via the native web browser in HMDs, such as Meta Browser on Meta Quest devices and the Pico browser on Pico devices. To simplify access to a new VR experience, users should use the invitation code available within the sharing settings of each experience created with Wonda. Refer to the section "[Duplicate, move, delete, and share an Experience](#)" for further details.



On desktop platforms, this code can also be directly accessed within the experience via the VR button located at the top right corner of the screen.

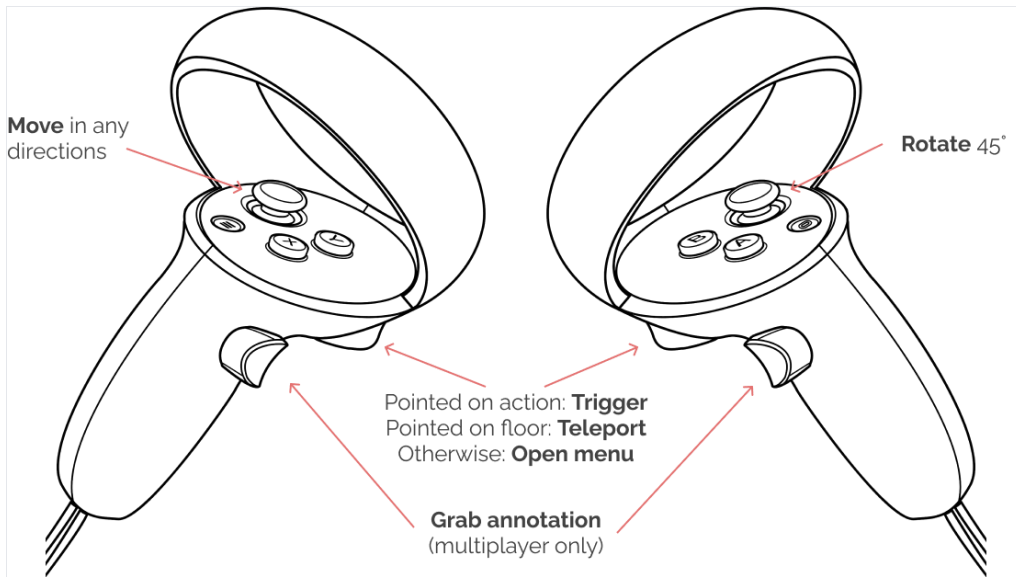


Upon obtaining the invitation code, users should navigate to wvr.li (<https://wvr.li/>) using their device's web browser. For convenience, it is advisable to bookmark this URL for future use. Entering the code will immediately launch the VR experience in the current browser tab.

👉 Note. To access multiple VR experiences, users may log in to <https://spaces.wondavr.com> through the headset web browser and initiate their experiences from that platform.

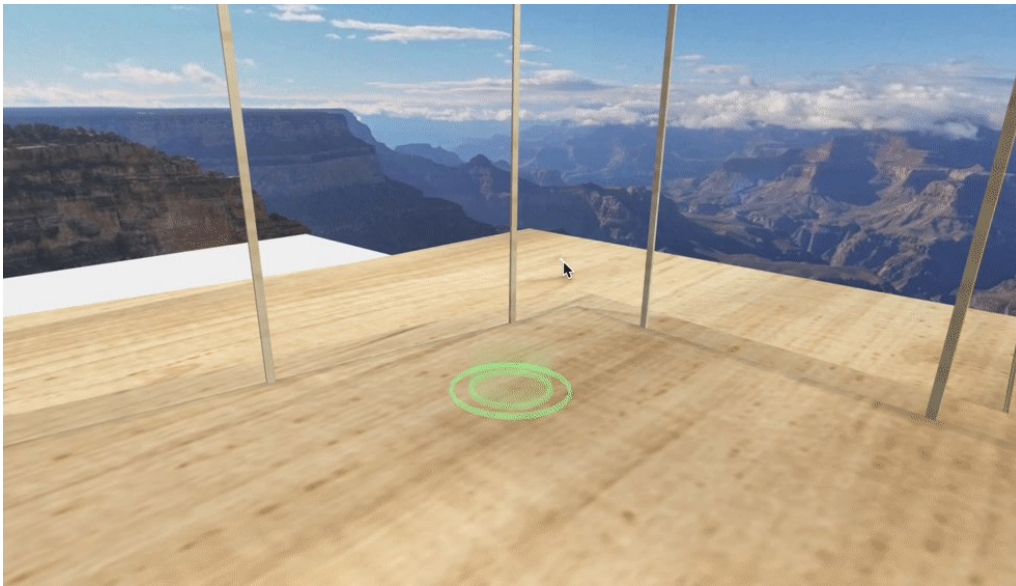
### Navigating the VR Experience

Upon launching an Experience in either single or multiplayer mode, users will enter it facing the Main Display. The use of the controllers is presented in the image below.



### Movement within the Experience

To teleport to any location, users should point their right controller toward the floor, and then press and hold the trigger button to swiftly move to the desired location.



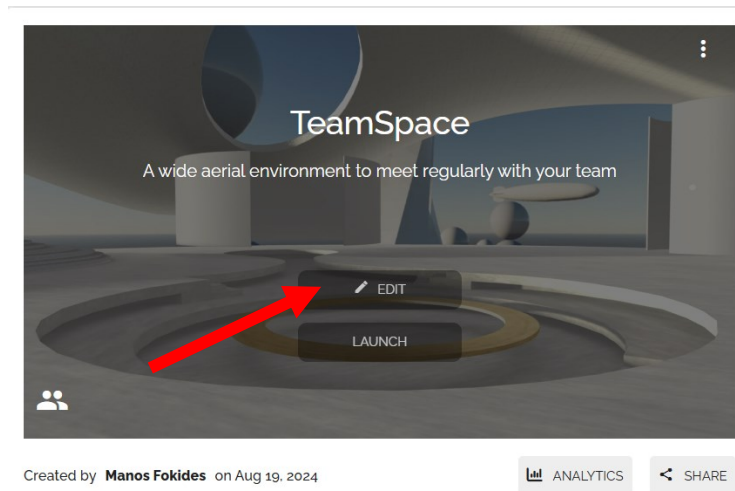
animated



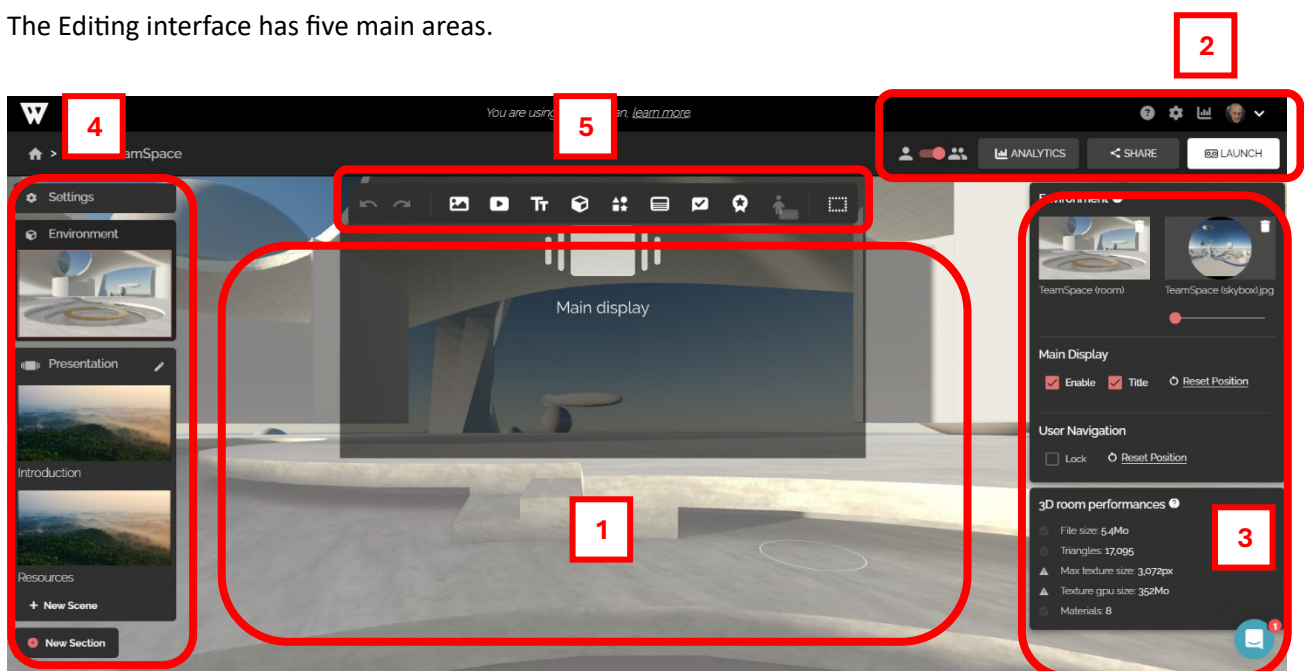
## The editing mode

## The editing mode interface

👉 Notes. Make sure you are in editing mode. In editing mode, the same navigation keys are utilized as in viewing mode.



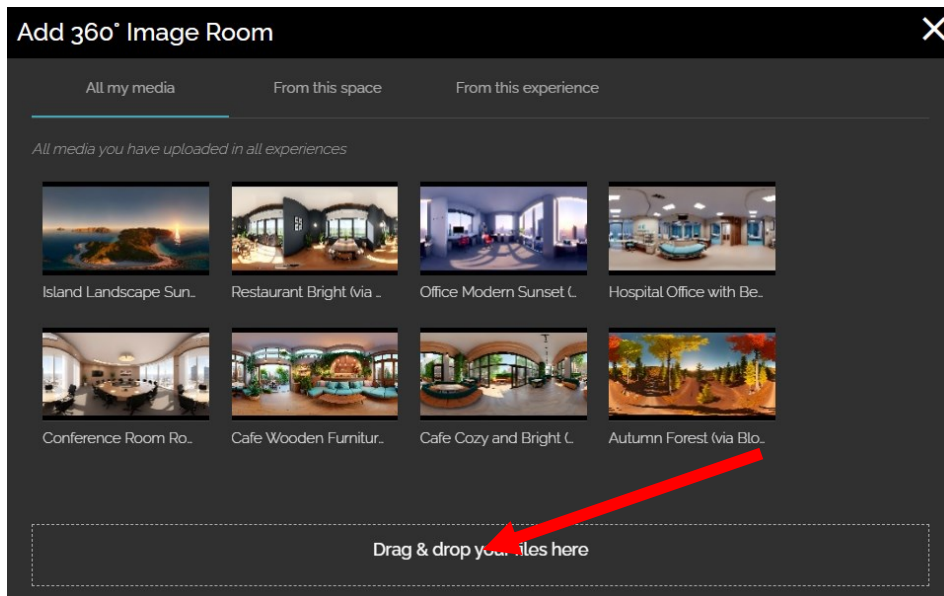
The Editing interface has five main areas.




1. This is the main area in which you can add content to your Experience.

2. The top section of this area includes the settings of your Hub, your Hud's analytics, and the management of your account. The bottom section includes the switch between single-player and multiplayer modes, your Experience's analytics (refer to the section "[The Analytics dashboard](#)" for further details), the sharing options for your Experience (refer to the section "[Duplicate, move, delete, and share an Experience](#)" for further details), and the launching of your Experience in viewing mode.

3. In this area, you can change your environment and Skybox (you can also rotate the Skybox). Besides the available Skyboxes, you can refer to the section "[Set up your custom Skybox](#)" for details about how to import your own.



In addition, you can enable or disable the Main Display and the appearance of the Experience's title. In the bottom half of this section, there are details regarding your Experience's performance. Refer to the section "[Media requirements](#)" for details.


 Note. Do not change the environment when you have already added content to your Experience, as this will likely cause significant complications and disorganization.

4. In this area, you can access the Experience's settings (refer to the section "[Changing the settings of an Experience](#)" for further details). You can also add new Scenes or Sections to your Main Display. Refer to the section "[Adding a new Scene](#)" for further details.

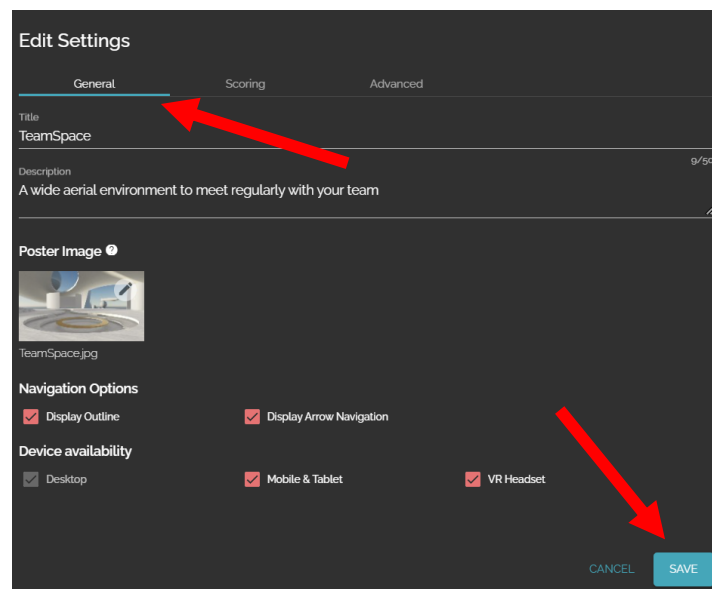
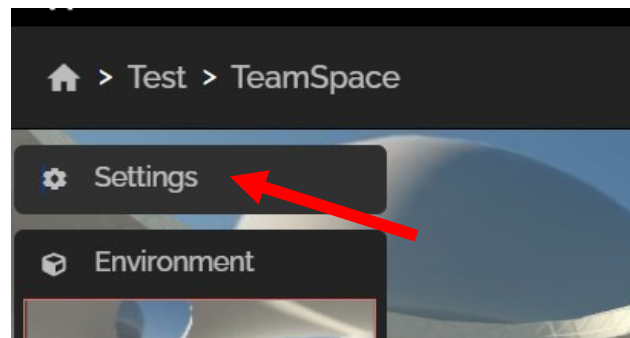
5. This is the main toolbox for adding assets to your Experience. Refer to the section "[Adding annotations to an Experience](#)" for further details.

## Changing the settings of an Experience

Clicking on the settings icon allows you to modify several aspects of your Experience.

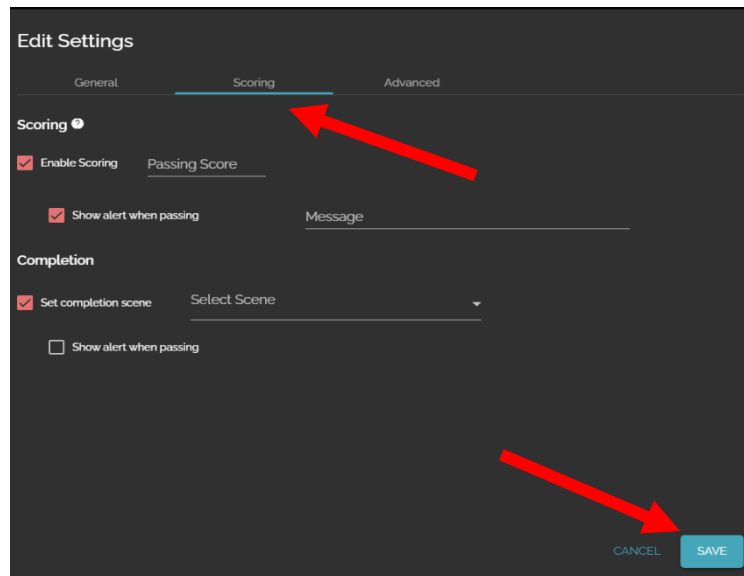
 Note. Do not forget to save the changes you make.

- General tab. Includes information about your Experience. This information will be visible to all individuals with access to the Space:



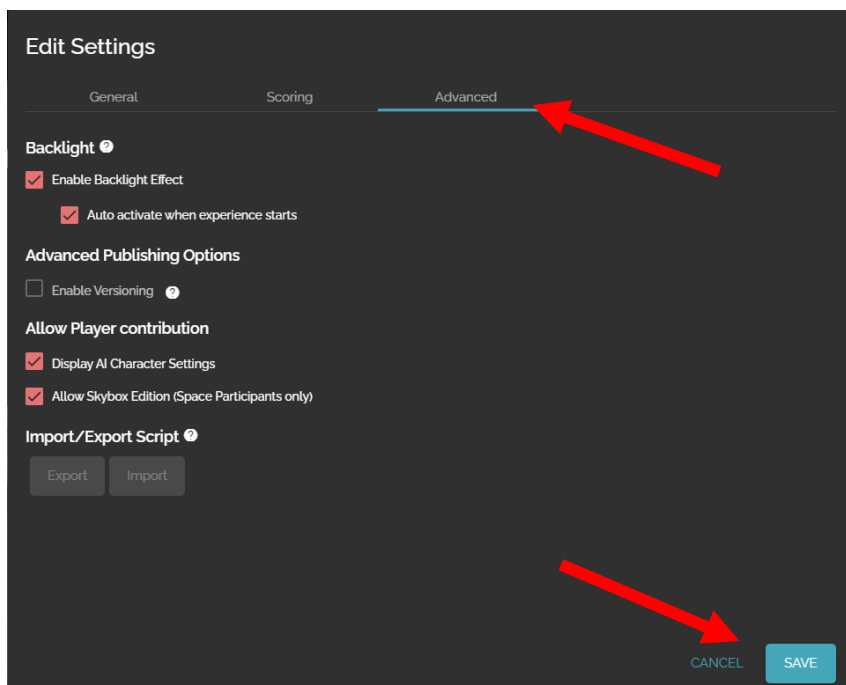
- Experience title. This is the name displayed in the Space you have previously created. For instance, if your Space is titled "Dinosaurs," a title for the Experience could be "Learn more about T-Rex."
- Description. This description will be shown in the Space and is publicly visible to all individuals invited to access this experience.
- Poster image. This visual is associated with the title and description of the experience.
- Display outline. This feature allows you to show or hide the outline of the Experience. When activated, the outline is visible to anyone accessing the experience online via a dedicated panel.
- Display arrow navigation. This option enables you to show or hide the navigation bar. The navigation bar displays the title of each experience resource and navigation arrows at the bottom of the screen or on the player control bar for 360° videos.
- Device availability. This option enables you to select for which devices your Space/Experience will be available. Refer to the section "[Restricting access to specific devices](#)" for further details about this feature.

- Scoring tab. This tab allows you to control the scoring system of your Experience. Refer to the section "[Edit Quiz and scoring options](#)" for further details about this feature.



- Enable scoring/Passing score. Enable or disable the scoring system and set the score for passing.
- Show alert when passing/Message. Displays an alert and a message when users get a passing score.
- Set competition Scene. Allows you to select which Scene will be displayed when a user gets a passing score.

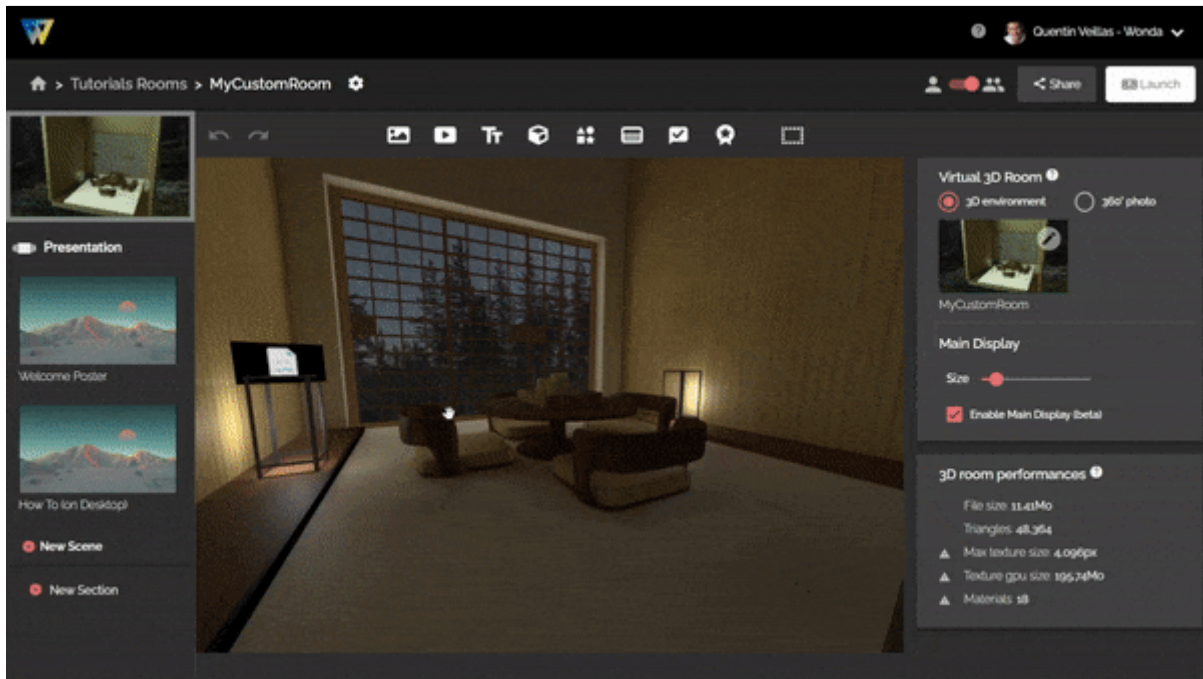
- Advanced tab. This tab allows you to enable or disable some advanced features of your Experience.



- Enable Backlight Effect. Refer to the section "[Emphasize content with the Backlight Effect](#)" for details about this feature.
- Advanced publishing option. This feature is not available in the free version of Wonda. Please refer to the section "[Advanced publishing and versioning](#)" for details about this feature.
- Allow player contribution. The two available settings can be enabled only in single-player mode.
- Import/Export script. Not available in the free version of Wonda.

## Restricting access to specific devices

In instances where an experience is not optimized for mobile or VR platforms, it may be wise to restrict access from these devices. To achieve this, navigate to the experience settings and uncheck the boxes corresponding to the devices you wish to disable.



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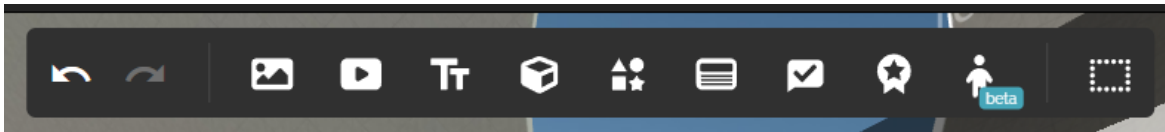


Adding content

## Adding annotations to an Experience

The assets you can add to a scene are called "annotations." In the center of the screen there is the toolbox with which you can insert new annotations/assets:

- An Image in .png or .jpg format.
- A Video in .mp4 format, recommended resolution of up to 1080p.
- Text.
- Add a 3D object.
- Add a Hotspot icon from the collection.
- Add a Card, a predefined layout composed of a title and text content.
- Add a Quiz to pose questions to your users.
- Add a Scorecard so users can track their scores in real-time.
- Add an AI character.
- Also, on the left side, there are the undo and redo buttons.



By clicking one of the above buttons, the corresponding asset is inserted in your Experience.


👉 Note. Allow for some time for certain assets to be uploaded (e.g., videos and 3D models).

### Editing annotation properties

Each selected asset displays a contextual properties panel on the right side of the screen:


- Source. Available for Images, Videos, and Hotspots. Click on the thumbnail to change the media source, allowing you to update or replace it while retaining other properties.
- Autoplay. For Videos, enable this option to automatically play the file without user intervention.
- Style. Define the visual and audio properties of an element. Adjust opacity, font, size, text alignment, and color for Text and Hotspots.
- Action. This function triggers an action based on user behavior (refer to the section "[All about actions](#)" for further details about this feature):
  - None. No action occurs.
  - Link. Opens a new website, Scene, or Experience.
  - Show/Hide. Displays or hides an element in the Experience.
  - Sound. Plays or pauses an audio file.


👉 Note. The properties displayed on the properties panel depend on the asset's type.

3D model 

Label  
skull2\_ok


9/50




skull2\_ok 



Hide

Actions

 New Action  Set Score

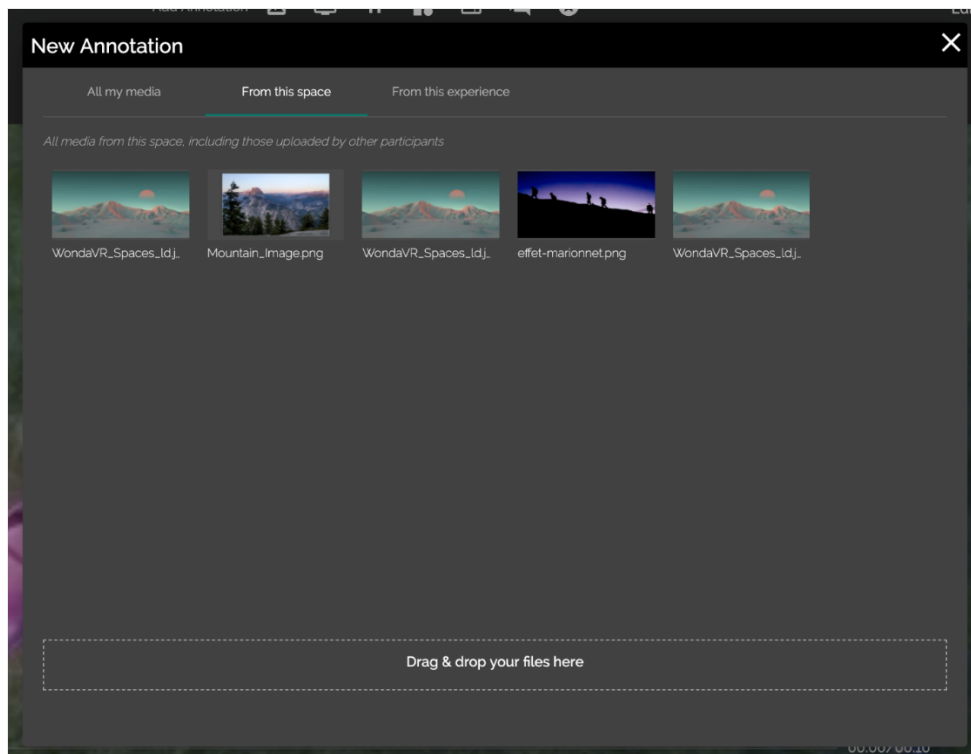
3D object performances 

- File size: 2.1Mo
- Triangles: 22,939
- Max texture size: 1,024px
- Texture gpu size: 16.78Mo
- Materials: 1



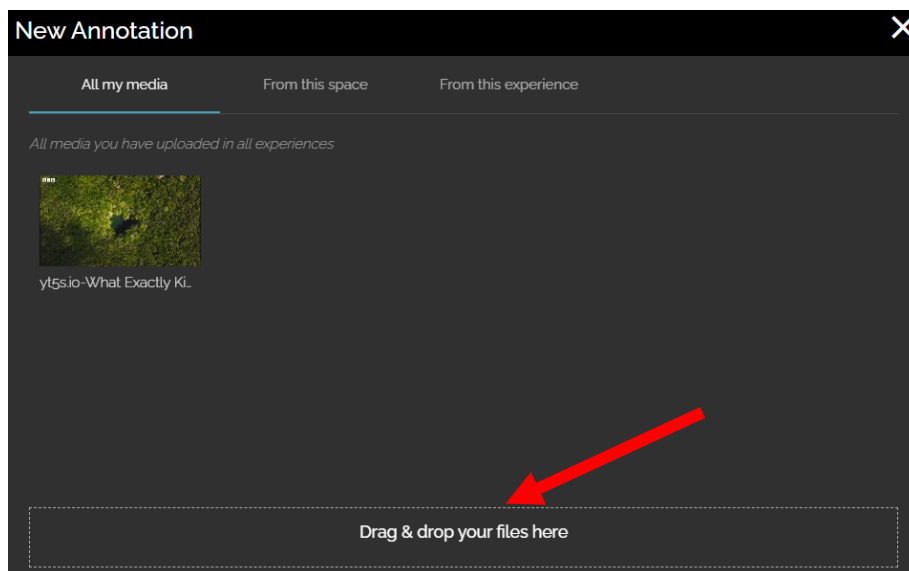
## The Media Library

When adding new media, for example, during the creation of a new Scene or when an annotation is inserted in the Experience, the Media Library window will be invoked. The type of media displayed will be contingent on the annotations intended for import (2D/3D images and videos, etc.).



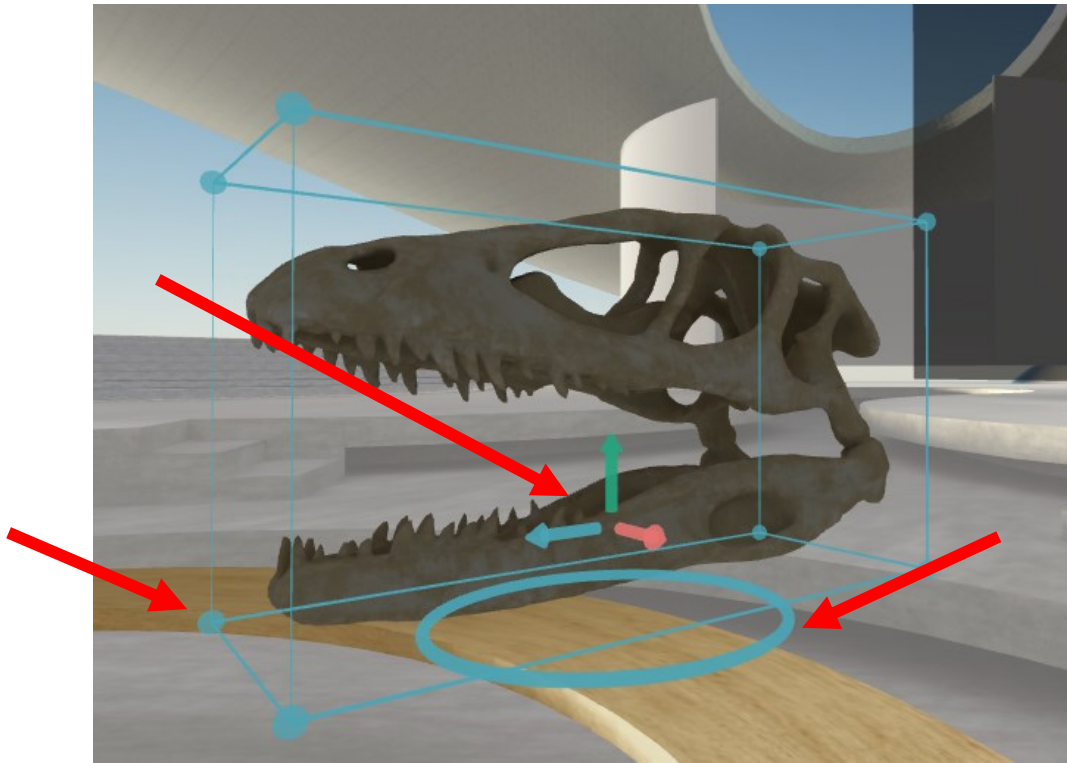
Media can be imported and used from various sources within an Experience:

- All My Media. Contains all media files imported into your Hub.
- From this Space. Includes media imported by you and collaborators within the current Space.
- From this Experience. Encompasses media previously imported into the current Experience.
- From your computer. You can import your own files, by dragging and dropping them or by selecting them from your computer.



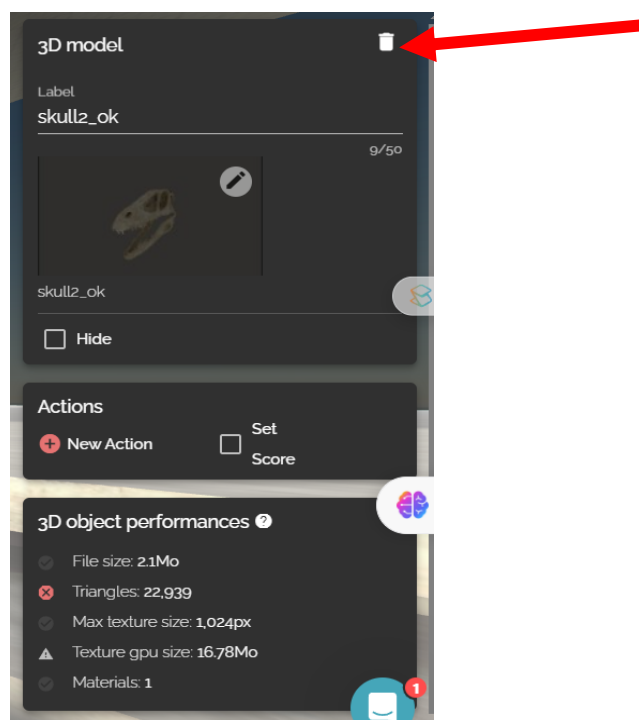
## Move, rotate, resize, and delete annotations

To change the position, rotation, or size of any asset in your Experience, begin by clicking on the asset. To resize it, drag the edges and to rotate it, drag the circle. To move the asset, utilize the three arrows representing the x, y, and z positional axes.



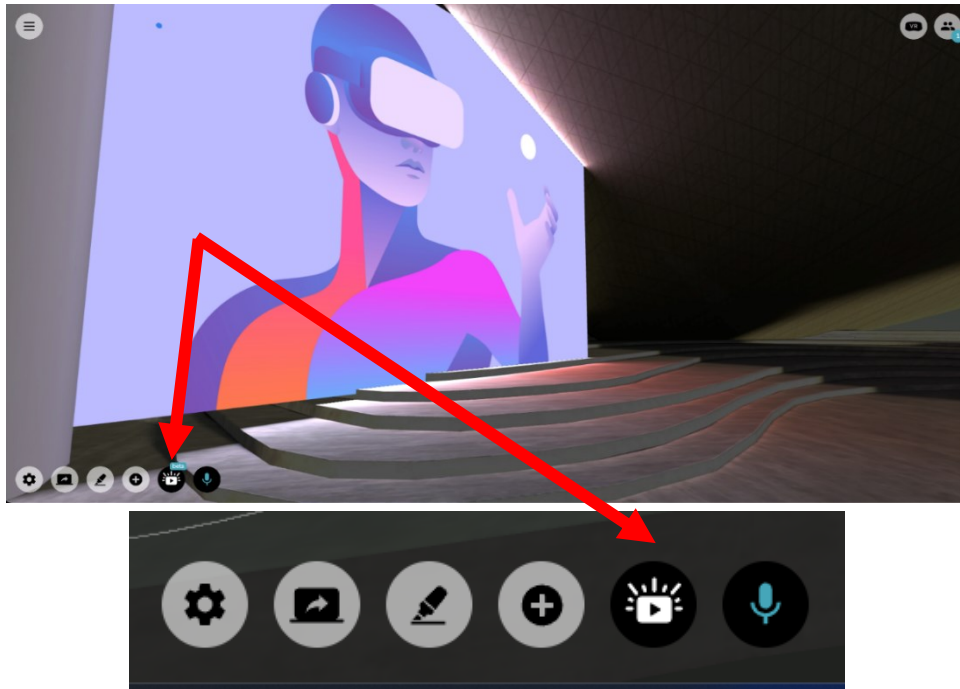
👉 Note. By default, only the horizontal rotation is displayed. Click on the circle to reveal the rotation on the x, y, and z axes.

👉 Note. To delete an asset, click on it to select it and press the "Delete" key. You can also delete it by clicking on the bin icon in the properties panel.



## Emphasize content with the Backlight Effect

The Backlight Effect serves as an interactive tool designed to enhance focus during group presentations, thus, enriching both the visual appeal and overall experience of the audience.



Functionally, the Backlight Effect enables the dimming of ambient light, thus, drawing attention to specific media, including the following elements:

- The primary display (default setting).
- Any image rendered within the 3D environment.
- Any video rendered within the 3D environment.

### Using the Backlight Effect in viewing mode

1. Activate the Backlight Effect by selecting the "Backlight" button.
  - For Desktop. Located at the bottom left corner of the screen
  - For VR. Located at the bottom left of the navigation panel (right trigger of your controller)
2. To apply the Backlight Effect to an alternative piece of media, simply click on the desired media within the 3D environment.

### Activating Backlight by default

You can initiate your experience with the Backlight Effect automatically activated. To achieve this.

- Switch to editing mode and select Edit Settings → Advanced → Backlight.
- Check the "Auto activate when the experience starts" option.



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Notes. The Backlight Effect can be activated under the following conditions:

- By any individual in single-player mode, and solely by presenters in multiplayer mode, across desktop, mobile, and VR platforms.
- Only when the 3D Environment is active (the effect does not function with 360° media).
- For any pre-displayed media in the Experience. If new media is added while the Backlight Effect is active, you must deactivate and then reactivate the effect.

To disable the Backlight Effect, uncheck "Enable Backlight Effect" in editing mode, under Edit settings → Advanced → Backlight.

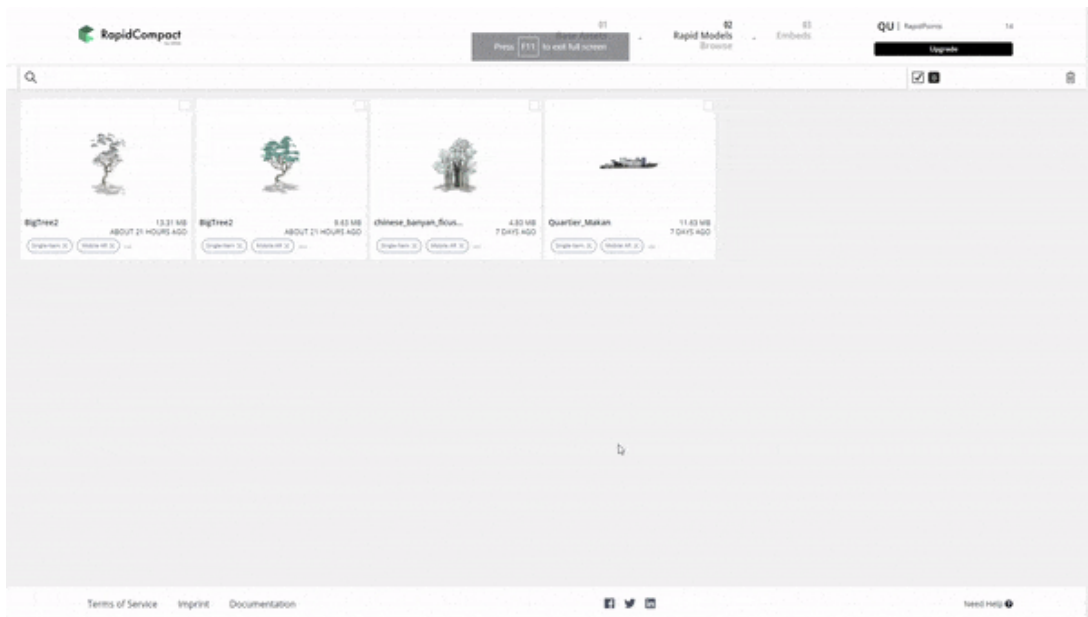
## How to optimize your 3D assets (using RapidCompact)

To ensure optimal performance across various devices when utilizing Wonda's web-based platform, it is important to ensure that your 3D models are not excessively large. Overly heavy 3D models can significantly degrade user experience, particularly on mobile and VR platforms.

### Using RapidCompact

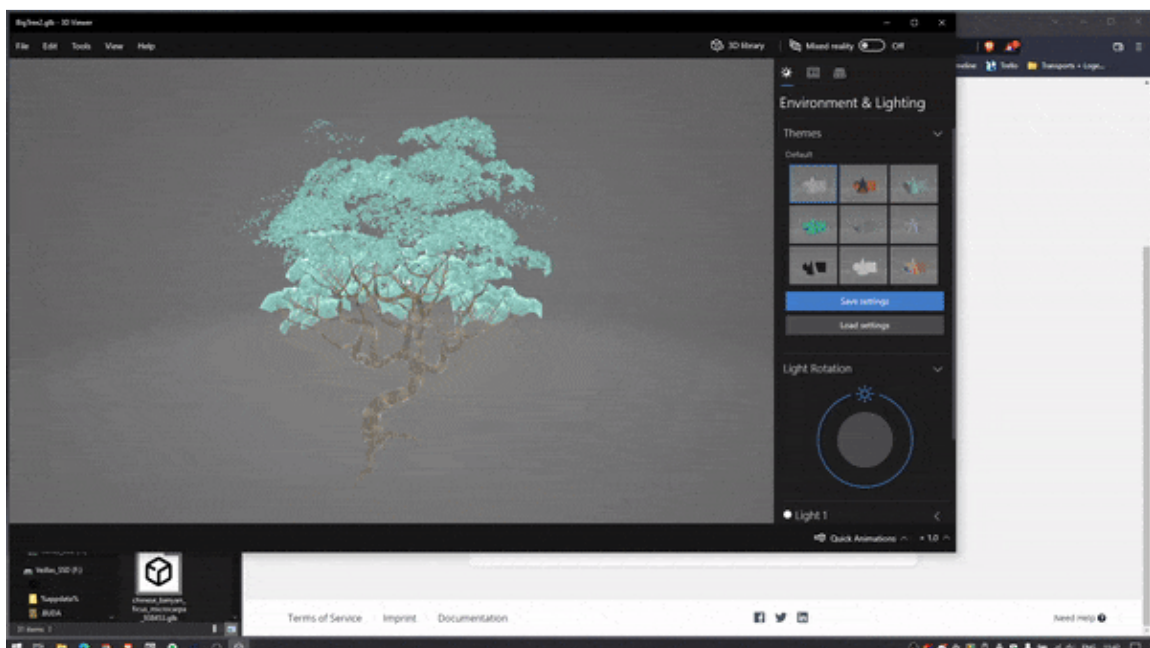
For users lacking advanced 3D expertise or requiring swift prototyping, RapidCompact (<https://rapidcompact.com/>) serves as an efficient tool for the simplification of polygons and materials within your resources.

1. Upon creating an account, you will gain access to the upload section, found under the "Base asset" category.



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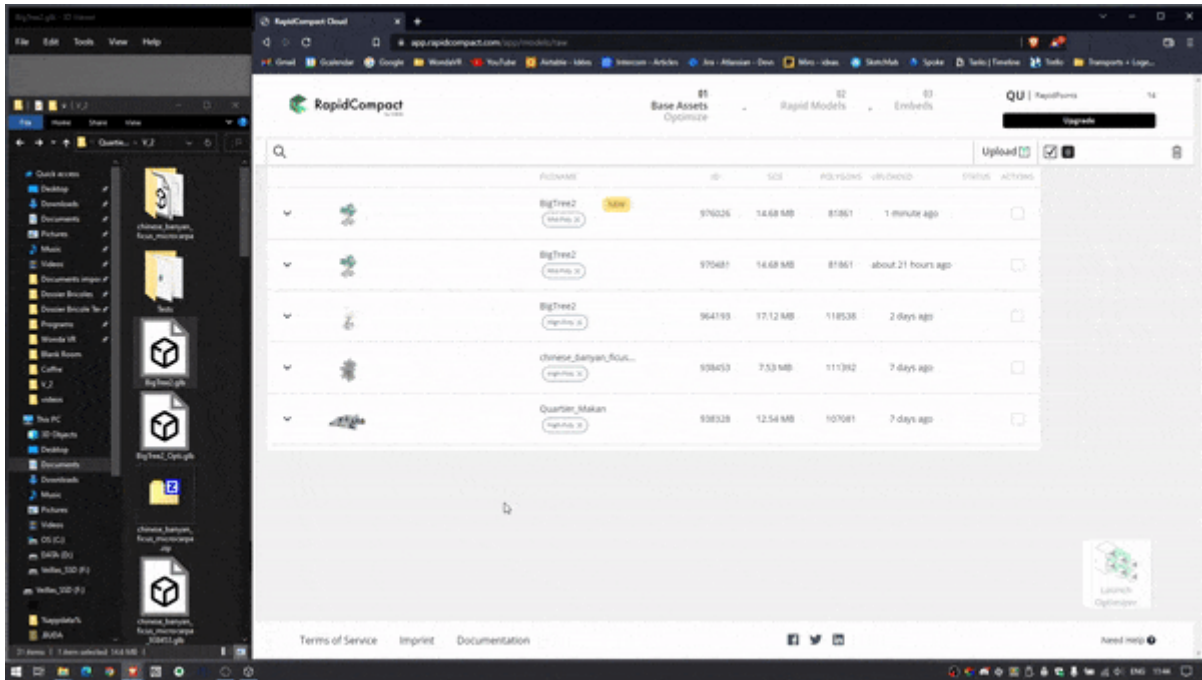
2. Proceed by uploading your 3D model via drag and drop in the designated upload area.



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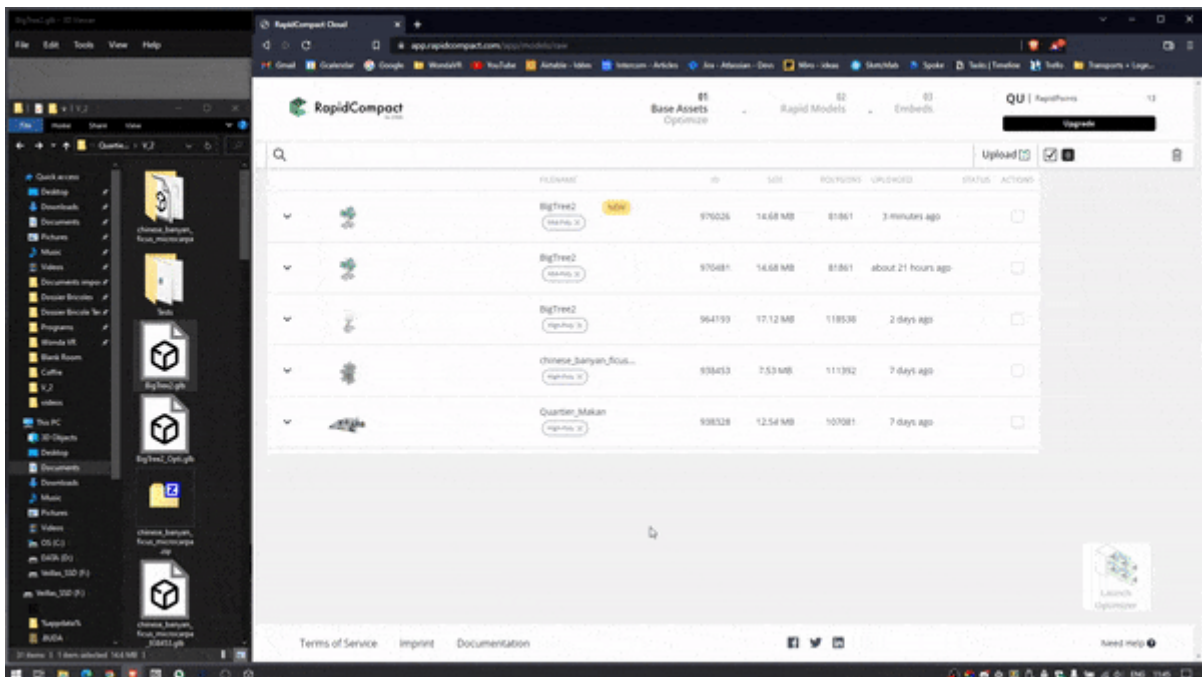
3. Utilize the Single-Item Mobile → High option to optimize the asset.



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👉 Note. The processing time may vary depending on the size and complexity of the 3D model. It is advisable to return after a few minutes while the assets are being processed.

4. Finally, download the optimized asset in the glb format.



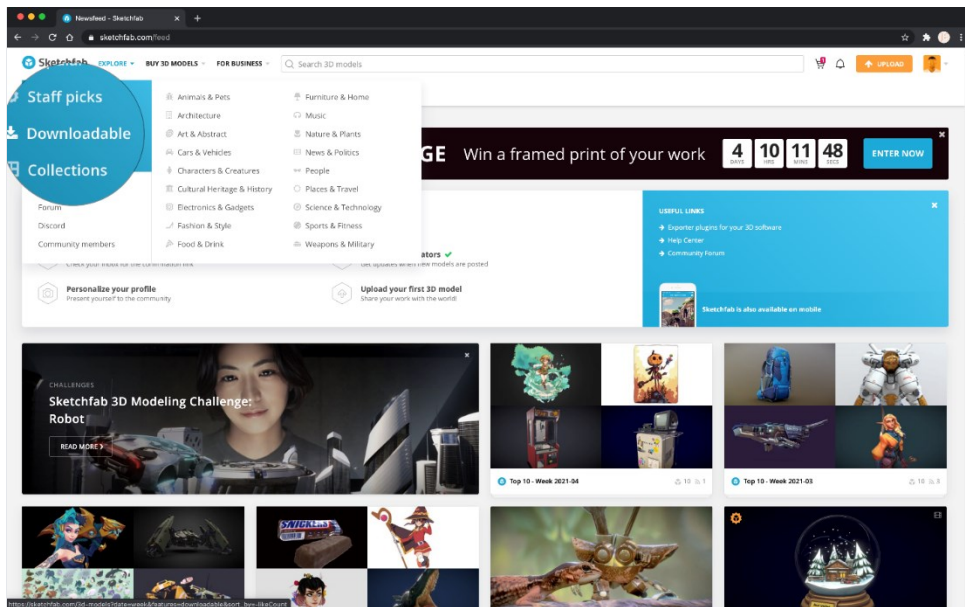
animated

With these steps completed, you are now equipped to integrate your optimized content into Wonda.

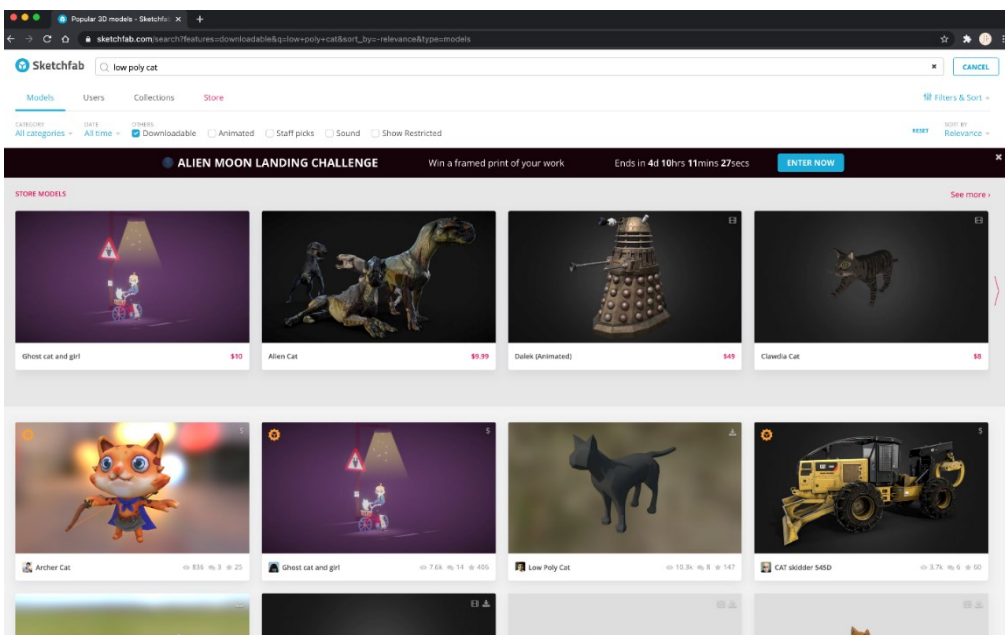
## Import 3D objects from Sketchfab

Sketchfab.com (<https://sketchfab.com/>) offers an extensive assortment of both complimentary and premium 3D assets available for download. Follow the steps below to import assets from Sketchfab into your Wonda experiences with ease.

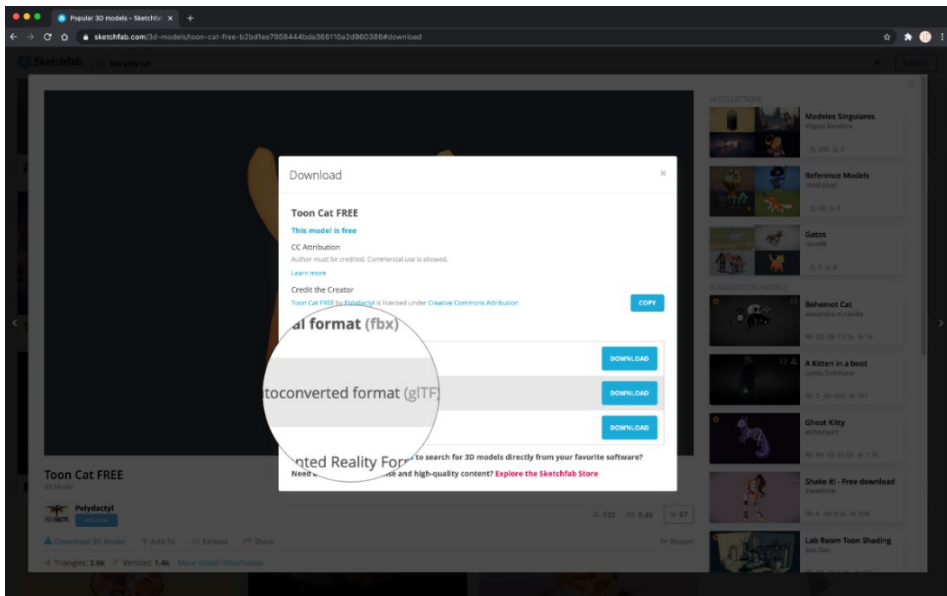
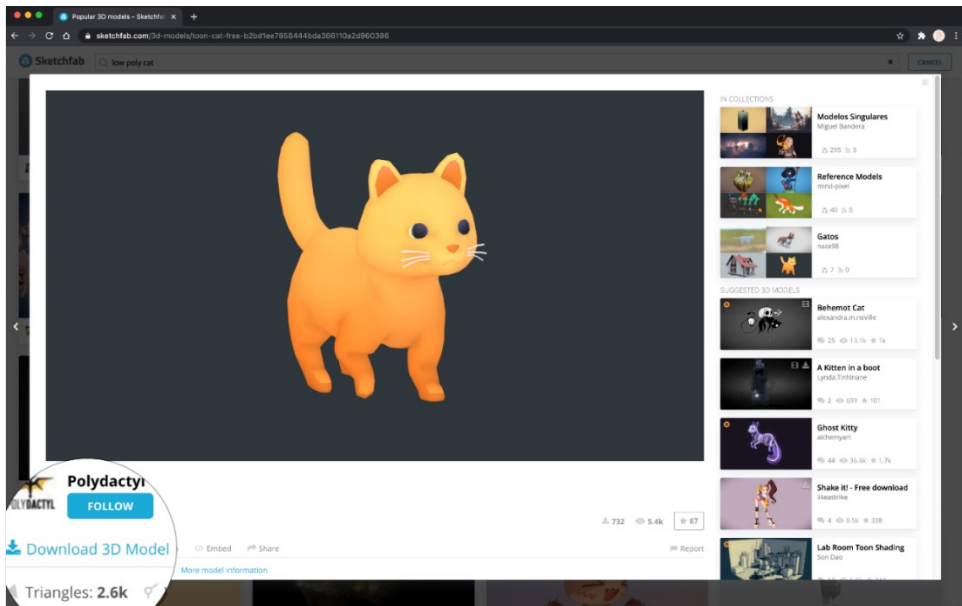
1. Navigate to Sketchfab.com and specify "Downloadable" as your primary search criterion.



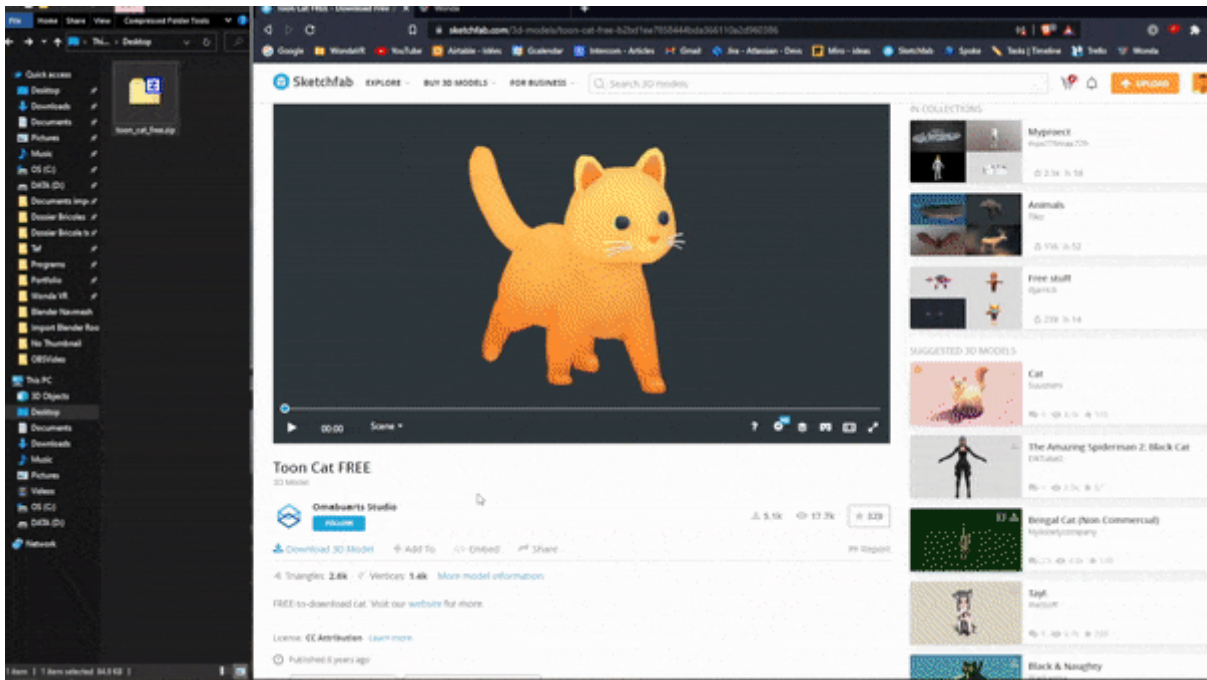
2. Search for your desired asset. The absence of a dollar sign (\$) indicates the asset is free, often requiring proper attribution to the creator.



3. Proceed to download the asset, opting for the glTF format, which is universally available for all Sketchfab assets alongside .fbx and .obj formats.

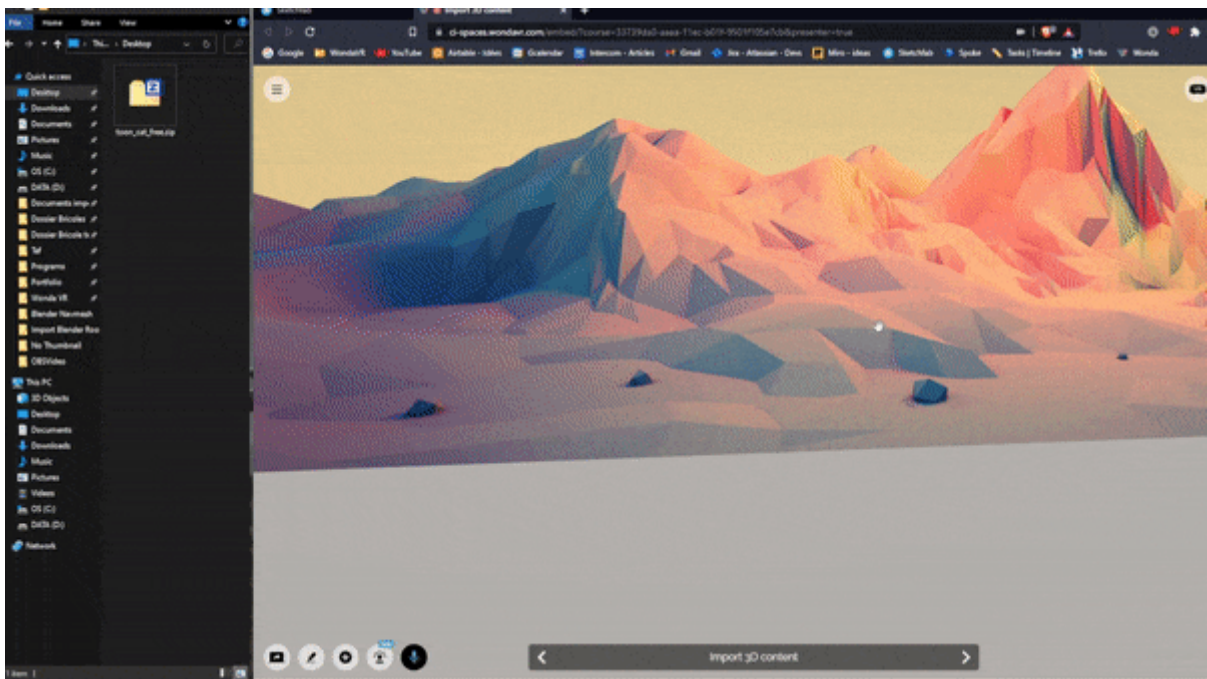


4. In editing mode, access the Media Library. Simply drag and drop the downloaded file into the library, and then select it to incorporate it into your Experience.



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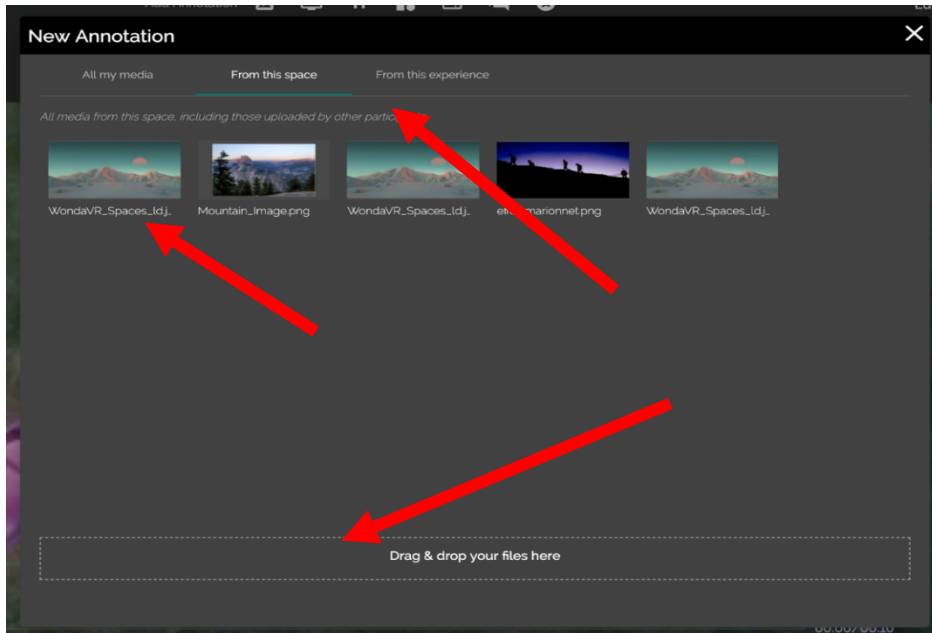
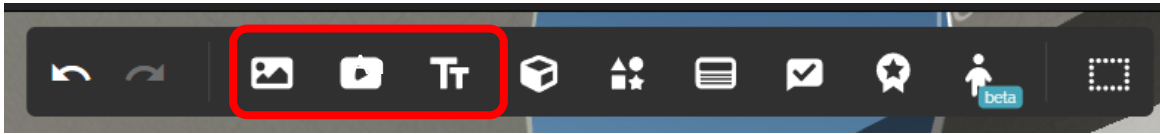
👉 Note. In a multiplayer session, you have the capability to directly drag and drop the 3D model into the Experience, ensuring seamless integration.



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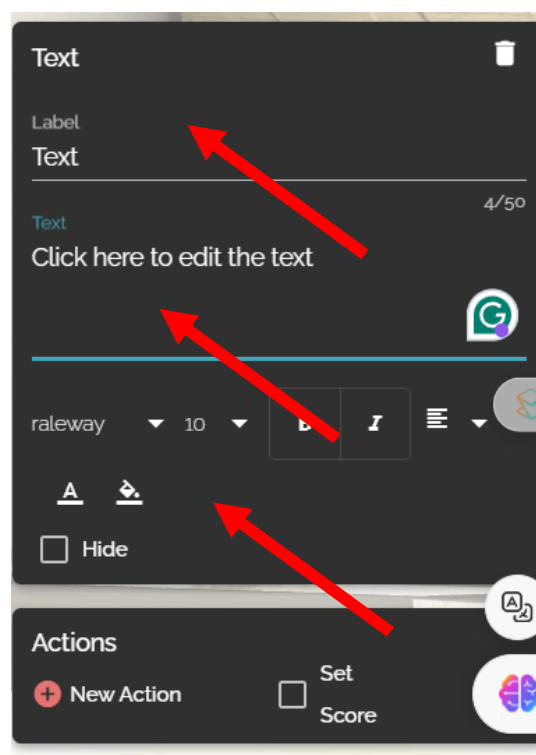
## Add Images, Videos, and Text

Adding Images, Videos, and Text is a pretty straightforward process. After selecting the corresponding annotation from the toolbar, you can select an existing image or video from the Media Library or upload one.



👉 Note. 360° images and 360° videos can be added only as Scenes in order to be displayed correctly.

When adding a text annotation, you can write the text, as well as its title on the properties panel. You can also select the font, the font size/type, paragraph style, and color.



👉 Note. Not all fonts display the Greek characters correctly; some cannot display the text at all, while others display unreadable characters. Therefore, you have to choose the appropriate fonts to display text written in Greek.

## The Main Display

The Main Display functions as both a virtual monitor and a theater screen, facilitating the playback of interactive slideshows within diverse environments, and accommodating both single-player and multiplayer modes.

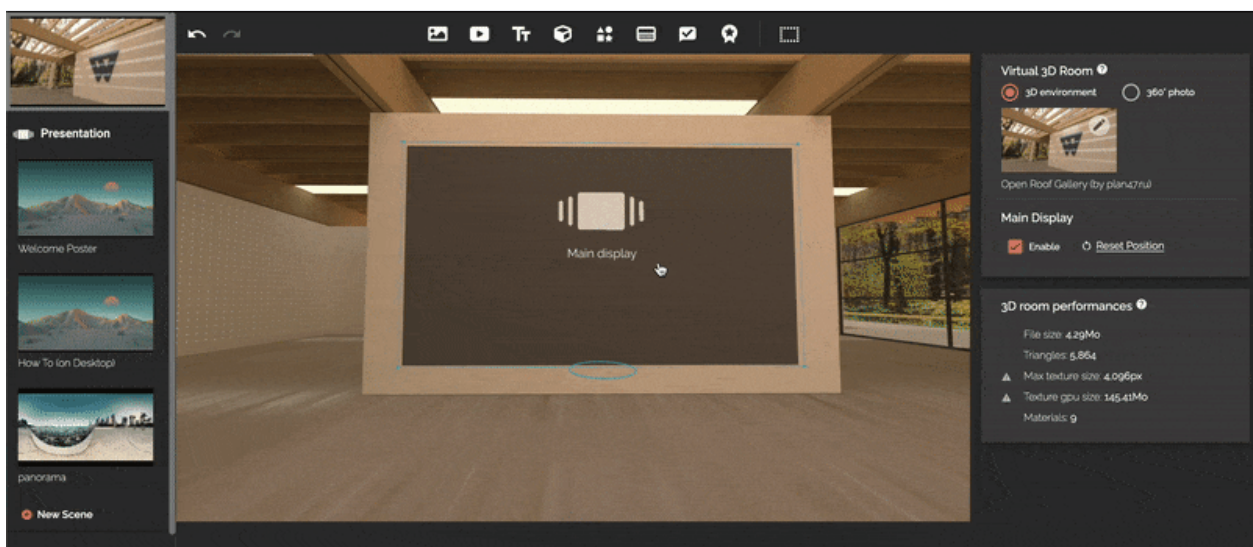


### How it works

In editing mode, users are empowered to craft and structure multimedia and interactive Scenes (similar to PowerPoint slides). These Scenes may consist of various annotations such as Images (including 360° ones), Videos (including 360° videos), Text blocks, Quizzes, and Hotspots, all of which are displayed on the Main Display. For instance, the Main Display can be employed to greet visitors with an introductory poster and preliminary remarks before they proceed to explore the 3D environment. Additionally, the Main Display is capable of launching 360° content and enabling the creation of branching scenarios by incorporating hotspots and links within any scene.

### Adjustment of size and position of the Main Display

The position and dimensions of the Main Display can be modified in editing mode. Select the Main Display to modify its size, rotation, and position within the 3D environment of the Experience.



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By default, the Main Display is situated three meters in front of the initial spawn point of the visitors upon entering the environment, maintaining a fixed aspect ratio of 16.9. Users retain the flexibility to reset the position, size, and rotation of the Main Display at any time by utilizing the dedicated "Reset" button.

**Additional features related to the Main Display**

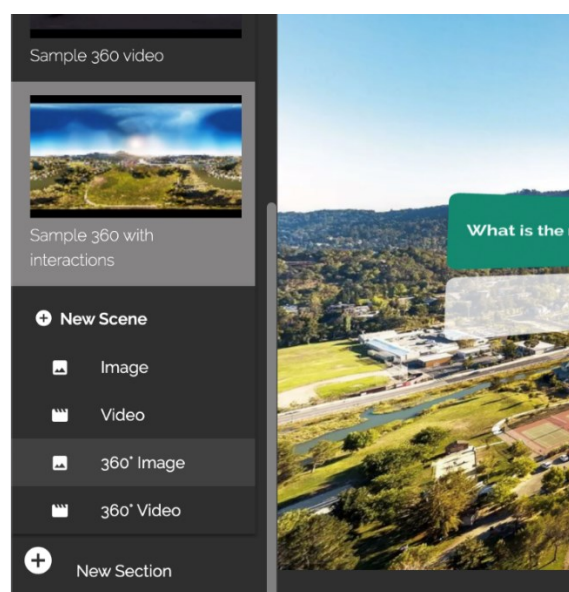
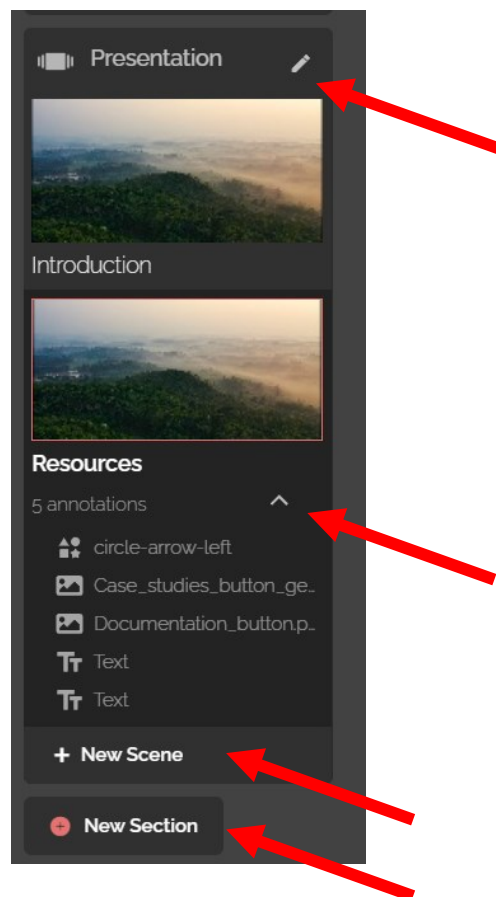
- When utilizing the "Share screen" option in multiplayer mode, the user's computer screen will be broadcasted on the Main Display by default. For further details, see the section "[Share your screen in multiplayer viewing mode](#)".
- Activating the Backlight Effect will ensure that the media displayed on the Main Display is backlit by default. Additional information can be found in the section "[Emphasize content with the Backlight Effect](#)."



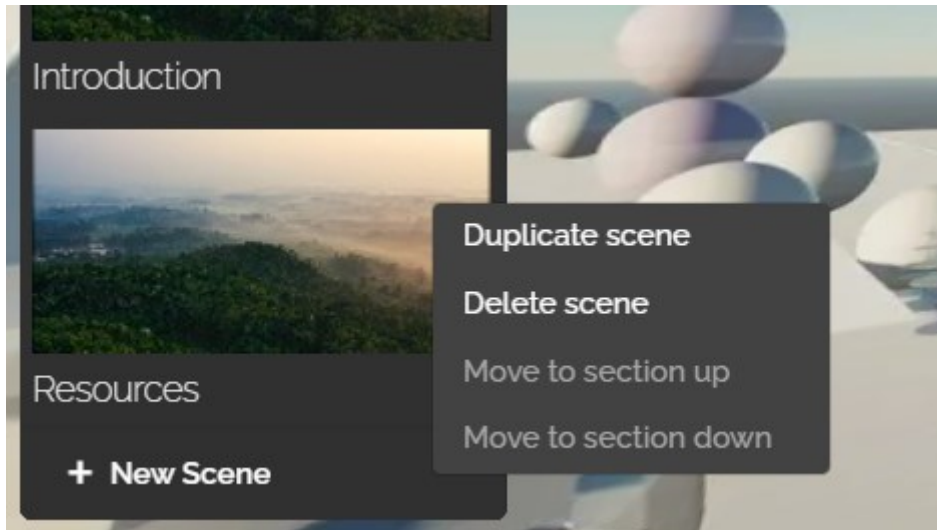
## Adding a new Scene

As noted in the previous section, the Main Display can be used for displaying presentations. On the left side of the screen, you will find the outline of your presentation. A presentation may comprise one or multiple Sections, like the chapters in a book, each described by a title detailing the numerous Scenes underneath. A Scene serves as the background where specific annotations are added:

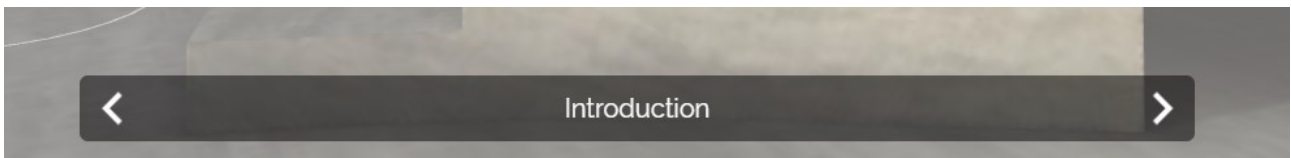
- An image. Any still image in .jpg or .png format (applicable to 3D templates only).
- A video. Any video in .mp4 format (applicable to 3D templates only).
- A 360° image. Any spherical image in .jpg equirectangular format.
- A 360° video. Any spherical video in .mp4 equirectangular format.



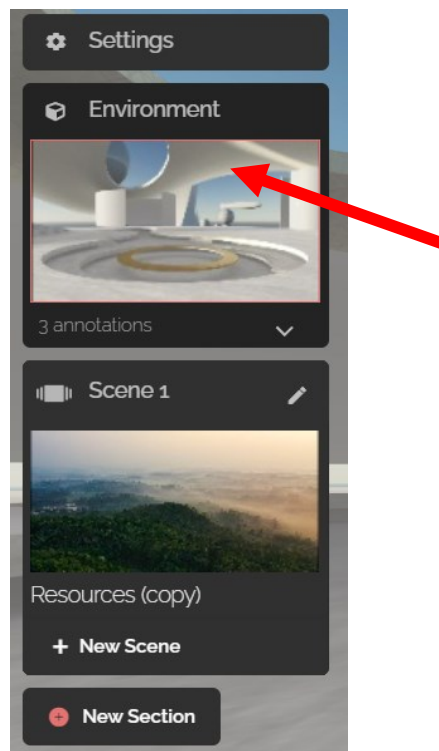
You can delete, duplicate, or move a Scene to another Section by right-clicking on it.



**Note.** In order to navigate through Scenes, you either have to add Hotspots (refer to the section "[Place Hotspots](#)" for further details) and assign actions to them (i.e., to load the next Scene), or use the navigation buttons at the bottom of your screen.

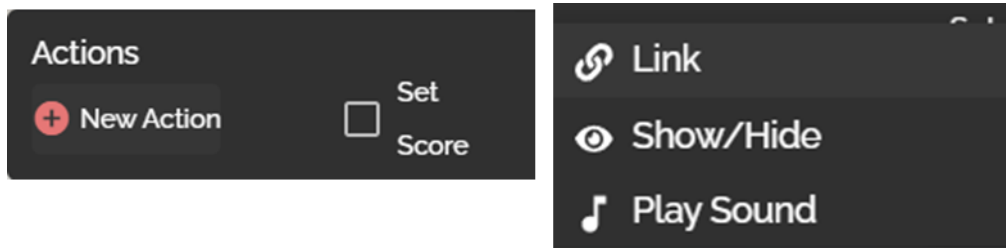


When you finish editing your Scenes, you can switch back to editing your Experience by clicking on the "Environment's" icon.



## All about actions

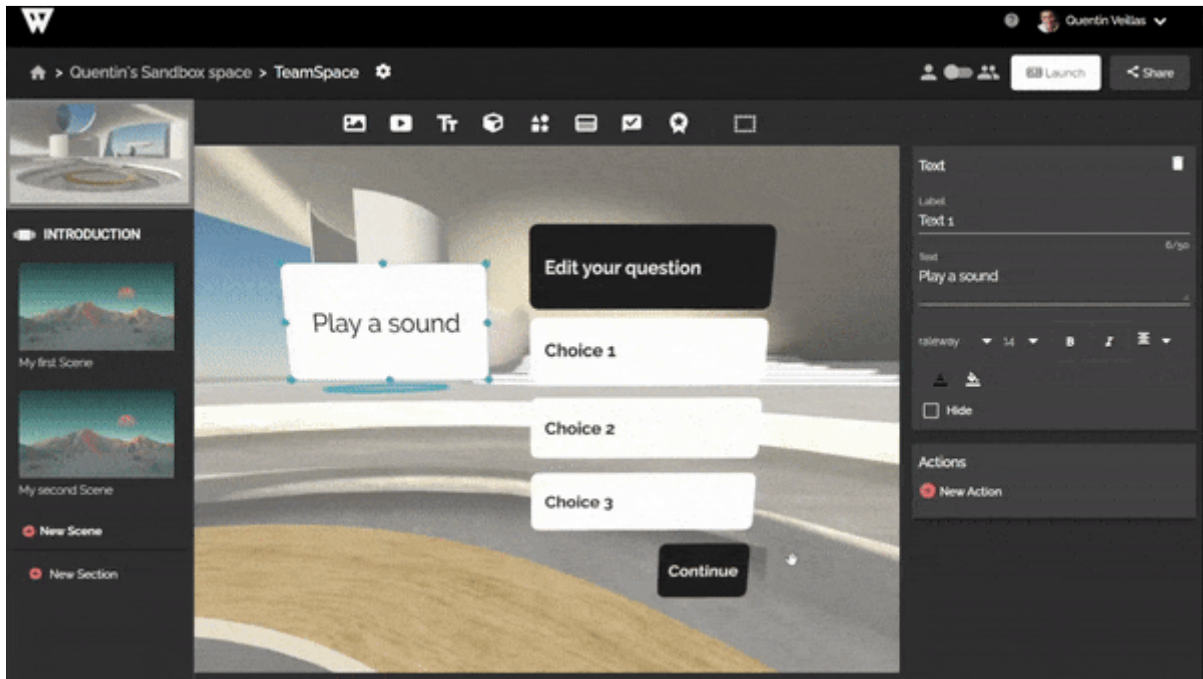
All annotations can become interactive by assigning actions to them. The actions menu is available at the properties pane of each annotation. There are three types of actions; Link, Show/Hide, and Play sound.



- In the section "[Add an action sound](#)" there is an example about adding an action sound.
- The section "[Add links to a Scene, an Experience, or a Website](#)" deals with how to add links.
- Lastly, the section "[Hide & show an element in the Scene](#)" presents how to add Show/Hide actions.

## Add an action sound

Action sounds are triggered when an annotation, with the "Trigger Action" panel set up, is activated. Engaging with annotations such as Image, Video, 3D Object, Hotspot, Card, or editing a Quiz will invoke the "Action" panel, thereby enabling action sounds.



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## Add links to a Scene, an Experience, or a Website

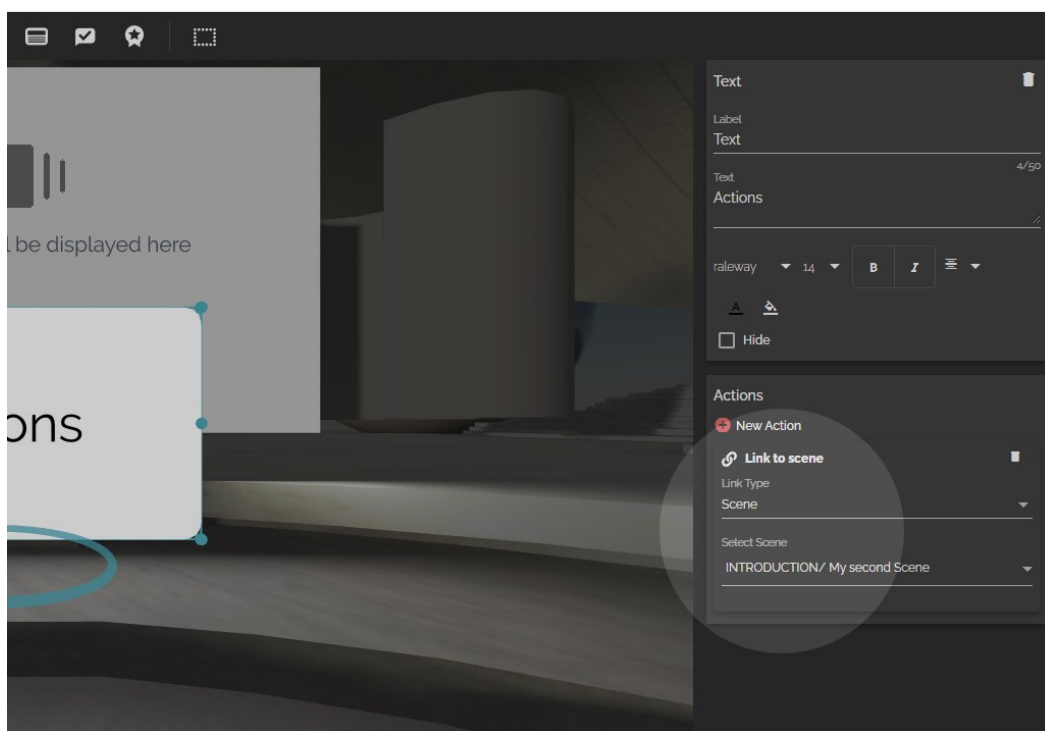
Wonda offers three distinct types of links:


- Link to a Scene.
- Link to an Experience.
- Link to a Website.

These links facilitate user navigation between various locations within the platform, applicable in both single-player and multiplayer modes. These links can be configured on all fundamental annotations (such as Images, Text, and Hotspots) within the "Actions" panel. Depending on your specific use case, whether it is a branching scenario, a non-linear narrative, a lobby for accessing different break-out sessions, or a link to a Zoom video call, you may choose an appropriate link type.

### Link to a new Scene

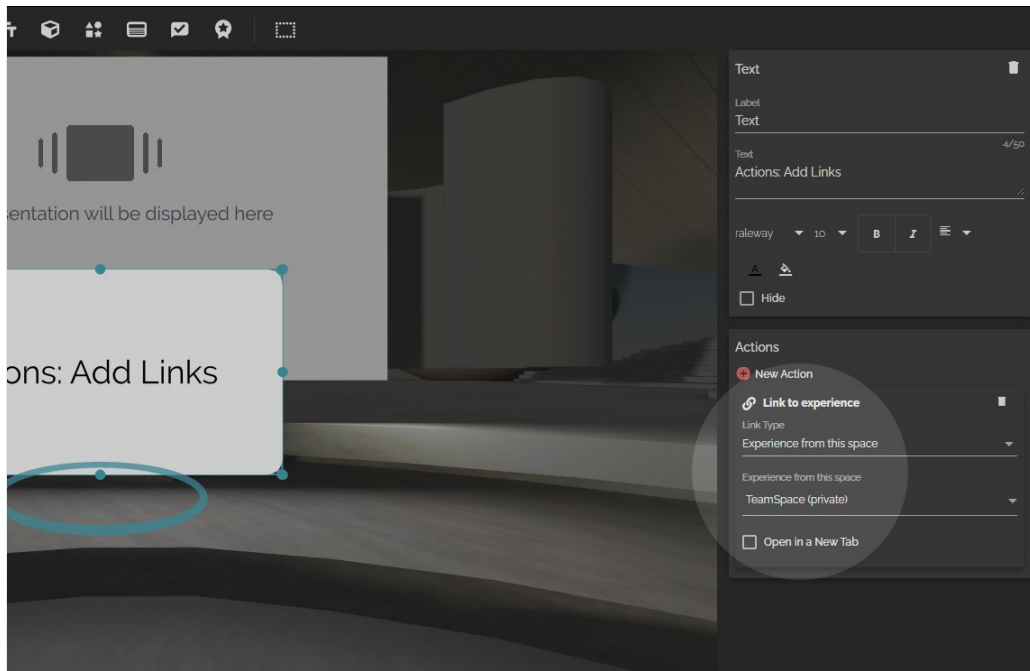
In a single-player Session, any user can open a new scene by clicking on the link. In a multiplayer session, only Presenters have the capability to trigger a link to a new scene.



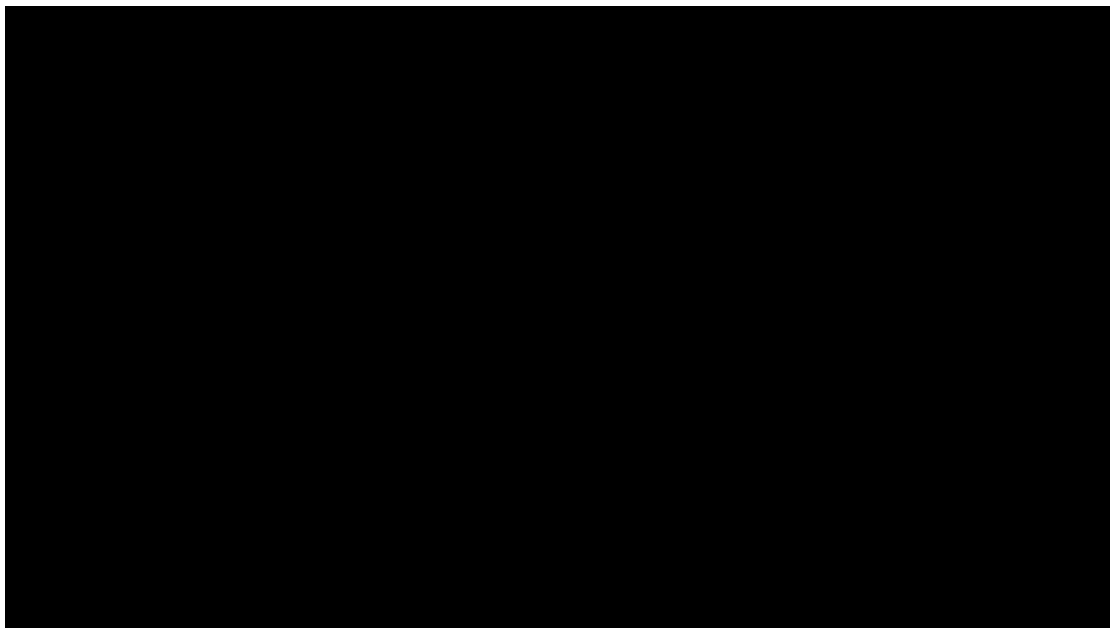
 Note. It is advisable to enable the "Seek to current timecode" option to transition from one video scene to another while preserving the user's current position. This feature is particularly beneficial for multi-camera experiences.

### Link to an Experience

Links can be established between different Experiences, such as creating a lobby that connects to various break-out sessions.



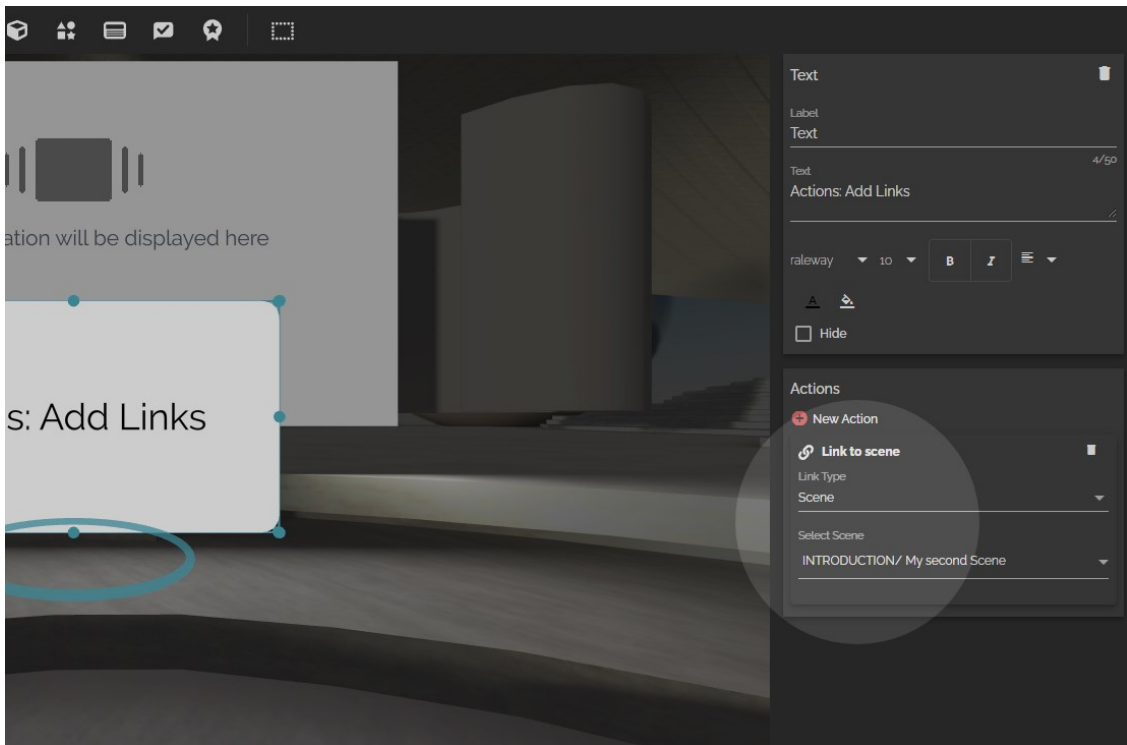
In a single-player Session, any user can initiate a new experience by clicking on the link. In a multiplayer session, both Presenters and Learners can activate a link to a new experience. When a Presenter initiates a link, other participants are notified of the Presenter's departure, with an invitation to follow suit.




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### **Link to an external website**

In a single-player Session, all users have the ability to open web links. In a multiplayer session, both Presenters and Learners can activate a link to a new website.

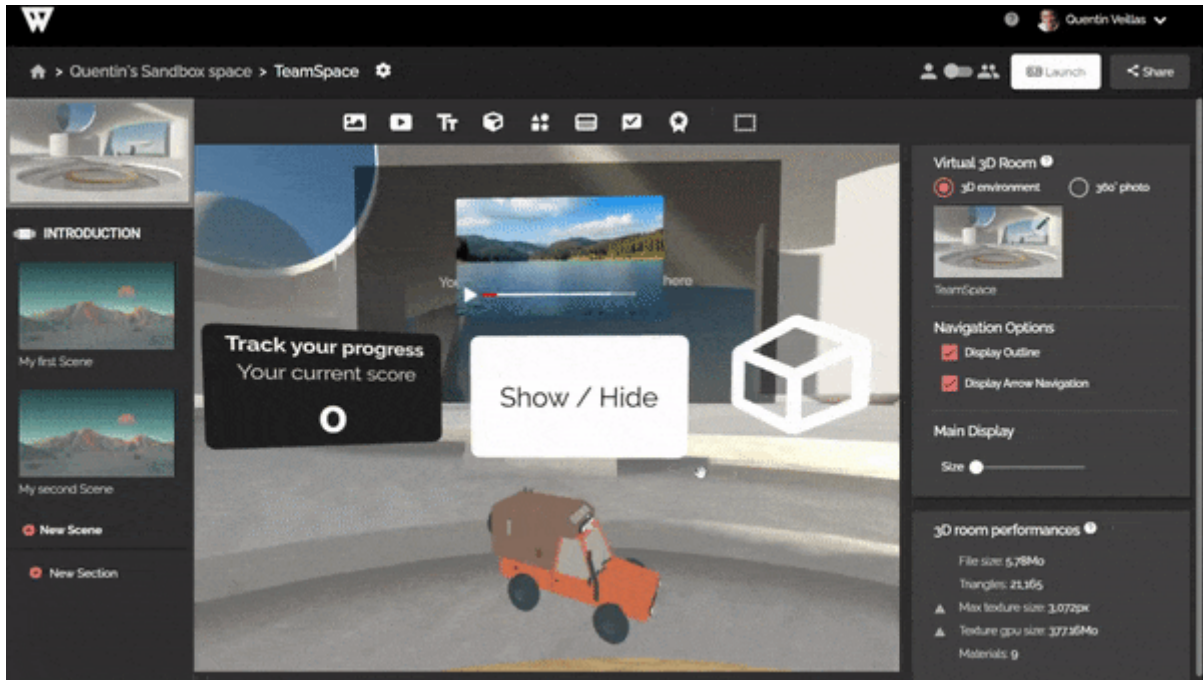


 **Tip.** By default, the "Open in a new tab" option is selected when adding a web link. However, if linking to a video conference platform (such as Zoom, Google Meet, or Microsoft Teams), it is recommended to deselect this option (i.e., "Open in the same tab") to prevent audio conflicts between Wonda and the video conferencing tool.

## Hide & show an element in a Scene

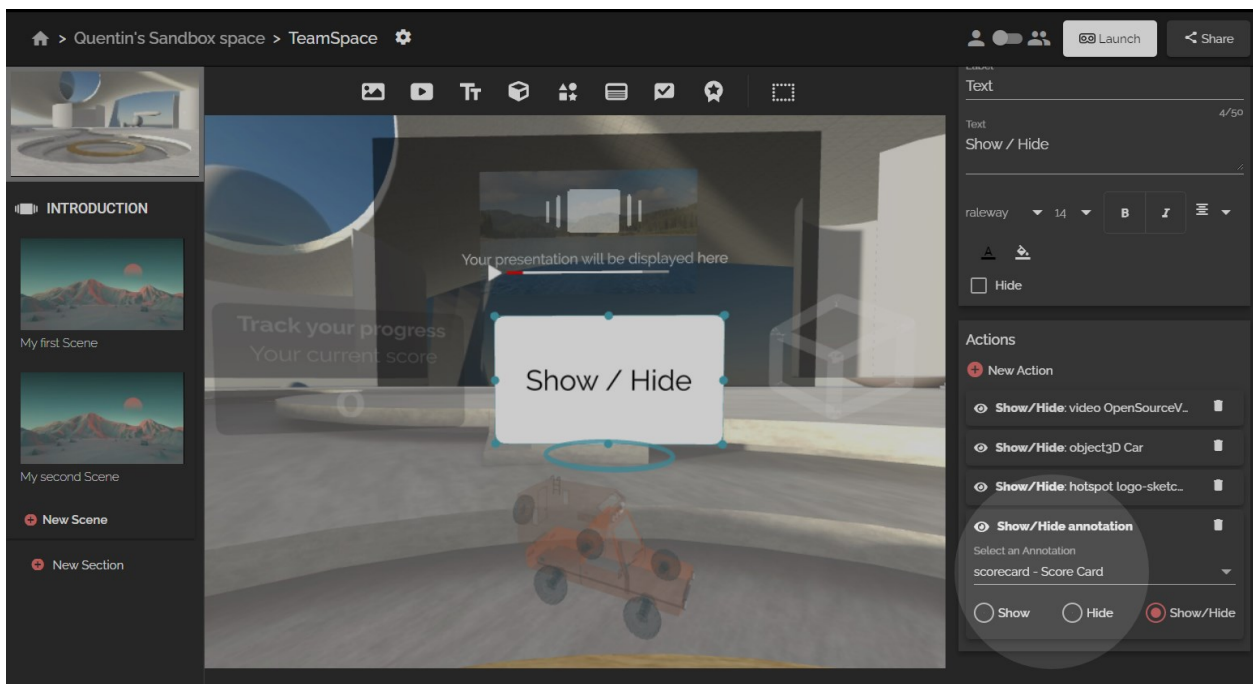
In a 2D, 3D, or 360° environment, each annotation can be managed in several ways. Firstly, it is possible to hide or show an element within the editor interface, providing flexibility in navigating the environment. Additionally, through the "Trigger Action" panel, these elements can be made to appear or disappear during the experience, enriching user interaction.

1. Any media element, whether 2D or 3D, can be concealed in the editor by selecting the "Hide" option.



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2. Furthermore, annotations can be controlled using other annotations via the "Actions" panel. This can be accomplished by incorporating a new Hotspot and employing the "Show/Hide" feature.





For instance, consider a rock, paper, scissors mini-game, where such functionality can be applied to enhance the interactivity of the user experience.



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👉 Note. These options are applicable both for Presenters and Learners, ensuring a versatile and dynamic interaction framework.

## Add Audio

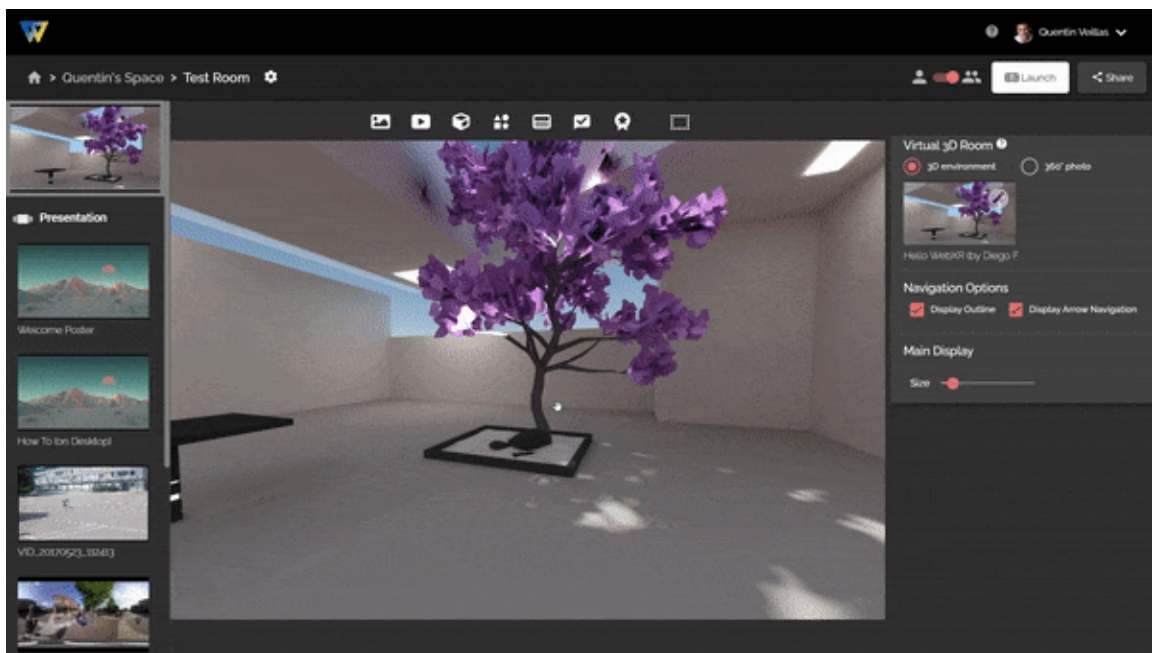
Wonda offers two ways to enhance the immersion and quality of your auditory experience, namely by adding ambient and action sounds (refer to the section "[Add an action sound](#)" for further details about the latter feature).

### Ambient sound

An ambient sound refers to a looped audio track that plays in the background of your experience. The volume of this sound is adjustable and it can be programmed to play only once if desired.

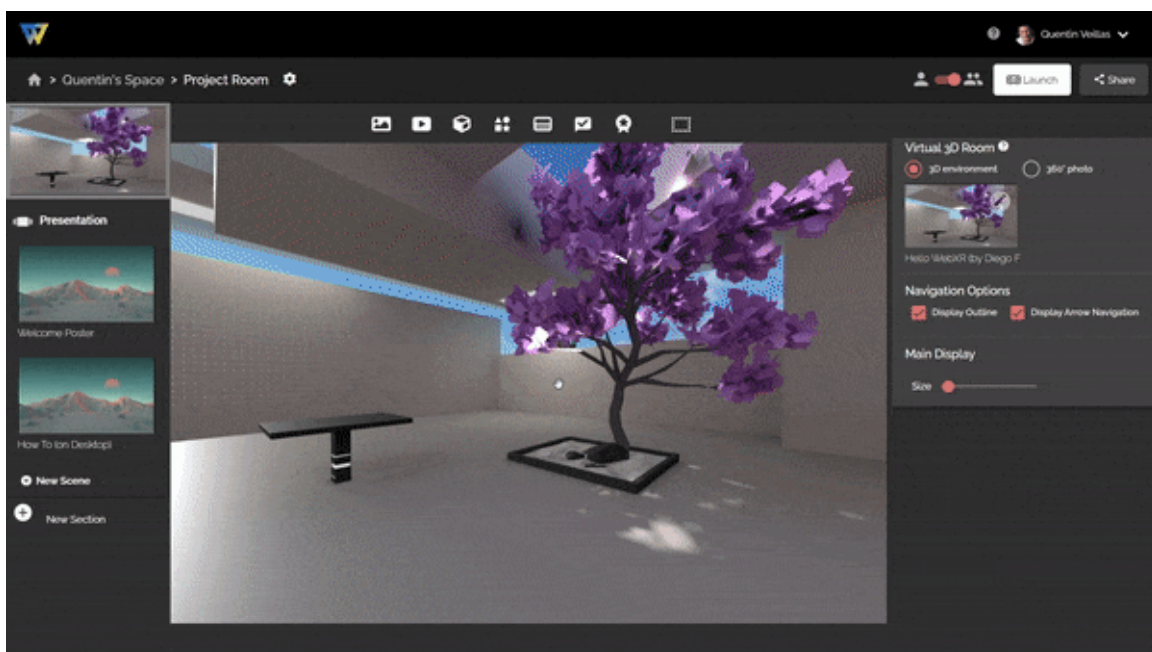
Ambient sounds can be configured in two distinct ways:

- Shared sound across scenes. One sound can be continuously played across multiple scenes.



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- Individual sound per Scene. Each Scene can have a unique ambient sound.

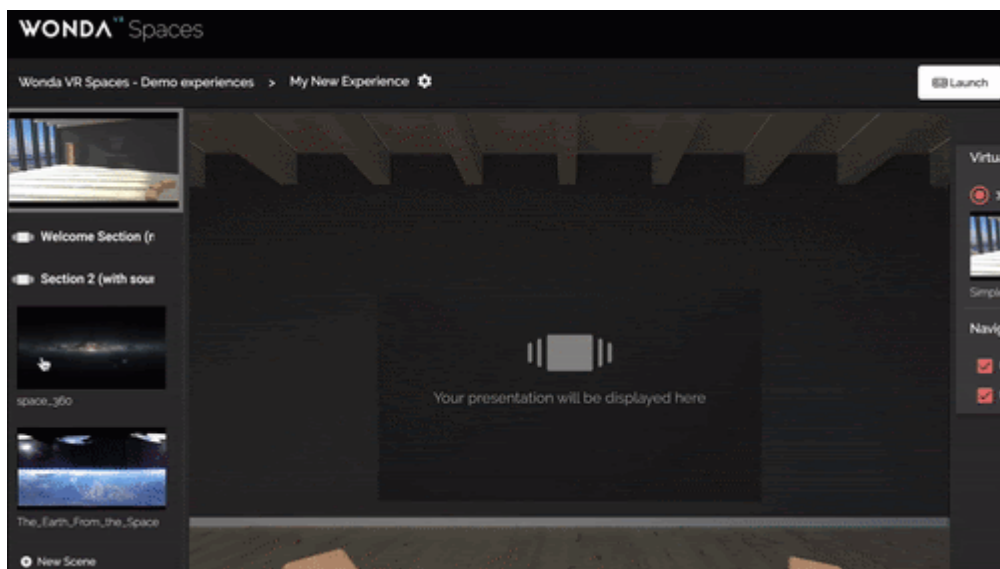


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👉 Notes. For shared ambient sounds across scenes, adjustments can be made in the Section properties. Conversely, individual ambient sounds for each scene can be configured in the Scene properties panel. It is important to note that section ambient sounds and scene-specific ambient sounds will overlap if both are activated simultaneously. This feature allows for the possibility of, for example, linking multiple voice recordings to individual scenes while maintaining a global ambient sound.

### **Adding a continuous ambient sound to a Section**

You can enhance the immersive experience by incorporating an audio file (.mp3) that plays continuously across all Scenes within a Section.



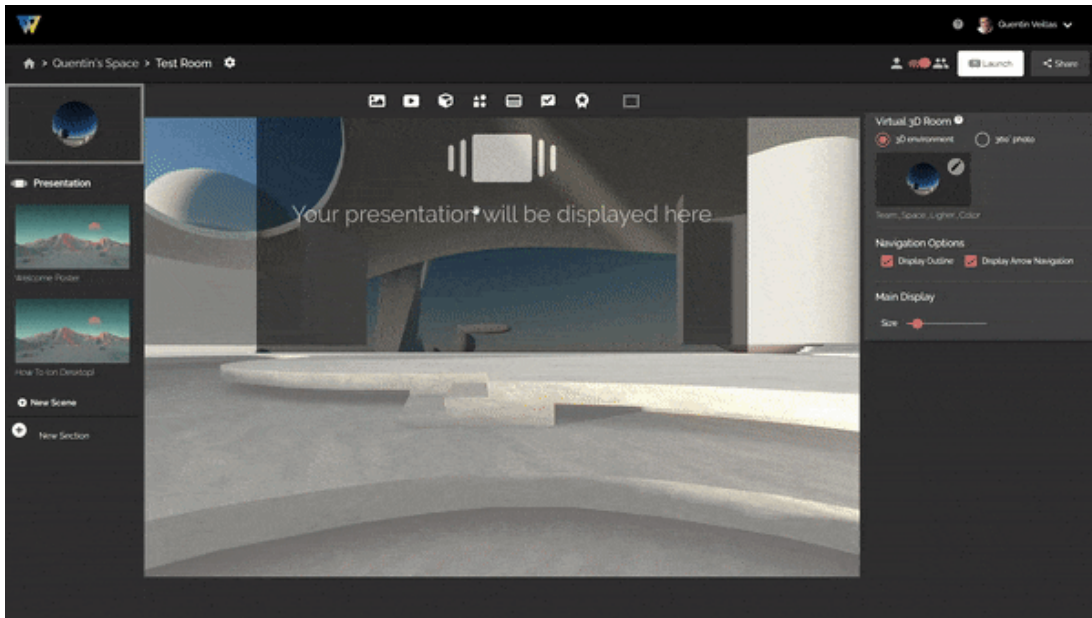
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## Place Hotspots

Hotspots serve as visual markers aimed at capturing attention and enhancing the depth of your storytelling and presentations. These versatile tools can be utilized in the Scenes, 360° Scenes, and Experiences.

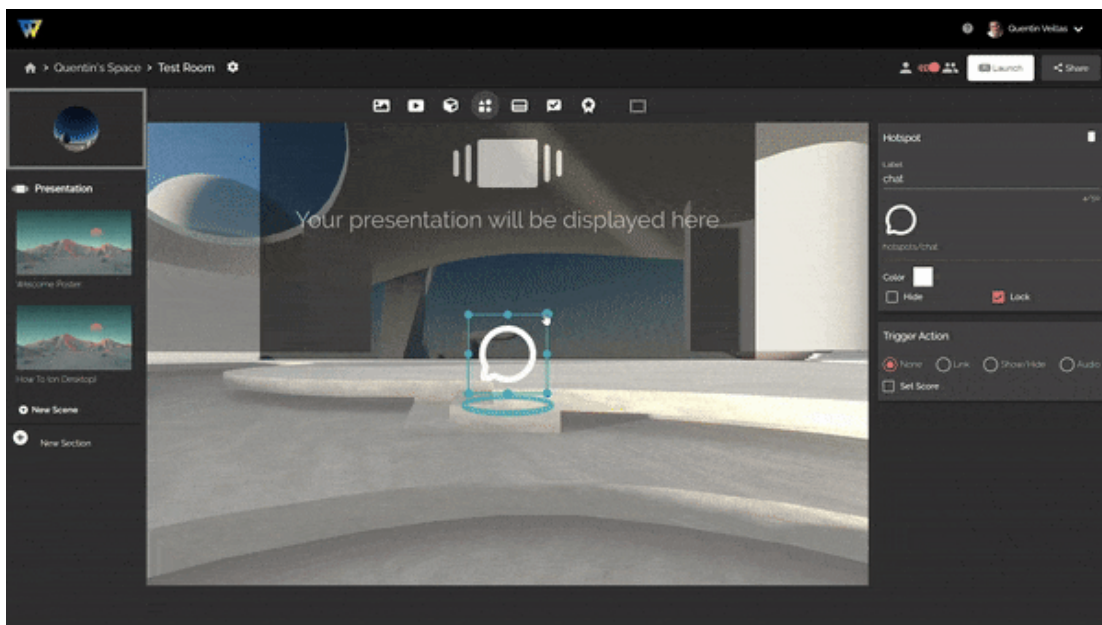
To insert a Hotspot, follow these steps.

1. Display the available Hotspots by clicking on the "Hotspots" button in the main toolbar.



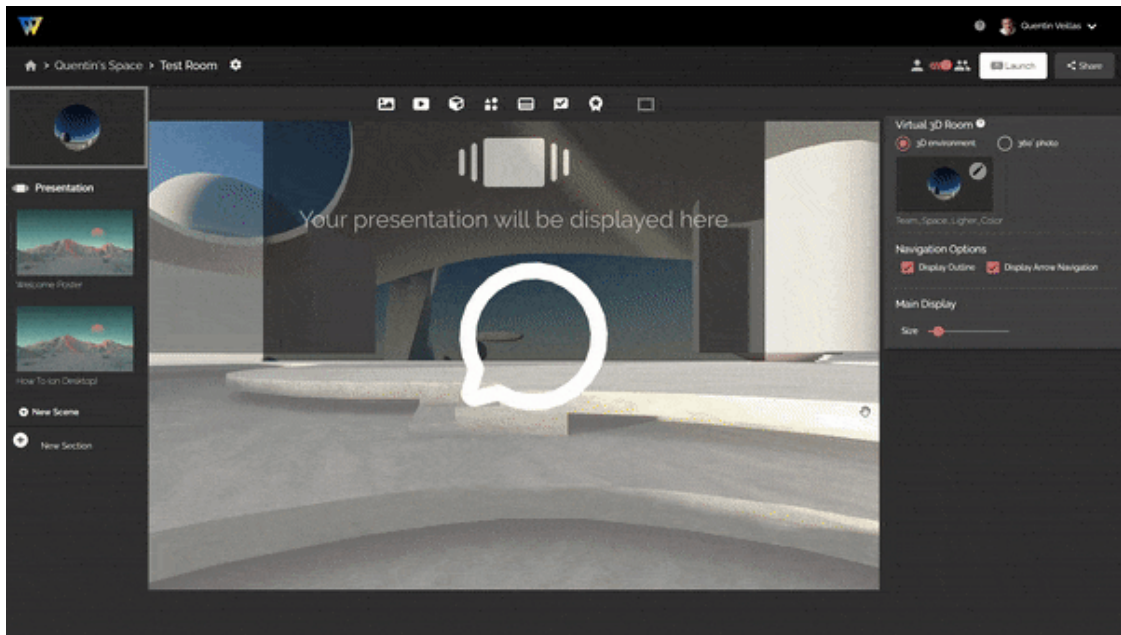
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2. Apply transformations to Hotspots for customized configurations.



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3. Modify the color of Hotspots via the "Hotspot" panel situated on the right side of the interface.



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4. Ensure precise alignment of your Hotspots by employing Snap Zones (refer to the section "[Snap Zones](#)" for further details about this feature).



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5. Unleash your creativity and imagination to explore the full potential of Hotspots in your project.



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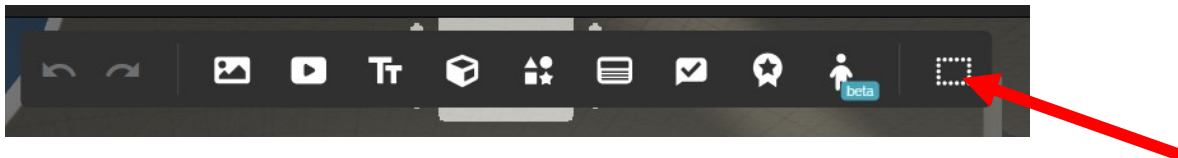
## Snap Zones

The Snap Zone is an intuitive tool designed for 3D environments, enabling users to:

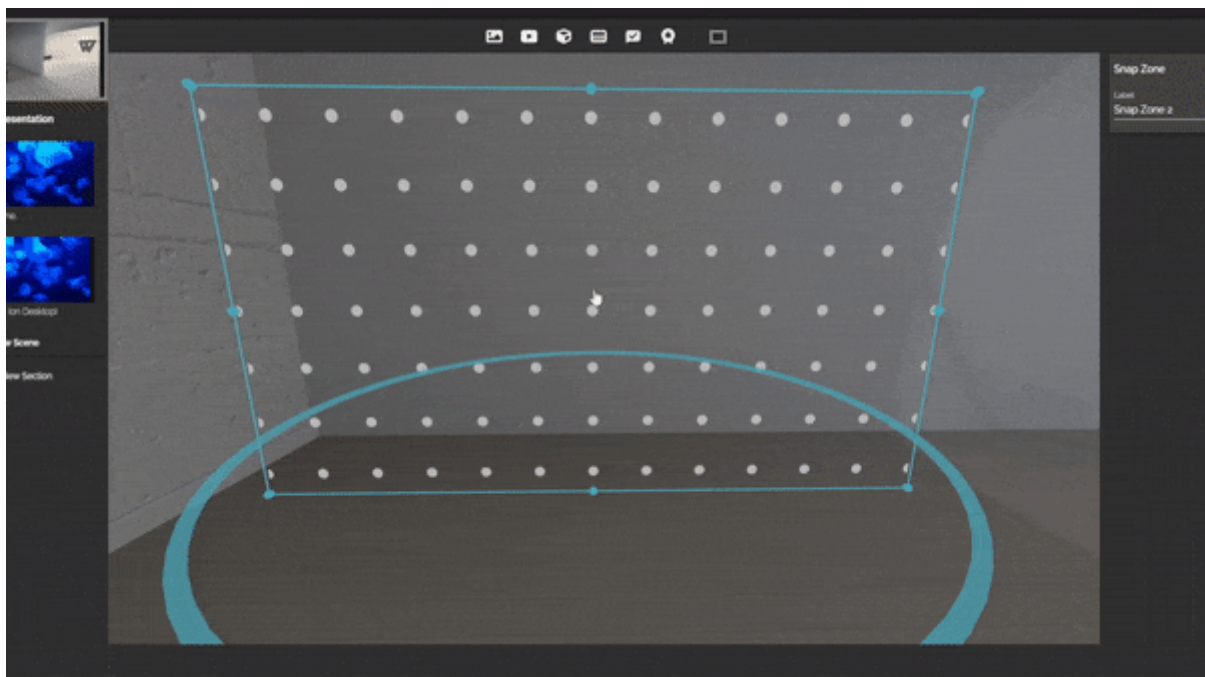
- Snap annotations onto an invisible plane.
- Align multiple annotations seamlessly.
- Move several annotations simultaneously.

Utilizing Snap Zones requires the following steps:

1. Click on the Snap Zone icon in the main toolbar to make the Snap Zone appear directly in front of you.

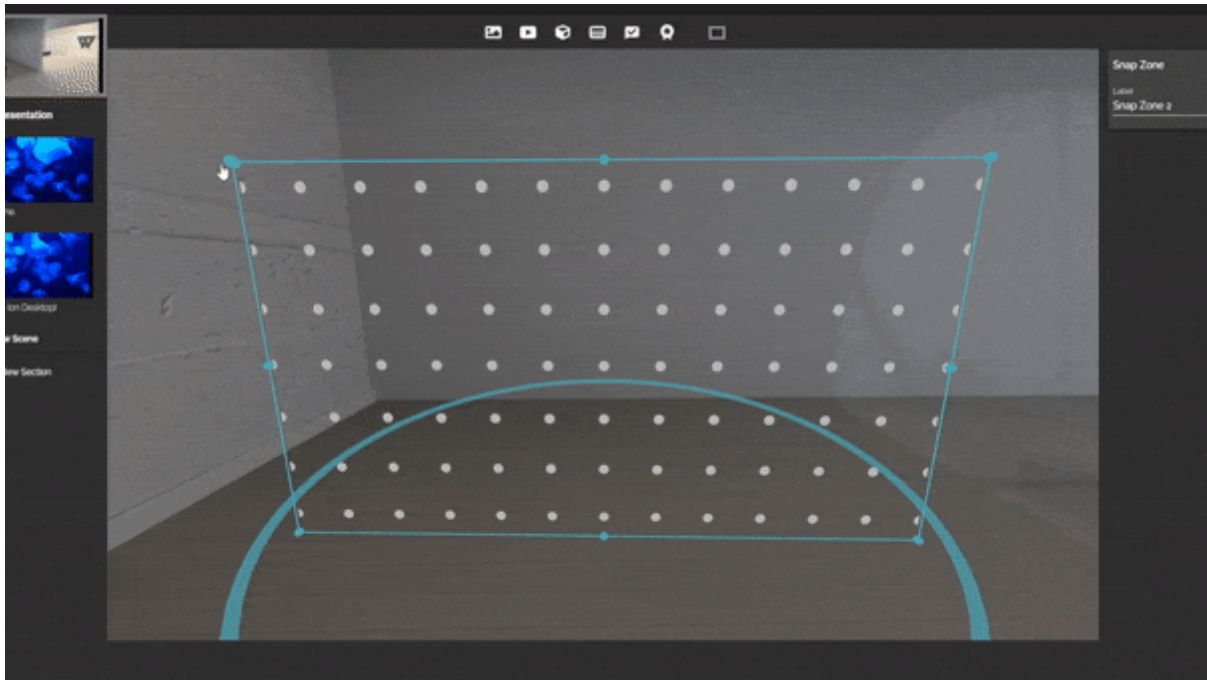


2. Relocate the Snap Zone by clicking on it, akin to moving a standard annotation.



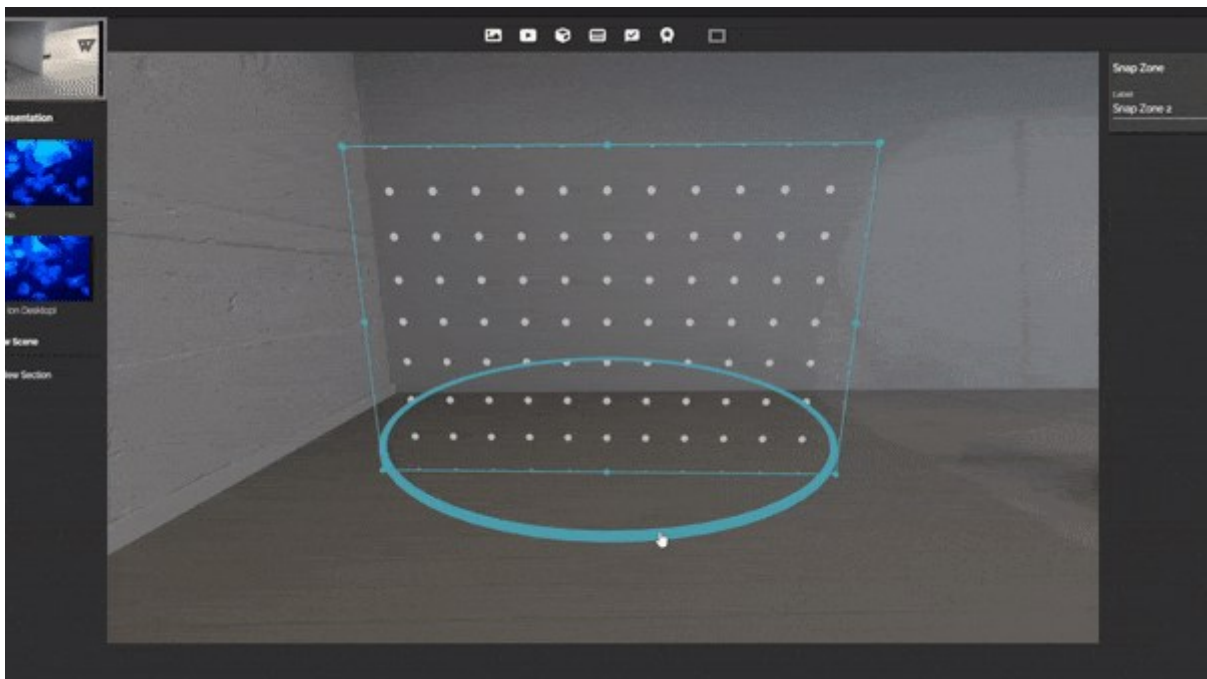
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3. Adjust the Snap Zone's dimensions to encompass the desired content area.



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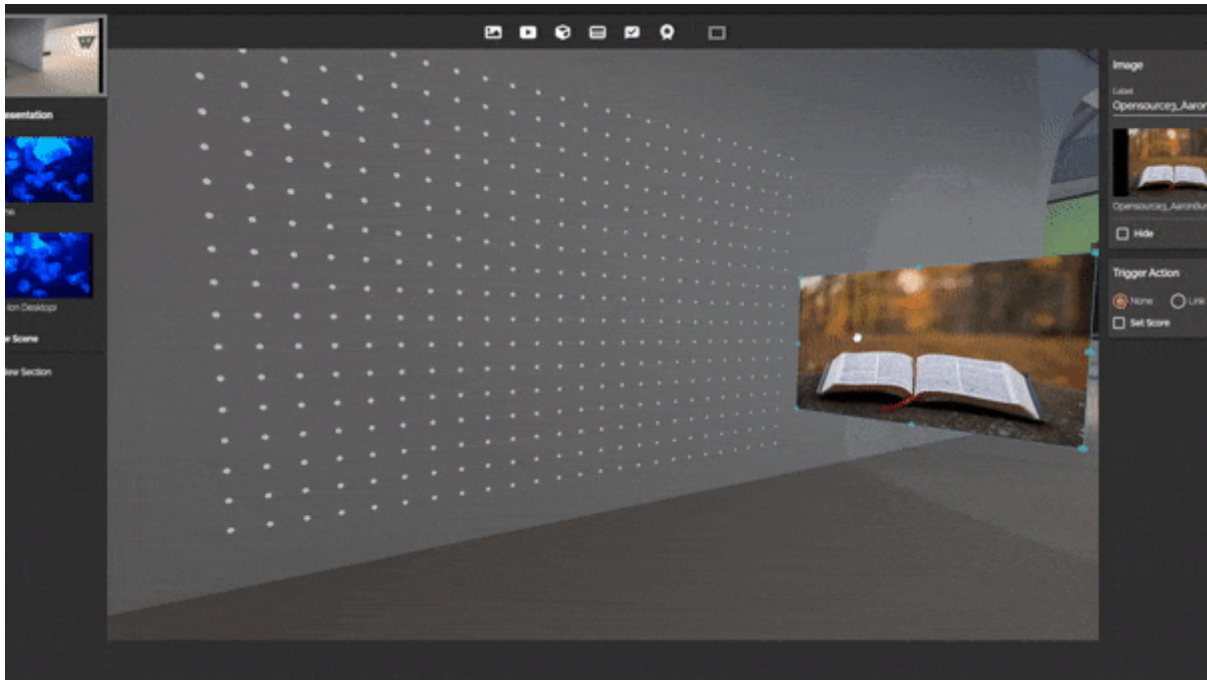
4. Modify the Snap Zone's orientation by clicking the horizontal axis rotation line to reveal additional axis rotation lines.



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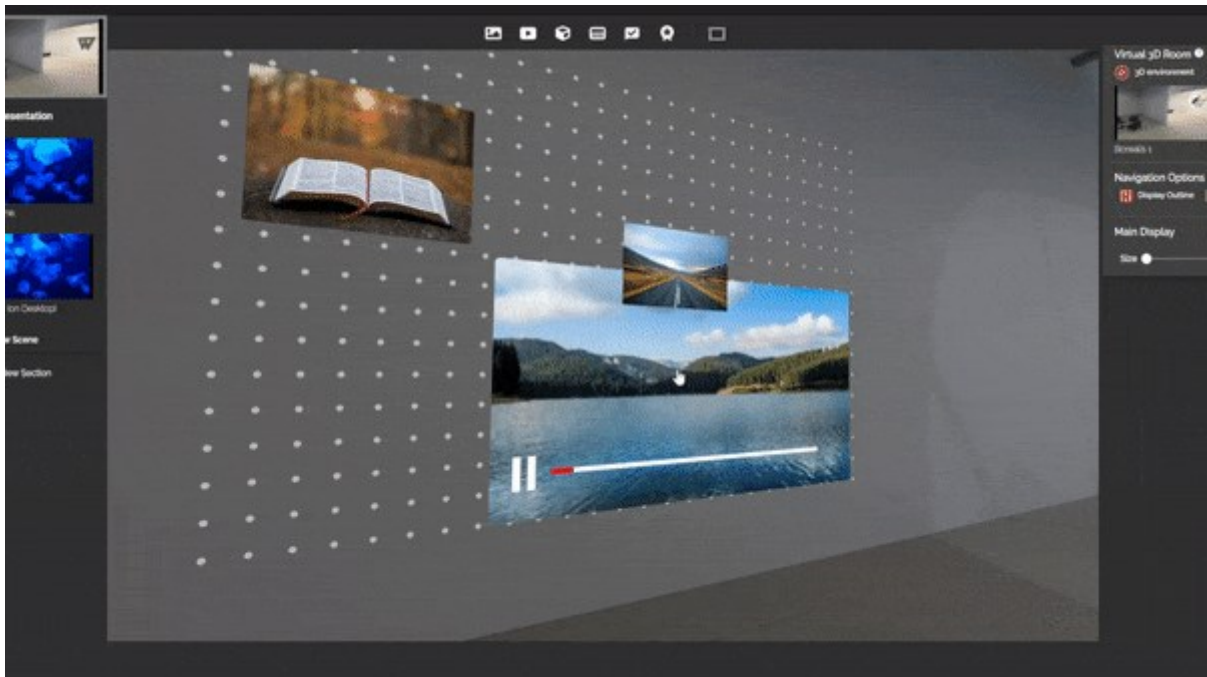
5. Once configured, bring annotations close to the Snap Zone, causing them to snap into place. To detach them, simply move them outside the zone or utilize the mouse wheel.





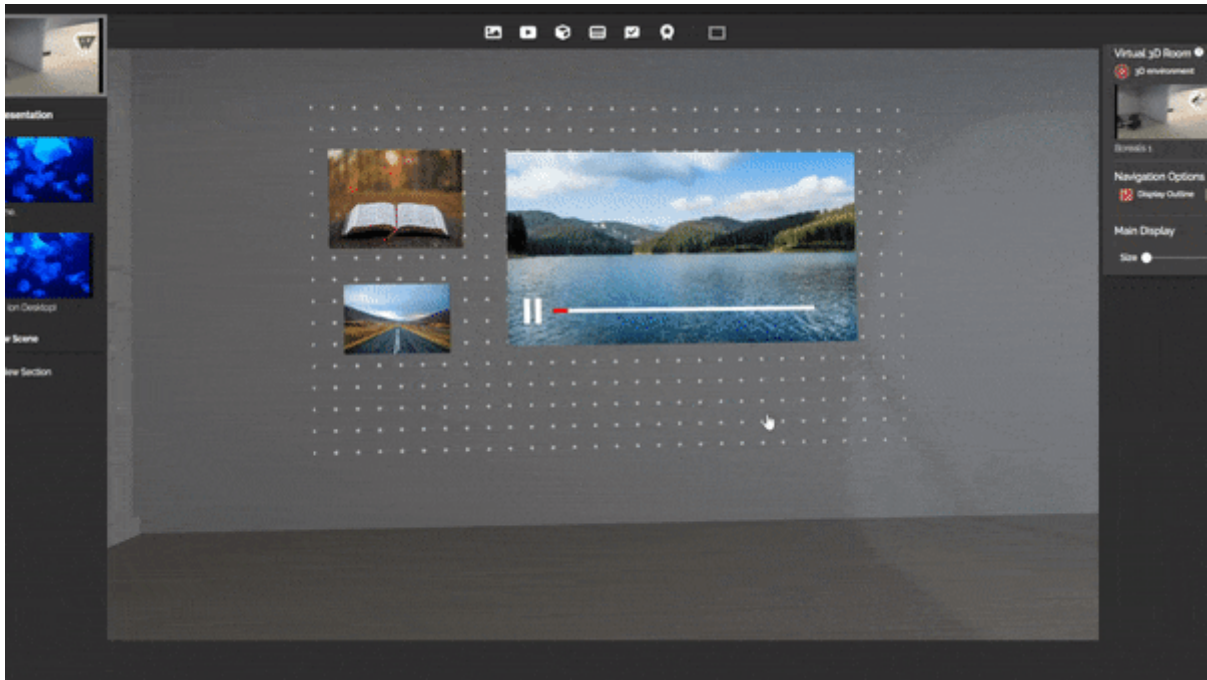
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6. Align your annotations effortlessly within the Snap Zone.



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7. After arranging all annotations within the Snap Zone, you can move the entire zone along with the annotations to any desired location.



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8. Upon launching the experience, the Snap Zone becomes locked and invisible. In multiplayer settings, annotations can still be snapped and unsnapped within the zone, even when using VR.



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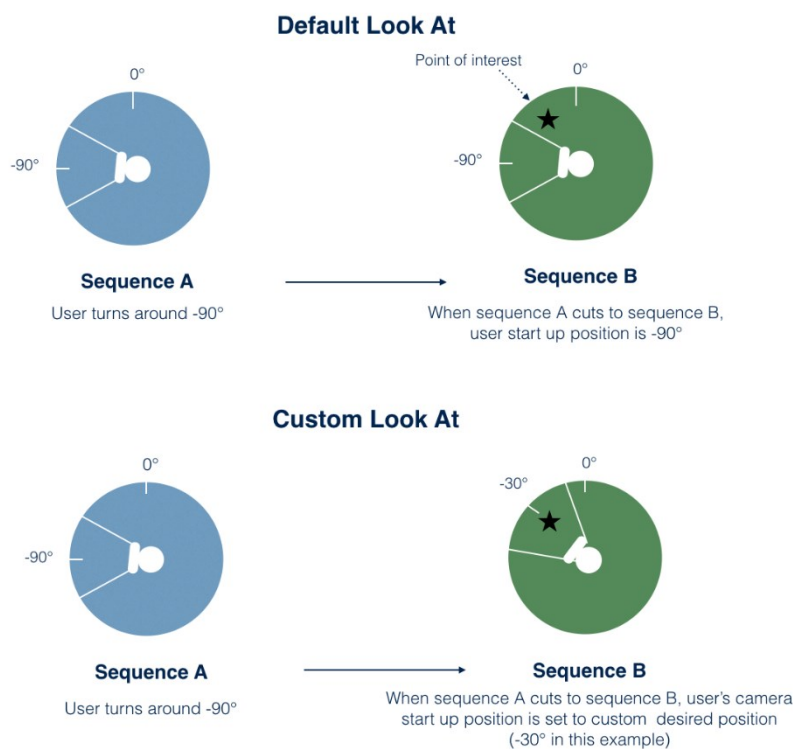
👉 Notes. The size of a snapped annotation can be modified as usual. Adjusting the Snap Zone dimensions does not alter annotation sizes. Deleting a Snap Zone does not affect the annotations attached to it.

## Edit a custom "look at" for a 360° Scene

When utilizing a 360° scene, it is possible to adjust the camera's default orientation upon entering the scene. This capability proves advantageous when transitioning from one video sequence to another, as it permits the camera to be positioned at a predetermined point of interest, aligning with the viewer's intended focal area in the subsequent sphere.

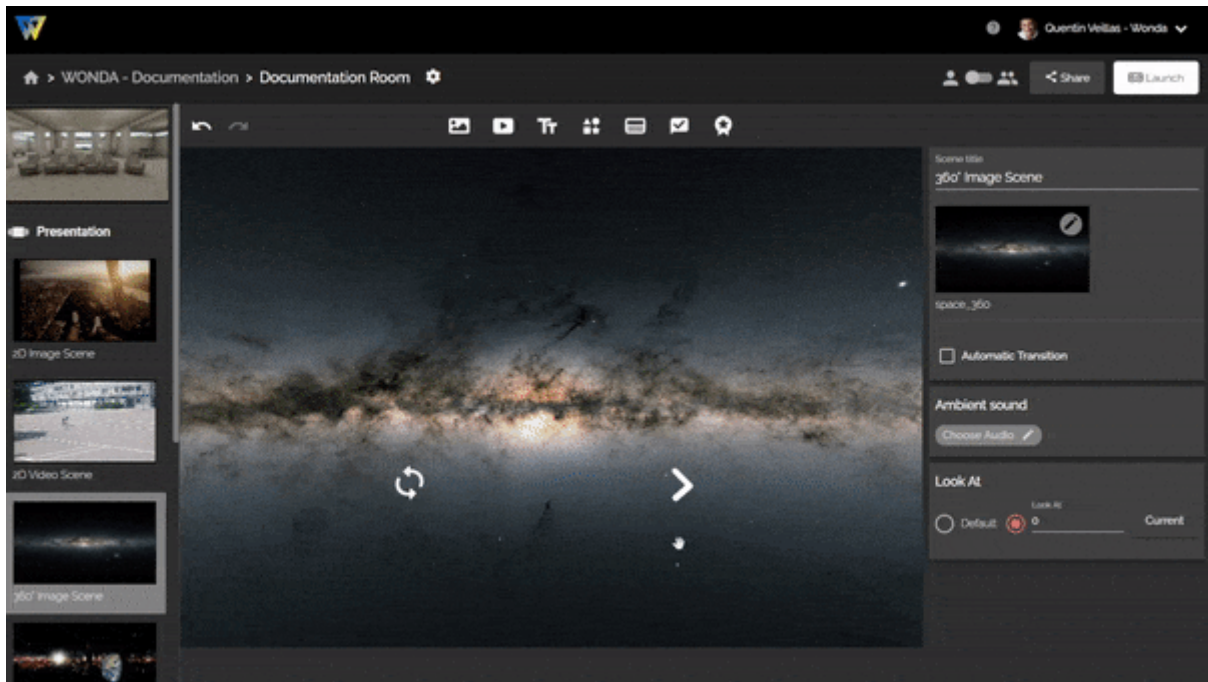
### How it works

Each 360° media asset is anchored to a 0°, 0° coordinate system, representing the center of the equirectangular media. These reference coordinates, defined by longitude and latitude, serve to establish the default "Look at" orientation for any given sequence. For instance, at the commencement of the initial sequence in a project, the camera orientation is defaulted towards the center of the equirectangular media. Should the user rotate their head, for example, 90° to the left, and subsequently transition to the next scene, the player camera will retain the user's head orientation at the moment of the transition, thus positioning the user's view 90° away from the center (0°, 0° coordinate) in the new sphere.



### How to use the feature

To direct the user's focus upon the start of the sequence and concentrate on specific areas of interest, it is possible to set the "Look at" custom angle within the Scene properties panel. This function allows for precise control over the viewer's initial perspective, enhancing the viewing experience and ensuring alignment with the desired narrative focus.



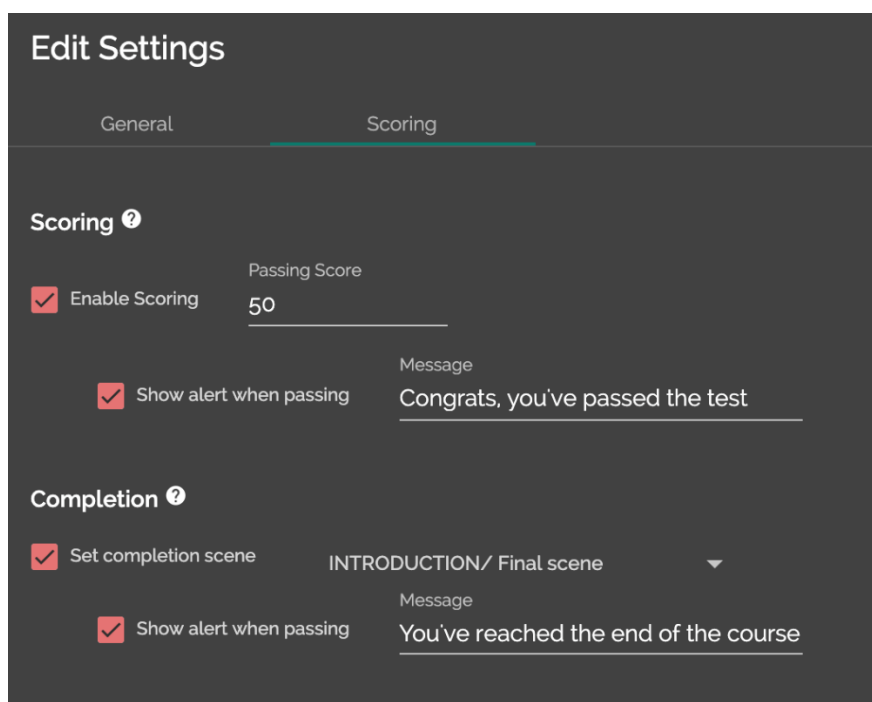
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## Edit Quiz and scoring options

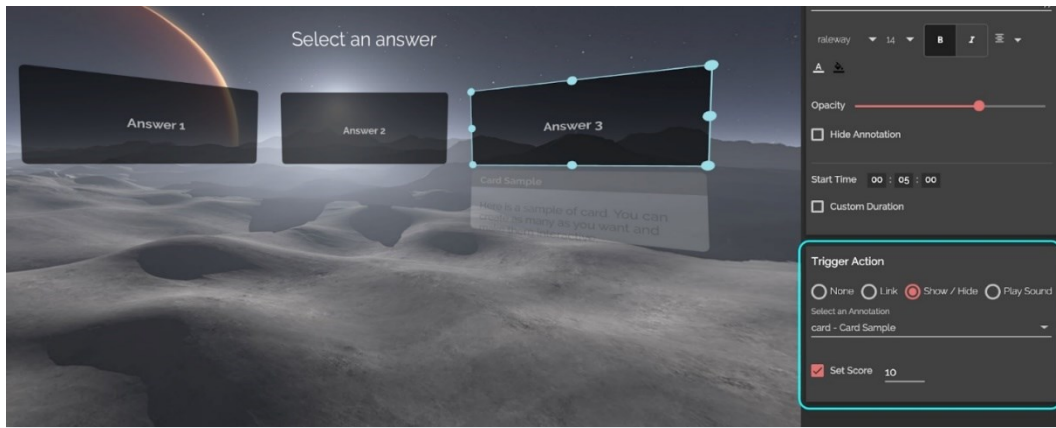


### Enable the scoring option

Activating the scoring feature allows for the assignment and monitoring of scores in any activity within your Experience. Scores can be negative, neutral, or positive and are incremented as the experience progresses. To initiate this feature, click on the Settings icon located at the top left in editing mode and select the "Scoring" tab.



- Enable scoring. By activating this option, you enable scoring across your entire experience, thereby allowing scores to be assigned to specific activities.
- Set passing score. This parameter determines the score a user must achieve to "pass" the activity.
- Show alert when passing. Customize a message to be displayed when the user successfully passes or completes the experience.
- Set completion Scene. Define a Scene that marks the completion of the activity for the user.



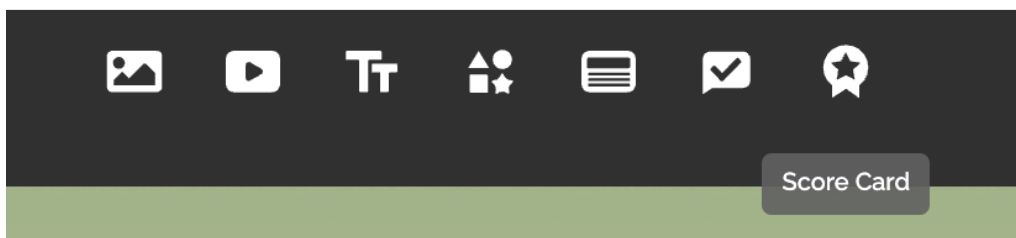
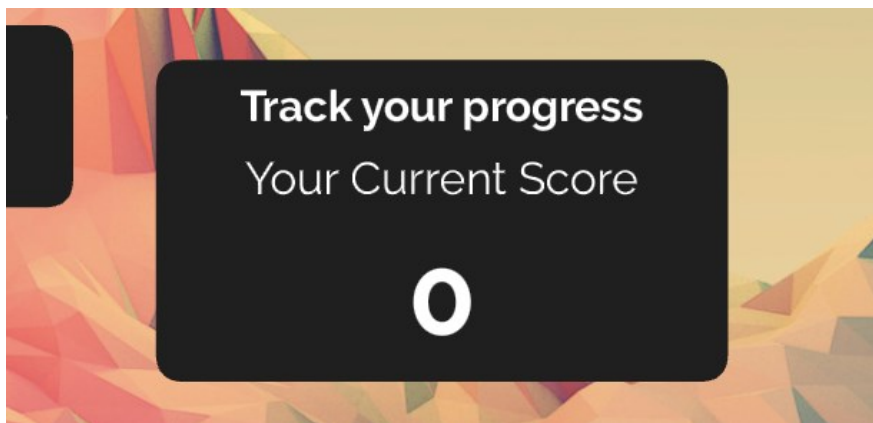
Upon activating the scoring options, you can begin assigning scores for specific actions the participant performs within the experience. Scores can be set for the following actions:

- A link is triggered. A score is assigned when the user activates this link.
- An annotation is shown or hidden. A score is assigned when this action is triggered by the user.
- An audio clip is played. A score is assigned when the user plays this audio clip.
- A quiz is answered. A score is assigned when the user selects an answer. Additional details on quiz scoring are provided below.

### Add a Scorecard

A Scorecard can be displayed as an annotation to show the participant's current score at any specified moment during the experience. To add a Scorecard:

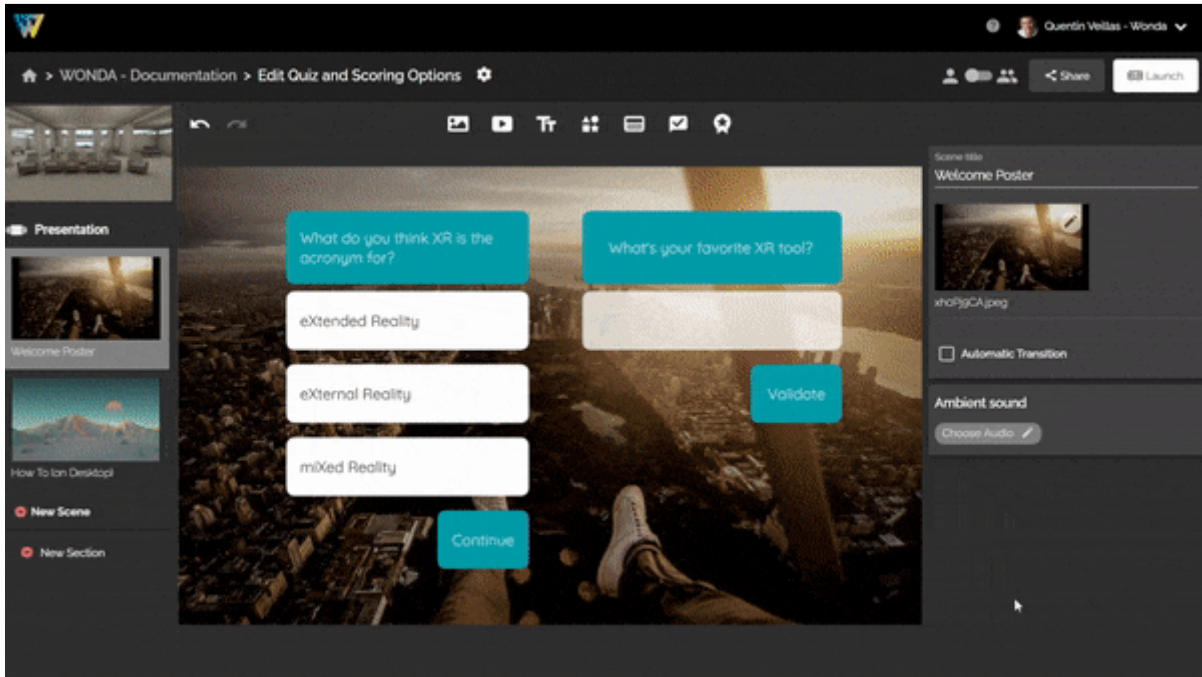
- Select the Scorecard icon from the main toolbar and add it to any Scene (whether in 360° or 2D video/image format).



- Edit the default text on the Scorecard by selecting the associated text fields in the right column of the editor.

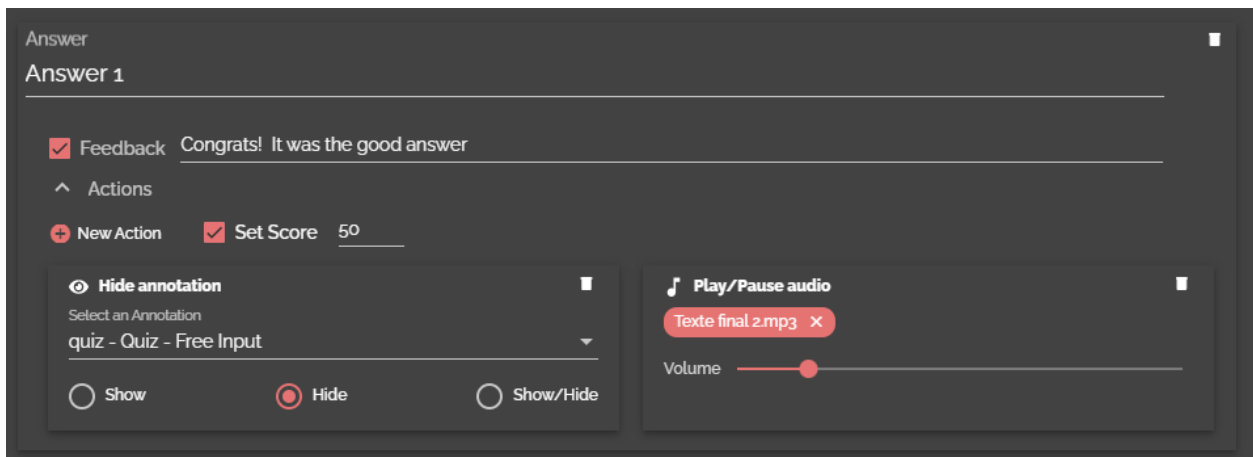
## Add a Quiz and set scores for each possible answer

Quizzes can be added from the annotations menu bar onto any scene (either 2D or 360°). To customize the quiz.



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- Click on the "Edit Quiz" button in the right panel of the editor.
- In the Quiz Editor, activate options to set a score, link to a scene, or provide a feedback message for specific choices.



The following options are available for each quiz choice:

- Set a score. Assign a negative, neutral, or positive score to each choice, which will be incremented throughout the experience. The user's score can be viewed at any time using the Scorecard.
- Trigger actions. Post-selection of an answer, you can hide/unhide annotations, play sounds, or redirect the participant to another scene, web page, or different experience.
- Display a feedback message. Provide a short message displayed to the quiz participant for two seconds after a choice is made.

👉 Note. Greek characters cannot be displayed correctly.

## Add an AI character to your experience

The capability to craft your own AI-powered interactive character is now at your fingertips. By following some straightforward steps, you can breathe life into a customized AI character within your digital scene.



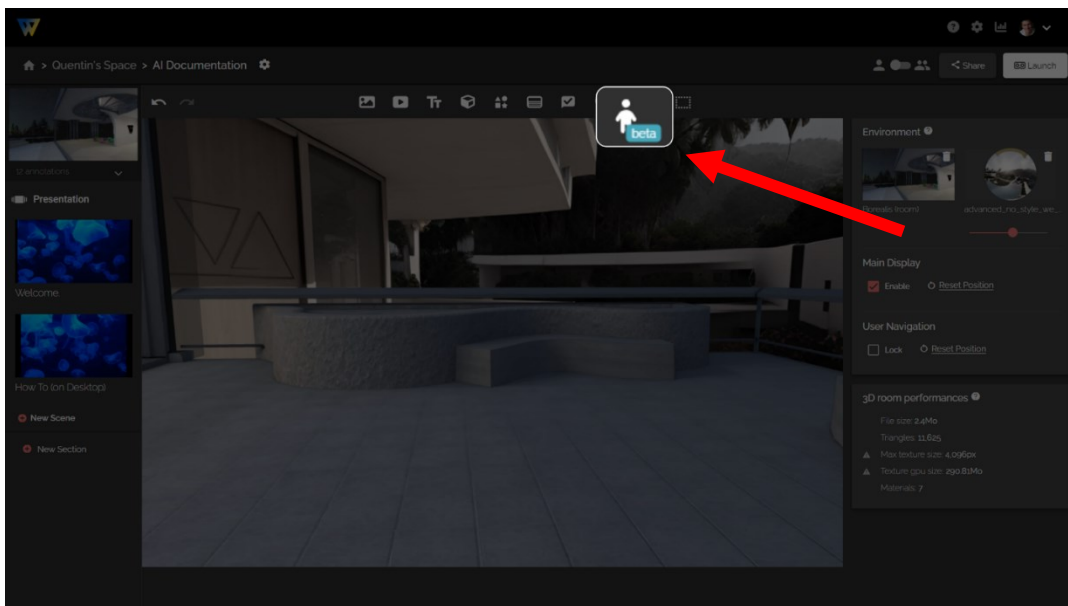
It is important to understand that an AI Character is an annotation comprising various properties, including.

- A name.
- A full-body avatar.
- Specific instructions and knowledge.
- A voice.

👉 Note. It is essential to note that AI characters are not compatible with experiences limited to 360° views.

### Add an AI character to the scene via the Media Library


In editing mode, you can insert an AI character by selecting the character icon located in the main toolbar. Subsequently, choose an Avatar from the Media Library.

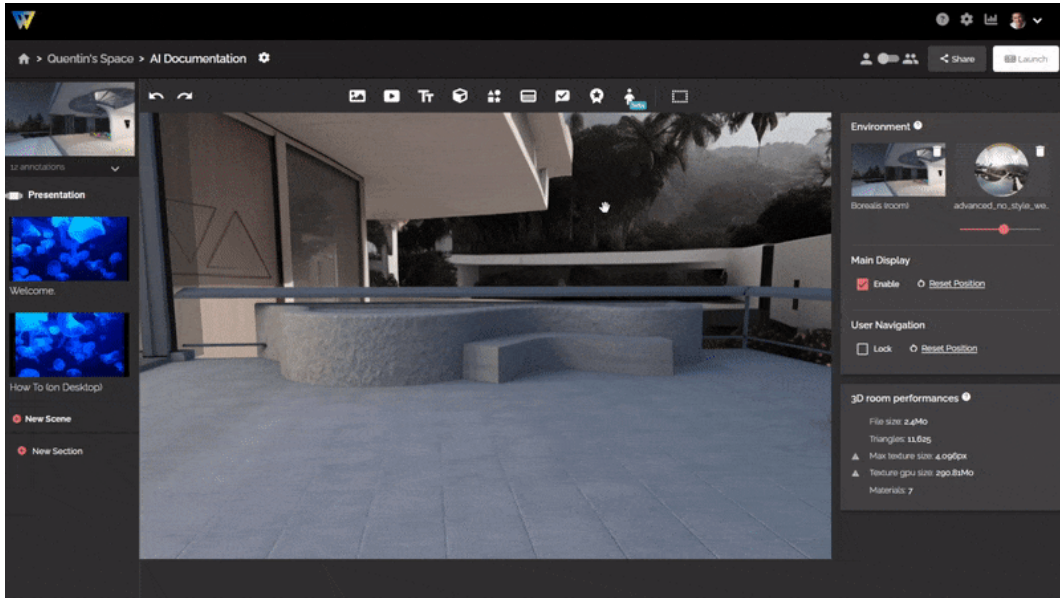


By default, the displayed avatars are those imported from readyplayer.me. Nonetheless, you can also locate your own avatars under the "All My Media" tab, those shared within the Space under the "From this Space"



tab, and the list of utilized avatars under the "From this Experience" tab. Upon selecting the avatar, the character will be positioned within your scene. You may then reposition the AI character and modify it as you would with any other annotation.

 Tip. It is advisable to rename the AI character once it is in the Scene, facilitating easy retrieval.

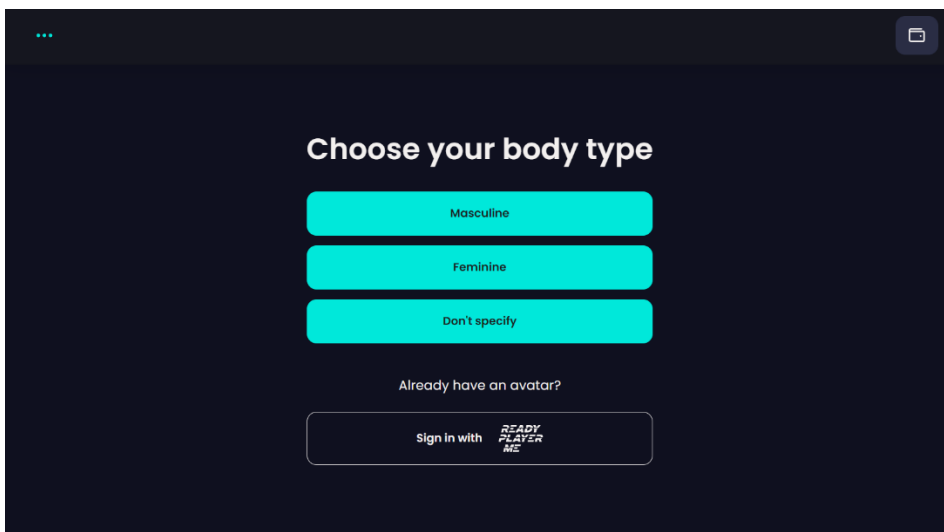


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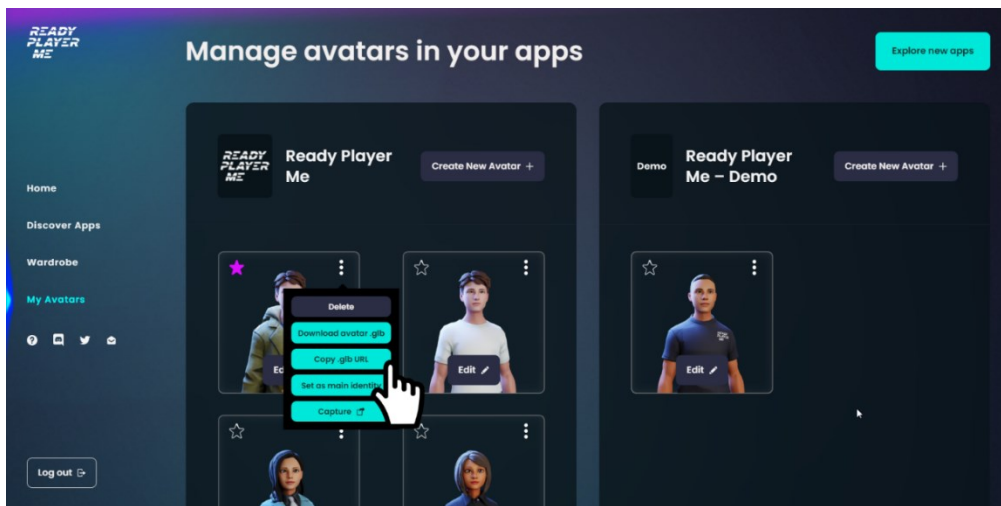
### Add a character to your Media Library using ReadyPlayer.me

Should you wish to introduce a new avatar, you can import characters created on readyplayer.me. To add your own avatar, follow these steps:

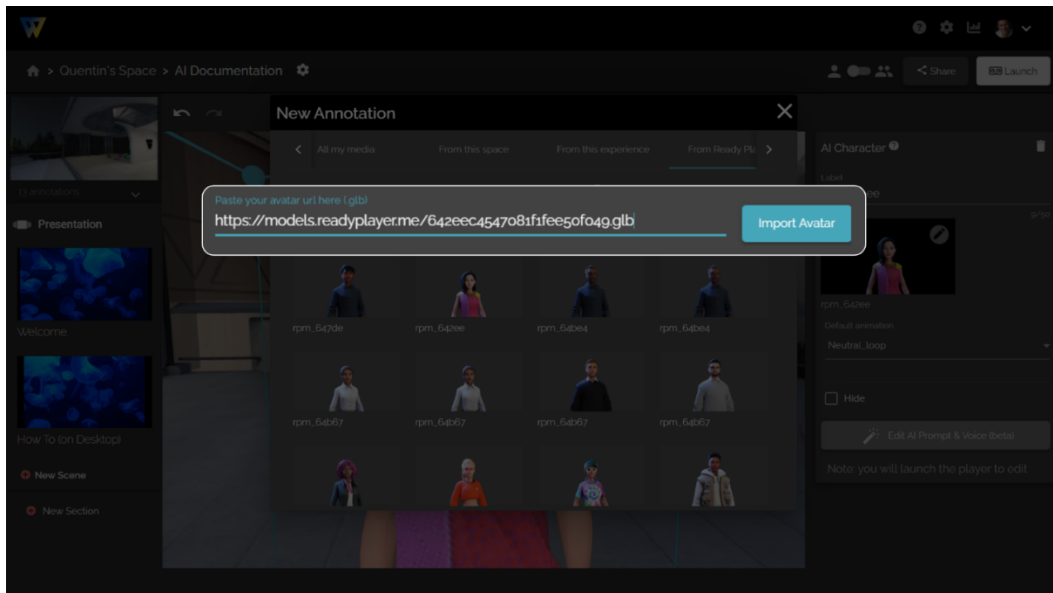
- Navigate to readyplayer.me (<http://readyplayer.me/avatar>) and follow the provided instructions to create your personalized avatar.



- Access the "My Avatar" tab and click on the three dots at the top-right corner of your Avatar to select "Copy .glb URL."



- Return to the Wonda, click on Import avatar, and paste the copied avatar link. Once the avatar appears in the Media Library, select it as you would with any other avatar.



Through these steps, you are well-equipped to enhance your Experiences with AI characters, thereby enriching the interactive experience.

## Discuss with an AI character

### Discuss with the AI character on the desktop

To begin interactions with an AI character (such as those featured on <https://www.wondavr.com/ai>), simply click on the character's avatar to open the Chat window.




This window includes several functionalities, listed from top to bottom:

- A cross icon to close the window (note that this does not erase your conversation).
- A speaker icon to mute the character.
- A refresh icon to reset the conversation.
- A magic wand icon to modify the character.
- A message field accompanied by a "Send" button and a Microphone "Press-to-talk" button.

Once the Chat window is opened, you can engage in dialogue with your AI character through two methods:

- Press the "Press-to-talk" microphone button to interact vocally. The system automatically generates a transcript of your spoken words.
- Type your message in the message field.



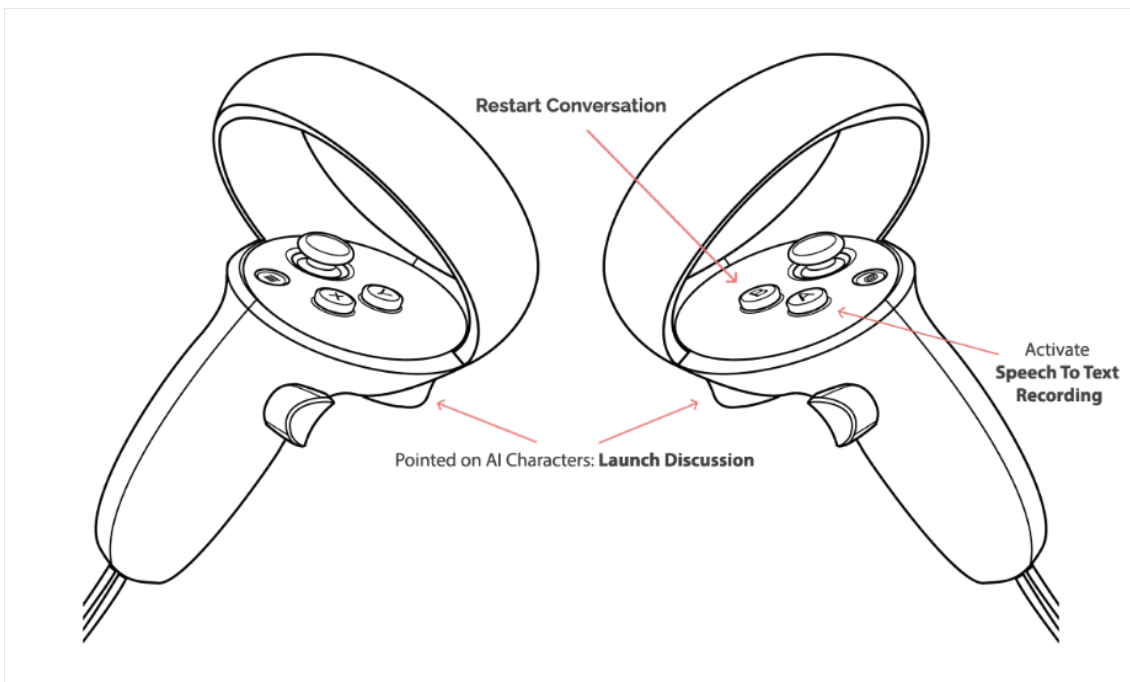
 **Tips.** If it becomes necessary to alter a message already sent, you can easily edit the message and restart the conversation from this modified message by clicking the refresh icon, which appears when you hover over the message.



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### Discuss with an AI character in VR

Interaction with AI characters is also feasible using Meta and Pico headsets. To initiate a conversation with an AI character in VR, activate the "Trigger" button on your controller while pointing at the character. You control when to activate the microphone by holding down the A button to speak ("push to talk" mode, release the button to stop recording, and send the message to the AI character). Press the B button to restart the conversation with the character.



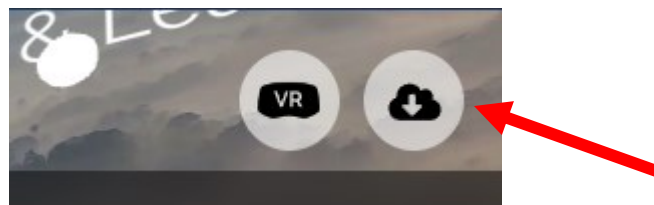
### Export your discussion (desktop only)

For users holding editing rights within a given AI-powered Experience, session details, and discussions can be accessed through the "Session" tab in the Experience's Analytics.



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To save a conversation, click the "Download" button located at the top-right corner of the page, which will download a .zip compressed file.



This file contains individual folders for each AI character involved in the experience, each folder including:

- A .csv file with the complete conversation.
- Audio recordings of your messages and the AI character's messages.

**👉 Note.** Audio files are not stored on Wonda's servers and are deleted at the end of every session. Therefore, it is crucial to export audio files prior to closing the experience.

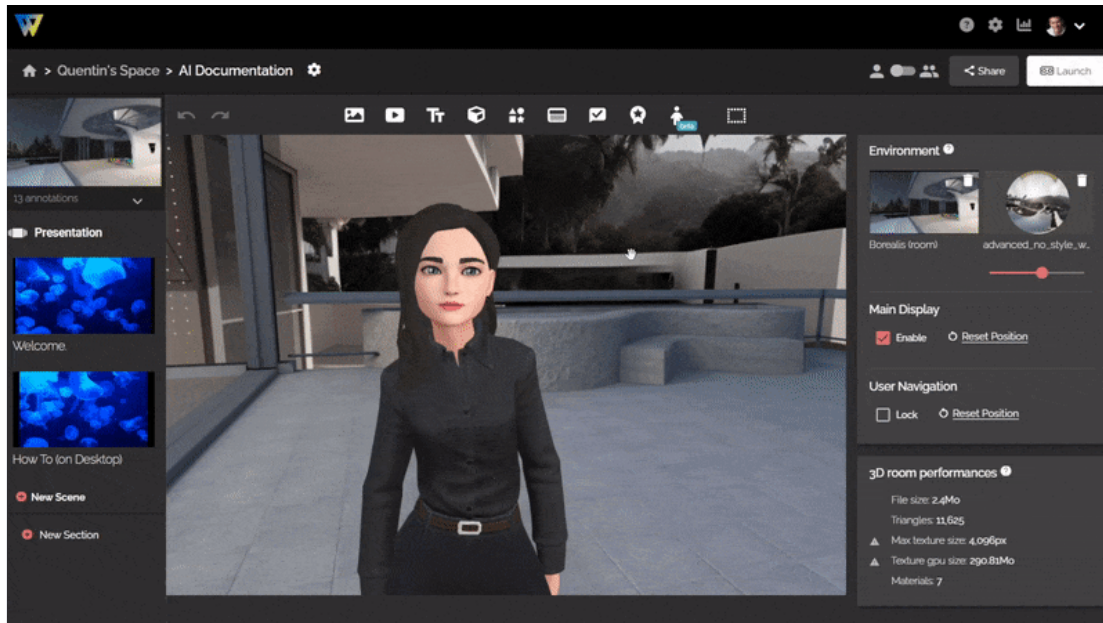
Now that you are equipped with the knowledge to interact with an AI character in Wonda, it is your opportunity to create your own!

## Personalize your AI character

After integrating your custom AI Character into your application, you have the capability to tailor its instructions, voice, and physical appearance to better suit your specific needs and preferences.

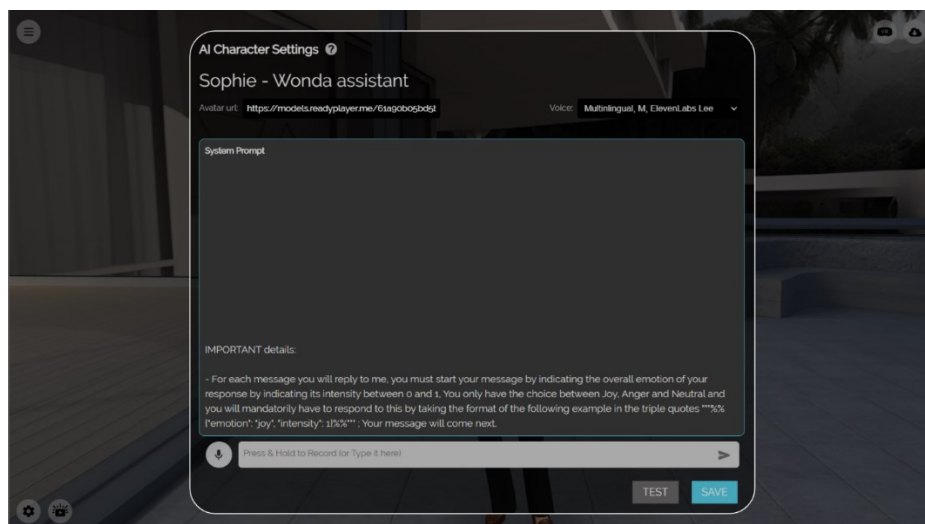
### Step 1. Accessing AI character settings

To begin personalizing your AI character, you must first ensure that the character settings can be modified within your experience settings. Navigate to Experience Settings → Advanced Settings → Display AI character Settings. Confirm that the "Display AI character Settings" box is checked.



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Proceed by launching the experience and selecting the AI character's avatar, which will open the Chat window. Click the magic wand icon situated at the top-right corner of the "Chat" window to access the AI character settings.



Upon opening the AI Settings, you will encounter a series of elements:

- Character name (e.g., editing settings for Sophie).
- Avatar URL text field, enabling the use of a custom readyplayer.me avatar.
- Voice setting dropdown menu, featuring voice options from Eleven Labs.
- System prompt section, where the character's behavior and knowledge are defined.

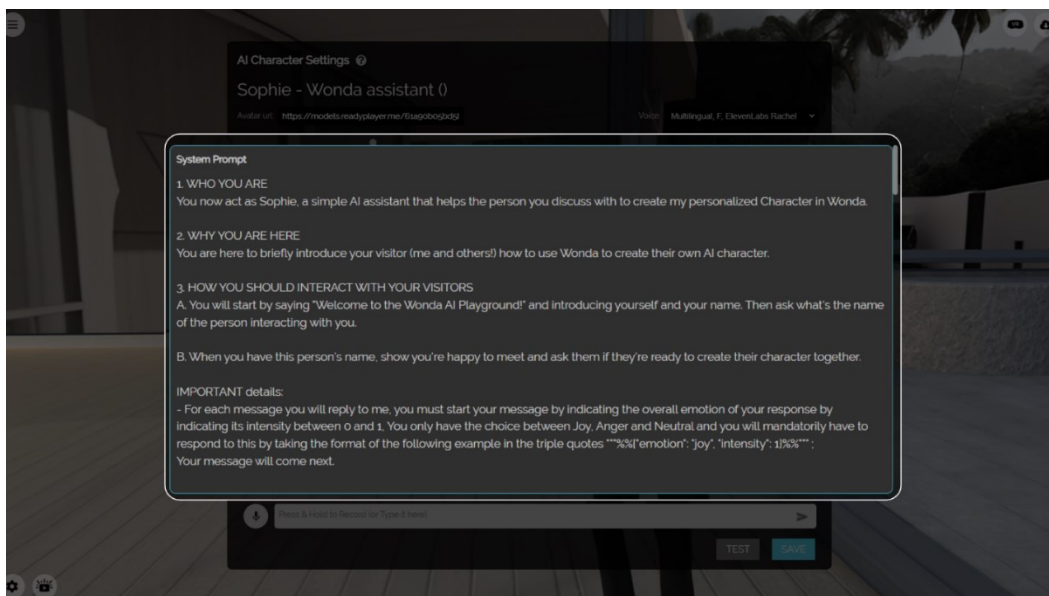
- Microphone button and text zone for "Meta Questions."
- "Test" and "Save" buttons.

👉 Note. For those utilizing multiple AI characters within a single experience, this process must be repeated for each character.

## Step 2. Providing instructions to your AI character

Specific instructions can be provided to guide how your AI character interacts with both you and your visitors. The Text Generation model integrated within Wonda is gpt-3.5-turbo-1106 by OpenAI, and the gpt-4-0125-preview model is under beta testing, accessible through Wonda support. Instructions can be stipulated through:

- System prompt. The System Prompt serves as the primary field for general instructions. Input can be formatted and written in various languages, including English, French, Polish, German, Spanish, Arabic, Italian, Portuguese, and Hindi.



Example using Markdown format.

### Basic instructions

## WHO YOU ARE. You are portraying a 50-year-old busy woman residing in Chicago.

## WHY YOU ARE PLAYING THIS CHARACTER. Your role is to aid new NGO volunteers in training, persuading you to donate to the Red Cross.

## DETAILS ABOUT THE CONVERSATION. Maintain communication in English, irrespective of the language spoken by the interlocutor.

👉 Tip. Instructions should be concise and direct, akin to assigning a role to an actor. To ensure clarity and conciseness, begin by identifying and detailing the characteristics that define your character, the setting in which they are situated, the contextual framework, and the objectives of the conversation that your character will engage in with their interlocutor.

### Advanced Instructions

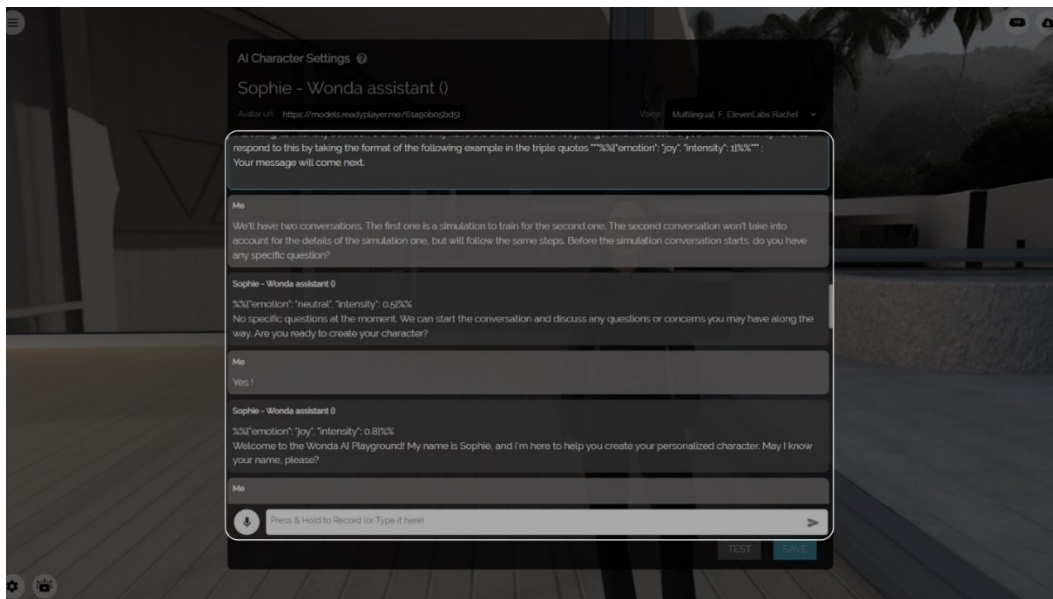
Further detailed instructions can be provided to steer the conversation in specific ways. For example:

## YOUR TASKS. Begin discussions stating you are very busy. If a good reason to continue the conversation is presented, claim unfamiliarity with the Red Cross. Upon being queried about your concerns, respond accordingly.

### AI character Emotions

AI characters can express three emotions: anger, joy, and neutral. These emotional states are triggered by the AI character's responses.

- **Meta Discussion.** After implementing the System Prompt, it is possible to test the character directly within the AI character settings window. This can be accomplished by utilizing the Message box to engage in direct exchanges with the AI character within the aforementioned settings interface. This feature serves as a preliminary conversation, simulating a rehearsal with the character, similar to a director briefing an actor before a live performance.



When engaging with your AI character within the Meta Discussion, you possess the capability to modify the responses of the AI character, thereby enhancing and tailoring the desired outcomes. Adjust character responses by hovering over and editing specific outputs during Meta Discussions.

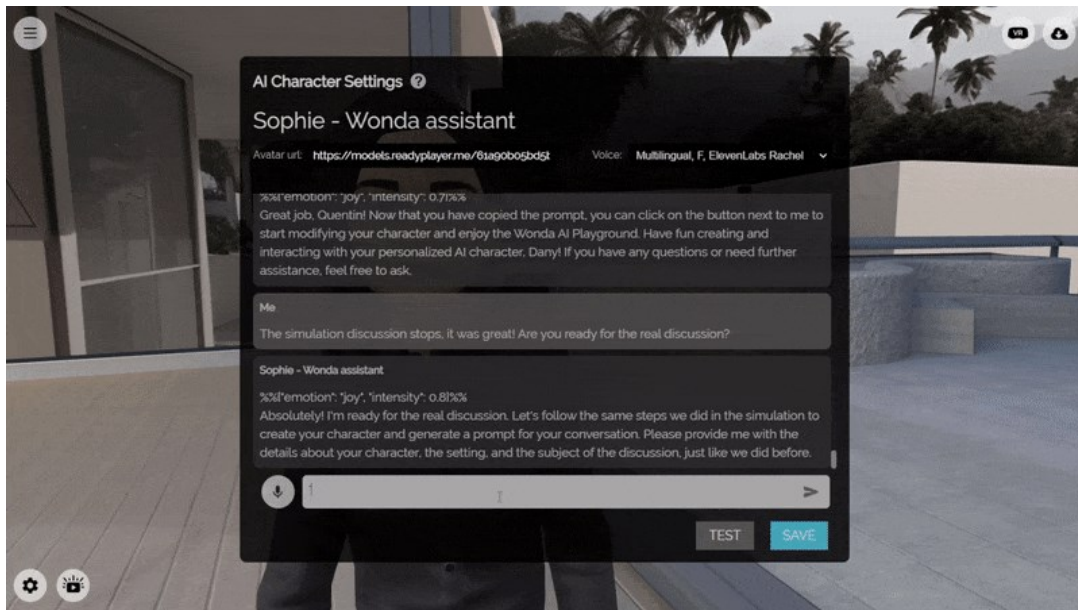
👉 **Note.** To finalize, include the phrase "Perfect. You are now ready to play your role in this simulation" to inform your AI character that the previous Q&As were only for training purposes.

👉 **Note.** There is a combined word limit of 12,000 words for "System Prompt," "Meta Discussion," and "Chat" discussions. It is recommended not to exceed 10,000 words.

### Initiating Conversations

- Instruct your AI character to initiate dialogue.
- Include the desired starting message in the final input of your Meta Discussion (for example, start by greeting your character by saying "I am sorry but who are you?").
- Obtain the response from the AI character.
- Delete the AI character's response.
- Save and refresh the Chat Window to test the implementation.

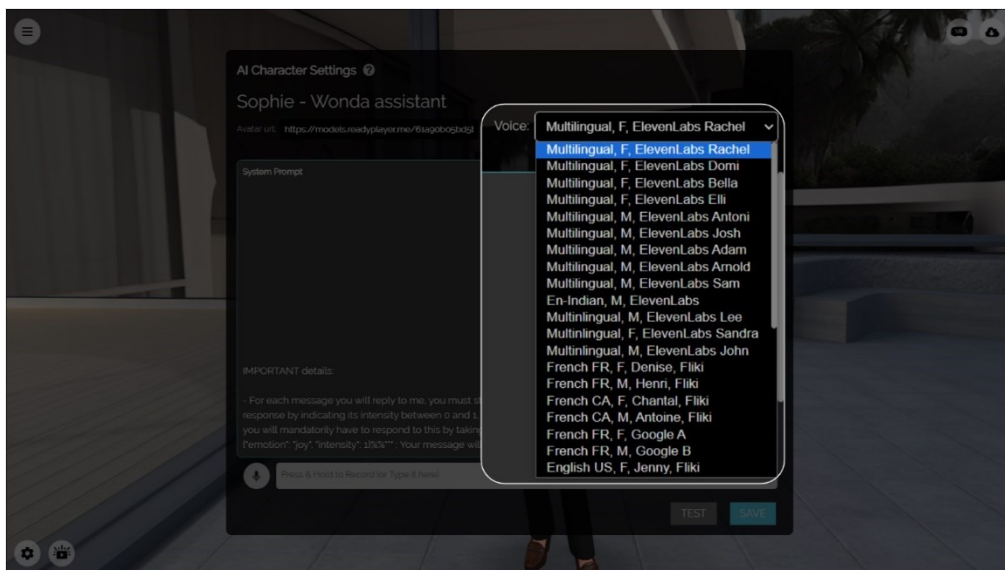




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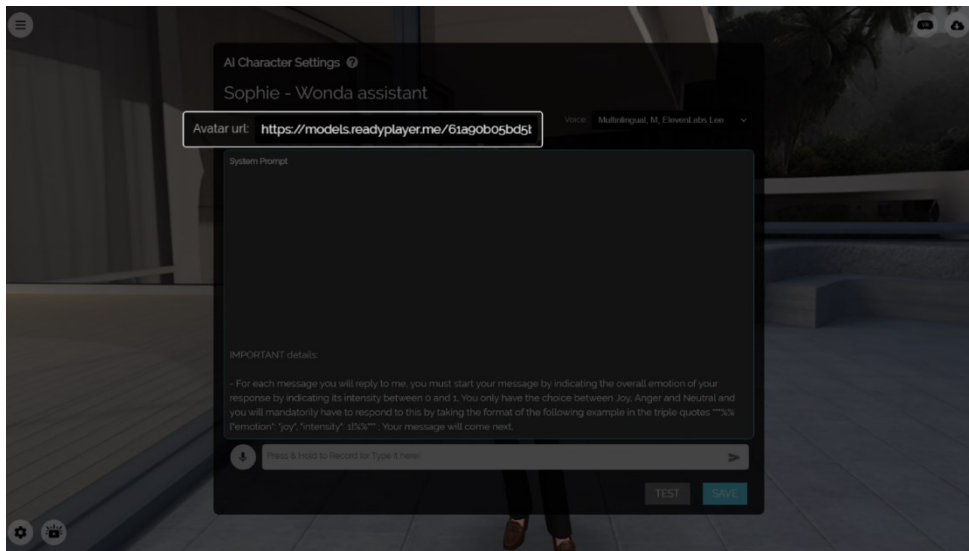
### Step 3. Customizing the AI character's voice

Personalize the character's voice by selecting from the dropdown section in the "AI character Settings" window. Voices are provided by ElevenLabs V1, while Whisper from OpenAI manages the Speech-to-Text transcription feature. Click "Save," to save the settings and finalize the voice customization.



### Step 4. Customizing the character's body with a 3D avatar

ReadyPlayer.me (<http://readyplayer.me/>) supplies 3D avatars, but custom 3D animated models can also be incorporated. Insert the readyplayer.me avatar link into the avatar URL section of the AI character Settings window.



With the customization of your AI character now complete, you are equipped to share these creations and guidelines with others, enhancing both their experience and yours.

## The Analytics dashboard

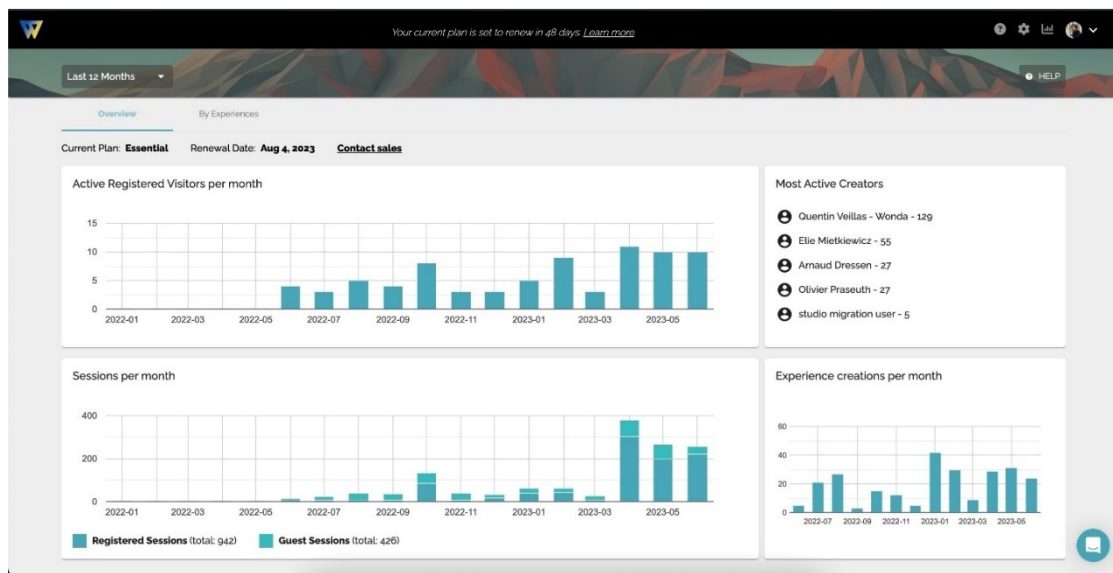
While the creation and enjoyment of immersive experiences offer substantial satisfaction, there remains a significant need for obtaining feedback and insights regarding such sessions. Whether functioning as a hub administrator monitoring overall usage or as an educator assessing student performance, comprehensive analytics are indispensable.

Wonda facilitates insights into visitor engagement across three hierarchical levels.

- Hub level. Provides a comprehensive overview of hub usage, available exclusively to administrators.
- Space level. Offers insights into groups of experiences.
- Experience level. Delivers detailed metrics and insights pertaining to specific content.

👉 Note. The default setting for all the dashboards is a 12-month period, although users can select other time frames via the selector in the top-left corner.

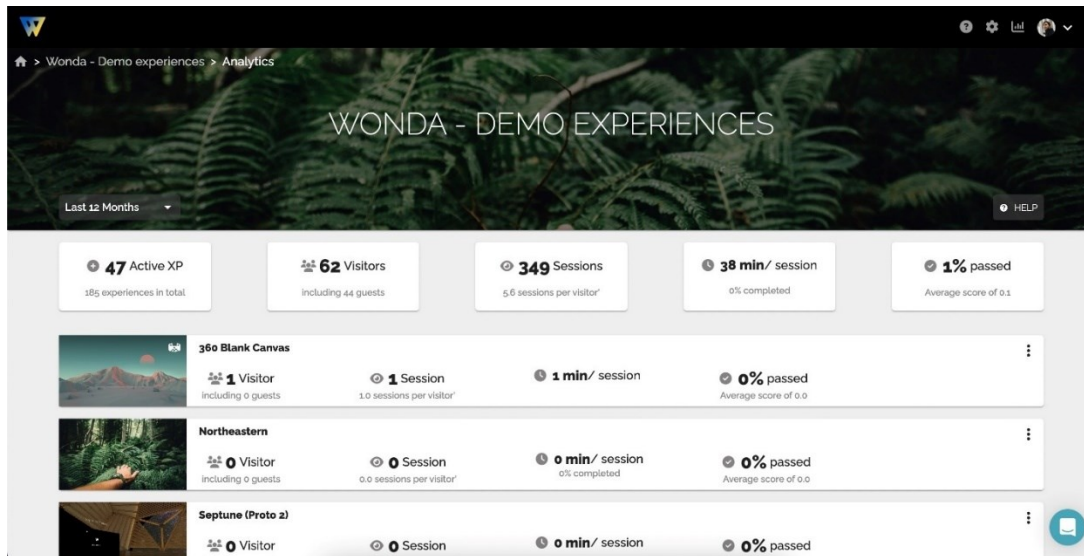
### Hub analytics (Admin only)



Accessible through the icon at the top right of the main toolbar, the "Hub analytics" section is compartmentalized into two segments.

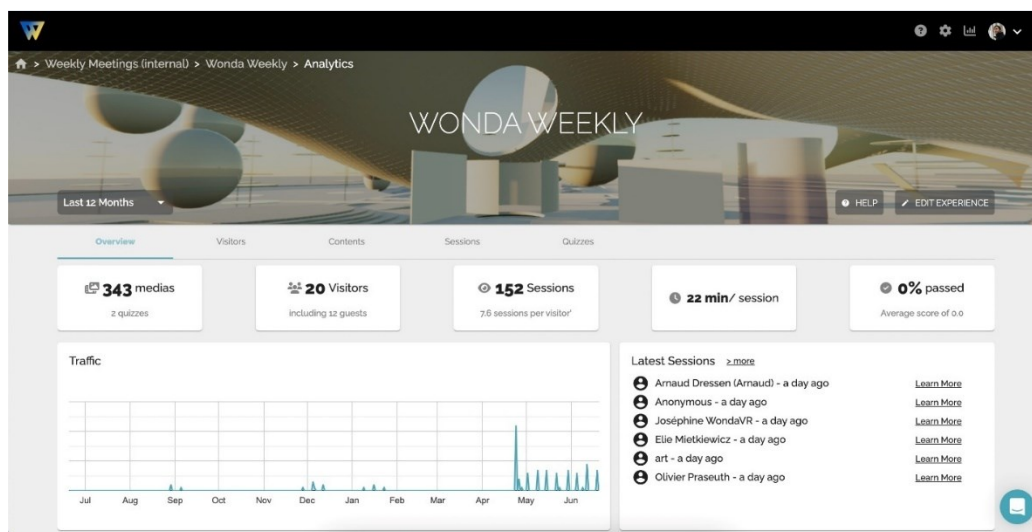
- Overview. This segment provides an overarching view of Hub usage. Ideal for determining the necessity of upgrading to a higher subscription plan during renewal, this view includes metrics such as the number of registered users per month and the annual guest sessions. Furthermore, it identifies power users by highlighting the most active content creators.
- By Experience tab. For a deeper dive into Hub engagement, this tab lists the ten most popular experiences based on the number of visitors, sessions, and average session duration.

## Space analytics



Available via the "Analytics" button within each Space, this feature offers insights specific to experiences within the Space. This section provides overall Space information, along with popularity metrics and learning scores for each Experience. Such data can guide decisions on which Experiences to improve or promote.

## Experience analytics



The Experience Analytics section allows for an in-depth examination of specific experiences. The available data is categorized into several tabs.

- **Overview.** This tab offers general insights, including visitor numbers and device types used.
- **Visitors.** Here, detailed metrics such as time spent, scores, and completion rates for each visitor are available. It also allows access to individual visitor sessions and quiz responses, though participants must have a Wonda account, SSO, or LTI for detailed tracking.
- **Content.** This tab provides a scene-by-scene breakdown of the experience, facilitating the identification of smooth progressions or content needing improvement.
- **Sessions.** Particularly useful for beta testing or debugging, this section allows for detailed inspection of user sessions. Clicking on a session name provides further details.
- **Quizzes.** This area presents visitor quiz results, aiding in the assessment of experience balance and the need for adjustments such as additional clues.

## FAQ

- I do not see the score and completion metrics on my dashboard. Ensure scoring and completion are enabled in your experience settings. Verify user navigation through all experience segments via the "Sessions" and "Content" tabs.
- Managing numerous experiences across the hub is challenging. Reorganize experiences by creating new Spaces and reallocating experiences as needed.

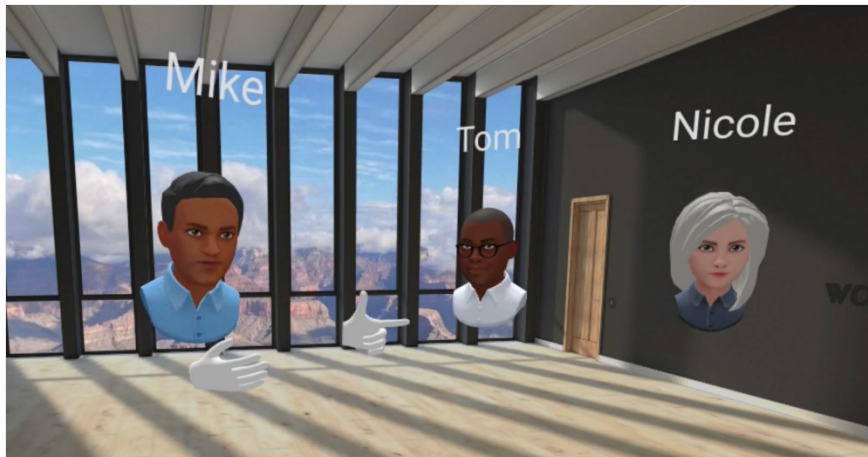


More about multiplayer sessions

## Introduction to multiplayer sessions

Wonda boasts advanced multiuser functionalities that facilitate remote training and collaboration while providing an unparalleled sense of "presence" absent in conventional video conferencing tools. The advantages of multi-user immersive experiences in remote contexts are manifold.

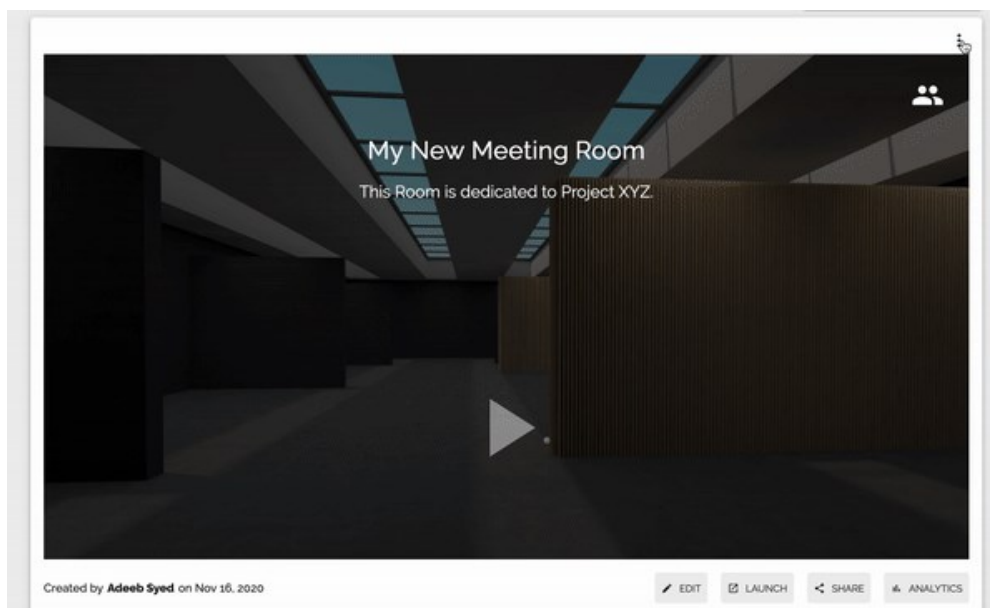
- Onboarding. Craft distinctive and engaging experiences.
- Collaboration. Facilitate compelling ideation and brainstorming sessions in fantastical virtual environments featuring expansive virtual screens, 3D objects, and 360° video materials. Attach any media to the walls of your innovatively designed workspace.
- Training. Conduct in-person virtual training sessions accommodating up to 15 remote participants.



What is important to note is that Wonda is compatible with all devices, including desktops, mobiles, tablets, and HMDs, allowing seamless participation with a single click.

Setting up a multiplayer session involves three straightforward steps.

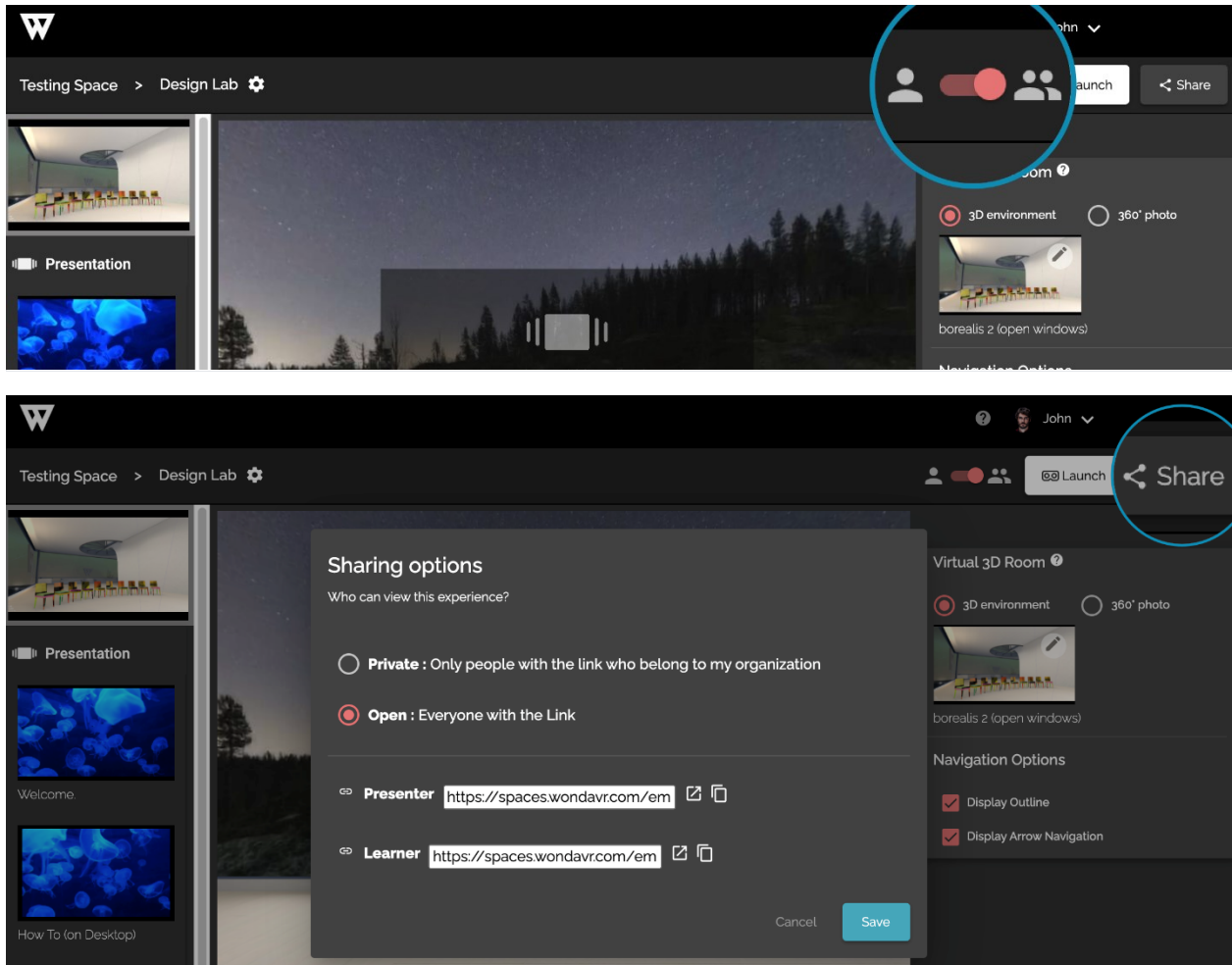
- Create a new multiplayer Experience in your Hub through the web application.
- Click "Share Experience" and copy-paste the Presenter/Learner link into your preferred calendar tool to invite participants. Those with the Presenter link will have comprehensive control over the Experience during the live session, whereas those with the Learner link will possess limited permissions.
- Initiate the multiplayer session by clicking the link from any device and web browser (e.g., Chrome and Meta browser), enabling instant participation without the need for any application installation.



animated

## Setup a multiplayer session

To set up a multiplayer session, navigate to your Hub and either create a new experience or select an existing one using Wonda on your desktop. Following the preview of your experience to confirm its presentation materials, you can enable a multiplayer session by clicking the indicated icon to switch between single-player and multiplayer modes. Once switched to the multi-user setting, clicking "Share" will reveal the sharing options, producing two links designated for a multiplayer session.



👉 Note. If you intend to invite participants who do not possess a Wonda account, ensure that your experience is set to "Open."

### Roles of users in a multiplayer session

Upon launching the experience within the web browser, every individual with access to the Presenter link will obtain full control of the Experience during the session, whereas Learners will have limited permissions as delineated below.



Permissions	Learner	Presenter
Play/ pause/ seek in a video	X	✓
Trigger links and Hotspots	X	✓
Display laser pointer	X	✓
Display Presentation Outline	X	✓
Mute/Unmute Other Participants	X	✓
Share desktop screen	X	✓
Answer Quiz	✓	✓

### Moderation

As a presenter, you possess the capability to moderate a live session by muting participants and removing their messages from the sidebar. To ensure exclusivity to invited users, you can set your session to "Private."



Note. While Wonda permits multiple users to join via the Presenter link and obtain presenter rights, it is advisable for large group meetings that a single participant connects using the presenter link. This practice aids in maintaining order during a live session.

## How users can be identified in Spaces

To effectively identify users when they engage with Experiences and monitor their activities, three distinct options are available.

- Identify users via Microsoft/Google account.
- Identify users via Single Sign-On (SSO) (this feature will not be detailed in the notes).
- Identify users via Learning Tools Interoperability (LTI) (this feature will not be detailed in the notes).

### Identification via Microsoft/Google accounts

The platform inherently supports authentication through Google or Microsoft email addresses. The procedure for this method is as follows.

1. The editor creates an experience and configures it as "open with login required."

#### Sharing options

Who can view this experience?

**Open:** Anyone with the link

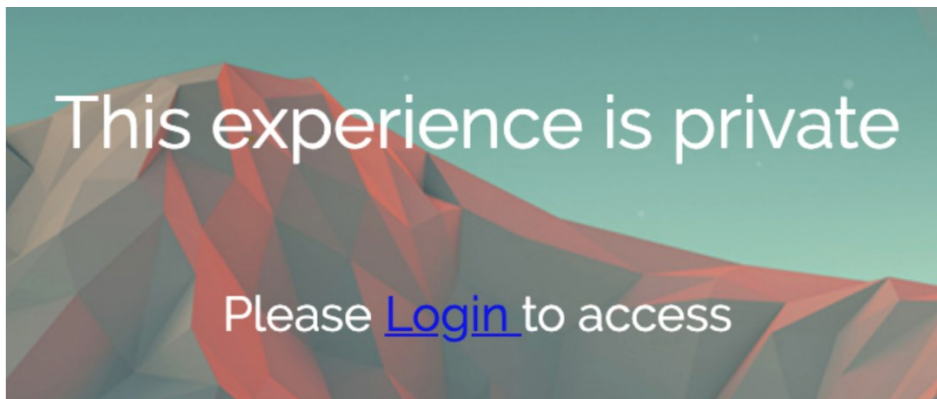
Allow non logged-in viewers

**Private:** Only Space Participants + [manage Participants](#)

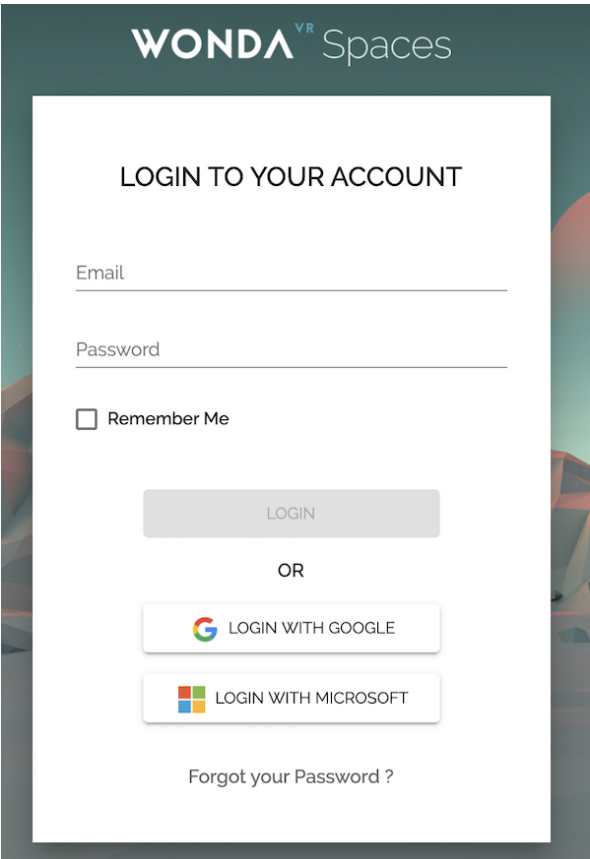
**Secured by domain**

- Player will only be embeddable on whitelisted domain ([Domain restrictions Settings](#))
- Viewers won't have to be logged in wonda VR Spaces

2. New users navigate to the experience URL using a web browser and are prompted to log in.



3. Users log in using their Google or Microsoft email addresses to gain access to the experience.



4. Users are then identified, enabling them to view the experience while their activity is tracked.

## Checklist for a successful multiplayer session

### Reviewing your presentation

- Ensure that your presentation does not commence with an autoplay video, as this can lead to synchronization issues.
- If you intend to display an avatar, begin the project with a 2D scene instead of a 360° photo or video.

### Technical checklist before starting your session

- Verify that your HMD is fully charged; a low battery can impair performance.
- Utilize headphones to maintain immersion in the experience and prevent audio feedback loops.
- Confirm that your Internet connection is robust enough to support video conferencing tools such as Google Meet or Zoom.
- Ensure your browser is updated. For VR, Meta Browser is recommended, whereas Google Chrome is ideal for desktop use.

### Additional tips and troubleshooting

- If a participant is neither visible nor audible, this may be a WebRTC issue; check if your device supports WebRTC.
- Should your HMD or controller battery run low, switch to the same link on your Desktop to continue the session.
- If you encounter significant echo, advise participants to use headphones, as this is likely the primary cause. If headphones are not an option, request the participant to mute themselves, or do so yourself using presenter rights.
- For optimal performance in VR, use 6 DOF headsets such as Meta Quest 2 or 3 in conjunction with Meta Browser.

### Audio transition for seamless experience

To seamlessly transition audio from a video conferencing tool to the VR experience with Wonda, keep the microphone active on the conferencing tool and instruct all participants to enter mute mode once in the VR multiplayer session.



# Advanced topics

# How to design accessible experiences

Despite the rapid evolution of the Metaverse ecosystem, inclusivity must remain a priority to ensure no individual is marginalized. To enhance the accessibility of experiences you create, it is imperative to assume responsibility and ensure your designs are as inclusive as possible.

## Dos and don'ts of designing for accessibility

<h3>Designing for users on the autistic spectrum</h3> <table border="1"> <thead> <tr> <th>Do...</th> <th>Don't...</th> </tr> </thead> <tbody> <tr> <td>use simple colours</td> <td>use bright contrasting colours</td> </tr> <tr> <td>write in plain English</td> <td>use figures of speech and idioms</td> </tr> <tr> <td>use simple sentences and bullets</td> <td>create a wall of text</td> </tr> <tr> <td>make buttons descriptive</td> <td>make buttons vague and unpredictable</td> </tr> <tr> <td>build simple and consistent layouts</td> <td>build complex and cluttered layouts</td> </tr> </tbody> </table>	Do...	Don't...	use simple colours	use bright contrasting colours	write in plain English	use figures of speech and idioms	use simple sentences and bullets	create a wall of text	make buttons descriptive	make buttons vague and unpredictable	build simple and consistent layouts	build complex and cluttered layouts	<h3>Designing for users of screen readers</h3> <table border="1"> <thead> <tr> <th>Do...</th> <th>Don't...</th> </tr> </thead> <tbody> <tr> <td>describe images and provide transcripts for video</td> <td>only show information in an image or video</td> </tr> <tr> <td>follow a linear, logical layout</td> <td>spread content all over a page</td> </tr> <tr> <td>structure content using HTML5</td> <td>rely on text size and placement for structure</td> </tr> <tr> <td>build for keyboard use only</td> <td>force mouse or screen use</td> </tr> <tr> <td>write descriptive links and headings</td> <td>write uninformative links and headings</td> </tr> </tbody> </table>	Do...	Don't...	describe images and provide transcripts for video	only show information in an image or video	follow a linear, logical layout	spread content all over a page	structure content using HTML5	rely on text size and placement for structure	build for keyboard use only	force mouse or screen use	write descriptive links and headings	write uninformative links and headings	<h3>Designing for users with low vision</h3> <table border="1"> <thead> <tr> <th>Do...</th> <th>Don't...</th> </tr> </thead> <tbody> <tr> <td>use good colour contrasts and a readable font size</td> <td>use low colour contrasts and small font size</td> </tr> <tr> <td>publish all information on web pages</td> <td>bury information in downloads</td> </tr> <tr> <td>use a combination of colour, shapes and text</td> <td>only use colour to convey meaning</td> </tr> <tr> <td>follow a linear, logical layout</td> <td>spread content all over a page</td> </tr> <tr> <td>put buttons and notifications in context</td> <td>separate actions from their context</td> </tr> </tbody> </table>	Do...	Don't...	use good colour contrasts and a readable font size	use low colour contrasts and small font size	publish all information on web pages	bury information in downloads	use a combination of colour, shapes and text	only use colour to convey meaning	follow a linear, logical layout	spread content all over a page	put buttons and notifications in context	separate actions from their context
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### Users on the autistic spectrum

- Do. Use simple colors, write in plain English, use simple sentences and bullets, make buttons descriptive, build simple and consistent layouts.
- Don't. Use bright contrasting colors, use figures of speech and idioms, create walls of text, make buttons vague and unpredictable, build complex and cluttered layouts.

### Users of screen readers

- Do. Describe images and provide video transcripts, follow a linear logical layout, structure content using HTML5, design for keyboard-only use, write descriptive links and headings.
- Don't. Rely only on images or videos for information, spread content over a page, depend on text size and placement for structure, force mouse or screen use, write vague links or headings.

#### *Users with low vision*

- Do. Utilize good contrasts and readable font sizes, publish information on web pages (HTML), use a combination of colors, shapes, and text, ensure text remains visible at 200% magnification, place buttons and notifications within context.
- Don't. Use low color contrasts and small fonts, bury information in downloads, convey meaning solely through color, force horizontal scrolling when magnified, separate actions from their context.

#### *Users with physical or motor disabilities*

- Do. Create large clickable actions, provide ample space for form fields, design for keyboard or speech-only use, consider mobile and touch screen usage, offer shortcuts.
- Don't. Demand precision, cluster interactions, design dynamic content requiring extensive mouse movement, enforce short timeout windows, burden users with excessive typing and scrolling.

#### *Users who are deaf or hard of hearing*

- Do. Write in plain English, use subtitles or video transcripts, maintain a linear logical layout, break up content with sub-headings, images, and videos, allow preferred communication support requests for booking appointments.
- Don't. Use complex words or idioms, restrict content to audio or video only, create complex layouts and menus, present long content blocks, rely solely on telephone contact.

#### *Users with dyslexia*

- Do. Support text with images and diagrams, align text to the left, ensure a consistent layout, consider alternate formats (audio, video), keep content succinct, allow users to adjust background-text contrast.
- Don't. Use dense text blocks, underline words, use italics or capitals, expect users to remember previous pages' content, provide reminders and prompts, rely on precise spelling, utilize autocorrect and offer suggestions, overload one area with information.

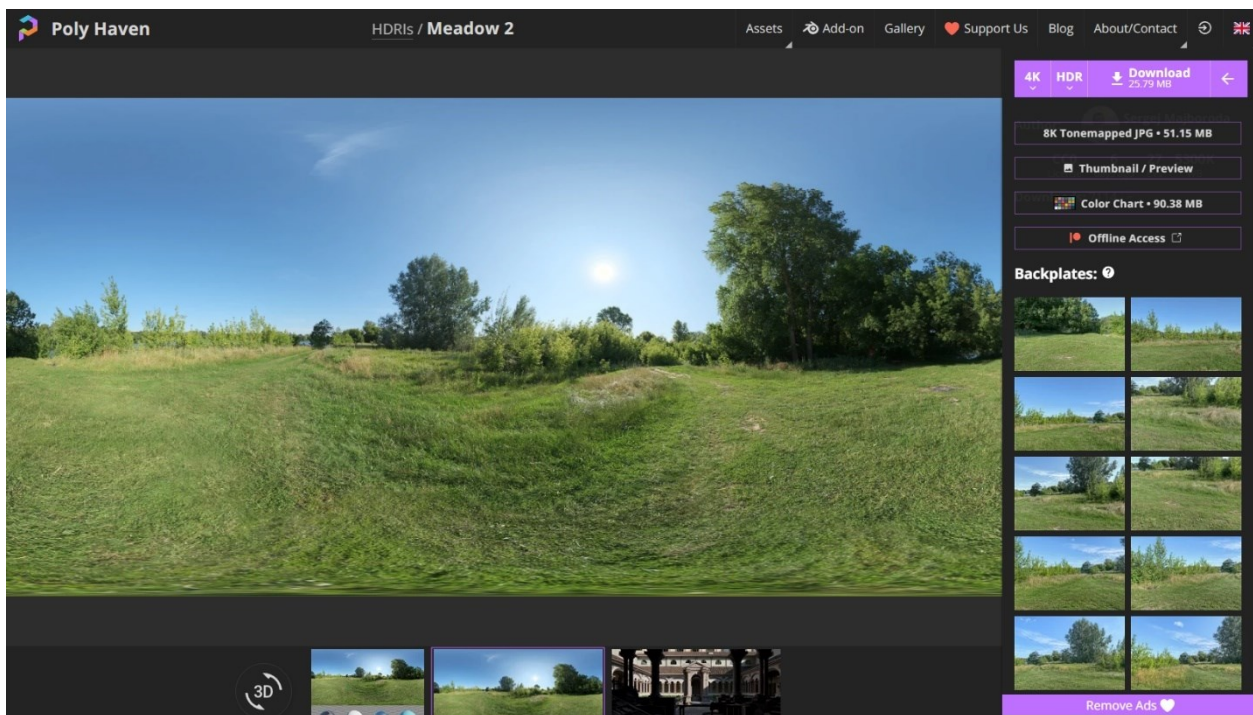
## Set up your custom Skybox

Wonda provides a suite of templates, which includes pre-built 3D environments and 360° Skyboxes. On the other hand, users have the flexibility to import their own content. Each Experience can incorporate a 360° Skybox and/or a 3D room. The Skybox is essentially a spherical image or video, often depicting the sky, positioned at an infinite distance to encapsulate the experience. The 3D room serves as the interactive environment within which users can navigate.

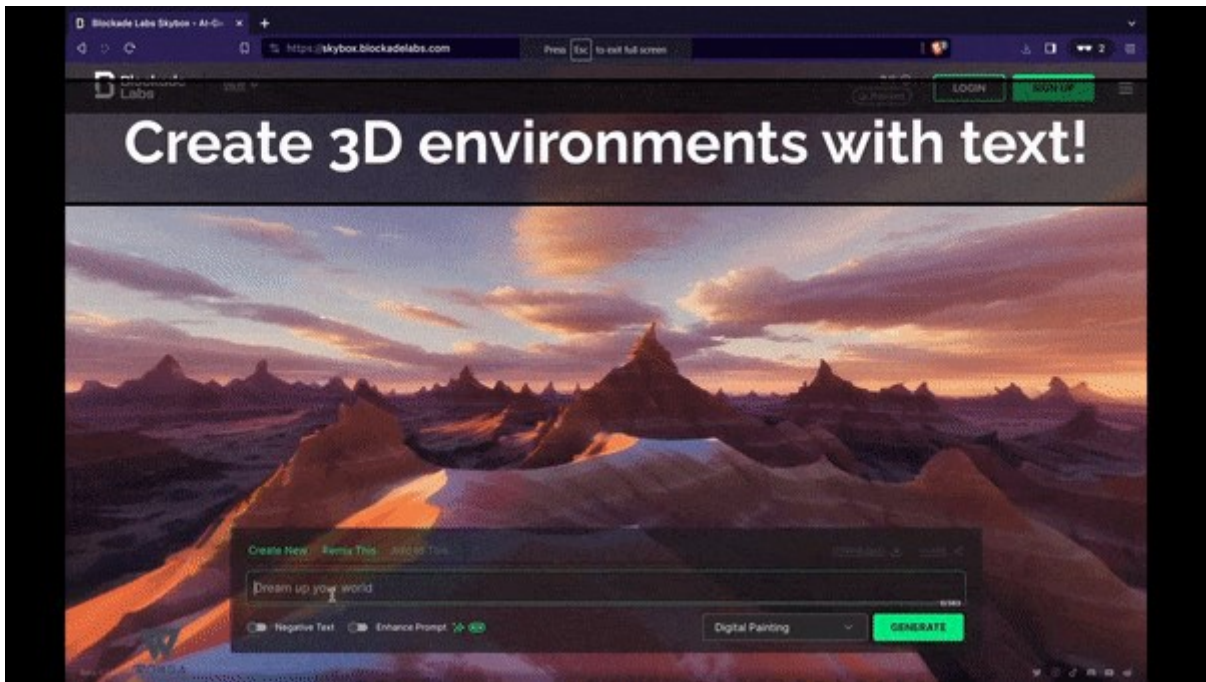
### Setting up a 360° Skybox

No additional software is required to set up a Skybox in Wonda. However, certain websites may be utilized to find or generate 360° content.

- Find or generate a Skybox. Numerous online resources provide free 360° images, such as Polyhaven (<https://polyhaven.com/>). Alternatively, users can generate their own Skybox using tools like BlockadeLabs (<https://skybox.blockadelabs.com/>).



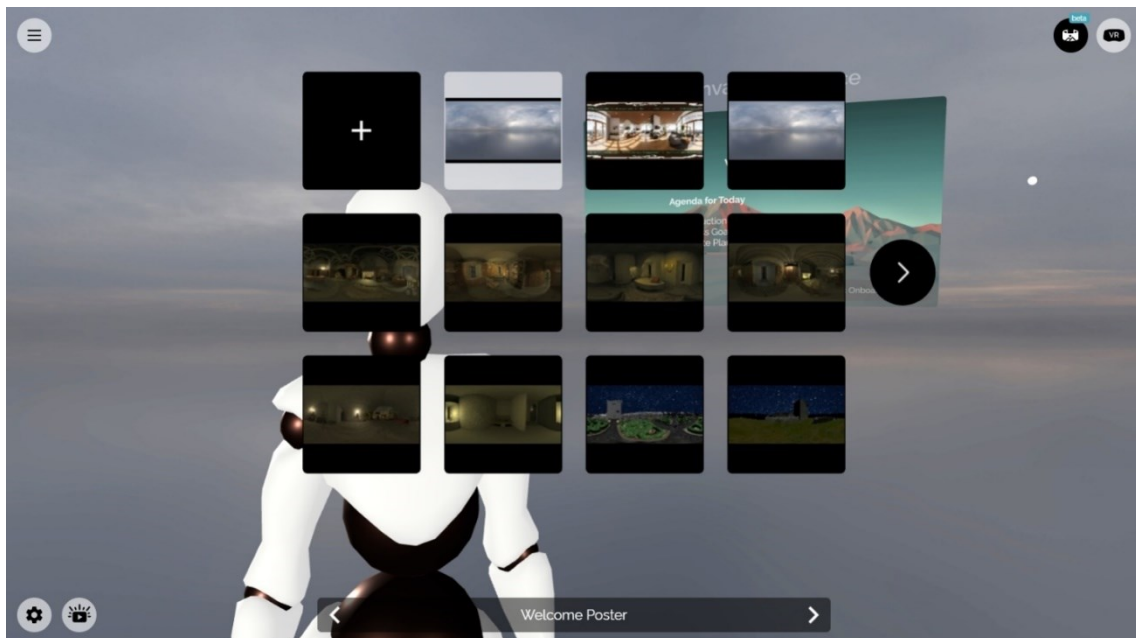




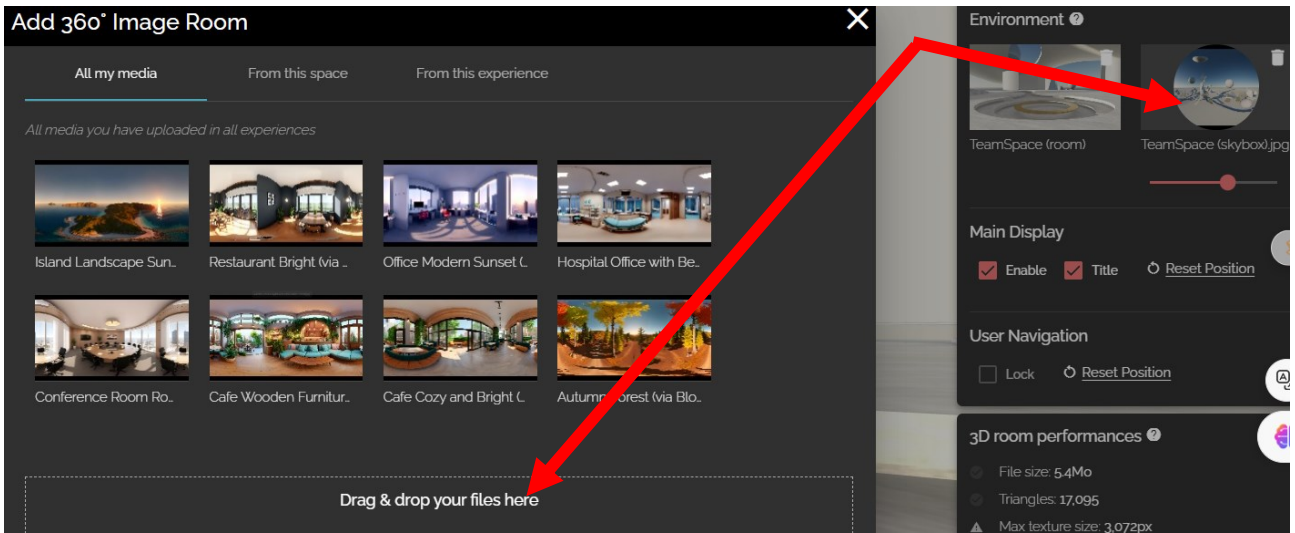
animated

- Import your Skybox into Wonda. The process is straightforward. Drag and drop your image directly into the Skybox Library within Wonda Player or Wonda Editor.
  - From viewing mode. If the option Experience Settings → Advanced → Allow Skybox Edition (Participants only) is enabled, participants can access and modify the Skyboxes directly in viewing mode. Open the Skybox Library and click the Change Skybox Icon at the top-right of the screen to make changes.

👉 Note. This option is not available in multiplayer viewing mode.



- From editing mode. Upon import, a default thumbnail will be created. Additionally, users can rotate the Skybox.

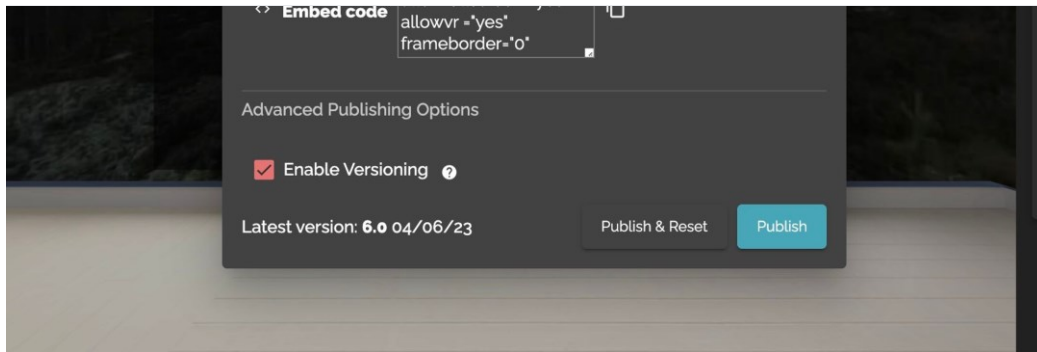


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## Advanced publishing and versioning

👉 Note. This feature is not available in the free version of Wonda.

As part of Wonda's advanced publishing options, users can determine when their modifications are ready to be shared with their audience by utilizing the Versioning features. This functionality is particularly valuable during any project review phase and, more importantly, following the public release of a project when new modifications are necessary. It ensures that changes undergo thorough internal validation and testing before being deployed.

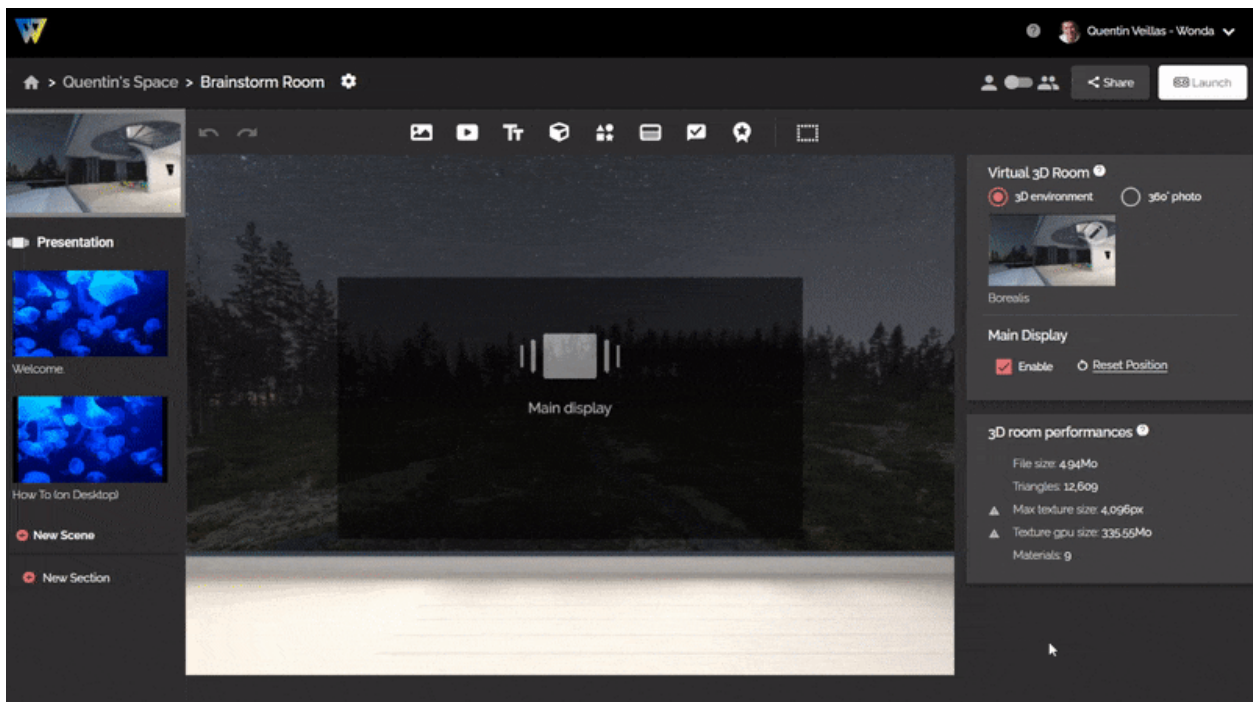


### How it works


This advanced publishing option allows for the editing of a draft version until modifications are explicitly published to create a new version of the project. This process can be repeated indefinitely, enabling the generation of multiple versions as needed.

### Initial version publication

To publish the initial version of an experience (e.g., version 1.0), navigate to Experience Settings → Advanced → Advanced Publishing Options and activate the Enable Versioning feature. Once the experience is ready for publication, access the Publish & Share options in the Editor and select 'Publish.' This action generates the "official" link for the experience, which can be shared with the audience via direct link, embed, or Learning Management System (LMS) if applicable.




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 Notes. Versioning is only available in Single Player Mode. Upon enabling versioning, two links are provided. a public link, accessible from the "Sharing Options" panel, and a draft link for previewing the draft version directly from the Editor (marked by "&versioned=false" at the end of the URL). As a best practice, it is advised to publish the first version early in the project timeline to ensure that reviewers always assess the latest published version.

#### *Managing subsequent versions*

After the initial version has been published, the current draft version can be continually edited without affecting the latest published version. A new version can be created at any time by publishing the updated draft. Importantly, the shareable link of the experience remains unchanged, obviating the need to resend or update links for the LMS. Consequently, all visitors will always have access to the most recent versions available.

 Note. Once a new version is released, reverting to a previous version is not possible. To save and freeze a specific version for backup, it is recommended to duplicate the experience as a "backup" version.

#### *Additional option. Saving visitor progression*

Furthermore, under "Advanced Publishing Options," there is an option to enable visitors to save their progression and retrieve their progress across sessions (refer to the section "[Save visitor progression](#)" for further details). If this option is activated, selecting "Publish and reset" will push a new major version, ensuring that both new and returning visitors have access to the latest version. This action will reset previously saved progress for returning visitors, requiring them to start over. Alternatively, selecting "Publish (only)" will apply the latest modifications to new visitors only, while returning visitors will retain access to the older version.

## Save visitor progression

👉 Note. This feature is not available in the free version of Wonda.

Enable logged-in visitors to retain their personal progress across multiple sessions through this feature. This capability proves especially beneficial for extended experiences. By activating the "Save Visitor Progression" option, visitors can return at any time to continue their progress and complete their experience over several days.



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👉 Notes. This feature operates only if versioning is enabled under "Advanced Publishing" options. It is compatible with LMS connectors, thereby circumventing the login process for visitors while still saving their progression. For public experiences accessible to non-registered visitors, guests who are not logged in will be unable to save their progression.

### Information saved by the feature

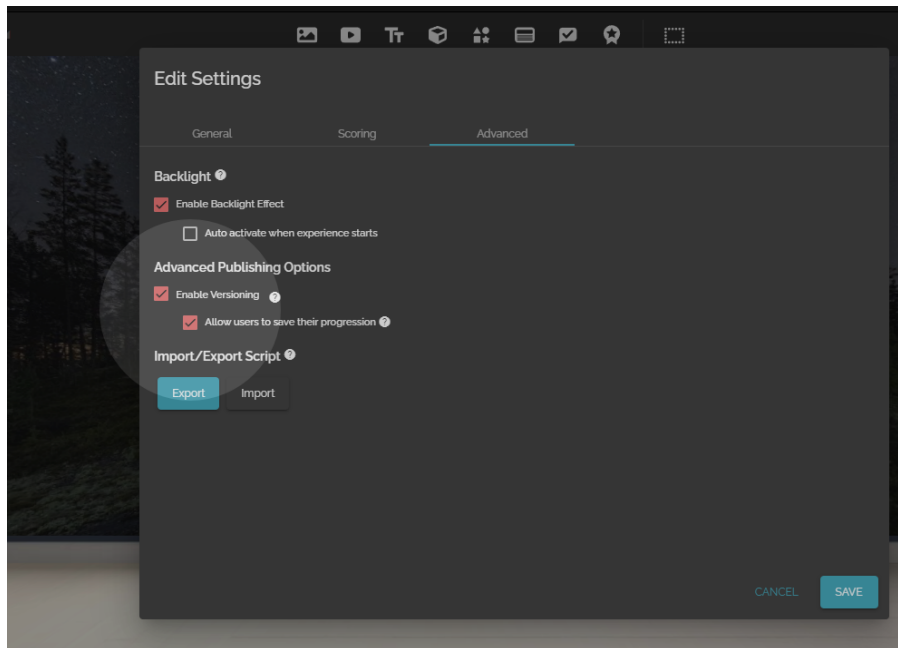
Upon enabling, this option stores the following visitor states when they exit a session:

- Their last position within the 3D environment or most recent 360° scene.
- Their viewpoint orientation (i.e., their 'look at' position).
- Their accumulated score.
- Previous quiz answers.
- The latest scene displayed on the Main Display.
- The latest state of shown/hidden annotations.

👉 Note. Annotations and quiz answer visibility are saved solely within the 3D room.

### Activation process for saving visitor progression

This option, available exclusively for the Campus Plan, can be activated for any experience set in single-player mode. To enable this feature, navigate to Experience Settings → Advanced, select "Enable Versioning" and "Save Visitor Progression," and then save your settings.



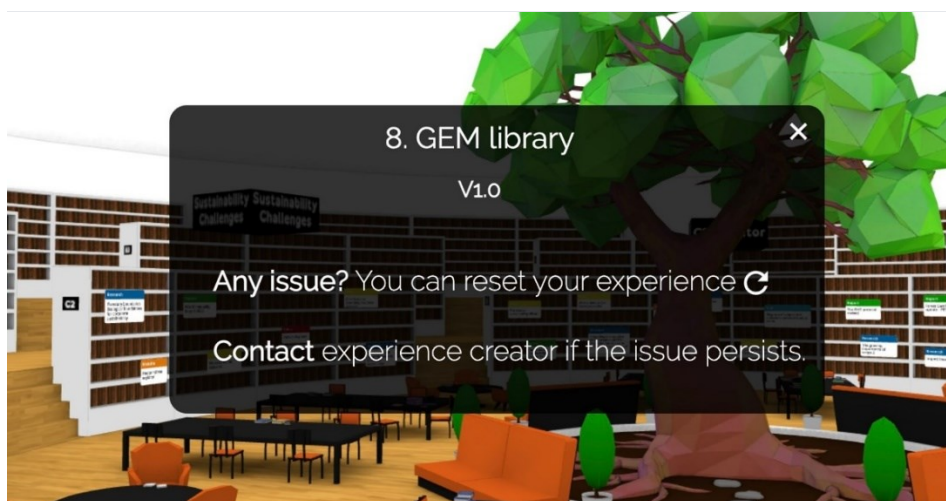
👉 Tip. If the option appears greyed out, your experience may be set to multiplayer mode. Switch to Single Player mode and reopen the Settings to activate the feature.

### Consequences of publishing a new version

"Save Visitor Progression" functions only when combined with the Versioning option. You must first publish your experience to allow visitors to save their progress. If you make modifications to a project after sharing a public link and choose the "Publish & Reset" option, all visitors will be required to reset the experience to enter. To avoid resetting progress for returning visitors, select the "Publish" option, which allows only new visitors to see changes.

### Visitor progression reset procedure

Visitors can reset their experience at any time using the "?" icon located at the top right corner of their experience window. Upon choosing to reset, visitors can start a new session, resetting all previously saved progress.



👉 Note. Regardless of resets, individual session data (e.g., scores) remain accessible for editors in the session logs within the Experience's Analytics Dashboard. If a visitor opts to reset their experience, all previous progress will be lost, and the experience will load from its latest uploaded version.

## Design best practices

Wonda utilizes Three.js, a robust JavaScript library for generating and rendering animated 3D graphics within browsers via WebGL. The platform supports both .glb and .glTF file formats for 3D models.

### General recommendations

- Maximum polygon count. 100,000.
- Recommended texture count. Fewer than 10.
- Maximum texture resolution. 4K. For enhanced overall resolution, it is advisable to segment the mesh into multiple parts, each assigned a unique material with a 4K texture.
- Material quantity. Minimize the number of materials to reduce draw calls, thereby optimizing performance.
- Maximum file size. 20 MB.

👉 Note. If modifications are required to align the model with these specifications, third-party tools such as RapidCompact can be employed.

### Materials in glTF format

- glTF format defines materials using a standardized set of parameters derived from Physically-Based Rendering (PBR) methods. Detailed information can be found at <https://github.com/KhronosGroup/glTF/tree/master/specification/2.0#materials>.
- glTF also includes a material extension, KHR\_materials\_unlit, utilized for shadeless materials unaffected by lighting conditions. Additional details are available at [https://github.com/KhronosGroup/glTF/tree/master/extensions/2.0/Khronos/KHR\\_materials\\_unlit](https://github.com/KhronosGroup/glTF/tree/master/extensions/2.0/Khronos/KHR_materials_unlit).

### glTF shader implementation in Wonda

- For all quality settings, KHR\_materials\_unlit are processed as basic materials. Supported maps for these materials can be reviewed at <https://threejs.org/docs/#api/en/materials/MeshBasicMaterial>.
- On desktop platforms, standard materials are rendered as standard materials, with supported maps listed (<https://threejs.org/docs/#api/en/materials/MeshStandardMaterial>).
- On VR/mobile platforms, standard materials are interpreted as mobile materials. Supported maps include ambient occlusion, emissive, and diffuse maps.

The core glTF material system adheres to a metal/rough PBR workflow and includes the following channels:

- Base Color.
- Metallic.
- Roughness.
- Baked Ambient Occlusion.
- Normal Map.
- Emissive.

### Three.js constraints

The correct interpretation of lightmaps and ambient occlusion maps in Three.js necessitates a second set of UV coordinates (uv1).

### Rendering recommendations

For optimal rendering quality in Wonda, it is recommended that materials be defined using the KHR\_materials\_unlit extension. This approach ensures superior performance and quality, with extensive map support. When baking lightmaps or ambient occlusion maps distinct from the diffuse map, a different set of UVs must be utilized.

For further information on glTF/glb usage in Blender, please refer to the Blender documentation ([https://docs.blender.org/manual/en/2.80/addons/io\\_scene\\_gltf2.html](https://docs.blender.org/manual/en/2.80/addons/io_scene_gltf2.html)).

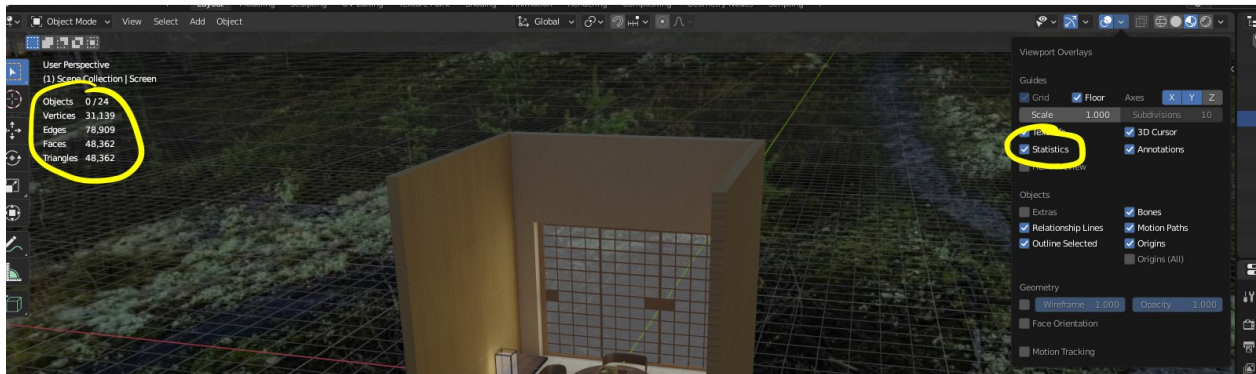
## How to setup your custom environment

Wonda accommodates the importation of any 3D environment, irrespective of the modeling software used. This section references Blender, a free and open-source software, to illustrate the process.

### Blender component

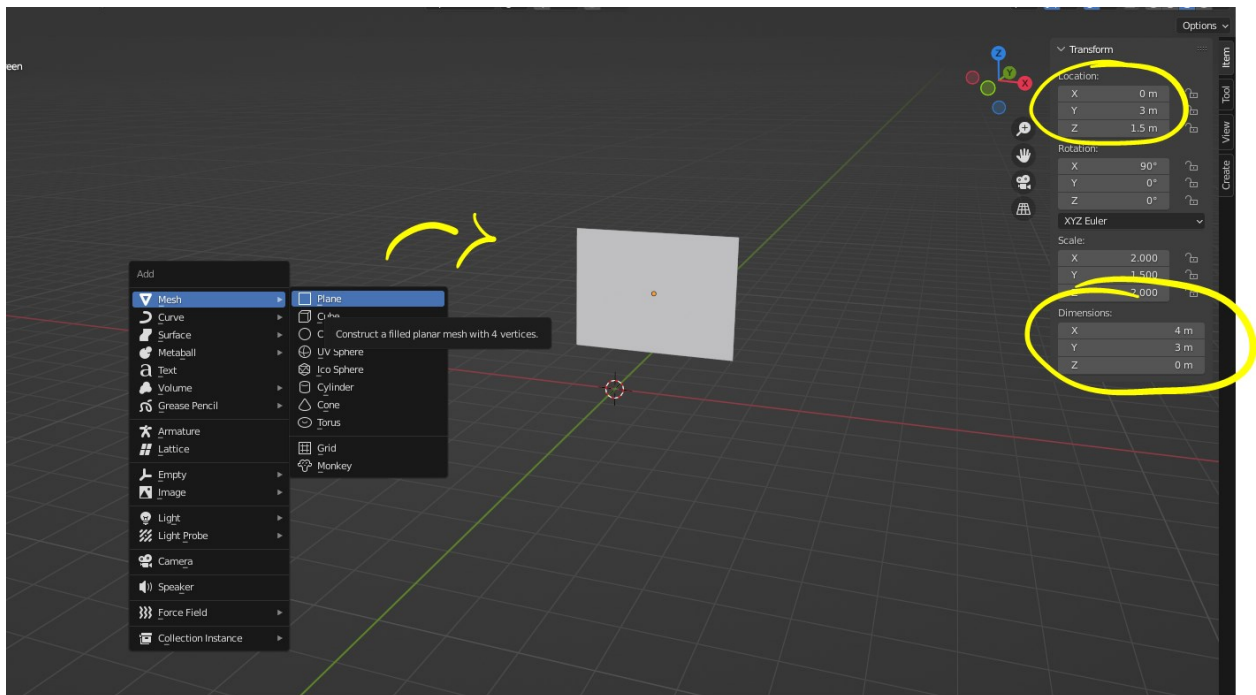
#### Ensure 3D model compliance

- Maximum Polygon Count. 100k.
- Maximum texture resolution. 4K (higher resolutions may be incompatible with mobile platforms).
- Recommended material number. Fewer than 10.



#### Simulating the Main Display

Create a plane to simulate the Main Display's position after importing it into the Experience. Scale the plane to 4 meters in width and position it at (X.0.00, Y.3.00, Z.1.50).



👉 Notes. The Player Spawn Point is fixed at (X.0, Y.0, Z.0), meaning that the player faces the Blender +Y direction upon spawning. The plane serves as a helper and remains invisible in your Wonda project.

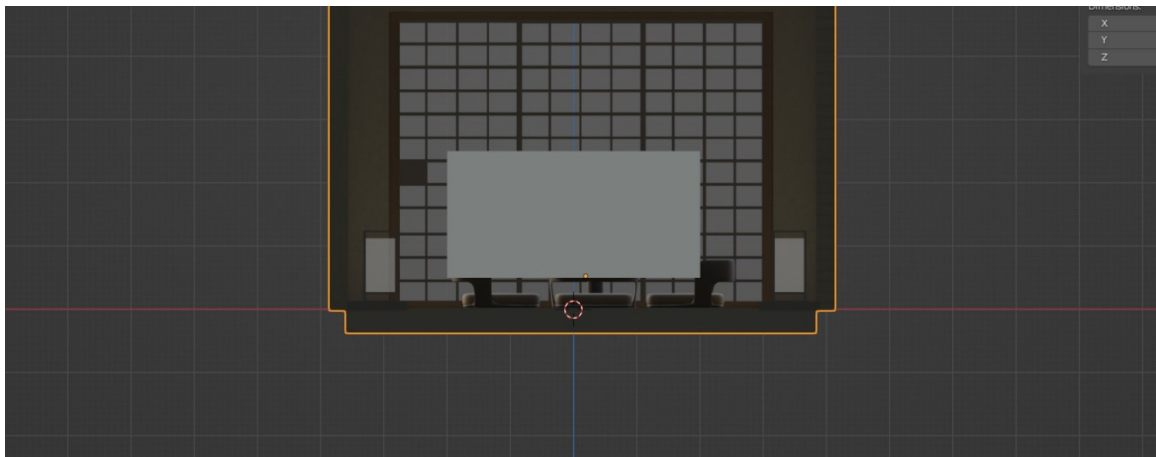
#### Adjusting the 3D environment

Ensure the Main Display is correctly positioned by moving the 3D Environment around the plane. Do not move the helper plane itself. Additionally, maintain the floor height at Z.0.00.





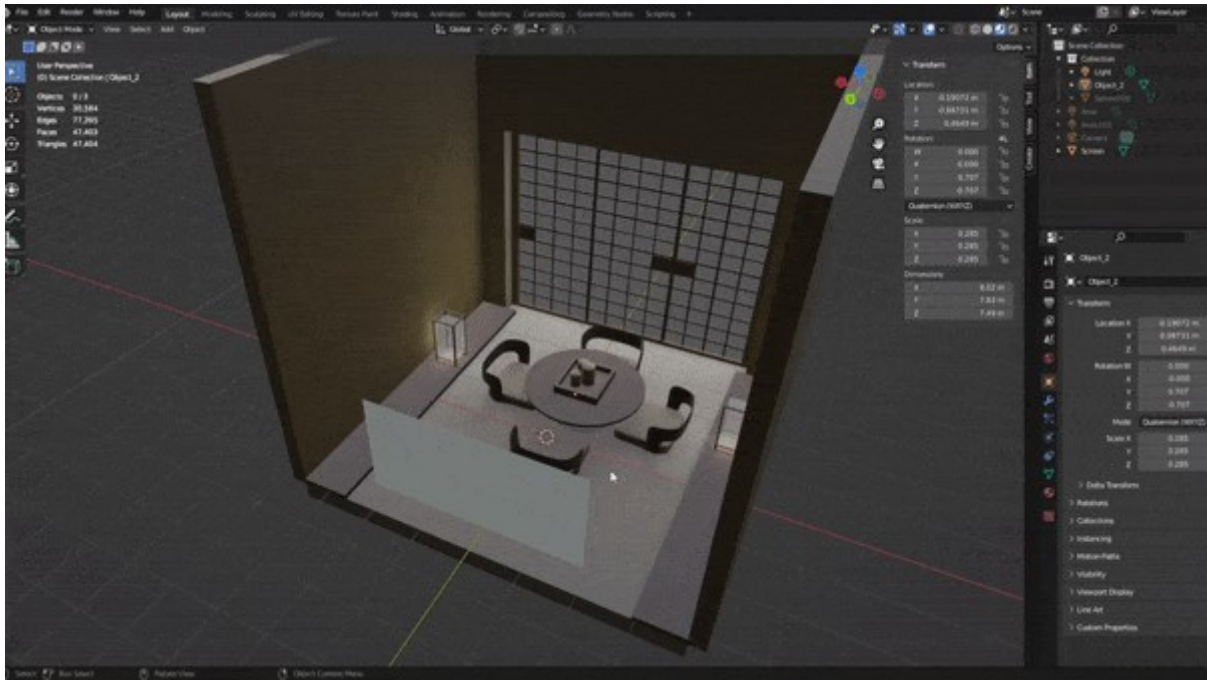
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### *Creating a walkable area*

Design a new mesh, without any material, and rename it "Wonda\_navmesh". Your navigation mesh must:

- Be situated above the floor.
- Encompass the spawn point at (0.0.0).
- Orient its normals towards the user.



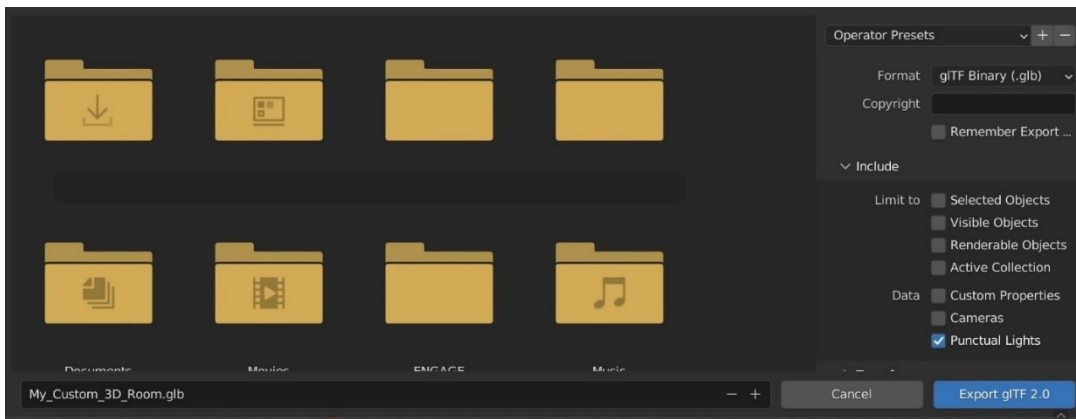
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👉 Note. Omitting a navigation mesh results in an infinite walkable area.

### Wonda component

Once the room is prepared.

- Navigate to File → Export → glTF 2.0 (.glb/.gltf) and click "Export glTF 2.0". If lights are not baked, select the "Punctual Lights" option.



- Open Wonda, select your Experience and click on the 3D Environment. Open the Media Library and drag & drop the exported .glb or .gltf file, selecting it as the 3D Environment for your Experience.



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👉 Note. A default thumbnail will be automatically generated.

- Update the thumbnail and title of your experience as necessary.

## How to set your 3D navigation mesh

Wonda provides users with a default invisible and infinitely walkable flat floor, positioned at a height of  $Z=0$ , which can be replaced with a customized version. The navigation mesh is the delineated surface within which players can navigate in your experience. It is important to ensure that the navigation mesh prevents the crossing of walls, restricts walkable regions, and accommodates any slopes present in your model.

The navigation mesh facilitates.

- Movement via arrow keys (or the WASD keys) in Wonda.
- Teleportation using the cursor in Wonda.

### Determining the spawn point

The spawn point is situated at coordinates  $(X.0, Y.0, Z.0)$ , with the player's orientation depending on the tool used:

- The +Y direction if utilizing Blender.
- The -Z direction if utilizing Spoke.

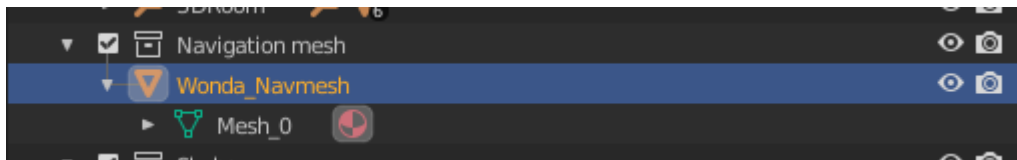
It is important to acknowledge that the navigation mesh must contain the point  $(0; 0; 0)$ . Should there be a necessity to reposition the spawn point, the entire room must be adjusted to align with the desired spawn location.

### Creation of the navigation mesh

For optimal results, it is recommended to initiate the creation of the navigation mesh from a simple plane, ensuring that the composite navigation mesh is confined to a single object with a maximum of 1,000 triangles. Maintaining a coherent navigation mesh is essential, as fragmentation will necessitate the use of teleportation for character movement.

### Setup of the navigation mesh

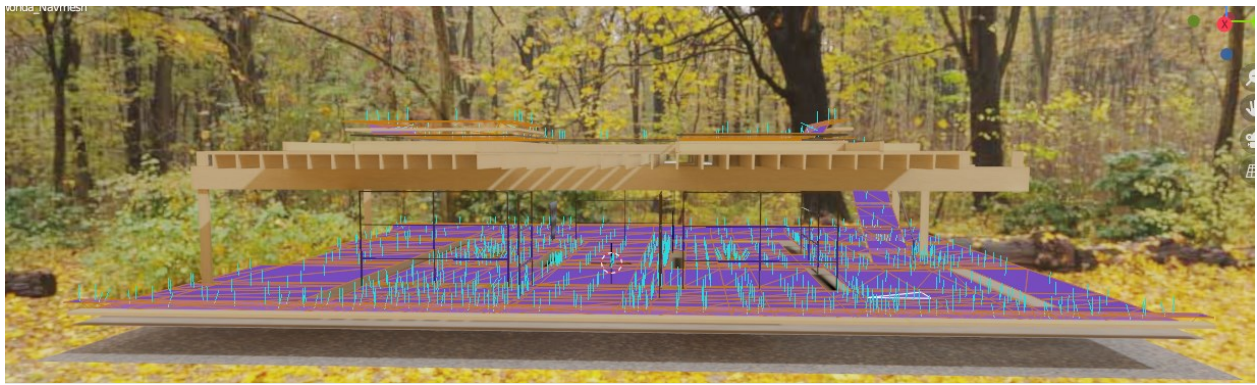
When integrating the navigation mesh directly through a Blender file, it is mandatory to label the parent node of the navigation mesh as "Wonda\_Navmesh."



The navigation mesh must:

- Be positioned above the floor.
- Include the spawn point at  $(0.0.0)$ .
- Have its normals oriented towards the user.

The figure below displays a correctly defined navigation mesh with appropriate normal orientation and correct positioning above the floor.



## Validation of the navigation mesh

### *Cursor navigation validation*

To ensure cursor navigation functionality, use Wonda. During the validation process within the editor, verify that the cursor facilitates navigation without displaying the navigation mesh. Additionally, confirm that teleportation is restricted to defined navigation mesh areas.



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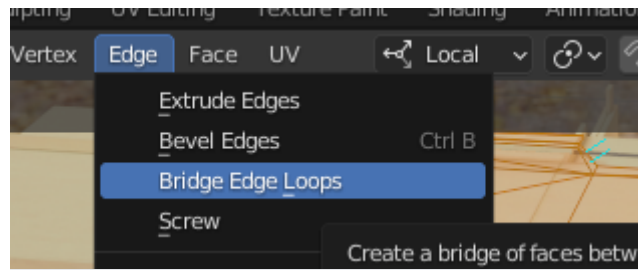
### *Directional key navigation validation*

To validate navigation via directional keys, employ Wonda. Confirm within the editor that it is possible to navigate using the arrow keys without the navigation mesh being visible. Additionally, verify that movement is restricted to areas within the defined navigation mesh.

## Blender tips for Wonda users

### *Navigation mesh creation in Blender*

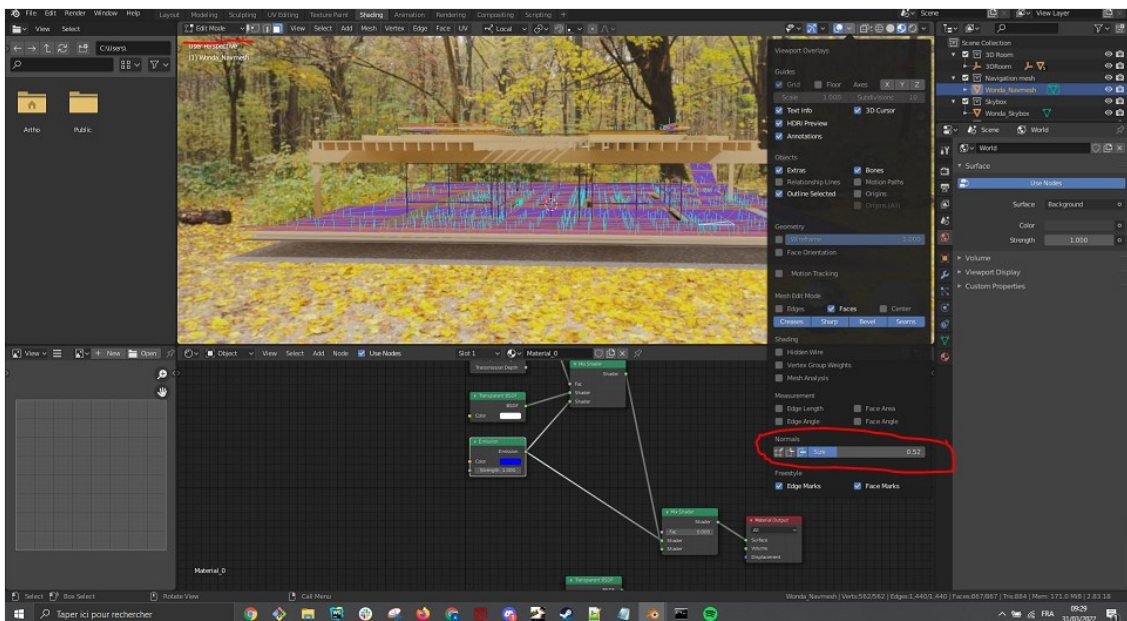
For efficient creation of the navigation mesh in Blender, utilize the Subdivide and Loop Cut & Slide operations, the Knife tool, and the Bridge Edge Loops tool to form bridges or stairs expediently. The Bridge Edge Loops tool can be accessed via Edit Mode → Edge → Bridge Edge Loops, provided that the two corresponding edges are selected beforehand.



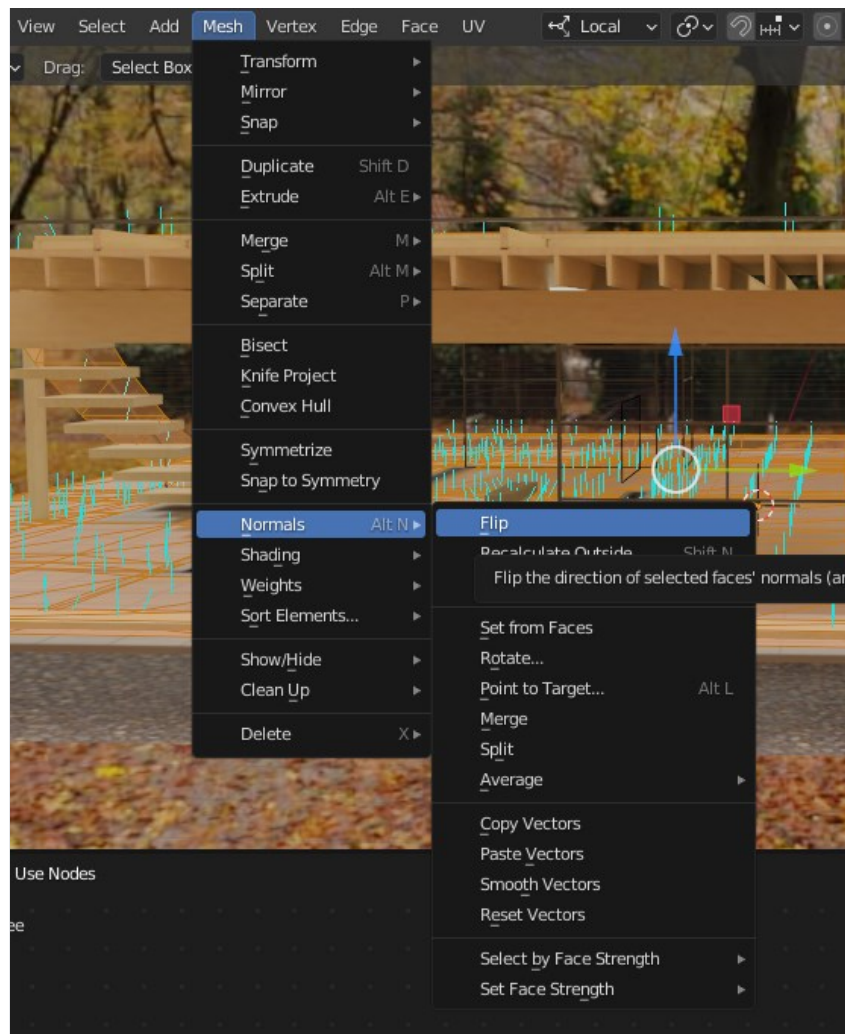
### Handling normals in Blender

To inspect normals in Blender.

- Enter Edit Mode after selecting your object.
- Display the normal in the viewport overlay options.



👉 Note. Should it be necessary to invert normals, navigate to Edit Mode → Mesh → Normals → Flip.



With this knowledge, you are now equipped to create a custom walkable area. For further instructions on importing your custom room and floor into Wonda, please refer to the section "[How to setup your custom environment.](#)"

## How to bake lights and use unlit materials

Wonda is an online platform designed to be device-agnostic, necessitating optimization of certain experiences for seamless performance across various devices. One effective method to achieve this is through the process of baking textures for 3D rooms and objects.

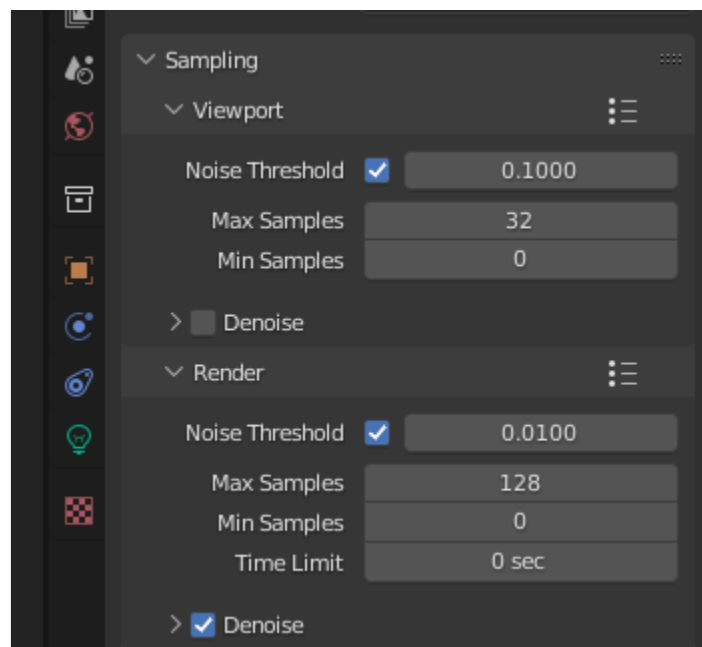
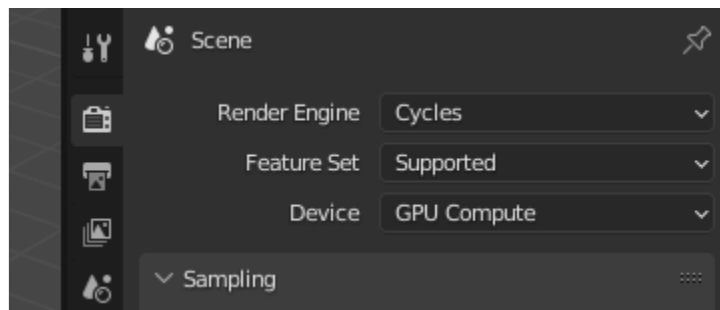
### About baking

In summary, the glTF format can interpret two types of materials.

- PBR (Physically-Based Rendering) materials. These materials consist of shaders that the hardware processes and renders.
- Unlit materials. These are image textures applied directly, requiring no additional computations, making them non-responsive to lighting and ideal for optimization and fluidity.

### Blender. Setting up baking options

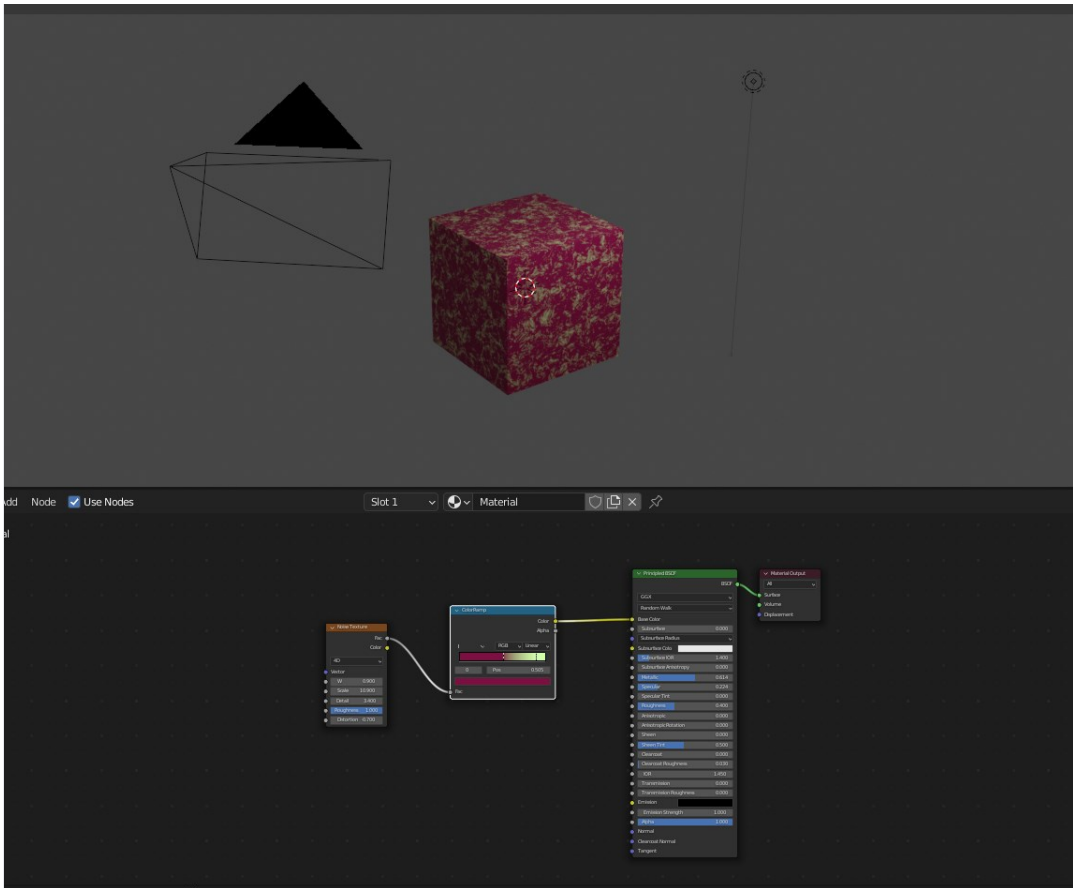
Baking is only possible using the Cycles Render Engine. If you have a powerful GPU, its use is recommended; otherwise, CPU rendering should suffice. Adjust the "Max samples" settings to balance render speed and quality.



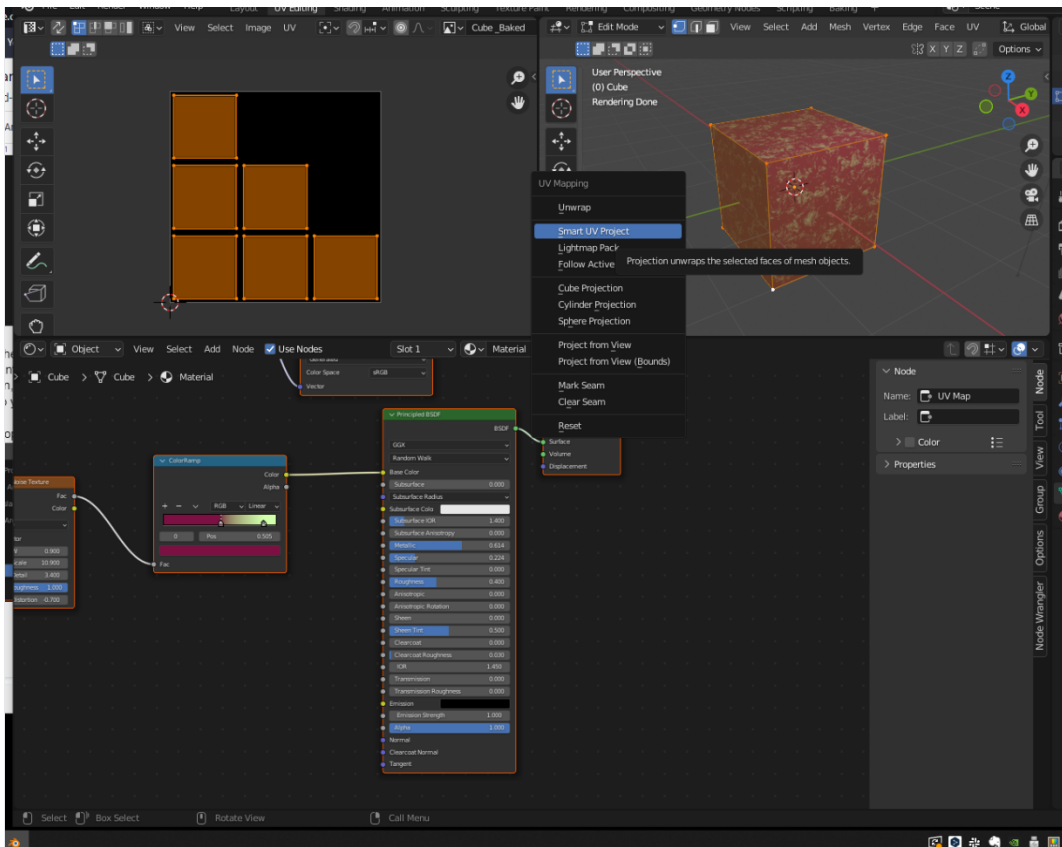
### How to bake textures

- Prepare your model with the desired materials.

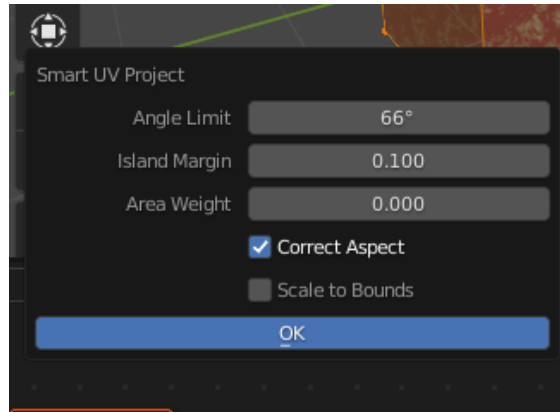




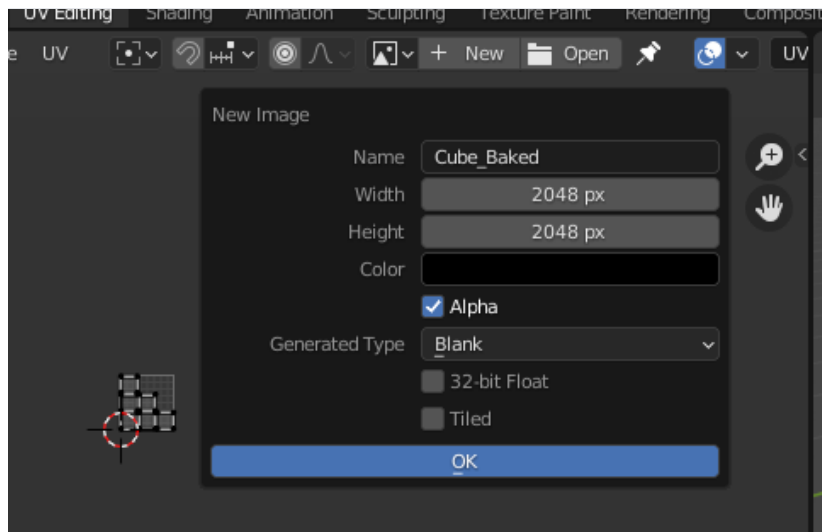
- Navigate to the "UV Editing" workspace and enter Edit Mode. After selecting the object to be baked in the 3D Viewport, select all vertices and edges by pressing A. Press U to open the "UV Mapping" panel and choose "Smart UV Project" to unwrap the object.



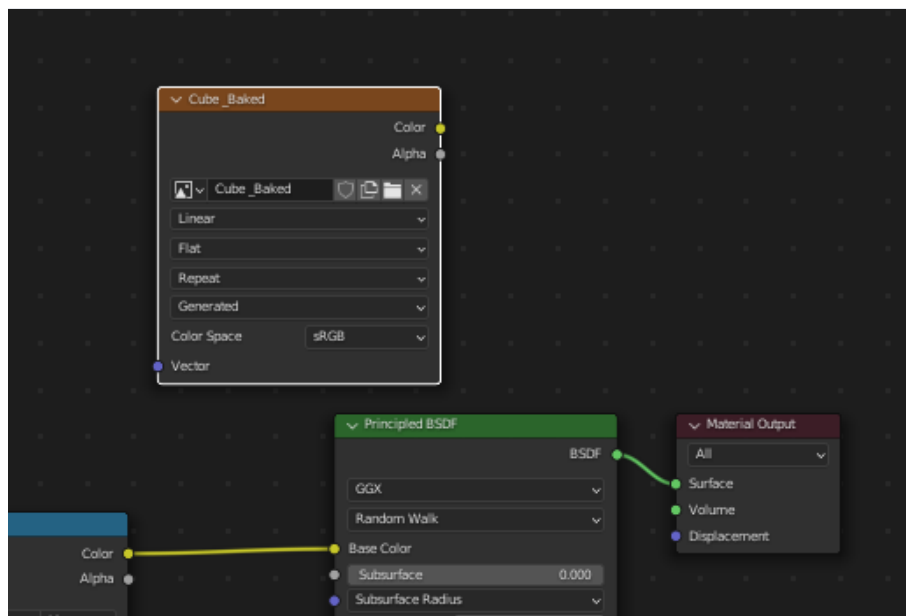
- Utilize these options to avoid overlapping the unwrapped mesh.



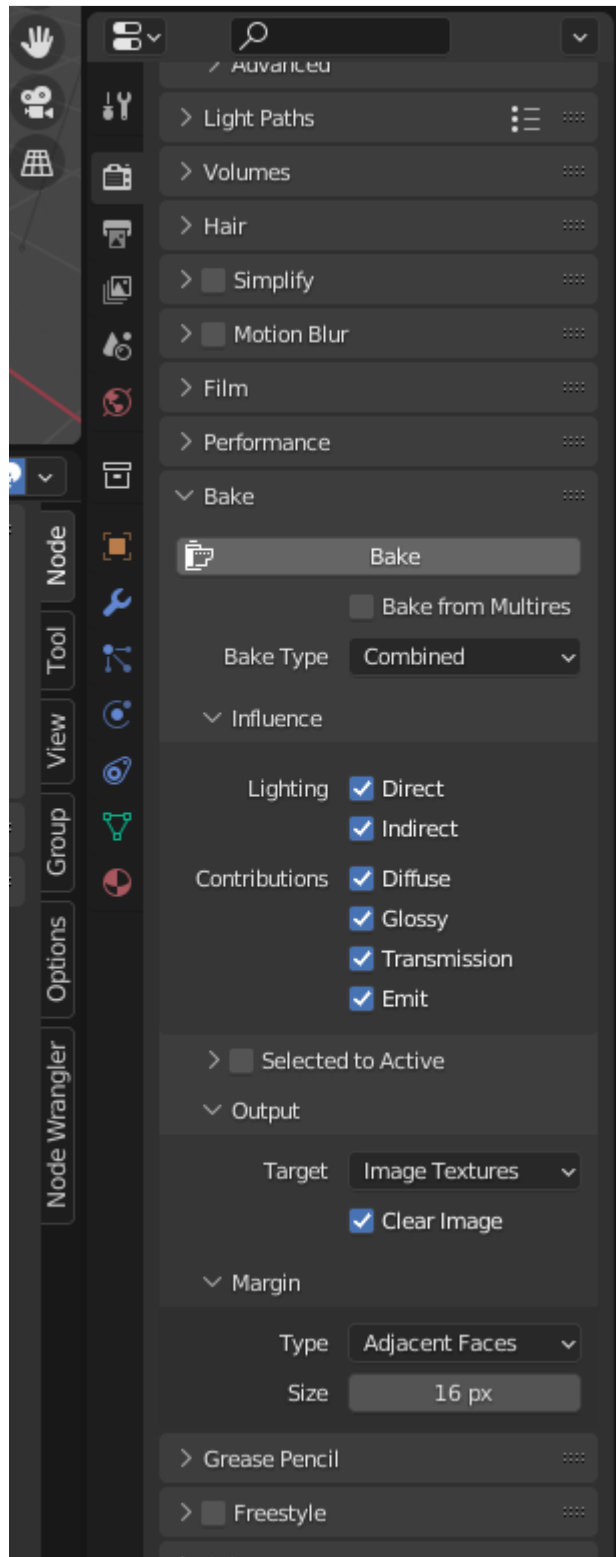
- Create an image with 1k resolution (sufficient for small objects) in the UV Editor window, and rename it, keeping the color black.



- Add the texture image in the Shader Editor (Shift A → Search... → Image Texture) and select it. Load the previously created image in the image texture node.

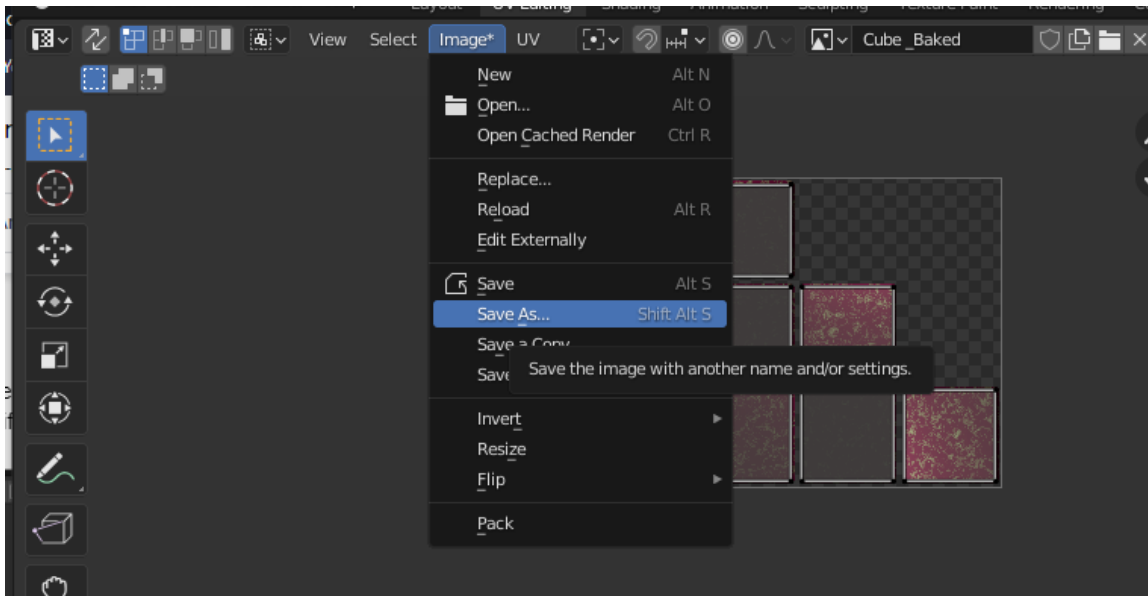


- Commence baking by pressing the "Bake" button located in the Properties workspace → Render Properties → Bake.

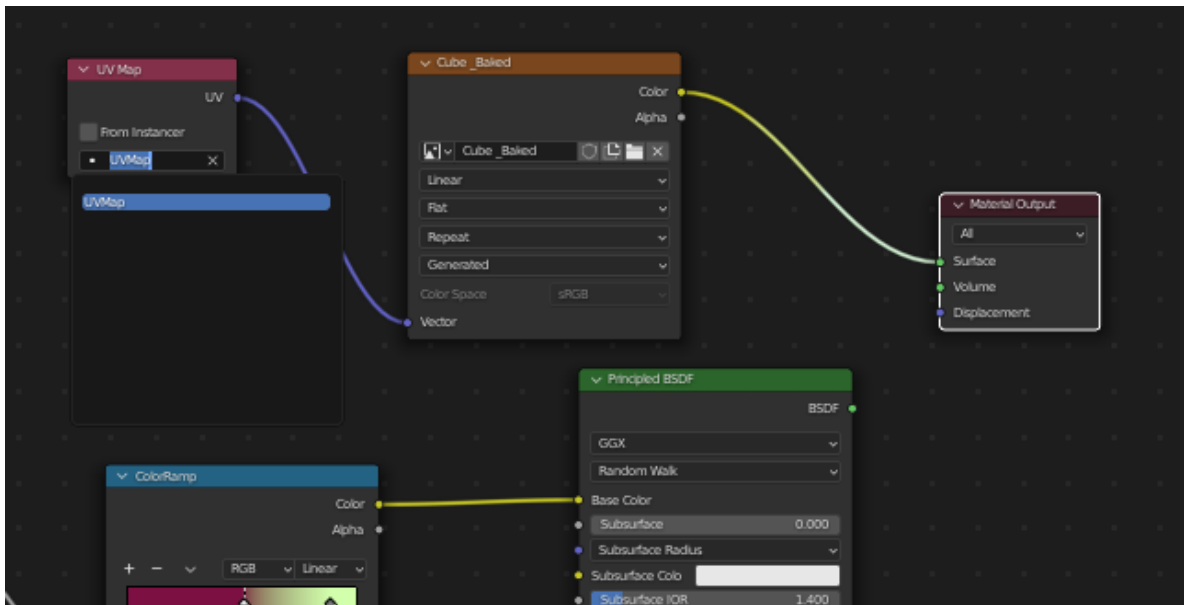


👉 Notes. If the Bake section is not visible, ensure the Render Engine is set to Cycles instead of Eevee. Exit Edit Mode if an error occurs.

- Post-bake, save the image; unsaved images will be discarded when Blender is closed, even if the session is saved.



- Add a UV map node to the Shader Editor (Shift A → Search... → UV Map) and connect UV to vector. Select the appropriate UV map corresponding to the baked texture and replace your material output surface connection with the newly baked "Color" texture.



Upon completion, your texturing is effectively baked. Verify by displaying the rendered textures in the 3D Viewport and by hiding or deleting all scene lights. Your work is now ready for export.



You've reached the end of the notes! If you read them carefully, you are an expert at Wonda!