BIMserver.center

Virtual Reality **(VR)**

USER MANUAL ¡ "‰'$

A step-by-step guide to installing a virtual reality system on a Windows PC
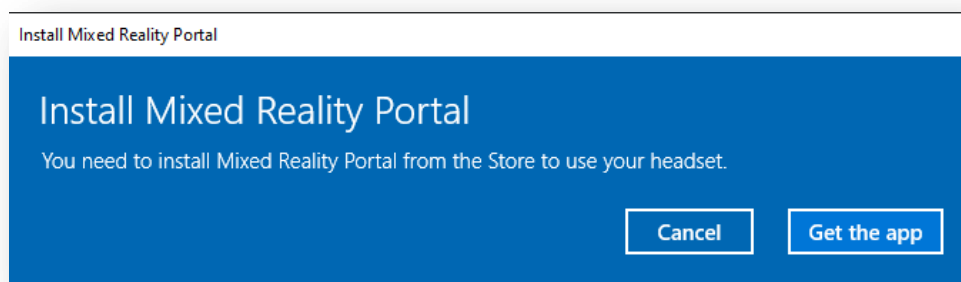

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**VirtualReality**

Contents

1 Installing and setting up the "Mixed Reality Portal"

After connecting the VR headset to the computer via USB 3.0 and HDMI, a screen will appear prompting the user to install an application called "Mixed Reality Portal", which manages Microsoft's virtual environment.


Clicking "Get the app" (*) redirects the user to the Microsoft Store, where the "Mixed Reality Portal" application can be installed.
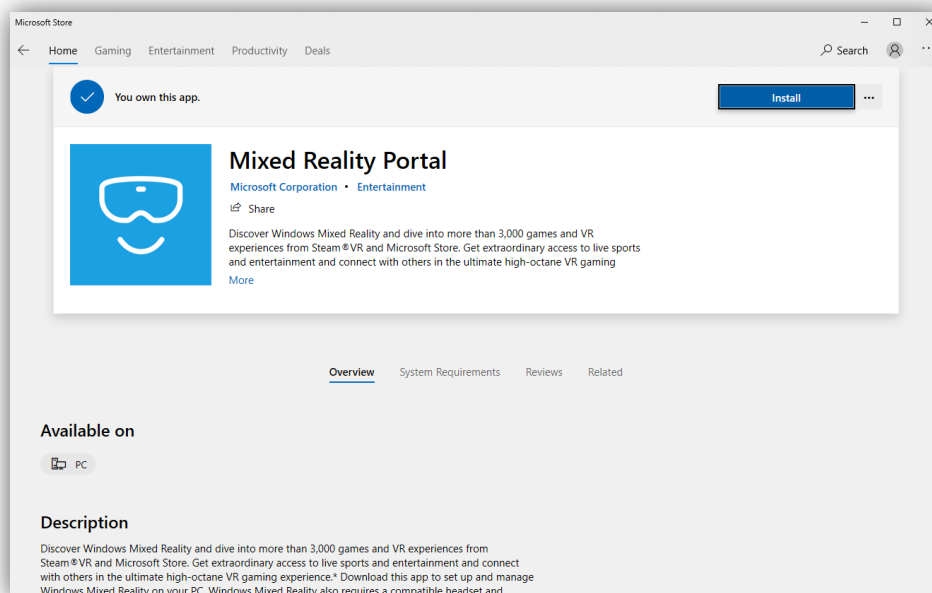
(*) Note: If the window prompting the user to install "Mixed Reality Portal" and the "Get the app" button do not appear upon connecting the device to the computer, the user must go to the Microsoft Store directly, search for the application and install it.

Once installed, open the application and the following screen will appear where the user must set up Windows Mixed Reality
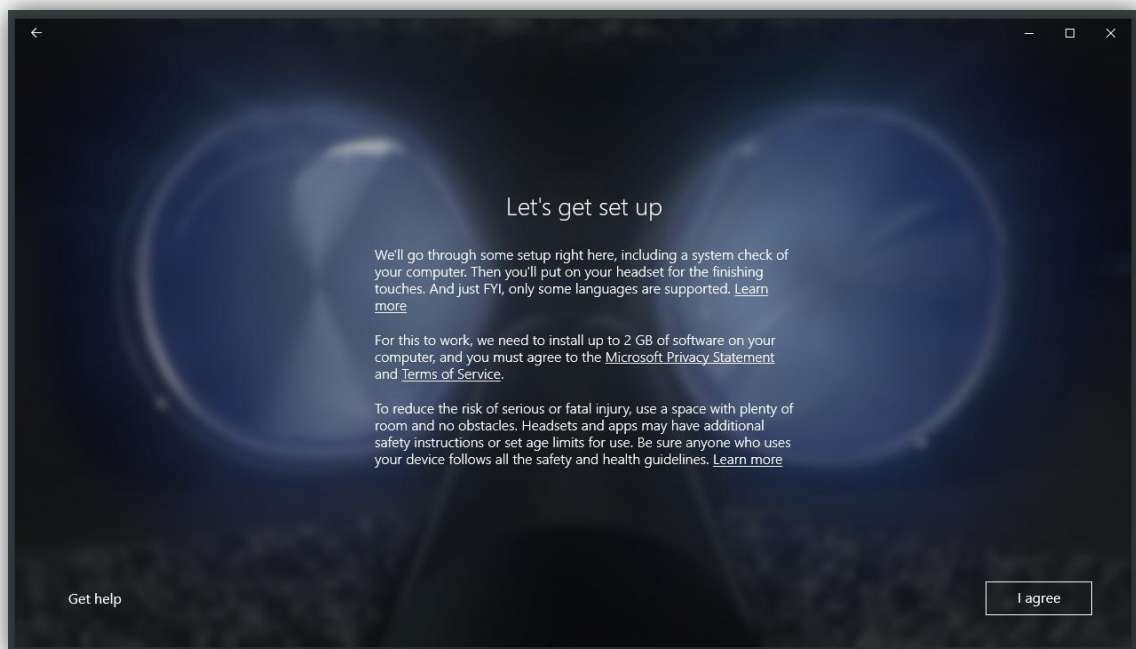

After accepting the terms and conditions, the first thing that will take place is a system check, to ensure the system is compatible with Microsoft's virtual reality environment. To do this, the user's computer hardware will be analysed.

In the best of circumstances, the machine will be fully compatible with the technology (*"Good to go"*). This occurs when all of the test points pass the test without any problems or warnings.
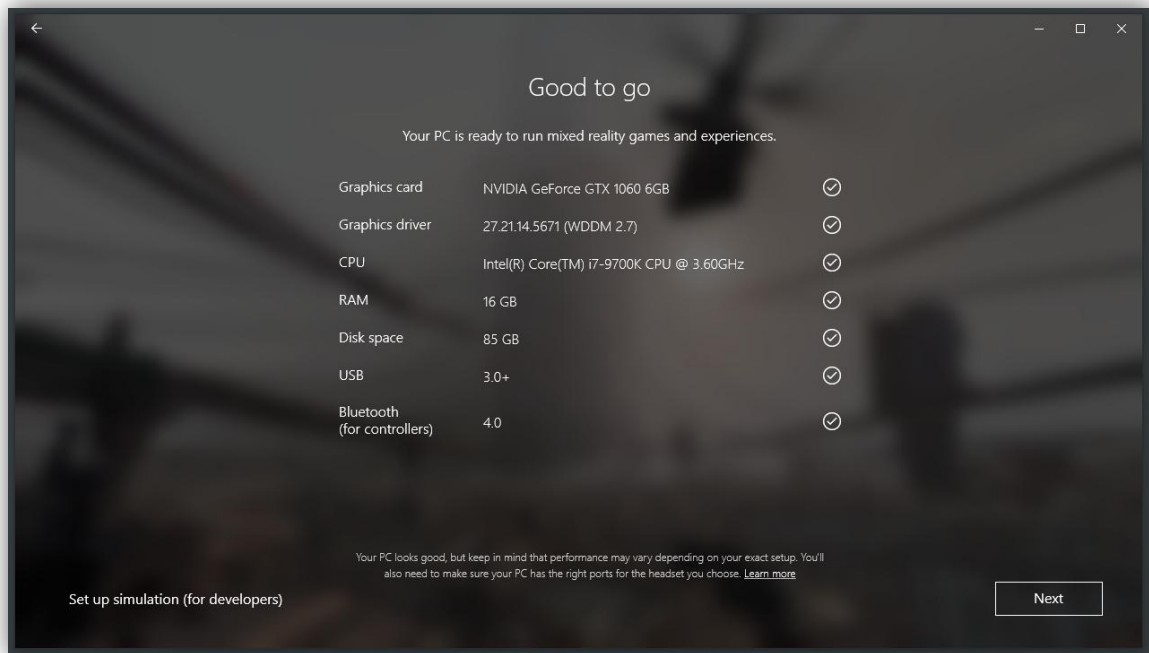

In cases where the computer is not 100% compatible with the technology (*"Supports some features"*), the system will work, but the user may experience bugs as the hardware does not meet all the requirements.
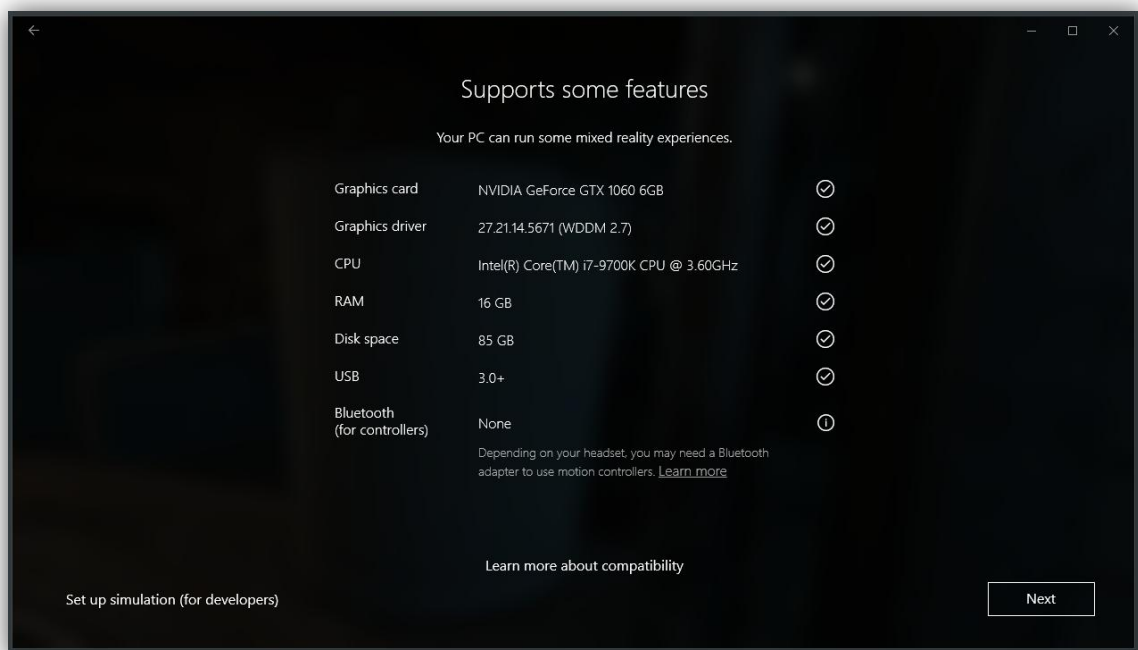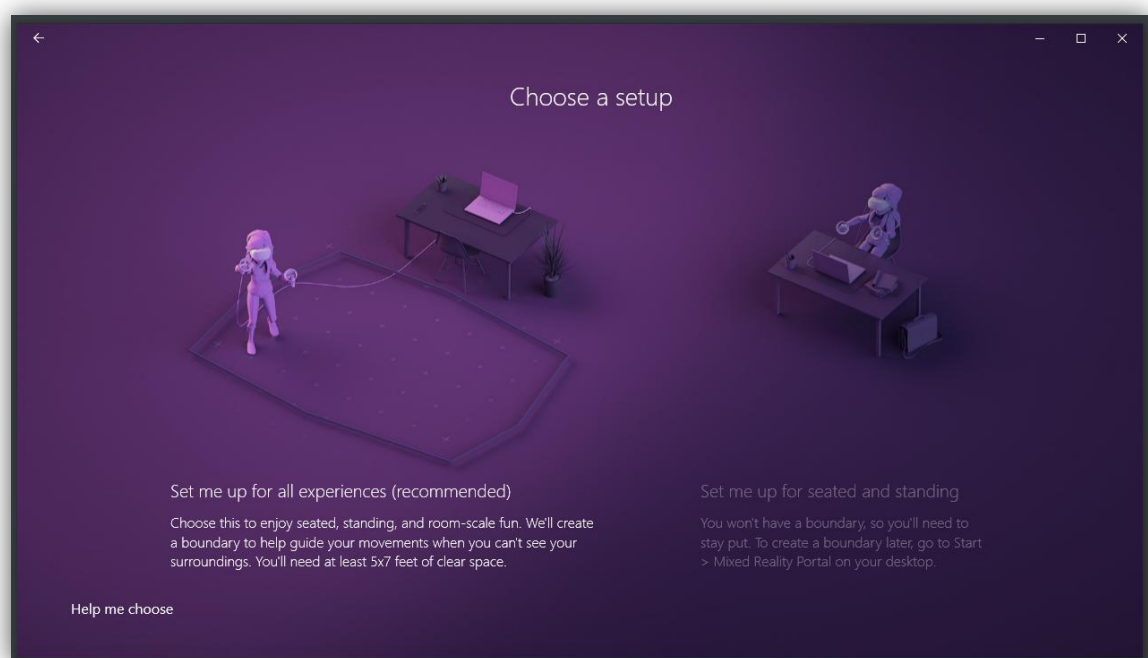
Finally, there is the possibility that the computer is incompatible with the technology (*"Can't run mixed reality"*), and, therefore, will not be able to run any virtual reality applications.
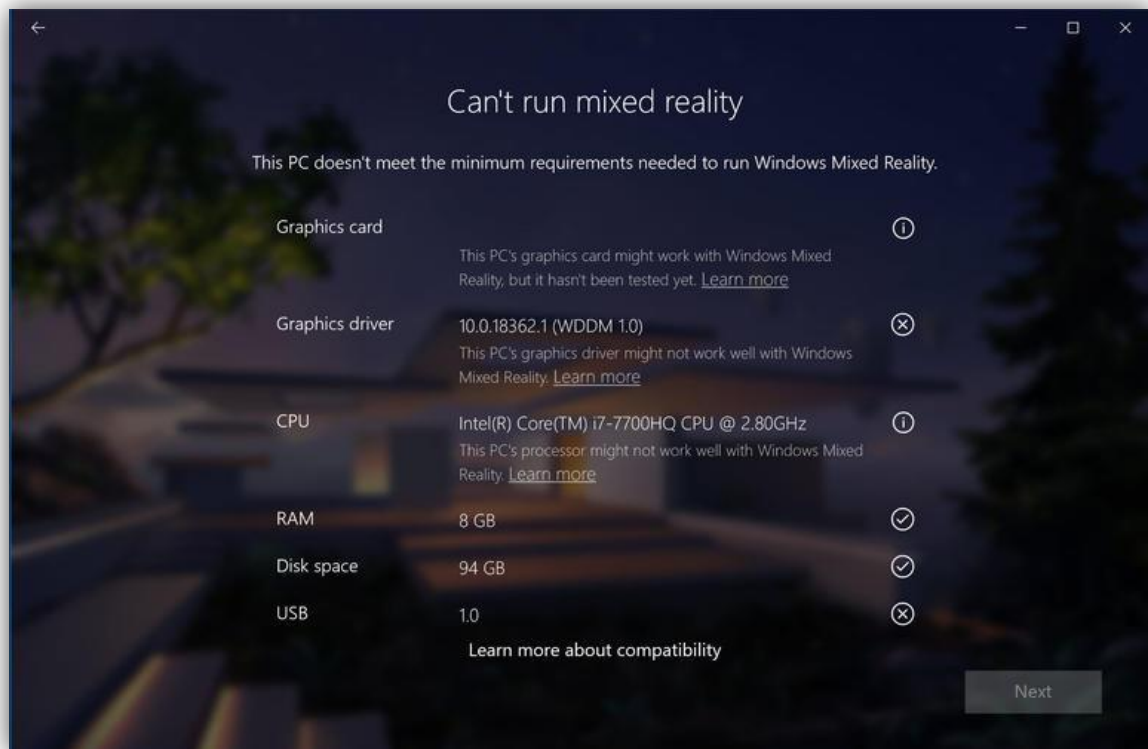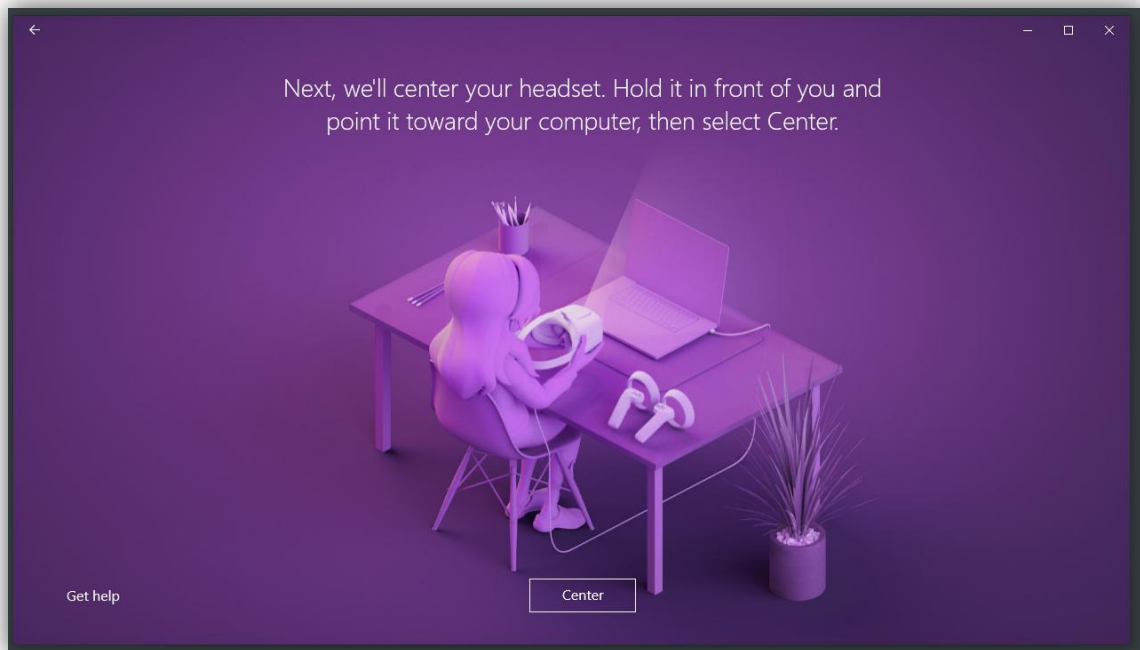

Once the hardware compatibility check has been completed, the user can proceed to set up the virtual reality environment space.

The user should select the type of setup according to the position of the device. To follow this example, click the option "Set me up for seated and standing", which allows the user to stay in one place, either seated or standing.

To use this setup the user should point the headset towards the screen and click on the "Center" button so that the angle of the device can be calibrated correctly. If this process is not done correctly, the user may see the virtual environment in a different angle to that at which the headset is worn. For example, having the headset resting on a table at 0º and seeing the virtual reality environment inclined 90º to the right. If this problem occurs, the way to fix it is by performing a headset recalibration from the "Settings" menu in the mixed reality portal.

Once the internal tools required by the system have been installed and set up, the welcome screen appears and the user can begin using the portal.
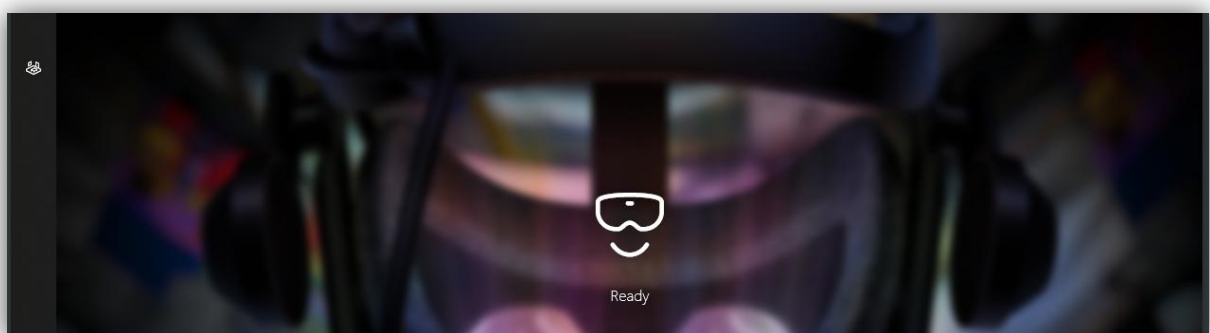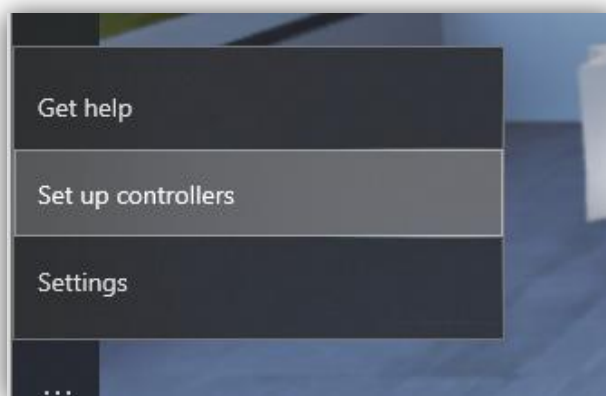
2   Setting up controllers

When launching the portal for the first time, there is no bluetooth remote or controller linked to the application to be able to start interacting with the environment.


In order to set up a controller, go to options in the lower left corner and select "Set up controllers".

Depending on the type of virtual reality headset, the user will be asked to download an application from the Microsoft Store or a different store in order to set up and link controllers. In this case, since it is a Samsung HMD Odyssey+, the user is prompted to install the following application.
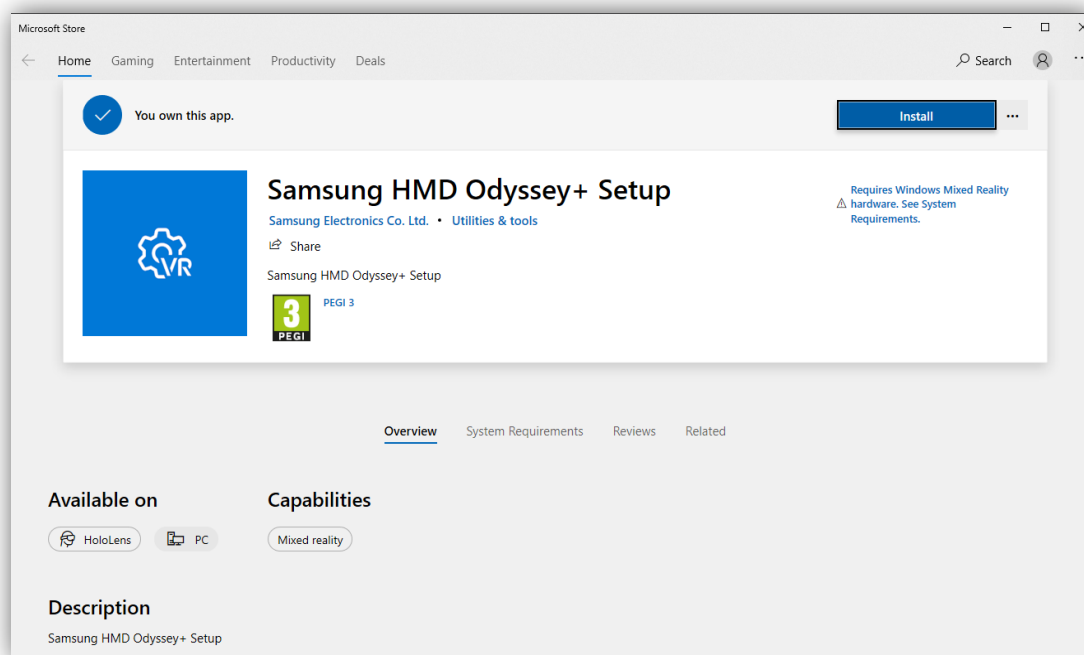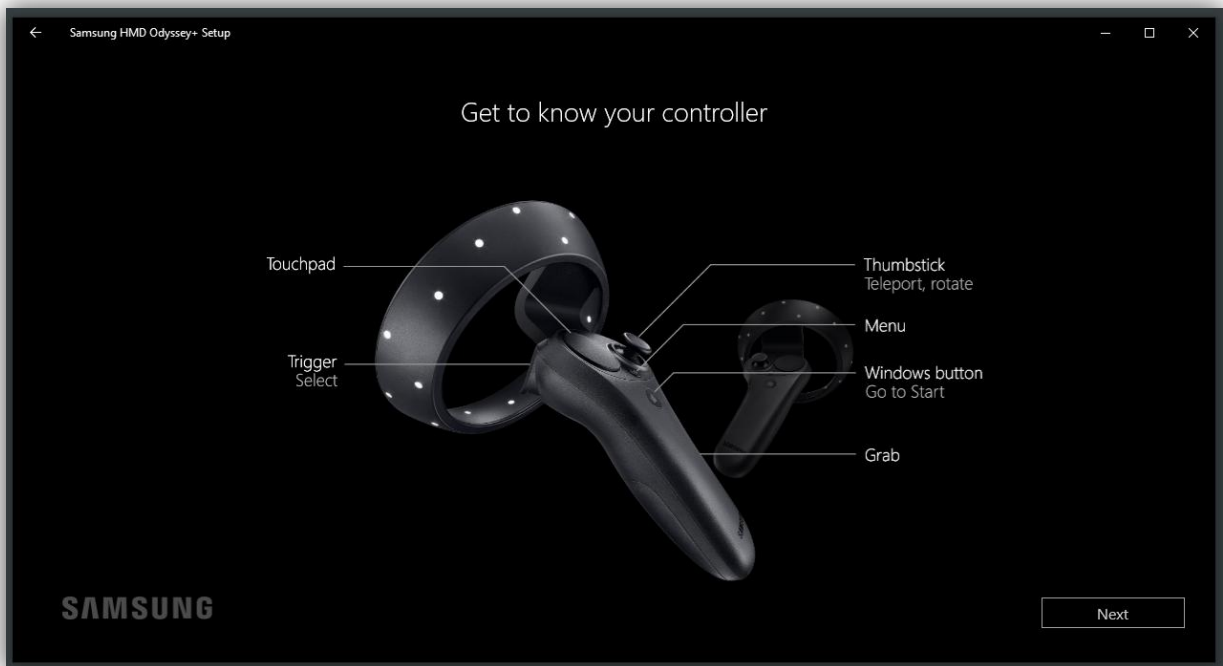

In this application, the user is shown, step by step, how to pair the controllers with the mixed reality portal.
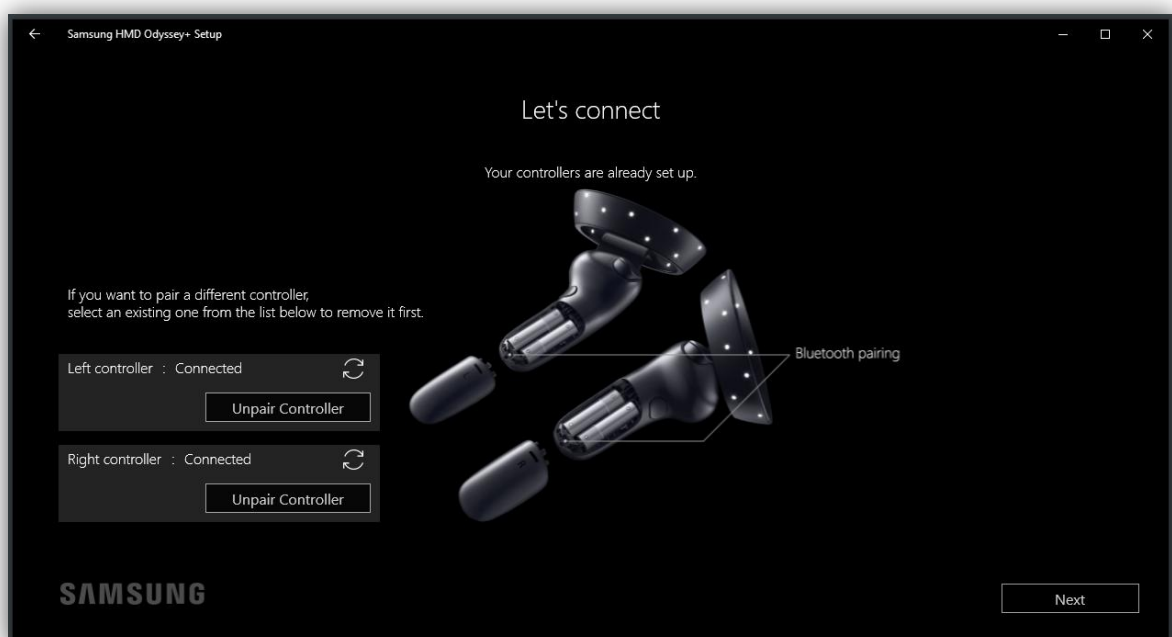
Once the controllers are linked, click "Next". A screen will appear with an image which briefly outlines the features of the controllers and how they interact with the mixed reality portal.

Once the pairing process has been succesfully completed, the controllers can be used for viewing and interacting with the mixed reality portal.
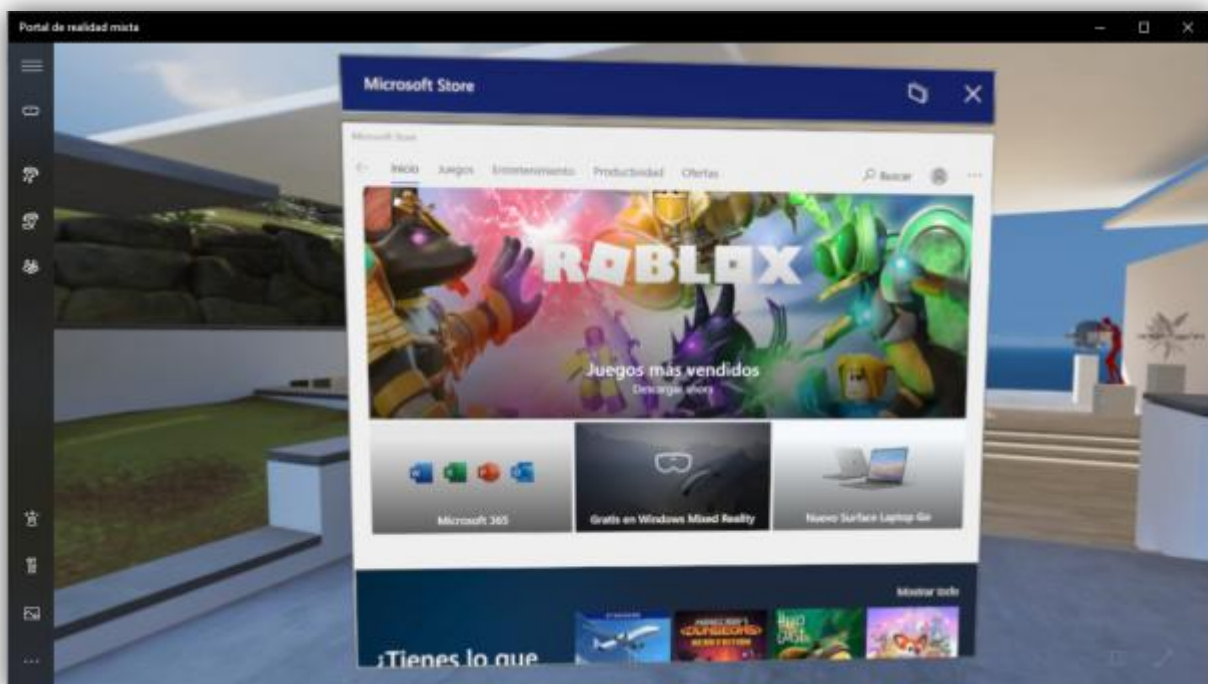
3 Installing BIMserver.center Virtual Reality

Once the entire setup process has been completed and the mixed reality portal is ready for use, the user can then proceed to install the BIMserver.center virtual reality project visualisation tool.

To access the Windows menu, press the button on the controller bearing the Windows symbol. Once the menu is visible, click on the "All" button using the rear trigger on the controller and the user will be able to see all installed applications in the portal.

Using the rear trigger and the various options on the menu, the user can browse the menu until they locate the "Microsoft Store", where the application can be installed.
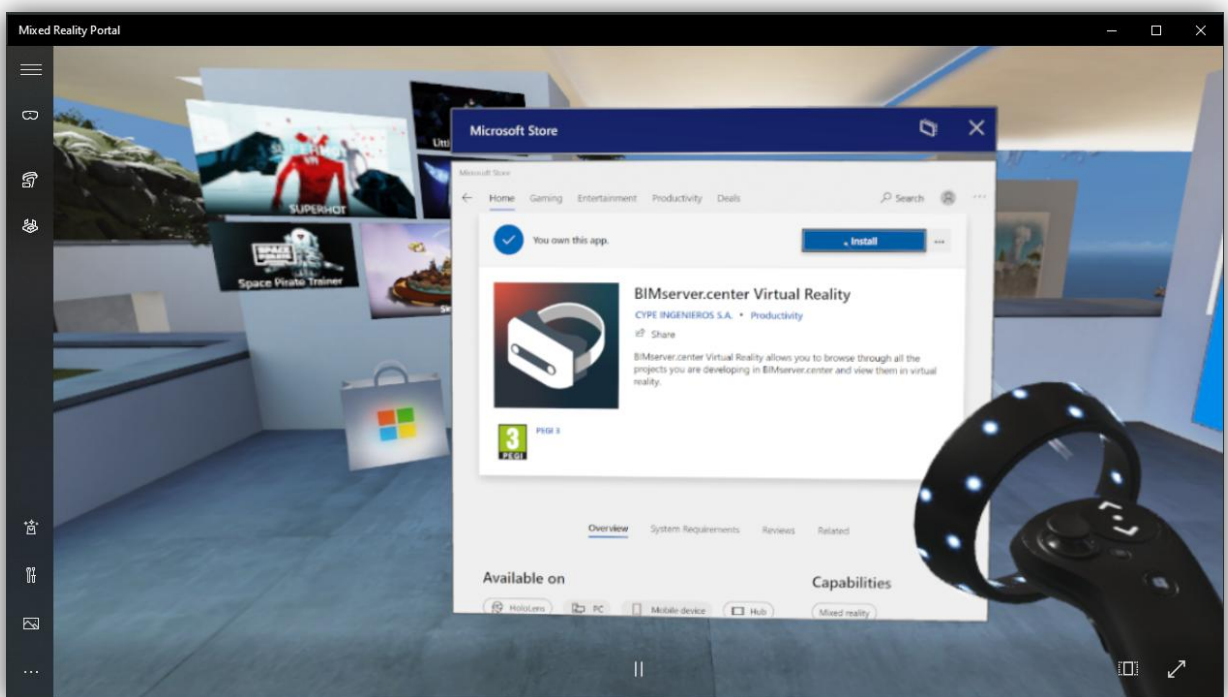
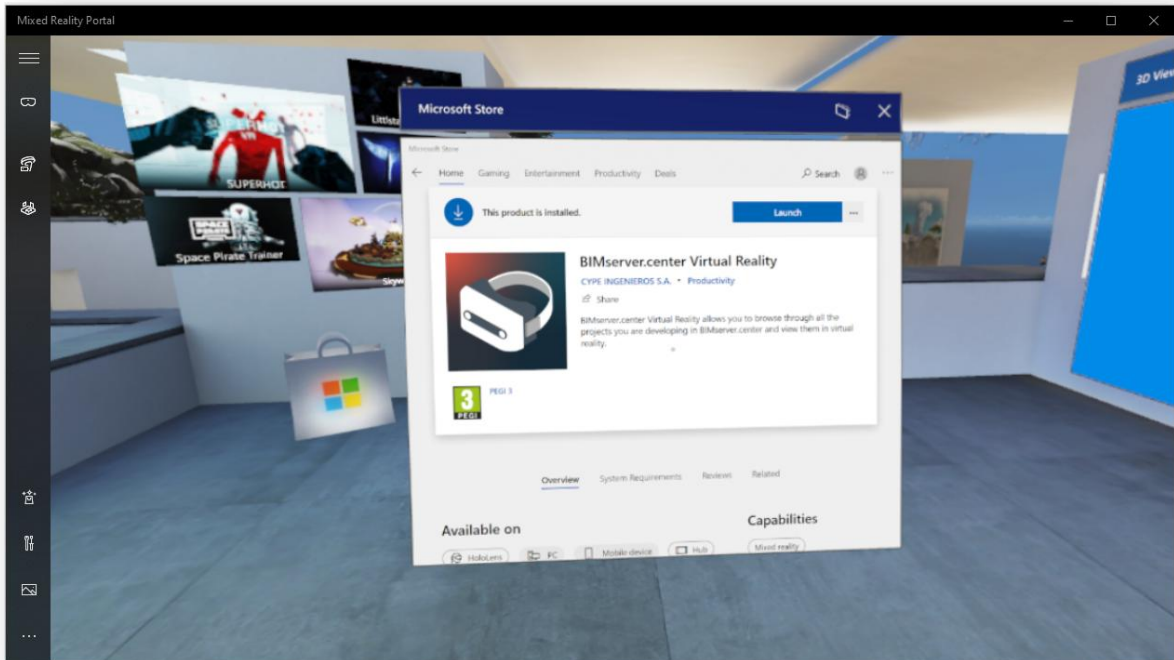Using the search bar, find the "BIMserver.center Virtual Reality" application.

Clicking on the application will display its description, where the user can "Get" and "Install" the application and start the process.

Once finished, the user will have the application installed in the portal and will be able to open it by clicking the "Launch" button.


The BIMserver.center Virtual Reality application will also appear in the Windows menu as a shortcut to launch the application.

4 The BIMserver.center Virtual Reality Application

Having installed the application, we are now going to show a little bit about how it works. Upon launching the tool the first thing the user will see is a login panel for the platform, to be able to access all the information of their projects stored on BIMserver.center
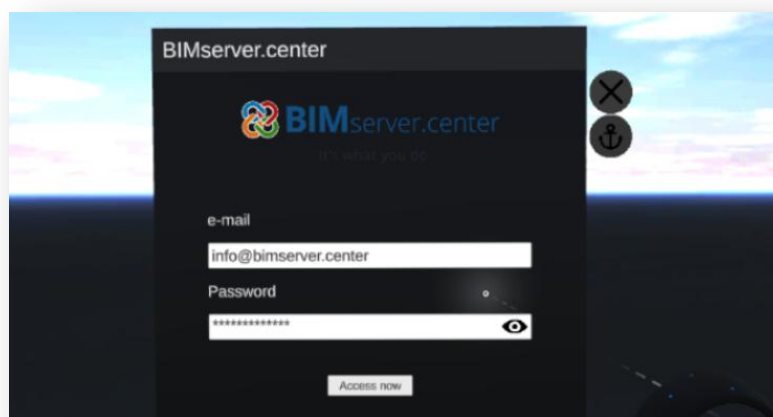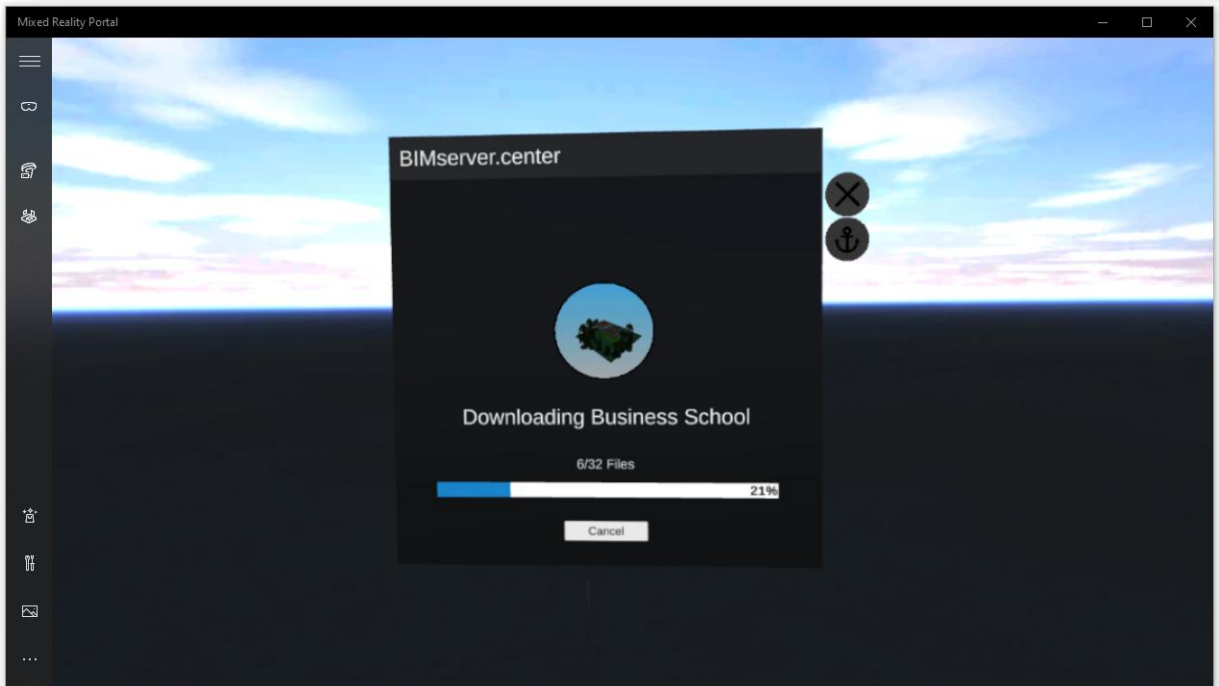
After logging in, a screen appears with a button in the upper left corner that takes the user to a list of all their projects.
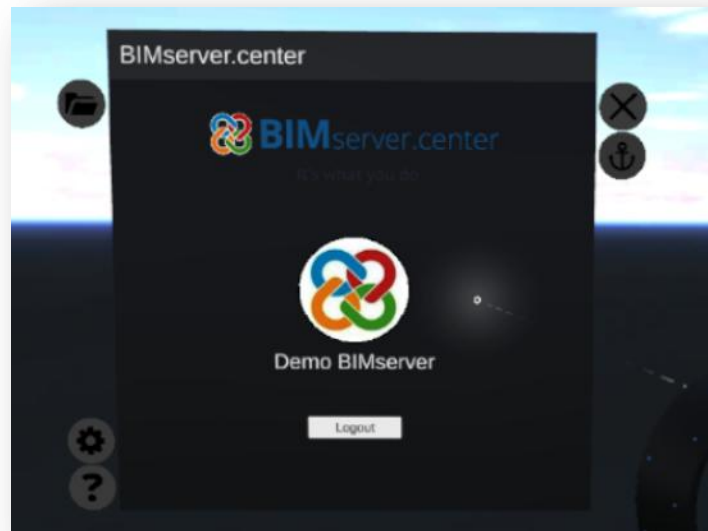
In the project list, the user can browse all their projects stored on the platform and select the one they would like to examine in this new virtual reality environment that the platform has to offer.

After selecting and loading the project, the user will be able to view all the layers in the project, with the ability to toggle visualisation of not only the layers, but they can also view the set of the model's animations (if there are any).

Once the user has selected the visible layers, a help panel is always accessible from the lower left side, where a brief explanation of how to interact with the visible model in virtual reality is provided in a direct and concise manner.

5   Known errors

"I get an error asking me to check the display cable even though I have the USB cable in a USB 3.0 port and the HDMI cable plugged in."
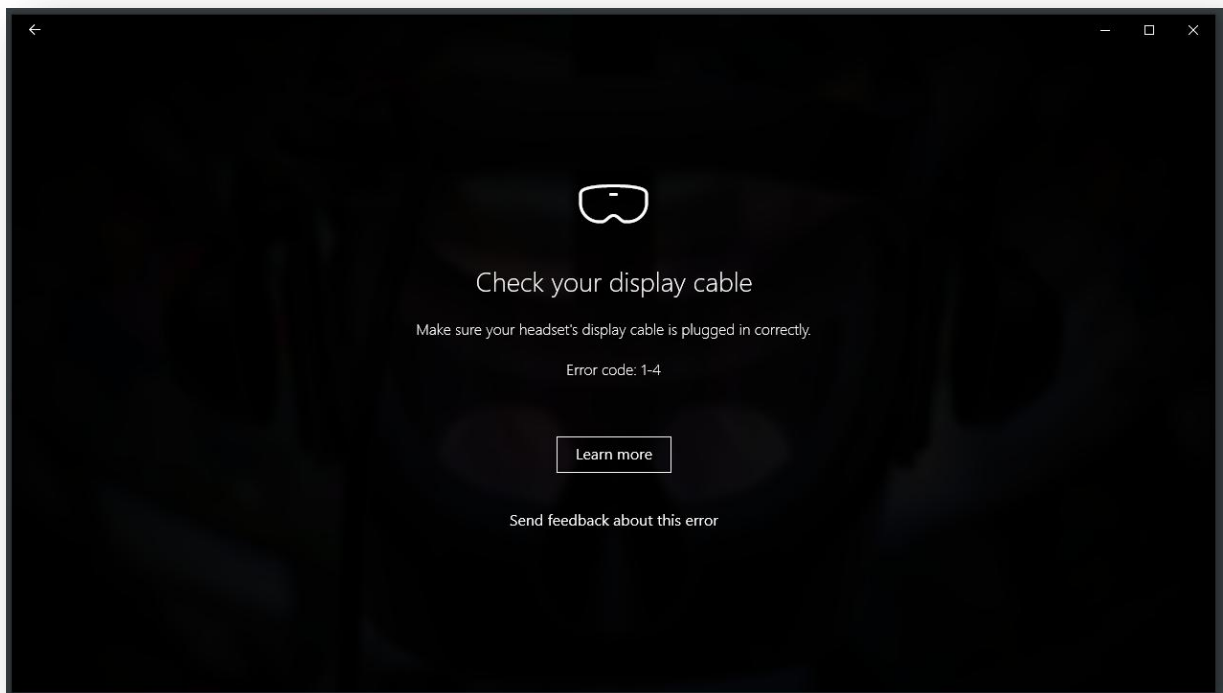
If what you are seeing is a screen with the following error message, the system is trying to indicate that you have the USB cable properly connected to a USB 3.0 port, but the HDMI cable is plugged into a HDMI port without a direct connection to the computer's graphics card, meaning the system will not work properly. In order to fix this problem, simply try removing the HDMI cable from its current port and plugging it into one which has this direct connection to the computer's graphics card.