# Under Amsterdam

## User manual

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## Introduction

This game was made with the thought in mind to create awareness for underground space problems. It is a step in the direction of making this social problem more recognized and shared. The game is intended to be used on a mobile VR headset. All ages may play this game. Under Amsterdam is a game which is about laying pipes in the fastest and most efficient way. If all players work together, the mess of pipes can be prevented leading to more space. Every round the players will come back to the pipes as another company and they have to work together to clean up each other's mess.

## Technical Data

Minimum Requirements:

Operating System: Windows 7 or higher / MacOS 10.12 or higher
Processor: Intel i5-4590 or equivalent
Memory: 8 GB RAM
Graphics: NVIDIA GTX 970 or equivalent
Storage: 2 GB available space
VR headset: Oculus Quest 1 or equivalent
Internet connection: Broadband internet connection

Recommended Requirements:

Operating System: Windows 10 / MacOS 10.15 or higher
Processor: Intel i7-4770 or equivalent
Memory: 16 GB RAM
Graphics: NVIDIA RTX 2070 or equivalent
Storage: 4 GB available space
VR headset: Oculus Quest 2 or better
Internet connection: Broadband internet connection

# Getting Started

When using the Oculus Quest

1.  Download and install SideQuest on your computer:
● Go to the official SideQuest website (https://sidequestvr.com/)
● Click on the "Download" button to download the latest version of SideQuest for your operating system.
● Once the download is complete, open the installer and follow the prompts to install SideQuest on your computer.

2.  Enable developer mode on your Oculus Quest 1:
● Open the Oculus app on your mobile device or computer
● Click on the "Settings" button in the bottom right corner
● Scroll down and click on the "Device" tab
● Click on the "Oculus Quest" button
● Click on the "More Settings" button
● Click on the "Developer Mode" toggle button to enable developer mode

3.  Connect your Oculus Quest 1 to your computer:
● Connect your Oculus Quest 1 to your computer using a USB-C cable
● The Oculus Quest 1 will prompt you to allow access to the device, click on "Allow"

4.  Install the game via SideQuest:
● Open SideQuest on your computer
● Click on the "Library" button on the left sidebar
● Search for the desired game and click on the "Install" button to begin the installation process.
● Wait for the installation to complete, you will be notified when it is done.

5.  Launch the game:
● On the Oculus Quest 1, go to the library
● Click on the game you just installed
● Press the trigger button on the right controller to start the game.

## When using the PC

1. Connect your Oculus Quest 1 to your PC:
● Connect your Oculus Quest 1 to your PC using a USB-C cable.
● Make sure to enable "Oculus Link" or "Virtual Desktop" on the Oculus Quest 1 settings to enable the connection.

2. Locate the game executable file:
● Locate the game executable file on your computer, it should be a .exe file.

3. Run the game executable file:
● Double-click on the game executable file to run the game.
● A dialog box may appear asking you to confirm that you want to run the game, click "Yes" to proceed.

## Features

Setting up the game:

- Players can join or host a lobby by entering the lobby name with the keyboard. After pressing join the player will be sent to the lobby with the name they typed in.
- Players are placed in a virtual lobby above the ground.
- Once all players have put their hand inside the box, the game starts.



Gameplay:

- The game consists of several rounds, each round a different company takes the lead.
- Each player takes turns as the company in charge of building the pipeline network
- The player uses the thumbstick on the left controller to move around the map and look for the best location to place the pipes.
- The player uses the trigger button on the right controller to place the pipes.
- The player uses the trigger button on the left controller to grab a hammer and remove the pipes.
- The player can rotate using the thumbstick on the right controller.
- The player must build the pipeline network within a certain time limit.

- The player can earn points by building the pipeline network efficiently, such as by minimising the number of pipes.
- The player can earn bonuses by connecting the pipes ahead of everyone else.

Scoring:

- The game scores are based on how fast you can connect the pipes and how many pipes you use.
- The player with the lowest amount of pipes and the fastest time wins the game.

End of the game:

- After the final round, the players are returned to the lobby
- The players can see the scoreboard displayed on the wall, displaying the results and ranking of the game.
- The players can also look down to see the pipes they have built in a bird's eye view.
- The players can choose to play again or exit the game.

# Game phases

## Lobby

The lobby will be the starting area of the game. Inside the lobby, you can practise and wait for others. Around the lobby are several billboards which have instructions on them. Once everyone is loaded, put your hand inside the rectangle box and this way, you will get the watch. Once everyone has put their hand inside the box, they float down and the game starts.

Game
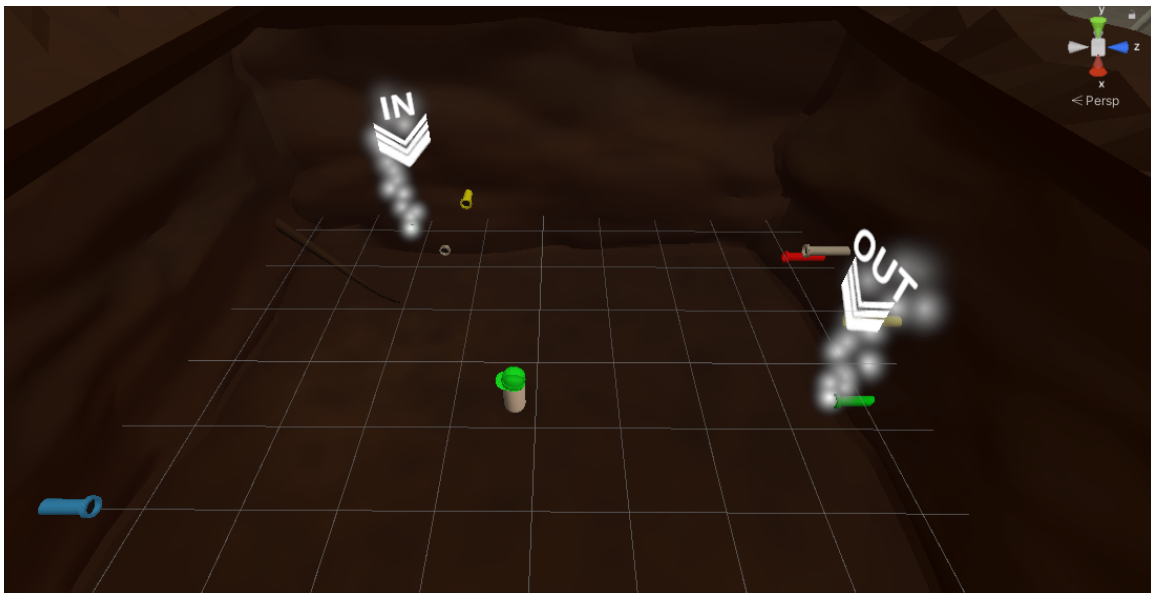


Inside the game, the players have to connect the smoking, coloured pipes to each other. The players have 60 seconds per round. The fastest player will get the most points, while the slowest player will get zero points. The player who has the most points wins.
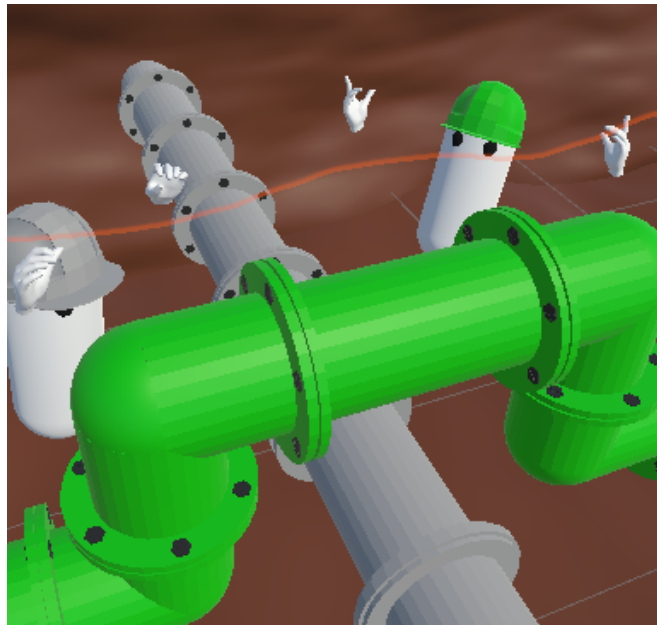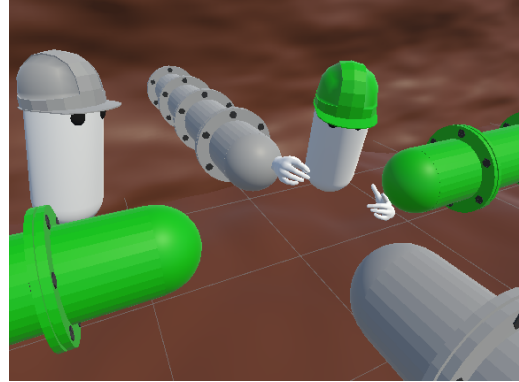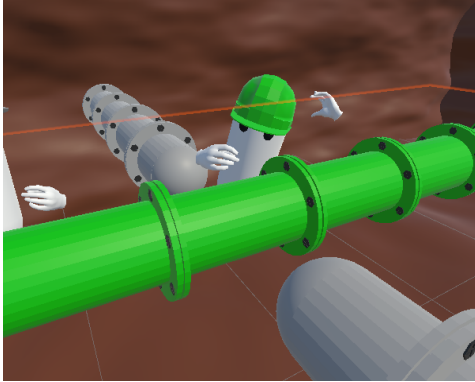
Placing pipes:
In order to place a pipe, press the right trigger (index finger) when a sphere appears

Removing pipes:
Hold your grip on the inside of the controller to hold a hammer. The players can use this hammer to destroy their own coloured pipes.

Voice chat:

Listen and speak to other players. No setup is needed. It is possible to talk right away.

## End game scene

After the game ends, the players will float up back to the lobby. The players will be able to see their score ranging from gold to bronze and black from player four onwards. Shortly after, numbers one to three wil be put on the podium. The players will be able to look down at the pipes they've placed to see what mess they have made.
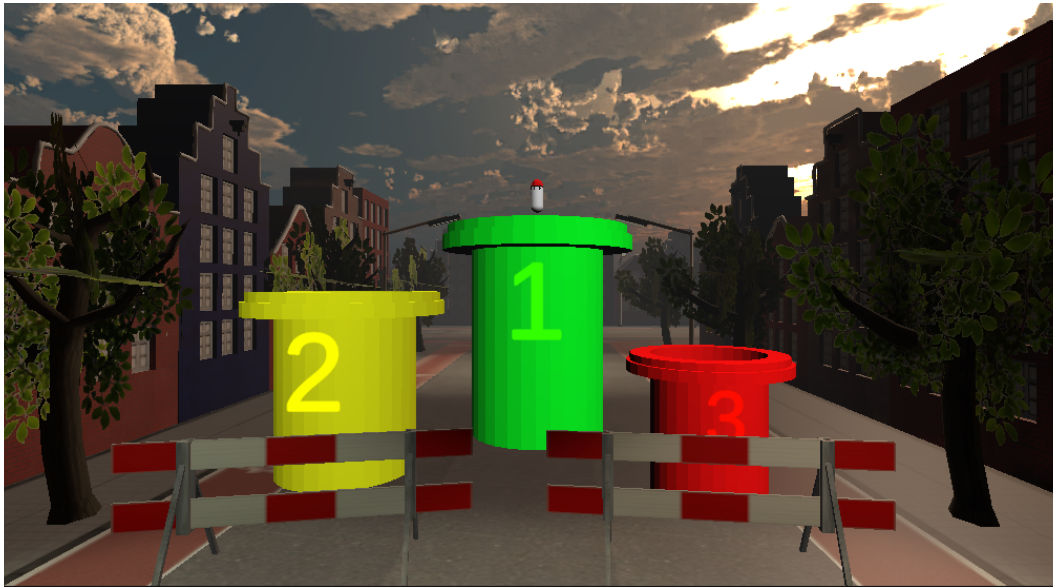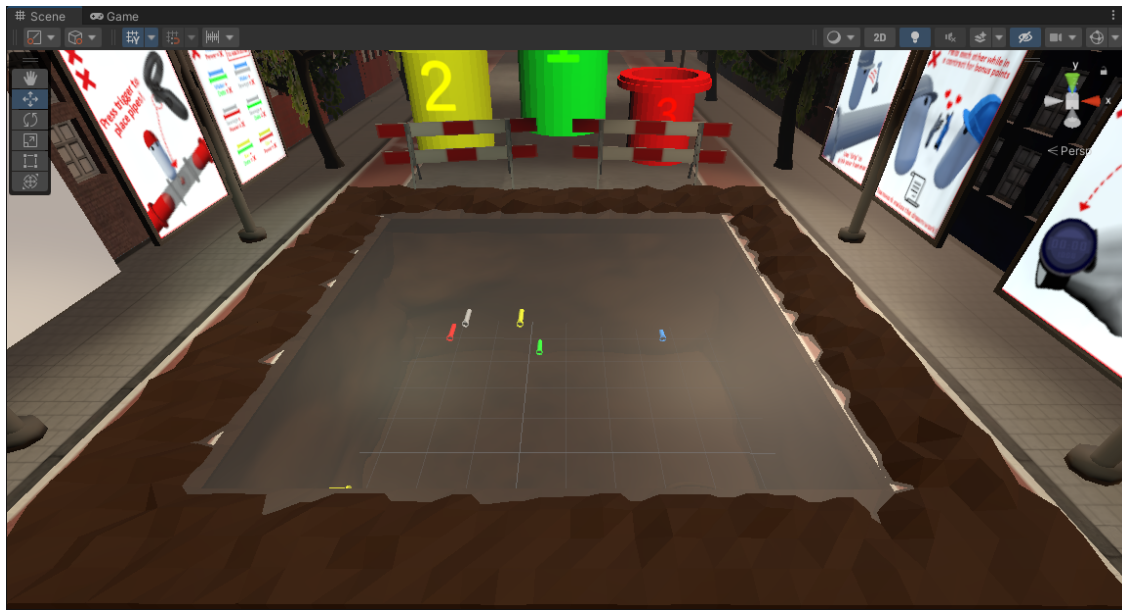
# Safety using a VR headset

## Child safety:

Adults should make sure children use the headset in accordance with these health and safety warnings including making sure the headset is used as described in the Before Using the Headset section and the Safe Environment section.

Adults should monitor children who are using or have used the headset for any of the symptoms described in these health and safety warnings (including those described under the Discomfort and Repetitive Stress Injury sections), and should limit the time children spend using the headset and ensure they take breaks during use.

Prolonged use should be avoided, as this could negatively impact hand-eye coordination, balance, and multi-tasking ability. Adults should monitor children closely during and after use of the headset for any decrease in these abilities. We recommend that ClassVR is used for no more than 15 minutes in any one lesson. Short VR sessions are very engaging and are the perfect way to open a topic or reinforce a key point. The ClassVR player includes a notification to the teacher when any student has been in VR for longer than this recommended time, which is also the limit recommended for children by optometrists.

## Seizures warning:

Some people (about 1 in 4000) may have severe dizziness, seizures, eye or muscle twitching or blackouts triggered by light flashes or patterns, and this may occur while they are watching TV, playing video games or experiencing virtual reality, even if they have never had a seizure or blackout before or have no history of seizures or epilepsy. Such seizures are more common in children and young people under the age of 20. Anyone who experiences any of these symptoms should discontinue use of the headset and see a doctor. Anyone who previously has had a seizure, loss of awareness, or other symptom linked to an epileptic condition should see a doctor before using the headset.

Measures were taken to reduce the chance of experiencing these symptoms.
The screen will black out if the player is moving

General Precautions:

To reduce the risk of injury or discomfort you should always follow these instructions and observe these precautions while using the headset:

Use Only In A Safe Environment: The headset produces an immersive virtual reality experience that distracts you from and completely blocks your view of your actual surroundings.

Always be aware of your surroundings before beginning use and while using the headset. Use caution to avoid injury and remain seated unless your content experience requires standing.

- Use of the headset may cause loss of balance.
- Remember that the objects you see in the virtual environment do not exist in the real environment, so don't sit or stand on them or use them for support.
- Serious injuries can occur from tripping, running into or striking walls, furniture or other objects, so clear an area for safe use before using the headset.
- Take special care to ensure that you are not near other people, objects, stairs, balconies, open doorways, windows, furniture, open flames, ceiling fans or light fixtures or other items that you can bump into or knock down when using—or immediately after using—the headset.
- Remove any tripping hazards from the area before using the headset.
- Remember that while using the headset you may be unaware that people may enter your immediate area.
- Do not handle sharp or otherwise dangerous objects while using the headset.
- Never wear the headset in situations that require attention, such as walking, bicycling, or driving.
- Make sure the headset is level and secured comfortably on your head, and that you see a single, clear image.
- Make sure any headphone cables if used are not tripping hazards.
- Ease into the use of the headset to allow your body to adjust; use for only a few minutes at a time at first, and only increase the amount of time using the headset gradually as you grow accustomed to virtual reality. Looking around when first entering virtual reality can help you adjust to any small differences between your real-world movements and the resulting virtual reality experience.

- Do not use the headset while in a moving vehicle such as a car, bus, or train, as this can increase your susceptibility to adverse symptoms.
- Take at least a 10 to 15 minute break every 30 minutes, even if you don't think you need it. Each person is different, so take more frequent and longer breaks if you feel discomfort. You should decide what works best for you.
- If using headphones, listening to sound at high volumes can cause irreparable damage to your hearing. Background noise, as well as continued exposure to high volume levels, can make sounds seem quieter than they actually are. Due to the immersive nature of the virtual reality experience, do not use the headset with the sound at a high volume so that you can maintain awareness of your surroundings and reduce the risk of hearing damage.

## Discomfort:

Immediately discontinue using the headset if any of the following symptoms are experienced: seizures; loss of awareness; eye strain; eye or muscle twitching; involuntary movements; altered, blurred, or double vision or othe visual abnormalities; dizziness; disorientation; impaired balance; impaired hand-eye coordination; excessive sweating; increased salivation; nausea; lightheadedness; discomfort or pain in the head or eyes; drowsiness; fatigue; or any symptoms similar to motion sickness.

Just as with the symptoms people can experience after they disembark a cruise ship, symptoms of virtual reality exposure can persist and become more apparent hours after use. These post-use symptoms can include the symptoms above, as well as excessive drowsiness and decreased ability to multitask. These symptoms may put you at an increased risk of injury when engaging in normal activities in the real world.

- Do not drive, operate machinery, or engage in other visually or physically demanding activities that have potentially serious consequences (i.e., activities in which experiencing any symptoms could lead to death, personal injury, or damage to property), or other activities that require unimpaired balance and hand-eye coordination (such as playing sports or riding a bicycle, etc.) until you have fully recovered from any symptoms.
- Do not use the headset until all symptoms have completely subsided for several hours. Make sure you have properly configured the headset before resuming use.
- Be mindful of the type of content that you were using prior to the onset of any symptoms because you may be more prone to symptoms based upon the content being used.
- See a doctor if you have serious and/or persistent symptoms.

Repetitive Stress Injury:

Using the device may make your muscles, joints or skin hurt. If any part of your body becomes tired or sore while using the headset or its components, or if you feel symptoms such as tingling, numbness, burning or stiffness, stop and rest for several hours before using it again. If you continue to have any of the above symptoms or other discomfort during or after use, stop use and see a doctor.

## Contagious Conditions

To avoid transferring contagious conditions like conjunctivitis (pink eye), do not share the headset with persons with contagious conditions, infections or diseases, particularly of the eyes, skin or scalp. The headset should be cleaned between each use with skin-friendly non-alcoholic antibacterial wipes and with a dry microfiber cloth for the lenses.

For further information, please see our guidance on [protecting against contagious viruses](#).

## Troubleshooting

- If the headset or controllers are not responding, try re-syncing them by pressing the power button on the headset or controllers.
- If the game is not running smoothly, try closing other apps or restarting the device.
- If the image in the headset is blurry, try adjusting the interpupillary distance (IPD) or the distance between the lenses in the headset.

## Commonly Asked Questions

- How do I solve the issue of not being able to connect to other players?

Make sure the system you're using the game on has either a wired or wireless connection and an exception has been made in Windows Firewall. Refer to the following list for port forwarding (If necessary):
https://doc.photonengine.com/en-us/realtime/current/connection-and-authentication/tcp-and-udp-port-numbers

- My VR experience is stuttering, lagging, crashing. What should I do?

Check if the VR headset and/or computer meet the requirements. If they do then check that you have the newest drivers. If the problem persists, consider using another system to see if the problem remains.