There are many different types of models we can use. We could lean into full virtual reality, where all stimulation is simulated or, alternatively, we could go for an augmented reality where users can interact with the world and have the concert take place in their homes.

Virtual Reality is when we use computer-generated simulations to define an environment that can be interacted with, using equipment such as controllers or headsets. Using VR allows users to be taken to a completely different environment that can be different from what is possible in the real world. Additionally, there are fewer physical constraints to worry about as since all of it is simulated, we can change what is shown easily as we do not need to build off an existing world. Additionally, since we don’t have to use the real world, we can go for a higher stylistic approach to designing the stage and models as there won’t be any unsettling contrasts between what is virtual and what is real. Less work is also required to make it immersive from a visual perspective as well, due to fewer constraints which allows us to invest more resources into controls and other senses.  
However, there are some concerns regarding full use of Virtual Reality. Virtual Reality can be a cause for nausea and may make users uncomfortable after prolonged use. Additionally, more work will need to be done at the start of the project to build up a complete world, as it would be having to be worked on from the ground up, instead of using the existing world as the baseline. Embodiment could also present itself as a challenge as there are more physics and interactions to be considered, to allow to user to feel like they are in the world, instead of just observing it. Something else to consider is allowing the users to interact with each other. In a concert hall, it would be ideal for users to be able to interact with each other. This could be easily solved through an augmented reality angle where users can be in the same room and see the same thing but from different angles. However, allowing users to connect and interact with each other can be challenging to find a solution that isn’t overbearing.

An alternative model is the use of Augmented Reality. Augmented Reality overlays imaging to the real world, meaning users interact with both physical and virtual spaces. Like VR, there are many benefits to using AR. For starters, AR is much more accessible, due to it being available on phones, tablets, etc. Additionally, since the physical world is still present, it causes less nausea and allows the user to be more aware of their surroundings. AR also allows the experience to be more personalised as their environment is adapted to fit the concert hall, so they could have a singer present on their sofas or tables. Furthermore, it is easier to connect with people who are physically nearby, allowing for better interactions.  
Just like VR, AR has some drawbacks we need to consider as well. Although it is easier to connect with people who are physically around, it is more difficult than with VR to connect with people who aren’t nearby as it is much more difficult to have avatars walk around in your environment that also suits theirs. Additionally, unless the application is very high quality, it is more difficult to be immersed, compared to VR, meaning for the scope of the project, VR may lead to more immersive experiences. Augmented Reality is also less developed than VR, leading to higher costs or lower quality experiences. Having the stage and characters be placed in a “normal” position might present another challenge as it would either require the user to place markers down, or for the application to have smart sensors which can place the virtual environment in an ideal spot.

After considering the two models, our group is leaning towards a fully virtual environment for our concert hall to take place in. Virtual Reality better suits our skillset and allows us to create an environment from the ground up, which means we can attempt to create a fully immersive concert hall. Additionally for our brief, it makes more sense to have it in virtual reality as the focus will be on the stage, which is a static object. People also tend to not walk around so much in concert halls so there are less health and safety concerns to worry about. Through VR, we can create a virtual environment which utilizes both sight as well as hearing to enhance the immersion experience. The fully virtual environment ensures that we can create a scene that feels like you are in a concert hall, and it allows us to control what can be seen and not, unlike dealing with the physical world constraints AR must solve. We could give each user an avatar that exists within the world and have NPCs roam around, mixed in with other avatars, to give life into the simulation.