



# VIVEPORT

A Usability Evaluation

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## What is Viveport

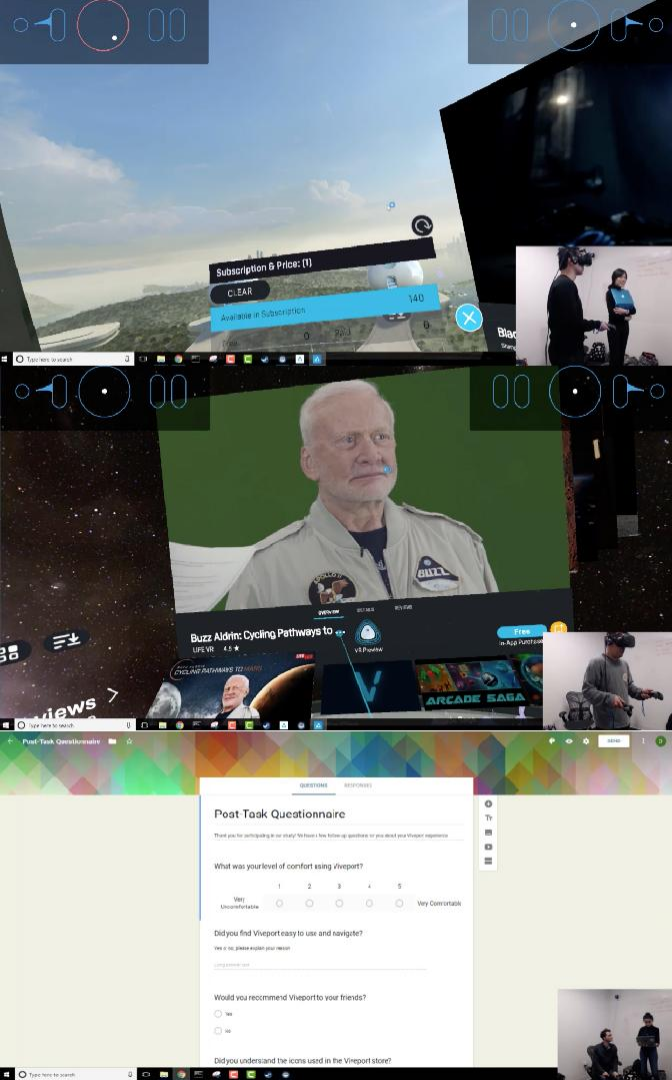
The Viveport store creates an interactive and immersive environment for customers to preview new games and manage their VR game libraries.

## What is the purpose for this usability testing

Identify any usability issues during a user's experience when interacting with the store in different scenarios.

## Research questions

- + What usability issues may users encounter in the Viveport store ?
- + Can users successfully navigate VR scene previews to purchase a game ?
- + What do users think of the VR game previews ?
- + Can users successfully use interface components such as 'filters' to view different categories of games ?
- + How do users feel about shopping in Viveport VR store comparing to purchasing games on the Viveport website ?



# Methods & Procedures



# Study Methods



## THINK ALOUD

Short Term Memory  
Relaxed Method  
Verbalize Current Activities



## OBSERVATION

Video & Audio Record  
Note-Taking



## INTERVIEWS

Open & Close-Ended  
Pre Study & Post Study



## SURVEYS

Recruitment Survey  
Post Study Survey

# Test Procedures



Task 1: Use Scene Preview & View Details

Task 3: Use the Sort by price option to view games in a \$20 budget

Task 5: Purchase

Post-Test Survey



Pre-Test Interview

Task 2: Bookmark a favorite game for later

Task 4: Use the Filter option to select a genre of user's choice

Post-Task Interview

# Affinity Diagram & Data Analysis

X=1

NAV1  
① N=9  
X=3

FILEDS  
② N=4

③ PREVIEW  
W=5

1x0, 1A  
IND

1x, 1I

1M, 1N,  
IP

N1

N1

N1

N1

X1c

N1c

IL

N1d

C1d

C1

N1c

P1

P1

2N, 2c, 2d  
2A

2Xd, 2A

2A, 2Xd

I2

I2

C2c

X2d

G2

A2

X2d

C2

X2d

N2c

V2b

V2d

N2c

A2

N2c

P3a

P3a

P3

AV3

3c

3D1

N3d

C3

3Xd

3N4, 3A

3A

A3

X3c

C3

3Xd

3D1

US

P3

P3

3C

## Themes

1. Navigation / Menu
2. Searching (Sort / Filter / Categories)
3. Preview

## Emotions (if applicable)

- a) Happy
- b) Surprised
- c) Frustrated
- d) Confused

Example: X1c - Usability problem with Navigation or Menu (frustrated)  
P3 - Positive opinion expressed for preview

X	Usability problem
D	Duplicate usability problem (described earlier)
V	Video highlight — an "Ah-ha!" moment
C	Comment (general comment by participant)
P	Positive opinion expressed by participant
N	Negative opinion expressed by participant
B	Bug
A	Assist from moderator
G	Gives up or wrongly thinks finished
I	Design idea (design insight by logger)
M	Misc (general observation by logger)

X=1

X=7

X=4  
U=3

OVERALL  
VR ENV.  
⑤

I5

P5

I5

Xd5

52, 5H.

5C, 5M

5N6, 5C

5N6, 5C

5H, 5C

5C, 5M

# Results

## Primary Categories based on Information Architecture:

- + VR Previews
- + Filter/Sort functionality
- + Navigation & Viveport Experience
- + Bookmarks

## Severity Level Rating Scale:

- + Level 1: Cosmetic
- + Level 2: Moderate
- + Level 3: Major
- + Level 4: Critical

# VR Previews | Mental and Conceptual Model Mismatch

**Severity Rating:** 2

**No. of participants who faced the issue:** 60%

## **User Quotes:**

- + “I have very little context for what a VR Preview means. Is it the environment or the things that I interact with?”
- + “Am I looking up reviews?”

# VR Previews | Discoverability

**Severity Rating:** 2

**No. of participants who faced the issue:** 20%

**User Quotes:**

- + “For the game that I am viewing, I can’t see the preview button somehow!”

# VR Previews | Interactions

**Severity Rating:** 3

**No. of participants who faced the issue:** 80%

## **User Quotes:**

- + “Was that the preview that I was looking at?”
- + “I didn’t know I could walk around in this preview!”
- + “How am I supposed to interact except of course looking around?  
Or is that the case with this game in particular?”
- + “Still not sure exactly what to do!”
- + “No, it’s not working. I thought it was” Couldn’t figure out what  
objects can be interacted with in the previews”.

**No. of participants:** 60%

## **User Quotes:**

- + “Basically I wanna try before I buy, right.”
- + “Wow, this is awesome.”
- + “Now we’re in the Cat Sorter universe. How delightful!”
- + “Oh, so now I find the progress bar”
- + “The VR preview was really cool”
- + “I mean I won’t buy a 10 dollar game without experiencing it!”
- + “Definitely a preview over just a video of the game. Since VR is so new I think it is important!”

## Filters | Comprehension

Participants are unable to understand the filter labels and icons (Visual Design Language is difficult to decipher)

**Severity Rating:** 3

**No. of participants who faced the issue:** 40%

### **User Quotes:**

- + “The filters were easy to find but the icons were ambiguous”

**Severity Rating: 3**

**No. of participants who faced the issue: 60%**

## **User Quotes:**

- + “Interesting is if I point it here, it will show ‘Recommended’, if I point it here (another similar icon), there is nothing here.”
- + “This appears to be the only menu” (referring to filter)”
- + “Is that efficient? Is that as much as you can filter?”
- + “The ones that don’t have a price listed next to them, are those free?”
- + “Now I find a menu, that’s not intuitive”

## Filters | Discoverability

**Severity Rating:** 3

**No. of participants who faced the issue:** 80%

### **User Quotes:**

- + “That takes a little while to figure out”

# Navigation & VR Experience | Legibility

**Severity Rating:** 2

**No. of participants who faced the issue:** 40%

## **User Quotes:**

- + “I find it hard to read the text”
- + “There are some signifier or affordance that are not clear.”

# Navigation & VR Experience | Layout

**Severity Rating:** 2

**No. of participants who faced the issue:** 40%

**User Quotes:**

- + “I’m not really crazy about that design” (referring to stack of videos on main content window)

# Navigation & VR Experience | Language

**Severity Rating:** 2

**No. of participants who faced the issue:** 60%

## **User Quotes:**

- + “I don’t have a high level of trust because I’m seeing some duplication”
- + “This says download, I thought I can directly download for free. Now you say join now when you hover there, then I have to pay or select subscription.”

# Navigation & VR Experience | Animation

**Severity Rating:** 2

**No. of participants who faced the issue:** 80%

## **User Quotes:**

- + “There is a lot to see here all of a sudden”
- + “When I select, it like bumps me through all the options instead of replacing and selecting it. That’s a little bit disorienting. It’s not so smooth”
- + “That jumping is really distracting”

# Navigation & VR Experience | Discoverability

**Severity Rating:** 2

**No. of participants who faced the issue:** 60%

## **User Quotes:**

- + “I think having things left and right, I didn’t notice either side of my peripheral. I would say if they are in my (sight) periphery, I would know quicker”
- + “I am not sure how to find the genres!”

# Navigation & VR Experience | Assistance

**Severity Rating:** 2

**No. of participants who faced the issue:** 80%

## **User Quotes:**

- + “The four squares icon for the genres didn’t have anything say below it (tooltip)  
When you hover it should have some text.”

# Navigation & VR Experience | Experience Expectation Mismatch

**Severity Rating: 3**

**No. of participants who faced the issue: 80%**

## **User Quotes:**

- + 'It's a typical window interface just that it's in 3D which didn't seem very natural to me (store VR environment)'
- + 'It's just steam in 3D literally and that doesn't make sense to me! If you are going to make it in 3D come up with a new shopping experience.'

# Navigation & VR Experience | Joy

## User Quotes:

- + 'Other VR experiences aren't as interactive as this!'
- + 'There are a surprising number of games here!'
- + 'I think the store was fine as you just had to look a little left or right to find the options.'

# Bookmarks | Discoverability

**Severity Rating:** 3

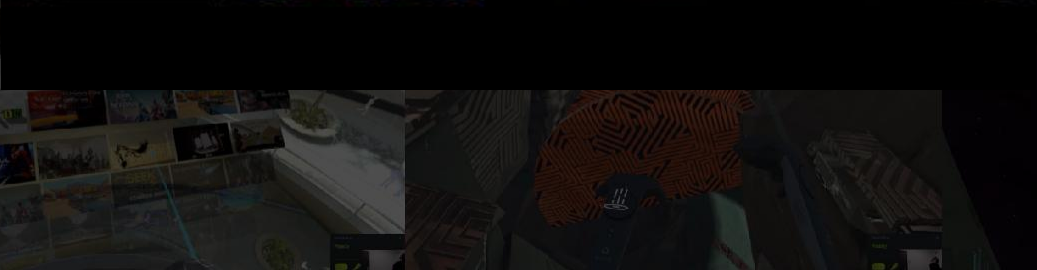
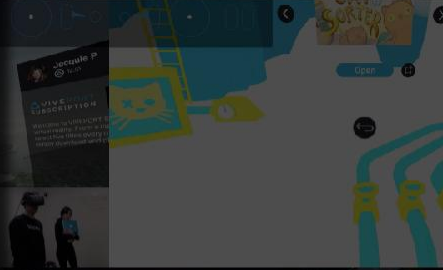
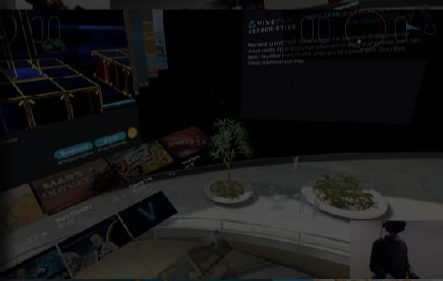
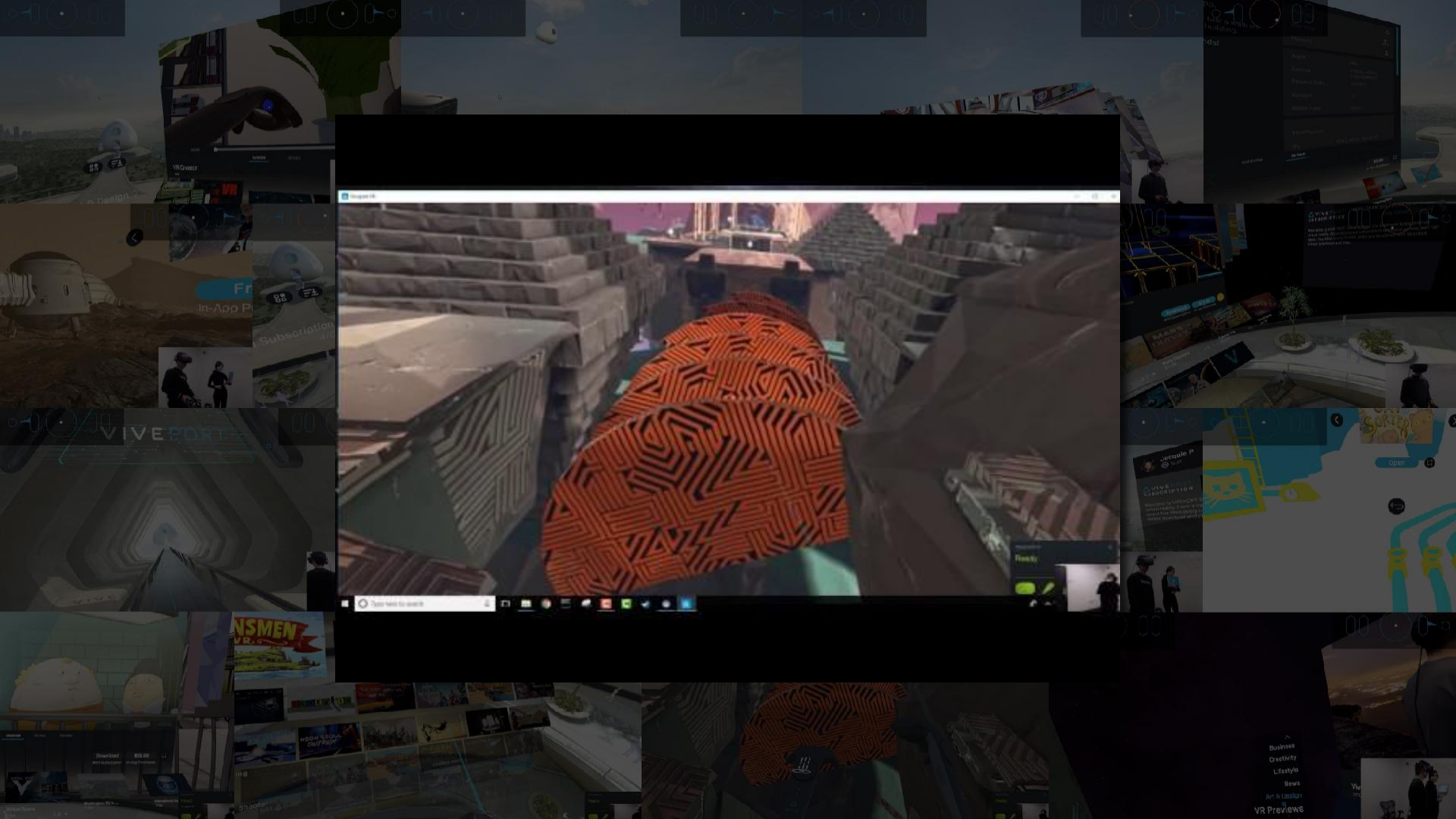
**No. of participants who faced the issue:** 20%

## **User Quotes:**

- + “So I assume that the game has just been added already or....?” (After clicking yellow bookmark button)”

## Post-Task Survey & Interview

- + 60% of participants did not understand the icons used in the Viveport Store
- + 40% of the participants would recommend Viveport to a friend
- + Generally rated a positive and comfortable experience
- + 60% of participants said the store was efficient to use (purchase flow)
- + People like the previews, do not understand how to interact with them



# Recommendations

*"It's just Steam in 3D, literally, and that doesn't make sense to me!  
If you are going to make it in 3D, come up with a new shopping experience."*

## Recommendations | VR Previews

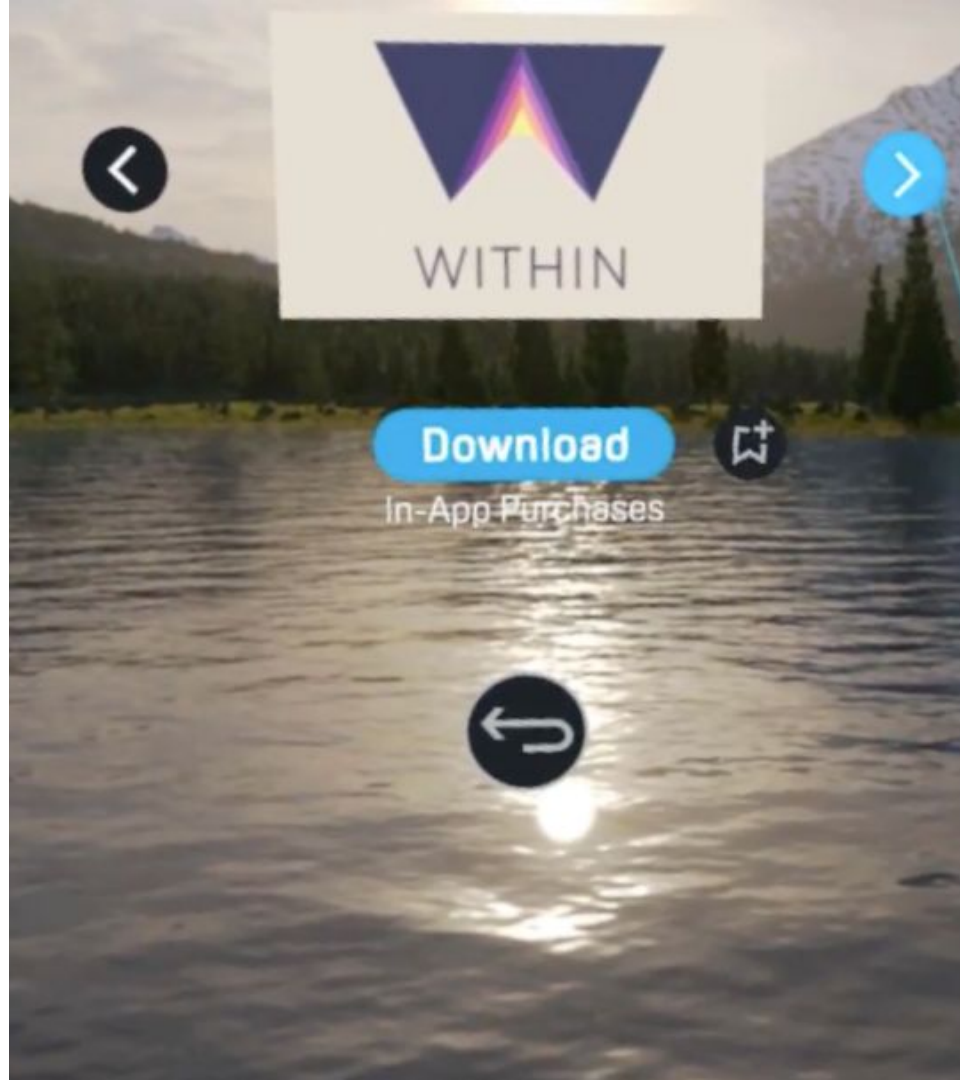
### Emphasize VR Previews Experience

Standardize or create guidelines for VR Previews

- + Standards for elements of VR Previews to improve user interactions

Create VR Preview icon on thumbnails

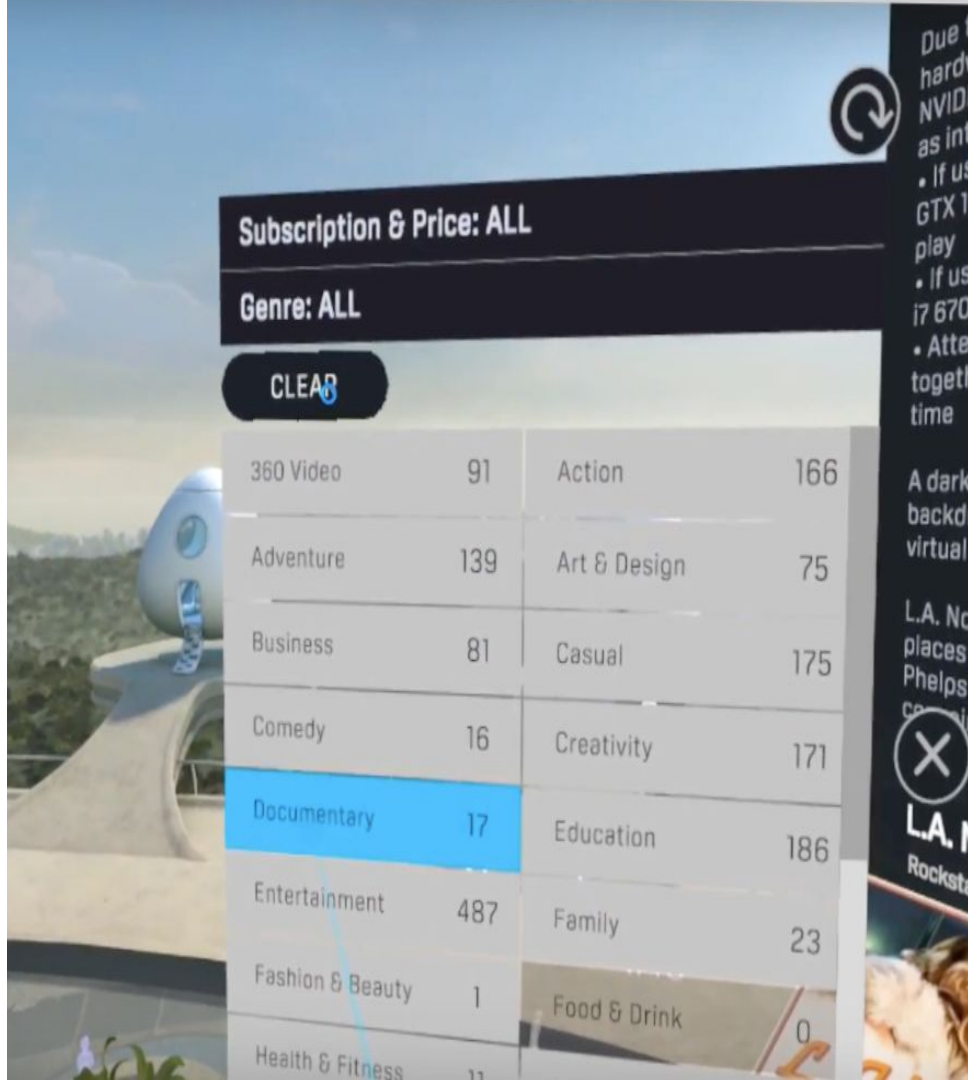
- + Users could notice whether the game has VR Preview or not outside the VR Preview section



## Recommendations | Filter & Sort

### Enhance Filter & Sort Options

- + Add tooltip or more noticeable iconography for discoverability
- + Add more granular options in filter settings
- + Incorporate combined filter and game title search



## Recommendations | VR Environment

### Reduce Motion Speed

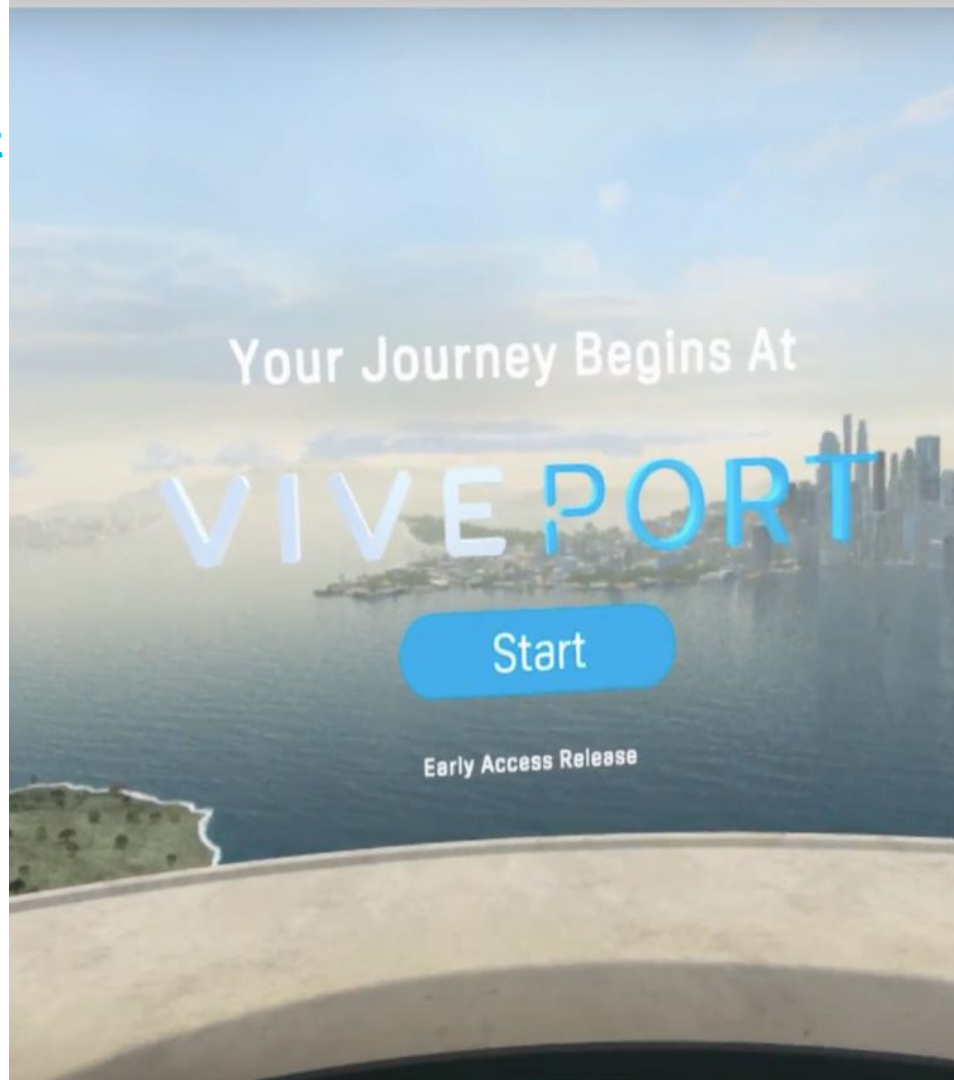
- + Reduce “bounce” animation when selecting titles

### Enhance Visibility of Wallet Balance

- + Wallet balance on-screen in profile information
  - + Helps with establishing budget while browsing

### User Personalization

- + Allow users to customize store background / ambient environment





# Reflections

## What we discovered in our usability testing:

- Our participants are all UW students in their 20s
- Steep learning curve in VR even for people with some level of experience or exposure in VR

## What we would do differently:

- Recruit participants with more diverse background
- Recruit participants with more expertise in VR



# Q & A

*Any questions?*