Multidimensional Divides

Bringing Land division and Star Compass to life for all levels of learning

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Key Insights from Research

- **Interest levels varies** significantly across the student population, so prototypes should support different levels of engagement.

- On-campus students' geographical knowledge is **centered on campus**. Students living off campus are more grounded to the geography of the **surrounding area**.

- Hawaiian land division boundaries communicate geographical **features or different uses**. Colonial boundaries erase these relationships, making it difficult to view Native Hawaiian boundaries.

- Elevated **perspective** is a powerful visualization tool.

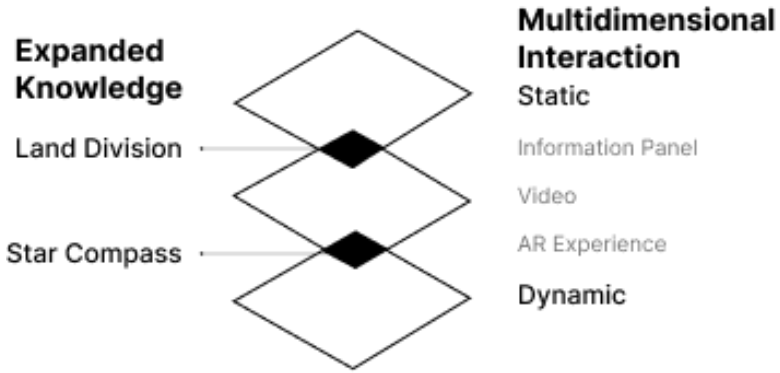
"A lot of people…kind of just walk past the signs instead of read them… you need to put in effort to try to learn the culture"

–Student Interview Participant

Value Proposition

- These concepts explain Hawaiian concepts of land division, space, and navigation in a dynamic visual format that attracts attention from students walking past ‘ili markers. It grounds learnings in existing geographic knowledge.

- Information is tiered into different levels, so that basic information is conveyed using the most engaging/attractive animations to, while detailed information utilizes static formats.



Multidimensional Approach in Learning

‘ili Marker Interaction

1 Panel Information — **2** Video Information

AR Interaction

3 Observe & Immerse — Identity & Discover — Document & Remember

Static

Dynamic

What the students do, think and feel

I never take more than 30 seconds to look at the sign systems and ‘Ili markers. The design of ‘Ili markers looks interesting, and **I wish I knew more about why they are here and designed in this way.**

Provide panel information introducing ‘Ili boundaries and land division system based on where you stand.

What the students do, think and feel

According to the panel information, there are several land division layers in relation to my current location. While I understand the concept, **I am finding it challenging to apply it in the real world.**

Provide video information scaling from campus to the whole island.

What the students do, think and feel

The land division in the video is very clear and easy to understand. I would like to learn more about Native Hawaiian culture. **Someone told me that the base of the ‘Ili Marker is a star compass. What is that?**

Introducing the concepts of Polynesian navigation and star compass, and indicating their connection to the base of the ‘Ili Marker.

What the students do, think and feel

The concept of Polynesian navigation and star compass is fascinating. **But How can I really experience it, and is it applicable on land?**

Provide Kilo Practice in a AR immersive method, allowing users to experience the navigation mindsets at ‘Ili Marker.

What the students do, think and feel

I am interested in seeing how different people keep their Kilo Journal, and **I would also like to explore any advanced features that may be available**. I plan on returning to learn more about the various aspects of kilo on my campus.

Navigation is a mind mapping activities, each navigator has different way to remember the natural patterns.
Keep doing Kilo, this is the way that connect you with our Aina.

Phase 1 **Panel Media**

‘ili Marker Interaction

1 Panel Information

2 Video Information

AR Interaction

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Identity & Discover

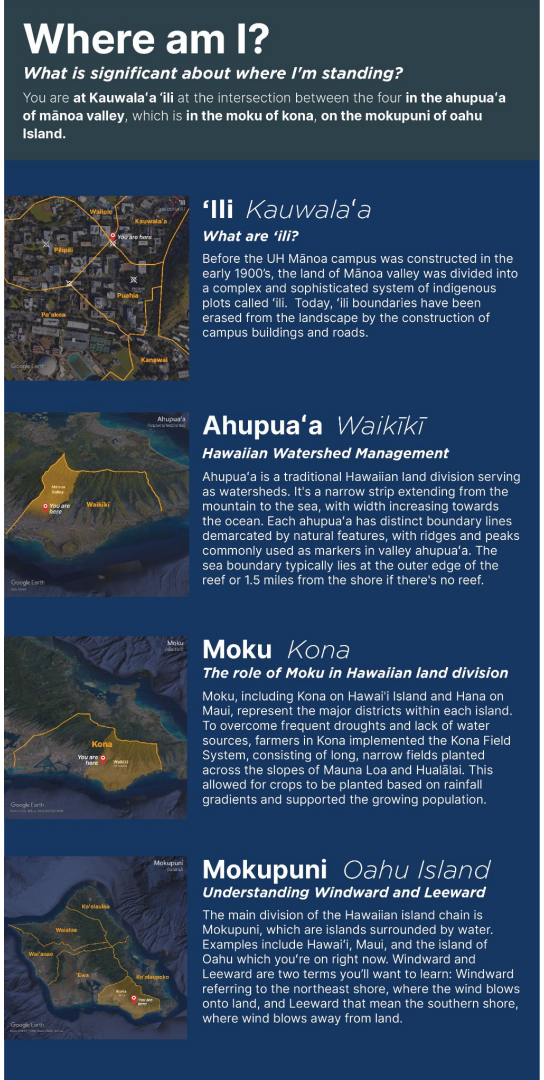
Document & Remember

Phase 1 **Information Panel**

The information panel allows people to both understand the Hawaiian land division system and recognize where they are standing.

The text explains notable aspects of each level of division.

Since the imagery matches the video content, it facilitates people's comprehension of the video.



Phase 2 **Video Media**

‘ili Marker Interaction

1 Panel Information

2 Video Information

AR Interaction

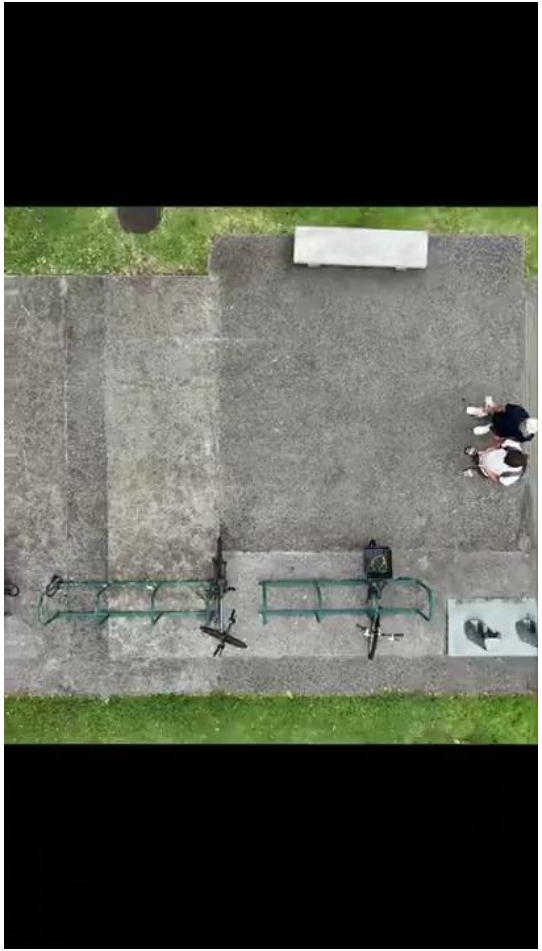
3 Observe & Immerse

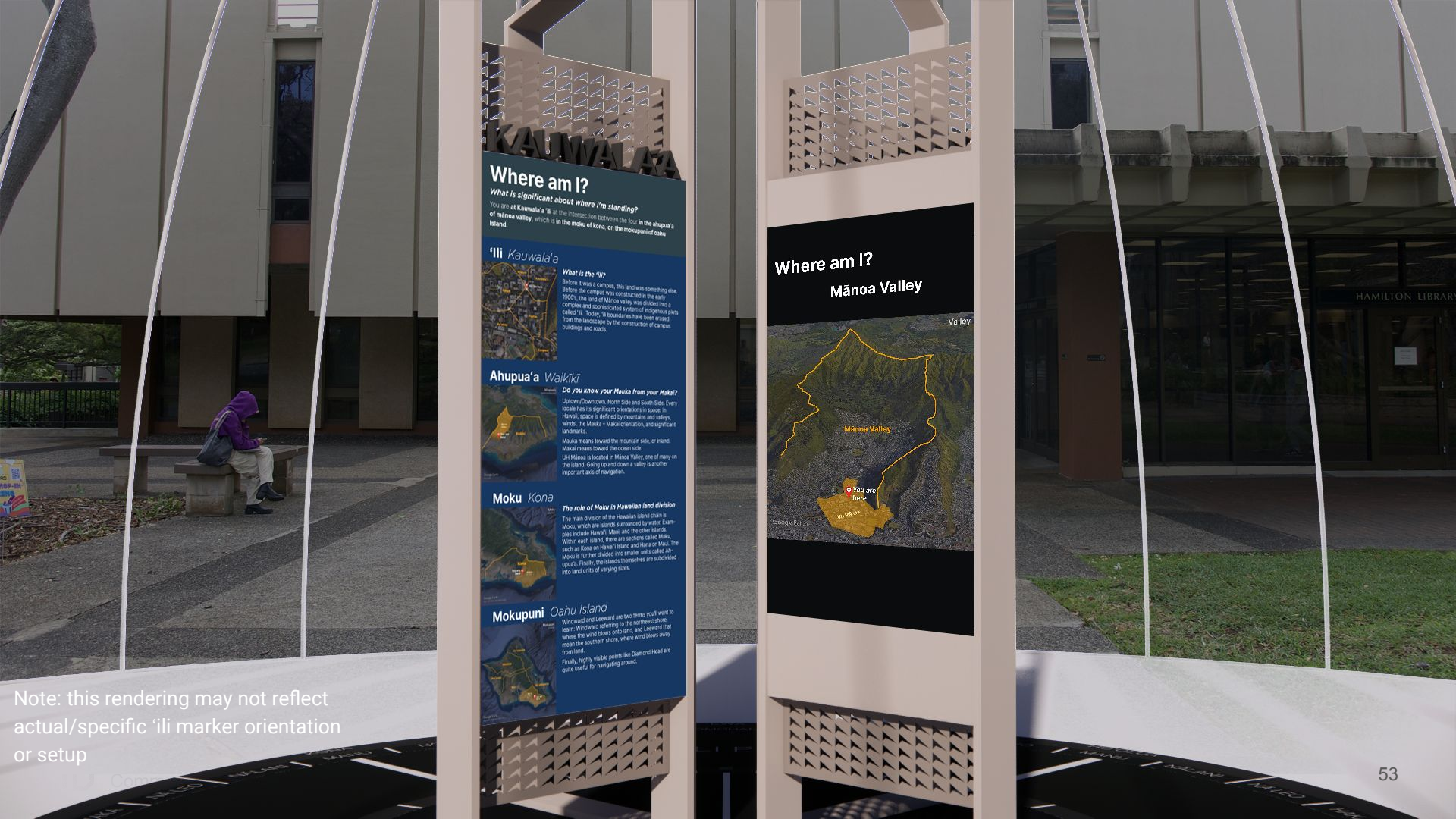
Identity & Discover

Document & Remember

Phase 2 **Video — Map Zoom**

- Captures the viewer’s attention once they have stopped to investigate the ‘ili marker.
- Further visualizes the information from the panel into a dynamic format.
- At the end, the viewer is invited to dive deeper into an AR experience via a QR code.





Note: this rendering may not reflect actual/specific 'ili marker orientation or setup

Phase 3 **AR Media**

‘ili Marker Interaction

1 Panel Information

2 Video Information

AR Interaction

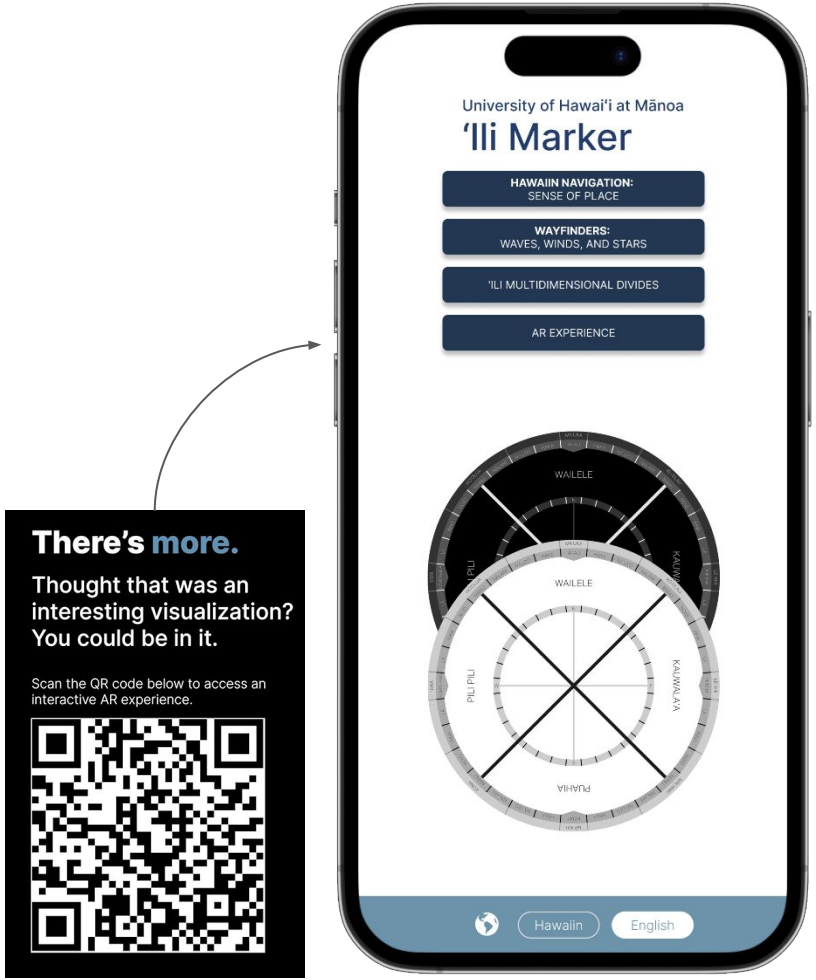
3 Observe & Immerse

Identity & Discover

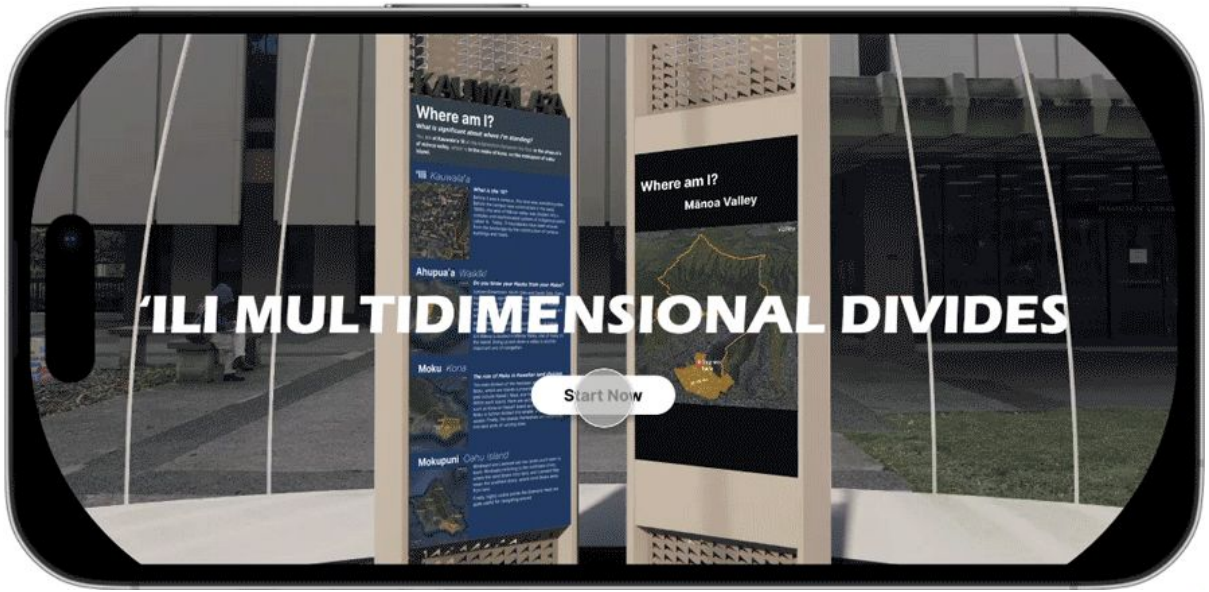
Document & Remember

Phase 3.1 **Observe & Immerse**

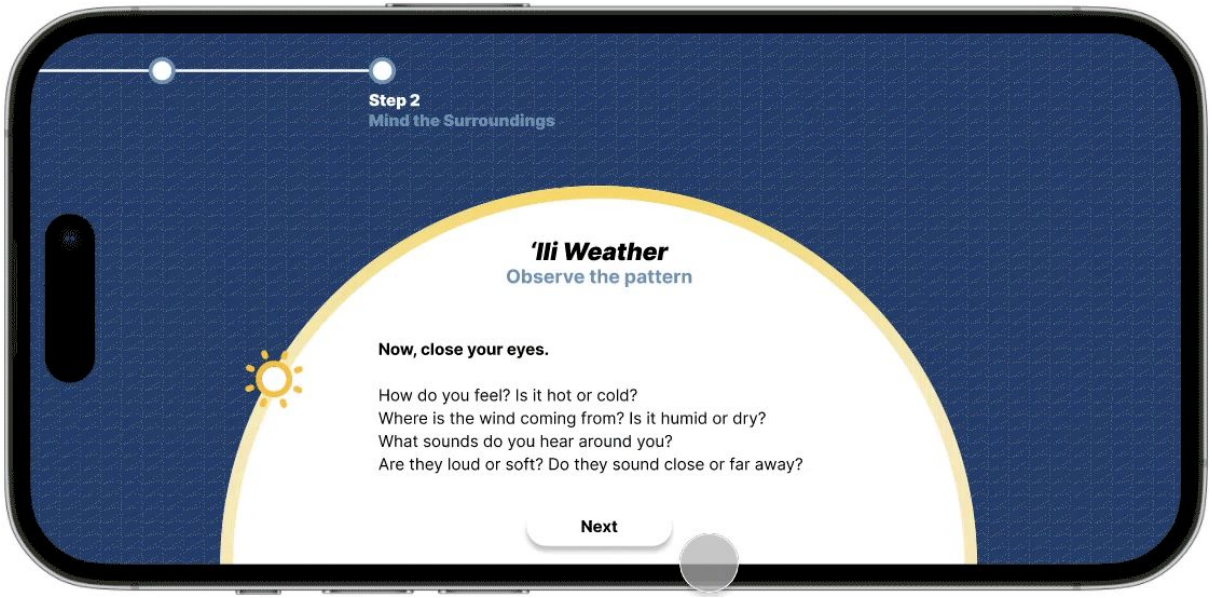
- Follow the **same structure** and **visual language** as the current QR code used in Life Science sign system, **creating a connection to AR experience**.
- Viewers are invited to dive deeper into the content through the QR code at the end of the video.
- Those who choose not to engage with the AR experience still gain knowledge through observing the video and panel.



Phase 3.1 Connecting the **Star Compass** and the **‘Ili Marker base** indicates what you are standing on.

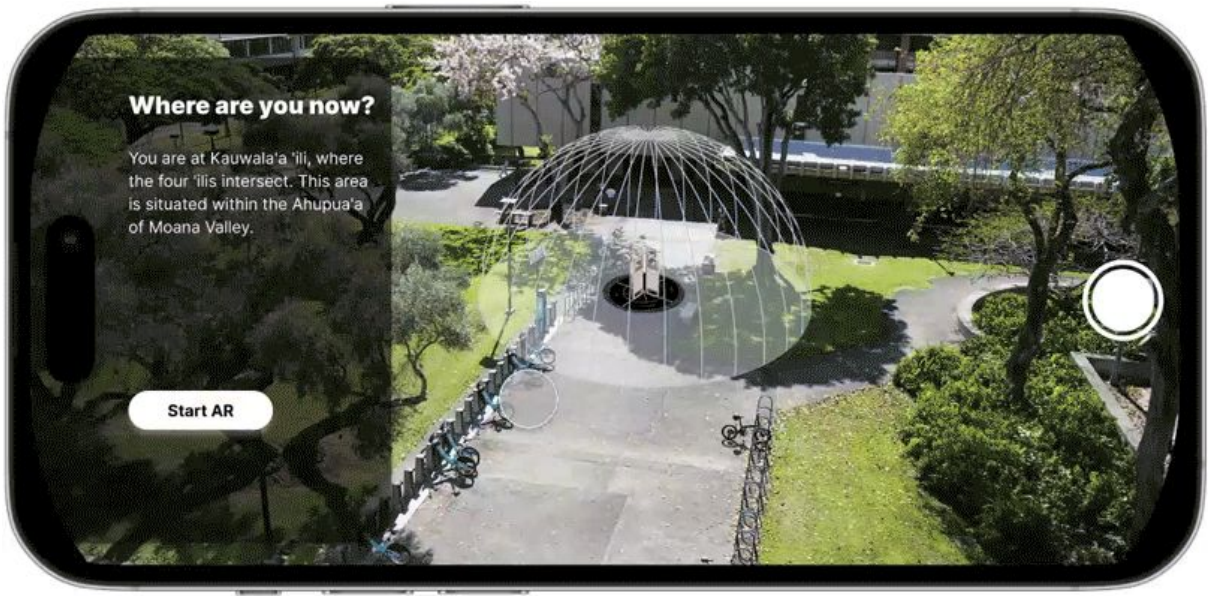


Phase 3.2 **Identify and Discover** - Select the Kilo practice theme to engage in and **immerse yourself to observe your surrounding and patterns.**



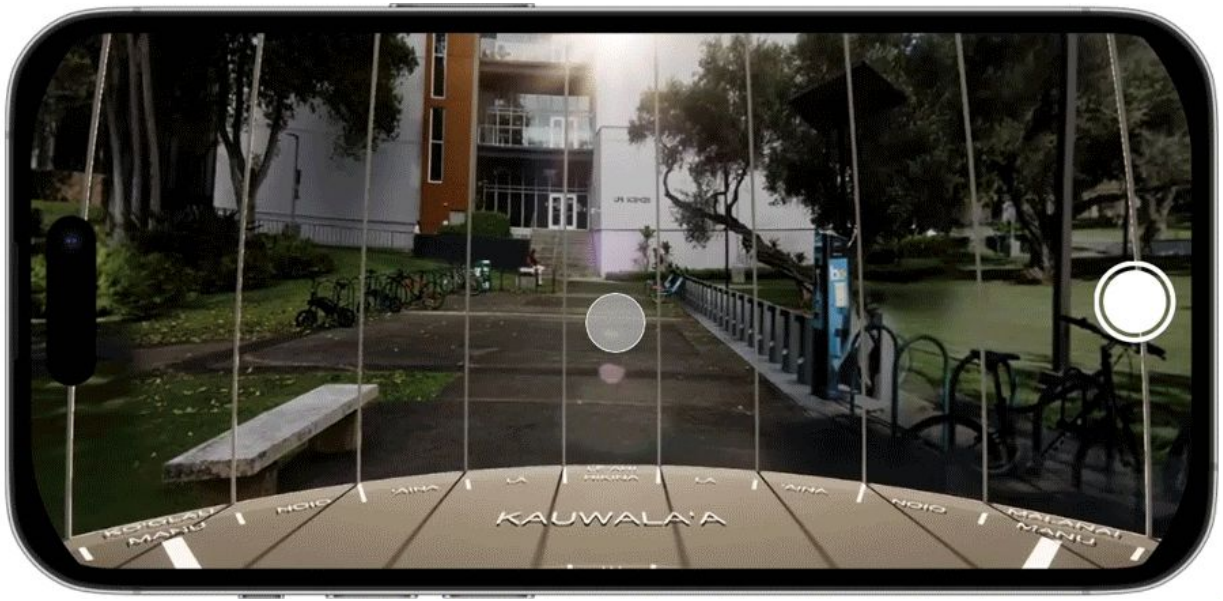
Phase 3.2 Using the AR features to observe, and **practice Kilo on land**.

See how the dome actually works on your phone. (Software https://panoraven.com/en)



https://panoraven.com/en/embed/SgFMCamqPG

Phase 3.3 **Document & Remember -** After the AR interaction, the **Kilo Journal** will be generated automatically. For those who want to continue diving deeper, **Kilo forum** and **reference links** are available.



Concept benefits

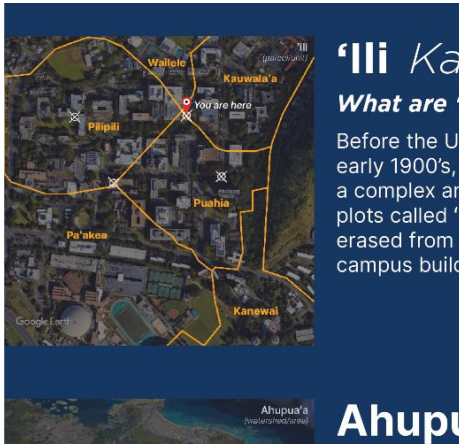
- **Sequential learning**: to engage students in progressively more immersive learning experiences lowers the barrier to entry at the start.
- **Extended + Portable:** The experience started at the ‘ili marker extends to viewer’s devices via the AR experience which can be accessed anywhere.
- **Flexible:** video can include future concepts if priorities or user testing reveals other directions.

Design Rationale

- Secondary research identified that prototypes should be v**isual forward** and less reliant on text, and should prioritize literal over abstract representations.

- Primary research identified that interest levels and willingness to engage in Native Hawaiian topics varies significantly across the student population, so prototypes should support varying levels of engagement.

- Visual perspective was identified as a powerful tool to help ground viewers in the spatial information that they're learning about.



Opportunities and Issues

Extension Opportunities

- End of video can tie into other team’s concepts to extend learning experience.

Potential Issues

- Video and panel content are tied, so changes to video content mean the panel must be updated as well.
- User testing of prototypes might identify issues such as unwillingness to engage with videos over a certain length, limiting the content.