

A collection of Polaroid photos is scattered on a light-colored wooden table. In the upper left, a brown ceramic cup is partially visible. A pair of black-rimmed glasses rests on one of the photos. The photos depict various scenes, including a blue sky, a green landscape, and a close-up of a textured surface. A semi-transparent white rectangular box is overlaid on the center of the image, containing the text.

Kiosk Final

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Problem Statement

How can we design a kiosk/display, while utilizing ecodesign strategies to reduce the lifetime impact by at least 50%, and provide the opportunity to interact with postcards.



Okala Key Strategies

1.5 Share among multiple users

2.2 Avoid materials that deplete natural resources

2.5 Use renewable resources

4.1 Reduce Product and Packaging weight

4.2 Reduce product and packaging volume



Reference Kiosk/ Display

Lifetime Impact:
1016.463



Lifetime Impact:
2505.565



Target Audience

Due to this kiosk being in a public domain there needs to be a certain level of inclusiveness for all. This meaning that the design should be wheelchair accessible and not exclude any certain type of group or person from being able to use or experience the kiosk.

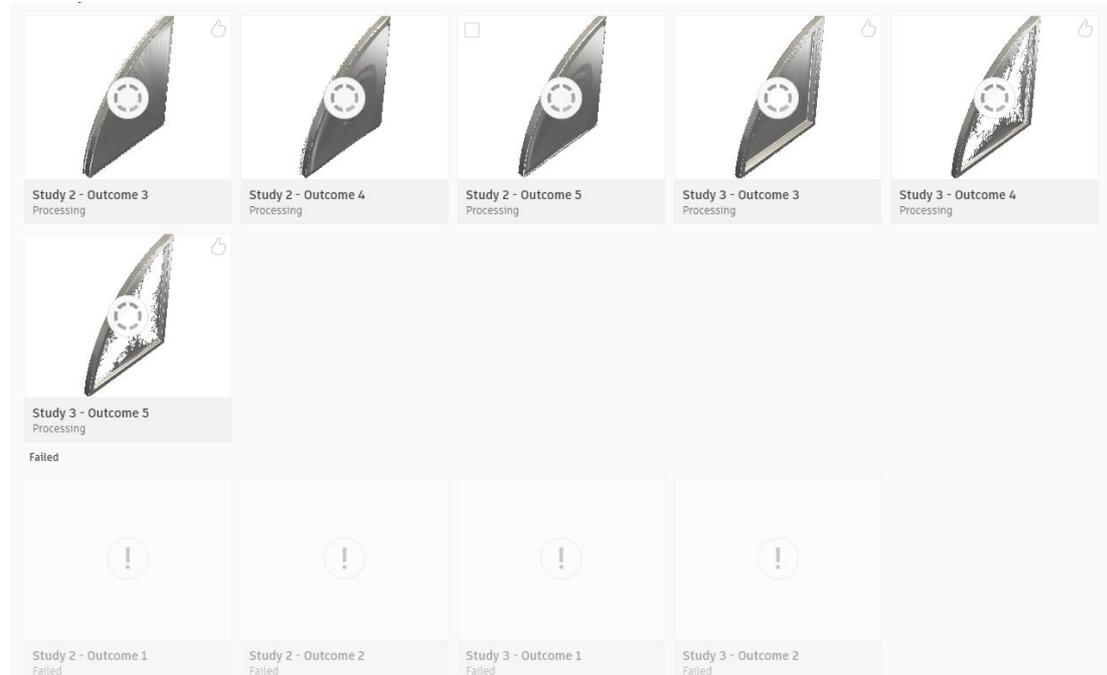
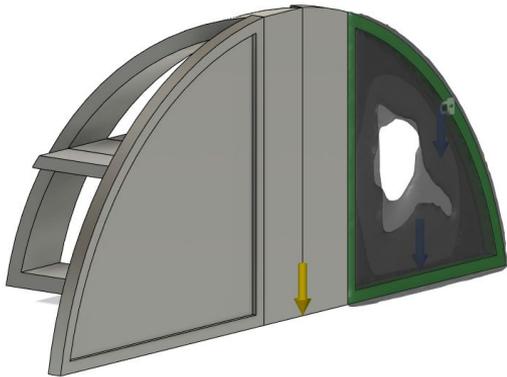


Chosen Concept



Generative Design

Using generative design can reduce the overall weight of the kiosk, while maintaining structural integrity.



Final design



Branch is a postcard distribution and display kiosk. Branch utilizes generative design to reduce weight and overall impact, while maintaining structural integrity.

Features



Different height table tops allows for greater accessibility.



Cork surface would allow for multiple pinning and be replaceable when needed.

Fully Collapsible



Details



A deadbolt system would hold the desk up when open and prevent tampering.



A simple hinge would allow the table top to freely move and collapse.



For easy movement, there is hidden casters on each corner of the base.



Boxes would contain blank postcards with the associated artwork displayed in the front.

Material Choice

Bamboo

- Used for many years as far back as 11th century
- Can grow on unproductive land
- Lives off of rain water and spring water
- Sustainable timber in 3 years (Trees take 20+)
- Naturally resistant to molds and termites, thus removing the need to treat the wood with pesticides and other heavy chemicals

Cork

- Trees aren't cut but stripped of bark
- Bark takes 9-12 years to grow back
- While tree regrows bark it sucks 5x more carbon from atmosphere
- For every ton of cork used,, 2 tons of CO₂ is taken from atmosphere
- cork is biodegradable



Life Cycle Assessment

Lifetime Impact - Original

Total Impact / Lifetime		
Materials	918.0930225	
Processes	62.87779344	
End of Life	35.49218636	
Transportation	0	
		1016.463002

Lifetime Impact - New

Total Impact / Lifetime		
Materials	166.9276149	
Processes	5.56830626	
End of Life	8.563992624	
Transportation	0	
		181.0599138

A collection of Polaroid photos is scattered on a light-colored wooden table. In the upper left, a brown ceramic cup is partially visible. A pair of black-rimmed glasses rests on one of the photos. The photos depict various scenes, including a sunset, a forest, and a blue sky. A semi-transparent white rectangular box is centered over the photos, containing the text "Thank You" in a black, sans-serif font.

Thank You