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Critique Paper

### **Cartagena Group**

In this paper, I will be exploring the solar still design created by group 5 for the Nativos in Playa Blanca. This group was also a Cartagena group, and therefore I will be drawing on my knowledge and context of the Playa Blanca residents in order to inform my critique of their design. While my group decided to design a solution to deal with transporting water and trash around the bumpy terrain, we did originally investigate water collection solutions. As such the design choices and considerations will be quite familiar. Overall, group 5 did a fantastic job at exploring options, considering design strategies, and creating an interesting product. To further assess this project, this paper will be broken up into three concepts: context, design progress, and the design itself.

Group 5 began their design proposal with really detailed context slides. The first highlights the geographical and historical context of Cartagena. They talk about the general context of the area, such as the population, size of the land, and why the Nativos live there in the first place. This information is valuable, but I think they could've gotten more specific with how the beach is accessed, where the Nativos live and what their living conditions are like. I think they also could've shown images of all these aspects that we had access to through Katie Shoemaker. The project context is then explained with images and facts about the Nativo lifestyle. This slide does address some of the issues I highlighted about the previous slide, however fails again at being specific to the Nativo community. This slide does mention important information relevant to their design, such as the businesses present in the community, as well as exactly how the Nativos water infrastructure is organized. This context is the most important context for their project and they do a good job of highlighting these points, such as how the water is used and who uses it.

The design process is the most impressive part of group 5's work. This section of the presentation starts by stating how they structured their thinking through socially engaged design and agile

methodologies. The reasoning they give to support this thinking structure is well thought out and returned to as the design and problem statement are explored. The design process begins with the stakeholder map which I think is accurate to their design considerations, but is too general for the primary stakeholders. I think in order for a stakeholder map to have value in the context of a design, the primary stakeholders should be as specific and limited as possible. Group 5 was very specific here, but included too many separate users. However this design does serve a very wide range of users so it's possible I am over analyzing here.

One part of the design process I thought was most successful was the positionality statement. Like most groups, they highlighted each designer's background and how it applied to designing products in general, but I felt group 5 did a fantastic job at applying these concepts to their specific perspective on Cartagena and water usage in general. I think it's very difficult to recognize bias in something as universal (at least in western culture) as running water.

The design priorities are well outlined and in depth. I do think they missed an important aspect of the design priorities that my group highlighted - usability. While group 5 did mention ease of use and maintenance, they fail to mention actual use in the community and how it would be used. For example, my group found it difficult to figure out exactly how the Nativos would use an all terrain cart, so we gave them as many options as we could and left the final use decision up to them. This solar still is very limited in how it can be used, so getting that priority down early on is important.

The final design is where I think this project struggles the most. I feel this way mostly because of how difficult it is to design something that will last in a tropical environment. The all terrain cart will experience wear all the time due to how it's used, and thus degradation of parts and repairability is an expected routine. This solar still would ideally have little to no maintenance required as it is stationary, and the only moving part is the door for filling it with sea water. The final design does address these concerns with the option of using any water container within the still for containing sea water, however due to the nature of a solar still this does not prevent sea water from coming into contact with the wooden structure. I can't see this design lasting long term, which is one of their major design considerations.