**Highlighted Issues**

One potential improvement in the design that would further demonstrate the inclusion of the social context would have been coming up with a system to better motivate residents to participate in the recycling program.

Short term incentivisation scheme, then the products produced for the community will sustain this incentivisation into the later stages of the project.

1. Priority in receiving products for area, along with those who need it most.
2. Idea of a competition. Whatever section recycles most receives products first.
3. Option of monetary incentive (only if it comes to it – last straw).
4. Communicate with community leaders to come to the scheme that would work best for the community.

Four collection locations spread through Lobitos may have too many barriers to get good participation.

These are just the initial areas and expansion with more bins is planned, however if participation isn’t high enough in these high traffic areas the project would most likely be unviable in this format and a new plastic collection method would need to be devised. (Plenty of opportunity to expand our operation within the future, good to not waste the invested money in a scheme that doesn’t work).

Add small bins to the initial setup plan (stage 0), where they can scattered around the community a bit more making it easier to recycle. Reducing the amount incentive required. (NEED TO ADD TO COST).

The table also needed to have a brief description of what was considered in each of the criteria that received the scores or 1-10. Once plastic recycling was chosen though, there was no additional process described to settle on the plastic recycling process from Precious Plastics. An evaluation of options for plastic recycling / shredding / moulding and collection would have further supported the chosen plan.

Reasoning (Cover later in case of question).

I would have liked to understand how many jobs the plant and scheme as a whole would create, to ensure it would address issues such as community poverty.

All we can be certain of as of yet is the initial stages of the project, we see the creation of five jobs being a good general figure. A worker for each machine, and two for collection. We wish to get all worker trained on machinery as soon as possible though.

it should be considered that too many products to meet too many different needs may lead to difficulties in processing.

Staggered implementation

consideration should also be given to where the locals would want the plant located to ensure the workers can access it

Our initial plan is an estimation, before any proper action is taken as to the location of the plant and big bins, we will consult the locals. We aim to keep this project as local bases as possible.

The observation that recycling schemes have previously been unsuccessful was also insightful; it would have been beneficial to understand why this was the case, and the direct steps the project would take during implementation to ensure this project was successful within the community.

Unsuccessful we say because the product didn’t actively benefit the community, we are fully community focussed hence we expect less backlash. – We do have fencing around plant just in case.

I would like to have understood how the sorting and segregation of the plastic waste is undertaken in the design to ensure only recyclable plastic is processed (thus avoiding damage to machinery)

It is often that plastics can be differentiated by eye, plastic identification labels are getting more common day by day. Bottom line is, if we’re not sure don’t use it. A lot of plastic types are regimented, e.g. coke bottle always the same type, this will allow certain ones to be identified immediately.

potentially leaving the processing equipment vulnerable in the outdoor environment and insecure.

Fences, and locks.

The economic analysis gives a good breakdown of the costs and gives a good idea of the initial investment required. This would be even stronger if you had broken the costs down into capital costs for the initial investment (e.g. equipment costs, collection points) and operating costs (e.g. salaries, vehicle rental). It would also be useful to provide references for the cost data you have obtained.

References were hard to obtain for some of the equipment costs, such as fences and the solar panel farm as without making specific enquiries to companies for quotes then we would have to use data available online to estimate these costs.

The cash flow statements, and IRR are good tools to use when assessing the viability of the business, so well done on implementing these. I would have liked to have understood more about how you derived the numbers behind these models. For example, it is not clear how you came up with the sales revenues and these numbers seem unrealistically high, particularly when considering the value of the local currency. For a more in-depth analysis, you might also consider that sales will fluctuate with the tourist seasons.

Ross

You might also want to consider how you would train the workers to be aware of the risks and what you would implement to reduce hazards on the plant.

Emphasise in the final presentation. Include health and safety but very briefly. Keep appendix sections handy, just in this arises.

I would have liked to have seen more about how the project would be implemented on a smaller scale and how it will engage with the community, for example when selecting the location of bins to ensure they were in a useful area and how you would actively encourage locals to use the schemes (e.g. incentives).

We are aware that communicating with the community is absolutely essential to the success of this scheme. Especially considering past theft of components.

More local buy-in might be obtained if the machines were manufactured in Peru.

We would love to be able to manufacture our machines in Peru, though this is entirely dependent on the options of materials and labourers available to us. This will be weighed up fully later.

The quality assurance checks are also a good point; however, for high volume production, you might want to consider reducing the checks on a proportion of products as it might be very time consuming to check them all.

Works fully with the project, where we initially have the time to check all products. As production expands we limit this logarithmically where we check every 10, every 100, every 1000 etc. This will fit with the machine operators getting better at their job and making fewer mistakes.

would have liked to understand more about how you tackled "real-life events" as a company would do, and how you learnt about techniques you implemented.

We understand that it is difficult to react to every small change so what we have done is covered scenarios where the feasibility is high, they are more likely to happen. E.g. Low plastic sourcing, theft of machinery, displeased locals.

You need to make sure that the reader is convinced that plastics in the region are indeed a problem. Presumably, you have taken many of these figures from elsewhere, and if not referenced, they indicate that it is your own work (if it is, then info on how you arrived at these deductions is required). As a starting point, I might suggest, e.g. world bank reports/journal papers/our world in data etc.

Though plastics aren’t the biggest area, it gives us a basepoint to tackle the rest. It is important to realise that this scheme is way more than just the processing of plastics, covering the other areas too. With this being said, plastics is still an issue. A lot of the current development in the region is limited by the lack of tourism, something that is related to the plastics creating an eyesore of the place.

From Ecoswell given info

the same problem of how you sourced these prices/ sources for these need to be provided. Would benefit from including at least qualitatively how and from where you may source the materials from the Figure 3.1.1

Reasoning

I am not sure about ideas regarding long-term sourcing of the plastic. Transporting waste between countries/continents is a very controversial issue in the waste industry/research environment [+ associated carbon cost of transportation] So this aspect needs more work in terms of how you will want to run the project in the long-term.

Highlight this is a very long term possibility based on the progress of the project and would only ever be implemented if the transporting of plastic could be done in a low emission manner.

We are aware that our plastics requirement will be met by Peru for the most part, like likely to fit the build.

not considered in sufficient detail is the risk to the environment of microplastic escape. We are finding them now in the deepest part of the ocean to the highest part on land. You will need to ensure that no/minimal escape occurs. You need to at least consider this risk and mitigate it as and if necessary.

We can only feasibly capture large pieces of plastic at this stage.

Scheme to encourage people handing in past items, stops the disposal of them inappropriately. Priority received, point system, most recycled area gets priority points.