

Waste Management

Feasibility Study
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Warehouse for Consignment Distribution
Feasibility Study
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Proposal

The proposed waste management project is aimed at the dual purpose of job creation and the improvement of urban environments. The proposal intends to create an income for ten people using two properties as sorting areas for collected waste.

Operations

The proposed operation would involve the collection, sorting, and disposal of waste.

Collection

The collection would target three areas: residential communities, industrial companies, and cleaning contracts from government. Collection from local communities would entail the removal of waste from homes within a predefined radius. Community buy-in is needed to insure enough customers in a given area would pay for this service and an agreement from the home owners to separate recyclable materials from other waste. This is needed due to the limited resources assigned to this project.

For industrial companies, collection would target only 1 – 2 companies. This is due to the large amount of waste they produce, and the limited resources of the project. This collection would prove more difficult because the collection would have to entail all waste. To entice businesses to sign contracts with this project there needs to be a value added service. To request a business to use their own manpower to sort their waste would give them no benefit. Also, the project would have to offer a lower cost alternative to the solution already present.

The third collection area, government contracts, may not be a viable solution at this time. Currently the City of Cape Town is in the process of developing an Integrated Waste Management Plan (IWMP) in compliance with the National Waste Management Strategy and the Draft Integrated Waste Management Bill, due for promulgation in 2005. Therefore any government contracts enlisted at this time may not be counted on in the future if the contracts do not fall within the IWMP once completed. Any business model made on this solution would be risky.

Sorting

The proposal calls for two sorting facilities located at DHRC Philippi and a yard in Paarden Eiland. At these sites materials would be sorted, i.e. glass, metal, plastic, wood, paper, etc. These materials would then be packaged to deliver to the correct disposal facilities. Also, manufacturing or restoration of appropriate materials could be used to sell materials on the secondary market. The zoning for these properties needs to be verified to insure that the sorting of waste is allowed on these premises. Also, a suitable structure would need to be constructed.

Disposal

Recyclable material would be brought to commercial depots and recycling companies who pay for these materials. The Fairest Cape Association has a Recycling Directory which lists these various organizations. Any materials which can not be sold would be donated or disposed. Materials that are salvaged need to be stored until sold.

Structure

There would be a program coordinator and project leader, both working part time, to oversee the project. Ten volunteers, working two sorting facilities, would be the initial workforce. At present, it is unclear who would own this project. This project is envisioned to initially run over a twelve month period, with possible social investment should problems arise.

Finances

Below was given as cash flow estimates.

Start up Budget

Vehicle	R50,000.00
Equipment	R20,000.00
Safety Clothing	R 5,000.00
Total:	R75,000.00

Cash flow monthly budget

Project Coordinator	R 3,000.00	Sales	R5500.00
Project Leader	R 3,500.00	Waste Collections	R1000.00
Site Rentals: Philippi	R 500.00		
P/Eiland	R 500.00		
Telephone	R 500.00		
Petrol & Maintenance	R 1000.00		
Pickers (10 x R400)	R 4000.00		
	<hr/>		
	R12,500.00		R6500.00
Net Loss			<hr/> R6000.00

Total Project Cost:	R147,000
Capital Cost:	R 75,000
Operating Cost:	R 72,000

None of the estimates have been analyzed, but some initial costs seemed to have been overlooked. If there will be two sorting areas, two trucks will be needed. In addition, some sort of structure will be needed for the sorting areas. This will greatly enhance initial capital costs. Also, an endeavor of this nature will need a full time experienced supervisor to oversee the business and train the volunteers. Therefore, the salary of this supervisor should be included. Finally, sales and waste collection numbers need to be fully investigated to determine the feasibility of this project. They will be discussed under the market opportunity section.

Evaluation

The feasibility of this project will be evaluated under four categories: management and manpower, market opportunity, sustainability, and organizational fit.

Management and Manpower

As mentioned in the Finances section, this project would call for an experienced supervisor to run the day to day business and train the volunteers. It is unreasonable to expect a group of people with no experience or training to run this project successfully. Also, the proposal assigns ten volunteers working at two separate sites. This would not be feasible due to the labor intensive work of waste disposal. One team would be needed for collection and disposal. If only one truck is employed, a team of three would be needed. Collection can occur in the morning and disposal in the afternoon. The other seven would be assigned to the sorting facility. To operate two sorting areas an additional ten people would be needed with access to a truck.

Market Opportunity

For this project to be successful, clients will be needed to employ the services of the volunteers. For residential customers, an area would need to be identified in which enough residents are both environmentally and socially conscious enough to agree to pay for this service. Before embarking on this project, a market survey would need to be conducted to first identify an area, and then determine if there would be enough clients to support this project.

For industrial customers, businesses that are socially conscious would need to be approached to pay for this service. The project would have to prove to the business that it can be trusted to remove their waste when contracted so not to interfere with the operations of their business. Another hurdle, unlike residential customers, is it would be unlikely that an industrial business would agree to separate their recyclable waste from their unrecyclable waste. This would add additional labor hours.

It would be advisable that under any of the alternatives, including government contracts, that clients are first established before the outlay of the initial investment. The problem being to establish clients before the setup of operations is difficult.

Sustainability

As discussed in the Finances section, the initial capital outlay would be much greater than the proposal suggest. Even if all ten volunteers worked at one site the additional capital costs would likely be double of what is presented. Even under the numbers of the original proposal, over the first year, it would take approximately R15,000 to create and sustain one job. Even if the sales and waste collections earn enough for the volunteers to earn enough to sustain themselves, additional capital will be needed grow the business to create new jobs. The biggest expense being additional trucks. In the beginning phases the project will not generate enough money to accomplish this growth. Therefore, you will need several rounds of funding for this project to achieve sustainable growth.

Organizational Fit

The best practices method for job creation is to teach people the necessary skills so they can compete in the business environment and sustain themselves. Under this proposal a business that behaves like a for-profit company will be established to create jobs for a small number of people. This is also a very risky endeavor considering the large amount of capital outlay. There are successful recycling programs benefiting low income people. However, these programs are based out of

communities, schools, or other organizations that have a larger pool of people. This offsets the need for a large investment of money.

Recommendation

With the correct amount of funding and management, this project could create and sustain the initial jobs of the volunteers. With the correct levels of additional funding, more jobs could be created. But I feel this proposal should be rejected for the following reasons.

- The risk of maintaining enough clients to sustain the business is high. A market survey would need to be conducted before any other action.
- The investment is too high for the limited number of jobs the project would create.
- Does not support job creation in that jobs are given to people instead of skills in which they can provide for themselves.
- CWD does not have any experience in a project of this nature.
- There are other more attractive alternatives available.
- The City is currently implementing an Integrated Waste Management Plan that could alter any efforts to implement this project.

Steps Going Forward

The vision of job creation through waste management with the additional benefit of an improved urban environment is valid. If CWD feels that a recycling program is a fit within their vision, there are alternatives that can be pursued. The IWMP is a plan developed by the City to better handle the solid waste of Cape Town. The IWMP is scheduled to be completed by the end of 2004. Within this plan there is recognition for the need of co-operation and partnership initiatives for waste management and economic development. Once these initiatives are finalized, CWD could explore a possible relationship with the City to develop these initiatives.

This could take the form of a project for the next group of interns. If so, I have recommendations on how to proceed.

- Interns should be assigned project before they arrive in Cape Town to allow time to thoroughly research background of the project.
- CWD will need to identify what initiative they wish to pursue and establish initial contact with any pertinent contacts the interns will need to utilize. Two months is too short of a time for interns to both establish contacts and utilize them effectively.
- CWD must assign a program manager which will support the interns and which the interns can hand off their findings.

To best utilize the interns they should work on the implementation strategy in Cape Town. Therefore, any necessary work before then should be completed before the interns arrive.