

Project Report

On

Collecting E-waste Through E-Commerce

Course Name: Project 12 Semester: Summer-2022

Submitted To:

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LETTER OF TRANSMITTAL

To

Md. Kamruzzaman Didar

Lecturer & Head Department of Innovation & Entrepreneurship

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Subject: Submission of Project Report on "Collecting E-waste Through E-Commerce".

Respected sir,

I am pleased to share my project report on the "Collecting E-waste Through E-Commerce", which I worked on over the last year. I followed your instructions and recommendations while putting together this report. This article was written based on my own experiences and thoughts.... I would want to offer my sincere thanks for your time, expertise, and assistance. I've done all I can to make sure the report is as accurate as possible. Primary and secondary sources of information were used in my research.

I therefore pray and hope that you take this report under advisement and provide me with sound advice on the direction I should pursue in my professional career. I also ask and hope that any errors in my report would be graciously excused.

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Daffodil International University

CERTIFICATE OF APPROVAL

This is to certify that the project report "Collecting E-waste Through E-Commerce" has been prepared by **Sk Raihan** as a partial fulfillment of the requirement of our semester final of the Department of Innovation and Entrepreneurship, Daffodil International University. I wish him every success in life.

Md. Kamruzzaman Didar

Lecturer & Head Department of Innovation & Entrepreneurship

Daffodil International University

Acknowledgement

I must give Allah all the credit for enabling me to complete this report. Md Kamruzzaman Didar, Lecturer & Head of Faculty of Business & Entrepreneurship, Daffodil International University, who oversaw my report, has my sincere gratitude.

I've worked hard and diligently over the past three weeks to put this report together.

I received help from a few of my friends and business experts to collect all of the data.

They have my sincere gratitude.

Executive Summary

In recent years, a market for mobile devices, laptops, consumer electronics, and home appliances has expanded as a result of technical advancement and Bangladesh's rapid economic expansion. As a consequence of this expanding market, there are now more locally produced consumer goods available, and many electronic gadgets must be discarded after a number of years of usage, creating a new environmental concern. E-waste is recycled, disassembled for components, or disposed of entirely in Bangladesh. Recycling is now an unregulated informal activity that puts both the environment and human health at jeopardy. Not only are Bangladeshi citizens unconcerned about the dangers of e-waste, but there is also a dearth of knowledge within the public and business sectors. Bangladesh utilizes over 3.2 million tons of electronic items annually, according to the Bangladesh Electronic Machinery Marketing Association (BEMMA). Only 20 to 30 percent of this quantity is recycled, and the other 80 to 90 percent is discarded as outmoded or dumped in the open, endangering human health and the environment. We are thus eager to seize this chance and turn these environmental problems into a commercial model. According to our business model, we would collect consumer e-waste utilizing online platforms including mobile apps and websites before selling it to a licensed e-waste recycler. Our collecting procedure is economical since it uses less raw materials, less energy, and used materials. Due to the fact that this concept is entirely new to the waste management industry in Bangladesh, we have an edge over other E-waste Recyclers in the market. Eco-friendliness is another benefit. Under the company name Recycle Bin, our firm will do business as a private limited company.

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1. Project Overview

1.1. Introduction

There is presently no reliable system in place in Bangladesh for the safe disposal of electrical waste (e-waste). Therefore, our strategy is to gather e-waste from customers and then sell it to the accredited Recycler, the Televisions, air conditioners, laptops, mobile phones, IT equipment, refrigerators, and electric fans are typical sources of e-waste. Precious metals including gold, silver, copper, iron, and a few other heavy metals are present in such goods. An investigation by Bangladesh University of Engineering and Technology found that the country generates almost 400,000 metric tons of this e-waste annually. Only 3% of the entire garbage produced, according to the report, gets submitted for recycling. The most popular way of disposal is to burn it in a pit outside under the open sky, however this releases hazardous chemicals into the environment, endangering both human health and the ecology. We have developed a method to stop this by gathering user-generated e-waste via mobile apps and websites, preventing it from ending up in the hands of illegal purchasers who don't know how to recycle the items safely and sell them to the authorized vendor. Users may quickly and simply sell their old electronics to us at a fair market price by utilizing our mobile application. In our company strategy, we primarily use the C2B and B2B business models. A consumer must first establish a profile in our mobile applications using their Gmail account in order to sell any secondhand electronics. After creating a profile on one of our websites or mobile applications, a consumer is presented with a number of choices, including Products, Brand, Usage Time, Initial Buying Price, Description of Current Condition, and Attached a Photo or Video File. The seedling process begins with choosing the product to sell, whether it's a mobile phone, TV, refrigerator, etc. The second choice is choosing the brand, such as Samsung, Nokia, Apple, etc., that represents your product. In the third option, you must enter the goods' original list price into our applications. Following that, a 150-word description of the product's present state is required. The last option is to submit a 5-MB-or-less photo or video of the product. Immediately after a user completes all the steps and clicks the next button, a sell request is sent to our operation team. After our system judges all the options the user entered, an AI-based

automation price is then displayed in the apps, and the user can choose to sell their product at that price. If a consumer wants to sell anything after viewing the pricing, they must click the confirmation button. After that, an automated SMS will be sent to the customer's mobile phone. Within 24 hours, our delivery person will pick up the items from the customers. When it comes to the buyer's perspective, a firm that wants to purchase e-waste from us must register on one of our websites or mobile applications using their trade license. They may then see our product categories, brands, and inventory. A buyer may use our app or websites to submit a purchase request to our operation team after selecting all of his selections and basing it on his requirements. Following confirmation of the purchase, our operating team will enter into a direct contract with the buyer, and the further steps will be addressed during a private meeting. Without utilizing any applications or websites, the consumer may also enter a straight contract with us and purchase our items. However, our website will include an auction mechanism for customers from abroad. Additionally, we will directly export our goods by negotiating an agreement with a foreign client.

1.2. Vision and Mission Statements:

Vision Statement: Recycle Bin wants to be more than simply a firm that collects e-waste. Our goal is to create a model of excellence that is both economically and ecologically responsible when it comes to recycling certain materials.

Mission Statement: Our mission is to conserve, maintain, and enhance the environment and the standard of living in the areas we serve while offering our clients superior disposal solutions.

1.3. Objectives:

The objective of Recycle Bin Management is to expand and improve its primary e-waste collection company across Bangladesh while also creating a cutting-edge recycling solutions business.

specific: Our specific objectives include creating and maintaining a successful e-waste collection company, educating people about environmental protection, and increasing rural residents' knowledge of sustainable communities.

Measurable: By offering sensible and economical methods for disposing of garbage and recycling consumer electronics, we will succeed in our mission.

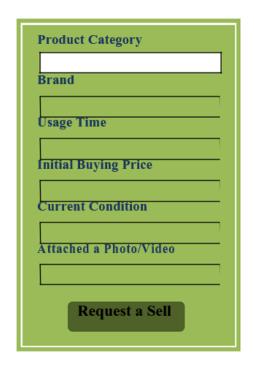
Assignable: Using cutting-edge AI-based mobile apps to collect e-waste and increase public and individual knowledge of environmental challenges, we will assign our aim.

Realistic: Our business plan will lessen damage to the environment and enhance Bangladeshi residents' life experiences.

Time Based: In this age of pollution and global warming, our company is highly environmentally friendly. Our company also helps the jobless find work, which is important given where the global economy is right now.

1.4. Selling Procedure:









1.5. Buying Procedure:









1.6. Product/Services:

The Recycle Bin app will be created with the intention of increasing revenue in the E-Waste collection sector. As an e-commerce company, we want to compete favorably with the top e-waste collectors in Bangladesh. For this reason, we have put in place a capable quality assurance team to make sure that every collected electronic material or product meets and even exceeds the expectations of both our sellers and customers and complies with industry best practices before it leaves our storage facility.

We will put in a lot of effort to make sure that the goods we gathered and the Recycle Bin brand are recognized not only in Dhaka but also in other significant cities in Bangladesh. Our firm acts as a mediator between sellers and buyers, and our services are described below.

- Providing facilities for classifying and isolating computer components.
- Providing facilities for recycling hard-copy devices that are separated and sorted.
- Operating facilities for recycling TV separation and sorting.
- Providing facilities for sorting and segregating recyclable mobile devices.
- Gathering and reselling reconditioned secondhand electronics such computers, TVs, radios tablets, and mobile phones.
- Customer assistance is available around-the-clock.
- Effective delivery crew for E-waste collection.

2. Company Overview

2.1. Company Summary:

As our business is based on collecting e-waste our inventory storage will be located in multiple places in Dhaka (Dhanmondi, Motejhel). Owner contributions will be used to pay for startup costs.

Start-up Requirements

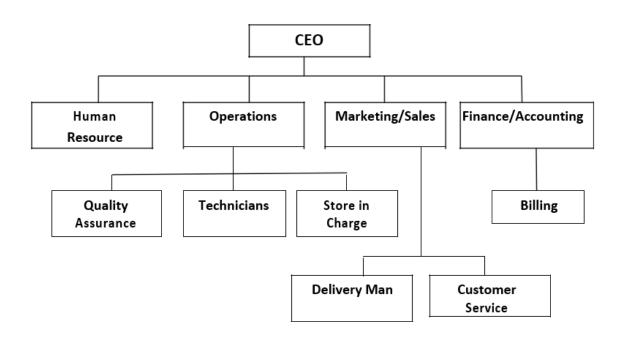
Apps, Website and Inventory storage				
Mobile App (Recycle Bin)	1000000BDT			
Website	50,000 BDT			
Rent	50,000 BDT			
Telephone & Utilities (3 months)	10,000 BDT			
Business/Office Supplies/Stationary Furniture	65,000 BDT			
and Interior				
Cash Required	4,00000BDT			
Others	25000 BDT			
Total requirement	7,000,000BDT			

2.2. Company Locations and Facilities:

As we have indicated, the inventory storage will be in Dhanmondi, Motejhel, and Recycle Bin sites. These places will vary in size from 100 to 150 meters square and seat 50 to 100 people. The inventory shop will be furnished with contemporary pieces, and we'll work to make it seem tidy and feel open.

2.3. Business Structure:

E-waste will be collected from consumers by the firm Recycle Bin, which intends to start operations in Dhaka and help regional recycling enterprises. In order to effectively compete with other top E-Waste recycling companies both locally and worldwide, the firm intends to grow dramatically. We understand how important it is to develop a solid organizational foundation that can support our goal of becoming a world-class business. We promise to exclusively collaborate with the best employees in the business as a result. Recycle Bin will take care to only hire people that are qualified, committed, imaginative, customer-focused, and ready to work so that we may build a successful business that benefits all parties involved (the owners, workforce, and customers). In fact, the firm's board of trustees agreed that all of our top management staff would have access to profit-sharing plans, which would be based on their performance over a period of five years or more. Given the above, we have decided to hire qualified individuals to fill the following positions.



3. Analysis of the Environment and Industry

3.1. SWOT Analysis:

Recycle Bin hired a specialist in e-waste collection and structuring to help our company create a well-organized e-commerce-based rubbish collection firm that can successfully compete in Bangladesh's fiercely competitive waste collection market as well as the global market.

A SWOT analysis will show the company's overall strategic position in relation to its surroundings. Its fundamental objective is to identify the strategies that will assist a corporation in creating a distinctive business model that will best fit its assets and competencies with the requirements of the environment in which it operates. A SWOT analysis of the recycling bin is shown below.

Strengths: Our personnel are the source of our primary strength. We have a team of highly skilled, qualified technicians, operators, and a staff with great credentials and expertise in a variety of specialized fields in the garbage collection sector.

In addition to the synergy in our carefully chosen team, industry best practices will direct our collection procedure. The sustainable growth of society is a key component of our business approach at Mover.

Weakness: It may take some time for our firm, a new e-waste collector through applications in Bangladesh, to establish traction in the industry and win over high-profile customers (Large Corporate organizations that utilize large quantities of electronic items). Perhaps our greatest shortcoming as a company is the lack of customer understanding of e-waste and its impact on the environment. Another flaw is that we may not have the necessary funds to market our company the way we would want to.

Opportunities: There are undoubtedly many prospects in the garbage collection sector, especially in light of the growing number of people and recycle businesses that are transitioning to alternate raw material sources to save costs and energy. As an organization that collects e-waste, we are prepared to seize any business opportunities that may arise. Additionally, the kids that are digital aware will have job opportunities thanks to our firm.

Threats: One of the biggest challenges we'll probably have to deal with, besides poor government policies, is an economic slump. It is true that a downturn in the economy has an impact on buying and spending ability. Arrival of new garbage collection businesses in the area where our target market is located and potential adoption of our business model is another danger that may face us.

3.2. Porter's five forces model:

Threat of new entry: Threat of new entry refers to the possibility of new competitors entering the market whenever our business experiences a profit in order to compete with our service. Although our business concept is relatively new in Bangladesh, there is always the risk of competition from potential competitors in every industry. We won't initially have much competition, but when we start to outperform conventional west collectors in terms of profit, a lot of prospective rivals will be drawn to us. As a result, we should be always alert for fresh entries and work to maintain a balance between buying and selling prices.

Bargaining power of: The recycling business has a high level of buyer power since each and every customer has the ability to shape the market owing to their substantial buying power. We should thus maintain our prices reasonable in order to draw in a large number of new customers both domestically and abroad.

Bargaining Power of suppliers: large business entities and consumers of electronic items will be our primary suppliers in the trash collection sector. When selling its useable items to us, a major business supplier may have considerable negotiation leverage. However, a single supplier will have less negotiating power than a major corporation, but they do have the ability to change the brand. Our business manager will thus work to maintain contracts with a variety of suppliers in order to keep the cost of purchases as low as feasible.

Competitive rivalry: In order to prevent competition, our firm constantly introduces new items/different sorts of products at affordable prices. Competitive rivalry is defined as the same type of company with the same type of products. In addition, our company will do market research to learn about the rivals. At first, there won't be much competition, but as time goes on, there will be competitiveness.

Threat of substitutes: The same items and identical facilities are meant by substitutes. Products made in imitation are a constant danger to businesses. Therefore, the danger of substitutes exists as well. So, by buying and selling e-waste at a fair price, our company will aim to keep the alternatives at bay.

4. Sustainability Analysis

4.1. Feasibility Analysis:

The results of a feasibility study are used to assess the company idea's viability. A thorough investigation of the feasibility provides a wealth of data for the business strategy. We need to create an AI-based mobile app and website for our company in order to assess how technically and financially viable it is to operate. There are many developers in Bangladesh that are skilled at creating high-quality mobile applications and websites.

4.2. Prototyping:

For six months, our test marketing will be conducted. We will heavily promote our service throughout this period. Since we can learn whether or not the local market would accept our service there, we will go for the local market. Is our service up to par with what our seller and buyer anticipate given the demand? We will operate our firm continuously if we can instill a minimal degree of approval in the minds of suppliers and customers.

5. Marketing Plan

5.1. Marketing Strategy:

The major strategy's foundation is the marketing plan:

- Highlight high-quality and valuable services for suppliers and buyers.
- Create a company that is relationship-focused.
- Concentrate on the federal government, manufacturers, landscapers, and municipalities as your primary first markets.

5.2. STP Analysis:

The entire form of STP consists of segmentation, targeting, and positioning. Our business strategy heavily relies on STP analysis.

5.2.1 Segmentation:

A board target market is segmented when it is broken up into smaller segments. Our company's business model is built on gathering e-waste from users and selling it to approved sellers. Consequently, the e-waste source determines our segmentation. We have specified in our business strategy that we would gather e-waste from three separate groups. In order to do this, we have split the market into three parts.

The market can be segmented into three distinct groups:

• **Students**: These folks are now employed in academics, are used to quick connections, and are prepared to provide a reasonable price for their old technological goods. Since our company is founded on an e-commerce platform, the individuals who constantly update their electronic items based on changing demand and who are significant Internet users will be given top priority.

- Professionals: These individuals engage in a considerable number of online transactions, including banking, e-commerce, and communications; as a consequence, they are regarded as a major source of e-waste.
- Corporations: One of our top suppliers would be large organizations with several offices
 in various parts of Dhaka city that need to employ electronic products in order to run their
 everyday operations.

•

5.2.2 Targeting:

Due to the subject of our partnership company, which is to create a "Green Bangladesh," we are focusing on two sorts of businesses to sell our e-waste:

- Recyclers of electronic garbage in Bangladesh who are licensed by the government
- Global recycling businesses.

5.2.3 Positioning:

Recycle Bin's primary marketing objective is to raise community awareness of the environmental problem associated with e-waste among suppliers. How disposing of e-waste might harm our health, making suppliers keen to sell us their old goods. All of our goals and initiatives will be directed at defining who we are and what we stand for. To maintain a successful company, we will buy e-waste at a reasonable price and also sell it to the approved seller at a fair price. We'll work to maintain high standards and carry out the plan so that "Green Bangladesh" will serve as our primary marketing tool.

5.3. Marketing Mix Analysis:

5.3.1 Product:

The products that we will collect form our suppliers are listed below:

- Mobile Phones, iPod etc.
- TV, Fan, Oven
- AC
- Fridges
- Computer parts
- Printer
- Other electronic utility

5.3.2 Price:

We will acquire e-waste from supplier at a lesser price and then sell it to the recycler at a reasonable price since our business model is built on purchasing from supplier and then selling it to approved recycler.

5.3.3 Place:

Through our highly designed applications and websites, we will collect e-waste from the local market and keep it in our distribution storage facilities situated in Dhaka. After collecting, we will sell our e-waste through the app and website, direct sales, or export to overseas recycle firms as well as locations around Bangladesh where a government-authorized recycle facility is located.

5.2.4 Promotion:

Publicity: Press releases that we have issued will be received by all of the major publications in Dhaka. It will gain a lot of credibility and be a great way to tell all target groups about this new, innovative firm and the solutions it provides for municipalities and users of electronic items if news articles about Recycle Bin and its influence on e-waste in the environment are published. We'll search for news coverage from local radio and television stations in a similar way.

Advertising: To educate the target audiences about e-waste, we will use direct mail and face-to-face advertising techniques. Using newspaper advertising is another option. The efficacy of radio and television advertisements will be assessed before continued use.

Internet: We'll have a website with plenty of material that's designed to inform prospective clients about the advantages of selling e-waste to us. Our website and email address information will be included on all marketing materials, including business cards.

Alliances: In order to liberate society from the negative effects of e-waste, we want to develop partnerships with recycling businesses to purchase our product and utilize it in their recycling facility.

5.4. Sales Strategy

We will sell the e-waste we have obtained from our target provider to the local, licensed recyclers. The buyer may make a purchase either directly from the seller or via our app. We concentrate on exporting our e-waste to countries where there is a need for it.

6. Competitor Analysis

Knowing our competition is crucial given that we are a new company. because competitors may have a significant impact on how our company is run.

6.1 Existing competitors:

Core: There are several unlicensed local stores in our nation that give e-waste to the recycling firms as raw materials, showing that we are not the only supplier of e-waste to the industry. Faisal Enterprise is one of those organizations that now supplies various waste products to recycling businesses, making them one of our main rivals in the business-to-business market. However, as an e-commerce platform, we have an edge over slower players in this market. In Bangladesh, no other garbage collection businesses have an online store.

Significant: Think about our efforts to gather e-waste. Due of their ability to buy e-waste directly from suppliers, large recycling companies like Azizu recycle firm may be one of our main rivals.

Indirect: Large electronic manufacturing businesses like Walton may be our indirect competitors since they have the ability to directly purchase e-waste from suppliers and utilize it in their production systems.

6.2 Potential competitors:

It is conceivable to have rivals in a short period of time as we develop a novel idea and there are less legal obstacles to starting an online-based rubbish collection business in our nation. They may simply enter the market with some fresh concepts that might drive us out. Our idea may face competition from others. They are able to provide more amenities than we can.

7. Financial Plan

7.1 Financial Overview:

The business will have its start as a partnership corporation with 4 partners. The firm will be financed via a combination of stock and loan funding. The partners will each invest 1,000,000 Tk. A further loan of 300,0000 TK would be obtained. In five years, this debt will be repaid. Since we are a new business, we can't depend on our reputation to acquire a loan quickly. We are a new firm; hence we are also unable to provide any collateral. As a consequence, the interest rate on the loan we get will be greater than usual.

7.2 Assumptions:

To make budgeting and preparing financial statements more convenient, a number of assumptions have been made.

- Taxes are 30%.
- The straight-line technique would be used to compute depreciation.
- To determine some of the costs, we utilized the percent of sales technique.
- Credit sales are not permitted.

The pro forma income statement, balance sheet, and cash flow statements have been created for the financial management plan, which is shown below. This would enable us to determine whether or not the business idea would be lucrative.

7.3. Projected Income Statement:

The first step is to predict revenues in order to produce the pro forma income statement. Market research and industry analysis were used in this, and it was discovered that the demand is reasonable given the industry's stage of development. Salary and payroll costs, rent, and depreciation are among the costs. There are other costs. All expenses relating to water, gas, electricity, and other utilities are included in utilities. We have a significant advertising spend in the first year, which is one unusual thing. Since we are brand-new, we will launch with a massive campaign that uses several billboards and TV commercials. Although advertising has a very low weight in our market and is scarcely a crucial success component, we must nonetheless undertake it. Finally, we've demonstrated how much net profit will be invested back into the business over the next years to fuel its expansion.

Recycle Bin Statement of Income Year1

Particulars	Taka	Taka
Sales:		
• TV, Fridges, AC	4000000	
• Mobile	2000000	
Computer parts	4000000	
Total Sales:	10,000000	
COGS:	(3500000)	
Gross Profit:		75,00000
Operating Expenses:		
Salary and wages	5000000	
• Depreciation	100000	
• Rent expenses	100000	
• Utilities	100000	
Advertising expenses	100000	
Total operating Expenses:		(1600000)
Earnings Before interest and tax (EBIT)		1900000
Interest expense		(2000000)
Earnings Before Tax (EBT)		1700000
Tax (30%)		(510000)
Net Profit		1190000

7.4. Balance Sheet Prediction:

The predicted balance statement for the first year provides extremely encouraging information. According to the first year's predicted balance sheet, our net asset, or total value, will increase over the next years at a highly desirable pace. Nevertheless, there is still a sizable sum of money remaining. But this puts us in an excellent position for liquidity. We will be able to handle circumstances when money will be required. Since we don't have many other liquid assets, this is a positive thing. The least liquid asset is inventory, and it is a rather little quantity when we consider how much is kept on hand annually. Since we don't have enough room and can't stock up on a lot of products, which would raise the cost of storage, we will endeavor to manage our inventory effectively. We also have a few investments in the money market. We anticipate that our assets will expand annually, resulting in more available cash. The retained profits are used to pay for this growth in assets. All of the company's assets are depreciated using the straight-line approach throughout their useful lives.

Recycle Bin
Balance Sheet
For the period ending December, 2021

Assets	Taka	Taka
Current Asset:		
• Cash	2340000	
 Inventory 	50000	
• Short-Term Investment	500000	
Pre-paid Rent	500000	
Total Current Asset:		3390000
Fixed Assets:		
 App and website 	3000000	
• Vehicles	1500000	
Furniture and Equipment	500000	
Less: Accumulated Depreciation	(<u>100000</u>) Tk. 400000	
Total Fixed Assets:		4900000
Total Assets:		8290000

Recycle Bin

Balance Sheet

For the period ending December, 2021

Liabilities	Taka	Taka
Current liabilities:		
Short-term notes Payable	100000	
Total Current liabilities:		100000
Long-term Liabilities:		
 Loans and Notes 	3000000	
Total Long-term Liabilities		3000000
Total Liabilities:		3100000
Stockholder's Equity:		
Paid-up capital	4000000	
Retained Earnings-Net Profit or (Loss)	1190000	
Total Stockholder's Equity:		5190000
Total Liabilities and Net Worth:		8290000

8. Conclusion

8.1 Conclusion:

There was a pressing need to carry out in-depth investigations in Bangladesh even though the issue of e-waste and the present waste management procedures were hot topics of discussion. Our company will assist society in recognizing the e-waste danger. Our strategy is focused on educating consumers about the negative effects of e-waste so that they are aware of the risk and are encouraged to sell their old items to us in order to help us reach our business objective. If things go well, we'll install waste-collector vending machines all around the city of Dhaka.