Sustain It: A Guidance Research for Startup Business for Sustainable Recycling Enterprise

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Abstract. "Sustain It" is research guidance for a local Syrian enterprise specializing in recycling waste (plastic, paper, glass) and manufacturing recyclable materials and reusing them efficiently and sustainably. This research aims to provide sustainable solutions for Syrian enterprises to improve the environment and conserve natural resources by reducing the amount of waste produced by society and converting it into new and useful products, recycling, and reusing them in various industries. The research seeks to improve and develop services to meet the needs of proposed Syrian target customers, including b-to-b segments and society in general. In addition, Sustain It aims to reduce costs associated with producing new materials, which will be provided in the form of raw materials suitable for many uses and deployments in the markets and companies at competitive prices. It helps reduce the waste of natural resources and keeps the environment sustainable. A competitive advantage is providing high quality with low profit by deploying three production lines with new technology.

Keywords: sustainability, startup, recycling, case analysis, environment.

1. Introduction

Environmental sustainability is a significant issue in life for individuals to protect the environment, reduce pollution and preserve its resources, whereas environmental sustainability is the responsibility of companies. Since the majority of natural resources are not unlimited and renewable, sustainable organizations and enterprises can ensure equal opportunities for future generations. Because governments urge environmental sustainability and environmental preservation, each individual must take into account all the axes of sustainability, and from this point of view, we launched our scientific research which is the company "Sustain It" will be created to recycle paper, glass, and plastic and reuse it effectively and sustainably by collecting the appropriate waste for its use in recycling and providing raw materials that can be used in all areas (factories and markets) while maintaining the health of the environment (Kowasch, 2022, Sivakumar et al. 2018, Yilmaz, 2023, Villalobos Araya. 2020). This research proposes solutions for Syrian enterprises to improve the environment and maintain natural resources by reducing the amount of waste produced by societies and turning them into new and beneficial products. The proposed research for business enterprise's services is to collect and sort waste, reuse and reuse in various industries.

"Sustain It" will be created to recycle paper, glass, and plastic and reuse it effectively and sustainably by collecting the appropriate waste for its use in recycling and providing raw materials that can be used in all areas (factories and markets) while maintaining the health of the environment (Kowasch, 2022, Sivakumar et al. 2018, Yilmaz, 2023, Villalobos Araya. 2020). The company aims to improve the environment and maintain natural resources by reducing the waste produced by societies and turning them into new and beneficial products. The company's services are collecting and sorting waste and reuse in various industries. The company is characterized by quality and efficiency and its commitment to environmental and health standards, and it is constantly seeking to improve its services and develop them to meet the needs of its customers and society in general.

Sustain It collects, sorts, sterilizes, analyzes against germs and viruses, and puts them in the appropriate machines to remove them as a preliminary product ready to reuse. Sustain It examines three pillars of sustainability. These pillars are social, environmental, and economic sustainability. This project aims to create a positive and sustainable impact on the environment in Syria. Eventually, social sustainability will be implemented by positively impacting the environment (Dalati 2021).



Fig. 1: Pillars of sustainability

The proposed enterprise vision is to become a market leader in the recycling industry in Syria and to contribute effectively to protecting the environment and improving the quality of life for individuals. The mission is to provide sustainable and effective waste management and recycling solutions healthily and safely, improving environmental quality and preserving natural resources. This will be achieved through continuous innovation and development of technologies and processes, providing high-quality services to our customers, and educating the community on the importance of recycling and preserving the environment. This will be achieved through satisfying target customers, meeting their needs and aspirations, and achieving sustainable and stable growth.

The project uses local raw materials. The project relies on the national labor force and provides job opportunities for many individuals. The project uses local and national industries of national machinery and equipment. Raising the quality of Syrian products and enabling them to perform better in the event of external and internal competition. Raising the financial return of workers and enabling citizens to obtain these products at competitive prices.

2. Recycling Process

It is the process of recycling and using waste, whether domestic, industrial, or agricultural, in order to reduce the impact of these wastes and their accumulation on the environment. This process is carried out by classifying and separating waste on the basis of the raw materials in it and then recycling each material separately. The idea of recycling began during World War I and II, when countries suffered from severe shortages of some basic materials, such as rubber, prompting them to collect those materials from waste for reuse. Years later, recycling has become one of the most important methods of waste disposal management due to the many environmental benefits of this process (Cheung et al. 2018, Cláudia Dias 2004, Georgakellos 2006, Brodin and Anderson 2008, Krali 2011, Pearce 1992, Ridge and Cull 1988, Suhil 1990).

Recycling glass. According to personal communication with a glass expert in 2023 in Damascus in Syria, the glass recycling project is exploited for two reasons. The first reason is environmental because of its positive effects such as reducing carbon dioxide emissions, saving energy when making new glass products, and ridding the environmental environment of accumulated garbage from roads and areas where humans are. The second reason is the exploitation of this waste and its conversion into materials and money. It is made of fine sand by mixing it with sodium carbonate and placed in a 1500-degree roasting oven, adding minerals that accelerate the process of melting sand in the form of glass.

Glass recycling steps comprise: first is cracking, where glass waste is broken into a crusher to turn it into small pieces depending on the type of granules. The second step is transportation: shredded parts are transported on a magnetic belt machine to collect metal impurities. Third is washing: it goes through the stage of washing and drying. Fourth is milling and transferring to the grinding or crushing machine and taking out a quartet of powder with a quarter of a millimeter diameter, and finally packing, as the packaging process is done to be ready for sale. This powder is used in epoxy floor paint or in road paving to reduce accidents by increasing friction and for many manufacturing purposes (Economy Faharas 2023).

Recycling paper. It works to save a large area in landfills, as paper constitutes about 28% of solid waste in landfills. Paper recycling conserves resources, as it preserves trees and forests, and each ton of paper that has been recycled saves 17 trees; paper recycling works to reuse and preserve the environment, as it reduces waste, helps maintain the cleanliness of the environment, and promotes human health.

The raw material enables us to manufacture the paper we use for all purposes, whether domestic, agricultural, industrial, or in the field of work. They are cellulose fibers found in the walls of various plant cells, and the plant includes bamboo, cotton, and hemp.

Paper recycling steps comprise the following. First is classification, where the paper should not be mixed with impurities such as minerals and food residue. Second is assembly and transport, where special boxes are allocated in each company and a car is to collect these papers in a predetermined period. Third is storage, where special warehouses are allocated to collect paper boxes until recycling. Fourth is shredding, mixing, and filtering: in which water and other chemicals are added to the paper. The mixture is stirred until it becomes homogeneous and then passed through sieves to filter it from minerals that may be suspended. Fifth is shredding, mixing, and filtering: in which water and other chemicals are added to the paper. The mixture is stirred until it becomes homogeneous and then passed through sieves to filter it from minerals that may be suspended. Sixth is removing the ink: It is done in two phases, the first by washing with water and the second by passing a stream of air bubbles inside the bowl, then the ink collected on its surface is filled. Seventh, the paper casting stage, where the paper is poured through several tubes on a movable belt with small holes to remove excess water, then passed through rollers to determine the required thickness of the paper. Eight is the drying stage: pass the paper over a long belt with streams of hot air for drying. Finally is the packaging stage: The paper is wrapped in rolls according to the specifications approved by the manufacturer, then transported for use. (Greentumble, 2023).

Recycling plastic. Reducing ecosystem pollution, large amounts of greenhouse gases are released during the plastic industry, consuming less time and preserving natural resources. Plastic manufacturing needs a certain amount of time that can be used for other more essential things when recycling plastic, and plastic needs a set of raw materials to manufacture it, such as oil, coal, water, and natural gas, so plastic recycling will help preserve these resources. The manufacture of plastic begins with the process of extraction or extraction, during which the raw materials from which the plastic is made are extracted. These materials include oil and natural gas, and coal can also be used. Notably, these materials represent a mixture of thousands of compounds that then require processing.

Refining. The aim of the refining process is to convert crude oil into various petroleum products, such as monomers, which represent the basic building block for the production of polymers, and the refining process goes through several stages that include heating the oil in a furnace and then passing it to the distillation unit, where heavy crude oil is separated into lighter components, including naphtha. Plastics recycling steps comprise: firstly, the washing stage. In order to get pure and non-polluting products, the plastic to be recycled must be free of any grease, oils, and any other impurities that may be stuck to our raw materials, so it must be washed with concentrated liquid soap with hot water as well as using caustic soda. The second is the drying stage, where the plastic must be well-dried until we start the process of recycling plastic products, as we cannot start with it if the plastic is wet. Third is the chopping stage: this is the basic stage in order to convert different types of plastic into very small granules, which are then easy to use in the manufacture of different products. (Economy Faharas 2023).

3. Symbols and Numbers Meaning

Symbols and numbers meaning have specific codes. Triangle means recyclable, and each number inside the triangle represents a specific plastic material. The letters are an abbreviation for the name plastic, that is synonymous with the number in a triangle. No. 1 is safe and recyclable, used for water, juice, soda, and peanut butter cans. No. 2 is safe and recyclable: used for shampoo, detergent, milk and toys, and is considered one of the safest types of plastic, especially transparent ones. No.3 is harmful and toxic if used for a long time, which is called vinyl or PVC is used in plumbing pipes and shower curtains, and is often used in children's toys and covering meat and cheese as transparent plastic, so be careful of this type in particular because it is one of the most dangerous and cheapest types of plastic, so it is used a lot. No. 4 is relatively safe and recyclable, used to make CD boxes, some bottles, and shopping bags. No. 5 is one of the best and safest types of plastic, suitable for cold and hot liquids and materials and never harmful, used in the manufacture of food containers. No. 6 is dangerous and unsafe and is called polystyrene or styrofoam. It was used in burger boxes, hot dogs, and tea cups that look like corks and

was used until recently in our international fast-food restaurants. Knowing that it was banned more than 20 years ago in America by the government, it has to beware of this substance, which is still used in restaurants and popular buffets, as well as this substance is considered one of the reasons for the lack of an ozone layer because it is manufactured using harmful CFC gas. No. 7 does not fall under any classification of the previous six types and may be a mixture of them. The important thing here is that many international companies have begun to avoid it, including the American company TOYS R US for games that also manufacture baby bottles. This material is still the subject of controversy among the scientific community. Avoid this substance as much as possible unless it is stated that it is BPA-free and written on bottles as follows (BPA-free bottles) and be transparent (Acmeplastics 2023).



Fig. 2: Recycling symbols (Acmeplastics 2023)

4. SWOT Analysis

A SWOT analysis examines internal and external factors that characterize the environment under examination. From a management perspective, strengths, weaknesses, opportunities, and threats should be identified to develop a strategic plan (Ferrell & Hartline, 2011, Barringer 2016, Longenecker et al., 2020). Sustain It will convert weakness points to strength points by putting more budget in the short-term plan for the marketing section, leading to the attraction of more customers and a good reputation to improve our brand name. In the short-term plan, there are recommendations for awareness campaigns on the importance of recycling to improve awareness and increase acceptances towards recycled products to increase the company's opportunities.



Fig. 3: SWOT analysis for Sustain It

5. Market Analysis

Based on the market analysis conducted in this research, 600,000 kg of plastic is projected to be sold at a price of 96,000\$. Also, 1,800,000 kg of paper is projected to be sold at a price of 155,880\$. Furthermore, 1,200,000 kg of glass is presumed to be sold at 120,000\$, with total expected revenue of 371,880 \$. The suppliers are projected to be landfills, cleaners and factories (waste and damaged) that can be used. Customers are projected to be all factories that use recyclable glass, paper and plastic, such as paint factories, pavements, and marble for glass. All plastic factories that do not manufacture plastic are used in food preservation for plastic.

Critical risks. Risks that can appear significantly on the company's success and continuity in business, the company must continue to focus on participation and viewing. Moreover, this administration requires dealings with it.

Assumption			
• Sustain It will create a positive impact on the	he environment.		
• A sharp decrease in the country's waste and	damaged items.		
• Get help from the government and the citize	ens to make the environment clean.		
Risks Mitigation			
Restricting the use of plastic in the country. This will be mitigated by making more			
Total power outages in the country. and paper products to compensate f			
	plastic division shortage.		
A sharp decrease in the amount of waste in the	This will be mitigated by importing waste from		
country.	neighboring countries.		
Price fluctuations for raw material	This will be mitigated by increasing the		
	amount of raw material storage.		

Fig. 4: Critical risks (created by the authors)

6. Factory Divisions

The factory is divided into three production lines. Plastic division, paper division (cardboard), and glass division. The number of administrators and workers (37) employees. The duration of the implementation of the factory (6-12) months. The duration can be prolonged in the event of a trend towards traditional buildings. The enterprise capital is 332.000\$. Estimated Investment Costs in USD where it is estimated as fixed capital 187.000 \$, and working capital 145.000 \$. The project needs a land area of 3400 m2 that includes buildings, constructions and facilities. The required area varies according to the nature of the buildings, whether horizontal or vertical. The area is roughly divided into 2900 m 2 for buildings and 500 m 2 for roads, gardens, loading places, parking lots and other service places.

Plastic Building No. 1 (600 square meters)

A special hall for sorting with an area of 100 square meters contains a hall for separating 1.

impurities.

- 2. Private laundry hall with an area of 150 square meters containing a plastic washing hall.
- 3. Private drying hall with an area of 150 square meters with a steam dryer.
- 4. A special hall for chopping with an area of 200 square meters containing a chopper hall.

Glass Building No. 2 (500 square meters)

- A private hall for sorting with an area of 150 square meters containing a hall for separating 1. impurities.
- 2. Private laundry hall with an area of 100 square meters containing a hall for plastic washing.
- Private drying hall with an area of 150 square meters with a steam dryer. 3.
- A special hall for chopping with an area of 100 square meters containing a chopper hall. 4.

Paper Building No. 3 (600 square meters)

- A private hall for sorting with an area of 150 square meters containing a hall for separating 1. impurities.
- 2. Private laundry hall with an area of 150 square meters containing a plastic washing hall.
- 3. Private drying hall with an area of 100 square meters with a steam dryer.
- 4. A special hall for chopping with an area of 200 square meters containing a chopper hall.

Public Annex Building No. 3 (1200 square meters)

- A special warehouse for packaging materials 300 m², noting that all warehouses are equipped 1. with firefighting devices.
- 2. A warehouse for the preservation of ready-made production prepared for sale equipped with everything necessary to ensure the quality of storage 500 m².
- Administration Building 400 m². 3.
- 4. Guarded with an outdoor courtyard, parking, roads and electricity room.

7. Financial Study

Estimated Investment Costs of the Project comprise the estimated investment costs of the project by calculating the fixed costs first and then the variable costs (working). Fixed investment costs include the prices of equipment and supplies for the production lines needed to complete the production process. They also include the prices of office furnishings that we need in the offices, means of transportation

for employees, raw materials and goods, employee training expenses, trial operating expenses, and other administrative expenses for all requirements for completing the work. Investment Costs are illustrated in Table 1.

Statement	Costs
Production Lines Equipment & Equipment	82,000
Furniture & Furnishings	20,000
Transportation and transportation	60,000
Labor training expenses	5,000
Trial operating expenses	10,000
Administrative expenses (various)	10,000
Total fixed investment costs	187,000 \$

	Table	1:	Investment	costs
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Variable investment costs. It was started by estimating working capital from the following: it provides a reserve of raw materials and fuel sufficient for three months and a cash reserve to face emergency cases, and workers' wages for 6 months. The detail for the cost assessment is illustrated in Table 2.

Table 2: The cost assessment	t
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Statement	Costs
Commodity, maintenance, and fuel supplies	15,000
Current Financing Cash	110,000
Contingent expenses and salary reserve	20,000
Total variable investment costs	145,000\$

Total estimated investment costs. The total fixed investment costs that we have to pay when starting the project. Total estimated investment costs are explained in Table 3.

Statement	Costs	
Fixed investment costs	187,000	
Variable investment costs	145,000	
Total estimated investment costs	332,000\$	

Table 3: Total estimated investment costs

The annual production cost plan. The following foundations were approved to calculate the

annual operating costs. The percentage of benefit from production is 90%, and we have taken into account the possibility of breakthroughs of emergency or maintenance work. According to international standards, the percentage of waste in raw materials is 0%. Increase cost prices 5% annually, and the price of products is raised by the same percentage. Based on this, we can calculate the annual cost plan according to the following data. Based on the information of the technical study for the production capacity of the project, the annual cost required to operate all divisions of the project continuously and with a disruption rate that does not exceed 10% with the application of the terms of the marketing plan, the annual need for raw materials is according to the data of the Syrian market and export needs within the limits of It includes raw materials used in the manufacture of cardboard, plastic, and glass, and is considered the best alternative.

The annual variable costs of the project. The total annual variable costs of the project are commodity requirements such as raw materials needed to complete the production process and service requirements that we need in production costs. Table 4 illustrates annual variable costs.

Statement	Total
Commodity supplies	127,500
Service supplies	43,000
Total annual variable costs	170,500\$

Table 4: The annual variable costs

Fixed costs. This stage starts by calculating the depreciation of fixed assets. In each project, we have a depreciation of fixed assets such as machinery, furniture, means of transportation, and company establishment expenses. Table 5 shows the extent of depreciation in our company.

Statement	The value of the asset	Depreciation ratio	Depreciation
Machine	82,000	%10	8,200
Furniture	20,000	%20	4,000
Means of transport	60,000	%20	12,000
Establishment expenses	9,000	%5	450
Total			24,650\$

Table 5: Fixed cost

The Annual Fixed Costs of the Project

The annual fixed costs every year have to be paid, and they are the basis of the company, such as the rent of the building on which the work will be based, the annual salaries of employees, and other costs that we may need in the future. Tables 6 and 7 illustrate annual fixed and variable costs.

Table 6: Annual fixed costs

Statement	Total
The project land rent is (3400 sqm * 11 \$) per year	37,400
Wages and salaries include insurance and annual bonuses	38,609
Communication costs (telephone, fax, internet, etc.)	900
Other costs (miscellaneous) 5% of the capital	15,000
Total annual fixed costs	91,909\$

Table 7: The annual costs of the project

Statement	Total
Annual variable costs	170,500
Annual fixed costs	91,909
Annual total costs	262,409

Projected annual revenues. In order to ensure the integrity of the project's economic feasibility and give a greater degree of confirmation to investment, we have taken the price of the production by 95% of the prices. Popular in the market currently taking into account. The increase in supply in the internal market after entering the project's production may lead to decreased sales prices and a high intensity of competition. The project may be forced to obtain a greater share in the internal market to reduce sales prices or increase the profit margin for distributors at home and abroad. The daily production capacity of the project is estimated. Tables 8 and 9 illustrate projected annual revenue.

Goods	Hourly output kg	Daily Output kg	Annual production capacity / 300 working days kg
Plastic	250	2.000	600.000
Paper	750	6.000	1,800,000
Glass	500	4.000	1,200,000

Table 8: Projected annual revenues

The average unit price was based on a study of market prices through the network of delegates -Syria. Before researching the economic feasibility indicators of the project, it is necessary to clarify some points that shed light on the credibility of the results that will be reached: The benefit of the capital invested in the project was not calculated as it is for the cost of an alternative opportunity as prepared by some feasibility studies, for the following reasons: Because the profits achieved by the project represent the return that results in the investment and thus includes the provision of interest rates, and thus when the profit rate in the project is higher than the interest rate, the project is feasible, and its profit is increasing, the greater the profit rate than the interest rate. The critical aspect of an investment is the speed of investing invested capital, whether it is achieved through surplus profit, benefits, or even capital.

Statement	Annual quantity/kg	One unit	Annual revenue
Plastic	600.000	0.16	96,000
Paper	1.800.000	0.0866	155,880
Glass	1.200.000	0.1	120,000

Table 9: Projected annual revenues

The level of investment profit is better measured by the level of the current net value index, which takes into account the net revenues, denoting the current value of the paid investments, and to the extent that the surplus is large, the investment will be more profitable, especially since this indicator eliminates the inflation factor and its impact on the value of cash flows if an appropriate discount rate is chosen.

It shows the annual net profit of the factory without regard to the increase in expenses during the year on the grounds that the increase in expenses is followed by an increase in revenues by a larger percentage. In order to achieve accuracy and objectivity, we fixed the expenses and revenues, and the cost of renewal in investments was not taken into account on the basis that the life of the project is only 20 years. Table 10 illustrate the financial analysis of the enterprise.

The time required to recover the entire invested capital is three years and eleven months, which is a reasonable period of time for any successful investment. The project should work with a capacity of 33.4% of the available energy in order to achieve a tie point or the use level of project energy. From the previous data and assumptions, we have reached the following results and indicators:

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Fixed investment costs = 187,000$
Changing investment costs = 145,000$
Working capital = 332,000$
Variable operating costs = 170,500$
Fixed operating costs = 91.909$
The total annual production costs = 262.409$
The expected annual revenue of the minimum = 359.880$
The annual net profit during = 84.741$
Capital recovery period = three years and eleven months.
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Revenues	Expenses	Net income	Depreciation	Net profit	Payback
371,800	262,409	109,391	24,650	84,741	84,741
371,800	258,205	109,391	24,650	84,741	169,482
371,800	258,205	109,391	24,650	84,741	254,223
371,800	258,205	109,391	24,650	84,741	338,964
371,800	258,205	109,391	24,650	84,741	423,705
371,800	258,205	109,391	24,650	84,741	508,446
371,800	258,205	109,391	24,650	84,741	593,187
371,800	258,205	109,391	24,650	84,741	677,928
371,800	258,205	109,391	24,650	84,741	762,669
371,800	258,205	109,391	24,650	84,741	847,410
371,800	258,205	109,391	24,650	84,741	932,151
371,800	258,205	109,391	24,650	84,741	1,016,892
371,800	258,205	109,391	24,650	84,741	1,101,633
371,800	258,205	109,391	24,650	84,741	1,186,374
371,800	258,205	109,391	24,650	84,741	1,271,115
371,800	258,205	109,391	24,650	84,741	1,355,856
371,800	258,205	109,391	24,650	84,741	1,440,597
371,800	258,205	109,391	24,650	84,741	1,525,338
371,800	258,205	109,391	24,650	84,741	1,610,079
371,800	258,205	109,391	24,650	84,741	1,694,820

Table 10: Financial analysis

As for financial and economic analysis, the project uses local raw materials. The project depends on the national labor and provides (39) job opportunities. The project uses local and national industries, such as machines, equipment, and foreigners. Raising the quality of Syrian products and enabling them to perform better in the event of external and internal competition. Raise the financial return for workers, and enable citizens to obtain these products at reasonable prices. The internal return on investment for the project at a rate of 25.408 % means that the project has certain guarantees of emergency developments from the high production costs and the low prices of the project's final products.

8. Organizational Structure

As illustrated in Figure 5 the enterprise follows a hybrid structure between functional and divisional structure. A General Manager holding a university degree in administration and an experience of no less than five years in management and good communication skills, correct decision-making, and knowledge in all financial and shopping matters is requested. The General Manager assistant holds a university degree in human resources and has a high contact force and experience of no less than three years. There is also a financial director with a university degree in financing and a high contact force and experience of no less than three years. Third is the accountant, who should hold a university degree in accounting and has a high contact force (no less than three years). Fourth is the production manager,

who holds a university degree in human resources and has high communication strength and experience of not less than three years. Also, warehouse managers hold a university degree with high communication power and at least three years of experience. The marketing manager will hold a university degree in marketing and has high communication power and at least three years of experience. Purchasing Manager holds a university degree with high communication strength and experience of over three years. Chemist holds a university degree in human resources, has high communication power, and has at least three years of experience. The technical manager also holds a university degree in information technology and has high communication power and experience Not less than three years). The maintenance Manager holds a degree in machinery engineering and has high communication power and experience of over three years. Finally, workers have strong communication and good manpower.



Fig. 5: Recommendations for organizational structure for Sustain It

Through the information systems department, the projected enterprise will provide service and order via the internet for easy access and clarity of product prices. Smart garbage containers will be installed in the entire country using a QR code that can scan and earn points to spend and get rewards. It will be distributed nationwide for easy access and features for customers to benefit from rewards the more they deal with the enterprise. Sustain It proposes to assist customers in fulfilling their requests. Through the information systems department located, it will give help and service.

9. Conclusion

This research presents guidance for the proposed enterprise "Sustain It," which will be created to recycle paper, glass, and plastic and reuse it effectively and sustainably. The proposed research aims to enhance development and modernization in economic and environmental aspects by collecting the appropriate waste for its use in recycling and providing raw materials that can be used in all areas (factories and markets) and contribute effectively to protecting the environment and improving the quality of life for individuals. Results show that research for enterprise plans to purchase own raw material collection garbage trucks to save cost by reducing suppliers when collecting raw materials, thus increasing the number of employees and reducing unemployment in the country. Staff must be trained and developed, and new staff must be added to increase the company's high efficiency. The challenge for addressing

economic, political, and environmental aspects for Syria moving towards a sustainable environmental, economic, and social goal of sustainability requires hard effort, knowledge, and innovation of strong technology and strategic capability.

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