



### **ABSTRACT**

*The sort bin is a simple compartmentalized bin that encourages the segregation of waste types and seeks to encourage recycling habits in Ghana. This business plan highlights the description of the business, the market and competition, organization and structure, the production process and operational plan, financial highlights and the growth and exit plans.*

# **KAAGS COMPANY LIMITED - Producers Of The Sort Bin APRIL 2014**

**ASHESI UNIVERSITY COLLEGE**

KAAGS Company Limited

(Producers of the Sort Bin)

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Business Plan submitted to the Department of Business Administration, Ashesi University  
College. In partial fulfilment of the requirements for the award of Bachelor of Science degree  
in Business Administration

April 2014

We hereby declare that this Business Plan is the result of our own original work and that no part of it has been presented for another degree in this university or elsewhere.

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*I hereby declare that the preparation and presentation of the Business Plan were supervised in accordance with the guidelines on supervision of Business Plans laid down by Ashesi University College.*

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## ACKNOWLEDGEMENTS

Our gratitude goes out to our lecturer Mr. Kwaku Ohene-Bonsu, both our Teaching Assistants Mr. Kwame Owusu Ansah and Ms. Naa Ayelesa Quainor Mettle, Mr. Noam Sarfati of Zoomlion for the insights he gave us to help develop our findings, and our respective parents for lifelong support.

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## **EXECUTIVE SUMMARY**

KAAGS Company Limited is a start-up company seeking to establish itself in the waste management industry. We have identified a niche in the area of waste collection which consists of trash bins for the purposes of waste segregation and recycling. The organization seeks to create, market and produce these compartmentalized bins also known as sort bins in a bid to rekindle a recycling courage in the general public.

The product would consist of a bin with four translucent and colour-coded plastic compartments which are default labelled as paper; plastic, bio-degradable and the last would be left for the consumer's discretion. These bins would come in different sizes depending on the need of the consumer. Other special features include slots at the base of each compartment with a refill of trash bags to replace the bags whenever they are used and taken out.

We seek to form alliances with waste collection companies in order to distribute the bins at a faster and more viral rate. Also, the segregation bins would help these waste collection companies by reducing their load of work when it comes to waste collection at a bulk level.

As at now, KAAGS Company Limited is the only organization in Ghana seeking to produce and distribute the compartmentalized bins. This niche would establish and position us strongly in the market and also make the business a viable one.

The projected financial performance of KAAGS indicates that the firm has a sound commercial outlook with all major financial indicators showing a very lucrative business venture. We will need an estimated GHS 100,000 to get the project off the ground and this will include all initial costs and working capital to produce the first set of 1000 bins. Our total projected sale for the first year is 24,106 units and this is from six targeted districts within the Greater Accra Region. The company is making an estimate net profit of about 85,000 cedis in the first year which represents net profit ratio of about 11% of turnover. The profit ratio is expected to increase to over 20 percent over the three year period as cost of production decreases and when we are able to take better advantage of economies of scale. Also because of the financing strategy we hope to adopt there will be very little

debt which ensures that out debt to equity ratio remains low. This will ensure that the firm will have a sound financial ground over the long period. The payback period of the project is one year and one month. The firm expects to be able to recoup initial investment by the end of the first month of the second year in operation. Investing in this venture is proving to be lucrative and worthwhile.

## 2.0 COMPANY DESCRIPTION

### 2.1 Company/Business Description

KAAGS Company Limited is a private limited liability company in the business of the production and wholesale/retail distribution of compartmentalized refuse bins, also known as "sort bins". It was founded in November 2013. We are a waste management institution that primarily focuses on the creation and distribution of sort bins across Ghana and Africa at large. There are five shareholders who are also the founders of the company, and each shareholder is in possession of 20% of the company. It is to be situated at North Industrial Area (Accra).

### 2.2 What Led To The Development Of This Business?

After observing the waste disposal behaviour of Ghanaians and the state of refuse dumps across the country, it came to our notice that Ghanaians are not encouraged to recycle, and have large land areas filled with unprocessed waste, a canker to our society. These areas are continually dumped onto by the general public, and huge mounds of waste remain stagnant and cause health and aesthetic problems. A few recycling companies have emerged in the country to help reduce the amount of waste created and discarded. However, sorting through large piles and mounds of trash for recyclable material at these landfills has been a great headache to most of them.

The challenge waste disposal companies face when trying to find recyclable material from traditional household waste was the initial trigger for the idea for this business. It also came to our notice that these companies pay the general public for their efforts in bringing the companies recyclable material. This therefore motivated us to implement an indirect system of division of labour when it comes to recycling in Ghana.

These companies can hence generate recyclable material straight from households and business centres by making it easier for households to sort through and separate their waste so that the material needed by these companies are easily acquired, eliminating the job of sorting through large mounds of combined waste. An effective system on minimal sorting on a domestic scale was needed, hence the emergence of the sort bin.

### 2.3 Description of Industry

The waste management industry has a very extensive supply chain. The components of this industry starts from households that generate waste, waste management companies then haul the waste and finally, the disposal sites where waste is finally disposed and in some cases recycling is done. The industry is such that multiple segments have to be satisfied for the effective management and control of waste. The waste creation segment of the market is most dominated by households and firms that generate waste material through everyday activities. The waste generation segment is aided by manufacturers of waste bins to facilitate the collection of the generated waste. The second sector of the waste disposal industry is the collection and haulage segment. The firms under this sector are responsible for collecting the waste generated within the region. According to an AMA report on the Millennium City about 2000 tons of waste is generated every day. However only about 1200 tons of the waste is properly collected in Accra (Alhassana, Gabbay, Arguellob, & Boakye-Boaten, 2010).

The levels of waste indicate that the volumes generated cannot be handled by the 11 major waste management companies in the region. The landfill sites where all waste are disposed remain as the third sector. The numbers of landfill sites within the region have been decreasing as a result of the decommissioning exercise. The traditional sites are being decommissioned because the communities that used to be on the outskirts of town have become an integral part of the region. The Achimota site was decommissioned early 2013 (Daily Graphic, 2013) and according to our sources at ZoomLion the Abokobi Landfill site will be decommissioned this year because it has exceeded its capacity. This has therefore resulted in a considerable amount of pressure on the Tema Landfill site. The need for increased recycling and reuse has not been more apparent with the number of waste disposal sites reducing in number. At the moment there are a few specialized firms that recycle specific types of waste. Currently, ZoomLion has as compost recycling plant where wet waste is recycled into compost for use as fertilizers. Super Paper Products also recycle paper waste while Trashy Bags also undertake recycling of plastic waste.

With direct reference to bin manufacturers there are a few companies that actively participate in the industry. ZoomLion currently produces bins in Ghana for their customers while other companies like Universal Plastics also manufacture and sell waste bins. There are large numbers of small scale importers who import and sell a variety of waste bins.

#### 2.4 Services and Product

The product that KAAGS is seeking to introduce to the market is a compartmentalized refuse bin for separating waste. The sort bin, as it is commonly called, specifically deals with refuse collection and recycling mainly on a domestic scale. The product is largely a portable bin made up of between two and four distinctly coloured compartments to allow waste segregation according to user need. They are colour-coded and translucent to guide the user as to where to put what type of waste. By default, the recommended waste separation tags are plastic, paper, bio-degradable waste, and glass; however, the user is free to assign any compartment to any type of waste produced. The main aim is for waste types to be divided. This expectantly would allow for waste to be separated according to type in order to develop a recycling and waste sorting habit in every Ghanaian.

The sort bins come in various sizes ranging from small, room-sized bins for home/domestic use to large industrial-sized bins for larger types and quantities of waste. We have also incorporated a trashy-bag pull-out slot in hidden compartments underneath each bin in order to aid refills, so whenever the bag in use is full and gets pulled out, a new one fills the container. We also aim to make the lining of the bins out of recycled plastic in order to promote and reinforce the idea that segregated waste and recycled products can and will be put to good use if given the chance. Also it is relatively cheaper to use recycled plastic. This shows a more efficient way of utilizing recycled waste for various purposes. Even though the product is a simple compartmentalized bin at the moment, we are looking to add more mechanized functions to the product in the near future to keep up with technological advances and also to make the sorting and segregation of waste easier and less time consuming. Features such as a mechanized compartmentalized garbage disposal system and a detachable feature will be considered.

## 2.5 Business Model

The business model strategy will be a combination of the Push and Pull Strategy models where 70% of efforts will be placed on the former and 30% on the latter. We will indulge in the stocking of our products by us and third parties such that the product is pushed towards the consumer/target market through distribution, wholesale and retail. We will also indulge in activities that will cause consumers to fervently demand the product from us such as consistent advertising, promotions and customer relations.

**Key Partners:** The key partner we are engaging for the manufacturing and production of the sort bins is JTP Mould Co Ltd in Huangyan, China. The bins made will be collected and distributed for sale by KAAGS Company Limited through wholesale and retail on the open market. They will also be given to wholesalers and retailers of plastic products on the general market. We will engage the services of ZoomLion in the distribution of the bins for KAAGS by exchanging the old single-spaced bins for the new compartmentalized sort bins at a reduced price. This small profit will be split between KAAGS and ZoomLion. Also, any other waste collection companies and distributors of rubbish bins who are interested in patronizing our services as partners will be considered.

**Key Activities:** The key activities include designing of bins, manufacturing of bins, distribution and sale, and in the near future waste collection, sorting and sale of recyclable products. The designing of the bins will be largely handled by KAAGS Company limited. Manufacturing processes will be handled by JTP Mould Co Ltd. After the manufacturing processes comes the distribution, where KAAGS Company Limited will largely be in charge of the wholesaling and retailing of bins on the open market. ZoomLion will handle one part of the distribution aspect which consists of exchanging old and non-compartmentalized bins for the new sort bins at a discounted price. KAAGS would also hold occasional durbars and public education seminars in various cities across the country where the general public will be educated on the effects of waste pollution and benefits of waste segregation and recycling. To encourage the consumers to demand our product, there would be advertising and viral marketing. We will encourage the stocking of products on the shelves of plastic and bin wholesalers and retailers in the country through trade

shows demonstrating the use of our product. There will also be investment in marketing and advertising strategies primarily through television, radio and print media, and secondarily through websites and social media in order to create awareness over all segment of the market.

**Key Resources:** For distribution, we would require a walk-in store, commercial warehouse, professional office space, distribution trucks to carry the product around, and fork-lifts to arrange the product in the warehouses. We would also need a patent for the product in order for it to be rightfully owned by KAAGS Company Limited. Licenses needed to conduct any of the activities and processes needed will be acquired before doing so.

**Customer Relationships:** Customer relationships between the company and the public will be established through the bin exchange and educating the public on recycling. Also, regular check-ups on those signed on for waste collection will be administered, and the organization will seek regular feedback from its consumers. There will also be a hotline where customers can call to raise issues and concerns, make enquiries or offer suggestions. Customers can also return items for refund or exchange. If items are damaged before they were bought, they can call our company on the hotline or return it to the distributor from which they bought it in exchange for a new one.

**Channels:** Our channels as previously mentioned include external wholesalers and retailers, waste collection companies such as ZoomLion and any other interested parties, KAAGS as a distribution centre itself and the public seminars on recycling and waste segregation.

**Customer Segments:** Our customer segments have been divided into households (specifically high-income households, middle-income households), food joints (restaurants, chop bars, snack joints), offices/ corporate buildings, and construction sites. This is because the types of waste generated by these segments are different and will inform the size, strength and prices of the bins recommended for their type of waste.

**Cost Structure:** The cost structure largely falls under the main headings of start-up costs, manufacturing costs, shipping costs, warehouse/storage costs, distribution costs, administrative costs and consumer education costs.

**Revenue Streams:** Our revenue streams are mainly through the sale and distribution of bins in the above mentioned ways, and also through the sale of recyclable materials to companies and organizations in need of such. As time goes on, the design and manufacturing of the bins will include the latest technology and extra features informed by research, feedback and business developments. The sale of updated bins will bring in recurring revenue. There will also be revenue generated from the future collection and sorting of waste.

## 2.6 Purpose, Vision, Mission and Company Values

**Purpose:** Sort bins were basically created to help households and businesses dispose of waste better, develop a recycling habit, and in the process make money from it.

**Vision:** To be the leading distributor of sort bins across Africa, in order to curb pollution and encourage recycling to make the continent a safe haven for its people.

**Mission statement:** To offer every home and waste management companies ease and affordability in sorting their waste and to build a cleaner and wealthier society by making value out of waste.

**Values:** We encourage each and every member to live by the honourable values established by the company.

**Integrity:** Our business operation would always be conducted in a transparent and ethical manner.

**Accountability:** All information concerning the company would be made known to the each founder and investors.

**Excellence:** In carrying out business activities, we aim for the highest level of perfection attainable.

### **Products and Service In Relation To Mission**

As mentioned earlier, the sort bin has been created to inculcate a recycling habit in Ghana. As the producers of this product, we encourage our manufacturers to produce the linings of these bins out of recycled plastic, thereby propagating the message of recycling through our product itself.

### **Value Proposition**

To help households and businesses dispose of waste better, develop a recycling habit, and in the process make money from it.

## 2.7 Company Past, Present and Future

. We recognize that there may be points in future where there would be a saturation of sort bins in the market and therefore a sole business of production and distribution of the product may not be sufficient to aid the company survive. We plan to enter into the waste recycling business in the near future and possibly be a distributor of recycled materials to production companies that need them. In general, we are aspiring to be the market leader in waste segregation solutions.

## 2.8 Key Success Factors

Factors that would go a long way to ensure the success of the sort bin is its unique nature (compartmentalized bins are not profoundly common in Ghana), its durability, relative affordability, and easy-to-use nature. Also our mode of distribution, dictates that discounted price, one can exchange their old bins for a sort bin, is another strategy that would help the propagation of the sort bin to be successful.

### 3.0 MARKET AND COMPETITION

The waste management industry is changing rapidly. Due to the effects of global warming, many waste management companies have developed the habit of recycling the waste they collect to help protect the environment and also reduce the amount of waste sent to the landfill sites which are almost filled over the expected capacity. Therefore there is the need to manufacture bins that make the sorting of waste material easy and convenient for the waste management and recycling companies as well as the households. The waste management industry is presently at its growth stage due to the large amount of waste produced each day. As a result of this, there is a gradual increase in the entry of waste management companies and other retailers of bins. On the other hand, waste management companies in the industry are expanding to provide similar services, for example, ZoomLion has a compost recycling plant. There is also an increased partnership to find ways to better solve the waste disposal problem as is evident by the formation of Zoom Alliance, a subsidiary of ZoomLion that specializes in building partnerships for effectively handling the waste disposal challenges.

#### 3.1 Market Analysis

**Market Size and Growth:** The market has a lot of consumers over a large geographical area. As a result, the industry has seen a remarkable growth in the purchase of its services and products with majority of its consumer's beings households.

**Competitor Analysis:** The waste management industry is a broad one, with a lot of competing companies in the industry. Due to KAAGS unique product, the company does not have any direct competition from these companies as our products is one of its kind and has never been done before in our local society. However, existing indirect competitors in waste management industry include ZoomLion, Asadu, Liberty Waste, Mohas Waste, Keen 2 Clean Services, and MFS Waste Management & Communal Services.

The company is also in competition with other plastic waste bin producing companies such as Universal Plastics, Plastic Co and Quality Plastic. These can also be classified as indirect competition as they deal in designing and making of the waste bins.

Most of KAAGS indirect competitors have been in business for a considerably long time, as a result of this, they have a larger market share and customer loyalty. KAAGS' ability to be creative, innovative and incorporate modern trends serves as a threat to these existing companies.

### **Specific Target Market(s)**

Our Target market for the first phase of production would be the Greater Accra Region. We would satisfy the major districts and metropolises within Greater Accra that are serviced by waste disposal companies like ZoomLion and Asadu Waste Disposal Company. We are selecting these places because it provides the most practical medium for sort bins to be effectively utilized. For Sort bins to be useful, segregated waste must be collected efficiently and on time to ensure that consumers are not compelled to jam up their waste. Accra is divided into Metropolises, Municipal assemblies and districts. For the interim we are targeting Accra Metropolis, Tema Metropolis, Adentan Municipal, Ga West Municipal, Ledzokuku-Krowor Municipal and Ga South Municipal Assemblies.

**3.2 SWOT Analysis:** We conducted an analysis to determine the strengths, weaknesses, threats and opportunities that may present themselves to KAAGS as against that of our competitors should the company begin operations. The particulars of this can be seen in Figure 1.0. See appendix for further details

**3.3 Strategic Partnerships:** KAAGS would be involved in certain key and strategic partnerships in order to propel the business as efficiently as possible. Figure 1.1 of the appendix highlights the partners, what we expect from them, and how their actions will affect our business strategies. See appendix for further details.

**3.4 Marketing Channels:** Figure 1.2 covers the various channels KAAGS would use to market our product, the functions of these channels, the main target of these channels and the mediums we are going to adopt as a company to forward the awareness and use of the product. See appendix for further details.

### **3.5 Marketing Mix:**

**Pricing:** Consumers today are price conscious and are therefore very careful of the products they buy. With this knowledge, KAAGS products would be of good quality

and priced relatively cheaper than the ordinary waste bin. The main aim of every business is to make profit, we therefore seek to maximize profits whilst helping keep our country clean, adopt a good recycling lifestyle and also enable our customers make money of their plastic waste. The current prices of the waste bins on the market against the prices we would charge for our bins have been collated. See Figure 1.3 in Appendix for details of price ranges.

**Promotion:** The launch of KAAGS Co. Ltd would have bins on sale at a fairly reduced price of GHC 30 for the large bins with 10 extra plastic refill bags this is to gain recognition in the market and also help sell our products to the general public. Households with already existing bins would have their bins replaced with the sort bin for a relatively low price and we would also give away mini sort bins which can fit into their kitchens or rooms as an additional package. Loyal Customers of our product would also have 4-6% discounts on a pack of bin liner sold. Schools and other institutions that purchase our products in large amounts would have a 10% discount on the total number of products bought. KAAGS Co. Ltd would also deliver the sort bins and plastic bags to the intended locations.

**People:** Employees of KAAGS are selected and well trained so as to ensure that the day to day running of the business is in full swing.

**Administration:** Administrators are to ensure the smooth running of the business, as finances, operations and employee problem are handled in an ethical manner. Administrators who fail to remain competent at KAAGS would have their contracts terminated as this costs the business money and resources

**Motivation:** KAAGS seeks to implement certain policies which would serve as incentives so as to encourage employees put in their best in their duties. There would be the "Employee of the Month" award system to encourage competition amongst workers. These award holders would have their pictures on the company's website and office. Employees would also receive bonuses every year so as to propel them to worker harder and be dedicated to their work.

**Place:** KAAGS place of reaching its customers is through the face to face interactions either at their place of residence or place of work via the bin exchange program, durbars to educate the public on recycling, and through wholesale and retail.

**Sales Potential:** As per the 2010 census, Greater Accra holds about 14% of the total 3392745 houses nationwide (Ghana Statistical Service, 2012). This figure rounds up to about 474984 houses within Greater Accra. Our target districts represent half of the total 10 districts in the Greater Accra region. We are pegging the total number of houses within our target districts to represent a modest sixty percent of the total housing stock in the Greater Accra region because they represent the most densely populated areas. This brings the projected number of houses we could reach to 284991 houses. Also, because we are targeting middle to upper income household the number of households that will be able to serve in the interim will reduce to about 150000 households. Our sales projections for the first four quarters after launch have been presented in the appendix at Figure 2.1.

The total number of units we expect to sell in the first year stands at 24106 units. The figure represents all the sizes of bins that we have available. The turnover from these sales is about one million Ghana cedis for the first year. At a weighted average price of GHS43 per unit we would be able to make a fairly substantial turnover for the first year.

A table has been provided in the appendix to give a description of the various components that have gone into the estimation of the average price. See Figure 2.2

### **Consumer Profile**

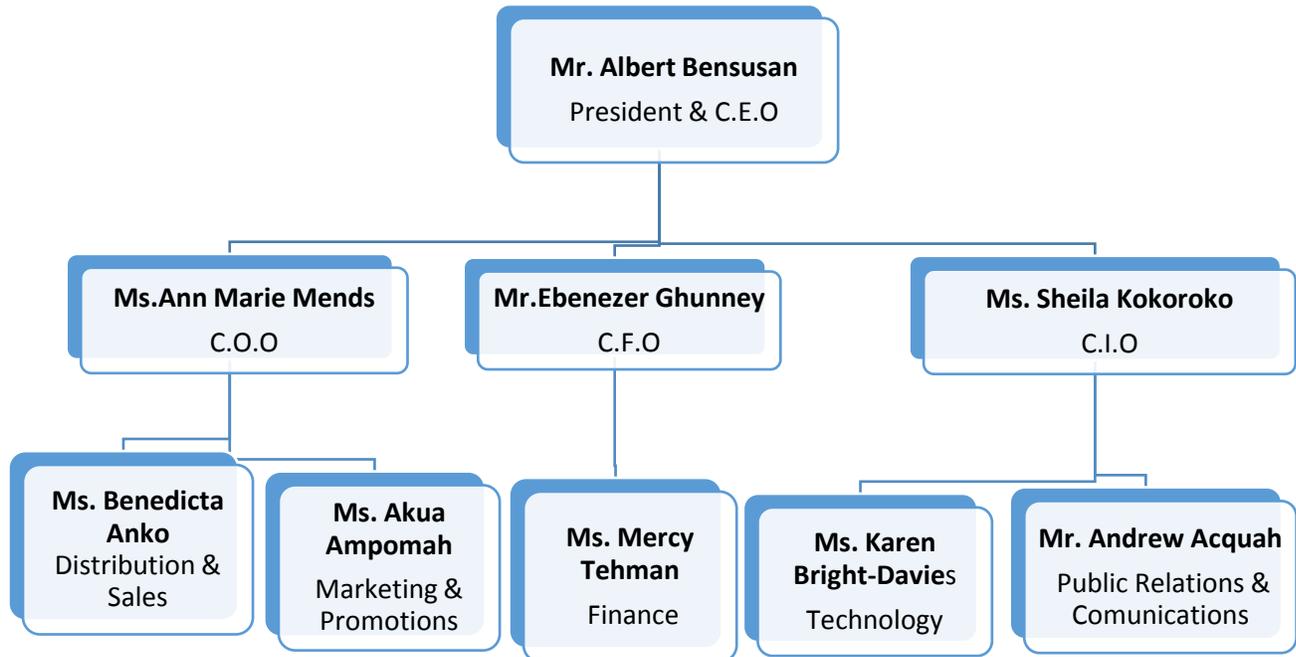
Our customers represent a segment of the market that is conscious of the environment and are willing to go the extra mile to protect it. Our consumers are relatively young middle to upper class people who are willing to contribute to keeping our environment clean and friendly for the next generation. In our market survey, we realized that over 80% of respondents considered environmental protection and sustainability as the main reason why they would want to segregate waste for recycling. Only one person among the 60 respondents said they would segregate their waste because it was a fad as most of the people within their social bracket would be undertaking such an exercise. The second highest ranked option chosen was income generation. A fair number of people said they would segregate their waste if they could make money from sorting their waste. This response was most suitable for our value proposition. A small fraction of our survey respondents said they would not bother sorting their waste and their main reason was that they

believed their waste after being segregated would end up being disposed of at the same place defeating the reason for sorting waste.

## 4.0 ORGANIZATION AND STRUCTURE

### 4.1 Organizational Hierarchy

The team would be managed by its active shareholders. The following positions would be filled as follows:



- Chief Executive Officer- Mr Albert Bensusan
- Chief Operating Officer- Ms Ann Marie Mendis
- Chief Finance Officer- Mr Ebenezer Ghunney
- Chief Information Officer- Ms Sheila Kokoroko
- Public Relations and Communications – Mr Andrew Arde-Acquah
- Marketing and Promotions – Ms Akua Ampomah
- Technology- Ms Karen Bright-Davies
- Distribution and Sales – Ms Benedicta Anko
- Finance – Ms Mercy Tehman

The organizational structure of the company is more vertical than flat. This is to ensure that decision making is easily taken and the organization has a well-structured system so as to ease the flow of information.

**Mr Albert Bensusan (CEO)** graduated from Ashesi University in the year 2005 where he attained his degree in BSc. Mr Bensusan also has a diploma in

Entrepreneurship and Organizational Behaviour from Harvard University. He was the former C.O.O for PMC an audit firm. His role at KAAGS is to manage all departments, sit and make decisions as the Board Chairman for the company.

**Ms Ann Marie Mends (COO)** graduated from Ashesi University in 2006 with a degree in BSc. She has masters in Marketing from Yale University. She worked at the Standard Pendant Bank as their Marketing Consultant Manager. Her role at KAAGS is to help research and find strategic ways of marketing the company's products.

**Ms Sheila Kokoroko (CIO)** graduated from Ashesi University in 2008 with Summa Cum Laude and BSc degree in Management and Information System. Ms Kokoroko has masters from Mahatma Ghandi University in Scientific and Technological Database. She worked at KoKo Rock Co. ltd as the I.T manager. Her current role is the management of database system at KAAGS.

**Mr Ebenezer Ghunney (CFO)** graduated from the Ashesi University in 2008 with a degree in BSc. He has a doctorate from the University of California-Berkeley in Financing and Accounting. His role at KAAGs is to crosscheck the company's books and ensure that all financial inflows and outflows are monitored and up to date.

**Mr Andrew Acquah and Ms Karen Bright Davies (PR, Communications & Technology)** would manage I.T and communications at KAAGS. They would report to the C.I.O. They both have degrees in Communications and Relations and Informational Technology Management Respectively.

**Ms Mercy Tehman (Finance)** graduated from the Central University with a degree in banking and finance. She has in depth knowledge in accounting and is charge of the company's finances. The Finance Manager therefore reports to the chief finance officer.

**Ms Benedicta Anko & Ms Akua Ampomah (Distribution and Marketing)** would be in charge of the marketing and distributing of KAAGS products to the company's target market. They respectively have degrees in marketing and competitive strategy from Ashesi University. They are currently pursuing masters in marketing and strategic brand management at G.I.M.P.A.

## 5.0 PRODUCTION PROCESS AND OPERATIONAL PLAN

**Operations Plan (Production of Bins):** The production of the sort bins would be outsourced since it is relatively cheaper for JTP Mould Co Ltd to produce them for KAAGS due to the high cost of equipment needed for the production of the bins. KAAGS would however have a warehouse located in the North Industrial area to keep the branded finished products and the building would be maintained from time to time to ensure the safety of the employees. Again, KAAGS would have its offices at the same location where we would produce the trash bags ourselves.

**Equipment and Materials:** As part of our CSR, production materials for the trash bags would consist mainly of recyclable material such as used sachet wrappers and plastic bottles. Full index for the equipment needed has been provided in the appendix.

### **Scope of Operations: Product Offering**

- Sort bins would be unique to KAAGS Company limited.
- Different designs and sizes of sort bins
- Partnership with ZoomLion Ghana

**Sort Bins and Trash Bags Procurement:** KAAGS Company limited would procure the sort bins from JTP Mould Co Ltd. However KAAGS would procure the linings from Plastic Co Ghana. Used sachet bags and plastic bottles will be used for the production of the trash bags (linings) and would be purchased from waste plastic collectors.

**Inventory Management:** Inventory control would be handled by our computer software system and checked daily by management.

## 6.0 FINANCIAL HIGHLIGHTS

### 6.1 Revenue Model

**Recurring Revenue:** The Company would generate this type of revenue through the sale of trash bags produces for the sort bins as well as the amount paid by clients who want to trade in their old bins for new ones. Also, KAAGS would generate this type of revenue from Zoomlion since it has an increasing number of clients throughout the year based on their continuous demand for new bins. With the recurring revenue model, KAAGS Company limited would generate its revenue through various means. Our major recurring revenue would be spawned through the sale of our trash bags since customers do not necessarily have to have a sort bin before they purchase the bags.

As a firm we have decided that the best option for a start-up would be to outsource production and focus mainly on marketing and the direct result of that, is a focused spending plan that would entail the cost of having the goods produced and supplied to our warehouse.

We have divided our financials into three segments; the start-up phase, initial operation and a projected 5 year financial statement. The start-up phase entails any initial cost that would help get the company off the ground. It represents the total initial capital that the firm would have to secure to move the product from the idea stage to implementation. The start-up phase for our firm includes costs such as cash for permits and business registration, office space, warehousing, a product designer, advertising and a number of key items.

Resources have to be made available for the payment of some all these costs to make it possible to create a tangible product and get that product to the final consumer. The business registration is a key cost component because the firm needs a legal identity and representation to make it possible for us to transact business. Our product also needs a better design polish as such we feel it would be necessary to engage the services of a better designer to help us fine tune some of our design ideas to make sure that the product that we take to market would meet international standards and consumer usability expectations. For this type of business that we would be engaging in, we would need a large storage area to keep

produced products as they await distribution. Along with the warehouse there would be an office space to aid in the administrative responsibilities that have to be carried out. All these cost items have to be settled to ensure a smooth take off of business activities.

The next phase that we have to prepare for is the initial operation of the business. This phase includes actual marketing and distribution of the sort bins to interested customers.

An average increase of revenue is expected to be 7.5% in the first three years, which would eventually settle to an average of 3-5% in the subsequent years.

## 6.2 Profitability

Profitability, enables us to measure the success of our company, it refers to the ability of our entity to generate income and cash flows. Profitability analysis helps to establish if the income made by the company is sufficient in relation to the items listed on our financial statement. The measures of profitability used in our analysis are the gross profit ratio, mark-up ratio and net profit ratio. These ratio used helps us know the company's profit and the capital used to finance the business.

The gross profit ratios projected for KAAGS Company Ltd for the first three years of operation indicate that the proportion of sales which will be retained as profit would increase from 25% in 2015 to 33% in 2016 and increase to 38% in 2017. These results of the retained profits prove that the company would make much profit from its trading activities.

The mark-up ratio is similar to the gross profit, it measures the profit earned in relation to the cost of goods sold. These results indicated in appendix 1.7 prove that KAAGS Company Ltd would be making much profit as compared to its cost of sales. The mark-up ratios projected by KAAGs from 2015 to 2017 are 33.33%, 49.25% and 61.29% respectively. The rate of increase in the retained profit is encouraging for 2016 and 2017 since our cost of sales took a huge percentage of the company's earnings in the first year of operation; hence KAAGS Company Ltd.'s profitability proves to be high.

The other profitability ratio used in our assessment is the net profit ratio, this indicator illustrate the proportion of sales revenue which is retained after all

expenses have been accumulated for. KAAGS obtained a projected net profit ratio from 2015 to 2017 at 11%, 19% and 24% respectively. These percentages indicate that KAAGS will make this profit once all due payments have been made.

### 6.3 Liquidity

Liquidity refers to the company's ability to convert its assets to cash in order to meet its current liabilities or financial obligation. The projected current ratios of KAAGS Company Ltd, which compares current assets to current liabilities, indicate a high level of liquidity over the three year projection. The ratios obtained from 2015 to 2017 are 5.31 to 1, 10.19 to 1 and 14.18 to 1 respectively. This proves that our current assets would be more than the current liabilities, thereby suggesting a great financial performance of the company.

### 6.4 Efficiency

Efficiency refers to the company's ability to utilize its resources effectively to generate optimum revenue. From the appendix, the projected stock turnover is seen to have reduced from 9.93:1 in 2015 and 8.68:1 in 2016. These results indicate that the ratio of cost of sales to inventory would fall steadily over the years. In a nut shell, the KAAGS would sell lower proportions of its stocks as the product saturates the market. However, it is interesting to note that our cost of sales keeps rising each year, this is due to our forecasts of inflation and the prices of crude oil used in the production of bins in the international market.

The stock turnover days measures how fast our stocks would be sold. We must note that a lower number of stock turnover days show a sign of increased efficiency.

### 6.5 Solvency

This indicator helps KAAGS to project its credit worthiness, hence is particularly important to creditors. From our projections we had a low debt to equity ratio of 0.23 in 2015, 0.108 in 2016 and 0.076 in 2017. These results indicate a lower financial risk and a higher ability of us paying off our non-current liabilities.

The debt to capital ratio was the other solvency ratio used; it helps to measure the relationship between KAAGS's debt capital and total capital. This measure indicates the proportion of the company's capital which is financed through liabilities. However, our computation gave us a lower debt to capital ratio which indicates that

only a small percentage of the company's long-term capital would be funded through non-current liabilities. On the whole, KAAGS Company Ltd.'s financial risks prove to be low even though we are subject for improvement.

## 7.0 GROWTH & EXIT PLAN

**Five Year Action Plan for KAAGS Company Limited:** Below is a table showing various activities we intend to do during the five year period of operation. This action plan would be subject to review as time goes on.

Year	Summary of Activities
1	<ul style="list-style-type: none"> <li>• Shift from strategic planning to plan implementation</li> <li>• Sell at least 5000pieces our products</li> <li>• Capture 30% of the market through wide distribution channels and retail outlets.</li> <li>• Create awareness amongst 10% of our target audience within the first six months of operation.</li> <li>• Advertisements - social media, radio, television, posters and billboards.</li> <li>• Sales promotions – trading old bins for new ones.</li> <li>• Sponsorship of events – clean up exercises.</li> <li>• Develop company website</li> <li>• Update the communication plan to align with the strategic plan.</li> </ul>
2	<ul style="list-style-type: none"> <li>• Fully develop capacity of the new administrative support team and strengthen program delivery with new practices using existing resources</li> <li>• Breakeven</li> <li>• Increase number of billboard advertisement to 10.</li> <li>• Market research</li> <li>• Donations (CSR)</li> <li>• Find KAAGS sort bins in 30% of homes in Accra, 15% in Kumasi, Cape Coast and Takoradi.</li> <li>• Focus on staff development including developing a supervisory and management curriculum for mid-level staff</li> </ul>
3	<ul style="list-style-type: none"> <li>• Increase revenue by 100%</li> <li>• Sponsorship of events</li> <li>• Donations (CSR)</li> <li>• Advertisement</li> <li>• Update website</li> <li>• Continue focus on staff development including developing a supervisory and management curriculum for mid-level staff</li> </ul>

### **Exit Plan**

In the situation whereby a shareholder intends to leave the company, the right of first purchase would be given to the existing shareholders. Also, a succession plan has been drawn to help in the situation of the death of a shareholder in the near future.

## **8.0 KEY RISKS AND CONTROL MEASURES**

Our product is predicated on the availability of a ready market for recyclable products. Our current capacity will have to be increased to be able to cater for the projected volumes of waste that will be recycled. There is a proposed plan by ZoomLion to engage in a plastic buyback program which will provide a ready market for waste plastics. This program when implemented will be one of the major incentives for segregating waste. There is also a challenge of other companies adopting our idea and saturating the market with similar products that might not be of the same quality. We are taking measures to retain some exclusivity to the use of the idea. The introduction of the technology to generate fuel from plastics also holds a huge potential for making our product relevant but with the frustrations associated with implementing this project there might be a delay in its implementation. Also our partnership with Wecycler is an essential component of the plan as they will be able to better cater for the collection and haulage of the different types of waste. Wecycler represent a company segment that specializes in the operationalisation of collection of different types of waste. The company entrance into the Ghanaian market with better facilitate our efforts are encouraging recycling however if they are unable to implement their programme effectively, household might have a challenge of finding a system that allow the collection of different types of waste and thus might be compelled to revert to traditional disposal methods.

## 9.0 REFERENCES

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## 10.0 APPENDIX

**Figure 1.0**

### SWOT ANALYSIS

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>• One of KAAGS major strengths is its unique product offering (colour coded detachable compartmental bins with at least ten refillable plastic trash bags for each compartment)</li> <li>• Recycling of plastic waste in the production of our rubber liners</li> </ul>	<ul style="list-style-type: none"> <li>• Already existing companies such as universal plastic products.</li> <li>• Product risk stemming from the uncertainty of trying to introduce a brand new product into the market</li> </ul>
<b>Opportunity</b>	<b>Threat</b>
<ul style="list-style-type: none"> <li>• Increased Recycling Culture</li> <li>• Change in government regulations on waste disposal</li> <li>• Partnering with well-established companies such as Zoom Lion and Asadu Waste with the distribution and advertising of our products.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased competition from existing companies</li> <li>• Cultural Risk (Cultural tendency of Ghanaians not to accept new waste disposal techniques)</li> </ul>

**Figure 1.1**

### STRATEGIC PARTNERSHIPS

<b>Key Partnerships</b>	<b>What to expect from partners</b>	<b>How it affects our business Strategies</b>
Distributors	Ensuring our product is in the market due to the high establishment and influence of our partners in the general market	Constant flow of income/revenue Enhances our value proposition and gain recognition
Promotion and governmental agencies	Advertising, governmental regulations and awareness of the importance of recycling, promotion and our ability to reach our target audience	Helps gain a large market share Effective advertising to our target market
Wecycler	To coordinate and operationalize the collection of the different types of waste	Helps encourage consumer participation and drives up demand

**Figure 1.2**

## MARKETING CHANNELS

Channels	Function	Main Target	Medium
Social Media	It is a quick and easy way of disbursing information to our target market An interactive mode of engaging our target audience	Target Market (Corporate offices and Households,)	Internet
Company Websites	Online database which informs our target market of our products and its benefits Also provides a platform for the general public to order online for our product	General Target Market	Internet
Posters& Radio and T.V Ads	Creates Awareness on the importance of recycling and the benefits of our products	Households, Construction company, general public, schools	Notice boards, Television and Radio
Word of Mouth	It is a cheap and yet highly effective means of marketing. Customers recommendations can increase the likelihood of patronage	Entire Target Market	No particular medium

**Figure 1.3**

## PRICING

Sizes	Current market price (GHS)	KAAGS Price (GHS)
Extra Large Bins	80	65 - including the old bin 75 - without the old bin
Large Size Bins	65	45- including the old bin 55- without old bin
Medium Bins	40	30- including the old bin 35- without the old bin
Smaller Bins	15	10- including the old bin 15- without the old bin
Bin Linings(PACK)	5	4.50

## Dependence of the Sale of Our Product or Service on the Sale of Others

Indirectly, the sale of our product depends on the sale of every single product which when used, creates some sort of refuse. Without trash, there is no need to create trash bins. It also depends on the variation of trash types.

### **Differentiation**

The sort bin is relatively cheaper, has plastic refill bags, has four larger and labelled compartments and is detachable. It is divided into four parts with a section underneath each division/compartments, containing trash bags which make the refilling of the bins with trash bags very easy.

**Figure 1.4**

### **SALES PROJECTIONS**

<b>Location</b>	<b>1st Qtr.</b>	<b>2nd Qtr.</b>	<b>3rd Qtr.</b>	<b>4th Qtr.</b>	<b>Total</b>
Accra Metro	937	1205	1473	1742	<b>5357</b>
Tema Metro	852	1096	1339	1584	<b>4871</b>
Adentan	724	931	1138	1345	<b>4138</b>
Ga West	639	822	1004	1187	<b>3652</b>
Ledzokuku-Krowor	426	548	670	792	<b>2436</b>
Ga South	726	800	1026	1100	<b>3652</b>
<b>Total</b>	<b>4304</b>	<b>5402</b>	<b>6650</b>	<b>7750</b>	<b>24106</b>

**Figure 1.5**

### **PROJECTED WEIGHTED PRICE**

Size of Bin	Price	Weight (Projected quantity sold compared to total sales)	GHS
Extra large	75	0.1	7.5
Large	55	0.4	22
Medium	35	0.3	10.5
Small	15	0.2	3
		Total	43

**Figure 1.6**

## INITIAL CAPITAL

	<b>Cost (GHC)</b>
Business Registration/ licenses and permits	350.00
Actual cost of making first 1000bins	25,800.00
Customer education	3,500.00
Furniture	1,500.00
Computer	1,300.00
Transportation and equipment installation	800.00
Yearly warehouse Cost	36,000.00
Deposits with public utilities for water, electricity & telephone	600.00
Advertising & promotion for opening	1,200.00
Office and Ware house security (first quarter)	1,350.00
Product Designer	2,500.00
Legal and Other Professional fees	1,000.00
Signage	500.00
Decorations and Remodelling	350.00
Hire of Truck	6,000.00
Hire of Forklift	3,600.00
Stationary	500.00
Advertisement & Promotion deposit	1,750.00
Miscellaneous	6,000.00
<b>Total</b>	<b>94,600.00</b>

**Figure 1.7**

## PROJECTED INCOME STATEMENT

	2015	2016	2017
	<b>GH¢</b>	<b>GH¢</b>	<b>GH¢</b>
<b>Revenue</b>	1,036,558.00	1,813,976.50	3,174,458.88
Cost of Sales	777,418.50	1,215,364.26	1,968,164.50
<b>Gross Profit</b>	259,139.50	598,612.25	1,206,294.37
Other Income	62,193.48	108,838.59	190,467.53

General and Administrative Expenses	207,311.60	362,795.30	634,891.78
<b>Operating profit</b>	114,021.38	344,655.54	761,870.13
<b>Profit before taxation</b>	114,021.38	344,655.54	761,870.13
Income tax expense	28,505.35	86,163.88	190,467.53
<b>Profit for the year</b>	85,516.04	258,491.65	571,402.60

**Figure 1.8**

**PROJECTED BALANCE SHEET**

<b>YEAR</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
	GHC	GHC	GHC
Current Assets			
Inventory	57,129.01	99,372.91	180,585.65
Accounts Receivables	29,707.09	51,673.91	93,904.54
Warehousing Prepaid	38,847.73	67,573.58	122,798.24
Utilize prepaid	11,425.80	19,874.58	36,117.13
Cash & bank	91,406.42	158,996.66	288,937.04
<b>Total Current Assets</b>	<b>228,516.04</b>	<b>397,491.65</b>	<b>722,342.60</b>
<b>Current Liabilities &amp; Owner's Equity</b>			
<b>Liabilities</b>			
Accounts Payable	43000	39000	37400
Deferred Tax	-	-	13540
	43000	39000	50940
Total Current Liability			
<b>Owner's Equity</b>			
Capital Contribution	100,000.00	100,000.00	100,000.00
Retained Earnings	85,516.04	258,491.65	571,402.60
	185,516.04	358,491.65	671,402.60
<b>Total Liability &amp; Owner's equity</b>	<b>228,516.04</b>	<b>397,491.65</b>	<b>722,342.60</b>

**Figure 1.9****FINANCIAL INDICATORS**

## PROFITABILITY RATIOS

Gross Profit Ratio : $x\% = (\text{Gross Profit}/\text{Revenue}) * 100$	25.00	33.00	38.00
Mark-up Ratio : $x\% = (\text{Gross Profit}/\text{Cost of Sales}) * 100$	33.33333333	49.25373134	61.29032258
Net Profit Ratio : $x\% = (\text{Profit before tax}/\text{Revenue}) * 100$	11	19	24
Current Ratio: $x:y = \text{Current Assets}/\text{Current Liabilities}$	5.314326512	10.19209359	14.18026305

## SOLVENCY RATIOS

<b>Debt to Equity</b>			
$x:y = \text{Total Liabilities}/\text{Equity Shareholders' Fund}$	0.231785888	0.108789145	0.07587102
<b>Debt to Total Capital</b>			
$x:y = \text{Total Liabilities}/\text{Total Assets}$	0.188170598	0.098115269	0.070520554

## EFFICIENCY RATIOS

Stock Turnover: $x \text{ times} = \text{Cost of Goods Sold}/\text{Average Inventories}$	9.934938817	8.682458254
Stock Turnover Days: $x \text{ days} = (\text{Average Inventories}/\text{Cost of Goods Sold}) * 365 \text{ days}$	36.73902846	42.03878548