



# MamaSafeKits

...every life counts!

## GeeBiz Competition 2013

An MDG Business Proposal

Prepared by: Team 15

Nell Franklin, New Zealand

Allie McLean, New Zealand

Arine Sarkis Kishian, Lebanon

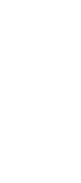
Rashmi Pant, Nepal

Abdul-Rahman Buhari, Nigeria

Hogan Kok-Fung Wai, Hong Kong

Abdul-Hakeem Buhari, Nigeria

Akram Mimouni, Finland



## Table of Contents

1.0: Executive Summary .....	3
2.0: Business Objectives.....	3
2.1: Socio-Economic Objectives.....	3
2.2: Financial Objectives.....	3
3.0: The Product.....	4
4.0: Market Analysis.....	5
4.1: Target Market.....	5
4.2: Competitive Lanscape.....	5
4.3: Risk and Barriers.....	5
5.0: Business Strategy.....	6
5.1: Marketing.....	6
5.2: Sales.....	6
5.3: Growth.....	6
6.0: Projected Financial Statements.....	7
7.0: Conclusion.....	8
Bibliography.....	9

## 1.0 Executive Summary

The prospect of delivering a baby is usually a source of joy to most families. However, for many households in developing countries today, it is a source of anxiety. This is largely due to the fact that an unconscionable number of women and infants in these countries lose their lives during, and sometimes shortly have a delivery procedure. One of the major reasons for these neonatal deaths (i.e. deaths that occur during the first four weeks after birth) is exposure tetanus and other infections. According to the World Health Organisation (WHO), 33 percent of all neonatal deaths are attributed to infections – principally neonatal tetanus and sepsis. Each year some 440,000 infants die of neonatal tetanus and other severe bacterial infections.

However, in the midst of this gloomy picture of maternal and infant mortality, our team has spotted a viable business opportunity. We feel very strongly that it is the right of every child and mother to have the required equipment and resources in order to have the best chance of a successful birthing experience. We stress on using innovative technology and research to constantly improve and develop our products, so that they are of best use to the women who need them. We plan to work closely with the communities in which we will distribute the products, to ensure that the products are effective in their product usage cycle. We propose to start with a pilot program in the city of Lagos, the commercial capital of Nigeria, seeking to replicate the success that similar projects have recorded in Tanzania, Nepal and Uganda.

## 2.0 Business Objectives

### 2.1 Socio-Economic Objectives

- Promotion of clean delivery practices especially in the urban slums.
- Reduction of the number of deaths from neonatal tetanus, sepsis and cord infection
- Increasing the level of impact and coverage of current maternal and newborn health programs in Lagos state by partnering with the state government.
- Generation of employment for the teeming unemployed population through the assembly plants that we plan to set up
- Improvement of living conditions of slum dwellers
- Decreasing the alarming trend of maternal mortality in developing countries
- Inclusion of Traditional Birth Attendants into the healthcare system of developing countries
- Providing delivery kits to all women who deliver in health units and in the community

### 2.2 Financial Objectives

- Sustainability: This will be measured by our ability to make enough money to keep the business running while remaining self-sufficient in the medium to long-term
- Profitability: This shall be measured by the business' ability to make a healthy profit over and above the fixed and running costs of the project
- Growth: We will measure this by our ability to expand into other markets, increase turnover while making a healthy return on investment



## 3.0 The Product

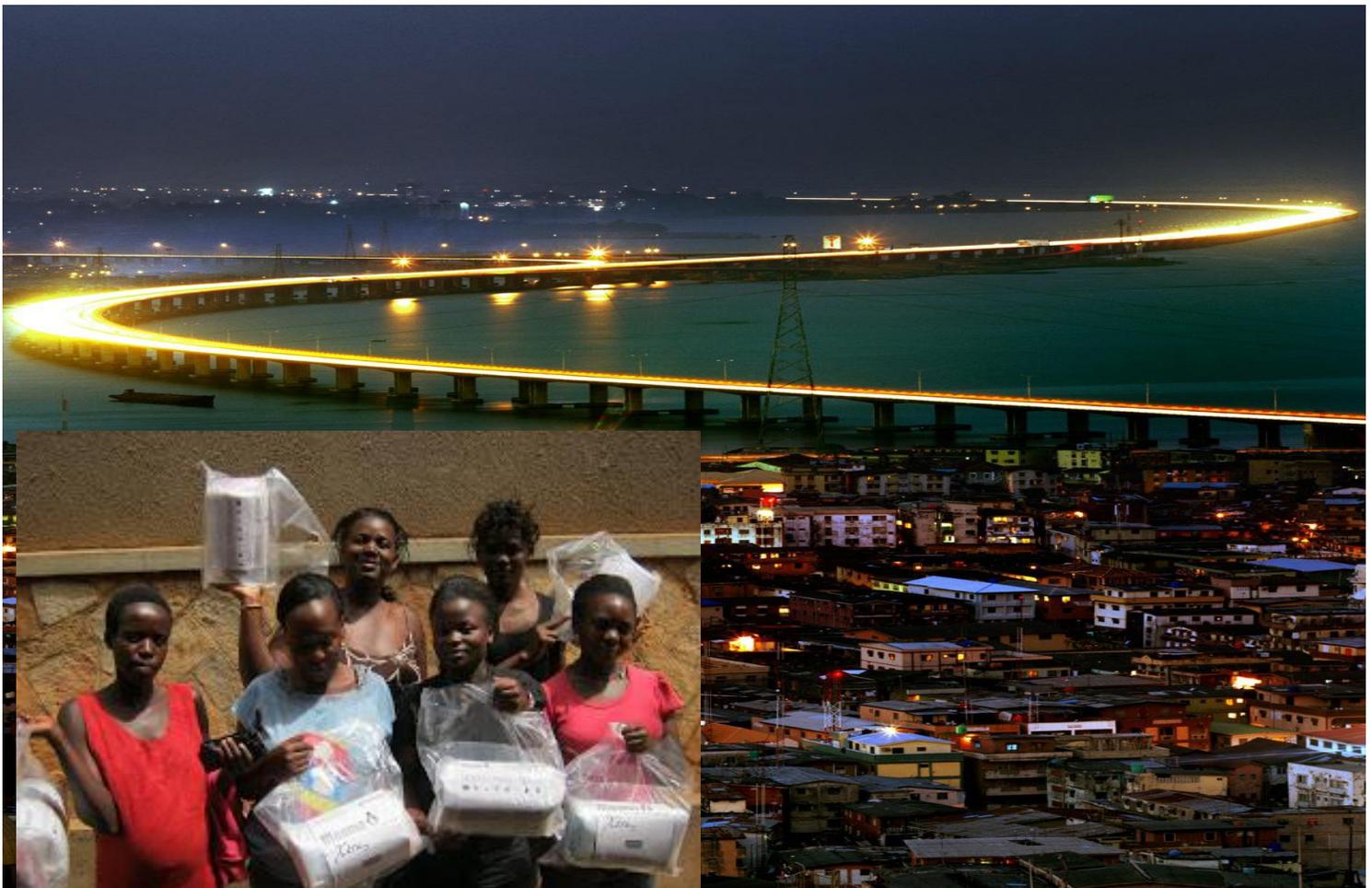
The MamaSafe Kit is a single-use, disposable birth delivery kit which would contain the basic items that are necessary to execute a clean and safe delivery of a child. More importantly, it would ensure that the number of preventable neonatal deaths recorded as a result of infections contracted by the mother and child is reduced to the minimum.

The contents of this kit have been carefully selected in a bid to minimize cost, ensure affordability, and maintain sustainability. These items have been listed below.

- A clean **plastic liner** to put on the ground so the new mother doesn't deliver directly on the floor
- A clean **razor blade** reduces infection caused by other implements.
- **Cord ties** for tying and cutting the umbilical cord thereby preventing bleeding from the cord that connects the mother to baby.
- **Soap**: For a thorough washing before and after the birth. It also prevents the birth attendant from transmitting germs to mother and baby.
- A **pictorial instruction sheet**: This is included as a reminder of the information about the birth process and how to use the materials in the kit. It would be strategically placed near the top of the kit to ensure that the user does not remove anything from the bag before following the pictorial instructions on the sheet.

The instruction sheet illustrates the sequence of steps leading to a clean delivery using the supplies provided in the kit and are listed below:

- i. Washing both hands thoroughly with a bar of soap to remove any germs
- ii. Preparing the delivery area and arranging supplies
- iii. Tying the cord with tape
- iv. Cutting the umbilical cord
- v. Disposing of the placenta and used supplies.
- vi. Breastfeeding the newborn



## 4.0 Market Analysis

### 4.1 Target Market

Broadly speaking, our target market is largely made up of women of reproductive age (typically aged 16 to 35) who live in the rural areas and urban slums of developing countries. In the unique context of the city of Lagos, we have gone further to subdivide the whole market into two broad segments: the primary target market and the secondary target market.

#### Primary Target Market

The primary targets for our product are the women who reside in the five major urban slums in Lagos and those that live in the suburbs. More often than not, they do not have access to decent health care facilities either due to a lack of proximity to these facilities or the fear that they might not be able to afford to pay for birth delivery services. They therefore settle for cheaper, albeit more dangerous options like going to the local pharmacies or giving birth to their babies at home.

Through research that we carried out, our team also found out that most women that live in these areas are the breadwinners of their families. They run very small businesses and their families manage to survive on their meagre income. Therefore, instead of spending time attending antenatal sessions, they constantly trying to make ends meet.

An opportunity for them to purchase these kits at an affordable price (we don't want to give them out for free so that they would attach some value to the product) from health centres could serve as a major incentive for them to visit the hospitals. However, they would only be able to get the kit if they've attended an antenatal session. This would boost the chances of the mother and child surviving the birthing process.

#### Secondary Target Market

The women that fall under this category are not necessarily poor (i.e having to survive under \$1.25 per day). Due to the deplorable state of health care infrastructure in Nigeria, it's not uncommon to find clinics or health centres that are not properly equipped to execute a safe delivery. This could translate to health care workers in these facilities using infected instruments for multiple patients, thereby putting the mother and child at risk. It is therefore in the interest of such women and their unborn children to purchase our disposable delivery kit as it would, to large extent, preclude the occurrence of neonatal deaths are resulting from tetanus and sepsis.

It is also pertinent to note that it's common practice for women in Nigeria (across the various strata in society) to wait till they fall into labour before heading for the hospitals. This is at odds with what the WHO prescribes for a pregnant woman to stay in a hospital at least one week before her due date. Hence, it isn't uncommon for women to actually give birth to their child en-route the nearest hospital. A woman in possession of a delivery kit therefore stands a better chance of undergoing a clean and safe delivery procedure.

### 4.2: Competitive Landscape

Within Nigeria, we do not face any serious competition. The kits available now are quite substandard and expensive (they currently retail for about \$20) and we intend to make MamaSafe kits a much better alternative to consumers. We however foresee that the success of our brand could attract other ambitious entrepreneurs to the relatively nascent industry. We expect to have captured a significant part of the market by then because brand loyalty is very common in Nigeria. We would also be benefiting from economies of large scale production which new entrants into the market cannot enjoy in the short term.

Outside Nigeria however, our main competitor is the Birthing Kit Foundation (Australia). A brief overview of Birthing Kit Foundation (Australia) shows that it is a non-profit organization started up in 2006, has distributed 800000 kits to over 30 countries and created training programs in multiple developing countries.

The biggest threat that Birthing Kit Foundation (Australia) poses to us is their experience compared to us. As we will have to spend some time at the beginning developing the expertise in distributing the birth kits, it is a challenge for our company to match the output and reach that our competitor has developed with their earlier entry into such regions.

### 4.3: Risks and Barriers

A major risk that we're faced with is the possibility of these women deciding to reuse these kits for successive deliveries in order to save money. The kit is supposed to be disposed after use, but poor households that have little income might want to reuse it which increases chances of infections and could affect the potential demand of our product. This is why we intend to devote significant resources towards educating them on how to use our product.

In addition, there's the potent risk of a change in government policy. This is why we have decided to sell to other organisations like NGOs in order to mitigate against such risks. There's also the risk that plans to expand our operations to other parts of Nigeria, especially in northern Nigeria might be hindered by security challenges.

With the rise of terrorist sects in these areas, our assembly plants and workers since the government cannot guarantee 100% security. The federal government has however taken bold steps to correct the situation and we're cautiously optimistic that we can go ahead with our expansion plans.

## 5.0 Business Strategy



To be successful in achieving our financial and social objectives, we plan to integrate our project into the existing healthcare infrastructure. Our pilot project in Lagos (Nigeria) seeks to leverage the aggressive efforts of the state government to improve the quality of health care through the Integrated Maternal Newborn and Child Health Strategy (MNCH) currently being implemented in all health institutions in the state.

We believe that our partnership with the state government would help direct attention to women who reside in the slums of Lagos and who have been neglected until now. This partnership would include an agreement for the state government to subsidize the cost of the kit for the women who cannot afford it and also advertising costs (as has been the case in other countries).

### 5.1: Marketing

Primary research conducted by members of our team has revealed some unique realities of the Lagos market that we've incorporated into our marketing strategy in order to guarantee robust demand for our product. Our targeted marketing strategy is based on the feedback that members of our team got from visiting some of the slums in Lagos state. We have come to the conclusion that the most effective means of promoting our delivery kits is through interpersonal communication channels.

This requires the involvement of all interested groups in the community especially the traditional leaders and the association of health workers. The women in these areas trust the counsel of local health workers which makes partnership with the association very important. We also plan to advertise our product to a wider audience through various mass media outlets, especially on radio due to its ubiquity.

### 5.2: Sales

As indicated earlier, we do not intend to sell our products directly to the final consumer. Our distribution network would include the health centres/clinics (through government), the local pharmacies, the association of traditional rulers and traditional Birth Attendants in the slums as well as some non-governmental organisations. By adopting this strategy, we can sell the product at a price that covers our unit cost of production. We have fixed a price of \$5 per unit (about N800)

It is our expectation that the women who cannot afford it at such prices would get it at a subsidized rate through the health centres and the NGOs. Other women who stand to benefit from our kit have the added alternative at purchasing them at a nearby pharmacy.

This wide supply chain helps our company to maximise its profits while ensuring that the kit is readily accessible to various segments of the market.

### 5.3 Growth and Development

After the successful implementation of the pilot program in Lagos, our company plans to expand its operations to other parts of the country where occurrences of infant and maternal mortality are more prevalent. This is especially the case in the predominantly Muslim northern part of the country where many women have to give birth at home due to cultural barriers. It is our plan to be able to get our kits to these women who are in desperate need of our product within the next 3 years. We would have to make further investments targeted towards setting up two more plants in the other two major geopolitical zones of the country. Our aim is not to stop here, but to develop our kit. New items should be added to this kit such as: sterile disposable towels, alcohol prep pads, gauze and tape. Our partners also have their sights on other emerging markets in Africa and Asia.



## 6.0 Projected Financial Statements



As will be shown below, the financials of this venture are profoundly encouraging given the large size of its market and its low overhead to turnover ratio. A 3-year financial glide path is shown below:

Costs									
Cost	2014			2015			2016		
1. Product	PPU	Qty	Total	PPU	Qty	Total	PPU	Qty	Total
- Blade	0.06	110,000	6,875	0.07	440,000	28,875	0.07	1,650,000	119,109
- Plastic Sheet	0.31	110,000	34,375	0.33	440,000	144,375	0.36	1,650,000	595,547
- Cord Ties	0.47	110,000	51,563	0.49	440,000	216,563	0.54	1,650,000	893,320
- Soap	0.31	110,000	34,375	0.33	440,000	144,375	0.36	1,650,000	595,547
- Pictorial Insert	0.63	110,000	68,750	0.66	440,000	288,750	0.72	1,650,000	1,191,094
- Miscellaneous	0.31	110,000	34,375	0.33	440,000	144,375	0.36	1,650,000	595,547
- Packaging	0.63	110,000	68,750	0.66	440,000	288,750	0.72	1,650,000	1,191,094
<b>Procurement &amp; Packaging</b>			<b>\$299,063</b>			<b>1,256,063</b>			<b>\$5,181,258</b>
2. Labour	Salary (\$)	No of workers	Salary for 11 months	Salary	No of workers	Salary for 11 months	Salary (\$)	No of workers	Salary for 11 months
	200	10	\$22,000	300	20	\$66,000	500	50	\$275,006
No of packs packaged/day		50			100			150	
No of work-days per month		20			20			20	
No of work-months in a year		11			11			11	
Total no packaged at the end of the year by 1 worker		11,000			22,000			33,000	
Total no packaged at the end of the year by all workers		110,000			440,000			1,650,000	
<b>Total Cost of Labour</b>			<b>\$22,000</b>			<b>\$66,000</b>			<b>\$275,006</b>
3. Plant	Price	Qty	Amount	Price	Qty	Amount	Price	Qty	Amount
Land and Equipment	\$75,000	1	\$75,000	\$100,000	2	\$200,000	\$120,000	3	\$360,000

## 6.0 Projected Financial Statements Cont'd)

Statement of Expected Income and Expenditure			
Cost Outlay:	2014	2015	2016
Procurement and Packaging	\$299,063	1,256,063	\$5,181,258
Labour	\$22,000	\$66,000	\$275,006
Land and equipment	\$75,000	\$200,000	\$375,000
Other expenses	\$35,000	\$63,000	\$95,000
<b>Total Cost per year</b>	<b>\$461,063</b>	<b>\$1,585,063</b>	<b>\$5,926,263</b>
Quantity	110,000	440,000	1,650,000
Cost per unit	3.92	3.60	3.6
Revenue	2014	2015	2016
Selling price of kits	\$5	\$6	\$7
Quantity	110,000	440,000	1,650,000
<b>Turnover</b>	<b>\$550,000</b>	<b>\$2,640,000</b>	<b>\$11,550,000</b>
Profit Statements			
Turnover	\$550,000	\$2,640,000	\$11,550,000
Less: Total Cost	\$461,063	\$1,585,063	\$5,926,263
<b>Gross Profit</b>	<b>\$118,938</b>	<b>\$1,054,938</b>	<b>\$5,623,737</b>
Less: Tax @ 20%	(\$23,788)	(\$210,988)	(\$1,124,747)
<b>Net Profit</b>	<b>\$95,150</b>	<b>\$843,950</b>	<b>\$4,498,989</b>

### Notes

#### Product

- 'Procurement and Packaging' cost shows the cost of procuring and packaging the kit *only*, during the year. It is the first of four elements of the Total Cost
- Prices used are estimates based on current trends. A 5% inflation rate is factored into prices of kit elements in 2015 and 10% for 2016 (over and above 2015 prices)
- The Quantity to be produced is as determined by the expected productive capacity of labour explained below
- Miscellaneous expenses refer to other sundry items which would be present in the kit e.g. gloves

#### Labour

- Labour is the second element of Total Cost and comprises the salaries of plant workers only. Salaries to General Administration employees amongst others are grouped in another section of cost
- *Productive Capacity:* The assumptions made here are that a worker, producing 50 packs a day, working for 20 days in a month and 11 months in a year (after leaves and holidays) would have produced 11,000 packs in 2014. A similar calculation is made for 2015 and 2016 adjusting the relevant figures of number of packs produced per day (which increases due to technology and specialization) as well as the total number of workers (an increase in which is necessitated by expansion into new markets and opening of new factories)
- *Salary:* An initial salary of \$200 is offered in 2014 which is above the median salary earned for similar jobs in the pilot location of Lagos State, Nigeria. This is adjusted for Inflation and rising wage demands to \$300 in 2015 and \$500 in 2016. It is expected that this amount would be enough to keep workers motivated enough to remain productive even when new plants are opened in other developing countries outside Nigeria

#### Plant

- The cost of setting up the packaging plant is expected to be the third key component of cost. This consists of the purchase cost of land as well as necessary equipment to start up the business. It is expected that these costs should be no more than \$75,000 at current market prices (as they will be purchased in 2013).
- In the second year of the venture, as the business opens two additional plants, the prices of land and fixed capital are expected to increase, thus the \$100,000 set aside for this in 2015 and \$125,000 for each of the subsequent 3 plants that would be opened as we expand into other countries.

#### Other Expenses

- The *Other expenses* section is the last element of cost and includes all expenditure including but not limited to: advertisement and publicity of the product, Maintenance of the plant and depreciation, evaluation costs, marketing expenses, shipping to and from other countries where necessary, salaries of non-plant employees, under-estimation of other costs in the budget and risk.
- Importantly, this costs rise as the years go by, given the increasing levels of risk and uncertainty that come with any venture such as this. It is however expected that the amounts set aside to defray these unforeseen contingencies, should they arise, is sufficient

## 7.0 Conclusion

There have been many factors contributing to infant and maternal mortality, of which unavailability of delivery facilities is at the top. By introducing MamaSafe Kits, our company intends to minimize that rate to a minimum while saving lives. MamaSafe Kits are very affordable and would serve as an invaluable product for women in developing countries who are not financially strong and also face other challenges such as poor infrastructure, lack of ambulances etc.

Finally, we expect to secure funds from the Acumen Fund (pioneers of the concept of Patient Capital) who are known to fund laudable projects as this as well as other well-meaning bodies in civil society. We are hopeful and confident that MamaSafeKits shall be a hugely successful business venture and more importantly, shall contribute to achieving goals 4 and 5 of the Millennium Development Goals.

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