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Expanding Social Business: Generating Awareness by Incentivizing Community Engagement

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Expanding Social Business
Generating Awareness by Incentivizing Community Engagement

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EXECUTIVE SUMMARY

Western Heads East (WHE) aims to bring probiotic yoghurt to underserved communities in collaboration with African partners in Tanzania, Kenya, Rwanda, Malawi, and Uganda. By establishing 'probiotic yoghurt kitchens' in these areas, WHE hopes to improve health, provide sustainable development, empower women, and stimulate economic development. Probiotic yoghurt has several health benefits related to boosted immunity and maintaining a healthy microbiota, making it a favourable product to market in areas that are burdened with malnutrition and disease. Food insecurity and malnutrition, compounded by poverty and various sociocultural, economic, political and environmental factors, has been an area of concern for Tanzania, Kenya, and Rwanda, prompting the need to provide context-specific programming to address these issues appropriately.

The proposed solution addresses potential setbacks in current programming, including cultural norms that prevent women in the community from sustaining yoghurt programs without WHE's direct assistance, profit not being prioritized in the business culture, inconsistent milk supply and quality, the lack of probiotic use in yoghurt production, lack of awareness of the probiotic benefits, and the stigma surrounding HIV that creates negative associations with yoghurt kitchens that provide subsidized probiotic yoghurt to HIV patients.

The proposed intervention leverages community participation. Community health mamas are tasked with outreach programming aimed at increasing probiotic benefit awareness and counselling local community members. Additionally, a community fund initiative was created to support local developmental programming. This will not only incentivize yoghurt kitchen purchases, but also establishes tangible and valuable goals for yoghurt mamas to strive for. The goal is to create community hubs within the yoghurt kitchens, through which, social enterprises can catalyze evolutionary change within low-resource settings.

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1.0 INTRODUCTION

1.1 Background of Western Heads East

Western Heads East (WHE) is an innovation that allows Western University and African partners to collaborate in bringing probiotic yoghurt to underserved populations across Tanzania, Kenya, Rwanda, Uganda and Malawi. The WHE program establishes social enterprises in the form of community 'yoghurt kitchens', which contribute to health and sustainable development across Sub-Saharan Africa. These businesses are owned and operated by local women and youth groups, to produce and sell probiotic yoghurt while also addressing HIV/AIDS, empowering women, and stimulating economic development (Western Heads East). The probiotic used in developing the yoghurt is *Lactobacillus rhamnosus* GR-1 bacteria and confers some health benefits, particularly in individuals living with HIV/AIDS (Whaling et al., 2012).

1.2 Health Benefits of Yoghurt

In a study on probiotic yoghurt in Tanzania, WHE probiotic yoghurt is used as a nutritional supplement and produces perceived beneficial effects such as weight gain (Whaling et al., 2012). Probiotics allow for increased levels of vitamins and micronutrients absorbed from consumer diets. The probiotic yoghurt has also been demonstrated to increase CD4 cell counts in individuals living with HIV, preventing diarrhoea, constipation, and urinary tract infections (Reid, 2010). Previous studies suggest that probiotics boost immunity through enhanced host defence and the uptake of highly active antiretroviral therapy (Whaling et al., 2012). In particular, women consumers experience a decreased likelihood

of vaginal bacteriosis and subsequently reduced risk of sexually transmitted infection (Reid, 2010).

1.3 Western Heads East Business Model

As a result of these health benefits, the target end-consumers of the WHE probiotic yoghurt include impoverished populations and those living with HIV/AIDS. However, the target of the WHE innovation itself are women that can be empowered in local communities. 'Yoghurt mamas' are women in the community that make use of the WHE collaboration to establish and operate local yoghurt kitchens (Western Heads East). The social enterprise model used by WHE yoghurt kitchens (see **Exhibit 1**) encourages operators to maximize profit via products that are affordable to people of the lowest income bracket, aiming to bring both out of poverty. These kitchens are also community centers for health promotion, social support, and entrepreneurship (Western Heads East). Key operating activities include purchasing ingredients for probiotic yoghurt production, producing the yoghurt, and selling the product through their kitchen. Through word of mouth, the product is marketed as having probiotic benefit, a low price, and being accessible. Key resources for the yoghurt kitchens include the probiotic sachets used in yoghurt production and quality milk produced by local farmers. The subsequent cost structure is split between milk, electricity, charcoal, probiotic, and the cost of salaries.

2.0 CONTEXT

2.1 Tanzania

Food insecurity and malnutrition cause a plethora of health issues in Tanzania. 15% of rural households are food insecure, with another 15% vulnerable to becoming food insecure (World Food Programme, 2013). In addition, 31.4% of children under five years of age are severely malnourished and stunted in growth (World Food Programme, 2013). 20 to 30% of households in Mwanza, Manyara, and Kagera regions are affected by food insecurity, with a majority of food insecure people having a low income (mainly from crop production) are small farmers, wage labourers, remittance or natural resources dependents (World Food Programme, 2013). These issues are further compounded by poverty, high transportation costs, poor health infrastructure, lack of access to health facilities, and lack of education on nutrition (Whaling et al., 2012). Only 35% of villages have a healthcare facility, with most people travelling up to 6 km to access the nearest one (Lorea et al., 2007).

With HIV/AIDS being the leading cause of deaths in Tanzania in 2003 (Whaling et al., 2012; World Bank, 2007; Lorea et al., 2007), the side-effects of antiretroviral therapy (ARV) take an even bigger toll in communities with food insecurity and micronutrient deficiencies (Whaling et al., 2012, World Bank, 2007). However, those who receive ARV treatment and are adequately nourished find the treatment to have a greater positive impact on their health and life expectancy, as vitamin and micronutrient uptake boosts the immune system (Whaling et al., 2012; World Bank, 2007; Lorea et al., 2007). In addition, environmental issues such as soil degradation, pest outbreak, and drought affect food security and adequate nutrition (World Food Programme, 2013), compounded with

absent political will to reduce hunger and improve food security and health in Tanzania (World Food Programme, 2013; Food and Agriculture Organization of the United Nations, 2015; Thaxton, 2007).

2.2 Rwanda

The civil war and genocide in Rwanda, heavily impacted the country's infrastructure and economy (USAID, 2014). However, following the end of the conflict, the Rwandan government has made great strides. Economic recovery has led to the national decrease in poverty from 77.8% in 1995 to 44.9% in 2012 (USAID, 2014). In addition, the government has created a national vision strategy, Vision 2020, to improve the quality of life of Rwandans, by promoting good governance and addressing issues such as poverty and health (USAID, 2014).

In Rwanda, lack of essential nutrients and food can cause chronically malnourished children to experience stunting, which prevents the proper growth and development. There has been progress in improving malnutrition in Rwanda, as seen in a report from the World Food Programme found that for children under five, the levels of stunting has dropped from 43% in 2012 to 36.7% in 2015 (WFP, 2016). However, more efforts are still needed as malnutrition persists at a higher concentration in rural areas of Rwanda, with a malnutrition rate of 40%, compared to 27% in urban areas (WFP, 2016).

The HIV epidemic is represented by the national prevalence of 3% in Rwanda (Rwanda Biomedical Centre, 2014). However, there is variation depending on the population of

interest. Women have a higher prevalence of HIV (3.7%) than men (2.2%) (Rwanda Biomedical Centre, 2014). While Kigalia, an urban center and capital of Rwanda, has a higher prevalence (7.3%) than other provinces (below 3%) (Rwanda Biomedical Centre, 2014).

2.3 Kenya

Similar contextual trends of food insecurity and poverty can be seen in Kenya. Despite recent economic growth, the country's ability to be nutritionally sufficient is still severely challenged by poverty and population growth. Over half of Kenya's population is living in poverty, with nearly 1.1 million people requiring emergency food assistance (UNAIDS, 2014). In addition, the country stands as one of the six HIV 'high burden' countries in Africa (UNAIDS, 2014), further complicating the issues related to food insecurity and malnutrition is the urgency for higher leadership to address these needs. In Kenya, stunting in children under five years of age has decreased from 35.2% in 2009 to 26% in 2014 (World Bank, 2016), but the global acute malnutrition prevalence continues to exceed the international threshold (UNAIDS, 2014). Inconsistent funding for social programs and food assistance has made self-sufficiency in nutrition an even greater challenge as well.

3.0 PROBLEM

Gaining a full understanding of the situation must be done before proposing potential interventions. Creating kitchens to distribute probiotics to those in need while simultaneously economically empowering women in communities was a unique and innovative idea. However, putting this idea into practice and ensuring sustainability has been a difficult task (Armstrong, Royer, and Weiderman, 2010; Texeria and Weiderman, 2015; Trudell, 2013).

The following issues were addressed both in the intern reports and lectures given by Bob Gough and Gregor Reid:

3.1 Cultural Heritage

Mamas working for the kitchen must dedicate their time and efforts to produce the yoghurt and sell it in the community. However, some Mamas do not come to work on time decreasing productivity for the day (Armstrong, Royer, and Weiderman, 2010). The number of yoghurt created per day varies depending on how accurately protocol is followed. Ingredients, such as the milk used, yoghurt produced and sold, will vary creating an inconsistent income flow for the kitchen. It is also unfair for the other Mamas who come on time as wages are divided equally. As mothers or wives, they also have other responsibilities to their families and husbands. Many reasons exist in their personal lives that perpetuates this problem. In addition, many kitchens closed down or are not generating profit after WHE leaves due to the created dependency. When a problem arises, the Mamas expect these organizations to fix the problem or help address it. For example, WHE interns visit the kitchens every year to offer advice and answers

(Armstrong, Royer, and Weiderman, 2010; Texeria and Weiderman, 2015; Trudell, 2013). This may be traced back to the culture of women following orders as they are not expected to work or make decisions on their own (Texeria and Weiderman, 2015).

3.2 Profit not a Priority

WHE has provided funding to start the kitchen and cover its expenses for the first three months. Mamas rely highly on this fund making the kitchen unsustainable once WHE leaves. Because expenses are covered, many Mamas do not feel the urgency to break even and/or make profit over time (Armstrong, Royer, and Weiderman, 2010; Texeria and Weiderman, 2015). Mamas are trained to produce yoghurt and market the product in the community but little attention is given to finances and managerial skills. Many view the kitchen as a way to give back to the community and provide for their family instead of a profit-generating business. Tracking sales and expenses are key activities for businesses, yet many of the kitchens do not carry out these tasks. This lack of awareness on how a business runs must be addressed for the kitchens to be sustainable.

3.3. Milk Quality

The quality of milk used to create the yoghurt affects the quality of the final product. Maintaining consistent positive quality of milk ensures customer satisfaction. Droughts decrease the amount and quality of milk available for yoghurt production. Relationships with farmers should be strengthened to ensure good quality (Armstrong, Royer, and Weiderman, 2010; Texeria and Weiderman, 2015; Trudell, 2013). In addition, spoiled milk should not be used as it decreases yoghurt quality. It is better to not sell the yoghurt for

that day, rather than lose customers. Sick customers will dampen the kitchen's reputation and loss customer loyalty.

3.4 Lack of Use of Probiotics

Before the creation of probiotic sachets, Mamas bought their probiotics from outside institutions. It required hours of travel to obtain the cultures, forcing the Mamas to close the kitchen for a day. Many have resorted to creating yoghurt without the culture due to the extra chore (Armstrong, Royer, and Weiderman, 2010; Texeria and Weiderman, 2015; Trudell, 2013). Selling "regular" yoghurt decreases both the integrity of the brand and the quality of the yoghurt. In addition, the dependency of the kitchen on institution may be exploited. If the institution decided to increase their prices, the kitchens would have to adhere to this change.

Currently, a discrepancy exists between the marketed product and the produced yoghurt. WHE and the yoghurt kitchen advertises probiotic yoghurt conferring health benefits to the customers and create certain expectations that they cannot meet. Benefits such as an increase in CD4 count in HIV patients and decreased diarrheal incidents do not occur with regular yoghurt (Reid, 2010). The absent use of probiotics reduces the value of the yoghurt and customer satisfaction, which harms overall sales and profit for the kitchen.

In addition to decreased value of the Mama's yoghurt, current operations do not align with the organization's visions. Regular yoghurt does not address the WHE mission to "use probiotic foods to contribute to [both] health and sustainable development" (Western

Heads East). Diverging from the mission may result in mistrust between partners and customers and harm sales. Many living in underserved sub-Saharan Africa are unaware of the benefits provided by probiotics. Unknown to them, they may not buy these probiotic foods.

3.5 Unaware of Mamas and Yoghurt Kitchens

After conducting market research in Oyugis, results showed only 7.89% of the population buy from the Mamas (Armstrong, Royer, and Weiderman, 2010). The rest purchase yoghurt from supermarkets, markets or shops. These other vendors provide both regular and probiotic yoghurt but at a higher cost. Low market share of the Mamas may be due to being unaware of kitchens' locations or the health benefits conferred by probiotics and result in lower overall sales.

Approval by food regulatory agencies are usually needed for products to be sold at supermarkets (Armstrong, Royer, and Weiderman, 2010; Texeria and Weiderman, 2015; Trudell, 2013). For example, in Kenya, the KEBS seal is highly regarded and their stamp is required by supermarkets (Armstrong, Royer, and Weiderman, 2010). Without the KEBS approval, Mamas cannot sell their yoghurt through these channels. Around half of the population trust the seal and will not buy without the approval. At a cost of 10,000 KSH, it acts as a barrier for many of the kitchens, leading to limited distribution channels compared to their competitors.

3.6 HIV stigma

Initially created to provide probiotic foods to the most underserved areas, these kitchens provide free yoghurt to HIV patients who can most benefit from probiotics. Due to this association, community members have attached an HIV label to the kitchens. The stigma surrounding HIV prevents people from buying yoghurts from the Mamas (Texeria and Weiderman, 2015; Trudell, 2013).

3.7 Lessons Learned

To solve the aforementioned problems, WHE has previously implemented numerous strategies (see **Exhibit 2**). Many of these proposals and interventions were described in reports by students with first-hand experience with the Mamas and kitchens, suggesting the trustworthiness of their reports. Many conducted interviews and surveys to gain the opinion of the community and the Mamas. While the reports come from different regions with region specific problems, the issues previously described are consistently recurring across kitchen initiatives.

One such theme with these interventions is the dependency on outside sources. Many of these ideas are given to the Mamas who follow through with the plan when they have guidance but lose motivation and commitment once left alone. Their dedication and hard work are unparalleled when given directions. However, once the interns leave, many kitchens revert to their old habits. The new proposal must include ways to motivate the Mamas and the community to use the probiotic yoghurt.

4.0 INTERVENTION

4.1 Leveraging Yoghurt Kitchen Threats in Developing Competitive Strategies

Social enterprises have a standing tradition of fostering community development within their working environment. Despite this focus on growing impact, priority on profits should not be lost. After all, it is profits that fund community initiatives.

The probiotic social enterprises sustained through the WHE partnership with local communities in Sub-Saharan Africa must balance a feasible social business with the creation of a community hub in order to maximize profits. Presently, various factors hamper yoghurt kitchen progress (see **Exhibit 3**). The yoghurt kitchen organizational structure is rooted in community service. These grassroots organizations empower women, support vulnerable community members, and establish development in some of the world's most resource-poor areas. However, external competition, inadequate distribution, competing priorities, and limited awareness challenge the sustainability of community yoghurt kitchens. Nonetheless, these variables also present an untapped potential for leveraging resources and improving outcomes.

The proposed intervention outlines a twofold process that encompasses community engagement and organizational restructuring (see **Exhibit 4**). Firstly, aligning with the scope of a social enterprise, a community fund is created as a catalyst for community development. This will highlight a community connection within business operations and produce an internal incentive for clients to purchase yoghurt kitchen products. Additionally, creating specific, meaningful, achievable, reasonable, and tangible targets will generate a sense of urgency that encourages yoghurt mamas to generate higher

sales to permit community investments. Urgency is necessary to create large-scale change (Donovan, 2008). This community fund will develop employee commitment and empower yoghurt mamas through their community contributions. Secondly, organizational restructuring was proposed (see **Exhibit 5**). Additional roles were created to better reflect expectations and manage operations. A head mama position was created to take a managerial role and is responsible for delegation of tasks, administration, and supervision. The *Community Health Mamas* will represent the outreach taskforce. These mamas will take on a health promotion and marketing role, tasked with community education, probiotic promotion, and product distribution. The yoghurt mamas will maintain the current responsibilities of yoghurt production and sales. The aforementioned intervention strategy hopes to not only benefit the business, but also create added value to the communities.

4.2 Implementation Plan

An implementation plan was developed that highlights three related developmental stages (see **Exhibit 6**). The final stage outlining the future goals is meant to demonstrate the potential evolutionary process of the program, not dictate its trajectory. Throughout the implementation process, it is important to recognize the value of yoghurt mama participation and engagement. Flexibility is maintained at various stages to allow for necessary adjustments. This plan must reflect the needs of the mamas and the needs of the communities. The goal is that yoghurt kitchens will be able to gain autonomy and individually grow beyond their initial goals.

The short-term stage of development focuses on consultation and modification. Yoghurt mamas will be consulted to generate feedback and jointly determine relevant goals and expectations that align with their visions and the mission of WHE. Following the generation of a representative plan and clear targets and goals, the mamas will be responsible for electing a head mama, who will assume a managerial role. The head mama will be provided with additional managerial and financial training that will allow her to confidently perform in her new role. Next, community health mamas will be hired (internally and/or externally). Both yoghurt and community health mamas will receive additional training separated into modules, varying from financial training to probiotic education (see **Exhibit 7**). In this stage of development, the goal is to provide the mamas with the necessary skills and knowledge to encourage and enable them to best carry out the goals of the business and support their professional development.

Lastly, the long-term plan expands beyond the walls of the yoghurt kitchen. This stage will focus on support community development initiatives. The community initiative fund must become a priority at this stage. Revenue calculations (based on the Tukwamuane kitchen) demonstrated that 10-15% of net income may be allocated to funding initiatives, while still maintaining the level of income of yoghurt mamas at or above the average monthly wages of agricultural and commerce workers in Tanzania (WageIndicator, 2016). Knowing that it is possible to not only support yoghurt mamas, but also the greater community, the goal is to establish community hubs within the yoghurt kitchen. From there, support and counsel will grow into the community. At this point, the mamas should begin considering potential local partners. These may include but are not limited to milk

suppliers, packaging manufacturers, shops, and school. Through these ventures, yoghurt kitchens may grow beyond just servicing communities via one avenue, probiotic yoghurt. If the kitchens are successful at establishing consistent and stable streams of revenue and generating profits, they may pursue additional ventures and/or hire additional community members. A previously proposed venture was hiring commission-based salespeople that will aid in yoghurt/product distribution (Armstrong et al., 2010). It is important to recognize that the yoghurt kitchens are catalysts for fostering better outcomes (see **Exhibit 8**).

4.3 Evaluation and the Generation of Community Value

In order to maintain yoghurt kitchens as integral centers for community support, the scope and services within the kitchens must evolve depending on community needs. In order to best care for the surrounding populations, community value must be regularly evaluated (see **Exhibit 9** and **Exhibit 10**). Projected Income Statements for five years were created to determine the success of the intervention (see **Exhibit 11**). Even with the addition of an employee and the required materials to make the yoghurt, the kitchen will remain sustainable and continue to generate profit. Year 1 will assume same sales level before the intervention. Year 2 and 3 will assume a 5% and 10 sales growth, respectively, after the intervention has taken root in the community. As more people gain awareness about the community kitchens and the community fund, sales will increase. Year 4 will assume no growth as the kitchen to be conservative. The Mamas have to maintain their customer loyalty over the years. Finally, year 5 will assume a 12% growth. These sales growths are

purposely conservative to ensure the kitchen will remain profitable during hard times. Furthermore, The communities must be consulted and included in decision-making. After all, this community hub is created for them. Beyond financial analysis, evaluation methods that reflect the opinions of communities must also be accounted (see **Exhibit 12**). These may include a picture project, where community members are asked to illustrate what the kitchens represent for them. 360 Feedback surveys may also be adapted to assess the needs of yoghurt mamas and determine subsequent interventions. Lastly, the overall community health may be assessed and recorded via the community health mamas to identify additional public health programs and highlight the benefits of probiotic. Therefore, success is characterized by establishing yoghurt kitchens as community centers in resource-poor areas.

The goal of social enterprises is to create value for communities. In an attempt to mitigate the external pressure and improve organizational efficiency, two interventions were proposed. The community initiative fund was created to introduce a sense of urgency, achieve tangible goals, and support surrounding communities. Additionally, the community health mama role was formalized to highlight a commitment to information dissemination, awareness generation, and community service. The advantages of these actions are increased awareness of probiotic benefit, community participation, product distribution, and establishing organizational commitment within the community through relationship development. The goal was to implement a wrap-around support system by building both internal and external pillars to support that sustain yoghurt kitchens within

communities. The focus must be directed on the community and how to best represent them. It is time to bring community back in social business.

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6.0 APPENDICES

Exhibit 1 Pre-Intervention Social Business Model Canvas

Social Business Model Canvas



Key Resources <ul style="list-style-type: none"> • Yoba for Life – probiotic sachets • Milk Farmers – ensure quality milk supply 	Key Activities <ul style="list-style-type: none"> • Purchasing ingredients for yoghurt production • Yoghurt production • Selling products 	Type of Intervention <ul style="list-style-type: none"> • WHE – guidance • APYN - monitoring 	Segments <ul style="list-style-type: none"> • HIV/AIDS patients • Children 	Value Proposition <ul style="list-style-type: none"> • Probiotic benefits • Low price • Accessible to local population
Partners + Key Stakeholders <ul style="list-style-type: none"> • WHE – guidance • APYN – monitoring • NGOs 		Channels <ul style="list-style-type: none"> • Kitchens • WOM 	<small>Beneficiary</small> <small>Customer</small> <ul style="list-style-type: none"> • Community members • Vulnerable members of community 	
Cost Structure <ul style="list-style-type: none"> • Main cost = milk (60%) • Electricity, charcoal • Probiotic • Salaries 		Surplus <ul style="list-style-type: none"> • Support vulnerable members 	Revenue <ul style="list-style-type: none"> • Probiotic yoghurt sales <ul style="list-style-type: none"> • Small = 10 KSH • Large = 20 KSH • Milk, tea, additional products & flavors 	

inspired by The Business Model Canvas

Exhibit 2 Assessment of the Previously Attempted Interventions

Intervention	Problem Addressed	Outcome
<p><u>Moringa</u></p> <ul style="list-style-type: none"> • Micronutrient rich plant • Great addition to the yoghurt • Widely available plant • Source of vitamin A, vitamin C, zinc, and iron, which has been shown to slow the progression of HIV and reduce the mortality (Tienen <i>et al.</i>, 2011) 	<ul style="list-style-type: none"> • Sales • Non-profit generating kitchens 	<ul style="list-style-type: none"> • Reduced customer acceptance compared to probiotic yoghurt • Revert back to probiotic yoghurt

<ul style="list-style-type: none"> ● Culturally accepted by the communities 		
<p><u>Financial Training</u></p> <ul style="list-style-type: none"> ● Students from Western University's Business program and WHE interns are recruited every year to help and teach the Mamas financial analysis ● Break even analyses, budgets and income statements were emphasized ● Guides and instructions on how to create these statements are given to the Mamas after the interns leave 	<ul style="list-style-type: none"> ● Sustainability of the kitchen ● Generate profits 	<ul style="list-style-type: none"> ● With no direction, after the students leave, many revert back to their old ways and forget the training ● Dependency on WHE and Western Interns
<p><u>Marketing Initiatives</u></p> <ul style="list-style-type: none"> ● By providing the kitchens and the Mamas logos, they are given a sense of ownership of the business ● Easily identified from their products or uniforms ● Marketed the product in big community events 	<ul style="list-style-type: none"> ● Increase awareness of kitchen, Mamas and benefits of probiotics 	<ul style="list-style-type: none"> ● Increased sales in the event ● Require planning and collaboration ● Difficult to do without guidance

<p>such as festivals to increase the awareness of probiotic yoghurt and the kitchen to the community</p> <ul style="list-style-type: none"> • Events are a success as people are receptive of the product 		
<p><u>Mobile Sales</u></p> <ul style="list-style-type: none"> • A few kitchens have started to distribute their yoghurt instead of having one central location at the kitchen • Two or three Mamas will carry buckets of yoghurt around the community to sell and promote the benefits of probiotics. 	<ul style="list-style-type: none"> • Increases awareness of the product, the benefits, and the Mama's contribution to the community 	<ul style="list-style-type: none"> • Carrying yoghurt around the community is very taxing work and may be unhygienic to sell yoghurt throughout the day from a bucket.
<p><u>Probiotic Sachet</u></p> <ul style="list-style-type: none"> • Traveling to institutions and carrying bottles of culture • These small sachets can be bought from Yoba for life and be added to the yoghurt in the kitchen 	<ul style="list-style-type: none"> • Lack of use of probiotic • Extra chore to obtain the culture • Far travel for the Mamas 	<ul style="list-style-type: none"> • Dependency on WHE and Yoba for Life • Can also be stored in room temperature with a long shelf life, of two years, eliminating the problem of lack of cold storage

<ul style="list-style-type: none"> • A lightweight packet with pictorial instructions at the back for easy use 		
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Exhibit 3 Pre-Intervention Business Analysis

Internal Analysis		External Analysis	
Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Low price • Health benefits: increased CD4 count, increased weight, aids in diarrhea treatment, allows individuals to stay on ART • Culturally acceptable • Decrease risk of malnutrition • Community-based enterprise – aids community development 	<ul style="list-style-type: none"> • Illegal use of packaging • Lack use of probiotics • Inconsistent milk quality – reported dilution • Insufficient training • Lack of distribution system • Dependency on milk farmers • Inconsistency in yoghurt production • Transition to Western diet • WHE influence 	<ul style="list-style-type: none"> • Purchase KEBS logo (20,000 KSH + annual fee) • Increase marketing • Sell to supermarket, shops (dependent on acquisition of KEBS) • Stationary stall in markets • Addition of fruit and/or Moringa to yoghurt • Buy cow for independent milk production • Hire sales people 	<ul style="list-style-type: none"> • Lack of back-up funds • Misaligned expectations and misunderstanding between WHE and kitchens • Dependence on WHE funding • Sales dependent on weather • Outside competition (<8% of sample purchased from Mamas) • Lack of awareness

Exhibit 4 Intervention Map Outlining the Proposed Competitive Strategy

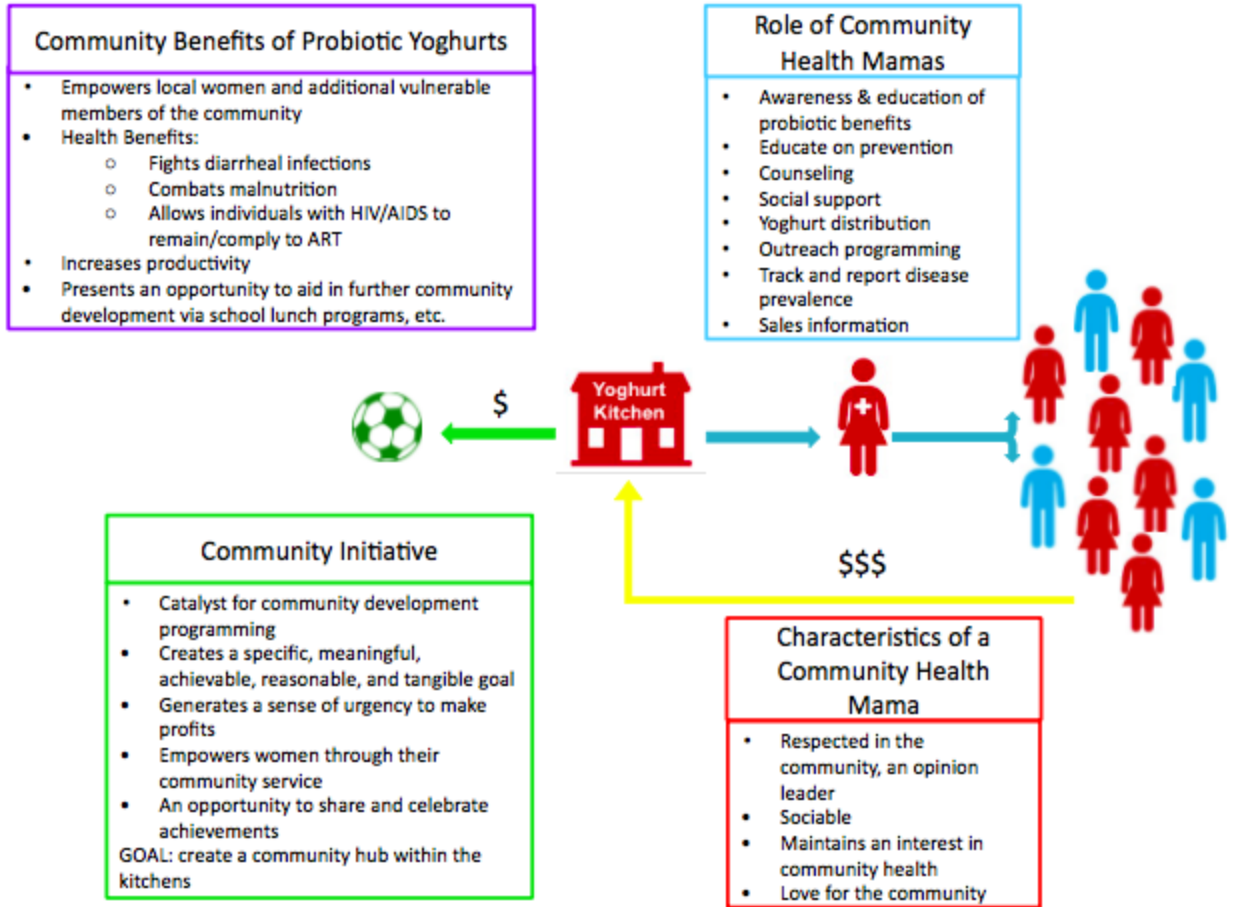


Exhibit 5 Modified Organizational Structure and Tasks

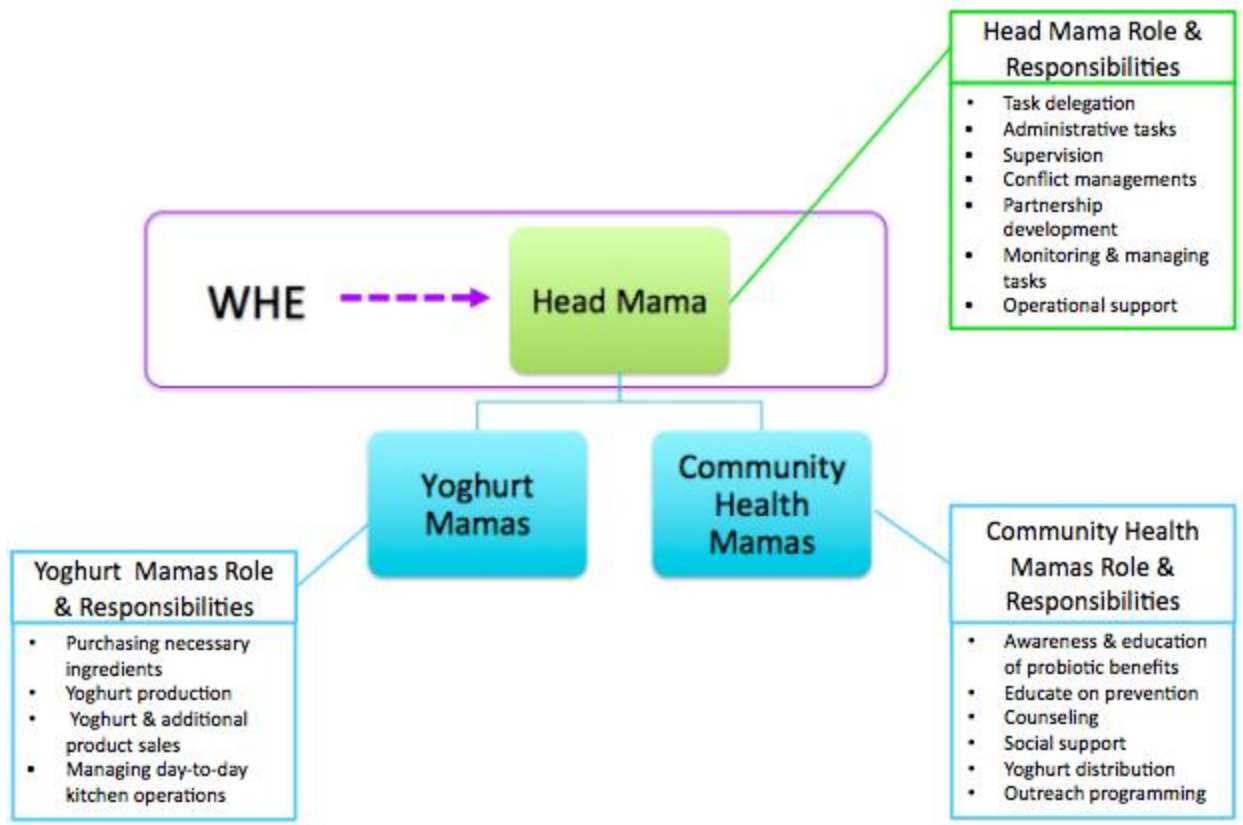


Exhibit 6 Implementation Timeline

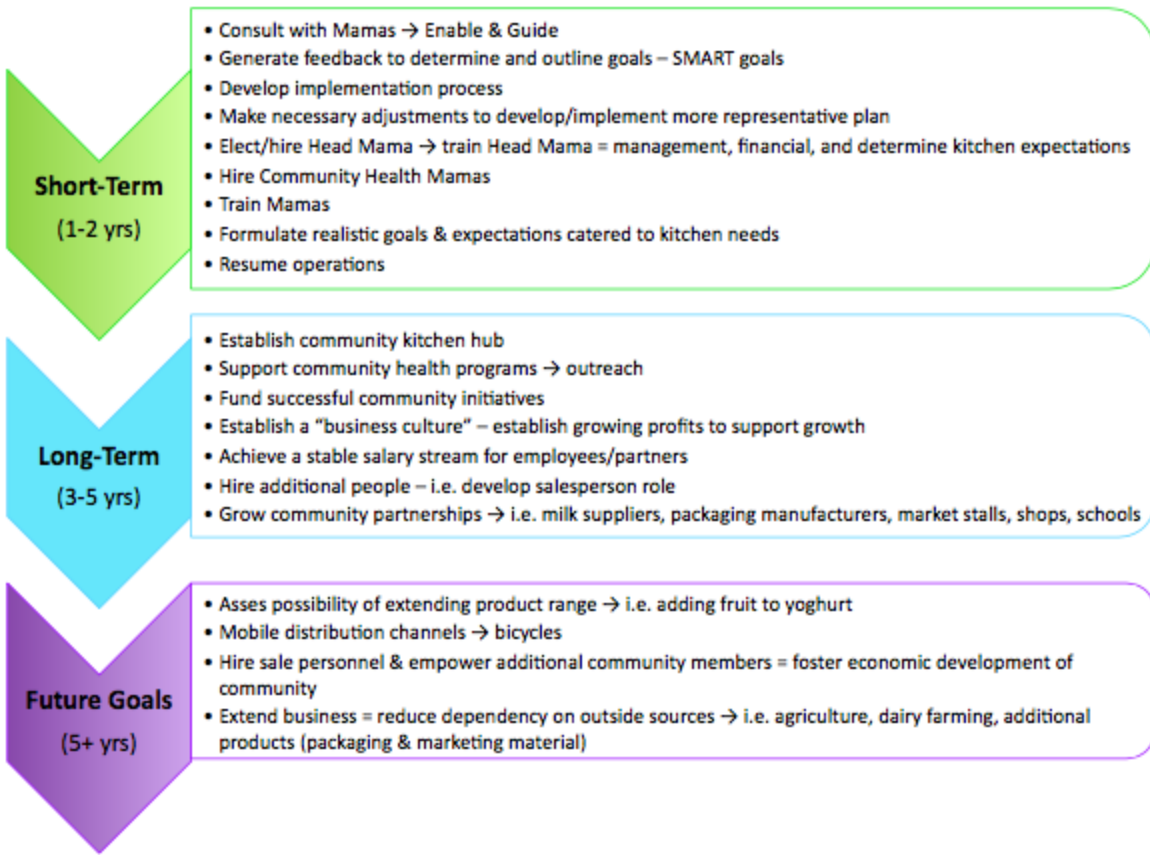


Exhibit 7 Proposed Yoghurt Kitchen Training Module

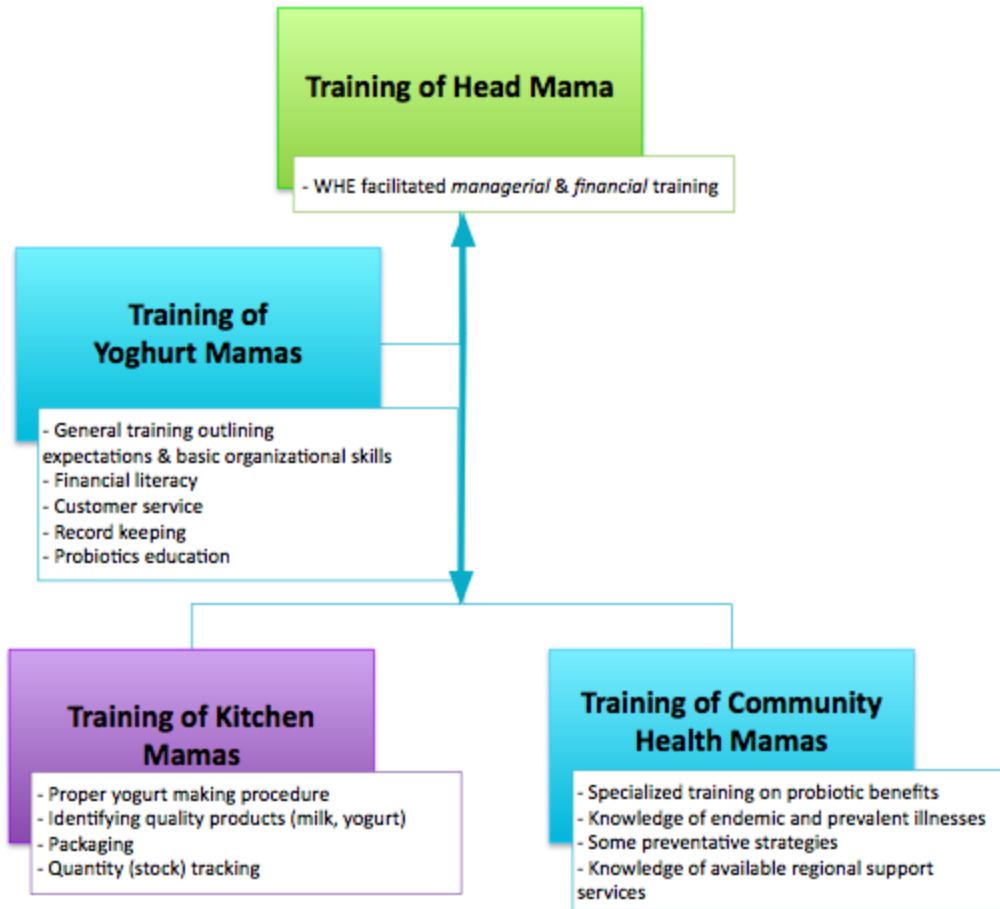


Exhibit 8 Summarized Social Impact

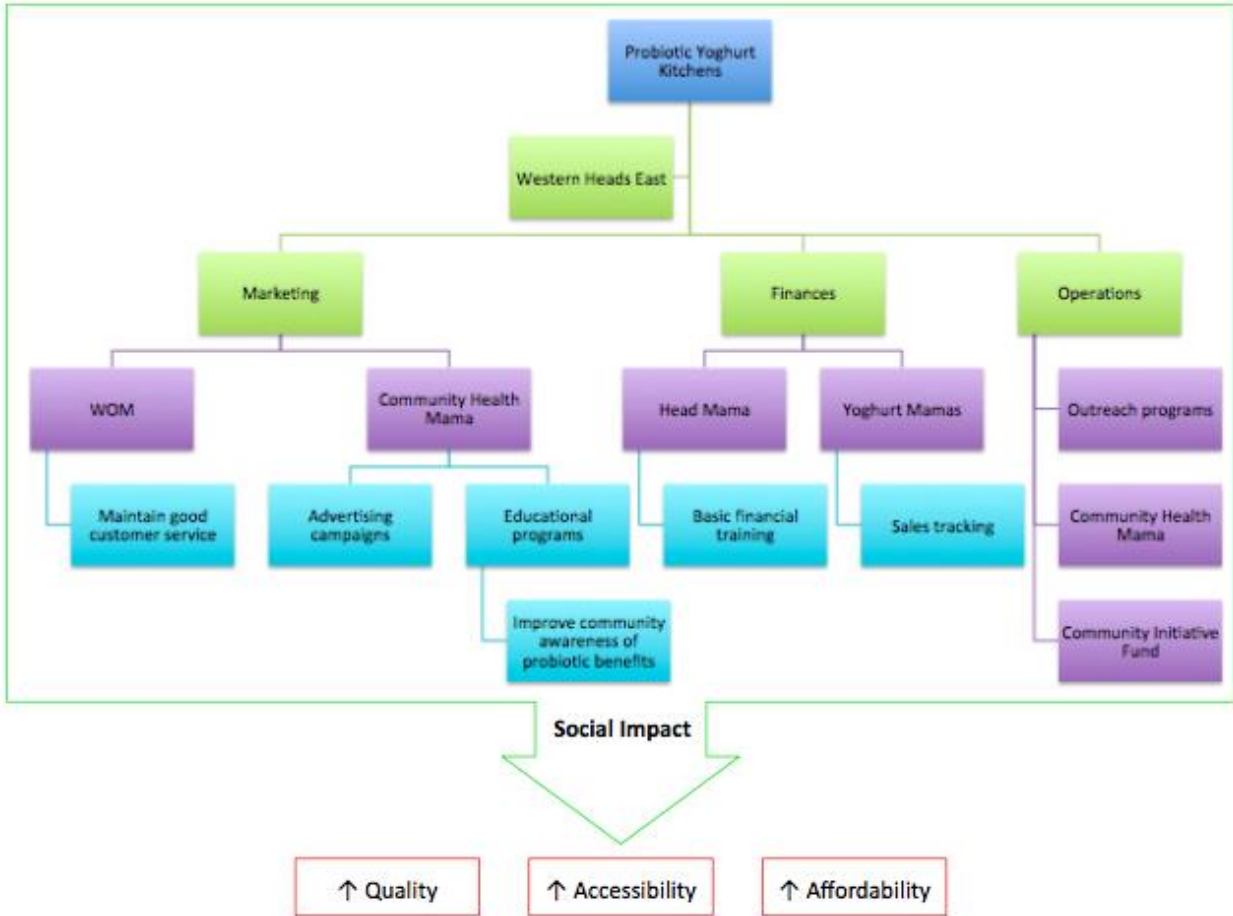


Exhibit 9 Post-Intervention Business Analysis

Internal Analysis		External Analysis	
Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Empower local women • Increased awareness = increased sales = increased profits • Improve productivity • Training program provides transferable skills • Engages community (community fund benefits community initiatives → incentivizes members to purchase from mamas) • Creates tangible goals 	<ul style="list-style-type: none"> • Dependency on Yoba for Life as source of probiotic • Lack of a quality assurance program • Bad taste? • Reliance on external milk supply, inconsistent milk quality • Profit dependency on sales • Mama salary dependent on profit • Additional responsibility & expense 	<ul style="list-style-type: none"> • Collaboration between WHE and communities to open additional kitchens • Develop lunch programs at local schools • Leverage government support by outlining health benefits • Add fruit to improve taste • Increase awareness • Use of salespeople • Aid community development 	<ul style="list-style-type: none"> • Stigma associated with HIV+ clients • Sustaining funding (reliance on WHE/external funding) • Western influence – loss of community by introducing business culture • Generating sufficient profits to invest in expansions • Loss of ownership by introducing an incentive

Exhibit 10 Post-Intervention Social Business Model Canvas

Social Business Model Canvas



Key Resources	Key Activities	Type of Intervention	Segments	Value Proposition
<ul style="list-style-type: none"> Yoba for Life – probiotic sachets Milk Farmers – ensure quality milk supply 	<ul style="list-style-type: none"> Purchasing ingredients for yoghurt production Yoghurt production Selling products Community Health Mamas lead outreach programs Creation of community partnerships Funding initiatives through fund 	<ul style="list-style-type: none"> WHE – guidance Schools – address needs Communities – support APYN - monitoring 	<ul style="list-style-type: none"> HIV/AIDS patients Children Community fund recipients 	<ul style="list-style-type: none"> Probiotic benefits Low price Accessible to local population Improved awareness of product through outreach programs Fund community initiatives / projects Community Health Mamas = support, knowledge, trust
Partners + Key Stakeholders <ul style="list-style-type: none"> WHE – guidance Schools – address needs Communities APYN – monitoring NGOs 		Channels <ul style="list-style-type: none"> Kitchens WOM Community outreach Schools Stationary stalls in market Shops 	<small>Beneficiary</small> <small>Customer</small> <ul style="list-style-type: none"> Community members Vulnerable members of community School children Families 	
Cost Structure <ul style="list-style-type: none"> Main cost = milk (60%) Electricity, charcoal, probiotic Salaries Community Fund 	Surplus <ul style="list-style-type: none"> Support vulnerable members Fund projects 	Revenue <ul style="list-style-type: none"> Probiotic yoghurt sales <ul style="list-style-type: none"> Small = 10 KSH Large = 20 KSH Milk, tea, additional products & flavors 		

Inspired by The Business Model Canvas

Exhibit 11 Financial Analysis

A

2015 Tukawamne Monthly Income Statement (TZS)

Monthly Revenues		
	Yoghurt	5,700,000
	Milk	2,700
	Additional Profit	
	Chapati & Tea	555,000
Total Revenue		6,257,700
Monthly Expenses		
	Milk	3,300,000
	Probiotics	73300
	Charcoal	90,000
	Electricity	60,000
	Water	10,000
	Security	50,000
	Rent	100,000
	Misc (soap)	20,000
	Salaries	800,000
	Packaging	1,710,000
Total Expenses		6,213,300
Net Monthly Income		44,400

B

2015 Tukawamne Yearly Income Statement (TZS)						
		FY1	FY2	FY3	FY4	FY5
Monthly Revenues						
	Yoghurt	68,400,000	71,820,000	75,240,000	75,240,000	76608000
	Milk	32,400	34,020	35,640	35,640	36288
	Additional Profit					
	Chapati & Tea	6,660,000	6,993,000	7,326,000	7,326,000	7459200
	Total Revenue	75,092,400	78,847,020	82,601,640	82,601,640	84,103,488
Monthly Expenses						
	Milk	39,600,000	41,580,000	43,560,000	43,560,000	44,352,000
	Probiotics	879600	923,580	967,560	967,560	985,152
	Charcoal	1,080,000	1,134,000	1,188,000	1,188,000	1,209,600
	Electricity	720,000	720,000	720,000	720,000	720,000
	Water	120,000	126,000	132,000	132,000	134,400
	Security	600,000	600,000	600,000	600,000	600,000
	Rent	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
	Misc (soap)	240,000	240,000	240,000	240,000	240,000
	Salaries	9,600,000	9,600,000	9,600,000	9,600,000	9,600,000
	Packaging	20,520,000	21,546,000	22,572,000	22,572,000	22,982,400
	Total Expenses	74,559,600	77,669,580	80,779,560	80,779,560	82,023,552
	Net Income	532,800	1,177,440	1,822,080	1,822,080	2,079,936
	Community Fund (15%)	79,920	176,616	273,312	273,312	311,990

C

Cost Input Values	TZS	Revenue Input Values	TZS
Milk (L)	1,000	Yoghurt/L	2,000
Probiotics (per 100L of milk)	1,200	Milk/L	1,500
Yoghurt (L) produced/day	110		
Yoghurt (L) sold/day	95	Additional Profit Input Values	
Yoghurt (L) sold/month	2850	Chapati & Tea	18,500
Yoghurt (L) produced/month	3300		
Milk (L) sold/day	40		
Income/mama	100,000		
Price/package (0.5L)	300		

A. Monthly income expense of community kitchen

B. Five-year projected income statements

- a. Y1 assumes 0% sales growth
- b. Y2 assumes 5% sales growth from 1st year
- c. Y3 assumes 10% sales growth from 1st year
- d. Y4 assumes 0% sales growth f
- e. Y5 assumes 12% sales growth from 1st year

C. Cost Input and Revenue Input Values for income statements*

*Values assumed from intern report (Texeira & Wiedeman, 2015)

Exhibit 12 Yoghurt Kitchens and Community Value Creation

Informing & Engaging <ul style="list-style-type: none"> Community Health Mamas educate community on the benefits of probiotics through outreach awareness and preventative programming Community fund project aims to increase community participation and engage members in shaping community development 						Patient Value
Measuring <ul style="list-style-type: none"> Record keeping focus: <ul style="list-style-type: none"> Head Mama responsible for tracking finances Yoghurt Mamas responsible for sales tracking 						
Accessing Care <ul style="list-style-type: none"> Kitchens function as community hubs <ul style="list-style-type: none"> Centre for information dissemination Consulting on community needs Supporting community members Community Health Mamas spread information and awareness by visiting community members 						
Monitoring & Screening <ul style="list-style-type: none"> Identifying and recording community members needs Assessing community risks Creating patient history records Assessing & evaluating kitchen success via picture project 	Diagnosing <ul style="list-style-type: none"> Consult with community members Advise on potential follow-up with professionals depending on care needs Create specialized/individualized programs to match community needs 	Preparing & Training <ul style="list-style-type: none"> Hire mamas based on the want to help community & want for developing professional skills Train mamas on health benefits & community-based preventative measures 	Intervening <ul style="list-style-type: none"> Providing yoghurt to families and vulnerable members of resource-poor areas Counseling available at the yoghurt kitchens, connecting clients to relevant information and services 	Generating Awareness <ul style="list-style-type: none"> Educating community members on the benefits of probiotics Consulting with community members to determine needs Service community via community fund Identify prevention strategies 	Monitoring & Managing <ul style="list-style-type: none"> Community Health Mamas track community yoghurt needs = determine demand Manage relationships with community members = "check-ins" 	