

KENYA SPECIFIC E-COOKING APPLIANCES PROJECT

KISAMBARA VENTURES LIMITED



Produced by: KISAMBARA VENTURES LIMITED & JIKONI MAGIC

For: DFID and Loughborough University



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Executive Summary

The main objective of this project was to support international appliance manufacturers to develop and adapt eCooking products and services that are relevant to Kenyan consumers by understanding what Kenyans like to cook and how they can communicate their product's functionality more clearly to Kenyan consumers.

To achieve this Kisambara Ventures Limited set out to do the following;

Come up with a set of tips that would help the manufacturers in their appliance modifications that would suit the everyday Kenyan cook. This is because the products are not Kenya Centric. The functionalities are very generic with many foreign foods.

A typology of Kenyan cuisine was developed which shows a list of foods that are typically cooked in Kenyan homes and their different cooking processes. This typology also showed how different foods are compatible with different e-cooking appliances.

Kisambara also produced 10 videos that were brand neutral for social media and they showcased how different foods can be cooked in different appliances and their compatibility. For instance, we demonstrated how eggs can be boiled in different appliances, namely: rice cooker, air fryer, electric pressure cooker (EPC) and induction cooker. We gave tips on how to have them come out successfully on each appliance. The same was done for rice, chapati, etc.

A questionnaire was developed in the e-digital cooking engagement project that was used to gather data from 20 participants and this information is going to be shared with e-appliance manufacturers and the clean cooking sector in Kenya as a whole. The data gives insights into what consumers like in their devices, the redundant functionalities, which appliances are most owned, among others.

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1. Introduction

In the recent past, Kenya has witnessed an increase in the number of energy efficient appliances that are being stocked on the market shelves. These are usually generic and not tailor made specifically to suit the Kenyan consumer because of the fact that they are originally designed and manufactured towards different foods and cultures from ours. Their uptake has been hampered by a lack of understanding that accompanies the devices. This ranges from the instruction language to the complexity of operation or even the unfamiliar foods on the menus of the devices.

In this project, Kisambara Ventures Limited tested various e-cooking appliances in order to find out how the energy efficient appliances could be adapted to various Kenyan foods.

We developed a questionnaire that collected data with the aim of coming up with a set of tips that would help manufacturers to know about what features Kenyans would prefer to keep in their appliances, have removed, enhanced or even which generic functions could be substituted for local foods. Over and above this, we were also looking to give tips to the manufacturers on how to best communicate the message to consumers of their products.

Kisambara developed a typology of Kenyan Cuisine that showed the most common types of dishes cooked by Kenyans in their homes and also came up with a selection of sample recipes for each type. This typology provides reference points by identifying popular international dishes that follow similar cooking processes (e.g. vibibi (rice and coconut pancakes to Moroccan baghrir). We went a step further to highlight the compatibility of each type of dish with different types of energy-efficient appliances.

We produced brand-neutral social media content that showcases a broad range of foods and energy-efficient appliances to show both consumers and appliances

Aims of the project

- 1.1 Kisambara Ventures Limited aim in this project was to support international appliance manufacturers to be able to develop and adapt their e-Cooking products and services to suit the Kenyan cooking landscape. In addition, we also aimed to help them to better understand what Kenyans mostly cook. And, finally, to propose the best ways in which they can communicate their product's functionality in ways that are easy for the Kenyan consumers to understand.

Objectives of the project

- 1.2 **Appliance modifications:** To Produce a set of tips showing that the e- appliances that land in the Kenyan market can be made more suitable for the Kenyan market as opposed to having generic functions that do not really resonate with most Kenyan consumers.
- 1.3 **Typology of Kenyan Cuisine:** Develop a typology of Kenyan cuisine that lists the most popular or common foods that are usually cooked in Kenyan homes. In addition, come up with sample recipes for each typology type while also identifying popular international dishes that follow similar cooking processes and how compatible they would be with different types of energy-efficient appliances.
- 1.4 **Brand-neutral social media content:** Produce unbranded content to demonstrate to Kenyan consumers as well as the appliance manufacturers how these popular Kenyan dishes can be cooked with these new modern energy-efficient appliances.

2. Methodology

2.1 The following are ways in which we used to realize the success of the project:

Appliance modifications:

We engaged in activities that enabled us to unlock the needs of Kenyans or what they highly desire when it comes to the energy efficient appliances in the market. They included the following;

1. We also used the information gathered from the e-Cooking Digital Engagement project to give more comprehensive tips to manufacturers on how to modify their appliances for the Kenyan market. The information was gathered from the questionnaire that we developed to interview the following categories of people;
 - 20 of our customers that we had previously sold EPCs to given that they have owned and used their EPCs for more than six months,
 - Participants who were shortlisted to the cook-off competition since they were already assembled in one place and primed for the interviews
 - Food bloggers who we collaborated with.
2. Different functions on various popular e-cooking appliances were tested in order to establish the generic functions that could be repurposed to cook Kenyan meals. We then came up with a 10 recipe pamphlet that highlighted the foreign foods functions that could be matched with the local ones and how to cook them using those functions.

Typology of Kenyan Cuisine:

Kisumbar team had initially proposed to demonstrate how different ethnic groups belonging to the same linguistic family share very similar cultures and food practices which are in turn heavily influenced by the areas they originally migrated from, although, over time their inter-mingling has resulted in the fusion of the cuisines. Kenya is historically divided into three major language groups, namely bantus, cushites and nilotes.

We came up with the table below which provided a breakdown of the different ethnic groups and their cultural practices that, to present time, still influence some of their cuisines.

Table 1:

LANGUAGE AND ETHNIC GROUPS	PREDOMINANT CULTURAL AND FOOD PRACTICES
Coastal Bantus (Mijikenda, Taveta and Swahili)	Farmers and some live along river Tana and next to Indian ocean

Central bantus (Kikuyus, Aembus, Kambas)	Primarily farmers and eat a lot of food from the ground
Western bantus (Luhyias, Kisiis)	Some are farmers and others live near Lake Victoria
Eastern Cushites (Orma, Somali, Borana) Semi arid and arid Ethiopia Somalia	Originally migrated from Ethiopia and Somalia and live in arid and semi-arid areas of Kenya. Predominantly pastoralists.
Highland nilotes (Kalenjins)	Traditionally they are pastoralists and farmers.
River and Lake nilotes (Luos)	These are Luos and they are known for their love of fish because they live along Lake Victoria
Plain Nilotes (Maasai)	Pastoralists who are traditionally known for their diet of milk, meat and blood.

We later expanded our research to include the Food and Agricultural organization Kenyan food recipes (citation) on top of our Google research that we proposed above. This combination gave more detailed findings that enabled us to come up with a typology of Kenyan cuisine by identifying the most predominant foods and referencing them to popular international dishes while at the same time highlighting the compatibility to different types of energy-efficient appliances.

Please find the typology table attached to the email.

In addition to that, we also came up with ten sample recipes representing the different typologies that showed how they can be cooked in the different e-cooking appliances. We used appliances from the eCooking Digital Engagement project that we'd also applied for, in order to cut on costs that we would have incurred purchasing appliances for this project as well.

Please find the recipes attached to the email.

Kisambara also came up with a list of reference points which showed internationally comparable dishes. For example, steaming of food wrapped in maize husks or banana leaves is very common in western Kenya while the same is known as tamales which is popular in Mexican cuisine. This dish can be steamed in either an EPC or rice cooker instead of over charcoal or LPG.

The international equivalents are in the Typology Excel worksheet that is attached, kindly check on sheet 2.

BRAND-NEUTRAL SOCIAL MEDIA

The food landscape varies across the country, for example; tilapia fish is cooked differently as you move from one region to another. At the coastal region we find that they predominantly love roasting, over charcoal, their fish which is marinated in a mixture of spices. Sometimes it's finished in a coconut sauce. They can be encouraged to grill their fish in the air fryer. In Nyanza and western regions, the tilapia is usually deep fried first and then finished off in a tomato based stew. They can be encouraged to air fry the fish and then finish it off in the tomato stew on an induction cooker. Sometimes they tend to cook it straight away in the tomato based stew without browning or deep frying and this can be done in the induction cooker instead of doing it over charcoal or LPG.

Ten sample video recipes were developed for this project that show how different communities can cook the same food with slightly different twists.

This is the playlist link to Jikoni Magic's youTube channel. It's unlisted for now because we will delete it once Pika na Power uploads the content therein to their own social media platforms.

https://www.youtube.com/watch?v=yfWvO1nmNIw&list=PLGj_sRsTOMYqAgm2o38DexlZsYPgH5IS0

3. Implementation

GENDER INCLUSION AND LEAVE NO ONE BEHIND (GILNOB):

GILNOB concerns were incorporated into the project and methodology.

We only worked with the Kisambara team for this project which comprises three women and two men and in terms of other aspects of GILNOB and safeguarding, Kisambara did not work with people with disabilities, remote communities and nor engage with children during this project. No negative consequences (intended or unintended) resulted from Kisambara Ventures Kenya Specific Appliances activities.

The project findings

Kisambara Ventures Limited realized that Inasmuch as many Kenyans are on-boarding onto the e-cooking trend, gaps still existed. For instance, how can different appliances be optimized to give the best results when cooking different foods?

A quick survey in the different social media groups that are cooking and food centered quickly informs someone that the EPCs are mainly being used to boil cereals and then store them in the freezers, or the air fryers being limited in use to chicken wings and chips. These appliances can do so much more than this and this is what we intended to do, to demonstrate that they can be used for a diverse range of foods and that they can still taste as good as they have always known them to be.

Activities conducted and results:

We intended to address these gaps through the following ways;

Questionnaire of people who've owned appliances for more than 6 months:

We carried out interviews of 20 participants to find out user experiences of electric cooking appliances. The criteria that qualified the participants for the survey was owning an energy efficient cooking appliance for more than six months. It was one or more of the following appliances, EPC, induction

cooker, air fryer or rice cooker. Our starting point was the people who we had sold EPCs to and from there leveraged our social network to find more participants who owned other appliances like the rice cooker, air fryer and induction cookers.

The questionnaires were recorded on KoboToolbox.

The survey was developed by drawn and developed by Kisambara Ventures Limited and covered a range of areas including:

- Length of appliance ownership
- Appliances owned by participants
- Functionality, cost, ease of use, as a factor of importanceWhat their ideal appliance would look like
- Most used features on their appliances

Showcasing versatility of e-appliances:

Another gap that was identified in our proposal was the fact that the menus being cooked on the appliances are limited to either beans, meat and pilau which does not showcase the diversity of the Kenyan menu. To address this, we made videos addressing this issue to show diversity in Kenyan cuisine.

Produce an e-Recipe Book

We intended to provide a more comprehensive collection of what is more representative of Kenyan cuisine and we did a comparison between appliances for the key food types on the Kenyan menu which will connect well with the project of Kenyan specific appliances.

Limitations of the project approach:

In the questionnaire that was deployed to 20 participants we found that participants felt that a beginners' appliance manual and recipe book were very important. However, as Kisambara, we thought that they would be good in the initial days and then would end up being forgotten and tossed inside a drawer.

In order to overcome this, the manufacturers can have both the manual and recipe book as soft copies. Most people nowadays have smart phones that can access the internet. Therefore, a QR code can be included for the people to scan and have the same downloaded and stored in their phones. This way the person will still have their write-ups in an environmentally friendly manner. The manufacturers will also have saved on that expense which could be used in other areas, perhaps, product development to suit the local population.

4. Next steps

The results of this project are of relevance to the e-cooking appliances, wider clean cooking sector and particularly useful to MECS, KPLC, Ministry of Energy, Clean Cooking Association of Kenya (CCAK) and the Clean Cooking Alliance (CCA). The findings will go a long way in ensuring that the energy efficient cooking appliances that will land in Kenya will be very Kenya Centric. Although lack of finances may hamper the pace at which we might expand our clean cooking business, we intend to scale up the clean cooking agenda through the following activities:

- Expand our operations to other counties within Kenya, we will start by targeting the greater Nairobi Metropolis. We already started with Kenol in Murang'a county.
- Look for more funding opportunities by partnering with manufacturers to test their specific appliances and offer recommendations on how they can adapt them to specifically suit the local cuisine.

- Start a series on Jikoni Magic social media platforms that will be purely targeted at cooking using generic functions and showing Kenyans that it is possible to maximize the use of their gadgets.

Recommendations:

1. Drawing on the findings from this project, the following are the primary recommendations to facilitate the international appliance manufacturers to develop and adapt eCooking products and services that are relevant to Kenyan consumers.
2. One thing that became abundantly clear from the questionnaire that was filled out for the 20 participants in the e-digital cooking engagement project was that functionalities played a very important role in purchasing decisions of any appliance. The participants were very keen to ensure that the appliances met their specific culinary needs in their kitchens.
3. The EPC was the most owned appliance by the participants (19 out of 20), induction cooker was the second (9 out of 20) and the air fryer and rice cooker tied in the last position (3 out of 20).
4. Of high importance was also the fact that they had to be safe and energy efficient.
5. The above findings can inform the manufacturers of the appliances on the best way to navigate the Kenyan market because they will have a better understanding of their core needs.
6. Since EPCs are the most widely adopted of the four energy appliances we looked at during the interview, our recommendations would be that manufacturers should leverage them in order to start making significant impacts.
7. Since 18 out of 19 participants considered functionality to be the most important feature when purchasing them. Our view was that functionalities can be looked at from various angles.
 - One would be including popular functionalities that the consumers are really interested in. We found cake and yoghurt to be very popular with the people that we interviewed. The high end EPCs have some functions that are hardly used by Kenyans because they do not understand them. For instance, sous vide is a method of cooking under vacuum which is not a cooking method that is used by most home cooks. Some EPCs have congee (broth or rice porridge found in Chinese cooking) as a function, however, this isn't something that the majority of Kenyans have in their typical menu. As it is, the majority of the available menus contain foods that are not very Kenya Centric. The two brands that we found to have localized menus were the Tefal and Ecoa.
 - The other one would be including a localized menu / functionalities that has commonly cooked Kenyan foods. Manufacturers should go the extra mile to come up with EPCs that have settings that, for instance, mimic the way local food is actually cooked. Ugali starts off on very high heat and to finish it off the heat is usually reduced and the ugali covered for about 5 minutes. If the EPCs could go through this cycle, then they would be the most ideal. Or, instead of having oatmeal, (which isn't as popular), wimbi porridge could be introduced and the cycle to start from high and gradually taper off to allow the porridge to simmer as it finishes cooking.
 - If an EPC is in a foreign language, then a sticker with local foods names or, at the very least, have the foods translated to Kiswahili or English for better understanding.
 - The other strategy that could be employed could be to include very targeted functionalities to get an initial foothold into a regional market. For example, in the Nyanza area, aliya is sun dried beef that takes very long to cook. If it was included as a function, then the probability of it being adopted faster in this region is high.

This means that if the manufacturers invested more in this area then they would make more inroads with the consumers by targeting to have their EPC brands as top of mind for them. From the questionnaire, just 7 of the 19 participants found brand names to be very important

as a factor when purchasing EPCs. This is an opportunity for manufacturers to boost their visibility. Consumers tend to purchase other product lines from one company if they are impressed with their initial purchases. The manufacturers can take advantage of EPCs being more adopted and ensure that they include features that consumers are looking for.

8. An extra inner pot was also very highly ranked as being important to 75% of the participants (15 out of 19) in figure 6 of the 20 participants' questionnaire. This can be used as a marketing strategy because the consensus was that it makes the cooking process faster since they do not have to wash out one pot in order to cook the next meal in the EPC, they can just start cooking straight up by switching pots.
9. Induction cookers were the second most owned appliances (9 out of 20 participants). We found that most participants viewed and used them more as a substitute for LPG. This conclusion was drawn from the fact that it was pulled out as a temporary stand-in for instances when LPG would suddenly run out. Functionalities were also found to not be as highly ranked, (3 out of 9). The most common way that the induction was being operated was having it turned on, go to the hot pot or saute settings and regulate the heat by taking it up or down to suit the cooking needs. The participants rarely experimented to find out what the other functions had to offer. Functionalities like milk, curry or rice were not being used. The manufacturers should invest more in marketing of the induction cookers because we found that they weren't very well understood by the users beyond them being fast and very responsive when the heat would be regulated.
10. Rice cookers were only owned by 3 out of the 20 participants. the participants expressed a desire to have them perform more than just boiling of rice with one button that operates as a cook or keep-warm button. Some of the features that could add value are saute functions and having the capacity to cook different types of rice like brown rice or wild rice. Having a digital user interface that is touchscreen was also a feature that was felt would add value.
11. **Beginners' manual or recipe book:** In as much as this ranked high in what the users wanted, our recommendations would be to go forward in a way that promotes a greener planet by reducing on generation of waste by going paperless. The warranty, recipe books and user manuals can all be downloaded via a QR code.

5. Conclusion

From the data that was collected from the 20 participants' questionnaire it is evident to see that there is a lot of potential for the penetration of e-cooking appliances as long as there is clear messaging. This means that the appliances must contain the functions that resonate with the everyday Kenyan cook, are in a language that is understood clearly, are easy to operate and are safe.

Clean cooking, especially using energy efficient cooking appliances is an emerging trend that has not yet been fully tapped and explored and more research is needed in order to unlock its full potential. This calls for concerted effort is required from all clean cooking sectors stakeholders in order to reduce the barriers that exist to the full appreciation and uptake of the appliances.

Going forward, we will keep developing more content as Jikoni Magic to encourage Kenyans to unlock the full potential of e-cooking.

6. Appendix

6.1

Appendix A

Appendix B