



AID-OAA-F-12-00017

***Milele* Tube Final Testing and Market Introduction**

MILESTONE 1 PROJECT IMPLEMENTATION PLAN

OCTOBER 18, 2012

With this grant, Baisikeli Ugunduzi will bring the *milele* tube to its first test market of Kitale, Kenya. Baisikeli Ugunduzi will perform the final round of large scale testing with *boda boda* in Kenya and plan for collaborative manufacturing, distribution, and design with the Trans-Nzoia *Boda Boda Sacco*. An additional important part of this period will be the development of distribution channels within and beyond Trans-Nzoia County.

BACKGROUND

For *boda boda* drivers and mechanics, Baisikeli Ugunduzi fills a huge void. There is no company delivering high-quality, low cost product and services focused on the millions of people in sub-Saharan Africa who use their bikes to earn a living. Customers are extremely frustrated with poor quality, Asian-made products that are ill designed for the rough life-cycle of working bicycles in Africa. Mechanics and store owners are losing income waiting for products to trickle in from large cities.

There is currently only one bicycle company (World Bicycle Relief) doing assembly in Kenya. Kenyans have a strong resentment for Chinese and Indian made products, but have a strong affection for American and European designed wares.

Baisikeli Ugunduzi is entering a market with over 50 million customers that spend over \$770 million annually on bicycles. The market that Baisikeli Ugunduzi is working in has two types of customers - people who earn a living with their bikes (*boda boda* and delivery people) and those who use their bikes to commute and transport their own goods. Analogous to how the American market sees bicycle technology trickle down for high end bicycles, we will put much of our effort into sales to the working bicycles and their more rugged life-cycle and allow our products' success on those bicycles inspire the commuter bicycle market.

To get our *milele* tubes in hands of customers, Baisikeli Ugunduzi is making use of the already trusted network of *boda boda saccos* throughout sub-Saharan Africa to both distribute and microfinance our products. *Saccos* are eager to deliver more value to their members. They are ready to co-brand stores that will serve as their headquarters for sales and training.

PROGRAM GOALS AND OBJECTIVES

Baisikeli Ugunduzi is a bicycle component company focused on products for working bicycles in the developing world. Our first product, the *milele* bicycle tube, completely revolutionizes the use of bicycles by eliminating flat tires. “Tubeless,” as our customers have called it, makes use of a heat resistant PVC tube that replaces conventional pneumatic tubes. The specially shaped tube is held in place by the tire and a proprietary rubber attachment unit that connects to the valve stem hole. This technology will last up to five years, will never have a flat, can be cut to length for any size wheel, and can be reused as the tires wear out.

Baisikeli Ugunduzi will focus on building brand awareness and capabilities in the Kitale region during the first year.

The goal of this program is to accomplish final testing of the *milele* tube and to develop the infrastructure for distribution within the first market – Trans-Nzoia county. First year objectives include:

- Final testing of *milele* tube
- Development of mechanic installation training manual
- Initial manufacture of *milele* tubes
- Training of Trans-Nzoia bicycle mechanics
- Distribution of *milele* tube by Trans-Nzoia Boda Boda Sacco
- Training of surrounding county bicycle mechanics
- Initial distribution of *milele* tube to nearby *Saccos*
- Development of an implementation plan for a collaborative Innovation Center for design, manufacture, and distribution

MILESTONES

#	Estimated Completion Date	Deliverables
1	Award Date + 30 Days	<ul style="list-style-type: none"> • Develop and submit preliminary Project Implementation Plan • List of progress indicators that will be tracked • Active SAM.gov registration
2	Award Date + 3 months	<ul style="list-style-type: none"> • Business registration complete in Kenya, articles of incorporation provided to USAID • Field testing of <i>milele</i> tube and results • # of employees hired (men/women) • Mechanic training curriculum with TBB Sacco • # of mechanics trained • # of <i>milele</i> tubes sold at TBB Sacco
3	Award Date + 6months	<ul style="list-style-type: none"> • # of mechanics trained (men/women) • # of saccos where training has been conducted • # of <i>milele</i> tubes produced/assembled • # of <i>milele</i> tubes distributed per Sacco
4	Award Date + 9months	<ul style="list-style-type: none"> • # of mechanics trained (men/women) • # of saccos where training has been conducted • # of <i>milele</i> tubes distributed per sacco • # of <i>milele</i> tubes produced/assembled • Mid-term dissemination plan/outreach strategy developed that includes potential for future scale-up
5	Award Date + 12months	<ul style="list-style-type: none"> • # of mechanics trained (men/women) • # of saccos where training has been conducted • # of <i>milele</i> tubes distributed per sacco • # of <i>milele</i> tubes produced/assembled • Impact of <i>boda boda</i> race in Kitale • Cumulative # of units sold since start of project • Cumulative # of beneficiaries since start of project (men/women) • Cost-benefit analysis of <i>milele</i> tubes versus conventional tubes • Plan for Innovation Center
6	90 days after project closeout	<ul style="list-style-type: none"> • Final dissemination plan/outreach strategy developed that includes potential for future scale-up • Final Impact Evaluation including overall cost-effectiveness of the invention • Final achievements based on progress indicators developed at inception

MILESTONE IMPLEMENTATION

TASK	DETAILS/DESCRIPTION	START/FINISH
Develop and submit preliminary Project Implementation Plan	Based upon the initial proposal, we will develop a detailed plan to meet the milestones. This task will be lead by John Gershenson.	10/1 – 10/21
List of progress indicators that will be tracked	Based upon the initial proposal, we will develop a detailed plan to meet the milestones. This task will be lead by John Gershenson.	10/1 – 10/21
Active SAM.gov registration	We are still waiting to hear back on this from SAM.gov. We will continue to monitor the situation.	10/1 – 10/21
Progress indicator tracking	Using the list of indicators, we will track them on a monthly basis. A scorecard will be maintained. In addition, we will develop a measure of the cost-benefit of <i>milele</i> tubes over conventional pneumatic tubes. The analysis will include the cost of the tubes, the price of installation and repair, and the savings of flats over the life of the <i>milele</i> tubes for a range of customer groups. We will continue to track this measure of social impact for customers on a bimonthly basis. We will use overall sales numbers, and spot checking of the evaluation inputs. This task will be lead by Ben Mitchell.	11/1 – 9/30
Business registration complete in Kenya, articles of incorporation provided to USAID	We have been working with legal representation in Kitale to register Baisikeli Ugunduzi as a foreign owned subsidiary in Kenya. This task will be lead by John Gershenson.	10/1 – 12/31
Field testing of <i>milele</i> tube and results	We will continue to work with boda boda to test the various designs for tubes and collaborate with suppliers to lock in material specifications. This task will be lead by Ben Mitchell.	10/1 – 12/31
Mechanic training curriculum with TBB Sacco	Develop a curriculum to train mechanics to properly install <i>milele</i> tubes and efficiently repair wheels with <i>milele</i> installed. This task will be lead by Ben Mitchell and our lead mechanic.	12/1 – 12/31
Mechanic training	Use our curriculum to train mechanics to properly install <i>milele</i> tubes and efficiently repair wheels with <i>milele</i> installed. This task will be lead by Ben Mitchell and our lead mechanic.	12/1 – 3/31
<i>Milele</i> tubes produced/assembled	Produce <i>milele</i> tubes and ship, then assemble and package in Kitale. Beginning with a small test batch, and then expand with larger batches as sales in Kitale continue to grow. This task will be lead by Ben Mitchell.	1/1 - 9/30
<i>Milele</i> tubes sold at TBB Sacco	<i>Milele</i> tubes will be sold first through the TBB Sacco, although their lead time will be short. This will allow us to set a distribution agreement that is very favorable for them. This task will be lead by John Gershenson.	1/15 – 9/30
Mid-term dissemination plan/outreach strategy developed that includes potential for future scale-up	We will develop a marketing campaign to get our message and product to potential customers and end users. The strategy will be such that it will work over many regions. This task will be lead by John Gershenson.	6/1 – 6/30
<i>Milele</i> tubes sold throughout Kitale	<i>Milele</i> tubes will be sold through wholesale and retail outlets throughout Kitale. Distribution, inventory maintenance, service, installation, and customer follow up will be crucial to our success. This task will be lead	2/15 – 9/30

	by John Gershenson, Ben Mitchell, and our sales lead.	
<i>Boda boda</i> race in Kitale	We will host and sponsor a race for <i>boda boda</i> in Kitale. The race will be a marketing opportunity, an opportunity to engage mechanics, and a time to support the needs of <i>boda boda</i> . This task will be lead by Jackie Johnson with support from the Baisikeli Ugunduzi <i>Boda Boda</i> Bicycle Race Team.	6/1 – 9/30
Cost-benefit analysis of <i>milele</i> tubes versus conventional tubes	We will develop the case for the cost effectiveness of <i>milele</i> tubes over conventional pneumatic tubes. The analysis will include the cost of the tubes, the price of installation and repair, and the savings of flats over the life of the <i>milele</i> tubes for a range of customer groups. This task will be lead by John Gershenson.	9/1 – 9/30
Plan for Innovation Center	We will develop a plan for the siting, building, furnishing, operation, staffing, and funding of an Innovation Center in Kitale. The center will be a magnet for collaborative design and manufacturing of bicycle components, as well as training. The plan will include strong input from the many stakeholders, including local government, local business, <i>boda boda</i> , mechanics, and local saccos. This task will be lead by John Gershenson and Ben Mitchell.	7/1 – 9/30
Final dissemination plan/outreach strategy developed that includes potential for future scale-up	We will develop a marketing campaign to get our message and product to potential customers and end users. The strategy will be such that it will work over many regions. This task will be lead by John Gershenson.	10/1/13 – 12/31/13
Final Impact Evaluation, including overall cost-effectiveness of the invention	We will conduct a final evaluation of the cost-benefit of <i>milele</i> tubes over conventional pneumatic tubes. The analysis will include the cost of the tubes, the price of installation and repair, and the savings of flats over the life of the <i>milele</i> tubes for a range of customer groups. This task will be lead by Jackie Johnson.	10/1/13 – 12/31/13
Final achievements based on progress indicators developed at inception	Using the list of indicators, we will summarize them and form a final scorecard for the first year. This task will be lead by Ben Mitchell and Jackie Johnson.	10/1/13 – 12/31/13

LIST OF PROGRESS INDICATORS

- # of employees hired (men/women)
- # of mechanics trained
- # of *milele* tubes sold at TBB Sacco
- # of mechanics trained (men/women)
- # of saccos where training has been conducted
- # of *milele* tubes produced/assembled
- # of *milele* tubes distributed per sacco
- Impact of *boda boda* race in Kitale
- Cumulative # of units sold since start of project
- Cumulative # of beneficiaries since start of project (men/women)



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***Milele* Tube Final Testing and Market Introduction**

MILESTONE 2 PROJECT REPORT

JANUARY 11, 2013

OVERVIEW OF GRANT: With this grant, Baisikeli Ugunduzi will bring the milele tube to its first test market of Kitale, Kenya. Baisikeli Ugunduzi will perform the final round of large scale testing with boda boda in Kenya and plan for collaborative manufacturing, distribution, and design with the Trans-Nzoia Boda Boda Sacco. An additional important part of this period will be the development of distribution channels within and beyond Trans-Nzoia County.

MILESTONE TWO DELIVERABLES

- Business registration complete in Kenya, articles of incorporation provided to USAID
- Field testing of *milele* tube and results
- Mechanic training curriculum with TBB Sacco

Business registration complete in Kenya, articles of incorporation provided to USAID

Business registration has been completed in Kenya, we have our certificate of registration as well as our business PIN number. Supporting documents can be supplied if necessary. The company articles of incorporation (LLC registration in Michigan, along with our initial partnership agreement) were complete before the grant period began and can also be supplied if necessary.

Field testing of milele tube and results

Field testing of the milele tube is complete! The final design – a circular cross-section tube of extremely high shore NBR – has been specified. The first batch of tubes (1000 units) has already been produced and is on its way to the port of Mombassa with a planned arrival of January 27. Included with this milestone report is our Field Testing Report that details the testing and results over the last nine months. We totaled 2,215 rider days and 52,340 total km. Testers put over 20,000 km on the final design, including 6,000 km with 100 kg loads.

Mechanic training curriculum with TBB Sacco

In association with the TBB Sacco, and with considerable input from Joseph Likhali, lead mechanic for Baisikeli Ugunduzi, we have put together the set of training materials for the

mechanic training curriculum. The purpose of the training is to help mechanics become well versed in the installation of milele tubes and the maintenance of wheels with milele tubes. The curriculum is designed as a reference and curriculum for a trainer to use in hands on demonstration of the training. In the beginning, Ben Mitchell and Joseph Likhali will serve as the trainers. Curricular documents are included with this report.

PROGRESS INDICATORS

Baisikeli continues to track all of the project indicators. Our scorecard as of January 1 is shown below.

Progress Indicator	Current Status (1/1/13)	Planned Status (1/1/13)
# of employees hired (men/women)	1/1	2
# of milele tubes sold at TBB Sacco	0	100
# of mechanics trained (men/women)	1/0	1
# of saccos where training has been conducted	1	1
# of milele tubes produced/assembled	1000/0	1000/1000
# of milele tubes distributed per sacco	0	100
Impact of boda boda race in Kitale	None	None
Cumulative # of units sold since start of project	None	100
Cumulative # of beneficiaries since start of project (men/women)	20	120

of employees hired (men/women)

Joseph Likhali has served as our part-time head mechanic for seven months. He also works full time as a mechanic at a local bicycle shop. Jackie Johnson had been a volunteer handling marketing for Baisikeli Ugunduzi and she will come on full time as of January 1. As raw materials arrive and production begins, expect hiring to pick up.

of milele tubes sold at TBB Sacco

Due to a delay in shipping, raw materials will not arrive at Baisikeli Ugunduzi until early February. Therefore, no units have been sold yet. As part of the MOU with the TBB Sacco, we have determined their selling price and profit. In addition, we have made all initial preparations to have a large first day sale at the Sacco office. We will go with a soft opening that uses existing advertising and relies on the Sacco's ability to get word to its members.

of mechanics trained (men/women)

We have trained Joseph Likhali and he has installed approximately 75 tubes at this point. He is gaining experience to be a trainer himself ahead of product sales. We have identified and arranged with five additional mechanics in Kitale for milele installation training.

of saccos where training has been conducted

Joseph is a member of the main TBB Sacco in Kitale. He became the first mechanic to be a member of the Sacco. It was determined that it is best to train the mechanics where they work (typically in front of or near stores that sell bicycle parts) rather than the Sacco headquarters.

of milele tubes produced/assembled

Due to a delay in shipping, raw materials will not arrive at Baisikeli Ugunduzi until early February. Therefore, no units have been produced yet. Tubes will arrive in Mombasa on January 27, then be forwarded through Nairobi to Kitale. At that point, we will use one week of production and final preparation before we begin selling. All manufacturing and assembly jigs and fixtures have been designed, and will be complete by January 25. Production space has been set up, and the production and assembly processes have been tested.

of milele tubes distributed per sacco

Due to a delay in shipping, raw materials will not arrive at Baisikeli Ugunduzi until early February. Therefore, no units have been sold or distributed yet. We have a distribution/sales MOU signed with the Sacco as well as an agreement with the largest distributor in Kitale.

Impact of boda boda race in Kitale

As planned, we have not sponsored a boda boda race. Due to elections in March, we will wait until June or July to hold the race. That is also a season where the prize money is most needed.

Cumulative # of units sold since start of project

Due to a delay in shipping, raw materials will not arrive at Baisikeli Ugunduzi until early February. Therefore, no units have been sold yet. However, over 30 test units have been given to riders to use. So far, milele tubes have been used for 2,215 days and over 50,000 km.

Cumulative # of beneficiaries since start of project (men/women)

While no one has benefitted from any units sold so far, beneficiaries of our work have been significant. 15 boda boda have served as testers, using prototype tubes and new wheels over the course of testing and being paid for their testing. In addition, we have engaged significantly with the TBB Sacco already raising their roles by over 20 riders and helping them in their launch of a women's group. We have employed two people as well. In addition, Susan Nyongsa, the owner of New Generation Cycle Mart where we have done all of our installation work, has seen a noticeable spike in her sales and has become known as a shop that embraces innovation.



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***Milele* Tube Final Testing and Market Introduction**

MILESTONE 3 PROJECT REPORT

MAY 13, 2013

OVERVIEW OF GRANT: With this grant, Baisikeli Ugunduzi will bring the Milele Tube to its first test market of Kitale, Kenya. Baisikeli Ugunduzi will perform the final round of large scale testing with boda boda in Kenya and plan for collaborative manufacturing, distribution, and design with the Trans-Nzoia Boda Boda Sacco. An additional important part of this period will be the development of distribution channels within Trans-Nzoia County.

MILESTONE THREE PROMISED DELIVERABLES

- Training of Trans-Nzoia bicycle mechanics
- Initial manufacture of milele tubes
- Distribution of Milele Tube by Trans-Nzoia Boda Boda Sacco

Continued field testing of Milele Tubes

Field testing of the Milele Tube was complete in the last milestone. We have now totaled 2395 rider days (180 on final design) and 63140 total km (10800 on the final design). Feedback has continued to be 100% positive. Word has now spread throughout the county and riders are excited to see the product.

Mechanic training

While the Trans-Nzoia County Boda Boda Sacco has been invaluable in the development of the training manual and the advertising of our tube, they have not been able to attract any mechanics to their organization. Therefore, we have taken it upon ourselves to work with sellers to seek out the appropriate mechanics to train. To date, we have trained five mechanics that serve four current sellers of the Milele Tube. Trained mechanics include Joseph Likhali (who also serves as the trainer of the mechanics) Kamau and Patrick (who also work near New Generation), and Alfred Kimutai and Jacob Kipkemboi Ngetich who work near Mama Kip's. The same training documents are being used and we expect a revision after the first 10 trainees.

Initial production run of 100 units is complete, raw materials for 1000 units in stock

Over this extended period, Baisikeli Ugunduzi ordered and received 1000 raw materials from Shanghai Yiguang Special Rubber Products Co. We also ordered custom printed packaging and sealing for the product. All materials are stored securely on premises in our living/working building. We have produced and packaged the first 100 units, evenly split among front tubes, rear tubes, and heavy duty tubes. A small batch manufacturing process has been designed and implemented for the time being that is heavy on quality control. These 100 units (now fewer due to sales) are also stored securely on the premises.

Initial tube sales

We had a grand “soft” opening at the TBB Sacco on April 7th. The purpose was to introduce the product officially through the TBB and to give them the opportunity to sell tubes ahead of the town. The opening was well attended, but with no sales. We gave the TBB three tubes on account. They were unable to sell any of the tubes.



Some of the TBB Sacco members before the beginning of the opening day of sales.



Ben celebrating the beginning of sales at the TBB Sacco headquarters with Hon. Secretary Earnest Wemali.

This was not surprising, for two reasons. One is that it is planting season. People are especially short on money and boda boda are feeling the brunt of that. Boda boda have been the main membership of the TBB and their income is quite seasonal. The harvest will begin in September/October and incomes will remain relatively high for seven or eight months. The second is the TBB's lack of sales ability. Without a store, they can sell only through their office, which is not frequented by boda boda. However, they have great marketing ability and they have been a great partner in getting the word out. Every boda boda in Kitale *wants* to buy a Milele Tube. Because of their membership, they have little access to those who carry heavy loads, Kenyarunda. These and better off commuters have seemed to be the early adopters of the technology. Going forward, saccos will continue to be an important part of getting the early word out about our products, but we should not look to them as an important partner in the sales themselves. In the future, we hope to bring in support to help them become stronger saccos with means of generating value for their customers.

After a fair waiting period, we began sales through local sellers. Long time partner Susan Nyongesa, owner of New Generation Cycle Mart, was the first to become an official seller of the Milele Tube on May 1. We wanted to see what it would be like if we let her sell tubes for one week on her own so that we would know what to expect with new sellers. She had only one walk by customer, a person who was actually mad that he was not informed that the Milele Tubes were finally in stock. From this, we reinforced our assumption that we must help launch and promote sales.



New Generation Cycle Mart owner, Susan Nyongeza, celebrates being the first store to carry the Milele Tube.



New Generation Cycle Mart's first customer, Protus, with his pair of Milele Tubes.

The third seller, Korir of Mama Kip's Cycle Spares in Mailisaba, was launched very differently. Without advertising, we brought a full duffel (18 tubes) to his shop on the local market day on May 12th. We then set up a stand at the market to sell. The intent was to show him how to sell tubes and then sell him 10 or so tubes that he would carry. However, we were cleaned out of tubes at the market and had to return with tubes the next day. The response was fantastic.

Other points (all beyond the scope of this work, but pertinent to its continuation)

- In the production of the first 100 units we worked hard to develop a process that will allow for consistent quality and can scale up to 100 units per day. Production is always in need of continuous improvement, but scale up beyond 100 units will require a different process and more space.
- The beginning of sales has allowed us to see how our distribution process will work. It is evident that to serve the entire county we will have to have our own transportation. We have begun work to secure that.
- Sales have also shown that our customer contact and guarantee process will need work to scale beyond 2500 units. We will undertake the design of a new system to implement in October.
- Initial distribution has shown that our seller agreements are cumbersome and difficult to read, we will work to streamline them.

PROGRESS INDICATORS

Baisikeli continues to track all of the project indicators. Our scorecard as of May 12 is shown below.

Progress Indicator	Current Status (5/12/13)	Planned Status (5/12/13)
# of employees hired (men/women)	4/2	4
# of milele tubes sold (total)	21	200
# of mechanics trained (men/women)	05/01/00	10
# of saccos where training has been conducted	1	1
# of milele tubes produced/assembled	1000/100	1000/300
# of milele tubes distributed	46	200
Impact of boda boda race in Kitale	None	None
Cumulative # of units sold since start of project	21	200
Cumulative # of beneficiaries since start of project (men/women)	60/20	100/20

of employees hired (men/women)

Joseph Likhali has served as our part-time head mechanic for eleven months. He also works full time as a mechanic at New Generation Cycle Mart. We are coming very near to the point of hiring him full time. Titus has been working small hours with us in sales, telling the story of the Milele Tubes and its benefits at key times. Beginning in May, we have hired on four volunteer interns for the summer. Kelli Whelan is a graduate student in Environmental Engineering with experience in Ethnography and has studied the impact of low smoke stoves in Tanzania. She will be leading up an impact study of the economic and social costs of tire punctures as well as structuring a study of the long term functionality of the tubes. Derek Turner is an undergraduate Mechanical Engineer that has come on to help us better understand our tube shapes relative to tires and wheels beyond the standard 28"x1½" wheels of most African bikes as well as quality monitoring of our supplied materials. Michele Harrison is a graduate student in Marketing with business experience in rural China who will be coming on board to study potential alternative marketing methods and their scalability. Jon Mitchell is an undergraduate student in film who is coming on to capture more professional video that shows the both the work of Baisikeli Ugunduzi and the work of our customers.

of milele tubes sold at TBB Sacco (now using # of milele tubes sold)

While no tubes have been sold at the TBB, we have sold 21 tubes as of May 12. Mama Kip's has sold 16 and purchased an additional two, and New Generation has sold three. Given the flooding and the fact that harvest season will begin after this grant period, we have adjusted our sales goals for the duration of this project to 300 tubes.

of mechanics trained (men/women)

We have trained Joseph Likhali and he has installed approximately 100 tubes at this point. He has now trained four other mechanics and is ready to do so without supervision. All trained mechanics have easily passed their certification exam and received certified Baisikeli Ugunduzi mechanic cards. As new shops carry our product, we will continue to train mechanics. There are few if any female bicycle mechanics.

of saccos where training has been conducted (now using # of centers where training has been conducted)

We have now trained mechanics to work at New Generation and TBB (very close to each other) and Mama Kip's.

of milele tubes produced/assembled

As indicated above, 100 tubes, split evenly among the FRONT, REAR, and HEAVY, have been produced. Now that sales have begun we will continue just-in-time production.

of milele tubes distributed per sacco (now # of milele tubes distributed per store)

In addition to the sales, we have allowed partner shops to take product on account. Mama Kip's has 11 on account, New Generation has kept three on account, and TBB has three on account. Allowing shops to keep tubes on account is an important element of distribution as few have the money to pay for large numbers up front.

Impact of boda boda race in Kitale

As planned, we have not sponsored a boda boda race. Due to elections in March and the harvest in September/October, we will wait until August to hold the race. That is also a season where the prize money is most needed.

Cumulative # of units sold since start of project

21 units within only one week of sales.

Cumulative # of beneficiaries since start of project (men/women)

15 boda boda have served as testers, using prototype tubes and new wheels over the course of testing and being paid for their testing. In addition, we have engaged significantly with TBB already raising their roles by over 20 riders and helping them in their launch of a now very strong women's group and a youth cycling team. We have employed two people as well. There have, as well, been many other service and product providers that we have relied on locally. We are now also employing four volunteers for the summer in an effort, of course, to increase our work capacity and capabilities. We hope that this program will also encourage young, bright, and adventurous upstarts to find their own vision of a better world and tackle it.

In addition, Susan Nyongsa, the owner of New Generation Cycle Mart where we have done all of our installation work, has seen a noticeable spike in her sales and has become known as a shop that embraces innovation. Mama Kip's a brand new partner is excited about increasing their profile as a wholesaler.

We have made sales to 12 people (some buy two tubes, some buy one). Our customers are using the bicycles for transporting goods for work, transportation to work, and transportation to school.

In addition to those mentioned, it is important to note that each of these people have families. Beyond our customers, whom we are getting to know better through follow up, our core business beneficiaries (Earnest from TBB, Susan from New Generation, Joseph our mechanic, Green and Geoffrey our testers, Korir from Mama Kip's, have approximately 25 dependents.



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Milele Tube Final Testing and Market Introduction

MILESTONE 4 MIDTERM PLAN

July 1, 2013

OVERVIEW OF GRANT: With this grant, Baisikeli Ugunduzi will bring the Milele Tube to its first test market of Kitale, Kenya. Baisikeli Ugunduzi will perform the final round of large scale testing with boda boda in Kenya and plan for collaborative manufacturing, distribution, and design with the Trans-Nzoia Boda Boda Sacco. An additional important part of this period will be the development of distribution channels within Trans-Nzoia County.

TECHNOLOGY: What have we developed?

Current

At this point, Baisikeli Ugunduzi has already a final product, the Milele Tube, that has tested perfectly and is being sold in stores.

Yet to be completed under this grant

The USAID/DIV grant does not contain any other technology development.

Future plans

We are in the process of developing production methods to reach particular production volume goals. Manufacturing capabilities must continue development as we scale-up. We will continue development as we progress towards 5,000 units per week from Kitale. As we move forward, Baisikeli Ugunduzi will also continue to develop new technologies that benefit people who earn their livings with bicycles. We are looking to co-develop (working with mechanics, riders, and non-profits) a light, a passenger seat, a hub, pedals, and other products. A wider range of products will allow better economies of scale as we scale-up distribution.

DISSEMINATION: How have we shared what we have learned?

Current

In association with Baisikeli Ugunduzi and our development of the Milele Tube, CEO has spoken at gatherings of the National Collegiate Inventors and Innovators Association (NCIIA), and both John and COO Ben Mitchell were semi-finalists for the Echoing Green Fellowship. However, with respect to dissemination, the most important activities have surrounded

advertising. We have used initial sales, fliers, radio, banners, and not least of all word of mouth to let all of Trans Nzoia County and western Kenya know about the Milele Tube. In doing so, the word is also getting out that there is an organization that is interested in developing products for people who depend on bicycles in Kenya and is interested in co-developing and co-distributing products in the region.

Yet to be completed under this grant

There was no dissemination plan for this grant. Given that we are focused on distribution at this point, we will not have any dissemination beyond continued advertising planned for this grant period.

Future plans

Baisikeli Ugunduzi feels that dissemination is an important part of our mission. We want to encourage others to take on similar missions and to learn from what we have done. Along those lines, we are making plans to involve several universities in case studies over the upcoming school year. In addition, CEO John Gershenson will be working with Moi University to encourage students to take on product development for Kenyans. Lastly, we are working with several non-profits and universities to try to develop a “design camp” that will bring US engineers together with Kenyan user groups to develop products for those who depend on bicycles. We look forward to participating in regional, US, and international events to detail what we have learned as we have progressed on our journey.

OUTREACH: To whom have we connected?

Current

As we have stated, the saccos have proven to be less effective as the confusion of elections and a dip in the economy have taken place. As such, we have moved beyond them as a major connection to both end users and new knowledge. This has forced us to piece together other smaller connections. We have reached out to the following groups (besides retailers and wholesalers) as sources for distribution, sharing information, collaboration, or other sharing:

- Kenya Farmers Association
- Kenya Creameries Coop
- Kitale Industries, Ltd.
- Women’s Representative Office of Siaya County
- Western Seed
- Imani Radio – Webuye
- Bridging the Gap Africa
- KMTI – Kenya
- Peace Corps Kenya
- Khetia’s Department Store

Yet to be completed under this grant

Outreach was not a significant part of this grant beyond the saccos. We will continue to make contact with saccos throughout Kenya during the length of this grant and beyond.

Future plans

Outreach is not only good mission, it is good business. We will continue to reach out to any Kenyan (or Sub-Saharan) organization that is concerned with people who depend on bicycles

either directly or indirectly and, once we have established Baisikeli Ugunduzi's business, we will take an active role in advocating for these people. As we plan towards scale up, we are thinking more about what it takes to scale up our impact.

SCALE-UP: What have we done to enable growth?

Current

To this point, we have focused on how to get the first tube to market in Kitale. We have already expanded our sales as far as Nakuru (240km), Bungoma (at the Ugandan border), and Lodwar (300 km near the South Sudan border), and Nairobi. However, individual sales in these locations and having sales and distribution set up in these areas are not the same. In addition, we have made changes to our manufacturing processes that will allow for, we think, up to 1,000 units per week in production. This has yet to be tested.

Yet to be completed under this grant

Scale-up beyond getting the first units to market was not part of this grant. However, within the time frame of this grant we will begin training sales personnel to cover an area of 250km, we will develop distribution processes to cover this territory, we will bring in a new forwarder to receive incoming supplies, and we will plan a larger advertising plan. Our first 1000 units will provide a great way to get things set up.

Future plans

Within five years, Baisikeli Ugunduzi will have a suite of 5+ products that will be available throughout the EAC and South Sudan. To achieve this goal, we must have processes in place for production, sales, distribution, and marketing that support the geographic and product expansion. We will take the next two years to develop, test, and expand these processes from Kitale and throughout Kenya. In addition, we have begun the process of co-developing the products necessary to support this growth. These next two years are the most important part of Baisikeli Ugunduzi's growth. We have begun and will continue to find a way to finance this growth.



AID-OAA-F-12-00017

***Milele* Tube Final Testing and Market Introduction**

MILESTONE 4 PROJECT REPORT

July 1, 2013

OVERVIEW OF GRANT: With this grant, Baisikeli Ugunduzi will bring the Milele Tube to its first test market of Kitale, Kenya. Baisikeli Ugunduzi will perform the final round of large scale testing with boda boda in Kenya and plan for collaborative manufacturing, distribution, and design with the Trans-Nzoia Boda Boda Sacco. An additional important part of this period will be the development of distribution channels within Trans-Nzoia County.

MILESTONE FOUR PROMISED DELIVERABLES

- Training of Trans-Nzoia bicycle mechanics
- Initial manufacture of milele tubes
- Distribution of Milele Tube by Trans-Nzoia Boda Boda Sacco
- Mid-term dissemination plan/outreach strategy developed that includes potential for future scale-up

Continued field testing of Milele Tubes

Field testing of the Milele Tube was complete in the second milestone. However, we continue to monitor product quality and functionality. We have now totaled 3,025 rider days (1,000 on final design) and 100,000 total km (60,000 on the final design). Feedback continues to be 100% positive. Word has now spread throughout the county and riders are excited to see the product. We have begun to implement a metric review and customer feedback system that will yield more data. An early glimpse of this is included with the milestone documents.

Mechanic training

To date, we have trained 15 mechanics that serve 11 current sellers of the Milele Tube. Trained mechanics include Joseph Likhali (who also serves as the trainer of the mechanics) Kamau and Patrick (who also work near New Generation), and Alfred Kimutai and Jacob Kipkemboi Ngetich who work near Mama Kip's. The same training documents are being used and a revision of the documents is currently being completed. We are in the process now of producing

a training video that will be posted on our website to allow for sales to non-local organizations and it will be used to speed up training sessions on the trainer's laptop.

Production of over 400 units is complete

We have now produced and packaged 458 units, evenly split among front tubes, rear tubes, and heavy duty tubes. A small batch manufacturing process has been designed and implemented for the time being that is heavy on quality control. We have also begun producing tubes for 26" *komarera* bicycles and for 20" and 16" children's bicycles.

Initial tube sales

We now have eleven sellers of the Milele Tube. As we are focused solely on Trans-Nzoia county, we have been splitting the county into centers and adding one new seller per center. We have used market days as the launch day in each new center. In addition, to better supply the centers that are further than 20km from Kitale, we have begun to develop wholesalers on each of the five main spurs out of town that access the centers of the county. To date, we have wholesalers that serve two of those five spurs.

We have now sold 328 tubes.

Mid-term dissemination plan/outreach strategy

We developed a mid-term plan for this grant. It will be used as a template for a Stage II application. The dissemination plan is included with the milestone documents.

Other points (all beyond the scope of this work, but pertinent to its continuation)

- Our new production process is now in place. All equipment and fixtures were locally manufactured.
- We have secured some interim funding that will allow us to grow. Stanley Eisenberg had previously promised to help us financially. In new talks with him, he has agreed to fund the purchase of a vehicle for use in sales and distribution as well as the capital to allow us to order a full container of raw materials (enough to produce 9000 units). This will be very important as we begin to plan for the harvest season in western Kenya. Mr. Eisenberg sees this gift as the first of a two part gift that will allow us to be better prepared for an application for Stage II funding.
- We have realized that we will not be able to maintain control over our installation process. Training mechanics is perceived as a plus. A warrantee that is tied to the correct installation by certified mechanics is also necessary. However, many customers are unconcerned with the loss of a warrantee and they would like to take their Milele Tube back to their hometown for installation. This is an issue with selling in market centers. In checking up on such customers, however, we find that the installation of these tubes is of great quality. This will make distribution easier as we expand our region.
- Initial distribution has shown that our seller agreements are cumbersome and difficult to read, we streamlined them.

PROGRESS INDICATORS

Baisikeli continues to track all of the project indicators. Our scorecard as of May 12 is shown below.

Progress Indicator	Current Status (7/1/13)	Planned Status (7/1/13)
# of employees hired (men/women)	4/2	4
# of milele tubes sold (total)	328	500
# of mechanics trained (men/women)	15/0	30
# of saccos where training has been conducted	1	1
# of milele tubes produced/assembled	1000/448	1000/600
# of milele tubes distributed	335	500
Impact of boda boda race in Kitale	None	None
Cumulative # of units sold since start of project	328	500
Cumulative # of beneficiaries since start of project (men/women)	280/60	300/50

of employees hired (men/women) [repeated from last

Joseph Likhali has served as our part-time head mechanic for eleven months. He also works full time as a mechanic at New Generation Cycle Mart. We are coming very near to the point of hiring him full time. Titus has been working increasing hours with us in sales and has now taken up residence as a watchmen in our place as well, telling the story of the Milele Tubes and its benefits at key times. He is also close to the point of hiring on full time. Since May, we have hired on four volunteer interns for the summer. Kelli Whelan is a graduate student in Environmental Engineering with experience in Ethnography and has studied the impact of low smoke stoves in Tanzania. She has been leading up an impact study of the economic and social costs of tire punctures as well as structuring a study of the long-term functionality of the tubes. Derek Turner is an undergraduate Mechanical Engineer that has helped us better understand our tube shapes relative to tires and wheels beyond the standard 28"x1½" wheels of most African bikes as well as quality monitoring of our supplied materials. He is also redesigning the production process. Michele Harrison is a graduate student in Marketing with business experience in rural China who has been studying potential alternative marketing methods and their scalability for Baisikeli Ugunduzi. Jon Mitchell is an undergraduate student in film who spent four weeks with us documenting what Milele Tubes have meant to our customers and partners, and also developing training videos.

of milele tubes sold at TBB Sacco (now using # of milele tubes sold)

We have sold 328 tubes as of June 30. Given the flooding and the fact that harvest season will begin after this grant period, we have adjusted our sales goals for the duration of this project to 500 tubes.

Shop	Location	# sold
Boda Boda Sacco	Kitale	0
New Generation	Kitale	3
Mama Kip	Mailisaba (Eldoret Rd)	15
Mabe Cycle Mart	Kitale	8
Kiminini Spare Parts	Kiminini	2
Planet Cycle	Moi's Bridge	0
Sambu Motorcycle Spares	Moi's Bridge	1
Golden Times	Moi's Bridge	0
Agrovet	Endebess	4
Imani Cycle Mart	Kakamega	10
Huryma Spare Parts	Kakamega	0
Baisikeli Ugunduzi		285

of mechanics trained (men/women)

We have trained Joseph Likhali and he has installed over 200 tubes at this point. He has now trained 15 other mechanics and has begun to do so without supervision. All trained mechanics have easily passed their certification exam and received certified Baisikeli Ugunduzi mechanic cards. As new sellers carry our product, we will continue to train mechanics. He also quickly trains customers who prefer to install the tubes themselves. There are few if any female bicycle mechanics.

of saccos where training has been conducted (now using # of centers where training has been conducted)

We have now trained mechanics to work at:

- New Generation
- TBB
- Mama Kip's
- Golden Times
- Endebess Agrovet
- Kiminini Spare Parts
- Planet Cycle
- Sambu Motorcycle Spares
- Golden Times
- Imani Cycle Mart
- Huryma Spare Parts
- Dao Cycle Mart
- Webuye boda boda stage

of milele tubes produced/assembled

As indicated above, 458 tubes have been produced, assembled, and packaged. The type breakdown is below.

Type of Milele Tube	# Produced
Front	127
Rear	119
Heavy	178
26" (komarera)	10
20" (child's bicycle)	12
16" (child's bicycle)	12

of milele tubes distributed per sacco (now # of milele tubes distributed per store)

The following sellers have been selling tubes and taking tubes on account. Note that we have sold most tubes directly, so the total in this table does not equal the total number of sold tubes.

Seller	Tubes sold or purchased
Boda Boda Sacco	3
New Generation	6
Mama Kip	20
Mabe Cycle Mart	8
Kiminini Spare Parts	5
Planet Cycle	3
Sambu Motorcycle Spares	4
Golden Times	3
Agrovet	10
Imani Cycle Mart	11
Huryma Spare Parts	2

Impact of boda boda race in Kitale

As planned, we have not sponsored a boda boda race yet. The race is planned for the first half of August.

Cumulative # of units sold since start of project

328 units (direct sales plus on account with shops) within only seven weeks of sales.

Cumulative # of beneficiaries since start of project (men/women)

15 boda boda have served as testers, using prototype tubes and new wheels over the course of testing and being paid for their testing. In addition, we have engaged significantly with TBB already raising their roles by over 20 riders and helping them in their launch of a now very strong women's group and a youth cycling team. We have employed two people as well. There have, as well, been many other service and product providers that we have relied on locally. We are now also employing four volunteers for the summer in an effort, of course, to increase our work

capacity and capabilities. We hope that this program will also encourage young, bright, and adventurous upstarts to find their own vision of a better world and tackle it.

In addition, all of the shop owners (nearly all are husband and wife teams where women are in charge of ordering) have seen an uptick in business from being known as the first to carry the milele tube.

We have made sales to roughly 220 people (some buy two tubes, some buy one). Our customers are using the bicycles for transporting goods for work, transportation to work, and transportation to school.

In addition to those mentioned, it is important to note that each of these people have families. Beyond our customers, whom we are getting to know better through follow up, our core business beneficiaries (Earnest from TBB, Susan from New Generation, Joseph our mechanic, Titus our sales agent, Green and Geoffrey our testers, Korir from Mama Kip's, have approximately 25 dependents. We have tried to account for some of these in our numbers.



AID-OAA-F-12-00017

Milele Tube Final Testing and Market Introduction

MILESTONE 5 PROJECT REPORT

August 15, 2013

OVERVIEW OF GRANT: With this grant, Baisikeli Ugunduzi will bring the Milele Tube to its first test market of Kitale, Kenya. Baisikeli Ugunduzi will perform the final round of large scale testing with boda boda in Kenya and plan for collaborative manufacturing, distribution, and design with the Trans-Nzoia Boda Boda Sacco. An additional important part of this period will be the development of distribution channels within Trans-Nzoia County.

MILESTONE FOUR PROMISED DELIVERABLES

- Training of Trans-Nzoia bicycle mechanics
- Initial manufacture of milele tubes
- Sales of Milele Tube beyond Trans-Nzoia Boda Boda Sacco
- Boda Boda Race
- Initial cost-benefit analysis of tubes versus conventional tubes
- Plan for innovation center

Continued field testing of Milele Tubes

Field testing of the Milele Tube was complete in the second milestone. However, we continue to monitor product quality and functionality. We have now totaled 3405 rider days (1375 on final design) and approximately 105,000 total km (65000 on the final design). Feedback continues to be extremely positive. The only negative response has been from those that must ride quickly through town over short routes who, correctly, say that the tubes make high speeds more difficult. This was not the intended application of the Milele Tubes. Word has now spread throughout the county and riders are excited to see the product. We now have over two months of data from sales and non-sales in our metric review and customer feedback system that will continue to yield more data. A glimpse of the initial data appears in the cost-benefit analysis.

Mechanic training

To date, we have trained 18 mechanics that serve 17 current sellers of the Milele Tube. Trained mechanics include Joseph Likhali, who also serves as the trainer of the mechanics. The same

training documents are being used and a revision of the documents was completed. We produced a training video that is posted on our website to allow for sales to non-local organizations and it will be used to speed up training sessions on the trainer's laptop when we reach that point. The training documents are clearly marked as sponsored by USAID.

Production of over 400 units is complete

We have now produced and packaged 723 units, evenly split among front tubes, rear tubes, and heavy duty tubes. A small batch manufacturing process has been designed and implemented for the time being that is heavy on quality control. We have also begun producing tubes for 26" *komarera* bicycles and for 20" and 16" children's bicycles. We will have a new combination of tires and tubes for children's bicycles coming soon that allows parents to purchase them as a combination since there are many different sized tires out there.

Initial tube sales

We now have 17 sellers of the Milele Tube. As we are focused on Trans-Nzoia county, we have been splitting the county into centers and adding one new seller per center. We have used market days as the launch day in each new center. In addition, to better supply the centers that are further than 20km from Kitale, we have begun to develop wholesalers on each of the five main spurs out of town that access the centers of the county. To date, we have wholesalers that serve two of those five spurs.

In addition, we have begun to spread the distribution to other areas in western Kenya. Using the national Agricultural shows as a vehicle, we have moved into Kakamega, Nakuru, and Kisumu. 10 of our sellers and wholesalers are now outside of Kitale. While at the Kisumu Agricultural Show (ASK), we were featured on the NTV news (shown on four separate shows) and that has yielded many new potential sellers and customers, especially in Nairobi.

We have now sold 620 tubes.

Other points (all beyond the scope of this work, but pertinent to its continuation)

- We submitted an LOI for a Stage II DIV grant.
- Our new production process is now in place. All equipment and fixtures were locally manufactured.
- We have purchased a vehicle for distribution – a van that has already saved us both time and money. The payment of this vehicle will be done over the next month. Even more importantly, we have ordered our first full container of raw materials for the Milele Tube. There will be enough to make over 8,500 tubes. The container will arrive in mid-September. Production with this material will begin immediately. This will be very important as we begin to plan for the harvest season in western Kenya and begin to test our processes at larger scale. We have used this as an opportunity to gain logistics experience as well.
- We have realized that we will not be able to maintain control over our installation process. Training mechanics is perceived as a plus. A warrantee that is tied to the correct installation by certified mechanics is also necessary. However, many customers are unconcerned with the loss of a warrantee and they would like to take their Milele Tube back to their hometown for installation. This is an issue with selling in market centers.

In checking up on such customers, however, we find that the installation of these tubes is of great quality. This will make distribution easier as we expand our region.

- Initial distribution has shown that our seller agreements are cumbersome and difficult to read, we have streamlined them.

PROGRESS INDICATORS

Baisikeli continues to track all of the project indicators. Our scorecard as of August 15 is shown below.

Progress Indicator	Current Status (8/15/13)	Planned Status (8/15/13)
# of employees hired (men/women)	5/2	6
# of milele tubes sold (total)	620	500
# of mechanics trained (men/women)	17/0	40
# of saccoes where training has been conducted	1	1
# of milele tubes produced/assembled	1000/700	1000/500
# of milele tubes distributed	620	500
Impact of boda boda race in Kitale	Done	Done
Cumulative # of units sold since start of project	620	500
Cumulative # of beneficiaries since start of project (men/women)	560/60	400/100

of employees hired (men/women)

Joseph Likhali has served as our part-time head mechanic for eleven months. He also works full time as a mechanic at New Generation Cycle Mart. We are coming very near to the point of hiring him full time. Titus has now started working with us full time in sales and production, and has now taken up residence as a watchmen in our place as well, telling the story of the Milele Tubes and its benefits at key times. Since May, we have hired on four volunteer interns for the summer. Kelli Whelan is a graduate student in Environmental Engineering with experience in Ethnography and has studied the impact of low smoke stoves in Tanzania. She has been leading up an impact study of the economic and social costs of tire punctures as well as structuring a study of the long-term functionality of the tubes. Derek Turner is an undergraduate Mechanical Engineer that has helped us better understand our tube shapes relative to tires and wheels beyond the standard 28"x1.5" wheels of most African bikes as well as quality monitoring of our supplied materials. He is also redesigning the production process. Michele Harrison is a graduate student in Marketing with business experience in rural China who has been studying potential alternative marketing methods and their scalability for Baisikeli Ugunduzi. Jon Mitchell is an undergraduate student in film who spent four weeks with us documenting what Milele Tubes have meant to our customers and partners, and also developing training videos. In addition, we are now looking for a full-time sales manager and we are looking at two new for the upcoming year.

of milele tubes sold at TBB Sacco (now using # of milele tubes sold)

We have sold 620 tubes as of August 15. Given the flooding and the fact that harvest season will begin after this grant period, we had adjusted our sales goals for the duration of this project to 500 tubes. Although, increased marketing has moved sales past that.

Shop	Location	# sold
Boda Boda Sacco	Kitale	0
New Generation	Kitale	10
Mama Kip	Mailisaba (Eldoret Rd)	15
Mabe Cycle Mart	Kitale	15
Kiminini Spare Parts	Kiminini	7
Planet Cycle	Moi's Bridge	0
Sambu Motorcycle Spares	Moi's Bridge	1
Golden Times	Moi's Bridge	3
Agrovet	Endebess	10
Imani Cycle Mart	Kakamega	80
Huryma Spare Parts	Kakamega	0
Nanyuki Bicycle Riders Club	Nanyuki	75
Sunshine Spares	Kisumu	25
Mola Interprises	Gita Market, Kajulu	20
Baisikeli Ugunduzi		285

of mechanics trained (men/women)

We have trained Joseph Likhali and he has installed over 300 tubes at this point. He has now trained 15 other mechanics and has begun to do so without supervision. All trained mechanics have easily passed their certification exam and received certified Baisikeli Ugunduzi mechanic cards. As new sellers carry our product, we will continue to train mechanics. He also quickly trains customers who prefer to install the tubes themselves. There are few if any female bicycle mechanics. Interestingly, installation has become easier and we have been seeing more and more mechanics install the tubes successfully. One mechanic that was trained even came back to show us an even quicker method that we have been using now.

of saccos where training has been conducted (now using # of centers where training has been conducted)

We have now trained mechanics to work at:

- New Generation
- TBB
- Mama Kip's
- Golden Times
- Endebess Agrovet
- Kiminini Spare Parts
- Planet Cycle
- Sambu Motorcycle Spares
- Golden Times
- Imani Cycle Mart

- Huryma Spare Parts
- Dao Cycle Mart
- Webuye boda boda stage

of milele tubes produced/assembled

As indicated above, 720 tubes have been produced, assembled, and packaged. The type breakdown is below.

Type of Milele Tube	# Produced
Front	206
Rear	205
Heavy	269
26" (komarera)	10
20" (child's bicycle)	12
16" (child's bicycle)	12

of milele tubes distributed per sacco (now # of milele tubes distributed per store)

The following sellers have been selling tubes and taking tubes on account. Note that we have sold most tubes directly, so the total in this table does not equal the total number of sold tubes.

Seller	Tubes sold or purchased
Boda Boda Sacco	3
New Generation	15
Mama Kip	20
Mabe Cycle Mart	25
Kiminini Spare Parts	15
Planet Cycle	3
Sambu Motorcycle Spares	4
Golden Times	8
Agrovet	10
Imani Cycle Mart	91
Huryma Spare Parts	2
Nanyuki Bicycle Riders Club	75
Sunshine Spares	25
Mola Interprises	20

Impact of boda boda race in Kitale

The race was a HUGE success. We ran it "American Style," which means that the money that went into the race all went to the benefit of the racers instead of local officials. We had capped the field at 50 racers for safety and logistics purposes and the race completely sold out. We had two women racers (the only two) and four 50+ racers. The local racers had asked that the race be limited to those living in the Trans Nzoia County. Given the support and response we have had and that the focus of Stage I was solely the county, we obliged.

The biggest impact of the race is that racers have now seen what it is like to have a bicycle race that is all about the racers. Typical races have a huge first place prize and it quickly drops off to nothing. We, instead, gave moderate prizes to the winner, but had prizes for everyone. We included a random prize draw (bottles and donated jerseys), we had a national drug and alcohol prevention group (NACADA) participate in the event and they donated reflective vest to every racer. We have since seen the vests all around town, increasing safety. Winners and the top five all received Milele Tubes to use or sell. Every racer raced with a Milele Tube sticker on their bicycle and a Baisikeli Ugunduzi number plate. In addition, our company got together the night before and made energy bites for all racers and officials. This is the first time most of them have used in-race nutrition (except for milk). They were skeptical at first, but loved them. In short, we had over half the racers come up to us at the race to say that it was a fantastically run race.

In terms of an impact on sales, that was not the main point of the event, but we do believe that we will see an impact after the harvest has begun. Regardless, we know that the seven fasted people in the area all have Milele Tubes in their hands and we will use the opportunity to track what they do with their free tubes.

Cumulative # of units sold since start of project

620 units (direct sales plus on account with shops) within only seven weeks of sales.

Cumulative # of beneficiaries since start of project (men/women)

15 boda boda have served as testers, using prototype tubes and new wheels over the course of testing and being paid for their testing. In addition, we have engaged significantly with TBB already raising their roles by over 20 riders and helping them in their launch of a now very strong women's group and a youth cycling team. We have employed two people as well. There have, as well, been many other service and product providers that we have relied on locally. We are now also employing four volunteers for the summer in an effort, of course, to increase our work capacity and capabilities. We hope that this program will also encourage young, bright, and adventurous upstarts to find their own vision of a better world and tackle it.

In addition, all of the shop owners (nearly all are husband and wife teams where women are in charge of ordering) have seen an uptick in business from being known as the first to carry the milele tube.

We have made sales to roughly 400 people (some buy two tubes, some buy one). Our customers are using the bicycles for transporting goods for work, transportation to work, and transportation to school.

In addition to those mentioned, it is important to note that each of these people have families. Beyond our customers, whom we are getting to know better through follow up, our core business beneficiaries (Earnest from TBB, Susan from New Generation, Joseph our mechanic, Titus our sales agent, Green and Geoffrey our testers, Korir from Mama Kip's, and the other sellers have approximately 75 dependents. We have tried to account for some of these in our numbers.

Cost-Benefit Analysis:

We have begun the process of determining the impact of the Milele Tubes on our users. The first step of this is to capture the TRUE cost of punctures to various types of bicycle users.

Baisikeli Ugunduzi uses personal interviews to track customer satisfaction and determine financial savings. For comparison and potential market investigation, both Milele Tube customers and non-customers are interviewed from each demographic, socioeconomic status, and employment category in our market. We have begun discussions with a group that can enable a mobile -based data collection system to assess impact on a large scale. Baisikeli Ugunduzi is working to become certified to utilize the Progress Out of Poverty Index (PPI) platform to track the social impact of its products more in-depth. Baisikeli Ugunduzi has already used the early interviews to understand how much the Milele Tubes save users directly (cost of puncture repair, tube replacement, and lost wages from down time). We will continue to collect data to improve the quality of the information.

Following is the initial data that describes only costs from replacing tubes and paying for puncture repairs. Please note that this data is very preliminary. Because interviews were done in English, we feel that the numbers are very risky (especially the commuter data which ignores all who commute to work as laborers), so the point of showing the information is indicate our capabilities and the format of the data to come in the very near future.

According to our initial data (sample size shown as n=#), boda boda (bicycle taxi drivers; n=20) reported spending on average 836.2 KES (9.8 USD) annually on inner tube replacement, with the highest amount being 2000 KES (9.8 USD). Those who deliver goods (n=8) spend from 340 KES (4 USD) to 1000 KES (11.8 USD) each year on new inner tubes, with an average expenditure of 659.2 KES (7.8 USD). Heavy loads carriers (n=9) spend on average 1097.8 KES annually (12.9 USD), with a minimum of 540 KES (6.4 USD) and a maximum of 2200 KES (25.9 USD). Finally, commuting bicycle users spend from 340 KES (4 USD) to 9720 KES (114.4 USD) every year on tube replacement, with an average of 1624.1 KES (19.1 USD).

Plan for Innovation Center:

The ability to spur bicycle-related innovation and entrepreneurship outside of Baisikeli Ugunduzi is key to our mission as a company. It is based upon solid business and solid mission. Baisikeli Ugunduzi needs many opportunities to develop future leaders of its own organization. In addition, we are hungry for innovations and partnerships that will help our business grow quickly. We believe that having opportunities both internal and external is the answer to this. Given that, we are actively pursuing ways to collaborate with existing agencies to create a home and central source for such activities, and we intend to play a central role in this.

We are currently pursuing several funding sources to support the physical and programmatic resources necessary to make the innovation center a reality. We have begun discussions with local government to support the innovation center physically either in Kitale or Kisumu. We have human resources to partner with in both locales. Even more exciting is the prospect of partnering with Universities in the USA and Kenya to bring in Engineering, Business, and Design students for co-creation activities with budding inventors. We are currently pursuing two proposals along those lines. However, such a center is a large undertaking. We are also making the Innovation Center a piece of our USAID/DIV Stage II proposal.