

# **SELLING BICYCLES TO ALLEVIATE POVERTY**

(Bicycle sales and repair micro-businesses)



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The KwaZulu Natal Department of Transport, in conjunction with the National Department of Transport and local government, has implemented an innovative programme to create a sustainable platform to promote cycling and create entrepreneurial opportunities in rural areas in KwaZulu-Natal, South Africa. The “Rural Bicycle Initiative” of the Department establishes a sustainable bicycle sales and repair business in partnership with the municipalities in towns and villages serving rural areas. This paper details the “Rural Bicycle Initiative” of the Department, highlighting the successes and failures encountered in testing and rolling out the programme.

## 1 BACKGROUND

The KwaZulu-Natal Department of Transport (KZN DOT) initiated the KwaZulu-Natal Rural Mobility Study in July 1998, to identify rural mobility patterns and needs. This study was intended to provide input to the development of policy and strategy of the Department in order to address rural mobility needs.

Surveys undertaken in the study found that:

- the majority of scholars walk to school (98% of primary school and 89% of secondary school pupils);
- 37% of secondary school pupils walk further than 5,5 km, with 11% walking more than 7,5 km to school;
- 43% of primary school pupils walk further than 3 km, with 15% walking further than 4,5 km to school;
- The average cost of travel to school by public transport is about R600 to R1 000 per scholar per year. This equates to an amount per scholar of between 6% and 9% of an average annual rural household income of R10 800 - an amount which is clearly unaffordable; and
- School principals stated that 70% of pupils are often tired at school, 60% are often late in the morning and 58% are sometimes absent from school as a result of the long distances walked.

If government were to subsidize public transport services it was calculated that it would cost in the region of R216 million per annum for those walking above average distances to school. This figure was almost equivalent to the road based public transport subsidy bill in the province. Subsidy would thus have to almost double or else the existing subsidies would have to be almost entirely redirected to scholar services. Neither of these options was feasible or possible.

The study recommended that the most economic form of intervention would be in the form of supplying bicycles to assist scholars in travelling to school, other than in areas where the topography is such that it is impossible to use a bicycle.



## 2 PILOT PROJECT

Following on the above findings, in early 2000 the KZN DOT initiated two rural scholar bicycle pilot projects in the then Ugu and uThukela Regional Council areas, with a view to demonstrate and measure the efficacy of bicycles in improving rural scholar mobility and hence the scholars' potential to benefit from their education, through introducing a mode of transport that is:

- Affordable and appropriate;
- Economically sustainable;
- Environmentally friendly and healthy; and
- Has the associated benefit of skills transfer and job creation.

A project Steering Committee was established to guide the pilot projects. It comprised representatives of the following organizations:

- National Department of Transport;
- KwaZulu-Natal Department of Transport;
- KwaZulu-Natal Department of Education;

- Ugu Regional Council;
- uThukela Regional Council;
- Afribike; and
- Consultants V3 Consulting Engineers and Forshaw & Associates.

Afribike were an NGO involved in the promotion of cycling and V3 Consulting and Forshaw & Associates were the consultants who undertook the Rural Mobility Study and were appointed as advisors on the Pilot Project.

Through much discussion and negotiation the Steering Committee made the following decisions in regards the rollout of the pilot projects.

- The pilot project would target a limited number of specific primary and secondary schools
- The selection of the specific schools would be done in consultation with representatives of the Sub-Regions;
- Liaison with the local communities would take place through the governing bodies of the targeted schools, the relevant Rural Road Transport Forum (RRTF) of the Department and the relevant Regional Education Departments; and
- Meetings would be held with representatives of the Izingolweni and Umtshezi Sub-Regions to discuss more detail on the pilot projects.

The main criteria to be applied in selecting the schools were that:

- they should be located such that a reasonable proportion of scholars have to walk fairly long distances to access the schools (>3 km for the primary school and >5 km for the secondary school); and
- the terrain around the schools should be such that it is feasible to use bicycles as a mode of transport.

### 3 ESTABLISHMENT OF BICYCLE SHOP

The strategy used to promote cycling was to establish a bicycle micro-business in the rural community. The micro-business consists of a bicycle shop, service centre and store-room housed in two recycled shipping containers. The business is owned through a community ownership structure and is run by a member of the community and sells low cost bicycles to the community, services bicycles and sells spares and accessories. The equipping of the micro-business and the initial supply of bicycles is part of the establishment of the micro-business. Subsequent to the establishment of the business it was intended to be self sufficient.

A container bicycle shop for Ugu was established in November 2000. The container was located in the premises of a shop, Mzotho Supermarket that is situated between the two identified schools. A local bicycle shop manager, Lucky Ngcobo, was identified by the local councillors and employed by Afribike. Initial training for the bicycle shop manager was also provided by Afribike, as well as on-going support. Lucky Ngcobo is 27 years of age, with a Matric and is computer literate. He has previously used bicycles himself.

The Weenen bicycle shop was established in August 2000. It was decided that the Afribike bicycle shop would be located within the grounds of the Weenen Combined School, which are fenced with a locked gate entrance. A local bicycle shop manager, Sifiso Langa, was recruited and trained by Afribike. Sifiso Langa had a Matric and a tertiary qualification from PC Training College in Estcourt. He was already familiar with bicycles, owning one himself.



Recycled bicycle sold at Izingolweni shop

## 4 ANALYSIS OF PILOT PROJECT

The Izingolweni bicycle shop proved very successful. Bicycles sold well and the community was very supportive of the initiative.

The Weenen bicycle shop did not prove as successful as the Izingolweni one. Initially, the project went well, with a number of bicycles being sold to scholars at the Weenen Combined School. However, in early November 2000, the shop was broken into and at least six bicycles together with spares and accessories were stolen. In early February 2001, the bicycle shop was again broken into and all the remaining bicycles and spares were stolen, as well as R700 cash, the cash book and stock records.

During this period of time there were also disruptions at the Weenen Combined School, with a number of teachers leaving and the principal threatened with losing his job. The bicycle shop manager abandoned the project and could not be located. It was then decided not to continue with the pilot in Weenen, but to look for another area nearby to which the container bicycle shop could be moved. The container shop was eventually moved to Muden, where a local NGO showed interest in supporting the project. A new bike shop manager, Thokozani Sithole was in the process of being trained by Afribike towards the end of January 2001.

### 4.1 PURCHASE AND PRICING OF BICYCLES

It was decided that the main target market for the pilot project was scholars. It was thus decided that scholars would be selected to purchase subsidised bicycles through the pilot projects. The following criteria were to be applied to the scholars selected for bicycles:

- Bicycles should be targeted at those scholars travelling the furthest distance to school;
- Both boys and girls should be targeted;
- Matric (Grade 12) scholars would not be eligible for bicycles because they would be writing exams/leaving school during the course of monitoring the pilot project outcome; and
- All scholars receiving bicycles must complete the Afribike bicycle skills training course after school.

There was considerable discussion during the course of the project around the pricing of bicycles. While the bicycles need to be affordable to the local communities, the bicycle shops also need to be able to operate in a financially viable manner. Furthermore, additional bicycle subsidies from government could not be guaranteed and care needed to be taken not to price the bicycles at a level that would make any future increase in prices seem inordinately high.

It was agreed that new bicycles would be sold by the shop at their full price, i.e. not subsidized. The emphasis would be placed on supplying subsidized recycled bicycles for the pilot projects and these would be priced at a minimum of R40. The recycled bicycles would be priced according to their condition - those in worst condition would be sold for R40 and those in better condition would be more expensive. Payment for the bicycles could include an element of "sweat equity" by scholars working in the bicycle shop after school. It would be emphasized that the cost of the recycled bicycles is being subsidized by the KZN DOT and was applicable to the bicycles for the pilot projects only.



## 4.2 ACTUAL MARKET

There are about 30 schools falling within 13 traditional authority areas within Izingolweni. The Amakhosi were initially dissatisfied that the bicycles would be available only at the two chosen pilot schools. Discussions were held with the Ugu Regional Council and it was decided that the bicycles would be available to all scholars in the area.

By April 2001, only about 15 bicycles had been sold to scholars from the two pilot schools. However, scholars from other schools in the area and adults in the community had purchased over 130 bicycles. The response was particularly good at Mbonwa High School, which is regarded as a good school by the community and scholars travel long distances to attend the school. In discussions with scholars at Mbonwa High School it emerged that all those who bought bicycles had previously been walking to school, with about 15% walking for longer than one hour in each direction. Only one girl had bought a bicycle, and there are clearly cultural restrictions on girls using bicycles. The scholars were keen to have further training on the use of bicycles, and also requested parking facilities at the school and bicycle helmets, for which they would be prepared to pay up to R25.

The shop was found to be serving a fairly broad geographic area, with customers from Harding, Kokstad, Weza, Murchison, Bizana and Port Edward.

Apart from the scholars, adults are also using bicycles to travel to shops, to purchase vegetables and chickens from farmers, and to travel to clinics. Some people previously using horses and donkeys are now using bicycles. About 30% of the bicycles have been sold to adults although from observations the usage of the bicycles did not seem to correlate with this figure.



## 4.3 PERFORMANCE OF THE PILOT

By end June 2001, a total of 236 bicycles had been sold by the Izingolweni bicycle shop in Ugu at an average cost of just over R150 per bicycle. Of the 236 bicycles, 164 were sold to scholars at a R100 discount.

Just over R3 700 of spares were also sold. This comes to a total turnover of about R40 500 or about R5 800 per month for the months December 2000 to June 2001, with an average of about 30 bicycles sold per month. Most bicycles are bought at the end of the month when people are paid.

The bicycle shop costs as at 2001 can be calculated as follows:

Set-up costs (scoping and site visits, containers, tools and equipment, transport of containers to site, training of shop manager)	R86 000
Fixed monthly operational costs (salaries, administration, accounts):	R1 700
Variable monthly operational costs (telephone, fax, administrative overheads)	R200
initial stock of 250 recycled bicycles at R180 per bicycle	R45 000

By October 2000, a total of 76 recycled bicycles had been sold by the Weenen bicycle shop in uThukela. These were sold at prices varying between R40, R100 and R150, depending on the condition of the bicycle.



By the time the shop was closed in February 2001 due to break-ins, a total of 203 recycled British Post Office bikes had been sent to Weenen and apparently all had been sold. This would suggest that on average about 34 bicycles per month were sold from August 2000 to January 2001. This is comparable with the number of bicycles sold in Izingolweni.

The concept of paying R40 plus so many hours of sweat equity for a bicycle of a higher value than R40 did not work very well. About half of the scholars did not arrive for their sweat equity contribution. Scholars seemed to prefer to pay the full price of the bicycle.

## **5 PILOT PROJECT CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 LOCATION**

Clearly the Izingolweni pilot project was far more successful than the Weenen pilot. Part of this can be attributed to factors beyond the control of the project, i.e. problems at the Weenen Combined School and the break-ins at the shop. However, the location of the Izingolweni bicycle shop at a "neutral" location (a local shop premises and not a particular school) proved to be the better option. The pilot schools initially chosen in the Izingolweni area were not the schools that eventually provided the greatest support for the project, and had the bicycle shop been located in the grounds of one of these schools, it may not have been as accessible to other schools and the community at large.



Bicycle shop established in rural market

The pilot found that the location would effectively determine the size of the market for the shop. Although the project was aimed at addressing rural mobility the shop needs to be located where there is a market large enough to sustain the business. Although locating the shop close to the local store in a dispersed rural area may place it within an area where mobility is limited the number of people who will use the shop will be few. It would thus be preferable to locate the micro-business in the closest market town where most of the residents go on a monthly basis to collect social grants or make purchases. In this manner the micro-business also provides service to a far greater rural hinterland.

### **5.2 TARGET MARKET**

Although the pilot projects were initially aimed at providing an appropriate and affordable mode of transport for rural scholars, the bicycle sales in Izingolweni show that there is a demand for bicycles in rural communities as a whole. The most sustainable option for the bicycle shops in the longer term is probably to sell bicycles to anyone within the community, thereby promoting the use of bicycles as a rural mode of transport. This would not mean that schools should not be targeted (visited and informed about the project), but simply that scholars should not be the exclusive target market.

### **5.3 EFFECT ON OTHER MODES**

There does not appear to have been any effect on the local minibus-taxi operators since the bicycles are being used for trips that were previously done by walking. No adverse reaction was reported from the local minibus-taxi operators.

### **5.4 ROAD SAFETY AND SECURITY**

The pilot areas were specifically chosen as areas with light traffic volumes. No serious accidents have been reported. Clearly security problems with the bicycle shop itself were

experienced in Weenen. In Izingolweni, however, there have been no security problems with the shop.

## **5.5 COSTS AND SUSTAINABILITY**

Analysis of the bicycle shop figures for Izingolweni show that:

- The initial set-up cost is about R86 000.
- The fixed and variable monthly operational costs (including the salary of the shop manager / mechanic) are in the region of R1,900.
- The initial stock of 250 bicycles is equivalent to just over eight months stock at average sales of 30 bicycles per month.
- Each bicycle costs an average of R125 plus a further R34 for transport to the site, totalling R159 per bicycle or R4 770 for 30 bicycles per month (observed average sales).
- If the operational costs are added to the bicycle costs, then the monthly cost is R6 670, which means that 30 bicycles need to be sold at an average of R222 each to break even.
- If a profit of R220 per month can be made from sales of spares and services, then 30 bicycles need to be sold at R215 each to break even.
- If only 15 bicycles are sold each month, assuming constant spares and repairs, the break-even price would be R271 per bicycle.
- If the transport costs could be reduced to R25 per bicycle (R1 500 per delivery of 60 bicycles), then the break-even price would be about R207.

Clearly, if the Izingolweni shop continued to sell bicycles at an average of R150 each, it would not be financially sustainable.

## **6 PILOT PROJECT RECOMMENDATIONS**

Based on the above conclusions, the following recommendations were made:

- a) If the Department intends to promote the use of bicycles as a mode of transport in rural areas, then its role should be to provide seed capital for the establishment and equipping of bicycle sales and servicing micro-businesses. Government would also cover the cost of an initial bicycle stock of bicycles and spares.
- b) The bicycles should be priced to ensure that once the seed capital and initial bicycle stock has been provided, the bicycle shops are able to become self-sustaining small businesses. Bicycles thus need to be sold at a price which would cover all operational costs, including the salary of the shop manager. This would be dependant on the number of bicycles sold per month. Bicycle and spares sales and services must be monitored closely to ensure sustainability whilst not becoming over-priced.
- c) The higher bicycle price may mean that those most in need of transport, i.e. the poorest, are not necessarily benefiting directly from the projects. However, if this is a primary government objective, then it should perhaps be approached differently by identifying the target beneficiaries and providing them with a voucher for a free or reduced price bicycle. This type of subsidy programme could have major cost implications for government due to the administrative systems required to ascertain and verify need. It also could result in similar outcomes since poorer people may sell their subsidised bicycles.
- d) The need for expensive and time-consuming administrative systems related to the projects should as far as possible be avoided. Monitoring of the performance of the micro-businesses mentorship of the shop managers should however be undertaken.
- e) The bicycle shops should be located in a "neutral" place, accessible to all members of the community and should serve a reasonable geographic area to ensure sufficient long term demand. The Izingolweni pilot showed that people were prepared to travel up to 50 km to



access the bicycle shop where long distance bus services were available to allow the bicycle to be transported back. Extensive, on-going, low-cost marketing needs to be maintained by the shop managers to sustain sales.

- f) The bicycle shop managers need to be carefully chosen, trained and supported through mentorship programmes for the first year of operation. It is important for the success of the business that financial and administrative systems are implemented from the outset.
- g) Although infrastructure and safety issues have not proved to be critical in the KwaZulu-Natal pilots, provincial, district and local government should be encouraged to invest some funds in at least basic infrastructure improvement and road signage.

## **7 THE RURAL BICYCLE INITIATIVE**

Emanating from the pilot project the Department developed the Rural Bicycle Initiative. This was implemented with funds from the Shova Kalula programme of the National Department of Transport in 2003/2004 and 2005/2006.

The objectives of the KwaZulu-Natal Rural Transport Initiative are to improve rural mobility and hence the economic and development potential of rural communities through the facilitation of mobility that is:

- Affordable and appropriate;
- Economically sustainable; and
- Environmentally friendly and healthy

In reaching these objectives this initiative has the associated benefits of skills transfer and job creation. It also has the benefit of providing a sustainable platform on which to build other rural mobility or social welfare projects related to cycling.

The principle on which this Rural Transport Initiative is built is twofold. Firstly it works on the principle that “handouts” cannot be said to constitute development and are not sustainable. Secondly it aims to create opportunities for entrepreneurs in the local communities where the Initiative is established.

For this reason the bicycles are not given away to communities but are instead sold at a price that would make the bicycle micro-business a sustainable entity. In this manner the micro-business, once established, can be a sustainable entity without the need for continued government subsidy. It can therefore sustain an entrepreneur from the local community who manages the business and gets paid from the income of the business.

A further 14 bicycle sales and service micro-businesses have been established throughout the province. In the rollout of the initiative many lessons have been learned. These lessons have been used to improve the rollout of the initiative. Some of the lessons learned subsequent to the pilot project are detailed below.

### **7.1 MUNICIPAL INVOLVEMENT**

Although in the pilot project municipal officials were consulted the involvement of the municipality in the implementation of the project was limited. This was identified as a shortcoming of the programme since it was essential that the bicycle micro-businesses integrated with the municipality's local economic development programmes. In this manner the business could support and benefit the municipality's development agenda.

To this end the Department implemented the Rural Bicycle Initiative in partnership with the municipalities. The Department funded: the appointment of consultants specialising in the establishment and training of micro-businesses; training of a shop manager; equipping of the

shop with the necessary tools and equipment; provision of a consignment of new bicycles; and 1 year of monitoring and mentoring of the shop manager.

The municipality funded the acquisition of a venue for the shop. This could either be in a recycled shipping container modified to be used as a shop, or in an existing municipal facility for small businesses or traders. The location of the shop was assessed by the Department in order to assess the suitability thereof.

## **7.2 SUSTAINABLE SUPPLY LINES**

The rollout of the bicycle micro-businesses has been met with an overwhelming positive response from communities. Most micro-businesses sold out their initial stock of bicycles within 4 months of establishment. Unfortunately no mechanisms had been put in place to ensure that micro-businesses could source more bicycles. Although bicycle suppliers were willing to sell bicycles to the Department none could be sourced who were willing to supply bicycles to remote rural shops on a cash-on-delivery or pre-payment system. Most of the shops thus ran out of stock of bicycles and spares and some closed altogether, opening only when requested by customers requiring bicycles to be serviced.

In 2005 a supplier was identified who would be willing to supply rural shops without charging exorbitant transport charges. This has greatly improved the viability of the bicycle shops although the cost to supply some of the more remote shops is high.

The lesson learned is that it is essential to put in place arrangements for long term suppliers at the same time that the shops are established. In order to minimise transport costs it is not advisable to locate bicycle shops in too remote a location or too widely dispersed. The cost of transport can be minimised if suppliers can supply several stores on one trip.

## **7.3 ENTREPRENEURSHIP**

Entrepreneurship is a skill which is essential for the success of the bicycle micro-businesses. The success of the businesses is largely dependant on the number of bicycles and spares sold and the number of bicycles maintained. Entrepreneurial skill is essential for the shop manager to identify customers and market the business. Some examples have been observed of the skills needed to make the micro-business a success.

Several of the shops established struggled to become viable. Shop managers reported that bicycles did not sell and the micro-business was not viable yet other bicycle micro-businesses in similar environments had thriving businesses. On investigation it was found in most cases that shop managers had not taken any initiative to market their store. In other cases shop managers had not assembled any bicycles and so when customers arrived at the store they could not see or test a bicycle and thus were unwilling to buy. In some cases shop managers simply did not open for business yet claimed they had no customers. Where stores had done basic advertising through putting up hand written posters in schools, clinics and government offices they had difficulty in keeping up with demand.

Due to the problems mentioned above of securing agreements with suppliers of bicycles and spares all of the initial micro-businesses established ran out of stock of bicycles and spares. The minority of the shop managers took the initiative to source their own suppliers and negotiate beneficial pricing. When business was slow one entrepreneur started a bicycle hire venture so that people could transport groceries back to their rural homesteads or so that local children could go for joy rides for a few cents. To supplement income from the shop the same shop manager sold sweets. This also had the advantage of bringing potential customers into the shop.

If the shop manager employed does not have the entrepreneurial skills required, the micro-business will fail. Extensive training and mentorship is the only way to develop these skills. A

one week training programme prior to establishing the micro-business is insufficient and must be followed up by at least monthly mentorship sessions with the shop managers in the first year of the businesses.

#### **7.4 RECORD KEEPING**

The mentorship and monitoring of the bicycle shops is difficult if no accurate records of income and expenditure are maintained. Despite extensive training and assistance none of the bicycle micro-business managers kept accurate and worthwhile accounting records. This has made it extremely difficult to monitor the sustainability of the bicycle shops since no accurate record of income and expenditure is kept. The lack of basic management accounting practices also places the long term sustainability of the micro-business at risk.

An innovative strategy to improve this has been proposed. The strategy involves the establishment of an award system where the accounts of all established micro-businesses are assessed at the end of every year to ascertain the best amongst them. This strategy is still untested and so no indication can be given as to the success thereof.

#### **7.5 SECOND-HAND SPARES**

Bicycle shops in urban areas dispose of slightly worn bicycle spares continuously. Wealthy recreational cyclists often replace tyres, tubes, bicycle parts, shoes, cycle computers, bottles, cycle clothing etc. and give the old equipment to the bicycle shops to dispose of. Most of this is thrown away despite being in reasonable condition. Through partnerships with these bicycle shops these spares could be donated to bicycle micro-businesses who would recycle them. Such partnerships can significantly improve the profitability of the micro-businesses.

In order to work the parts need to be delivered to the micro-businesses at no cost to the business since the cost of transport would be greater than the cost of the spares. Innovation in securing supply systems need to be pursued.

#### **7.6 RECREATIONAL CYCLING**

The main focus of the Rural Bicycle Initiative is the creation of a sustainable platform for the promotion of utility cycling. Recreational cycling was found however very popular, especially amongst scholars. Two shop managers have organised cycle races for the local youth. All arrangements were made by the shop managers and sponsorship for prizes was even secured. Although the races were small the races created a profile for cycling within the area and also generated some income for the shop manager, either directly from the entry fee for the race (R10 per rider) or from the repairs required to bicycles required before or after the race.



### **8 CONCLUSION**

The Rural Bicycle Initiative has established 16 bicycle sales and service micro-businesses throughout the province and over 3000 bicycles have been distributed in rural areas. Considering that KwaZulu Natal has a population of over 9.7 million this is a mere drop in the ocean. Locally where bicycle micro-businesses have been successfully established a difference can be seen. With time this impact will increase.

The effectiveness of the strategy taken by the Department can only be measured in the long term sustainability of the micro-businesses established. The continued operation of the

Izingolweni bicycle shop in November 2000 is testament that the strategy is viable if the following factors are in place:

- The micro-business is located in an accessible and neutral venue which will have passing pedestrian traffic
- The shop manager is empowered to run the micro-business as an entrepreneur and not as an employee
- Arrangements must be in place for the shop to access affordable bicycles and spares on a sustainable basis without the need for government assistance

An assessment of the impact on the incidence of cycling in areas where bicycle micro-businesses were established will be undertaken in 2007. This assessment should provide some indication of whether the establishment of bicycle sales and servicing micro-businesses have had an impact on the communities.

## **9 REFERENCES**

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