SHAP(E)ING UP Service Delivery

Government policy dictates that thorough consultation must take place with communities regarding all new services, including water and sanitation. A new tool developed by Sigodi Marah Martin (SMM) through research funded by the Water Research Commission (WRC) aims to assist municipalities to better serve their people. Compiled by Lani van Vuuren.

Nearly 10% of South African households still reside in informal settlements where they live mostly in shacks made of corrugated iron, cardboard and other rudimentary materials. These areas are overcrowded and prone to fires and flooding, with limited access to basic services. The integration of informal areas into South Africa's urban fabric has been high on government's list of priorities in the last few years. Since 1994 around 2,6 million low-cost houses have been constructed.

Last year, the Department of Housing announced its intention to fast-track delivery of housing with the objective of accommodating all those seeking homes within formally planned settlements by 2014. The department is targeting a delivery rate of 500 000 units a year (the present housing delivery rate is about 260 000 units a year). To achieve this, the housing budget is projected to grow from R9-billion in 2007 to R10,6-billion in 2008/09 and R15,3-billion by 2010/11, at an average annual rate of 19,4%.

INFORMED CHOICES

Housing costs are made up of a number of variables. These include the land, servicing of the land (which will vary depending on the size of the erf and the standard and type of servicing provided), the number of rooms, and the standard of fittings, finishing and services. In addition, there are the costs of the overheads (such as selling and administration costs).

Selecting a house that meets the spatial needs of a household, which is also affordable, is impossible for everyone in the low-income strata. "It is paradoxical that in spite of this fact such a high percentage – if not all – expenditure on housing solutions for the poor is made without consultation with the users," notes Richard Martin, Head of the Research Division at SMM. "This is despite the fact that government advocates the Batho Pele or 'people first' principle, which stipulates that citizens should be consulted and given a choice when it comes to service delivery."

"The SHAPE model presents the costs in such a way that any variable may be considered in real time, so that beneficiaries may make informed decisions."

This is especially true when it comes to the selection of sanitation services. "Every sanitation choice affects a consumer's disposable income, and people should be able to make an informed choice," explains Martin. "For example, waterborne sanitation does not only have cost implications for the local authority which has to install, operate and maintain the system, but also for the user who has to purchase fittings and toilet paper. These details are not always shared with communities."

In fact, many municipalities are seemingly not rolling out services with consultation of communities at all, but are instead implementing choices made by decision-makers, rather than by the receiving households themselves. When inappropriate solutions are implemented in terms of what people want it can lead to misuse, neglect or even vandalism of infrastructure. If the infrastructure is too expensive, bills will not be paid which may give rise to the discontinuation of services. Finding the right solution is therefore fundamental in the quest for sustainability.

COMMUNICATION TOOL

To improve the situation, the WRC tasked SMM to develop a computer modelling tool to help determine the effective demand for services, with a specific focus on sanitation, among peri-urban residents. The result is the SHAPE (Sanitation and Housing Applied Piorities Enquiry) model.

"Crude measures of cost are often used by decision-makers and developers to estimate, for example, a square metre cost for housing, and a fixed sum for a serviced erf. The apparent precision of these estimates hides the crude basis on which the calculations are made, and prevents anything more than a token involvement in decisions on the housing package," explains Pieter Pansegrouw of SMM's Research Division. "The SHAPE model presents the costs in such a way that any variable may be considered in

real time, so that beneficiaries may make informed decisions."

The model establishes the demands for housing and all other infrastructural services (water, sanitation, electricity etc) simultaneously. This is an enormous advantage to government and other authorities responsible for delivering services to the residents of informal settlements.

HOW THE MODEL WORKS

The basic objective is to allow the user to specify their preferences for, for example, sanitation, within the context of a global cost for the housing solution. The model recognises that, particularly for the poor, there are trade-offs between stand size and servicing, house size, and standards of finishes and fittings. It also takes the housing subsidy into account. "The value of this model is that, for the first time, as far as we are aware, a comparatively accurate estimate of the actual cost of all components allows such a trade-off to be made," notes Pansegrouw.

The SHAPE model is based on the concept of all-inclusive prices that may be used in a component form to obtain an aggregate price. Thus, a price can be obtained for a single room, for two rooms etc. For electricity, for example, there is a connection cost and a wiring cost for each room. In addition, there is the monthly charge. The costs are presented in monthly form – which is the way that people think about housing expenditure – and are totally inclusive. This means that, not only are the construction costs included, but also the monthly service charges and rates.

As far as sanitation is concerned the model allows comparison between the cost-in-use of several different sanitation solutions (including full waterborne, shallow sewer, single and double ventilated improved pit, and urine diversion systems). The user is not required to evaluate the relative capital and running costs – the model incorporates monthly amortisation of capital costs as well as water consumption etc, thus allowing all costs to be presented as a single monthly expense.

SMM

Members of a community are taken through service delivery options using the SHAPE model

HOUSEHOLD SURVEY

To test the model households were surveyed in several informal settlements throughout South Africa. The demand for housing and other services was established according to what households could afford or what they were willing to pay for the services.

Affordability was found to be the main driver, with people selecting certain technologies not because they necessarily wanted them, but because that was what they could afford. For example, all the households initially said they wanted full waterborne sanitation, however, once they understood the costs involved, about a quarter of respondents chose either single or double VIPs. About three-quarters of people surveyed requested water in their homes.

One of the most interesting results of the survey was that 95% of the participants argued that they would be satisfied with small houses (i.e. one and two rooms) as long as they could receive higher levels of water and sanitation services. With smaller families than in the past, many participants argued that they may build an extra room or two themselves in future. "People realise that the upgrading of services such as water and sanitation is far more complex and expensive than expanding their homes, which they can do themselves," says Pansegrouw.

Another interesting find is that participants regarded electricity as an extremely important service – even more important than waterborne sanitation. More than 80% of participants indicated that they required electricity, however, few opted for a geyser.

Importantly, the application of the model during the research led to far greater realism among the inhabitants of dense settlements as far as services are concerned. More appropriate and realistic choices were made by the inhabitants which they actually could afford – not only as far as sanitation was concerned, but also with regard to housing and all the other infrastructural services. Many people also said they felt empowered by the exercise as they felt they were making their own decisions.

The model will be made available to practitioners and it is hoped that this research study will have a positive influence on the establishment of sustainable service delivery that is acceptable to all.