

Using franchising principles to improve water services reliability

Jay Bhagwan, Kevin Wall, and Oliver Ive (South Africa)

Abstract

Experiences in South Africa and other developing countries have shown that lack of attention to operation and maintenance (O&M) impacts on the sustainability and the long term operations of water services. Innovation and creativity is warranted in dealing with this challenge. Partnerships using the basic principles of franchising are able to address many challenges associated with the operation and maintenance of water and sanitation infrastructure. Generically, partnerships of this nature would:

- *transfer appropriate skills to local personnel,*
- *bring ongoing assistance, mentoring and quality control, and*
- *provide backup at-a-distance skills together with the incentive, on the part of the local (franchisee) personnel, to call for those at-a-distance skills and, on the part of the franchisor, to make them available, because there would be a binding contract between them and a shared reputation.*

Research findings indicate that many opportunities lie in applying the principles of franchising to suitable activities of the water and sanitation services delivery chain -- that is, of readily systematised repetitive operation and maintenance activities. A selection of these activities has been researched and modelled so that they can be made available to small enterprises as the basis of viable businesses. A substantial body of research outputs and documentation of value to water services authorities, potential franchisors and potential franchisees, is now available from the WRC (Water Research Commission).

These concepts are now being piloted with considerable success in a school sanitation programme in the Eastern Cape Province. Under the guidance of a franchisor, trainee franchisees are well advanced with initial cleaning and the routine maintenance of the sanitation facilities at 400 schools. The purpose of this paper is to share the concepts of franchising principle and their relevance to water services O&M, findings from the research and lessons from the pilot study.

Keywords

Water, sanitation, operation and maintenance, franchising partnerships, South Africa

INTRODUCTION

Some areas of the developing world have seen an increasingly poor and often unacceptable quality of water and sanitation service. The reason for this is invariably inadequate arrangements and incentives for operation and maintenance (O&M) which include not only skills shortfalls, budget shortfalls and sometimes inadequate design and/or construction, but also weak institutional arrangements as well as unwillingness or inability to change.

Recognising the fact that good institutional management and processes are key to sustainable water services delivery especially in developing countries, it is imperative that innovative models are developed to respond to the variety of challenges posed by growing infrastructure and technology changes. The concept of franchising partnerships for the operation and maintenance of infrastructure is one of many institutional models which responds to the decentralisation of operation and maintenance water services (i.e. water and sanitation) infrastructure.

Improved institutional and financial mechanisms, where corporate, social and ethical responsibilities are given due attention, are needed. An important aspect would be how to increase positive incentives. Part of this must be the measurement of performance, and a system for rewarding on the basis of that performance.

Research has developed a partnership concept, adapting the principles of franchising to the operation and maintenance of water services infrastructure (Wall, 2005; WRC awaiting publication). Through these partnerships:

- owners of infrastructure can access the higher-level expertise in operations and maintenance that is seldom found outside the larger urban areas; while
- small enterprises able to provide locally-based service provider solutions are created and nurtured.

This paper presents the key features of water services franchising partnerships as have they have been developed in the research, and reports on the in-field piloting of the approach in the Butterworth district in the Eastern Cape province of South Africa.

The partnership concept

The concept has been formulated and developed with a view to improving water services (including sanitation) operational quality, reliability and efficiency through introducing a new (to water services) supply-side operation and maintenance provider mechanism. This research and development work has been undertaken by a partnership of the Water Research Commission

(WRC) of South Africa, the Council for Scientific and Industrial Research (CSIR) and the private sector water services operator Amanz'abantu Services (Pty) Ltd.

Public sector authority operation and maintenance of its own infrastructure is often unsatisfactory in South Africa (SAICE, 2006; DWA, 2009; DWA, 2010), for reasons not inherent to the in-house model, but because of problems with its implementation. Franchising partnerships might not be ideal, but would in many situations offer the prospect of improved services.

The partnerships would involve three parties – the franchisor, franchisee and the owner of the water services infrastructure. The main incentive of the franchisor and franchisee to perform is that their income and the sustainability of their businesses depend directly on the success of their collective performance.

These partnerships are a means of:

- assisting infrastructure owners by providing expertise in water and sanitation infrastructure operations and maintenance that would very seldom if at all be found outside the metropolises and larger urban areas; while
- creating and supporting small locally-based and efficient service provider solutions.

Generically, franchising:

- transfers appropriate skills transfer to local personnel,
- brings ongoing performance measurement and support, and mentoring and quality control, and
- provides backup at-a-distance skills together with the incentive, on the part of the local microenterprise (franchisee) personnel, to call for those at-a-distance skills and, on the part of the franchisor, to make them available, because there is a binding contract between them and a shared reputation. (FASA, 2005; Parker and Illetschko, 2007)

At present, staff members at the majority of public sector infrastructure authorities in South Africa are capable of dealing with routine, day-to-day operational needs but are unable to deal with anything more demanding, directly resulting in frequent non-compliance with the performance standards laid out.¹ The essence of franchising partnerships is the creation of a pool of appropriate expertise which the local systems managers can draw upon, a restructuring of the local responsibility for operation, and the creation of a two-way obligation – an obligation to call for assistance from the pool, and an obligation to respond rapidly to that call. All of this together with the incentive structures to ensure that it happens.

¹ Which include, in respect of drinking water quality management, for example: water safety planning, process control competency; efficiency of monitoring of drinking water quality; credibility of drinking water sample analysis; drinking water compliance with the appropriate South African National Standard; and drinking water quality failure response management. (DWA 2010, pages 8-10)

Franchisee water service providers, dependent for their livelihood on the success of their business, would have a strong incentive to perform, and would also benefit from the franchisor's expert guidance, enjoying the necessary ongoing support, mentoring and quality control, and having quick access to the appropriate level of expert assistance when they need it.

The franchisors would be any institutions that have the required expertise, are willing to provide the service, and would not be in a conflict of interest by providing the service. The franchisees would be small entrepreneurs; franchising partnerships would stimulate and support the development of local enterprises within the service delivery environment.

Modelling of the franchising of those elements of the water services value chain that are suitable for small business in that the components can be readily systematized, and have indicated the huge potential and opportunity which existed for the franchising of many repetitive activities (Wall, 2009). This modelling has drawn upon first-hand knowledge of operating these same elements in contexts as close as possible to franchising. It has also drawn upon the understanding of the small number of franchises already active in the water services sector, and upon the understanding of the very much larger number of franchises in other fields.

Some of the activities that appear to be suitable for franchising include operation and/or maintenance of on-site sanitation facilities and small treatment plants, meter management, plumbing services, sewer maintenance, pressure management, operating abstraction points operation of pumpstations, and site maintenance.



Figure 1 The type and scale of infrastructure that a small or microenterprise franchisee could possibly operate and maintain

Whereas a business based on a single element of the water services delivery value chain might not be viable, a franchisee might be able to build a viable business by offering several water-related services. The franchisee would thereby achieve dual objectives such as economy of scale and lessening its dependence on one or a limited number of clients.

What is good or bad for all small enterprises is good or bad for franchising partnerships. However the converse does not necessarily apply. A small franchisee enterprise, given the support it would receive from the franchisor, is likely to more easily meet regulatory and other requirements than a small standalone enterprise, everything else being equal.

An owner may require contractual recourse not only to the franchisee, but also to the franchisor. If this were deemed to be necessary, an additional contract would be required which closes the loop between the franchisor and the owner. The latter may require this contractual assurance that the franchisee will be supported by strong management, and also that the franchisor is able to make alternative arrangements which will ensure continuity of service should the franchisee for any reason whatsoever fail to meet its contractual obligations to it. Especially this assurance could be sought if the franchisor's expertise or track record is a significant reason for the owner to contract with the franchisee, and the franchisee is an unknown quantity.

In summary: franchising partnerships can offer significant potential for improvement in public sector water services operational quality and reliability.

There are precedents in South Africa of franchising partnerships to the benefit of water services infrastructure, but only to private sector-owned infrastructure. The longest-running of these is a Pretoria-based company called The Drain Surgeon which for 30 years has provided plumbing and related services to urban households, businesses and industrial premises. This franchise has grown to the point that it is a nationally-known brand, represented in all of the cities and major towns of South Africa.



Figure 2 **The Drain Surgeon at work**

Amongst the handful of other examples is a company that provides a range of high-end wastewater solutions in specific sectors of industry. Briefly, it (more correctly, one of its several franchisees) is appointed by a private client to take care of the wastewater stream, treating it for reuse or for discharge to a natural watercourse in compliance with the requirements of the national Department of Water Affairs. In this instance, the franchisees are typically university graduates with degrees in chemistry or chemical engineering, and clients include mines and other heavy users of water, such as poultry processing plants.

The pilot – Eastern Cape Province schools sanitation programme

During 2008 initiatives towards a pilot came together. Contrary to expectations, when undertaking the research over the last few years, that the public sector entity willing to pioneer a franchising partnership pilot would be a municipality, it was the Department of Education of the Eastern Cape provincial government that was the first to prove receptive. Its officials responsible for infrastructure indicated great interest in a pilot that would see franchisees carry out routine cleaning and maintenance of schools toilet facilities.

With the support of Irish Aid, a situation-specific development for a pilot, and general support over a period of three years starting in 2009 was realised.

At the same time, a few large water services providers began to take interest in franchising partnerships. In particular, Amanz' abantu² Services (Pty) Ltd, a provider based in East London with a footprint covering the whole of the Eastern Cape province, extrapolated into the franchising concept its well-established and very appropriate expertise, as well as its long experience of working alongside rural and developing communities. In 2008 it set up a subsidiary, Impilo Yabantu³ Services (Pty) Ltd, to be a franchisor and began to assess the potential market and approach selected owners of public sector infrastructure in the province.

Early in 2009, a memorandum of understanding was signed between five parties: the Department of Education (DoE), Irish Aid, the Water Research Commission (WRC), the Council for Scientific and Industrial Research (CSIR) and Amanz' abantu. In this memorandum it was inter alia stated that:

- The DoE wished to utilise small, locally based enterprises, in partnership with an established provincially based service provider, to provide identified maintenance services for its facilities.
- Research indicates that the franchising model offers public authorities “a contractual mechanism for improved efficiency, flexibility and accelerated resource mobilisation”.
- Amanz' abantu would contract with the DoE in order to set up and run a pilot programme, using the principles of franchising partnerships, for maintenance of schools sanitation facilities in the Butterworth Education District.
- Impilo Yabantu would perform the role of the franchisor for the pilot programme.
- The DoE would, from its budgets normally allocated to this purpose, provide the funding for maintenance of the facilities.
- WRC and CSIR, funded by Irish Aid, would provide policy, technical and other assistance necessary to facilitate the pilot programme – including drafting the terms of reference, formulating contractual documentation, monitoring its progress, and disseminating results with a view to replication in other areas of franchising partnerships for operation and maintenance of water and sanitation facilities.

Thus it is that the first major pilot is in respect of the maintenance of schools sanitation facilities in the Eastern Cape Province. Matters have come to a point at which there is little disagreement that most schools in that province, and especially the rural schools, are unable to operate and maintain this infrastructure. Many schools have not assigned responsibility for the infrastructure to members of staff.

School toilets and access to education

The built infrastructure of many South African schools leaves a lot to be desired. Not only in terms of facilities that these schools have lacked from the outset, but especially deplorable is the way in which so much of the infrastructure that was provided when the school was

² "Water for the people".

³ "Health for the people".

originally built, has since been neglected. When water supply, sanitation⁴ and hand washing facilities are insufficient or missing altogether, schools more readily become places where diseases are transmitted. Interventions at schools not only lead to safer in-school learning environments, but are investments – when one teaches a child, one teaches the whole community.

Quantitatively, more important than the safety aspect, can be the way in which infrastructure can exclude (or enhance) access to education. Every day, countless pupils – especially girls – are deprived of contact hours at school directly because of lack of maintenance of the physical infrastructure (specifically the water and especially sanitation facilities) of their schools. When sanitation facilities are inadequate, pupils may have to find a toilet outside the school premises, and this may lead them to being absent from the classroom for up to half an hour. They may even go home in order to use the facilities there. For many rural school earners who will have had to walk considerable distances to get to school, this means not being able to return to school that day. Girls who are menstruating would often rather not go to school than have to deal with the lack of privacy. Therefore improving the sanitation facilities could during the course of the year almost double the contact hours for many pupils.

South Africa is by the way not unique in reporting that the state of schools toilets significantly discriminates against girl pupils. (For example: IRIN, 2010⁵; Nahar & Ahmed, 2006; UNICEF, 2005⁶; WaterAid, 2009)

Neglect of school infrastructure, causing a learner's school day to be interrupted and/or abbreviated, is a partial withdrawal from that learner of access to learning. Improved sanitation (and water) facilities, hygiene education and the promotion of hand washing inevitably leads to less sickness and also to improved school attendance not just in terms of less days absent from schools, but also to increased time on tasks each day. This increased attendance by healthier pupils must lead to better examination results.

Modus operandi

The concept of a franchising partnerships model for the routine maintenance of water services infrastructure is now being tested and evaluated at some 400 schools in the Butterworth

⁴ With regard to sanitation specifically, the national DoE's statistics as at October 2008 reflect that, of the 24,751 public schools, 1,004 (4%) do not have sanitary facilities (Source: Parliament written reply question 1844, internal question paper 32 2008). This statistic is misleading since, in the authors' experience, the sanitation facilities of a great number of schools serving the poorer half of South Africa's communities, especially those in the rural areas, are dysfunctional or unhygienic, or both. To all intents and purposes, these schools have no usable sanitation facilities.

⁵ "The key reason girls were absent while menstruating was a lack of privacy, unavailability of sanitary disposal facilities and water shortages." (IRIN 2010)

⁶ "There are many non-curriculum considerations that support girls' education, and failing to provide them makes education inaccessible, especially for girls. Schools need safe water and separate, clean sanitation facilities. Too often, schools have polluted water supplies and filthy, broken latrines. In many cases there are no water or sanitation facilities at all. Health education curricula are undermined if children are unable to practice what they learn about drinking safe water or washing their hands. *If parents think that schools are hazardous places, they will keep their children at home. Many times girls who put up with deplorable conditions drop out once they begin to menstruate.*" (UNICEF 2005, page 12) (*Emphasis added by authors.*)

Education District. Throughout, the Amanz' abantu and Impilo Yabantu team have worked closely with the DoE managers.

Establishing the franchisees

Advertisements placed in May 2009 called for interested parties to come forward. A condition was that they had to be resident in the Butterworth area – firstly because it was important that the work would be done by "local" people from the communities that they would serve; and secondly, to minimise travelling time and cost to Butterworth and to the schools that they would be servicing. Distinct areas, determined on accessibility and scope, were identified within the Butterworth District, one for each franchisee, and each franchisee would be required to have its home base within the service area allocated to it.

Prospective franchisees were screened, and those shortlisted were interviewed in more depth. Those selected received initial training in East London during the first week of June. Immediately thereafter the trainee franchisees met with the DoE Butterworth District staff and headmasters to plan their programme schedules, and for works orders to be agreed.



Figure 3 Franchisee's team at a school

Training, mentoring and monitoring

Whereas approximately half a dozen franchisees would be sufficient for the task of regular servicing of the schools sanitation facilities in the Butterworth District, eight underwent training, on the assumption that a couple would drop out over the course of time. Several of the trainee franchisees are in business on their own for the first time.

The franchisees received initial formal training in performance of the tasks required of them. They have received further training and development as their understanding has deepened, in addition to which they benefit from ongoing mentoring through both formal and informal meetings with the franchisor.

At the formal workshops arranged to further the ongoing training process, the franchisees report on their progress and raise, for general discussion, the problems and successes they experience. Because each franchisee is responsible for a different geographical area, franchisees do not regard themselves as being in competition. Thus they readily share information, knowing that it will benefit all the franchisees. This is one of the strengths of the franchise arrangement.

The de-briefing of franchisees on their visits to Butterworth each Friday is also an occasion for more training, the answering of queries by the franchisor, and the sharing of knowledge by the franchisees.

The franchisor has drawn up a Quality Management System (QMS), encompassing all aspects of servicing, including methodologies, safety plans, audits of franchisees, risk assessments and administration. Because of the pilot nature of the project, the QMS is a work in progress document.

The franchisor also compiled a dedicated Operation Instruction Manual (OIM), and has trained the franchisees in its use. This includes:

- Occupational Health and Safety Plan
- Quality Management System
- Methodology Plan
- Service Plan
- Costing Plan

Training of the franchisees includes not just maintenance skills, but also business skills, including the necessary knowledge of human resources management.

In addition to training the franchisees, Impilo Yabantu also trained an in-house team, and intends to keep it in the field even when the franchisees are working satisfactorily. The one purpose of this team is to be available as a back-up should a franchisee drop out. The other purpose of the team is to provide the franchisor with benchmark costs.

The work of cleaning and maintaining schools sanitation facilities began around the end of June 2009. Impilo Yabantu set up an office and stores in the town of Butterworth. Apart from the basics (cleaning equipment and protective clothing), and a light delivery vehicle emblazoned with the Impilo Yabantu logo, each franchisee was supplied with a digital camera to take "before" and "after" maintenance service photographs. It is on the basis of these photographs,

and a signing off of the works order by the school principal, that the franchisees are paid. Nonetheless, spot check visits to randomly selected schools are also undertaken by the franchisor.

A key component of the service provided by the franchisee is that of inspection and reporting on the serviceability and suitability of the facilities. Reports are submitted to the district managers of the DoE following each visit, and repair and maintenance lists are then agreed for implementation at the next visit. In this manner, ongoing service relationships are developed between the franchisees, the school principals and the DoE's district managers.

Impilo Yabantu is continuing to provide structured learning in the form of on-the-job specific skills training and mentoring. Impilo Yabantu is also responsible for quality assurance.

Progress and achievements

The pilot is establishing and supporting locally-based small enterprises (mostly owned by women) for the provision of appropriate and locally-based service solutions. It is creating jobs, creating entrepreneurial opportunities, and, through facilitating workplace learning, upskilling rural people as well as improving schools sanitation facilities.

Progress with cleaner sanitation facilities in the schools that form part of the pilot project is evident. The franchising partnership concept, as it is being applied in the Eastern Cape schools pilot, is greatly improving the state of sanitation and hygiene at the schools it has reached so far. The emphasis is on the quality and reliability of the service delivered, and the viability of the franchisor and franchisees.

At the time of writing (July 2010), the toilet facilities of most of the 400 schools in the Butterworth District have been attended to in a first round of maintenance (many of them had been in a dreadful state – some even totally unusable), and a second round has begun. Impilo Yabantu has long completed the setting-up phase, including the design and implementation of training, and preparation of operation methodology.

The state of the sanitation facilities at the pilot schools has so much improved that the Department has requested that the programme be rolled out to a further three education districts.

It is envisaged that once the system is working smoothly, the franchisees will be able to offer their services to clinics, other public buildings, and to the private sector. A couple of the franchisees have already undertaken some work for a municipality, and more opportunities have been identified for routine maintenance of large numbers of household toilets.



Figure 4 Franchisee (on the left) with her team. Impilo Yabantu branding prominently displayed on overalls and on vehicle.

Issues emerging from the pilot experience

Apart from the need for constant attention to be paid to the process of payment, and to cash flow, a number of issues are emerging, and these must be addressed. In the short term, the biggest issue is the need to address water and solid waste at the schools.

Whereas current activity is focused on the sanitation facilities at the schools, it is abundantly clear that attention must soon be given to the water facilities, and to solid waste disposal.

- Many of the schools have no solid waste facilities, and inevitably much of the trash ends up in the toilets.
- Most of the schools are not on a reticulated water supply system, and are reliant on rainwater harvesting. That is, when they were built, gutters were in place to collect roof water and channel it to storage tanks. But the gutters on many schools are now broken, therefore no collection, therefore no water in the tank. The tanks themselves in many instances are broken or fouled. Taps are often broken or missing. Children have to bring water with them to school.

The finances

Initially, ImpiloYabantu is receiving the works orders directly from the DoE. In effect, each order is a small contract. (For the preliminary round of maintenance, each order is between R 2000 and R 5000 (US\$ 250-650).) Impilo Yabantu then instructs the franchisees to perform the work.

Potential total turnover of all the Butterworth District franchisees is of the order of R 4 million (US\$ 550,000) per annum. That is estimating their turnover on work which it is clear is pretty much the minimum that they need to do on school sanitation, and assuming that they need to visit schools on a six or seven week cycle. If they are asked by the school to do more (e.g. add solid waste, or maintenance of water infrastructure), or if they start working for other clients, then their turnovers will increase accordingly.

The franchisees are billing the schools (or the DoE on schools' behalf) each time they do cleaning and maintenance. But all of the development costs – developing the concept, and training schemes, conducting the training, preparing the operations manuals, etc – are being funded by Irish Aid (through the WRC) and also by the contributions of Amanz' abantu.

The franchisees have taken out loans to fund the capital outlay for vehicles, equipment, and so on. Franchisees will pay these loans off over the next few years from the income from providing the maintenance service. Due to the burden of the start-up costs, franchisees are not expected to make net profits until the second or third year. The franchisor has been working with selected financial institutions to structure financing arrangements, so as to enable franchisees to access affordable loan finance. This type of support would not normally be available to standalone small businesses and is thus an additional benefit enjoyed by franchisees over their standalone counterparts.

Lessons learned

- The franchising partnerships concept, as it is being applied in the Eastern Cape pilot, is promising to be very successful in terms of the quality and reliability of the service that it delivers, and in terms of the viability of the franchisor and franchisees. While this pilot is benefiting from an extraordinary amount of management attention from Amanz' abantu (and Impilo Yabantu), CSIR and WRC, enabling that attention is the purpose of the Irish Aid funding. The attention is manifested in many ways, not least in the great assistance given to the trainee franchisees in respect of ensuring that the processing of payments to them is running as smoothly as it is, and in the bridging finance they have had to receive from their main contractor, up to now Amanz' abantu.
- The principal lessons learned from progress with the pilot so far are:
- Task-specific concept development (for example the specifics of the business model, the training programme and the operations manuals) can only be done by a franchisor that has the knowledge – based on first-hand experience in the same or a similar community – of the details of performance of that task.
- Potential franchisees must be chosen on the basis of willingness to work hard and to commit to the business principles.

- More potential franchisees must be chosen for training than will be needed to undertake the work – attrition during the training period will reduce their number.
- Because water is an essential service, provision must be made in the franchising agreement for prompt replacement of non-performing franchisees.
- Cash flow problems will quickly put any small enterprise out of business. Therefore careful attention must be paid to resolving any procedural issues around the payment process and ensuring prompt payment of invoices submitted by the franchisees.
- In order to facilitate rapid and dissension-free agreement that the work has been performed according to contract, and that payment can be authorised, tasks must be as standardised as possible, and assigned standard prices.

CONCLUSION

The research and development team is monitoring the progress of the pilot, and will in course of time disseminate results with a view to replication of the franchising partnerships concept in the operation and maintenance of other types of water and sanitation facilities. Beyond water and sanitation infrastructure, there would appear to be opportunities in electricity reticulation and other areas of infrastructure.

Water services infrastructure owned by municipalities offers many opportunities. The incentive to municipalities to reform their current often inadequate provision for quality service delivery is the increasing pressure from the South African national Department of Water Affairs, which is threatening to prosecute authorities that do not comply with the legislated requirements for safe drinking water and adequate sanitation.

In a franchising partnership arrangement, the help of the franchisor would be of particular value away from the major urban centres. For example, few rural municipalities in South Africa can afford to employ competent qualified staff, and this directly results in periodic unreliability of supply and frequent non-compliance with national standards relating to, for example, wastewater treatment works effluent quality (SAICE, 2006; DWA, 2009; DWA, 2010). Significant improvements would soon be seen if the generally under-qualified and under-resourced water and sanitation services staff could have this ongoing support, mentoring and quality control, or if the municipality could partner with microenterprises which would, through franchising partnerships, enjoy the necessary ongoing support, mentoring and quality control from the franchisor, and would have quick access to skilled assistance when they needed it.

There is in South Africa immense potential for franchising partnerships for water and sanitation services operation and maintenance. The authors believe that the concept can be replicated elsewhere⁷ also in respect of other services.

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- WRC 1610/1/10: *Overview of the concept of franchising and its relevance to water services*.
- WRC 1610/2/10: *Review of policy, regulation and legal aspects*
- WRC 1610/3/10: *Modelling of selected water services operational elements*
- WRC 1610/4/10: *Institutional review for the application of franchising*
- WRC 1610/5/10: *Establishing criteria for the selection of water service franchisors, partnerships and franchisees*
- WRC 1610/6/10: *Business analysis case study: schools sanitation O&M*
- WRC TT432/09 (1610): *"Going with the franchising flow": An exploration of franchising partnerships for the operation and maintenance of water services infrastructure*

⁷ It is understood that the concept has in the last couple of years been taken up by a German organisation and also by one based in Ghana.

CONTACT DETAILS

Water Research Commission

Private Bag X03, Gezina 0031,

Pretoria, South Africa

+27-12-3300340

Jay Bhagwan

jayb@wrc.org.za