



Research and Surveys Series:

# Emerging Models for Developing Water Systems for the Rural Poor: From Contracts to Co-Production

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**Written** December 2000

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## Business Partners for Development

Sustainable development is a global imperative. Strategic partnerships involving business, government, and civil society may present a successful new model for the development of communities around the world. Business Partners for Development (BPD) is an informal network of partners who seek to demonstrate that partnerships among these three sectors can achieve more at the local level than any of the groups acting individually.

Among the three groups, perspectives and motivations vary widely and reaching consensus often proves difficult. Different work processes, methods of communication, and approaches to decision-making are common obstacles. However, when these tri-sector partnerships succeed, communities benefit, governments serve more effectively, and private enterprise profits. The result is a win-win-win situation that is the ultimate aim of BPD and its divisions, or clusters.

### THE WATER AND SANITATION CLUSTER

One of four sector clusters within the BPD framework, the Water and Sanitation Cluster aims to explore partnership mechanisms in order to improve access to safe water and effective sanitation for the rising number of urban poor in developing countries. It does this by working with focus projects and the sharing of lessons learned.

Focus projects are the mainstay of the Cluster's work. They provide lessons that inform project field work, help the Cluster measure the partnership's efficacy, and identify priority research areas. These research areas include, for example, technology and terrain, land tenure and non-payment culture. Through focus projects, the Cluster seeks to illustrate that by pooling their unique assets and expertise, tri-sector partnerships can truly provide mutual gains for all. Governments can ensure the health of their citizens with safe water and effective sanitation while apportioning the financial and technical burden. Corporations can showcase good works while ensuring financial sustainability over the long-term, and communities can gain a real voice in their own development.

The Cluster disseminates findings through newsletters, a Web site and other key publications to share best practice widely. The ultimate objective is to explore how partnerships can most effectively benefit from the strengths of the different stakeholders.

### THE FOCUS PROJECTS

The Water and Sanitation Cluster's eight focus projects respond to the specific demands and conditions of the communities they serve. As a result of these dynamics, each project's objective is a work in progress.

- 1) Drinking water supply and sewer system in the El Pozón quarter, Cartagena, Colombia
- 2) Water supply improvements to Marunda District, Jakarta, Indonesia
- 3) Restructuring public water service in shanty towns, Port-au-Prince, Haiti
- 4) Developing water supply and sanitation services for marginal urban populations, La Paz and El Alto, Bolivia
- 5) Innovative water solutions for underprivileged districts, Buenos Aires, Argentina
- 6) Sustainable water and wastewater services in underprivileged areas, Eastern Cape and Northern Province, South Africa
- 7) Management of water services, Durban and Pietermaritzburg, South Africa
- 8) Upgrade and expansion of local water networks, Dakar, Senegal

### **A NEW WATER SERVICES STRATEGY**

These are pioneering times for people involved in large-scale water collaborations. Following many years of limited success with sustainable development, a new strategy is being developed which holds great promise for the future. This new strategy combines the unique resources and competencies of three organisational sectors: business, government and civil society.

Projects working with all three sectors are resulting in more cost-effective, financially sustainable and environmentally friendly water systems (WSs). These WSs have been shown to have widespread and long-lasting benefits for all involved.

This report looks at how inter-sectoral groups are leading the way in developing this new strategy in the development of WSs in South Africa. Here, four new organisations have been set up for WS development, with the leadership of the national government. They provide role models for both commercial and non-profit organisations.

### **LESSONS LEARNT**

The experience of these pioneers in WSs in South Africa provides several important lessons. Firstly, combining the competencies of the three sectors is never straightforward or easy. Each sector's goals differ and must be stated early on in a project. The government's goal is to obtain recognition for its role in bringing services to its electorate; the business sector's goal is to produce profits; and civil society's goal is to develop socially responsible processes and structures. Success must be judged against all three independent goals, as well within the overall context of developing sustainable WSs.

Secondly, inter-sectoral relationships require a longer period of time to develop ways of working together than intra-sectoral relationships. Intra-sectoral relationships involve simple business-to-business or non-governmental organisation (NGO)-to-NGO partnering. They therefore have very similar operating frameworks, values and principles. Inter-sectoral relationships are much more complex. The South African experience suggests it is helpful to create an environment of learning and experimentation, encouraging teamwork between the three sectors. This allows for open communication and helps build up trust on all sides. It also ensures that essential learning is fed back into behaviours, processes and structures to develop them more effectively.

Thirdly, when key stakeholder organisations do not act as peers in making plans and decisions, confusion and misdirection can arise. In the South African case, the government has tried to direct activity through a traditional contractual structure. One reason for this is the desire to lessen government involvement and let the other parties take control. However, the government is an essential stakeholder and co-participant and should not just act as a contractor. Structures and processes need to reflect this in order to generate, co-ordinate and optimise these innovative partnerships.

### **TEAM WORK**

The South African experience demonstrates the difficulty of the three sectors working together as peers. However, it is vital to do so in order to utilise each other's resources and competencies, particularly when the 'currencies' of the sectors are so different. For business it is financial strength and technical management expertise. For government, the key currency is its policy-making, regulatory power and tax-raising ability. For NGOs it is their ability to connect with communities, apply this technical expertise in a developmental way and mobilise volunteer

resources. Better inter-sectoral structures are needed in order to tap all of these resources effectively.

## **REALISING THE VISION**

Perhaps the greatest lesson from these WS experiences in South Africa is that with persistence, the vision of combining these unique sectoral competencies can be achieved. With the expertise of companies focusing on the physical construction, the government creating a supportive legislative environment, and the NGO building capacity to maintain and pay for the facilities – the vision is attainable.

Of course there are a multitude of difficulties to be encountered along the way. Compared with traditional approaches developed over many decades, the newness of this approach means processes are still in development. But one thing is clear – success depends on the participants' ability to change their way of working. Businesses must understand that rather than constructing water and sanitation structures, they are developing sustainable water and sanitation systems. Government must learn that it is not 'in charge' simply because it has legislative power, but rather that it is a partner in a developmental process. NGOs must learn more about their own internal strength, overcome fear of collaboration, and develop new ways to ensure people-centred development.

## **DEVELOPING THE MODEL**

South Africa is creating a new model for linking business, government and civil society stakeholders in the WS development process. Rather than following the traditional buyer-seller relationship of the commercial contract, the on-going co-development aspect must also be emphasised. Contracts can then shift from being the glue between the sectors, to positive relationships, trust and mutual respect reinforcing the bond. Undoubtedly, developing this new model and building the capacity of people and organisations to support it will require many years of work. However, the vision of a world with increasingly successful economic, social, and environmental outcomes is one we must pursue.

This paper was sponsored by the Business Partners for Development Water and Sanitation Cluster, London, UK. It does not necessarily represent the views of the Cluster or the project partners.

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Business Partners for Development  
Water and Sanitation Cluster

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## List of Abbreviations

ABP	Area business plan
ANC	African National Congress
APF	Area Planning Forum
BoT	Build Operate Transfer
BoTT	Build Operate Train Transfer
CSO	Civil Society Organisation
CWC	Collaborative Water Consortium
CWSS	Community Water Supply and Sanitation (a government White Paper)
DC	District Council
DWAF	Department of Water Affairs and Forestry (national government)
ER	Employer representative
HDI/HDC	Historically disadvantaged individuals/historically disadvantaged companies
ISC	Intersectoral collaboration
ISD	Institutional and social development
LG	Local government
LSP	Lead service provider
NGO	Non-governmental organisation
O&M	Operations and maintenance
OD	Organisational development
PIA	Project Implementing Agent
PSC	Project Steering Committee
VWC	Village Water Committee
WS	Water system
WSA	Water Service Authority
WSSA	Water and Sanitation Services South Africa

# Emerging Models for Developing Water Systems for the Rural Poor

## 1.0 Introduction

In many regions of the world, new approaches to water development are integrating social and physical infrastructure to create sustainable water systems (WSs) for the poor. Past approaches dominated by government were notoriously slow and non-sustaining. Those by civil society have faced problems of scale and speed of delivery. Those by business have not met challenges of sustainability and cost-effectiveness.

This analysis looks at two cases in South Africa that started at the same time. These are Amanz'abantu in the Eastern Cape along the Indian Ocean and Metsico in the Northern Province bordering other countries. The paper first describes the cases from a structure viewpoint. It then presents four major and six subsidiary key findings regarding their structures, strategies, and processes to bring government, business and civil society into effective working relationships.

### 1.1 THE DATA GATHERING

This report is based on a review of documents, interviews with 44 people, on-site visits at Amanz'abantu and Metsico and discussion of key findings with the people involved. These were informed and analysed with many years of work in collaborations involving business, government, and civil society (non-profit). The researcher gratefully acknowledges the considerable time contributed by many parties in the development of this report.

### 1.2 HISTORIC DEVELOPMENT

As one of the initial actions of South Africa's first post-apartheid government in 1994, a white paper was produced on Community Water Supply and Sanitation (CWSS). The goal was established to provide new water and sanitation services for 12 and 21 million people, respectively (European Union Delegation 1999). The key CWSS principles are:

- development should be demand driven and community-based
- basic services are a human right
- 'some (WS) for all' rather than 'all for some'
- equitable regional allocation of development resources
- water has economic value
- the user pays (for on-going costs)
- integrated development (with other development goals such as economic development)
- environmental integrity

A number of acts followed that included defining the role of new 'spheres' of government. This involved redrawing jurisdictional boundaries and decentralising government. The national government decided to transfer its responsibilities for water services to local government (LG), usually District Councils (DCs). This transfer presents huge challenges to build LG capacity, which in many regions means establishing entirely new government bodies. Establishing LGs included defining boundaries, and the first elections with these were held in November 2000. The South African approach to WSs has, therefore, been developed in a highly turbulent legislative and governing environment.

A strategic approach to WS development referred to as 'BoTTs' was chosen. BoTTs is an acronym for 'Build, operate, Train, Transfer.' It began in the 1970s as 'BoTs' without the 'Train', and bred a number of associated organisational arrangements. The BoT approach creates a consortium of companies that undertake international infrastructure building projects. It was an innovation designed to take advantage of a downturn in the infrastructure construction market in the late 1970s, which made companies more open to new business approaches. The original goal was to obtain the companies' expertise and gain access to their capital markets. Private companies would *build* the project, *operate* it for a period of time sufficient to pay back the project debt and equity investment, and then *transfer* it to the host government. However, there are very few examples of BoTs that reached completion (Augenblick and Custer 1990).

The South African BoTTs are actually quite different, but they possess one key similarity with the original BoT approach. The driving vision is for government to assign a task and responsibility to another party under specified conditions, and then leave that party alone to get on with the work. This approach aims to address two development problems: the slow pace and the inefficiency of government bureaucracy.

From many perspectives, the BoTT-BoT association seems more coincidental than anything. BoTs' core concepts do not include the major objectives of the South African government: WS sustainability, citizen participation, integration with other development objectives, and inclusion of civil society organisations. In South Africa the concept is broadened to create new one-stop shops that integrate both social and physical infrastructure development. Moreover, the BoTTs do not include raising private capital (although this may be part of a next phase in BoTT development). By engaging NGOs and communities in their own development, some problems of BoT privatisation are avoided. In other words, South Africa's BoTTs are experiments and represent a new approach to WS development.

The government tendering process began in August 1996 with a request for pre-qualification proposals for BoTTs. This led to establishing BoTTs in four provinces. One of the unusual tendering items was the stipulation that Institutional and Social Development (ISD) be an integral part of the respondents' proposals. Sometimes referred to as Organisational Development (OD) services, this stipulation represented the conclusion that development of both social and physical infrastructures must be integrated to create sustainable WSs. ISD (or OD) refers to the need to organise communities and develop their commitment to and their capacity for, long-term maintenance of the programme. This includes collecting sufficient user fees to cover maintenance costs. The key strategy is to engage local community representatives as *consumers* and put them in charge of the WS development. ISD also includes developing *local institutions* to support the new local government-based approach to WSs. Therefore, respondents to the request for proposals had to demonstrate capacity to produce both physical and organisational structures as critical outcomes.

### 1.3 AN INTERSECTORAL APPROACH

The BoTT approach grew out of four factors:

- 1) Success of NGOs' experiments with participative, small-scale, community-based development approaches;
- 2) Failure of projects that focused on physical construction because they resulted in either unaffordable or unsustainable projects;
- 3) Recognition that traditional government initiatives were simply too slow to respond to need; and
- 4) A creative environment and determination to serve the historically disadvantaged.



Some sophisticated initiatives following the freeing of Nelson Mandela, brought together people from the three organisational sectors – government, business, and civil society organisations.<sup>1</sup> This initiated a mutual understanding of their respective roles and abilities. This generic understanding and relationship building was then applied to many development issues, including approaches to WSs.

These factors, together with a vision of the need for both physical and social infrastructure, led to a preference for BoTT proposals with an intersectoral element. Proposals from consortia that included business and NGOs were encouraged. It was perceived that combining these organisations was needed to provide a speedy, large-scale and sustainable approach to WS development that was citizen-led.

A national NGO called the Mvula Trust, had been developing WSs since 1994. Mvula had demonstrated an ability to engage communities (consumers) in a process that improved accountability and sustainability with community control. However, Mvula lacked the ability for large-scale construction projects that the BoTT arrangement required.

#### 1.4 THE BOTT ORGANISATIONAL STRUCTURE

In rural South Africa, government is organised around five major geographical spheres. In order of largest to smallest these are: national, provincial, district councils, local councils, and villages. National government through its Department of Water Affairs and Forestry (DWAF), the department with the most sophisticated and developed structures, took the lead in WS development. In accordance with the new constitution, responsibility for WSs is being transferred to the districts and local government. It is important to understand that the BoTTs are organised on a provincial level with one in each of the four provinces, even though provinces have little role in WSs.

Financially, the premise behind the BoTTs is that the government will fund the actual construction, but the users must pay for the maintenance. The payment is made in the form of fees, with meters for yard connections and prepaid cards for standpipes. The communities themselves are responsible for setting rates and establishing long-term maintenance structures.

Five types of people are involved in this approach:

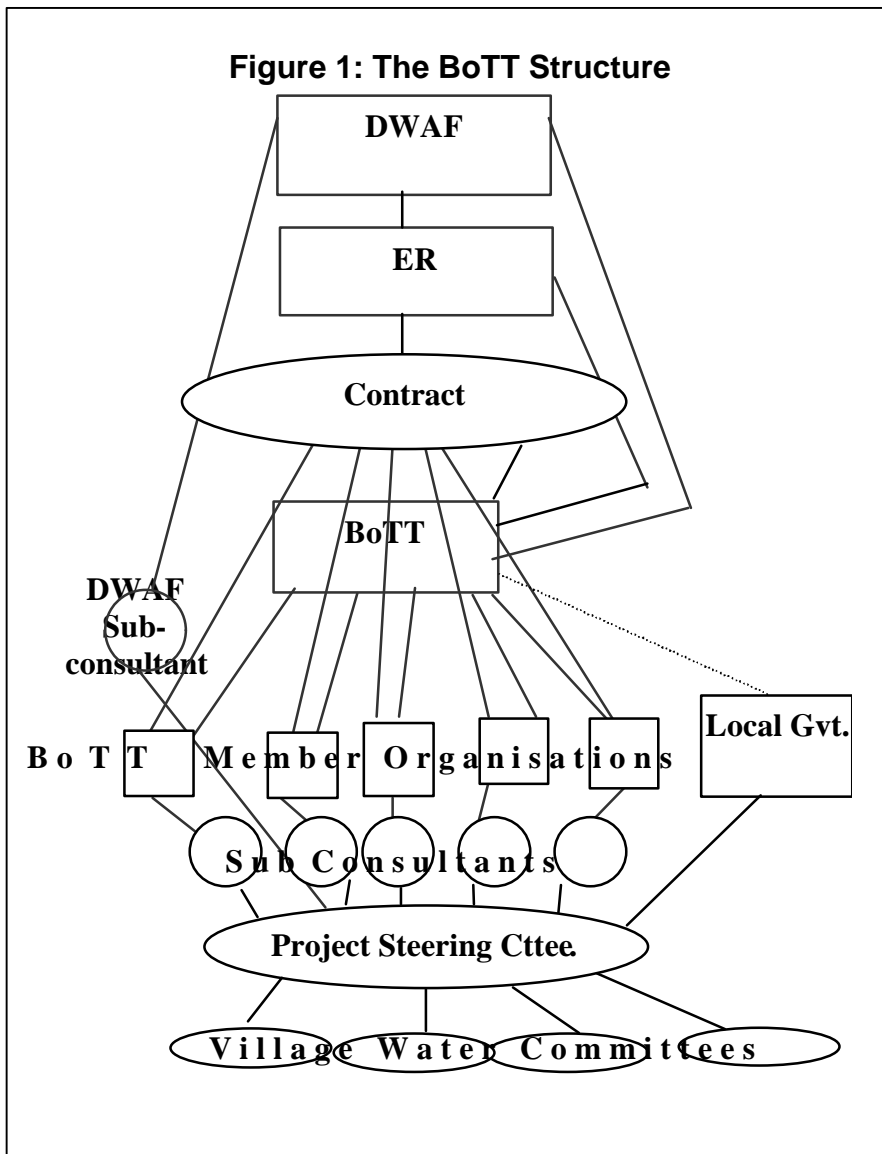
- 1) Government people, including the employer's representative (the 'ER') representing DWAF;
- 2) Direct employees of the BoTTs themselves;
- 3) Staff of the organisations forming the BoTTs which are responsible for specific segments of the work;
- 4) Subcontractors hired by the consortia organisations to implement much of the work; and
- 5) Local labour and community members who do the construction and participate in committees.

The key functional elements of the BoTTs are presented in Figure 1. In this arrangement, the contract between the BoTTs and DWAF is the major co-ordinating reference point. It regulates the relationships and what is possible in these relationships. The contracts are input-based, with costs specified for everything from laying pipes to buying chairs. This model features an ER who acts on behalf of

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<sup>1</sup> Civil society organisations (CSOs) are used as a more precise, but similar, term to independent/voluntary/ third/non-profit sector. However, they are *not* equated with non-profit organisations. Rather, the term is associated with organisations that have a preponderance of civil society characteristics (see Appendix A), their legal financial status (non-profit/for-profit) only being one characteristic. Therefore you can have a for-profit organisation that is a civil society organisation...and vice versa.

DWAF to ensure contract compliance and resolve any issues arising out of it. DWAF hires consultants to play the ER role, and they hire their own staff.



The BoTTs are legally distinct for-profit organisations. The member organisations are their shareholders. This is with the exception of Mvula, which chose not to become a shareholder because it perceived potential conflicts with its community accountability. (See Appendix C for the consortia members). The BoTTs are an interface between the organisations actually doing the work and the government. The BoTT signs the contract with the government. Each of the consortia organisations become responsible for specific services and are referred to as lead service providers (LSPs). They provide four services: ISD, design, construction, and operations and maintenance (O&M). These BoTT member organisations implement projects by doing the most sophisticated elements and organising subcontractors to do much of the work. Mvula is identified as the LSP for ISD in Amanz’abantu. In Metsico, Mvula plays a more complicated role of evaluating and supporting the work of a business that is named the ISD provider.

The South African BoTTs emphasise the importance of community leadership in the projects. This gives ISD a critical role as the developer and supporter of community leadership. From the community side there are two key community-led organisations. These are: an individual Village Water Committee (VWC), and a

Project Steering Committee (PSC) made up of representatives of the VWCs from a specific BoTT area programme. The VWC members are elected from their villages. Several DWAF and local government representatives and consortium members attend VWC and PSC meetings and have a voice but no vote. DWAF representatives include an employee that is paid by the BoTT as a sub-consultant.

The VWCs play an important role in decision-making and communications with the village residents. They must approve budgets, decide on the type of technology (standpipe, yard connection etc), and help identify local people to provide labour for the projects. In the later stages they make decisions about long-term O&M structures. However, after a project is completed, it is anticipated that the VWCs will dissolve in favour of the longer-term maintenance structure that they develop.

The ER's main task is contract administration. This involves ensuring the contract is appropriately applied and issuing orders to BoTTs to proceed with some action. This includes approving contracts for specific pieces of work, making payments and evaluating and inspecting the projects to ensure contract compliance. However, the role is controversial and has been pointed to as a bottleneck since it produces delays.

An evolving planning process guides the work of these structures. In the Northern Province, Area Planning Forums (APFs) are made up of regional representatives of national government departments, local government representatives, people from organisations such as the African National Congress (the largest political party in South Africa), and people from Metsico. Through Metsico, APFs produce Area Business Plans (ABPs) that propose how to address WS needs. These include institutional capacity-building and a general definition of the local construction projects required. These ABPs are supposed to define priorities for development for DWAF funding. However, there are in fact other influences determining the final priorities – including political ones. Another issue is that ABPs were originally compilations of specific projects, rather than planning bodies for a whole area, such as a watershed or government jurisdiction. A more area-wide process is being developed.

With these plans, DWAF then identifies priority projects for funding, and through the ER issues what is known as an '8.1.1'. This is an order for BoTTs to develop more detailed plans and budgets. These are then passed to the ER for approval. This approval for BoTTs to proceed with development, is conveyed by the ER issuing an '8.1.2'. During development, any changes in the budget must be approved by the ER.

Before BoTTs, an average of 21 months would elapse just to approve the project through 21 steps. The BoTT process is a vast improvement, but it can still take a significant amount of time. This is partly because of the vagaries of financing. It is not uncommon for approved funding to be rescinded, or to have 8.1.1 notices bunched up at the end of the financial year, when funding provided to DWAF by parliament must be either allocated or lost. This problem will hopefully be resolved with a new three-year rolling budget from parliament for WS projects.

### **1.5 THE BOTT STATUS IN JUNE 2000**

Four BoTTs signed two-year agreements on 11 July 1997. Two years later the agreements were renewed for two years with 'discounts' of around 10% reflecting an overly generous rate structure in the first contract. Following a shift to LG as the major agent for WS development, and significant questions about the cost/benefit of the BoTT approach, the role of BoTTs needs to be reviewed.

The four BoTTs listed as their major achievements:

- improved access to water services for more than 3.5 million people

- 500 organisations, including 290 historical disadvantaged corporations and NGOs, have been engaged
- close to 75% of 58 projects have been implemented and commissioned (i.e. water is flowing), demonstrating active cost recovery (most rates of recovery are low)
- per capita costs per person served varying between R150 and R2600 (Mas 2000).

Reports by the European Union have found the BoTTs' costs are similar to those of other approaches. They have listed four of BoTTs' major achievements as:

- 5 million people served with water
- an average per capita cost of providing water of R675 (about \$96 in 2000)
- approximately 310,000 jobs created
- 205 water projects completed

(European Union Delegation 1999, 2000)

It is important to note that it is still too early to define BoTTs' success in one of the major goals: sustainability of projects through local capacity development and fee collection. Experience to date indicates that this goal is challenging to achieve, but people remain optimistic.

## 2.0 Key Case Findings

### 2.1 AN INTERSECTORAL STRATEGY IS STRONGLY SUPPORTED

The two cases demonstrate a strong rationale for creating three-sector (government–business–civil society) collaborations to deliver water services to the poor in developing countries. Tri-sector collaborations are particularly important when the scale is large, speed is important, and system sustainability is critical. This rationale is demonstrated through the BoTTs co-ordinating mechanisms and synergistic innovations, and four other critical organising factors.

There are two reasons to use inter-sectoral collaborations (ISCs) involving government, business and civil society sectors. One is when resources distinct to the sectors are necessary to achieve the desired outcome – in this case speedy production of sustainable water systems for the poor. A second reason is that weaknesses distinct to the sectors lead to unsatisfactory uni-sectoral outcomes. Therefore, the driving rationale for ISCs is the same as for any inter-organisational relationship: to improve resource co-ordination and develop synergies to achieve what one organisation/sector cannot achieve on its own. The key ISC distinction is that large differences between the organisations make co-ordination particularly complex.

Each of these sectors has unique and inherent qualities. Each has distinct competencies that cannot be duplicated by another sector, since it does not have the same inherent characteristics. Some of these unique features are presented in Table 3. Therefore, the rationale behind creating complex inter-sectoral structures is to co-ordinate and combine the use of resources unique to each sector. In this way, any weaknesses are addressed by generating synergies.

Co-ordinating may be simply explained as bringing items 1 and 2 together to produce 3. For example, a company making one part of a product, may merge with another company making the other part of the product. This is a linear process designed to cut costs and improve co-ordination. Synergising, on the other hand,

brings together different resources to produce something new. Anyone can build a wall by piling up stones, but with the added skills of a stonemason a wall can be built that has different qualities. Similarly, any of the sectors on its own can build a WS, but by combining their unique abilities a different type of WS can be built. In this case, the result is a cost-effective, speedily constructed, sustainable WS. Synergising is non-linear and involves transformation of resources, strategies and processes. This is often associated with addressing core weaknesses. In the construction of a wall example, the core weakness is the lack of skills. Co-ordinating involves working within the current system of rules. Synergising involves re-defining the rules and capacities i.e. innovating (Bartunek and Moch 1987).

### 2.1.1 Six resources are being co-ordinated intersectorally, and more can be

The BoTT partners have come together to co-ordinate the use of unique resources and skills. Because the resources are so diverse, a flexible organisational structure is necessary to maintain their distinctness. However, in order to learn how to co-ordinate resources successfully, the diversity also demands close working relationships. The BoTTs achieve both of these requirements to a significant degree. Some distinct resources are presented in Table 1. Analysis shows that a variety of resources from each sector are critical. This demonstrates that each sector is playing an important role. Six sector-based resources stand out as important.

TABLE 1: SOME GENERIC COMPARATIVE SECTORAL RESOURCES

(Bold text indicates resources that are particularly important)

GOVERNMENT	BUSINESS	CIVIL SOCIETY
<b>Taxation and rule setting</b>	<i>Capital and financial assets</i>	<i>Inspirational and volunteer assets</i>
<i>Enforcement apparatus (courts, police)</i>	<b>Production networks</b>	<i>Community networks</i>
<b>Policy impact knowledge</b>	<b>Industry knowledge</b>	<b>Community/issue knowledge</b>
<i>Government reputation</i>	<i>Business reputation</i>	<b>Community reputation</b>

#### **Government**

(1) **Rule setting and taxation powers:** Government's ability to raise funds through taxation is providing critical support to the approach. Government regulatory power, through a number of legislative acts (see above), was critical to establishing the enabling environment.

(2) **Policy impact knowledge:** In the rapidly changing policy environment in South Africa, knowledge and influence in generating government's policy directions are extremely important. Through their intimate relationships, BoTT members are closely informed about government's directions to respond to new challenges and opportunities.

#### **Business**

(1) **Production networks:** Businesses' ability to produce large-scale WSs quickly is a critical asset to the BoTTs. BoTTs include companies that are among the best in the world in large-scale production of WSs.

(2) Industry knowledge: Businesses' knowledge about WS construction is highly valued. The companies involved and the international nature of some of the businesses' network, particularly Water and Sanitation Services South Africa (WSSA) through Suez Lyonnaise des Eaux, provides an impressive resource base when questions arise.

### **Civil Society**

(1) Community/issue knowledge: Mvula has critical knowledge about mobilising and working with communities, and balancing patience with continual momentum to support their development.

(2) Community reputation: Mvula's knowledge is not simply academic, but based in intense work with communities that has generated a reputation among communities of its trustworthiness.

In reflecting on the whole spectrum of resources available, some remain poorly engaged. For example, business is not contributing financial resources (except indirectly through guarantees). This may be appropriate at experimental stages when the development process and possible outcomes are unclear (this is a high-risk situation where the cost of attracting business capital will be very high). However, as the work of the BoTTs becomes more routine, the number of unknown factors and risks decline. In their next stage of development, the BoTTs should be expected to mobilise resources for investment in order to leverage public sector resources. Similarly, the inspirational and volunteer assets of civil society are underdeveloped. For example, all committee members and labourers are paid. This makes sense from some viewpoints, but it increases costs (modestly), and engages people whose goal may be reimbursement rather than community development. It can also undermine the goal to instil more long-term, self-help and civic spirit values.

### **2.1.2 Important innovations have been developed**

Sectoral weaknesses may be described as the drivers of synergy, because they cannot be addressed by simple co-ordination. In order to address the sectoral weaknesses, all parties must first recognise and accept them, before setting strategies to offset them by developing new ways of working together. The resources and cultural imperatives of one sector can interact with others to generate new ways of addressing a sectoral weakness. Although all the weaknesses in Table 2 are apparent in the BoTTs (see Appendix A), only some have given rise to synergistic responses.

TABLE 2: SOME GENERIC *COMPARATIVE* SECTORAL WEAKNESSES

(Bold text indicates weaknesses that have developed synergies)

GOVERNMENT	BUSINESS	CIVIL SOCIETY <sup>2</sup>
<i>Inflexibility in rule application</i>	<i>Tendency to monopoly</i>	<i>Restricted (interest) focus</i>
<b><i>Slow pace of decision-making</i></b>	<i>Disregard for externalities</i>	<b><i>Amateurism (staff as volunteers and in training)</i></b>
<i>Complexity of jurisdictions/levels</i>	<b><i>Poor integration of long-term concerns</i></b>	<i>Material scarcity</i>

<sup>2</sup> This builds upon **Brown, L. D. and Kalegaonkar, A.** 1998 *Addressing Civil Society's Challenges: Support Organisations as Emerging Institutions*, Vol. 15. Boston, MA: Institute for Development Research.

<i>Difficulty in internal co-ordination</i>	<i>Inequality of outcomes</i>	<i>Fragmentation (scale)</i>
<i>Desire to control other sectors</i>	<i>Transactional parochialism</i>	<i>Ideological parochialism (political correctness)</i>
	<i>Ideological agnosticism</i>	

### **Government**

(1) Slow decision-making: Since business places a premium on speedy delivery, it pressures government to overcome this weakness. With civil society and business present, there is also the option of allocating traditional government tasks to them. Both of these occur in the BoTTs. The basic BoTT strategy involves allocation of responsibility to the other sectors. There is substantial improvement in approval times for WS projects with the BoTT process: from a typical 21-month approval process previously, the average approval time is now just a few months. One developing synergistic solution is for the next contract to be output based, which will decrease these interventions.

One area of conflict is with project budgets that are not approved until year-end and then submitted to the BoTTs in a group, with an expectation for an unreasonably quick response. This problem will hopefully be resolved with a synergistic outcome from collaborating: a new three-year rolling budget process by government.

(2) Desire to control other sectors: Government's natural tendency, given its law-setting powers, is to expand its degree of involvement in issues by telling others what to do. Government tends to legislate solutions. A major impetus behind establishing BoTT was to respond to this very weakness, by empowering business and civil society to develop creative new strategies.

However, the incredible detail of the contract reflects a government tendency to control others. At first there was intense engagement between the BoTTs and the ERs/DWAF over contract interpretation, but this has generally died down. In part this is because improvements have been made, but the limitations of the contract have simply been 'accepted'. This may be simply a stage of evolution, somewhat justified by the government bearing all the risk during an initial time of intensive experimentation. A new synergistic outcome is emerging through growing consensus that an output-driven contract would be better.

### **Business**

(1) Poor integration of long-term concerns: Most business time cycles are very short, in comparison to those of civil society and government. This provides positive pressure to overcome government's slow decision-making. But if working on its own, business produces negative and sub-optimal long-term impacts. With the presence of the other two sectors, the BoTT strategy has included experimentation on two relevant fronts: with community economic development to provide long-term change, and with the emphasis on sustainability of projects. The former is shown by business use of local labour and local contractors with an emphasis on historically disadvantaged individuals and companies (HDI/HDCs), even though this has higher short-term project costs (about 10–15% for local labour). Mvula provides important skills training. With synergies between government financing of the extra cost, business hiring, and civil society training, the long-term concern of community development is being addressed modestly.

The way the projects are developed, and the emphasis on long-term maintenance solutions, respond to WS concerns about sustainability. ISD providers and traditional contractors report a significant change in the way construction tasks are

developed, although this is a source of on-going tension between the technical and social aspects of the BoTTs. An integrated production schedule has evolved (see Appendix B) with ISD being involved at all stages.

The sustainability problem is not yet fully resolved. However, 43 of 58 completed BoTT projects have 'active' cost recovery and an average annual R4 million out of R12 million in costs is collected on a Metsico scheme (Mas 2000). Recently, construction on some projects has been completed (a business responsibility), long-term O&M arrangements have been defined by communities (civil society outcome), and important pieces of government legislation are in place. The hallmark of the synergies in this case is the modelling and development of several options for structures to ensure long-term maintenance. Some are community-owned, some are government-driven and some are business-driven. This is an on-going experimental part of the BoTT approach. However, communities appear to be accepting their responsibility for paying for long-term maintenance, the national government is covering initial capital costs, and local government is taking responsibility for the long-term institutional solutions.

(2) Inequality of outcomes: Business on its own generates winners and losers in the form of wealthy and poor. This issue has resulted in the government contractually specifying HDI/HDC involvement, use of local labour, and community development goals for BoTTs. Civil society has taken a leading role through establishing labour offices and training programmes. The goal is to spread benefits to the greater community, beyond the BoTT members and employees.

On-going concern about inequality shows itself in concerns about business transparency and profit levels. However, there is also a synergistic outcome of companies 'discounting' their fees in re-negotiations. This is used as a vehicle to maintain the integrity of the contract, and yet recognise that the original pricing was too generous. Business appears open to further discussion about transparency and profits, but the parties have not managed to discuss them as thoroughly as they could.

(3) Ideological agnosticism: Business lacks sensitivity to the power and ideological implications of its activity (paraphrasing Karl Marx: Business will sell the rope that will be used to hang it). The roles of government and civil society have been critical in making up for businesses' lack of concern about its broader impact on society. One of the major interventions by government was simply to get Mvula as a BoTT member, because it wanted somebody it ideologically trusted on the inside. This has ensured that concerns about long-term impact and inequality are part of the BoTTs' discussion. While a business-only approach to WSs would lead to a pure business management solution for the long-term O&M structures, the engagement of the other sectors has led to a much more creative array of possibilities.

### **Civil Society**

(1) Amateurism: Although Mvula has significant professional expertise, its capacity-building focus leads it to emphasise the use of local subcontractors rather than other BoTT participants. In addition, the culture of Mvula (as with other civil society organisations) does not demonstrate traditional management expertise due to its grass-roots development focus. Therefore, interaction with business is forcing Mvula to address this situation and strengthen its management. All sectors seem to be holding onto their critical positions, rather than developing synergies or recognising the progress that is attained.

(2) Ideological parochialism: For civil society, ideology is important and requires addressing. The key issues are who controls the systems, and how the benefits will be divided. In Mvula, there is on-going intense discussion around the propriety of working with profit-making institutions and their role in the long-term WS structures. The concern is that Mvula may be assisting others to make profit from the rural poor. These concerns multiply with: (1) increased decentralisation; (2) the



drive for WSS to sustain themselves through local fees, while possibly using for-profit firms for long-term O&M; and (3) increased pressure upon the BoTTs to bear risk and the possibility of shifting costs to the rural poor.

Simply by participating in the BoTTs indicates Mvula has overcome some of its antipathy towards business. The role of government in the BoTT process was an important factor. Other factors include businesses' willingness to put Mvula on the Board with equal voice although it holds no shares, and Amanz'abantu's willingness to allow Mvula to co-hire two senior staff. All these represent important synergistic responses.

With greater familiarity, the ideological concerns of working with business have been moderated. A creative array of long-term O&M opportunities is being developed. However, there is still significant scepticism about the potential conflict of interest between the BoTT business of training people to run their own systems, and the potential for business to dominate long-term O&M. This demonstrates that Mvula continues to pursue its important ideological agenda and creative outcomes, rather than simply be submerged by business approaches, which would reduce the value of having Mvula involved.

(3) Fragmentation (working on a large-scale and managing large resources): Even the largest NGOs are of modest size compared to medium-large businesses and governments. If NGOs are to maintain their community base, they simply cannot become too large (not to be confused with their ability for geographic expanse). Therefore, they need to find new strategies to expand their influence and reach. The BoTT itself is a synergistic vehicle for Mvula to spread its approach and development philosophy. People inside and outside of Mvula (in Amanz'abantu in particular) point to ways Mvula has influenced their approach to their work. Although some of the changes are now so routine this influence might be underestimated. In Metsico the influence level is much less clear because of Mvula's different role, and both Mvula and others question whether Mvula has played the role it should.

## **2.2 INTENSE ATTENTION TO BOTTS' OWN DEVELOPMENT IS REQUIRED**

BoTTs are development organisations that develop WSSs. However, given the complexity of BoTTs and their newness as an organisational form, they require intensive attention to their own development.

### **2.2.1 The pre-contract development process requires intense relationship building**

Before developing the BoTT initiative there were numerous events in South Africa that brought together representatives from the three sectors to discuss their roles in the development of the New South Africa. Before the signing of contracts, DWAF conducted a pre-qualification process to identify the best consortia. However, there was still insufficient development of the consortia themselves before they signed the contracts. This would require three achievements:

- 1) Substantial familiarity with each others' organisation and their goals.
- 2) Mutual commitment to support one another to reach those goals.
- 3) A clear common vision and commitment to attaining that vision (see Gray 1989; Waddell and Brown 1997).

With these three achievements, a tool exists to monitor and assess the progress of the collaboration (in terms of overall goals and goals of each organisation). It also helps to identify problems before they get out of control. Without this, Metsico almost fell apart after a year and a half because of Mvula dissatisfaction with its approach to ISD. Although Amanz'abantu's development has been smoother, there are

substantial internal tensions that have arisen because of conflicts over goals and visions.

In forming the BoTTs, first the private sector corporations got together and made a proposal. Then they brought in Mvula at the suggestion of DWAF and after some discussion between a few people, a deal was struck. The businesses were familiar with consortia-type arrangements among businesses, and probably underestimated the difference between *intra*-sectoral and *inter*-sectoral consortia. The contact between Mvula and the BoTTs was very modest (and Mvula's Managing Director left shortly after), and there was insufficient engagement with Mvula staff in building the relationship.

Between the pre-qualification process and awarding the contract, the consortia needed to go through another stage of development to prove they could work together. It would also help to define the organisational arrangements that would make them successful. Some of this happened between Mvula's and the BoTT's Managing Directors. But the discussions did not involve enough people, were not wide-ranging enough, and did not achieve the three necessary outcomes among all parties.

### **2.2.2 The contract should develop collaboratively from the relationships**

Contracts are necessary in large-scale collaborations, yet their development and role are particularly difficult in ISCs. Traditionally, contracts are buyer-seller agreements that can be legally enforced. However, in ISCs legal enforcement is always particularly problematic, because such processes inevitably undermine the co-operative goal that is the essence of collaboration. Flexibility and the ability to re-negotiate contracts at frequent intervals, supports the developmental aspect of most ISCs and the ability to integrate new lessons into ISC work.

In the BoTTs the contract has gained the status of being *the* defining document, whereas in healthy collaborations dialogue is the key inter-mediating tool. The contract is a tool to limit and direct, rather than enable and facilitate. Although problems with the contract appear to have receded, this reflects that people have learned how to 'live with it' rather than there being a new level of respectful understanding about how it can assist them. As it is *the* defining intermediary, the contract suppresses the ability of the collaborations to do their important synergising. When problems, questions, opportunities or ideas arise, people commonly reference the contract to assess what responses are 'allowed', rather than find new ways to develop creative improved strategies.

The very structure of the contract is collaboration-unfriendly through its division into six separate contracts. Writing a contract in this way reinforces the traditional problematic approaches to Ws that are not sustainable. This is because such contracts do not take a systemic perspective. BoTT members tend to only look at 'their part' of the contract. There are other options that can reinforce the integrated approach needed. For example, the contract could be written in terms of phases of production, integrating all of the service providers' activities. This would better reflect the way the BoTTs work (see Appendix B).

The level of detail in the contract is also collaboration-unfriendly because it leads to micro-management. This is perhaps *the* key issue for government in intersectoral relationships. Government has a strong tendency under any circumstances to write rules and guidelines – after all, this is one of government's central functions. BoTTs arose partly as a response to the government tendency to dominate, mainly because it severely limits speed and flexibility and drives up costs. The original vision behind BoTT was to give general directions that applied to very different situations. However, as is common with centrally driven standards, many variations have arisen that question the wisdom of even some fundamental goals because of unforeseen circumstances. This even includes questioning the strict application of 25 litres as a

daily delivery standard (in fact occasionally the 25 litres has been reduced to 15 litres). The contract further reinforces this level of specificity, which prevents accessing the creativity of collaborations. Some explain micro-management as a result of an input-based contract, and this should be addressed by changing to an output-based contract. Another reason for micro-management is that ERs perceive themselves at risk through the need to carry professional indemnity.

The contract is often referred to within Mvula as being 'ISD-unfriendly'. Some of the detailed deadlines do not reflect the different time-scales needed for ISD to complete critical tasks. This can affect the end sustainability of projects. The method statement and business planning phases are so short that there is little time for community surveying and assessment of demands, both critical for ISD work. The subsequent development dates can mean insufficient time for communities to really understand the options and their implications. However, communities will readily sign support for a project because people want water and jobs. The time required for ISD conflicts with the goals of technical and contracting partners, whose revenue is based on designs and construction. They want the faster and predictable planning phases that the contract supports. Building sufficient community support is more difficult to schedule than the physical construction.

From DWAF's perspective, the contract is problematic because of the excessive fees it originally wrote into the agreement. This resulted in DWAF successfully pushing for discounted fees in the contract extension. From the ER's perspective, there is an illusion of detail that proves highly problematic, such as reference to 'Region' as a key planning unit, although the contract does not define it.

These problems arise in part because of the contract's development process. The traditional buyer-seller process existed, where one party identifies what it wants and then finds someone who will promise to provide it. Discussion was created through the pre-qualification and tendering process. However, good dialogue was inhibited by strong pressure for respondents to be conciliatory with the contractor. DWAF was also wary of being taken advantage of by the respondents.

An alternative and more collaborative approach would be to jointly define the contract through a series of interactions. The government could simply set the broad objectives for a new mechanism and ask for responses. This could be followed by a conference with those who produced the most interesting responses, to clarify the key ideas and components. Then a second round of proposals could be solicited for contracts and processes that would perhaps operationalise a couple of models. At that point DWAF could take a more direct contractor role, collect the ideas, and compile contracts that seem reasonable from its perspective. Following that, there might even be another round of dialogue and meetings with respondents, before a final contract is written.

The key by-product of this approach is that people from different organisations would learn more about each other and other organisations.<sup>3</sup> This development process could support vying for novel thinking and experimentation, and the conferences could be designed and thought of as think tanks.

The contract also could be written in a much more flexible framework to facilitate re-negotiation of key sections on the basis of experience. There is emerging consensus that many problems, particularly micro-management ones, can be resolved by moving to an outcome-based contract. This should allow for more creativity and flexibility to tailor work to particular circumstances.

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<sup>3</sup> This comment is made recognising that there were few viable civil society organisation options to Mvula at the time. However, the public forum process could help break down traditional old boy networks.

### **2.2.3 A learning and self-development strategy is needed**

The BoTT approach represents an attempt to transform the water sector. The scale of the undertaking is analogous to the creation of a new industry – defined as the sustainable water and sanitation systems development industry. Bits and pieces of the industry existed in construction, design, ISD, government and O&M. But they needed to be brought together in new ways. New work relationships needed development, and new institutions had to be constructed. The bits and pieces had to congeal into a new identity, and create appropriate systems and structures for the new industry. New skills, tools, and processes to support the industry's on-going development are required. In normal times, without substantial political pressure, four such schemes would not be launched without some critical piloting. Their experience suggests that emphasising the experimental nature of the BoTTs at their initiation and during their development would be useful. With experiments people adopt a more 'forgiving' and 'experimental' attitude themselves. Relationships are looser and more flexible. Under the currently system, many feel burdened with a rigid structure and contract, preventing them from engaging in the creation of something new.

Treating BoTT approaches as action research pilot projects on a grand scale would have changed processes. From the very beginning a more strategic and guided developmental and learning process would have taken place. Realising the need to develop new types of collaborating institutions and relationships, more support would have been provided for their own development. In fact, attention to the development of the BoTTs themselves reflects no more (possibly less) attention than would be paid to starting a traditional organisation.

A collectively organised learning and development process would include identifying and ensuring the application of key lessons. This reduces repetitive mistakes and reinforces good practice. There could be on-going support to develop the unique skills, tools, processes, and structures that are needed for ISCs. What happened instead was a series of useful but disjointed studies, workshops, and national forums. The learning should be integrated into BoTTs' self-assessment processes. This should include assessment of achievements in terms of the overall BoTT goals, and the various goals of the participating organisations. These goals are profitability for business, sustainable public infrastructure for government and empowerment for civil society.

## **2.3 THREE PARTICULAR SECTORAL DIFFERENCES NEED ATTENTION**

Sectoral differences are good, because they produce unique resources and generate innovation when working with organisations from other sectors. However, sometimes the differences do not receive enough conscious attention and the need for managing co-ordination and developing innovations goes unrecognised. Some of these differences are presented in Table 3. Three of these have proven particularly challenging for the BoTTs and need more focused attention.

### **Temporal cycles**

Co-ordination of election, business/financial and sustainable cycles is a critical issue in the collaborations. Political pressures have influenced the flow of work in terms of overall budgets and the specific project selected. For example, the commissioning of an Amanz'abantu scheme just before the 1999 elections, became a national political event. Key cycles for business include annual reporting of profits and losses. The parent for-profit companies have a variety of attitudes towards their return horizon, but the annual reporting cycle continues to influence the way progress is reported and the pace of work. Mvula is more interested in whether the projects are sustainable and if the approach empowers communities in order to

enhance the project's sustainability. Focusing on this cycle has led to tensions with others in the consortium who have more short-term goals and pressures.

### **Organising frame**

Government gets work done by taking an administrative approach – creating and policing processes, rules, regulations, laws and guidelines. The managing approach of traditional business implies that a person is given responsibility for driving a project to completion. Civil society takes a development approach that engages, organises and inspires grassroots to drive activity. Co-ordinating these frames has led to significant tensions, with government seen as 'too bureaucratic', business being too 'top-down', and Mvula not taking enough control and having weak management.

TABLE 3: SOME COMPARATIVE DISTINCTIVE SECTORAL ATTRIBUTES<sup>4</sup>

	GOVERNMENT	BUSINESS	CIVIL SOCIETY <sup>5</sup>
<i>Primary interest</i>	<i>Political</i>	<i>Economic</i>	<i>Social</i>
<i>Primary control agents</i>	<i>Voters/rulers</i>	<i>Owners</i>	<i>Communities</i>
<i>Primary power form</i>	<i>Laws, police, fines</i>	<i>Money</i>	<i>Traditions, values</i>
<i>Primary goals</i>	<i>Societal order</i>	<i>Wealth creation</i>	<i>Expression of values</i>
<i>Assessment frame</i>	<i>Legality</i>	<i>Profitability</i>	<i>Justice</i>
<i>Goods produced</i>	<i>Public</i>	<i>Private</i>	<i>Group</i>
<i>Dominant organisational form</i>	<i>Governmental</i>	<i>For-profit</i>	<i>Non-profit</i>
<i>Relationship basis</i>	<i>Rules</i>	<i>Transactions</i>	<i>Values</i>
<i>Organising frame</i>	<i>Administering</i>	<i>Managing</i>	<i>Developing</i>
<i>Temporal framework</i>	<i>Election cycles</i>	<i>Profit-reporting/ business cycles</i>	<i>Sustainability/ regeneration cycles</i>

### **Assessment frame**

To determine whether an outcome is 'good', the key question for government is whether it is legal, for business whether it is profitable and for civil society whether it is just. Tensions around this assessment frame are reflected again in comments

<sup>4</sup> All organisations possess some of these attributes to some extent. However, when organisations are analysed for possession of these attributes, they usually fall into one of these three categories.

<sup>5</sup> This builds upon **Brown, L. D. and Kalegaonkar, A.** 1998 *Addressing Civil Society's Challenges: Support Organisations as Emerging Institutions*, Vol. 15. Boston, MA: Institute for Development Research.

that government is 'micro-managing', business is only interested in maximising its profits, and Mvula is insufficiently concerned about efficiency.

### **2.3.1 These differences must be 'managed'**

The differences are inherent in the sectors and cannot be eliminated. They are part and parcel of what makes an organisation part of a sector and the basis of its value in the collaboration. Rather, the differences need managing. For example, the different temporal cycles must be taken seriously, understood, and addressed as a key activity of the BoTT. The BoTT's activity must integrate the administering, managing, and developing approaches in a way all partners consider appropriate. The outcomes of the BoTT must meet the criteria of the three different assessment frames.

Regular assessments should review whether there is *enough* tension among the actors to continually produce innovations. Often when organisations work together they begin falling into habits that undermine the creative energy that the BoTTs need. This requires building dialogue skills and creating energetic encounters where different opinions are valued. This also requires assessing partners to see if they really are acting like organisations from the sector that they originate from, or whether they have begun acting too much as if they are from a different sector. Is Mvula beginning to act simply like a business? Are businesses beginning to act like government bureaucracies?

## **2.4 STAKEHOLDERS ENGAGEMENT AND FLATNESS ARE KEY PRINCIPLES**

Collaborations between such diverse organisations as with the BoTTs involve great complexities. However, the organisational structures should use simplicity, direct engagement of stakeholders, and flatness as guiding principles.

### **2.4.1 Communication and co-ordination should be based in co-production**

As is common in experiments, the BoTT structure reflects *ad hoc* 'added-on' elements that, after three years, make communications and decision-making complicated. In the case of ISD in Metsico, there are eight key intermediaries between DWAF and a water user. This demands substantial time and energy for co-ordination, and opportunity for miscommunication as one intermediary connects with another. To compensate, BoTT and DWAF have developed a superfluous number of planning forums and standing committees to co-ordinate between organisations, job speciality, levels of responsibility, and level of activity. For the end beneficiaries, this structure also poses problems in terms of accountability. To whom should they complain, if they want to 'go to the top' to get action?

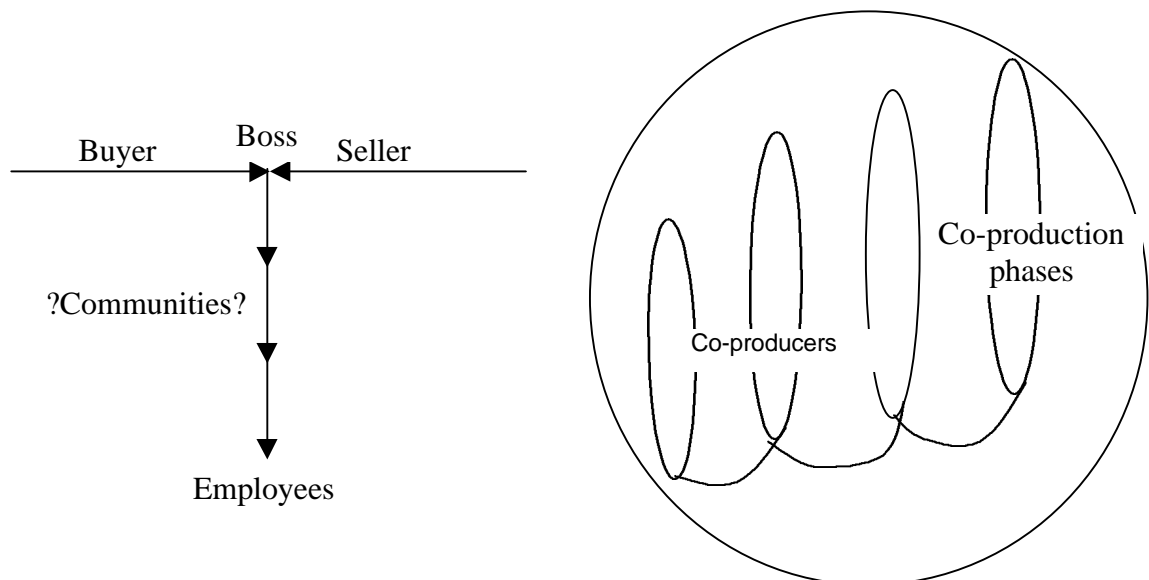
However, there appears to be a lack of intersectoral decision-making forums. Decision-making forums are meetings where people feel accountable to *each other*, issues are disposed of, and there are clear report-back mechanisms. This investigation found these qualities often lacking. Consequently, participants do not know how to make successful interventions when opportunities and problems arise. Consequently they make fewer attempts to do so. There is a general feeling that either the decision will be made farther up the hierarchy or out of the room, or responses will be so slow that the issue will change by the time it is reviewed.

On the other hand, those organisations that have traditions of working together (in particular the private businesses) appear to continue with productive relationships among themselves. Mvula does not have a tradition of strong field offices and is still experimenting with the head office/regional office concept, as well as the head office relationship with BoTT. This underdevelopment results in continuing tensions between it and the BoTT participants in Amanz'abantu.

This situation suggests that those ‘at the bottom’ (i.e. LG, Water Service Authorities (WSAs), communities, etc.) should somehow be ‘brought to the top.’ This would mean they can be engaged in policy decision-making directly. This will increase the authority and legitimacy of ‘the top’ and reduce the need for long communications linkages. This situation also suggests that operational decisions should be sunk down lower so there is no need for upward reference. This will be facilitated by an output-based contract. However, some of the links, in particular the role of the contract and the ER themselves, should be fundamentally changed.

Figure 2 aims to describe the two competitive dynamics at play with the BoTTs. One model image is linear: a traditional horizontal buyer–seller conceptual framework matched with a vertical hierarchical top-down operational framework. This is seen in the important role the contract plays in the life of the BoTTs, with DWAF as a buyer of services and the ER as the administrator/enforcer. It is also represented in the traditional inter-organisational co-ordination that characterises classic construction where one organisation does step 1, and a second one does step 2. This ‘chain’ structure is encouraged through the current contractor–contractee base of the BoTTs.

**Figure 2: Alternative Dynamics**



There is also a circular dynamic, moving through spirals of co-production phases within a circular peer-like production framework. This is seen by the actual workflow of the BoTTs, where LSP activities occur concurrently (see Appendix B). Here there is a drive to create project teams comprising all LSP representatives. In addition, the idealised relationships between Project Steering Committees, Village Water Committees and Area Planning Forums represent a collaborative strategy of bringing stakeholders together to evolve a plan. This plan is then moved onto another group of stakeholders for further evolution.

This spiral dynamic also describes the development cycles of the BoTTs. This cycle is characterised by a peak and trough, as people work to pull out the key experiences and integrate them into new ways of working together. This is rather like the ‘forming–storming–norming–performing’ process most commonly documented with regard to how groups develop. ‘Forming’ is when the parties first come together and create some sort of arrangement (signing the contract). ‘Storming’ (at the bottom of a cycle) is when they have disputes about how they should work together (experimenting with implementation). ‘Norming’ is when agreements emerge about how to work together (the roles are defined). Finally, ‘performing’ is when people

are working well together in an agreed model and really co-producing. This cycle repeats itself as new insights emerge about how to work together even more effectively. There may then be changes in the external environment (such as the shift in LG roles) and a new model of how to work together is created.

The traditional buyer-seller approach is static and attempts to 'freeze' relationships. In contrast, the spiral developmental model is dynamic and focused on continual adjustment and improvement.

The circular and 'co-producer' structure is at the cutting edge of our organisational knowledge and abilities (Lam 1996; Ostrom 1996; Ostrom and Davis 1993; Waddell 1999). All parties jointly define their responsibilities and carry them out. This is the underlying dynamic and philosophy behind the BoTTs, but it is being suppressed by traditional hierarchies and the contract approach.

The premise widely shared by BoTT participants, is that the latter model is the guiding concept. However, the circles and spirals of the *co-production* model represents an evolving structure that is still poorly understood. There can be confusion with this new model, since people are used to working in the former model.

#### **2.4.2 A socio-technical division needs recognition**

There are basically two products of BoTT: the physical and the institutional infrastructures. This is reflected in a natural division described as 'social and technical'. When interviewed, people spoke of this internal division more often than of a division between specific organisations (such as Mvula and others) or services (such as with ISD). There is a legitimate concern about how the social and technical aspects work together, since the BoTTs are on the cutting edge of the challenge to integrate them.

One approach would be to pretend that the division does not exist. However, people spoke about it because it seemed real and legitimate to them. It is not a 'bad' thing, but something that should be recognised. Another approach would be to aim directly for integration. This means recognising the division, but without structurally reflecting the divisions. DWAF itself has gone through a cycle of ignoring the division, to reflecting it with a clear ISD division, to de-emphasising the difference in favour of integration.

There are many reasons to legitimise the division, as Amanz'abantu has done by giving Mvula a greater say in hiring two senior staff. This division reflects what appear to be natural cognitive divisions. These are even reflected biologically – sometimes referred to as feminine and masculine or left brain/right brain approaches. There are extremely few people who can truly work well in both domains. People do not 'believe' that someone can work well in both domains, and therefore attribute problems to the fact that key leaders or power figures only *really* understand one of the domains.

Of course, operationally the differences demand definition. An initial functional description is proposed in Table 4. To legitimise the co-production and socio-technical nature of the BoTT approach, there could be Co-Managing Directors, with one responsible for social aspects and the other for technical aspects of implementation. The co-directors would be jointly responsible for integrated planning and development. Immediate reaction to this suggestion will probably reflect the traditional belief that you only need one master of a ship. However, collaborations are not traditional ships and collaboration culture must be instilled throughout.<sup>6</sup> This suggestion also reflects in part Amanz'abantu's originally proposed organisational chart with three senior Managers: Engineering/Programme, Organisational Development and Financial.

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<sup>6</sup> And in fact some very large businesses operate successfully with co-CEOs, such as Unilever.



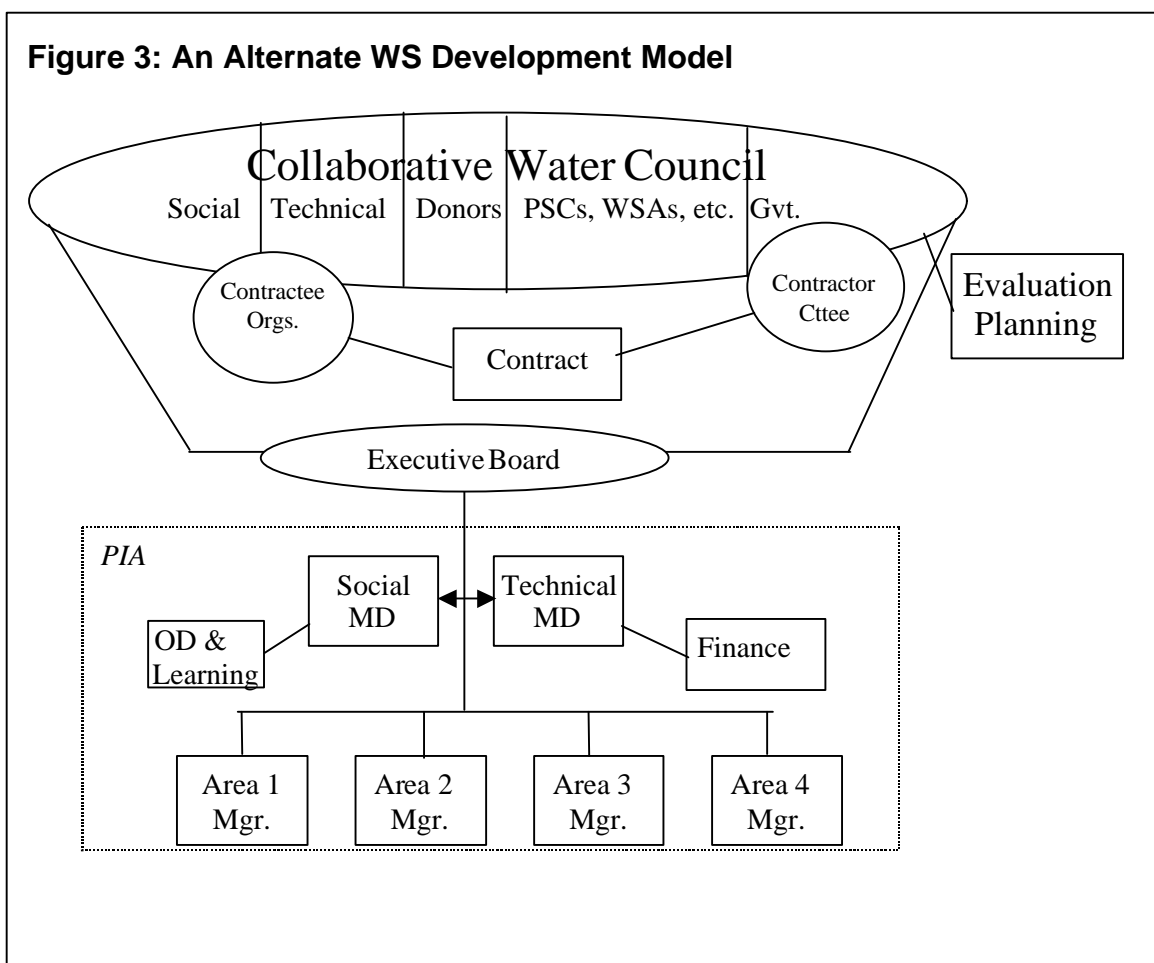
TABLE 4: SOCIAL AND TECHNICAL ASPECTS

SOCIAL ASPECTS	TECHNICAL ASPECTS
1) <i>BoTT institutional development and planning</i>	1) <i>ABPs and project planning</i>
2) <i>BoTT learning projects</i>	2) <i>Finance/budgeting</i>
3) <i>ISD</i>	3) <i>Construction</i>
4) <i>O&amp;M</i>	4) <i>Design</i>

**2.4.3 A multi-stakeholder forum including clients (government, communities) is required**

There is no body where all the key stakeholders join together as peer decision-makers and co-producers. The government is playing a ‘hands-off’ approach in reaction to problems with its traditional method of too much involvement. However, government in fact has a very big role in the WS development. Government therefore expends significant effort to ‘control’ it through the contract, the ER and other mechanisms such as a National BoTT Steering Committee. LG is also becoming increasingly important, but mechanisms to bring it into the BoTT process are underdeveloped.

**Figure 3: An Alternate WS Development Model**



Rather than the contract-based model dominating, a co-producer model can be dominant. There are some variations, but a co-production model has one core theme: all the shareholders should work together, share power and take responsibility. Figure 3 presents a model to help think about this further by proposing the creation of a non-profit organisation called a Collaborative Water Council (CWC). This structure would encourage collaboration to start at the top through its full stakeholder structure with all the key stakeholders in a leadership position.

In this model, the government is a member of the CWC. It contracts with the CWC to develop sustainable WSSs. The driving premise is that by bringing the stakeholders into a unified formal body, there will be improved opportunity for co-ordination and development of synergies. It will also mean a reduced need for evaluation and less time and effort spent on communicating, co-ordinating and reaching collective decisions compared to the current structure where stakeholders are not joined into a single entity. Members in the CWC would have peer-like relationships within the CWC.

This model broadens engagement at the senior level by embracing more stakeholders. An Executive Board of the CWC would work with the Project Implementing Agents (PIAs—Metsico, Amanz'abantu). Operationally, this shifts the focus lower down in the structure. The National BoTT Steering Committee would not be needed. The ER is eliminated, with some tasks distributed to a planning and evaluation function and accountability emphasised at the Council level. Although obviously still complex, this model is somewhat simpler and includes many more parties. Planning activities, for example, can be integrated easily into this model, as can the work of sub-committees and task forces. This model integrates decision-making across the sectors. It also reduces communication problems that occur without an integrative forum.

This structure is also flatter than the current one in terms of decision-making processes. It would significantly reduce the communications problems with the current segmented decision-making structure, and the back-and-forth efforts it requires. Ensuring everyone is on the same page from the beginning would enhance co-ordination. It would make decisions that make sense from all stakeholders' points of view, rather than decisions from one particular stakeholders' viewpoint that then are communicated and renegotiated when problems are pointed out by the other stakeholders.

Relevant models that come to mind are the International Youth Foundation ([www.iyfn.org](http://www.iyfn.org)) and the Local Initiatives Support Corporation ([www.liscnet.org](http://www.liscnet.org)). Major components of this potential model include:

- 1) CWC: This is a full stakeholder Council with the task of setting policy to co-ordinate the necessary (sectoral) resources and develop synergies between diverse organisations, in order to speedily establish sustainable WSSs for the rural poor. It would be a legal entity with five categories of members:
  - Government entities contracting or paying for WSS development, including LG and DWAF
  - Organisations involved in building and maintaining the systems, including WSAs, PSCs, Water Boards, etc.
  - Donor organisations contributing to WSS development
  - LSPs providing social development services, mainly ISD and O&M
  - Technical organisations of LSPs.

The CWC would be relatively large, but would take an overall co-ordinating role rather than a board supervision role. The latter tasks it would allocate to the Executive Committee. The CWC might meet quarterly. By bringing

together all the stakeholders, the body would facilitate formation of sub-committees and the implementation of their recommendations.

- 2) Contractor Committee: This consists of government organisations contracting with the LSPs. Their major responsibility is to negotiate the terms of the contract and, through an Evaluation and Planning unit, ensure the contract is being appropriately applied.
- 3) Contractee Committee: This consists of the LSPs who have joined in a legal entity to provide services under the provision of the contract. The legal entity may also have similar contracts elsewhere.
- 4) Executive Board: Many of the powers of the Council should be allocated to an Executive with a modest membership of about ten. While maintaining its accountability to the Council, it would make many of the decisions.

In this model, risk is shared. However, the contract can still accommodate different amounts of risk sharing. The CWC members actually doing the work may accept different amounts of risk, presuming they will be paid for bearing it.

The concept of collaboration is structurally reinforced in this model. There are performance pressures on all the parties to achieve the desired outcomes. They all have a forum for effectively co-ordinating their activity. The CWC could be structured as a non-profit organisation with a very small staff responsible for communications co-ordination. As a non-profit organisation, a low-cost structure is encouraged, donations and public money can be received, and for-profit affiliates can be created if investment funds are needed. Moreover, the co-operative ethic is promoted.

In this case, the PIA might best be a for-profit organisation, in part to balance the non-profit ethic. A for-profit structure helps strengthen the PIA's ability to be an important organisation with its own capital and access to capital markets, rather than simply an extension of the member companies. This would continue to create difficulties from Mvula's point of view as a non-shareholder, but as such Mvula retains its civil society focus. One solution is for Mvula to establish a for-profit affiliate that would allow greater internal PIA equality, while maintaining control through Mvula.

### 3.0 Conclusion

People working to develop sustainable water systems in South Africa are engaged in a critical inter-organisational struggle of our time. This struggle is about moving from a simplistic win-lose competitive dynamic with hierarchical patriarchy, to a win-win one of co-operative competition with distributed leadership. It requires moving from a contract-based model to one of co-production. BoTTs are working at the cutting edge of our organisational knowledge and abilities.

The BoTTs have achieved significant success in terms of co-ordination and innovation. They represent a new organisational form of co-production among sectors. As a new organisational form, they face significant challenges in development. The South African BoTTs, are large and have four years of experience to provide a rich base of knowledge and lessons-learnt. Analysing them illustrates the rationale for undertaking an intersectoral collaboration strategy. It also helps to illustrate the types of intersectoral differences that must be managed, as well as how to develop such collaborations, the importance of flatness, direct multi-stakeholder interaction, and full stakeholder participation.

The emerging model requires new working skills and attitudes. The organisations' core activity in the emerging model includes learning individually and organisationally for on-going development. In the case of new organisational forms like BoTTs, this includes development of sustainable water systems and of the BoTTs themselves.

In the emerging model contracts reflect relationships, rather than relationships being framed by contracts. The general consensus to move to an output contract reflects this understanding, since it is premised on building a shared vision and understanding of goals. However, the process of developing these visions and goals, and the structures that will support their realisation, requires some changes.

The emerging model requires new approaches to leadership, and movement from unitary 'captain-of-the-ship' approaches to co-leadership. This change is particularly challenging for current leaders, partly because it requires them to make themselves vulnerable as they practice the new approach. The basic challenge is to move from models of unitary power, to one where responsibility for leading is shared with peers. In short, team spirit must be structurally integrated at all levels.

The emerging model requires systems thinking, reinforced by processes and structures that literally force people to think systemically. After all, it is not implementation of *projects* or *programmes* that is the goal, but development of sustainable water and sanitation *systems*. This is already reinforced by putting people with very different life experiences and viewpoints into close contact with each other on a peer-like basis. While the shortest route from A to B might appear to be a straight line, people engaged in the South African water sector are leading the definition of the spiral development path that will take us to *sustainable* development. There are enormously complex feedback loops that are reflected in this path. They can lead to achieving a level of performance that produces deeper understanding of issues and potentials, and a new round of experimenting to produce new performance highs.

The BoTTs are still young as organisations, and very young as an organisational innovation. Typically three to five years elapses before the visions that stimulated the initiatives begin to be realised. Certainly there is room for optimism in terms of their ability to achieve the goal of speedy development of sustainable water systems for the rural poor on a large-scale. However, exactly how to achieve that will require more time and experimenting.

## Appendix A

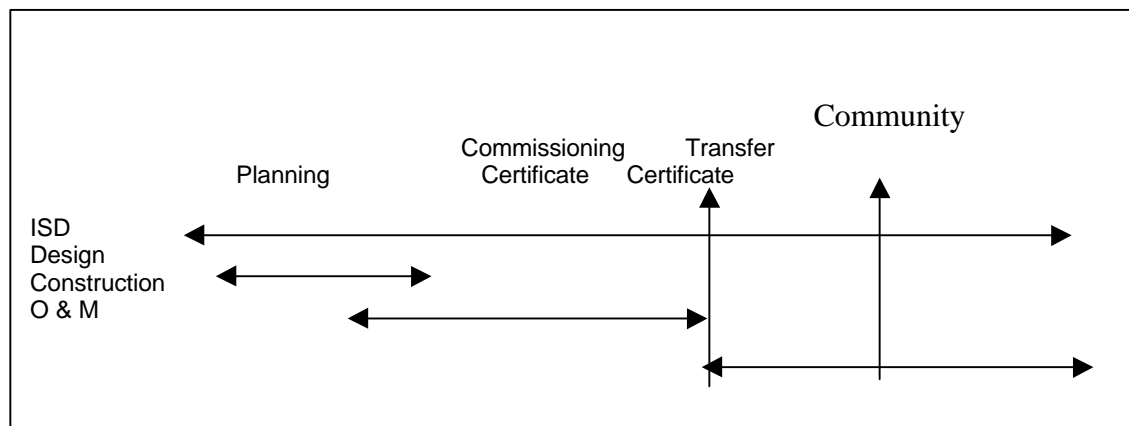
### Sectoral weaknesses at play in the BoTTs

Table 2 identifies sectoral weaknesses. Here is how some play out in the BoTTs.

- **Government:** WS development requires legislative support, but government standards and regulations inevitably pose problems to meet specific situations. They tend to be too stringent, since they cannot foresee all eventualities. As well in government there are usually many layers of decision-makers to slow down processes. Government's project-approval process before the BoTTs involved 21 people, and was considered a 21-month process. As well, water is an issue that touches many departments, such as housing, the environment, and agriculture; these are difficult for government to internally co-ordinate. As well, government has a tendency to try to legislate and force others to do what it thinks is right through overly-detailed legislation, stifling creativity and development of more effective solutions. In the BoTTs this can be seen with the highly detailed contract.
- **Business:** In WS development there is an opportunity for long-term monopoly development growing out of the four BoTTs. Since geographic location is important, they operate in distinct provinces, and up-front costs and relationships are very important. Business on its own will not be able to address externalities, such as reinforcement of racial divisions through traditional approaches of white-dominated business. Traditionally in WSs, business focuses upon the short- and medium-term without thinking about long-term issues such as sustainability. Business, working in a transactional mindset, often aspires to get a job done so efficiently that community relationships suffer. As well, although development is a highly ideological activity with issues of control and power in decision-making and the final O&M structures, business believes itself ideologically agnostic and practical without understanding its ideological impact.
- **Civil society organisations:** In WSs, development may be focused so narrowly upon issues such as empowerment that they have trouble balancing them with other concerns. CSOs rely heavily upon the commitment of staff and volunteer support, and often neglect (or can not afford) the importance of professional expertise. Because financial resources are weak, CSOs have difficulty asserting equality in schemes that involve substantial financial commitments. CSOs, in comparison with the other sectors' organisations, are small even when large, and they have difficulty co-ordinating large-scale resources. As well, CSOs tend to emphasise the ideological implications of work, which creates difficulty working with other sectors because this collaboration necessarily means some degree of compromise ideologically.

## Appendix B

### Integrated Socio-Technical Schedule



## Appendix C

### BoTT Organisational Members

#### A) Amanz'abantu

The original signatories are:

- Water & Sanitation Services South Africa Ltd (WSSA): Originally formed in 1987, since 1995 this company has been a 50/50 joint venture between a major French multinational Suez Lyonnaise des Eaux and a large South African construction company operating internationally, Group Five. It functions as an O&M service provider and is lead partner in the consortium
- Group Five Civils Ltd (Group Five): This is a joint venture between two Group Five companies, one (45%) that focuses upon roads and earth works and another called Civils (55%) that focuses upon construction of large structures such as dams.
- Ninham Shand East Ltd (NS) in association with Fongoqa Skade Toyi & Associates Close Corporation (FST): Under NS's initiative, these two companies jointly responded to the design portion of the contract. They apportion the design work on a 50/50 basis
- The Mvula Trust (Mvula): This is an NGO established in 1993 to improve WS services to increase access of the marginalized to safe and sustainable water and sanitation services. It has an international reputation for pioneering the development of good practice in the sector by testing and advocating sustainable models for cost-effective delivery and management.
- Set Point Industrial Technology Ltd (VSA) in association with Khulani Ground Water Consultants Ltd (KGC): Set Point is a public South African company traded under the name VSA Geoconsultants; together the companies provide services to analyse the availability of water and the optional ways to obtain it for use.

In addition to these original signatories, Amanz'abantu partners now include:

- Amanz'abantu Trust: This Trust was established by Amanz'abantu as part of its contractual commitment to DWAF to promote the role of historically

disadvantaged communities and individuals. The Trust holds shares (15%) made available to HDIs/HDCs—mainly subcontractors/consultants.

- Siyaya Civils and Building cc: An emerging black-owned construction company acting as a shareholder (12%) and a service provider.
- Jakoet and Associates: A black-owned (HDC) consulting engineering firm acting as a shareholder (5%) and a service provider.

## **B) Metsico**

There are five companies that are signatories to the Metsico contract; shareholdings indicate the 1 July 1999 position/targeted final position:

- WSSA: This is a 50/50 joint venture between Suez Lyonnaise des Eaux and Group Five. Formed in 1995, it functions as an O&M service provider and is lead partner in the consortium. Suez Lyonnaise is a French major multinational company. This company is the BoTT O&M service provider, a shareholder (12.5%/15.0%), a co-lead partner, and guarantor.
- Group Five Civils: In this consortium Group Five Civils is the contractor. This company is the construction service provider, a shareholder (36.5%/15.0%), a co-lead partner, and guarantor.
- Mvula Trust: The Trust's role is to guide policy and strategy on ISD and monitor performance, and provide sanitation services; it is a *non*-shareholder.
- EVN (and EVN-Care): An established, medium-size design and engineering firm with international connections. EVN-Care was a non-profit affiliate specialising in ISD, which subsequently became a division within EVN. EVN is project manager, provides design and ISD and is a shareholder (see below).
- Bergman Ingerop (BI) (and Democritus): A South African consulting engineering practice, partly owned by Ingerop, an international consulting engineering group based in France. Democritus was a non-profit affiliate specialising in ISD, which subsequently became a division within BI. BI provides design and ISD, and is a shareholder (see below).
- Allhold: Allhold is a young HDC also referred to as Sephold. Allhold acts as a project manager, provides publication relations, and is a shareholder (12.5%/10.0%).
- EVN/BI are joint shareholders for both their ISD roles (13.0%/15.0%) and design roles (13.0%/15.0%).
- HDI/HDC shareholdings, including those of Allhold are 25.0%/40.0%.

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