



Research and Surveys Series: Making Innovation Work through Partnerships in Water and Sanitation Projects

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Business Partners for Development

Sustainable development is a global imperative, and strategic partnerships involving business, government and civil society may present a successful approach for the development of communities around the world. Business Partners for Development (BPD) is an informal network of partners that seeks 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 however, and reaching consensus often proves difficult. Different work processes, methods of communication and approaches to decision-making are common obstacles. When these tri-sector partnerships succeed though, communities benefit, governments serve more effectively and private enterprise profits, resulting in the win-win situation that is the ultimate aim of BPD and its divisions, or clusters.¹

THE WATER AND SANITATION CLUSTER²

The Water and Sanitation Cluster aims to improve access to safe water and effective sanitation for the rising number of urban poor in developing countries. By working in partnership it is presumed that governments can ensure the health of their citizens with safe water and effective sanitation while apportioning the financial and technical burden, the private sector can effectively meet its contractual obligations while ensuring financial sustainability over the long term, and communities can gain a real voice in their development.

The Water and Sanitation Cluster works with eight focus projects around the world, most of which predated the Cluster. The approach to extracting information from which to analyse the efficacy of tri-sector partnership is three-pronged: 1) by supporting partnership-oriented research on thematic project elements (cost recovery, education and awareness, etc.); 2) by creating forums for analysing the sector specific (civil society, public and private sector) benefits and challenges of working so closely with organisations from other sectors; and 3) by documenting the evolution of the partnership in specific focus projects.

The Cluster supports learning and then disseminates findings through newsletters, a web site and other key publications to share best practice widely.

THE FOCUS PROJECTS

- 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 services 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

¹ The five clusters of the BPD include: the Global Partnership for Youth Development, the Global Road Safety Partnership, the Natural Resources Cluster, the Water and Sanitation Cluster and the Knowledge Resource Group (which collects and disseminates for wider audiences the lessons learned from the four thematic clusters).

² In the context of this report, the terms BPD and Water and Sanitation Cluster are used interchangeably. Though the goals of the other BPD clusters are the same, the approaches have varied widely.

Executive Summary

Serving the poor is a challenging undertaking – technically, socially and politically complex. Traditional methods of working may be found wanting – either unaffordable or inappropriate to the situation. Incentives and motivations for undertaking such work may also differ from service to the non-poor. As a consequence, actors working in poor communities often seek to innovate, finding new technological and institutional solutions to achieve their pro-poor goals.

Business Partners for Development (BPD) Water and Sanitation Cluster is an informal network dealing with partnerships that bring together the private, public and civil society sectors to better tackle the challenge of providing water and sanitation services to the poor. The underlying premise is that, through working together, these sectors can provide water services to the poor more effectively than by working alone. Partnership allows each actor to leverage their own resources, concentrate on their core competencies and rely on other actors to fill any gaps in their skills, abilities or mandates.³

Given the poverty focus of the BPD partnerships, innovation has been central to the success of the eight BPD focus projects;⁴ these have developed a range of alternative solutions for the delivery of cost-effective services to the poor. Most of the new approaches have achieved impressive benefits both to service users and providers, for example by accelerating the rate of expansion to unserved areas, improving financial viability and affordability, and designing services to meet the specific needs of poor customers.

The potential impact of tri-sector partnerships upon innovative approaches is significant. Such arrangements often require close co-operation between regulators, municipalities, private providers, poor communities and the NGOs that work with them.

This study thus reviews the innovative approaches adopted by the focus projects and their achievements in comparison to the conventional services that they replaced. It examines how and why the approaches were developed, assesses their potential for replication⁵ and considers how tri-sector partnership has contributed to their evolution.⁶ The primary conclusions of the study suggest that innovation requires a conducive environment for experimentation and that tri-sector partnerships, if done properly, can leverage the competencies of different sector groups to ensure successful innovative approaches.

INNOVATIVE APPROACHES IN THE FOCUS PROJECTS

The term ‘innovative approaches’ has no strict definition; it simply refers to approaches to service delivery that are substantially different to those used prior to project intervention. Though most of the approaches studied serve urban or peri-urban communities, they differ widely in terms of institutional arrangements, size and objectives. Four out of eight involve

³ The BPD has found that tri-sector partnerships work best where they are adapted to local contexts, and has therefore offered guiding principles rather than developing a formal model for such partnerships. Partnerships should build on existing assets, and roles and responsibilities develop from there. These can be harnessed to formalised governance and decision-making structures (with corresponding benefits for the legitimacy, accountability, effectiveness and equity of the partnership).

⁴ The Cluster works with eight focus projects around the world, most of which predated the Cluster. It supports partnership-oriented research on specific project themes (cost recovery, education and awareness, etc.); creates forums where sector specific (civil society, public and private sector) benefits and challenges are debated and documents the evolution of the partnership in each specific focus project. Findings are disseminated through newsletters, the website (www.bpd-waterandsanitation.org), policymaker/practitioner notes and other key research publications.

⁵ The significance of new approaches depends to a large extent on their potential for replication and mainstreaming within the operations of the service provider. While some of those studied have yet to reach this stage, the prospects appear to be generally good, though much depends on the degree of support and flexibility afforded by the policy and regulatory environment. In the focus projects, funds were mostly accessed from sources external to the partnership, but in two cases the service provider made substantial investments of its own funds. This suggests that, where the incentives are right, innovation can be not only necessary but also affordable without reliance on external support.

⁶ The information in this report was obtained via email and telephone interviews with project partners, a study of secondary documentation, and brief meetings with a number of key personnel. It is important to highlight that the focus projects were not visited during the study, nor was it possible to consult members of the affected communities.

some degree of technical innovation while others focus on models of management, billing and user payment. Some form part of a much larger programme and not all involve ‘conventional’ tri-sector partnerships⁷: in Port-au-Prince there is no major private sector partner, while in La Paz-El Alto and Jakarta there is no NGO.

In some cases, the focus project itself constitutes an innovative approach. In others, the focus project has produced a variety of innovations, only one or two of which are considered here.

OUTCOMES AND ADDED VALUE

<i>Buenos Aires, Argentina</i>	Participative water service (community labour in exchange for house connections; shared connections to reduce costs).
<i>La Paz-El Alto, Bolivia</i>	Condominial water supply and sewerage (low-cost technology, communal connections).
<i>Cartagena, Colombia</i>	Billing, payment and collection methods tailored to the needs of the poor, enabling easy payment.
<i>Port-au-Prince, Haiti</i>	Community-managed standposts.
<i>Jakarta, Indonesia</i>	Installation of tamper-proof meters.
<i>Dakar, Senegal</i>	Community-managed standposts.
<i>BoTT Programme, South Africa</i>	Communal standpipes with electronic pre-payment meters (individual users purchase tokens which slot into meters to release water).
<i>KwaZulu-Natal Pilot Project, South Africa</i>	The ‘BPD Stand’ (marketing an indoor water tank). Development of a Customer Management Approach.

Most of the approaches have had notable success in developing viable services for the poor, especially in terms of accelerated expansion of water supply coverage; improved maintenance of tertiary infrastructure; reduced vandalism; affordable charging and payment regimes; and improved recovery of operation and maintenance costs, though not capital costs. Some have also produced benefits beyond the sphere of water and sanitation, for example, the creation of stable ‘social infrastructure’⁸ in project slums in Haiti. Only one innovative approach, the introduction of standpipes with electronic pre-paid meters in the South Africa BoTT Programme, has struggled to produce any benefits though it still provides some valuable lessons in service design for the poor.

COMMON THEMES IN THE INNOVATIVE APPROACHES

Though the partnerships and the innovative approaches differ widely, common themes offer clues to the essential ingredients of pro-poor service design. These include:

- 1) **Progress through innovation.** Developing a partnership culture has been a vital ingredient in the development of effective innovative approaches. The scope for innovation depends, however, on the flexibility of the regulatory environment.
- 2) **Customer-orientation.** Project partners have recognised the value of communication and consultation with poor consumers to inform design of the new approach and develop a customer-client relationship in which both parties have rights and obligations.
- 3) **Community participation.** Several projects promote active community participation in the development and management of innovative approaches.
- 4) **Pro-poor institutional arrangements.** Several of the service providers and/or the partnerships within which they work have undergone significant change in order to become more effective in serving the poor. Initiatives include:
 - making the service provider accessible to poor consumers, for example, by establishing special units for poor consumers and/or setting up decentralised customer service outlets close to poor settlements; and
 - adopting holistic approaches that avoid a rigid division of ‘social’ and ‘technical’ functions.
- 5) **Promotion, education and awareness raising.** All of the innovative approaches have an education and awareness component. Most promote consumer rights and obligations; some also include hygiene education.

⁷ Many of the current Cluster partnerships see an international private operator working within a structured partnership together with national or local government (often municipalities) and either NGOs or local community structures.

⁸ i.e. helping to reduce conflict and violence within the shantytowns by building up a sense of community, as well as improving the capacity of the community to manage its own affairs.

- 6) *Moves towards financial viability*. The new approaches recognise the need for services to be both affordable to poor customers and financially sustainable for the service provider.

INCENTIVES TO INNOVATE

Most of the approaches were developed to address specific problems that could not be resolved through conventional approaches to service delivery. These included low coverage in, or exclusion of, poor settlements; poor cost recovery associated with poor customer relations and inappropriate billing; the need to reduce capital costs; the need for services to be affordable to the very poor; and the slow pace of conventional development.

Such problems are familiar in less developed countries but rarely resolved; a common response is for the service provider to focus on serving middle- and high-income areas where infrastructure already exists rather than investing in poor settlements. In the focus projects, however, a variety of incentives led partners to tackle services for the poor head on (as well as to innovate and to seek partnership). These included:

- 1) *Contractual obligations*. In concessions where explicit targets had been set regarding services for the poor, operators faced penalties (or at least lost revenue) if they failed to increase the speed of infrastructure development and/or improve cost recovery.
- 2) *Policy obligations*. Some governments adopted an explicit pro-poor policy. In South Africa BoTT, decentralisation of responsibility for water supply to local government and a poor history of payment for services made the prospect of pre-payment technology very attractive to municipalities concerned about their financial burdens.
- 3) *Commercial need*. With large-scale private sector participation still relatively new, most operators are on a steep learning curve and, if they are to succeed in this market, need to establish their credibility in developing services for large, predominantly poor, unserved populations.
- 4) *Local political imperatives*. In both Cartagena and La Paz-El Alto, municipal governments were keen to court potential electors and to be seen to be responding to their demands.
- 5) *Civil society concern* for the needs of the poor. In Dakar and Port-au-Prince, NGOs initiated the projects in response to demand from slum communities.

Experience from the focus projects suggests that solutions to service delivery problems can be found where there is real pressure to do so. This highlights the importance of getting the incentives right when undertaking macro reform (particularly in making private sector participation pro-poor) and developing an enabling context for partnerships. Furthermore it is important that multi-sector partnerships are well-designed in order to properly incorporate (and possibly strengthen) these incentives.

IMPACT OF EXTERNAL ENVIRONMENT

The development of innovative approaches has, in many cases, been affected profoundly by the external environment, which may foster or constrain success. The **policy context**, for example, can be pivotal. Pro-poor government policy can be a driving force behind the development of a new approach, but can also make an approach redundant.⁹ Political instability, however, and the politicisation of service provision overshadow the operating environment in several of the focus projects.

Where there have been **institutional** obstacles to the development of innovative approaches, the most difficult problems have generally originated not with civil society or private sector partners, but with municipal authorities, which have proved less willing than other partners to deviate from standard approaches, perhaps fearing they will be or be perceived to be second class solutions.

For those innovative approaches developed within concessions or management contracts the scope for innovation is to a large extent set by the **regulator** who has, in some cases, been flexible and allowed some deviation from existing norms. Rigid technical standards, caps on fees and tariffs and inflexible billing regimes have, however, proved a major stumbling block

⁹ For example, in South Africa the Free Water policy made pre-paid meters inappropriate.

in some projects. At the opposite end of the spectrum, the absence of a regulator can also be a constraint and exacerbate local problems of political interference and instability.

Social factors can have a profound effect on the development of innovative approaches. Most of the populations served are neither homogenous nor stable and this creates huge difficulties in the planning of communal services. Considerable effort was needed to overcome mistrust of external agencies, low willingness to pay, opposition to large-scale private sector participation, high public expectations and/or resistance to unfamiliar technology.

FINANCIAL ARRANGEMENTS¹⁰

In most cases the innovative approach has provided a service that is both cheaper to operate and more affordable to users than that which it replaced, especially where people were previously reliant on water vendors. Developing a new approach through research and piloting, however, incurs costs over and above those associated with normal service delivery¹¹ and most of the projects used special funds, often provided by donor grants or soft loans. This prompts the question of whether the development of an innovative approach is only possible with external funding; if so, the scope for innovation may be restricted to a few locations. The private company in two of the focus projects has committed substantial research funds from its own global resources. This indicates that, given the right incentives, private sector partners may be willing to invest in an innovative approach, especially one that could save them money in the long term.

Having developed an innovative new service, a critical issue is its financial viability for the service provider, and affordability for the consumer. Most projects have reduced capital costs, though none seeks to recover them in full; most have relied on government and/or donor funding. In the case of operating costs, however, most projects are recovering (or are likely to recover) all, or a substantial part of, their costs.

Measures to improve affordability for users include reduced connection charges, payment in instalments or as labour, decentralised collection, pay-as-you-go systems or frequent billing which obviates the need to save. Some innovative approaches are subject to user attitudes that may change over time, such as a reluctance to pay for standpost water in the South Africa BoTT Programme.

DEFINING PARTNER ROLES AND RESPONSIBILITIES

Clear (and mutually agreed) definition of roles and responsibilities is often cited as important for collaborative partnerships. Partner roles and responsibilities in the development of innovative approaches are not always formally allocated however; the process has in some cases been more iterative and roles may change over time.¹²

Factors that emerge as important in assigning roles and responsibilities for the development of innovative approaches include:

- 1) *Clarity*. Helps to prevent confusion, duplication or the neglect of important tasks.
- 2) *Flexibility*. Project agreements should be sufficiently flexible to accommodate role changes where appropriate.
- 3) *Incentives*. It is important to match responsibilities with appropriate incentives so that each partner maximises their contribution.
- 4) *Complementarity*. Innovative approaches are most effective when they incorporate holistic planning that capitalises on the complementary skills and resources of each partner.
- 5) *Innovation*. The partnership should operate in a way that allows creative input from all involved.

¹⁰ See also [Cost Recovery in Partnership: Results, attitudes, lessons and strategies](#), BPD, October 2000.

¹¹ Similarly, if an innovative approach is replicated in different locations, to what extent are the development costs repeated each time?

¹² For example, the multi-faceted role of an NGO can vary from that of innovative approach instigator, to facilitator to consumer watchdog. For further analysis, please refer to the NGO Workshop Report and the Practitioner Note on Contracting NGOs, both of which can be found on the BPD website (www.bpd-waterandsanitation.org).

THE VALUE OF PARTNERSHIP

Given the particular challenges of serving the poor, innovation has often been central to the development of effective new models of service delivery in the focus projects. In each case the multi-sector partnerships have played an important role, providing both an environment that fosters innovation and the resources needed to maximise the potential of new approaches. Partnerships can foster, promote and enhance innovation in several ways:

- 1) *Complementarity*. As noted above, partnership brings together organisations with widely differing skills, experience, resources, and access to the community and government bodies. This is especially important when seeking to innovate, as often a wider range of skills, contacts and mandates are needed than in conventional service delivery.
- 2) *Institutional learning*. Through collaborative ventures, partners learn from each other and can become more productive in their own field; ultimately this benefits poor consumers through more effective service delivery.
- 3) *Developing a common project*. By bringing together representatives of both service providers and users it is possible to narrow the gap between the two and develop a common understanding of how services should function.
- 4) *The role of personalities*. It is often key individuals within partnerships who really make things happen. By the same token, personality clashes can also impede progress. This highlights the importance of institutionalising effective approaches wherever possible, such that they reach beyond individuals into institutions.
- 5) *Documentation*. Multi-sector partnerships tend to dedicate the resources needed to record and disseminate the lessons learned. Such learning and sharing is often a key objective of the partnership from the outset.

However, not all of the projects have made full use of the opportunities that partnership can bring. One could ask whether working with an NGO, for example, in a few projects might have facilitated greater benefit. This suggests that the early stages of partnership, where potential partners map the territory (to see who the actors are, what they can offer, what their incentives for being involved are and where gaps may lie) is very important. Such an exercise should also form a part of the planning for innovation, where likely roles and responsibilities are reviewed alongside partnership incentives and structures.

MAINSTREAMING INNOVATIVE APPROACHES

The focus projects provide ample evidence that, where conventional models of service delivery have failed, innovation through partnership brings significant benefits to both service providers and poor consumers. Innovation requires increased co-operation and dialogue between the sectors, a wider range of skills and a conducive legislative and regulatory framework.

Overall, the prospects for replication and mainstreaming of the innovative approaches within the focus projects look promising. Innovation may require higher up-front costs and the financial outlay involved in adopting some alternative approaches will clearly be a constraint (although this is rewarded by a reduction in future costs and increased sustainability). Careful consideration thus needs to be given to how these costs are shared between partners and over time, as does the need for and design of any subsidies. The scope for innovation also depends heavily on the interest of government partners and the degree of flexibility they are prepared to allow in service design. The significant impact of the regulatory environment is also clear; without some degree of flexibility, replication may be impossible or extremely difficult.¹³

The principal lesson from the focus projects therefore seems to be to ‘begin with the end in mind’. In other words, if replication and mainstreaming are sought, this objective should be the ultimate driver throughout the partnership project.

¹³ This interaction is further explored in the BPD study on Regulatory Frameworks and Partnership which will be available soon on the website.

Business Partners for Development
Water and Sanitation Cluster

*Making Innovation Work through Partnerships in Water and
Sanitation Projects*

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Making Innovation Work through Partnerships in Water and Sanitation Projects

1.0 Introduction

It has become increasingly apparent that conventional models of service delivery are inadequate to meet the challenge of providing water and sanitation services to the vast unserved populations of the towns and cities of less developed countries. Most of those unserved are poor and many live in crowded, unplanned settlements, sometimes far from the existing water and sanitation networks serving wealthier neighbourhoods. There is an urgent need for models that can extend services to the poor at sufficient speed to cope with ever-expanding demand and in a manner that is acceptable to the users and technically as well as financially sustainable.

This study is one of a series commissioned by BPD to explore and illustrate how tri-sector partnerships involving business, government and civil society can achieve more at the local level than any of the groups acting individually.

This report sets out the findings of a study of the experiences of the eight BPD focus project partnerships in developing innovative approaches to service delivery that seek to overcome the many constraints in providing viable services to the poor. The term ‘innovative approaches’ has no strict definition here; it simply refers to approaches to service delivery that are substantially different to those used prior to project intervention.

The projects have developed a wide variety of innovative approaches, most of which have produced, or are likely to produce, substantial benefits to the poor. Four out of eight involve some degree of technical innovation while others focus on models of management, billing and user payment. All include some element of user consultation and communication and have sought to improve the customer-service provider relationship. The approaches also vary widely in scale, from a small pilot covering just 10 households, to approaches operating within large concessions and serving tens of thousands of people. Given such differences it is difficult to compare the effectiveness of one project against another. It is possible, however, to identify key elements in the design of successful models and to note how partnership may have enabled the innovations to happen.

RESEARCH OBJECTIVES

The research sought to address the following questions:

- 1) What innovative approaches have been developed by the focus projects, and why?
- 2) What added value is being achieved by the approaches?
- 3) To what extent has tri-sector partnership enabled them to happen?
- 4) What are the prospects for the replication and mainstreaming of these innovative approaches?

METHODOLOGY

The research was conducted via email and telephone interviews with project partners, a study of available documents and brief meetings with a number of key personnel. It is important to explain at the outset the limitations of the research process: the focus projects were not visited during the study, neither was it possible to consult members of the communities involved in the different approaches. To a large extent, therefore, the researchers relied on project partners’ own perceptions of the successes and failures of the innovative approaches and of the factors that were important in their development. In deciding which innovative approaches to study (some projects have produced several), priority was given to those which project partners considered significant, those in which all members of the partnership played a role, and/or those for which sufficient information was available about their genesis, development and impact.

BUENOS AIRES: PARTICIPATIVE WATER SERVICE

Situation prior to project intervention

In 1993 the city of Buenos Aires granted a concession to Aguas Argentinas, with a target of 100 per cent water supply coverage (private connections) and 95 per cent sewerage coverage within 30 years. At that time only 55 per cent of households in low-income areas had a legal water connection and 35 per cent a sewer connection. There were many illegal connections. Prior to the project, good progress had been made but 1.5 million people still lacked formal services.

Overview of the focus project

The concession operates on a five-year planning cycle, within which the company is required to develop a Service Expansion Plan for low-income communities. The plan targets specific populations prioritised by the municipalities and approved by the regulator.

Despite a plentiful bulk water supply, increasing the rate of expansion in low-income areas of the city is problematic due to connection fees that are unaffordable to the poor (despite subsidies), land tenure issues, unplanned housing development and, in some areas, security problems for company staff. This prompted the company to form a Sensitive Areas Unit mandated to develop effective approaches to working in low-income neighbourhoods.

The BPD focus project comprises a number of pilots established under the Sensitive Areas Unit. The projects are now run entirely by the company, but are based on previous experiences with NGOs in the mid-nineties. The pilots aim to increase user participation in service delivery and reduce costs.

Project partners

- *Aguas Argentinas (parent company Ondeo)*
- *Municipal authorities, San Fernando, et al.*
- *NGO partners engaged in the original work: IIED-LA (NGO) and Fundación Riachuelo (CBO)*

The participative water service, or Servicio de Agua Consensuado (SAC) involves the development of strategic partnerships through which services are financed jointly by the company, which facilitates the process and provides technical supervision and user education; the municipality, which funds materials; and the community, which provides free labour. The service includes a number of innovations:

- **Connection charges:** consumers may work in exchange for the cost of a house connection; in some instances the municipality even pays for this labour via income-generation schemes;
- **Semi-collective (multiple user) connections and metering:** while non-standard designs are not permitted, the company has, where possible, introduced house connections that serve several households simultaneously, thereby lowering per capita costs.

In developing the SAC approach, Aguas Argentinas built on the experience of its earlier work with an international NGO, the International Institute for Environment and Development – Latin America, in a low-income neighbourhood of roughly 2,500 residents. That project was financed largely through bilateral aid and with very focused inputs and as such could not be replicated on a sufficient scale, given local funding constraints. The company has therefore adopted the same methodology, but now works directly with residents. The basic unit of community organisation is the ‘Unidad Vecinal’ which is formed from groups of households and provides the vehicle for communication between service providers and users.

The pilot also includes a user education and awareness component which aims to:

- introduce and explain the services being installed
- clarify roles and responsibilities
- promote good communication between service provider and users
- promote a culture of paying bills

This is delivered through workshops and twice-yearly community meetings in various project neighbourhoods.

The company estimates the cost of the social component to be roughly \$15 per connection.

To date the pilot has served approximately 50,000 slum residents out of a target population of 250,000, and rates of revenue collection are high. When the pilot is completed, the operator will face the further challenge of expanding services to over a million residents in public housing complexes and low- to middle-income neighbourhoods.

ONDEO, the parent company, has invested some \$250,000 of its own funds in developing and refining the SAC methodology, which it is documenting for use by all of its Latin American subsidiary companies. This forms part of a global initiative by the company to develop effective models of service delivery to the poor, entitled ‘Agua para Todos’ (‘Water for All’).

LA PAZ-EL ALTO: CONDOMINIAL WATER SUPPLY AND SEWERAGE SYSTEMS

Situation prior to project intervention

In 1997 a 25 year concession was awarded to Aguas del Illimani, a subsidiary of Suez-Lyonnaise des Eaux, for the operation and expansion of water and sanitation services in the La Paz-El Alto metropolitan area, which has a population of approximately 1.4 million. The concession includes an explicit objective to achieve rapid expansion of services to low-income areas of the city, in accordance with government policy. The operator must extend in-house water connections to virtually all unconnected households in the metropolitan area by the end of 2001 and achieve 90 per cent sewerage coverage by 2021.

Of the municipalities covered by the concession, El Alto has the highest growth rate by far and is home to the majority of low-income households in the city. At the start of the concession, coverage for the city as a whole stood at 48 per cent for sewerage and 87 per cent for water. In El Alto, however, there was only 35 per cent coverage with sewerage. Most residents used pit latrines, public or neighbours' toilets, or defecated in streambeds. Most of the unserved households were located in fast growing peri-urban areas, and included a high concentration of ethnic Aymara people from the Altiplano, or high plains region.

Overview of the focus project

The El Alto pilot project was launched in 1997 by a partnership known as the Peri-Urban Initiative for Water and Sanitation (IPAS), which sought to develop affordable solutions for service provision to low-income communities. The objective of the pilot was to provide condominial water and sewerage connections to 10,000 households over a three-year period from 1998-2001.

Project partners

- *Aguas del Illimani (part of a consortium led by Ondeo)*
- *Ministry of Housing and Basic Services*
- *Municipal authorities of El Alto and La Paz*
- *Water and Sanitation Program – Andean Region*
- *Swedish International Development Agency*

Condominial sewerage

In a condominial sewerage system, households are connected to an intermediate network running through backyards or under footpaths. This links the community ('the condominial') to the main sewer through one shared connection, unlike a conventional system in which each house connects directly to a sewer in the street. By laying pipes where no vehicles pass, shallow depths and thinner pipes can be used, reducing costs considerably. The community is responsible for maintenance of the intermediate network, which can be accessed easily.

For the purposes of this study, the El Alto project model as a whole has been taken as an innovative approach, since the various components are closely interconnected. Of all the approaches studied, it is the only one that includes a sanitation component and explicit health objectives.

The package of products and services comprises:

- **Condominial sewerage (see text box):** users (individually or in groups) install condominial networks while the company, either directly or through sub-contractors, connects each condominial network to the main road sewer. Connection fees are subsidised and there is an optional extra-low connection charge for users who opt for 'shared management' whereby they take on some additional maintenance responsibilities.
- **Community mobilisation:** involvement of customers in the planning and implementation of the project, in order to generate demand for services and reduce costs. This is achieved via condominial organisations, which act in official negotiations with the company and enter into signed agreements setting out the roles of all players in construction and maintenance.
- **Community education and outreach:** an integrated scheme designed to support the expansion of services, increase water consumption and optimise health impacts. It includes hygiene promotion and micro-credit components.

The pilot has operated as a learning process from the start, with the Water and Sanitation Program providing a valuable facilitation and capacity building role. Partners have tried to avoid imposing pre-determined solutions, and the choice of condominial sewerage evolved from a review of various technical and managerial options that could meet the requirements of the Ministry of Housing and Basic Services.

A strong emphasis has been given to replication and institutionalisation of the approach. The process was documented thoroughly and training modules developed for use nationally; efforts are also being made to incorporate condominial sewerage into national technical standards so that it can be adopted widely.

By April 2001, 7,897 new connections had been made, confirming that the pilot had expanded coverage at a much faster rate than conventional approaches. The new services were affordable to customers, satisfaction levels were high and there was substantial demand for condominial services from other parts of the city. In addition, capital costs were significantly lower than for conventional water supply and sewerage systems and revenue collection stood at almost 100 per cent. Recent evaluations indicate that the pilot has also brought about specific improvements in hygiene behaviour and health.

Important challenges remain to be tackled however, since operation and maintenance systems have proved problematic and cost recovery remains very low due to the combined effects of low tariffs and connection charges imposed by the regulator as well as low consumption levels. According to the company, the tariff regime constitutes a serious threat to the viability of the innovative approach.

The Water and Sanitation Program will formally withdraw from the partnership in 2002. Aguas del Illimani are now implementing the approach on their own with somewhat reduced community mobilisation and education inputs.

While the capital, training and social components of implementation were funded from resources within the concession, development of the innovative approach was funded largely by external assistance channelled through the Water and Sanitation Program.

CARTAGENA: INNOVATIVE BILLING, PAYMENT AND COLLECTION METHODS

Situation prior to project intervention

In 1995 a 26-year contract was granted for the operation and expansion of water supply and sanitation services in the city of Cartagena. The operator is Aguas de Cartagena, a new company formed from a joint venture between the Municipality of Cartagena (50 per cent), Aguas de Barcelona (46 per cent) and local private investors (4 per cent). Prior to the concession the city network suffered low pressure, intermittent supply, poor water quality and poor customer service. Coverage for both water supply and sanitation was very low in poor neighbourhoods and many residents were reliant on water vendors.

Overview of the focus project

El Pozón is a poor district of the city which is not served at all by the city water supply network. The focus project began in 1999-2000 and its objectives are to provide an adequate water supply to all of the estimated 50,000 residents of El Pozón and, to improve the efficiency of billing and collection.

Project partners

- *Aguas de Cartagena*
- *Municipality of Cartagena*
- *Local associations and CBOs*
- *(Initially) MPDL (NGO)*

Development of this innovative approach began in response to community consultation at the project planning phase, facilitated by an international NGO (Movimiento para Paz, Democracia y Libertad), and a number of meetings between the operator and neighbourhood committees. It revealed a culture of non-payment for services and indicated that many residents would find it difficult to pay connection fees or monthly bills due to low and fluctuating daily incomes from informal sector employment. There was clearly a need to develop and market new services that were not only affordable in absolute terms but also incorporated billing and payment arrangements that did not require people to save.

Services also had to be cost-effective for the operator. Since the regulator required strict adherence to technical norms, there was limited scope for innovative technology and this further heightened the focus on innovation in financial management.

Project infrastructure is still being installed and new operating systems are yet to be implemented, but an innovative approach is already being developed with components relating to:

- **Connection fees:** a subsidised fee with 20 per cent down-payment at connection and the remainder deferred for up to 36 months at preferential rates of interest.
- **Billing and payment :** flexible arrangements including weekly or fortnightly billing (for which regulator approval is being sought) and locally-based collection. Since there are no official payment points in El Pozón, nor any outlets of major supermarket chains (where people can pay their bills elsewhere in Cartagena), the community has proposed to elect a number of individuals to carry out collection on behalf of the company. The establishment of neighbourhood company offices and use of mobile collection teams are also under discussion.

Piloting of the innovative approach will be supported by the ongoing education and outreach programme which introduces the new services, encourages waste reduction and promotes the rights and responsibilities of users, including the need to pay bills. Once the water supply is fully operational the operator intends to establish signed agreements with every connected household.

Following the initial consultation there has been little NGO involvement in the project. Instead, the operator has established an Office for Community Relations which employs a number of social workers who facilitate dialogue with the community, primarily through established neighbourhood committees known as Juntas Administrativas Locales. Dialogue with El Pozón residents has given the operator an insight into the needs and constraints affecting poor customers, and helped it respond to the deep-seated mistrust of public authorities among socially marginalised groups.

The cost of extending services to El Pozón is estimated at \$6 million and is being financed from an \$85 million World Bank loan for service improvements city-wide. The loan will be repaid partly by the operator and partly by the municipality.

PORT-AU-PRINCE: COMMUNITY-MANAGED STANDPOSTS

Situation prior to project intervention

The project takes place in 14 shanty towns in Port-au-Prince, a city facing rapidly growing demand for water and sanitation services due to a tenfold population rise in 30 years; the total city population is now two million. While the bulk water supply was reasonably good before the project, many shanty towns were unserved or badly served and most people relied on private vendors.

Overview of the focus project

The focus project was established in 1994 by the French NGO, GRET, which facilitated the development of networks of community-managed standposts fed from the bulk supply. Each standpost is supplied with a storage reservoir to enable a reliable 24-hour supply.

Project partners

- CAMEP (government utility)
- GRET/Port-au-Prince (NGO)

In this case, the BPD focus project and the innovative approach are one and the same. Each standpost is managed by an operator nominated by an elected committee serving the whole shanty town. The committees sign agreements with CAMEP setting out billing and payment obligations.

Both the utility and water committees recover their operation and maintenance costs. The bulk supply is metered as it enters a shanty town and charged to the committee via a monthly bill at \$0.3 per m³. It is re-sold to users from standposts on a 'pay-as-you-go' basis at a flat rate of approximately \$1 per m³; this is three times lower than the rate charged by vendors. After paying the utility and standpost operators, and maintaining the local distribution network, the committees make a profit of roughly 15 per cent, which is used for other small infrastructure investments. Not only are standpost operators employed, on a rotating basis, but a sanitation programme has been established which turns over a labour force of over one hundred community members every two weeks.

The project began as an informal experiment in which GRET and CAMEP made a written agreement to work together. GRET then initiated a long and comprehensive community mobilisation process in order to establish the stable social infrastructure necessary for development. The aim was to form committees that were neutral but inclusive. This was a major challenge as the shanty populations were riven with political tension that could easily erupt into violence.

GRET facilitates both social and technical aspects of the project. Community mobilisation and the training of water committees are done by two local NGOs (one formed specially for the project). Local contractors build the local networks, reservoirs and standposts and technical supervision is done by a Haitian monitoring company. While there is no international private sector partner, GRET secured the assistance of the consulting engineers Hydroconseil in the early stages of the project.

A total of 65 standposts have now been installed in the 14 shanty towns, serving a total population of 210,000. Revenue collection stands at 100 per cent; there have been no defaulting committees since inception. The approach has been replicated in more than 20 other areas and further expansion is no longer dependent on GRET, whose role has changed from implementor to advocate and watchdog.

CAMEP has supported the project throughout and through the partnership its own capacity to develop services for the poor has been enhanced considerably. It has now adopted the project model for use in its own operations via a Low-Income Users' Unit. Mainstreaming of the approach has happened faster and more easily than was originally thought possible.

There is now a plan to legally devolve responsibility for water supply down to the lowest possible level, thereby enhancing the role of water committees in the project. A regulatory body is also to be created to oversee and depoliticise the provision of services.

Capital and development costs were funded primarily by the French Development Agency AFD and the European Union.

JAKARTA: INSTALLATION OF TAMPER-PROOF METERS

Situation prior to project intervention

Marunda is a poor sub-district of eastern Jakarta, with seven sub-sections and a population of some 20,000 (3,000 households). The focus project takes place in four of the sub-sections. Prior to the project, the majority of houses had a private water connection but the network was in serious disrepair, delivering little or no water to most properties. Most relied on private vendors.

In 1999, Thames Pam Jaya was granted a 25-year water supply concession for the eastern half of Jakarta.

Overview of the focus project

The objective of the focus project in Marunda was to rehabilitate water supply infrastructure for 1,000 out of 1,540 households previously served by house connections. The operator reduced connection charges from up to \$7 to just \$3 and installed communal hydrants as an interim service where there was no tertiary network.

Project partners

- *Thames Pam Jaya (private operator)*
- *Pam Jaya (former government utility)*

The concessionaire, Thames Pam Jaya, has placed a strong emphasis on improving the efficiency of revenue collection and reducing the number of illegal connections. One of several initiatives that enabled this in Marunda was the introduction of tamper-proof meters (now used widely in Jakarta). Pam Jaya, the government utility, had tried to introduce the meters prior to the concession but the initiative suffered from the lack of an effective communications strategy; there was limited acceptance of the meters and long-standing problems of vandalism and non-payment remained. On taking up the concession, the company sought to develop a more effective approach. This included a user education and awareness campaign and an actively enforced disconnection policy for defaulters and illegal users. The approach was implemented by the company in collaboration with the former utility but without an NGO partner.

The meters used are produced in-country under licence from Schlumberger and Linflow and have proved to be both effective and affordable (\$9 to \$15 for a house connection). They are installed on all new or rehabilitated house connections and read monthly. Communal hydrants are also metered but billed at a low volumetric ‘social rate’ irrespective of consumption.

The education and awareness campaign was targeted at communities where infrastructure was to be rehabilitated: typically areas of about 2,000 population. It involved public meetings at which slides were presented to introduce and explain the use of the new meters. Staff also demonstrated to residents the savings they would make by getting a new house connection. Elected members and other key community leaders were encouraged to participate.

Marunda residents were represented in the project by their elected chairman, a fourth tier paid local government official. The company also developed an informal relationship with a number of community organisations and this helped to promote acceptance of the new metering system.

Households were unaccustomed to paying monthly bills, having purchased water from vendors in the past, but payment rates in Marunda are now very high (85-90 per cent) for both house connections and shared taps. Generally, the meters are functioning well though there are some problems in areas far from the treatment plant where supply is intermittent, and in a few places subject to corrosion and saltwater intrusion.

DAKAR: COMMUNITY-MANAGED STANDPOSTS ('EAU POPULAIRE')

Situation prior to project intervention

Prior to 1994 the NGO ENDA had been working in the Dakar slums for some years on a variety of projects and had gained the respect of both the community and government bodies. At that time most slum residents obtained water from contaminated shallow wells and a few standposts provided free by government. No private vendors were working in the city due to a ban on the re-selling of water from private connections.

Overview of the focus project

In 1994 ENDA began working with the community to develop networks of communal standposts fed from the bulk supply. Each standpost is metered and run by a community-nominated operator working under a management committee.

Project partners

- *SONES (government utility)*
- *ENDA (NGO)*
- *Sénégalaise des Eaux (operator)*

As with Port-au-Prince, the innovative approach and the focus project are one and the same in Dakar. The 'eau populaire' project was developed in response to community demand and an awareness that it could not be met in the near future through the conventional government approach. The utility in fact had little incentive to install standposts since they were billed at a lifeline rate that produced very little revenue.

Under the innovative approach, standposts are metered individually and each is run by a community-nominated operator who may work independently or under the supervision of the management committee (there is one committee for every standpost). Most operators are uneducated women and each has to pay a deposit of just under \$40 to secure their position. Approximately 250 are currently employed.

The bulk operator, Sénégalaise des Eaux (SdE), is responsible for operation and maintenance of infrastructure up to the meter on the standpost, the community operator and/or management committee thereafter.

Users pay a flat volumetric tariff at the point of collection, equal to the lifeline rate of the utility's increasing block tariff. The standpost operator (or management committee) is in turn billed bi-monthly by the bulk operator. ENDA have negotiated an agreement whereby only 60 per cent of the standpost revenue is remitted to the utility. Thirty per cent is paid to the standpost operator, 9 per cent is retained for standpost maintenance and 1 per cent covers depreciation.

Requests for standposts are relayed to the utility via ENDA or SdE. The utility then requests ENDA to conduct a feasibility study which includes a workshop with community representatives to explore options and their costs and promote participation. Often, the price of house connections rules them out and the community requests standposts.

ENDA secures a 25 per cent community contribution towards capital costs in the form of cash or labour. The utility and bulk operator are responsible for overall supervision of technical works, connecting the tertiary network to the bulk supply and quality assurance.

Some 250 standposts have now been installed and payment levels stand at close to 100 per cent. Any defaulting operators are quickly cut off.

BOTT: STANDPIPES WITH ELECTRONIC PRE-PAYMENT METERS

Situation prior to project intervention

The BoTT ('Build, Operate, Train and Transfer') programme in the Eastern Cape and Northern Province of South Africa serves rural and peri-urban communities, the great majority of them poor. Prior to project intervention, much of the population relied on traditional sources including wells, rivers and rainwater; some had access to a borehole. In the apartheid era most were excluded from government services.

Overview of the focus project

BoTT was launched in 1997 to meet the need for the development of water and sanitation services for the unserved population. It provides a 'one-stop shop' for the development of new infrastructure and services and their subsequent handover to local government or communities. This is achieved in each state via a Project Implementing Agency (PIA) contracted by the Department of Water Affairs and Forestry. The PIA is a consortium of companies plus the NGO Mvula Trust.

The standard BoTT project cycle includes comprehensive arrangements for planning and consultation with the community. Tariff structures are not fixed but are calculated for each scheme so as to achieve recovery of operation and maintenance costs at a predicted level of consumption.

Project partners

- *Project Implementing Agencies: Amanz'abantu in Eastern Cape, Metsico in Northern Province*
- *Department of Water Affairs and Forestry*
- *Local governments*

Of the wide variety of activities undertaken by the BoTT programmes, a notable innovation has been the introduction of pre-payment technology, in particular the use of communal standpipes with electronic pre-paid meters in the Eastern Cape. This technology was offered to, and accepted by, a number of communities as an innovative to the normal practice of charging each household a flat monthly rate for use of a standpipe.

The technology was also attractive to municipalities as it offered a means of cost recovery from newly adopted schemes with the minimum of administration, there being no need for household billing.

The standpipe used is known as the Bambamanzi. It is produced by Conlog and costs over \$500 to purchase and install, roughly double the cost of a conventional, unmetered standpipe. It is equipped with a smart card reader and solenoid valve and distributes water while debiting the value of the water consumed from the credit on the user's personalised card. The flow stops when the user withdraws the card or the credit is used up. Users purchase credit from designated local shops equipped with vending units for charging cards. Each shopkeeper buys a certain amount of credit from the service provider and re-sells it to customers.

The standpipes have suffered two major problems. Firstly, they have suffered frequent breakdowns for which town-based and expensive expertise is required. As such, they are now considered suitable only for locations less than two hours from the maintenance centre on a tarmac road. Secondly, though the standpipes were installed at the request of beneficiary communities, and at agreed tariff rates, consumption has been extremely low: typically 3–11 lpcd, indicating that people are not using them as their main source of water.

KWAZULU-NATAL (KZN): BPD STAND & CUSTOMER MANAGEMENT APPROACH

Situation prior to project intervention

This project takes place in Durban and adjoining Pietermaritzburg and targets a number of former townships that received very poor services during the apartheid era. Formal adoption by their respective municipalities in 1995 increased the official populations dramatically and presented a huge service delivery challenge. The municipalities responded by launching a number of initiatives to improve water and sanitation provision but services were still very poor when the project began.

Overview of the focus project

The project began in 1998 and seeks, through piloting and tri-sector partnership, to develop effective models of service delivery to the target communities. It is facilitated by Vivendi, which has a formal relationship with the two municipalities but no service delivery contract. The project has a strong emphasis on community consultation, participation and local economic development through the training and use of community labour and emerging contractors.

Planned activities include a wide range of sub-projects covering technical, financial and social aspects of service delivery.

Each partner has allocated funding for the pilot.

Project partners

- Vivendi
- Local governments (Durban Metro Water Services and Pietermaritzburg-Msundi Transitional Local Council)
- Mvula Trust (NGO)
- Umgeni Water (bulk supplier)
- Water Research Commission

The KZN pilot comprises a range of innovative approaches; two were selected for the purposes of this study.

a) The ‘BPD Stand’ – This approach relates to a low-cost housing project in Newtown, home to some of the poorest people in Pietermaritzburg, in which each property was provided with an outdoor, 200 litre trickle-fed water tank. Following completion of the scheme the municipality received numerous complaints from residents, some relating to drainage, heating by the sun, installation and physical protection. The majority, however, concerned with lack of prior consultation or explanation of the unfamiliar technology, and fear of poisoning or witchcraft due to the siting of the tank outside. The municipality invited the project to investigate and resolve the complaints.

In collaboration with the community, the project modified the design so that the tank was housed indoors on a steel support structure, feeding an indoor tap and wash basin with an outlet pipe discharging to a soakaway outside. Initial consultation was facilitated by the Mvula Trust, while technical development was done by UWP, a firm of technical consultants. The indoor stand was piloted in 10 households and proved both popular and cheaper than the previous arrangement. The community now hope that the municipality will provide indoor tanks for the hundreds of households affected, though no decision has been taken so far.

b) Customer management approach – A more recent, and ambitious, sub-project is the customer management approach pilot project in Ashdown, a community that has seen significant improvements in water and sanitation services without a corresponding increase in revenue. Here the KZN project aims to improve the level of payment and develop a positive relationship between service provider and customers. Unlike established customers in the higher-income areas of Pietermaritzburg, who have for many years enjoyed some degree of customer service, new customers in Ashdown are located relatively far from the municipal offices and, being poor, do not have easy access to telephones and transport. With this in mind, the main elements of the project will include:

- Community liaison and education
- Meter, customer and service audits
- Establishment of a local customer service centre
- Training and appointment of contractors

The pilot is still under development, hence it is too early to assess its value or impact.

2.3 OUTCOMES AND ADDED VALUE

The value of the innovative approaches can be assessed in terms of

- the extent to which they have succeeded, where conventional approaches have failed, in realising project objectives for the poor; and
- their broader value to the sector as models of service delivery to the poor that can be replicated widely.

This section focuses on the first issue; the broader question of mainstreaming is explored in section six.

Table 1 summarises the main achievements of the innovative approaches as reported by partners. It is important to note that:

- 1) There may be other benefits that have not been identified or reported by focus projects. For example, only in La Paz-El Alto and Dakar have health impacts been assessed to a limited degree. The absence of health objectives for most of the projects is noticeable, given the close links between water supply, sanitation and health; however, this may simply reflect the technical bias of the lead organisations.
- 2) Limited data is available from some projects. The table reflects trends reported by project partners more than measured outcomes.
- 3) The innovative approach in Cartagena and one approach in South Africa KZN (the customer management approach) have yet to be fully implemented so are not included in the table.
- 4) A blank box indicates that no information was available from the project; it does not signify a lack of achievement against that parameter.

Most of the approaches have been very successful, especially in terms of:

- accelerated expansion of water supply coverage (e.g. South Africa BoTT)
- improved maintenance of tertiary infrastructure (e.g. Port-au-Prince)
- reduced vandalism (e.g. Jakarta)
- affordable charging and payment regimes (e.g. Buenos Aires)
- improved recovery of operation and maintenance costs, though not capital costs (e.g. Dakar)

A further important benefit has been capacity building for service providers in both the government and private sectors. In Port-au-Prince, the government utility CAMEP has now internalised the innovative approach piloted by the NGO GRET, while in Latin America the learning experience has been invaluable for private companies that were not previously equipped or minded to work with the poor.

The only approach that has produced little benefit has been the introduction in BoTT of standpipes with electronic pre-paid meters, though the experience still provides some valuable lessons in service design for the poor and has helped to promote a contractual relationship between service provider and users. Some approaches have also produced benefits beyond the sphere of water and sanitation, for example the creation of stable community organisations in the Port-au-Prince slums that were previously prone to serious political and social unrest.

TABLE 1: The added value of innovative approaches

OUTCOME	IMPROVED SERVICES			IMPROVED O&M	USE BY THE POOR	FINANCIAL VIABILITY <i>(excluding costs of developing the innovative approach)</i>			CUSTOMER SATISFACTION	OTHER	
	Indicator	per cent of target population served / likely to be served	Level of service			Reliability	Viable system adopted	Use as main source by target consumers		Reduced capital costs	Recovery of capital costs
Buenos Aires	<i>High</i>	<i>Household</i>	<i>Good</i>	<i>Yes</i>	<i>High</i>	<i>Yes</i>	<i>Low</i>	<i>High</i>	<i>High</i>	<i>Fewer illegal connections</i>	<i>Income generation</i>
La Paz-El Alto	<i>High</i>	<i>Household</i>	<i>Good</i>	<i>Yes (but some problems)</i>	<i>High</i>	<i>Yes</i>	<i>Low (capped connection fees)</i>	<i>Low (tariff restriction)</i>	<i>High</i>	<i>Health benefits</i>	
Port-au-Prince	<i>High</i>	<i>Communal.</i>	<i>Good</i>	<i>Yes</i>	<i>High</i>		<i>Not sought</i>	<i>High</i>		<i>Water 1/3 of vendor price. Stable social infrastructure. Further development via revenue.</i>	<i>Reduced vandalism Job creation</i>
Jakarta	<i>High</i>	<i>Household</i>	<i>Improved</i>		<i>Yes</i>	<i>No</i>	<i>Low</i>	<i>Improved</i>		<i>Reduced vandalism</i>	
Dakar	<i>High</i>	<i>Communal</i>	<i>Good</i>	<i>Yes</i>	<i>High</i>		<i>Low (25 per cent community contribution)</i>	<i>High</i>	<i>High</i>	<i>Rapid coverage</i>	<i>Job creation</i>
SA BoTT	<i>Low</i>	<i>Communal</i>	<i>Poor</i>	<i>No</i>	<i>Very low</i>	<i>No</i>	<i>Not sought</i>	<i>Very low</i>	<i>Low</i>	<i>Promotes payment for services</i>	
SA KZN (BPD Stand)	<i>Uncertain</i>	<i>Household</i>	<i>Good</i>	<i>Improved</i>	<i>High (free to users)</i>	<i>Yes</i>	<i>Not sought</i>	<i>Not sought</i>	<i>High</i>	<i>Water stays cool</i>	<i>Public fears allayed</i>

3.0 Developing innovative approaches through partnership

This section examines how and why the innovative approaches were developed, the issues and obstacles arising from the process, and the roles played by project partners.

3.1 OBLIGATIONS AND INCENTIVES FOR INNOVATIVE APPROACHES

Most of the approaches were developed to address specific problems that could not be resolved through conventional approaches to service delivery, and for which the main provider had no easy answer. These included:

- *Low coverage in poor settlements*, as in Port-au-Prince.
- *Poor cost recovery* associated with poor customer relations and low willingness to pay. In South Africa KZN this persisted even after viable services had been provided.
- *The need to reduce capital costs* if infrastructure was to be provided on the scale necessary – a key consideration in Buenos Aires.
- *The need for services affordable to the very poor* This was a pressing need in all three Latin American projects.
- *The slow pace of development* In South Africa, it was expected to take 30-40 years to provide a safe basic water supply to the target population in the Eastern Cape.

The fact that a need or problem exists does not mean that it will necessarily be addressed; there must be an incentive to take action. In the case of the focus projects, a variety of formal and informal incentives were at work, including:

1. *Contractual obligations* In concessions where explicit targets have been set regarding services for the poor, operators face penalties (or at least lost revenue) if they do not increase the speed of infrastructure development and/or improve cost recovery. This, combined with a large population that cannot be served through conventional means, makes it imperative to seek an innovative approach. Buenos Aires and La Paz-El Alto are good examples.
2. *Policy obligations* Some governments had adopted an explicit pro-poor policy, as in Bolivia. In South Africa BoTT, decentralisation of responsibility for water supply to local government made the prospect of pre-payment technology very attractive to municipalities concerned about their financial burdens.
3. *Commercial need* Private sector operators need to learn how to provide cost-effective services for the poor, who make up the bulk of the unserved population in less-developed countries. With large-scale private sector participation still relatively new, most operators are on a steep learning curve and need to establish their credibility if they are to survive and expand in this market. Both Vivendi in South Africa KZN and Ondeo in Buenos Aires have committed substantial funds to their projects (\$750,000 in the case of Vivendi), which they regard as important research investments.
4. *Local political imperatives* In both Cartagena and La Paz-El Alto, municipal governments felt the need to meet the demands of potential electors.
5. *Civil society concern* for the needs of the poor. In Dakar and Port-au-Prince, NGOs initiated the projects in response to demand from slum communities

and an awareness that government alone could not meet their needs in the near future.

Experience from the focus projects suggests that solutions to service delivery problems can be found where there is real pressure to do so. The important point is that in these cases the pressure existed in the form of pro-poor organisational objectives or contractual obligations. This highlights the importance of incorporating appropriate incentives into contract design so as to ensure that tri-sector partnership really benefits the poor.

In a tri-sector partnership, different partners respond to different incentives. Some of the focus projects have achieved a successful balance whereby each partner gains from the innovative approach: a ‘win-win’ situation. The Port-au-Prince project provides a good example.

In other cases, however, partner incentives are not entirely compatible. In South Africa BoTT, partners differ in their perception of the ‘client’. Contractually, the client of the Project Implementing Agency (PIA) is the Department for Water Affairs and Forestry, but to the Mvula Trust, a member of the PIA, the primary client is the community. Their approach to work is community-oriented, and this has implications for project design and the pace of implementation. Partners report that this creates some tension on occasion, though the problems have not been insurmountable.

3.2 IMPACT OF EXTERNAL ENVIRONMENT

The development of innovative approaches has, in many cases, been affected profoundly by the external environment, which may foster or constrain success. Clearly, new approaches must be designed with careful attention to the context in which they are to operate.

Policy context

In La Paz-El Alto, pro-poor government policy was a driving force behind development of the condominial system, which was intended to provide affordable services for the poor. In South Africa BoTT, meanwhile, policy has been the dominant factor in both the introduction and impending demise of Bambamanzi standpipes.

Interestingly, most of the focus projects have not been hampered by a policy measure that is common in less developed countries: the exclusion of informal settlements from government services. In Port-au-Prince, for example, the utility CAMEP did not normally provide water and sanitation services in slums but its Director was very supportive of the GRET initiative to develop community-managed standposts fed from the public supply. In Dakar, though permission must be obtained from the Urban Planning Department in Dakar before services can be developed in slums, the state tends to regularise, rather than raze them. Only in Buenos Aires have major constraints been reported. Here Aguas Argentinas is prohibited by the terms of the concession from working in barrios that are not recognised by the public authorities or in areas where land tenure is uncertain. In Jakarta, Thames Pam Jaya is also not required to provide connections to illegal settlements.

Political instability, meanwhile, and the politicisation of service provision are serious problems that dominate the operating environment in several of the focus projects. In Jakarta this has created an environment of risk and uncertainty for Thames Pam Jaya, the operator.

Despite all of these constraints, relationships between the different stakeholders have facilitated service provision to poor communities. A key question is whether more concentrated partnering could have enhanced these impacts.

WIN-WIN SOLUTIONS IN THE PORT-AU-PRINCE PROJECT

- ◆ *The government utility, CAMEP*, benefits from increased revenue with relatively simple administration, since for each slum there is just one meter, one bill and virtually guaranteed payment; prior to the project, payment levels were very low.
- ◆ *Water committees* benefit through improved services and realising sufficient profit to fund additional infrastructure improvements.
- ◆ *The NGO, GRET*, pursues interests beyond the water sector. It facilitates development in the broadest sense by building social infrastructure and encouraging social and political stability.

THE IMPACT OF GOVERNMENT POLICY ON THE USE OF PRE-PAYMENT TECHNOLOGY IN SOUTH AFRICA

The BoTT programme was developed as a tool for implementation of three policy imperatives in the post-apartheid era:

1. The need for rapid development of water supply services for a huge unserved peri-urban and rural population (over 15 million people lacked a safe basic water supply).
2. A newly reconstituted Department of Water Affairs and Forestry (DWA) which emphasised that community participation should be central to infrastructure development.
3. Water and sanitation services were made a responsibility of local government, however, there was no capacity at that level to implement projects or to manage operation and maintenance. An innovative mechanism was needed.

Within this framework it appeared to programme managers (especially those on the technical side) that the Bambamanzi standpipe would be an ideal technology option for some rural communities. It offered a reasonable basic level of service plus simple and guaranteed revenue collection; community or municipal management was also thought to be possible. In the event, consumption from the standpipes has been extremely low and there have been repeated technical faults that can only be fixed by town-based technical specialists – an expensive constraint in remote rural locations.

Irrespective of these problems, new national water policy is set to make the Bambamanzi standpipe obsolete. With effect from 1 July 2001, every household will be entitled to a minimum quantity (likely to be 6,000 litres) of free water per month. All municipalities must implement the policy within two years. So long as few, if any, households consume as much as 6,000 litres per month from standpipes there will be no use for pre-payment technology.

Institutional constraints

Where there have been institutional obstacles to the development of innovative approaches, the most difficult problems have generally originated not with civil society or private sector partners, but with municipal government. While other partners are mostly willing to innovate and explore new possibilities, municipalities have, on the whole, been less eager to deviate from standard approaches. This may be because they have no incentive (under PSP) to innovate given that, in most cases, they do not face any financial repercussions for failing to deliver adequate services. It may also be the result of an institutional culture rooted in rules and formal procedures and an understandable aversion to any kind of risk. In addition there may be cases where the innovative approach deviates markedly from the private operator's original proposal; as such it could be seen as a breach of contract or at least a sub-standard solution.

Whatever the reasons for municipal conservatism, it can create a dilemma for project partners since high community expectations may be raised at the pilot stage. In the South Africa KZN project, the 'BPD Stand' pilot is complete and there is strong community support for the new water tanks, but it is far from clear whether the municipality will now provide the modified design for the hundreds of households that would like to have them. The constraint here is probably more financial than attitudinal, since money has already been spent installing outdoor tanks which have proved unpopular, but this only reinforces the need to ensure that innovative approaches are viable on a large scale.

On the positive side, some municipal governments have played a supportive role. In Buenos Aires, for example, the San Fernando municipality has been a pro-active supporter of the participative water service, while in La Paz-El Alto the municipality

of El Alto co-operated with the implementation of the innovative approach by granting permission to dig up pavements for installation of the condominial system.

Low municipal capacity has also influenced the framing of innovative approaches in the South African projects. Under a policy of decentralisation, local governments are taking on a raft of new responsibilities for which many are not equipped financially, technically or managerially, and there is some reluctance to take over new water supply schemes, especially those that may become a financial burden. Some schemes are handed over not to councils but to community-based organisations, especially in remote areas, but here, too, there are serious doubts about the ability (and motivation) of the organisation to provide an effective service.

Formal roles and responsibilities may also limit the scope for innovative approaches. In Dakar, institutional responsibilities for water supply and sanitation are separate and not well linked. Opportunities for holistic planning and implementation are missed, and sanitation is yet to be incorporated into the 'eau populaire' project. In general, inter-sectoral partnership should at least foster debate on potential options, even if these are not taken up. The experience in several of the projects suggests this to be the case.

Regulation¹⁶

For those innovative approaches developed within concessions (this applies to all three Latin American projects plus Marunda, Jakarta) the scope for innovation is to a large extent set by the regulator who sets fees, tariffs and technical standards. In La Paz-El Alto, the regulator has in many ways played a positive role, firstly by allowing the pilot project to proceed as an exception to current rules and standards, and thereafter by monitoring the concession and representing consumer interests through its Customer Affairs Desk. Notwithstanding this, and despite the fact that the technology used is cheaper than conventional sewerage, the viability of the entire project and the scope for replication are threatened by technical and financial regulation. La Paz-El Alto, Bolivia, is typical of many countries in that tariff setting is guided more by political than economic considerations.

At the opposite end of the spectrum, Jakarta suffers the total absence of a regulator, exacerbating the problems of political interference and instability. The former utility was to become the regulator but this was seen as inappropriate once they became a shareholder. Meanwhile, the Jakarta Consumers Association occasionally takes up grievances on behalf of individual consumers, but does not have a formal regulatory role.

Billing restrictions can be a further problem. In Dakar, the utility bills bi-monthly and is not willing to adopt more flexible arrangements. While this has not had a direct impact on the use of community-managed standposts, it could be a constraint on the take-up of house connections by low-income users who would find it difficult to save for a bi-monthly bill. In Colombia the national regulatory body for water and sanitation has imposed a minimum period of 28 to 32 days between reading of the meter and billing, and this could block the introduction of the more frequent billing cycle proposed by Aguas de Cartagena (at least fortnightly and possibly weekly) under the new innovative approach. The regulator has, however, granted permission for it to be tried on a pilot basis.

REGULATORY CONSTRAINTS IN LA PAZ – EL ALTO

1. Fees and tariffs

The maximum connection charge allowed by the regulator is lower than actual connection cost and adoption of the innovative approach only means that the company loses less money than normal: on average \$90 less on the condominial sewerage connection and \$46 less on the condominial water connection when compared to conventional connections. Turning to consumption, the situation is even worse for the company. An increasing block tariff is used with a lifeline volume of 30m³ charged at \$0.22 per m³, compared to a production cost of (according to the company) \$0.40 - \$0.50 per m³. With 65 per cent of El Alto residents consuming less than 10m³ and over 96 per cent consuming less than 30m³, the losses are considerable and, according to the company, the service is not viable even in the short term. (Source: V. Foster, *Water and Sanitation Program, The World Bank*).

2. Technical standards

While it recognises the condominial system as cost-effective and affordable, the regulator remains concerned that it does not follow established norms for the sector, and regards many technical aspects as sub-standard. The project was allowed to go ahead on the basis of a direct request from the Vice Minister of Basic Services but the regulator has made it clear that replication elsewhere in La Paz-El Alto will not be permitted until acceptable norms have been agreed upon for technical design, community inputs, operation and maintenance and other issues. The technical committee of the La Paz-El Alto project is where these issues are discussed by the different stakeholders. Various workshops, meetings and research pieces feed into this cross-sector discussion.

¹⁶ In early 2002, the BPD Water and Sanitation Cluster will be issuing a paper more closely analysing the relationship between regulation and partnerships.

Coincidentally, the national regulatory framework in Cartagena is coming to the end of its five-year cycle and is due for revision at the end of 2001. Experience in El Pozón, if successful, could influence a modification of billing norms at the national level.

On the positive side, regulation in Senegal has indirectly encouraged demand for the innovative approach. The re-selling of municipal water from private connections is banned in Dakar, hence there is no market for water vending. The utility does however permit the reselling of water from community-managed standposts, which are now heavily used.

Social factors

The populations served by the innovative approaches are mostly urban or peri-urban and are neither homogenous nor stable, creating huge difficulties in the planning of communal services. In several projects staff fear for their own security when visiting poor communities; vandalism of public facilities is also a common problem. Creating a stable social infrastructure was the single biggest challenge in Port-au-Prince.

Many of the innovative approaches were developed in the context of public attitudes to government services that were at best ambivalent, and sometimes openly hostile. They included:

- *Mistrust of external agencies.* In Buenos Aires, a history of broken promises made it very difficult to motivate people in the early stages of the project; this was also a major constraint in Cartagena and Port-au-Prince.
- *Low willingness to pay* This has affected most of the focus projects, La Paz-El Alto being perhaps the only exception. In Port-au-Prince, the high rates of payment achieved via the innovative approach reflect not only that the water was of lower cost, safer and more reliable (as in Jakarta) but also the value of working closely with the community.
- *Opposition to large-scale private sector participation,* which is relatively new, and often controversial, in less developed countries. In Jakarta, there was significant public opposition to the concession and staff have faced serious security problems in some parts of the city. There has also been strong trade union opposition to the concession. Many former Pam Jaya staff now work for Thames Pam Jaya but there has been considerable industrial unrest within the organisation; the relationship between the company and the municipality has also been strained.
- *High public expectations* are an important factor in the South African projects, where access to basic services is a right in the post-apartheid era. The Bambamanzi standpipe, the 'BPD Stand' and the customer management approach are all designed to help accelerate the development process in an affordable manner, so that all of the population receives at least a basic level of service. They also mark a new approach to service delivery whereby huge numbers of previously excluded users are treated as customers with both rights and obligations.
- *Resistance to unfamiliar technology* In El Alto, residents were initially unwilling to accept the changeover from six-inch sewer pipes made from concrete, to the new small-diameter sewer pipes (four inch diameter) made from PVC, which they considered on appearance to be sub-standard, unhygienic and insufficient to meet their needs. After successful trials and practical demonstrations residents became convinced; however, not surprisingly, there continues to be resistance from the manufacturers of concrete pipes.

WORKING WITH THE COMMUNITY IN EL POZÓN, CARTAGENA

In Cartagena, the residents of El Pozón come from every part of the country, as well as from various cultural and ethnic groups, and the majority are 'desplazados' – people who have been displaced from their homes by armed conflict, or the threat of conflict, between different para-military groups vying for power. This experience has created a collective mistrust of any external organisation that tries to engage with them, and overcoming this is a difficult and slow process. The education and awareness campaigns financed by Aguas de Cartagena have, however, helped to some extent in building bridges with residents.

3.3 TECHNOLOGY CHOICE

Under most of the innovative approaches, users have not been offered a range of technology options. South Africa BoTT is the exception; here beneficiary communities were presented with a number of choices (where options existed) which in some cases included the Bambamanzi standpipe. In general, though, technology selection appears to have been a technical and financial matter decided by the project partners, albeit with the interests of poor consumers in mind. In some cases it may be that only one option is feasible; there are certainly constraints where networked services are involved. Whatever the reason, lack of choice does not appear to have affected community support in most cases; billing and payment arrangements were of much greater concern. In Port-au-Prince and Dakar, for example, high usage levels and (in Port-au-Prince) the additional development made possible by user charges suggest that community need has been met effectively, albeit at a basic level (the projects do not assist users who wish to upgrade to house connections). Only where the technology has been unfamiliar, unreliable or ineffective have problems been reported. In La Paz-El Alto, a good deal of educational and promotional work was needed to generate demand for condominial systems and even then there was strong community resistance to the use of small diameter sewers in the early demonstration projects. In South Africa BoTT, the Bambamanzi proved to be highly unreliable.

Operation and maintenance

The success of an innovative approach can be judged in part by its operation and maintenance outcomes. The overall picture here is good; most of the seven approaches implemented have achieved good results, or at least an improvement on conventional arrangements. A strong emphasis on community consultation, participation and capacity building has no doubt made this possible. Port-au-Prince and Dakar have been particularly successful at tertiary level. Both projects have fostered viable community-based organisations, provided positive incentives for the key players and used relatively simple technology. These and other projects have seen a reduction in vandalism and made operation and maintenance viable through improved cost recovery.

In only two cases have serious operation and maintenance problems been reported. In both cases, the innovative approach employs non-standard technology:

- 1) *The Bambamanzi standpipe* as used in South Africa BoTT has proved unsuitable for remote rural locations due to frequent breakdowns that cannot be repaired within the community. It appears that the problems could have been identified much earlier through field testing prior to inclusion in the programme.
- 2) *Condominial sewerage* While the technology itself has proved effective, early experiences with maintenance are mixed. Two distinct maintenance models are offered to potential consumers. The first is '*Gestión Compartida*' or shared management, in which the household is obliged to carry out routine maintenance in exchange for a reduced connection charge. In the other option, the company takes on responsibility for all maintenance, both outside and inside the property boundary (though not inside the house itself). Of 14 completed zones, residents in just three have opted for the shared management model, but many fail to carry out the work properly (suggesting the need for ongoing liaison between the company and the communities). There have also been problems relating to the maintenance of pipes running through private property, due to legal ambiguities over land ownership and access. These problems will, hopefully, prove soluble and do not at present threaten the overall viability of condominial technology in La Paz-El Alto.

CONSTRAINTS ON USER CHOICE IN LA PAZ-EL ALTO

In La Paz-El Alto, the high level of community consultation in the El Alto project (the design of which was certainly influenced by the partnership) allows for informed decision-making on the part of potential consumers about the in-house level of service (number of taps, etc.), the management models, costs and levels of participation. Each household can thereby decide whether or not they wish to be involved in adoption of the innovative approach. However, in practice the company takes applications forward for implementation so long as at least 80 per cent of households are in favour. The fact that sewerage is a communal, not a household, service clearly presents physical constraints on the degree of user choice that can be accommodated; the regulator nevertheless has a degree of concern that some households are denied access to conventional technology.



*Condominial system in
La Paz-El Alto*

3.4 DEFINING ROLES AND RESPONSIBILITIES

Partner roles and responsibilities in the development of new approaches are not always formally allocated; the process has in some cases been more iterative and roles may change over time. In Port-au-Prince, the role of GRET has changed from one of facilitator to that of overseer, now that local organisations are able to manage and expand the service without direct managerial support. In South Africa BoTT, which develops new schemes for handover to local government or community organisations, roles and responsibilities are defined differently at each stage of the process. In some projects, the initiative for an innovative approach comes from just one partner and others are brought in at a later stage. In Buenos Aires, for example, semi-collective supply was originally developed by an NGO and later adopted by Aguas Argentinas, which was able to take the approach to scale. Broadly speaking, however, in those projects that were established as formal partnerships, contractual roles and responsibilities have also been followed in the development of innovative approaches. Typically, the private sector partner facilitates the process and deals directly with technical and financial aspects (perhaps using consultants), while ‘soft’ activities such as community consultation or education and awareness are assigned to an NGO partner and/or contracted specialists.

The facilitation role emerges as particularly important in developing an innovative approach. This is most clearly demonstrated in La Paz-El Alto where the Water and Sanitation Program (WSP) has no service delivery function but has served as a dedicated facilitator, a role for which it provided substantial donor-leveraged funding. The implications of this for replication are considered in section 3.6 below. With the withdrawal of the WSP imminent, Aguas del Illimani has now taken over as primary facilitator of the process.

Another notable feature of the projects is that, while tri-sector partnerships may be holistic in their overall approach, there may be only one partner involved in development of an innovative approach on a day-to-day basis. In South Africa BoTT, partner roles are quite distinct with only a limited degree of overlap. Within the Project Implementing Agency, the Mvula Trust is responsible for the institutional and social development (ISD) component, while private sector partners deal with technical aspects; both use consultants widely. In practice this has fostered something of a social-technical divide in planning and implementation. The introduction of the Bambamanzi standpipe was an engineering-led initiative that focused on the technical potential of the standpipe with perhaps less consideration of the social, geographical and institutional circumstances in which it would be used.

Similarly, in South Africa KZN the ‘BPD Stand’ pilot began as a team activity involving all project partners but after the initial community consultation most of the work - both ‘software’ and engineering elements - was done by a firm of technical consultants contracted by Vivendi. The project is now trying to develop more collaborative ways of working and the proposed ‘customer management approach’ is envisaged as a holistic endeavour involving all partners throughout, including the municipalities.

Municipal partners are often the least actively involved in the development of innovative approaches, though they may request their development and monitor progress. In Cartagena, for example, the municipality does not appear to be involved in the process at all. One reason for this may be that, as a 50 per cent shareholder in Aguas de Cartagena, the municipality prefers to make its presence felt in the boardroom. Low technical capacity has also been given as an explanation, but company representatives highlight the constant rotation of officials as a key constraint in securing the permanent and constructive engagement of the municipal authorities.

The division of roles and responsibilities has developed rather differently in the more informal, NGO-led initiatives in Port-au-Prince and Dakar. Here, roles are

defined not by areas of expertise but by levels of infrastructure. In Port-au-Prince for example, the utility is responsible for primary and secondary infrastructure, while GRET has facilitated both the social and technical aspects of the project at tertiary level.

Factors which emerge as important in assigning roles and responsibilities for the development of innovative approaches include:

- 1) *Clarity* This helps to prevent confusion, duplication or the neglect of important tasks.
- 2) *Flexibility* Project agreements should be sufficiently flexible to accommodate role changes where appropriate.
- 3) *Incentives* It is important to match responsibilities with appropriate incentives so that each partner maximises their contribution.
- 4) *Complementarity* Innovative approaches are most effective when they capitalise on the complementary skills and resources of each partner.
- 5) *Innovation* This should be encouraged and may come from any quarter. The partnership should operate in a way that allows creative input from all involved.

Customer contracts

It is not only project partners that have roles and responsibilities; there are also obligations on service users and some projects establish this formally. In Cartagena the operator intends to establish a so-called '*Contrato de Condiciones Uniformes*', or Uniform Conditions Contract. This will be a signed agreement between the Community Relations Office of the company and every household using the services. It will formalise obligations, responsibilities and rights relating to the administration and maintenance of the system as well as payment of bills. Similar contracts are also signed between the community and company in Buenos Aires and La Paz-El Alto. In South Africa BoTT, before commissioning a new scheme, operation and maintenance responsibilities are agreed in a multi-stakeholder workshop and enshrined in tri-partite agreements between the municipality, PIA and community. In Port-au-Prince, contracts have been made between the utility CAMEP and individual water committees, which are responsible for paying for bulk water consumption and maintaining their tertiary network.

Limits to NGO participation

For many NGOs and community-based organisations (CBOs) working in partnership with the private sector and government agencies is a new venture and can raise some difficult issues.¹⁷ Firstly, the NGOs may feel that their neutrality is compromised, making it harder for them to criticise public services and lobby for improvements. Secondly, they may fear public association with profit-making organisations, especially when private sector participation is controversial in the public eye.

The various stories around NGO involvement in the focus projects certainly highlight the need to develop NGO roles carefully. Treating an NGO as a regular private contractor may not be appropriate given the nature of the organisation, its motivation and (in some cases) limited professional resources. Furthermore, where

INCONGRUENT INCENTIVES IN THE DAKAR PROJECT

In the '*eau populaire*' project in Dakar, the NGO ENDA's main incentive is the opportunity to secure viable services for the poor. The private operator, whose income is based on a volumetric flat rate, also has an incentive to increase the number of standposts and introduce a more flexible billing arrangement since both would help to increase its income. The operator does not, however, have the power to install tertiary infrastructure or modify the billing system; these functions remain with the public utility, SONES. Since SONES' revenue is based on a tariff structure that produces relatively little income from standposts, there is little financial (as opposed to political) incentive for them to develop services for the poor and a much stronger one to serve high-paying customers.

¹⁷ For further analysis, please refer to the NGO Workshop Report and the Practitioner Note on Contracting NGOs, both of which can be found on the BPD website (www.bpd-waterandsanitation.org).

extension work is involved, the contract may need to be flexible in terms of the implementation approach (which may have to evolve through trial and error) and the time allowed for completion of community-based tasks.

Apart from contractual arrangements, the extent of NGO involvement may also be defined by decision-making structures within the focus project. In both South African projects, the Mvula Trust has a seat at decision-making forums, but elsewhere NGOs fulfil an essentially operational role. In Port-au-Prince and Dakar, the facilitating NGOs have a good working relationship with the bulk service providers, and some influence on them, but their role is essentially at the tertiary level.

In some cases, the partnership began with no designated NGO partner but one was brought in when the need arose, as happened with MPDL in Cartagena. A common constraint, however, has been the lack of suitable local NGOs, making it very difficult to develop civil society involvement. In Jakarta, Thames Pam Jaya had to rely primarily on an elected community representative as its link with local residents, though a small number of community associations also became involved in monitoring the use of the new tamper-proof meters. Staff report that the absence of a viable local NGO was a serious constraint; had one been available, much more could have been done in the areas of customer relations, environmental management and hygiene education. It may also have been possible to facilitate service improvements within households, by upgrading from a yard tap to internal reticulation.

In Port-au-Prince, though the project was initiated by a strong international NGO, there was still a need for a local organisation to work closely with the community. And given the need to find a vehicle, GRET created a new NGO, Fondation d'Appui aux Quartiers, with strong 'social engineering' skills. This became the lead NGO on the ground, though a number of other organisations have been involved in community mobilisation and water committee training.

Even in cases where suitably qualified NGOs are available, there can be difficult questions regarding their legitimacy as representatives of the community, especially when they are international organisations.

3.5 COMMUNITY REPRESENTATION

Irrespective of the presence of an NGO partner, all of the focus projects have adopted special measures to enable community representation, recognising its importance to the success of the innovative approaches. These mechanisms include working with and through:

Community leaders

Some projects work through established community leaders, especially where no suitable CBOs exist. There are clearly risks associated with this approach since leaders may not be truly representative of local residents, being motivated by a political agenda or other vested interests. This was a significant issue in La Paz-El Alto, where leaders in some communities were aligned with specific political parties. Some, however, prove to be champions of local development and great supporters of the innovative approach, as happened in some slums in the Dakar project and in Jakarta.

CBOs

Most of the innovative approaches have encouraged direct representation through community-based organisations or committees, often formed via an NGO partner as happened in Port-au-Prince. Sometimes CBOs already exist in some form, as in South Africa KZN where beneficiary households in the 'BPD Stand' pilot project were selected by the community's Development Committee.

An important question for project partners working with community leaders and CBOs is how to ensure that the poorest members of the community are not sidelined. It is not clear how this was done in the focus projects.

Consultative mechanisms

In some cases, procedures for community consultation and participation are incorporated into the project cycle from planning through to the maintenance phase. In South Africa BoTT, Bambamanzi standpipes were introduced on a project-by-project basis within the framework of an established project cycle. This begins with the identification of community needs and preferences in a workshop, after which a project steering committee with elected community members is formed as the main vehicle for community participation. A number of further meetings are programmed into the project cycle, including a multi-stakeholder workshop, before commissioning.

In La Paz-El Alto and Cartagena, the private sector employs ‘social promoters’ to facilitate community consultation.

It is interesting to note here that, while there has been a strong emphasis in the innovative approaches on community consultation and flexibility to accommodate user preferences, very little technology choice has been offered to consumers. This issue is considered further in section 3.7.

Low-income customer units

Some of the innovative approaches feature special institutional arrangements to facilitate easy access to the service provider for individual poor customers. This is a key objective of the proposed ‘customer management approach’ in South Africa KZN. In Port-au-Prince, the utility CAMEP established a low-income users’ unit some years ago. This initiative was independent of the innovative approach under study but the unit has been greatly strengthened through the utility’s collaboration in the project. Internationally, low-income users’ units or ‘customer service desks’ are more commonly established under the aegis of large-scale lease or concession contracts, as has been done in Buenos Aires and to some extent in Cartagena. The value of low-income users’ units in securing the replication and mainstreaming of innovative approaches is considered in section six.

The innovative approach adopted in Cartagena combines a number of the above strategies.

COMMUNITY REPRESENTATION IN THE PORT-AU-PRINCE PROJECT

Before constructing a network in a shanty town, the NGO Fondation d’Appui aux Quartiers (FAQ) undertook social and technical feasibility studies, and demand assessment, in close collaboration with CAMEP. A committee was then formed, with representatives of all the CBOs in the shanty town, which chose the number and location of standposts to be installed. It then facilitated construction of the network and standposts, in collaboration with the appointed contractor, appointed vendors and organised operation and maintenance. The formation of representative community organisations has been a key achievement of the project and beneficiary communities are now included in debates about city planning and development processes.

CONSULTATION MECHANISMS IN THE EL ALTO PROJECT

There is a continuous process of dialogue and engagement with the community prior to, and during, the installation of condominial systems in El Alto. This is achieved through individual household visits, community assemblies, informal group meetings and workshops or training events. In a typical project cycle lasting five months, there will be a total of about 10 meetings or events per month as part of the normal implementation process.

Consumers are formally represented by so-called ‘*organizaciones condominiales*’, or condominial organisations, which act in any official negotiations with Aguas del Illimani. The process and requirements for forming these condominial organisations are clearly set out in project training documents. There are some 325 such organisations within the El Alto pilot, with members directly elected by the households of a particular neighbourhood. Only five have acquired an independent legal status, whilst the majority are affiliated to national umbrella organisations for neighbourhood committees, ‘*Junta de Vecinos*’. This makes them subject to wider political influences and has made neutral community representation problematic.

In addition to this formal mechanism, individual consumers can approach the company directly through its two field offices in the El Alto pilot project area. This has been very helpful in establishing open communication between the company and its customers. A further channel for individual representation is via the consumer affairs desk of the regulator, but it is located in La Paz, posing access problems for many poor people. The regulator has recently, however, established toll free telephone numbers (which work from public phone boxes) and mass campaigns to raise awareness amongst the general public about their rights and responsibilities.

COMMUNITY REPRESENTATION IN EL POZÓN, CARTAGENA

There are over 18 local associations in El Pozón, primarily made up of low-income residents with a significant number of female led-households; all of them are involved in dialogue with Aguas de Cartagena. Since the beginning of 2001 a number have helped in the implementation of education and awareness campaigns.

Aguas de Cartagena stresses the importance of regular meetings with community leaders and maintaining an open forum for issues to be tabled and discussed. According to the company, at least two such meetings are held every month, either in a workshop format or as a more unstructured dialogue in which residents are free to raise their concerns.

The primary channel for communication with the company is through the Office for Community Relations of the company, which has a dedicated director and five social workers. The company now uses direct-hire social workers, many previously in state organisations, to continue the process of dialogue and consultation. The Office for Commercial Management is also available for consumers with specific complaints or billing problems.

3.6 MECHANISMS FOR LEARNING

Most projects treat the development of innovative approaches as a learning process.

For the private sector, the possible benefits extend beyond the immediate project to future, perhaps larger and commercially more attractive, ventures in the sector. For NGOs too, learning enables the development of ever-more productive projects and possible replication elsewhere in the locality.

In order to facilitate the expansion and replication of innovative approaches, it is important that lessons learned from the process are captured and disseminated. Initially this needs to happen within the partnership, which may involve large institutions with many hundreds of staff, but dissemination to government and a wider sector audience is also valuable. Several mechanisms have been employed to promote learning from the innovative approaches:

- 1) *Production of reports and case studies* Several project partners have made substantial efforts to document their experience in developing innovative approaches. In La Paz-El Alto, the Ministry of Basic Services emphasised replication and institutionalisation of the innovative approach from the start, and the Water and Sanitation Program has documented the process rigorously. In Buenos Aires, documentation of the participative approach is part of a broader initiative by Ondeo to develop and document effective methodologies that can be transferred to other concessions, particularly in its Latin America network. Documentation is to some extent a public relations exercise for private operators, but is nevertheless valuable in enabling lessons to be learned and perhaps applied elsewhere. There are, however, cost constraints and this may partly explain why little documentation is available from the NGO-led approaches in Port-au-Prince and Dakar.
- 2) *Production of staff training programmes and manuals incorporating best practices* Again, La Paz-El Alto provides a good example. The Water and Sanitation Program has developed training modules covering a range of topics, including the El Alto project cycle, implementation steps, community participation and management, hygiene education, legal representation and formation of committees. The aim is to develop a comprehensive training course that can be incorporated into the curriculum of the National System of Basic Training.
- 3) *Regular review and reflection* Collaborative meetings between all partners can serve both to identify lessons learned and to promote their absorption by all institutions involved. There is wide variation in the degree of formality with which this happens: in both South African projects the collaborative framework is very comprehensive and well-defined, while the NGO-led projects in Port-au-Prince and Dakar have developed in a more informal manner. This has nevertheless resulted in adoption of the innovative approach by the government utility in Port-au-Prince via its low-income users' unit.
- 4) *Internal capacity building initiatives* In both Buenos Aires and Cartagena the private companies have made a conscious decision to build up the capacity of their low-income users' units and try to break down the traditional divide between social and technical aspects of company operations.

3.7 FINANCIAL ARRANGEMENTS

Cost recovery in the focus projects was the subject of an earlier BPD study¹⁸ and the findings will not be repeated here. It is, however, important to consider briefly two key issues central to the development of each innovative approach:

¹⁸ See 'Cost Recovery in Partnership: Results, Attitudes, Lessons and Strategies', BPD, October 2000.

- 1) How was development of the innovative approach funded?
- 2) Has the new approach improved the financial viability of services?

Table 2 provides summary answers to these questions for each project.

TABLE 2: FINANCIAL VIABILITY OF INNOVATIVE APPROACHES

	<i>How was development of the innovative approach funded?</i>	<i>Has the new approach improved the financial viability of services?</i>
<i>La Paz-El Alto</i>	<i>Through donor support.</i>	<i>Yes: Capital costs are significantly lower than for conventional sewerage, though capped connection fees make cost recovery impossible at present. Recovery of operating costs currently inhibited by tariff structure and low consumption, but services are potentially viable.</i>
<i>Cartagena</i>	<i>Through World Bank soft (low-interest) loan covering both physical infrastructure and social components. Repayable by municipality and operator.</i>	<i>Not known since approach is still under development, but some concern that the costs of collection might outweigh the additional revenue from low-income communities. In practice, collection costs may be cross-subsidised using revenue from higher-income areas.</i>
<i>Buenos Aires</i>	<i>Parent company Ondeo has invested substantial funds from global resources.</i>	<i>Yes: through savings on shorter network costs and semi-collective connections.</i>
<i>South Africa BoTT</i>	<i>BoTT funds research and development from operational budgets. Although it executes capital projects, it does not operate services.</i>	<i>No: due to low consumption, high operation and maintenance costs and frequent breakdowns.</i>
<i>South Africa KZN (BPD Stand)</i>	<i>Funded primarily by Vivendi and Durban Metropolitan Water Services; also some donor support. The project is a research investment and does not seek financial return.</i>	<i>Capital costs are cheaper than for conventional technology, hence the stand will improve the viability of new investments. However, replacement of existing conventional tanks could prove expensive and would produce no revenue as both tanks and water supply are free to users.</i>
<i>South Africa KZN (Customer Management Approach)</i>	<i>Funded primarily by Vivendi and Durban Metropolitan Water Services; also some donor support. The project is a research investment and does not seek financial return.</i>	<i>Not known as approach is yet to be implemented.</i>
<i>Jakarta</i>	<i>From resources within the concession.</i>	<i>Not clear: the new meters cost more than conventional ones but revenue collection has increased substantially.</i>
<i>Port-au-Prince</i>	<i>Through donor assistance.</i>	<i>Yes: community also retains a significant share of the revenue</i>
<i>Dakar</i>	<i>Through donor assistance.</i>	<i>Yes: community also retains a significant share of the revenue</i>

It is clear from Table 2 that nearly all of the innovative approaches have achieved significant improvements in cost-effectiveness and financial viability, confirming the value of innovation in service design.

TRANSACTION COSTS IN EL ALTO

It is difficult to assess the true cost of developing the innovative approach in El Alto, but it is clear that funding channelled through, and technical support from, the Water and Sanitation Program have been vital in developing many aspects of the condominial system. According to WSP their total costs for running the programme from 1998 to 2000 are \$0.7 million, which can be broken down into three broad categories:

- knowledge transfer (55 per cent);
- training of local personnel (25 per cent); and
- complementary activities (20 per cent).

This investment compares with a total cost of \$1 million over the same period for construction of the scheme and implementation of training and social components (including community mobilisation and training). The facilitation costs thus appear to be very high, though this might be expected in the introduction of both new technology and a new way of working with the community. If, as seems likely, the approach is expanded to other parts of the country the start-up transaction costs should be considerably lower, though some components such as training and community mobilisation will have to be repeated.

Development of the innovative approach

It is also notable from Table 2 that most of the innovative approaches were developed using specially provided funds, rather than from ordinary operating budgets. In some cases the funds were donor grants or soft loans, in others the operator invested money from its own global resources. Only in Jakarta was the approach developed without additional funding, though the costs incurred in installing tamper-proof rather than conventional meters were modest in comparison to the other innovative approaches. Inevitably, research and piloting incurs costs over and above those associated with normal service delivery, so it is perhaps not surprising that external resources were sought. A more important question is whether development of an innovative approach is only possible with external funding; if so, the scope for innovation elsewhere may be limited. In response, it is instructive to note that in Buenos Aires and South Africa KZN, Ondeo and Vivendi have already made substantial investments of their own funds. This indicates that, given the right incentives, private sector partners may be willing and able to invest in an innovative approach that could save them money in the long term. The incentives will be even greater where failure to do so will result in penalties or lost revenue. In theory, this could also apply to public utilities if they were obliged to operate in a cost-efficient manner and to serve everyone.

A question which is harder to answer is to what extent the development costs of an innovative approach will have to be repeated in each location where the approach is implemented. Technological research may not need to be done again, but software components such as community mobilisation and user education usually will, and in some cases the costs of such components might outweigh any benefits accruing to the service provider through increased water consumption or a greater willingness to pay bills. There is no general rule here since costs will vary enormously according to location, the population to be served and the nature of the innovation. It is interesting to note, however, that in La Paz- El Alto Aguas del Illimani has scaled down the 'soft' aspects of the innovative approach since taking over the facilitation role from the Water and Sanitation Program. The development costs (including facilitation of the process) were considerable in this case.

Viability of new services

There are two dimensions to the financial viability of innovative approaches: viability for the service provider, and affordability for the consumer. These are considered separately below.

Viability for service providers

Given the low coverage levels, poor service quality and minimal cost recovery that characterised services prior to the introduction of the innovative approaches it would be unreasonable to expect them to recover 100 per cent of their costs. A more relevant question to ask is whether the new approaches, once implemented, are more financially sustainable than those which they replaced. The answer is, in most cases, yes.

None of the projects seek to recover all the capital costs of providing new infrastructure. This would probably be unrealistic, and in any case government may consider it perfectly reasonable to subsidise one-off investments in infrastructure for the poor, especially when infrastructure in higher income areas has been provided free of charge. Moreover, installation of new infrastructure may enable the development of services that become cost-effective in the long term. Most of the focus projects, then, have relied on government and/or donor funds. Connection charges are levied for house connections, but usually at a rate well below actual cost, while in the case of communal services, only in Dakar does the project seek to recover any capital costs. Here the community makes a 25 per cent contribution to the costs of the local distribution network and standposts, and can make this in cash or kind, or both. Turning to operating costs, the outcome is very encouraging. The

NGO-led initiatives in Port-au-Prince and Dakar are clearly viable and have been running well for several years; the innovative approach in Buenos Aires has also succeeded in reducing operating costs significantly. The proposed approaches in South Africa KZN and Cartagena are also designed to improve cost recovery, though in Cartagena there is some doubt that net revenues will actually increase. Two other approaches are centred on technology rather than service delivery processes. The ‘BPD Stand’, if adopted in South Africa KZN, will be provided free to users but is at least cheaper than the previous, unpopular design. In Jakarta, meanwhile, the introduction of tamper-proof meters has apparently helped to improve revenue collection. Only in South Africa BoTT and La Paz-El Alto have the approaches so far proved to be financially non-viable, and even then the latter could be transformed by a revision of tariffs and connection charges. The regulatory environment clearly has far-reaching implications for the financial viability of both piloting and the subsequent replication of innovative approaches.

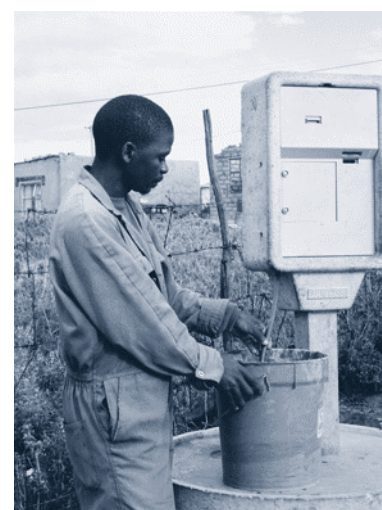
Some projects have already been able to set tariffs at a viable level. In South Africa BoTT, for example, there is no uniform tariff; instead, the Project Implementing Agency (the consortium) uses government guidelines to calculate a tariff that would cover the estimated operation and maintenance costs, based on a predicted level of consumption. This is then proposed to the municipality (or in some cases the managing community-based organisation) who may or may not accept it. With the advent of the new free water policy, however, few, if any, poor consumers will be subject to tariffs.

Notwithstanding external constraints, several projects have taken steps to enhance the financial viability of their new services. In Port-au-Prince and Dakar, for example, the NGOs were able to negotiate rates for the re-sale of water at standposts, which allowed for recovery of operation and maintenance costs at neighbourhood level while still providing valuable revenue for the utility. Interestingly, the utility in Port-au-Prince did not bill for bulk consumption at first, believing that none of the committees would pay. GRET persuaded them to pay anyway, believing it important to establish the service provider - customer relationship. The utility now bills regularly. Both projects have also kept the number of potential users per standpost high in order to ensure that each one is financially viable; in Dakar this is done by setting a minimum distance between each water point.

Affordability for consumers

In most cases the innovative approach has provided a service that is both cheaper and more convenient to users than that which it replaced, especially where people were reliant on private vendors. A variety of measures have been introduced to improve affordability: connection charges have been reduced, or made payable in instalments or in the form of labour, while consumption payment has been made easier where necessary through decentralised collection, pay-as-you-go systems or frequent billing which obviates the need to save for periodic bills. Tariffs themselves have not been reported to poor consumers and are in any case subsidised in some locations. It has been suggested that the very poorest may be unable to afford full use of the new service in Dakar, but insufficient information is available to verify this.

These measures have mostly been introduced in response to community consultation and are generally welcomed by the users. Only in two cases has average consumption remained low, but this does not appear to be the result of unaffordable tariffs. In South Africa BoTT the principle of paying is yet to be fully accepted, especially in rural areas, and many people have continued to use innovative free sources such as rivers and ponds. The standpipes have in any case proved unreliable and, being communal, are not as close and convenient to all households as they would be in a poor urban community.



Standpipe with electronic pre-payment meter, South Africa

In considering financial outcomes, it is important to bear in mind that the innovative approaches are, by definition, new and subject to fears and apprehensions that may in time be reduced. In South Africa, where the Bambamanzi standpipe has proved so problematic, partners nevertheless regard its introduction as a positive initiative that has helped to promote the principle of payment for services and develop a contractual relationship between service providers and users, without which users cannot make any demands for maintenance or better services. (Interestingly, there are indications that people would be willing to pay more for water if provided with convenient access via a yard tap.)

4.0 Common themes in the innovative approaches

While the innovative approaches differ widely in their scope and objectives, it is possible to identify some common themes that may offer clues as to the essential ingredients of successful innovation in the design of services for the poor. They include:

- 1) **Customer-orientation** In all of the projects, partners have recognised the value of communication and consultation with poor consumers to inform design of the new approach and develop a customer-client relationship in which both parties have rights and obligations. The innovative approaches also recognise that service delivery needs to be tailored to the physical, social and economic conditions in which poor people live. ‘One size does not fit all’ and traditional approaches designed for middle- and high-income consumers are often inappropriate for the poor. Partnerships have enabled the organisations involved to fill gaps in their understanding of the poverty context and so assisted the design of appropriate new models.
- 2) **A degree of community participation** Several of the projects promote active community participation in the development and management of innovative approaches, sometimes in the form of community labour and often via the formation of community-based committees. Experience from the projects indicates that capacity building is needed both at community level (as in Dakar) and within partnerships (as in La Paz-El Alto) to create a framework within which community participation is possible.
- 3) **Pro-poor institutional arrangements** Several of the service providers (and the partnerships within which they are working) involved in innovative approaches have undergone significant change in order to become effective in serving the poor. In some cases new arrangements were established at the outset (as in the BoTT programme) in others change has been more gradual (as in Cartagena and South Africa KZN). Initiatives that emerge as particularly important are:
 - a) **Making the service provider accessible to poor consumers** Most of the focus projects have taken steps to facilitate easy communication between individual poor consumers and the service provider, whose offices may be remote from most poor settlements under conventional approaches. Four out of eight have established special units for poor consumers, three of them within large concessions. These units have changed over time in an effort to make them increasingly effective.
 - b) **Adopting holistic approaches** that avoid a rigid division of ‘social’ and ‘technical’ functions. The NGO-led projects in Port-au-Prince and Dakar stand out as particularly effective in this regard.
- 4) **Promotion, education and awareness raising** All of the innovative approaches include an education and awareness component. While some

incorporate hygiene education, the most common objective is to advise consumers of their rights and obligations and so promote cost recovery.¹⁹

- 5) ***Moves towards financial viability*** Though not all have achieved it in full, the innovative approaches recognise the need for services to be both affordable to poor customers and financially sustainable for the service provider. The development of an innovative approach does, however, require time and money, highlighting the need for appropriate incentive structures that encourage service providers to make this investment.
- 6) ***Progress through innovation*** In the focus projects, partnership has fostered a culture of innovation and this has been a vital ingredient in the development of effective innovative approaches. The scope for innovation depends, however, on the degree of flexibility in the regulatory environment. A lack of flexibility can be the most difficult of obstacles to overcome, especially where the service provider has only limited access to the decision-making authorities.

It is also notable that several of the innovative approaches were developed within a context of weak – and sometimes inflexible – municipal government. If this is a widespread phenomenon it needs to be borne in mind when assessing the scope for developing or expanding new models of service delivery.

5.0 The value of partnership

All of the innovative approaches operate within an institutional partnership, be it bi- or tri-sector, and in every case this has played an important enabling role. There are several dimensions to the influence of partnership on the development of innovative approaches.

5.1 COMPLEMENTARITY

Partnership brings together organisations with widely differing skills, experience, resources, and access to the community and government bodies. In an effective partnership, each player fills gaps in the others' capacity so that the partnership as a whole can tackle the full range of tasks such as social, technical, managerial and financial inherent in developing an innovative approach. This is not to suggest that no organisation can develop a holistic approach on its own; some NGOs, for example, can do this very well provided they employ a range of expertise. There are, however, constraints on working in isolation: the NGO may not have the resources to take an approach to scale; the private company may on its own be unable to negotiate effectively with senior government authorities; the government agency may be unable to cultivate a positive relationship with the community.²⁰

Complementarity has been integral to the development of many of the innovative approaches, but is most prominent in Port-au-Prince and Dakar, where government and NGO partners are responsible for different levels of infrastructure, as well as in the South African projects, where private sector and NGO functions differ markedly. As has been seen, however, partnerships do not always take full advantage of the opportunities for holistic planning and the social-technical divide sometimes

¹⁹ See BPD report specifically on education and awareness in partnership for further analysis.

²⁰ Some practitioners even suggest that working in partnership with other sectors facilitates relationships within a sector i.e. department to department in both government and/or private companies. An example often given was that of two government offices (say the Department of Housing and Department of Urbanisation) that each had some responsibilities for water and sanitation although there was no co-ordination between the two. The partners outside the government forced a dialogue between the two internal actors. Similar examples can be cited within the private sector where communications between departments or firms responsible for design and those responsible for customer management were insufficient.

persists. In South Africa BoTT, design engineers paid too much attention to the potential of the pre-payment technology and too little to the environment in which it was to be used. A greater level of consultation with other members of the consortium might have revealed potential problems at the planning stage.

5.2 INSTITUTIONAL LEARNING

Through collaborative ventures, partners learn from each other and can become more productive in their own field; ultimately this benefits poor consumers through more effective service delivery. In Buenos Aires, for example, the private company learned a great deal from an early NGO-led project serving poor consumers.

Each partner involved in the development of an innovative approach may have different, but substantial, learning needs. For example:

- the private company may not know how to communicate with, and serve, the poor;
- the government agency may be a purely technical organisation that does not understand the importance of communication and consultation with customers; and
- the NGO may not appreciate the risks and constraints under which both government and private sector partners operate.

Many partners report the development of innovative approaches as a positive learning experience, both in terms of new skills and in developing an understanding of other partners' concerns, incentives and priorities.

5.3 DEVELOPING A COMMON VISION

By bringing together representatives of both service providers and users it is possible to bridge the gap between the two and develop a common vision of how services should function and what options are most appropriate. Ideally, this will result in mutually supportive contributions from each partner; a form of synergy. Again, the Port-au-Prince project is a good example: both the service provider and users gain from the innovative approach and therefore support it.

5.4 THE ROLE OF PERSONALITIES

It is important to recognise that it is often key individuals within partnerships who really make things happen. By the same token, personality clashes can also impede progress. This being so, it would be wrong to assume that a certain type of partnership can be replicated effectively, or will always be more effective than another type; much depends on the characters involved. This highlights the importance of institutionalising effective approaches where possible, to reduce reliance on individuals.

5.5 DOCUMENTATION

Though many good initiatives may arise in the development of an innovative approach, the lessons can easily be lost if not documented. One advantage of tri-sector partnerships is that, given the constant negotiations involved, they tend to devote resources to documentation and dissemination of the lessons learned, so maximising their value to the sector. In La Paz-El Alto in particular, one partner has taken the lead in providing resources for the documentation process.

5.6 INNOVATION

Multi-sector partnerships can provide both an environment that fosters innovation and the resources needed to develop new approaches to their full potential. In several examples, development of the innovative model started with innovation by a third party outside of the private or public sector. Once it had been tested and found

viable, and/or gained a critical mass of acceptance, the model was adopted by the private operator, who took it to scale.

5.7 AVOIDING MISSED OPPORTUNITIES

Not all of the projects have made full use of the opportunities that partnership can bring. In Jakarta, Thames Pam Jaya developed the innovative approach alone, and has cited an inability to identify a suitable civil society partner as a major constraint on the improvement of services in Marunda. It hopes to work with NGOs in the future, where suitable organisations exist, in order to enhance the education and awareness programme, develop a hygiene education component, reduce vandalism and facilitate better customer relations. Such a partnership in Marunda might perhaps have helped in allaying public suspicion, increasing community participation and pursuing an agreement with trade unions.

Formal roles and responsibilities can also limit the potential impact of innovative approaches. In Dakar, the utility and private operator have no responsibility for sanitation and this has not been incorporated in to the '*eau populaire*' project.

6.0 Mainstreaming innovative approaches

The ultimate value of an innovative approach arguably lies in its potential for replication and eventual mainstreaming within the operations of the service provider, both in the pilot location and nationally, or even internationally. Some of the approaches – especially those developed within a concession or management contract – were designed with replication in mind, while others were a response to specific local problems and as such had limited ambitions. It is nevertheless worth considering the potential of all of them for replication and mainstreaming.

Of the nine approaches examined in this study, two are still under development and as such untested. Of the other seven, one has proved unsuccessful (the Bambamanzi standpipe), but the picture emerging from the remaining six is, on the whole, encouraging.

In Buenos Aires, the participative approach has already been adopted widely within the concession, based on earlier piloting by the NGOs and Aguas Argentinas in much smaller populations. Lessons from the participative approach, and other innovative ways of working with the poor, are being documented with funding from Ondeo with a view to replication throughout its other concessions. In Jakarta, the introduction of tamper-proof meters in Marunda was very much a learning experience for Thames Pam Jaya and has provided the basis for developing an improved approach for use in other poor settlements.

Port-au-Prince provides perhaps the most successful example of replication to date. Not only has the approach been expanded to cover 35 settlements, the utility has also developed a strong low-income users' unit and is now adopting the 'social engineering' model for its own projects. There are even prospects for replication beyond the water sector with the electric utility seeking CAMEP guidance on how to work in shanty towns. A new contract for sanitation is also being drawn up, with both CAMEP and GRET eager to transfer lessons from the water supply project.

Replication and mainstreaming both within the concession and nationally were sought from the outset in La Paz-El Alto, and to this end there has been a great emphasis on documentation and dissemination, including the development of a national training curriculum. At present, technical standards are under review and if agreement can be reached with the regulator, the prospects for replication will be greatly improved, transaction costs and user charges notwithstanding.

In Dakar, strategies for adoption of the approach by the operator or utility are only just starting to be discussed. There does appear to be some potential, though a

constraint on expansion could be reliance on the utility and operator for technical supervision and quality assurance.

In South Africa KZN, the customer management approach is yet to be implemented, but is clearly intended to be replicable throughout the project area. As for the BPD Stand, installation of the technology is easily replicable, as is the process of consultation by which it was developed. However, it is unclear whether the local council are willing, or financially able, to fit the tanks retrospectively in the hundreds of affected homes.

A repeated theme in the focus projects is the establishment of dedicated units for poor customers: four projects have them already (though in the case of BoTT the Project Implementing Agency was not designed to be an enduring service provider) and a fifth may yet be established in South Africa KZN. It is not possible, on the basis of these few examples, to draw general conclusions on the importance of such units in facilitating the replication and mainstreaming of innovative approaches. The projects do, however, provide an insight into some potential benefits and pitfalls. Low-income units are clearly beneficial to poor consumers where they facilitate easy communication with the service provider and serve as a ‘one-stop-shop’ for customer service. A possible drawback, however, is that the degree of institutional learning and change effected through the development of an innovative approach may be confined to the special unit; good practices may not be mainstreamed within the organisation as a whole. In Cartagena, for example, the Office for Community Relations has undergone substantial capacity building while developing the innovative approach but accounts for only two per cent of the company workforce; the lessons learned have not thus far been absorbed by the wider organisation. In contrast to this, the low-income users’ unit in La Paz-El Alto was disbanded and considerable resources were devoted to capacity building throughout the utility.

From all of the above, several factors emerge as important in determining the potential for replication and mainstreaming:

- 1) *Financial resources* The financial outlay involved in adopting some innovative approaches will clearly be a constraint, depending on the resources of the implementing body. Partnership can help here by providing access to a diverse range of funds and creating a credible operating framework for their utilisation.
- 2) *Motivation of government partners* The scope for innovation will depend very much on the interest of government partners and the degree of flexibility they are prepared to allow in service design. Multi-stakeholder project development can again help by providing a vehicle for influencing the views of public sector officials.
- 3) *Regulatory environment* The impact of the regulatory environment is clear; without some degree of flexibility, replication may be impossible or extremely difficult. This is particularly true in the context of concessions or management contracts, where few, if any, private companies will be willing to risk mainstreaming innovative approaches without the prior approval of the regulatory body.

The principal lesson from the focus projects seems to be to ‘begin with the end in mind’. In other words, if replication and mainstreaming are sought, this objective should inform design of the innovative approach from the start. The La Paz-El Alto project illustrates the amount of work needed to prepare the ground for replication, in terms of documentation, dissemination, training and advocacy within government authorities. There and in Cartagena, the projects have attained a level of influence that may result in changes in government policy and standards. Such things take time, however; it may take several years for a project or approach to earn the level of respect from government agencies that enables partners to exert some influence over formal decision-making processes – especially in the case of NGO-led initiatives. In

such cases there is much to be said for allowing both the project and the relationship with government to grow 'organically', as happened in Port-au-Prince with great success.

In conclusion, the focus projects provide ample evidence that, where conventional models of service delivery have failed, investment in innovative approaches can bring substantial benefits to both service providers and poor consumers. Not all approaches will be commercially viable in the short term, but those developed under the umbrella of an effective bi- or tri-sector partnership stand a better chance of success.



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