

**Professionalization Contracts
for Small Municipal Water
Service Providers in India:**

Business Model Development

Final Report

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June 2015

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List of Acronyms

AMMP— Asset Management and Maintenance Plan
CEO—Chief Executive Officer
GIS—Geographic Information System
ISO—International Organization for Standardization
JUSCO— Jamshedpur Utilities and Services Company
NRW— Non-Revenue Water
NWSC—National Water and Sewerage Corporation
PHED—Public Health and Engineering Department
PPP—Public-Private Partnership
ULB—Urban Local Body

Acknowledgements

This report was prepared by a team comprising Josses Mugabi (Senior Water and Sanitation Specialist, World Bank), William Kingdom (Lead Water and Sanitation Specialist, World Bank) and David Ehrhardt (Chief Executive, Castalia Strategic Advisors).

The report draws on sector work undertaken in India to inform the design of a possible urban water supply and sanitation project. The original sector work, and the subsequent activities leading to the preparation of this report, were supported by the Government of Australia, through the AusAid Policy and Decentralization Trust Fund.

This report builds on fieldwork and consultations in the State of Maharashtra (India) — in particular the cities of Thane, Nashik and Mira Bhayander. The team would like to thank city corporation officials in each of the cities, as well as the Government of Maharashtra for their support in conducting the study. The National Water and Sewerage Corporation of Uganda conducted most of the background studies on which this report is based.

The report benefited from peer reviews by Iain Menzies (Senior Water and Sanitation Specialist, World Bank) and Jane Jamieson (Senior Industry Specialist, World Bank).

Executive Summary

Water utilities in India are in need of assistance to improve their services. The key to better service is generally better management systems, not just more capital expenditure on assets, yet for hundreds of mid-sized urban local bodies across the country there is no clear route to management reform. Traditional training and capacity building approaches have not worked well in the past, while public private partnerships may not be feasible or politically acceptable in many of these towns.

One way to fill this gap would be through Professionalization Contracts. Under a Professionalization Contract, a private firm would be contracted to help municipal water utilities to implement a comprehensive and standardized 'Utility Operating System'. This system would include Standard Operating Procedures for each functional area of the utility, such as network management, commercial functions, administration and finance, and capital planning and management. The Contractor would also provide (or procure) the necessary management tools (such as billing systems and asset management software) as well as operating assets, such as leak detection equipment and transport for maintenance gangs. The Contractor would assist the utility to implement all these Standard Operating Procedures and systems. The Contractor would then provide training and on-going management advice.

Actual management control of the utility would remain in public hands. However, governance reforms would be needed. In most cases, water departments in Urban Local Bodies (ULBs)¹ would need to be transformed into corporatized municipal utilities, with their own accounts and boards. To encourage and guide reform at the local level, State Governments would need to create Change Management Units for their water sectors. These Change Management Units would use the Benchmarking System developed by the Government of India to monitor service performance of ULBs. State funding of water services at the local level would be progressively tied to Service Improvement Plans designed to bring service standards in line with targets. This tying would create incentives for ULBs to reform their water systems, through Professionalization Contracts or other means.

The cost of a five year Professionalization Contract for a single ULB could be around US\$8 million. This would include provision of the Standard Operating Procedures, training and management assistance, equipment such as trucks and leak detection gear, and specialized utility software, as well as computers to run the software on. In addition, Contractors might need to be funded to prepare the Standard Operating Systems, at a cost which could be in the order of US\$1 million. The Systems so created could then be applied in any number of ULBs.

Contractors would need to have their costs covered through milestone payments based on deliverables, such as installing new management systems, or training staff. However, to provide incentives, performance payments should be made both to the Contractor, and to the management and staff of the utility. The first set of performance payments would be for achieving ISO 9000 or similar certification for the utilities. This certification would provide independent verification that quality operating procedures had been adopted. Staff would be encouraged to seek professional certification, and this would similarly show that the training is working, and could also trigger bonus payments.

¹ Note that this concept has been developed for application in Indian States that have devolved water service responsibility to Urban Local Bodies in accordance with the 73rd amendment to the Constitution.

The second set of performance payments would be for achieving performance targets as set out in the Benchmarking System. For example, there could be a bonus paid for every thousand households brought on to a sustainable 24/7 water supply. While such an achievement is not within the sole control of the Contractor, providing incentives to the Contractor, the utility management and the staff to achieve these goals will increase the likelihood that all parties work together to make the program succeed.

Potential Professionalization Contractors include India conglomerates, such as the Tata group, whose water subsidiary (known as JUSCO) has already expressed interest in participating. Indian and international engineering and management consulting firms will likely also be interested. Large international water operators will not necessarily welcome the concept, which they may see as threatening their traditional PPP business. However, if these operators understand that the program is a new PPP model targeting different market segments than traditional PPP models, then they are likely to see it as in their interest to participate.

A good way forward would be to pilot Professionalization Contracts in a reform-oriented State or States. Under a pilot program, donors would assist the State Government to set up the necessary State level reforms. Nine ULBs in the State(s) would opt in to the program. Then three Professionalization Contractors would be selected competitively, each serving three ULBs. Funding of around US\$75 million for the Contractors' fees, and perhaps US\$180–360 million in complementary capital works, would be needed. The capital funding could come from a World Bank loan, from other donors, or from the Government itself. The Contractors' fees would ideally be covered largely by bilateral donors, during this proof of concept phase.

1 Introduction

Professionalization Contracts are a new concept. The aim of these Contracts is to enlist the support of specialized private firms in turning public water utilities into competent professional operators. This report looks at how the Business Model for such Contracts might work.

To set the scene, the report first describes briefly the need for Professionalization Contracts in India, and the target market (Section 2). It then summarizes what the Contractor would do², and how this differs from traditional capacity building, as well as from traditional Public Private Partnership (PPP) concepts such as Management Contracts (Section 3). The report then describes the complementary policy and institutional reforms that would be needed at the State and Local Government levels to make Professionalization Contracts successful (Section 4). Section 5 looks at the political economy of Professionalization Contracts, identifying risks, and how these risks could be mitigated through design of the institutional reforms and the Business Model. All this is needed as background to understand the Business Model recommended and how it would work.

Section 6 then turns to the true Business Model aspects by describing indicative costs of the Professionalization Contract and the complementary investments required. Section 7 considers what the sources of funding for these costs would be, and Section 8 goes on to explain how the Contractor would be paid, and hence the incentives under which it would operate. This Section also describes complementary incentives for managers and staff of the public utility. Crucial to the success of this model will be attracting good quality Professionalization Contractors. Section 9 looks at the market of potential Contractors, and examines their incentives to participate.

Finally, Section 10 sets out some considerations for developing the Concept. Appendix A then sketches out how Professionalization Contracts could be rolled out on a pilot basis in a particular state.

This report builds on fieldwork and consultation in India. The study team traveled to Mumbai, Kolkata, and Delhi, meeting with water sector professionals in the World Bank, Government, and private industry. The model described in this report reflects two weeks of meetings with water sector stakeholder in India, including a workshop held at the World Bank country office in Delhi on 22 March 2011.

² A separate report prepared by the National Water and Sewerage Corporation of Uganda, as consultants to the World Bank, provides more detail on this.

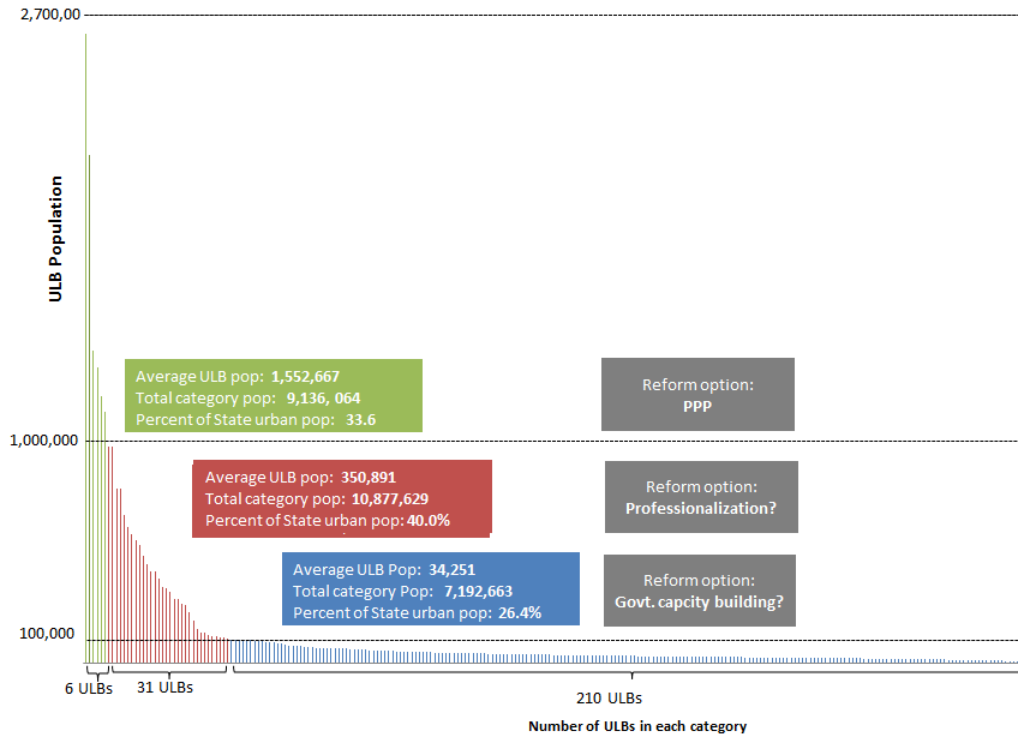
2 Target Market and Need for Professionalization Contracts

Most water providers in India fall short of government benchmarks for service quality, efficiency and cost recovery. Traditional approaches of training and technical assistance have often failed. Public Private Partnerships (PPPs) are increasingly of interest to some State and Local Governments, and offer real opportunities to improve water provider performance. However, many water providers will not be able to avail of this reform route, either because they are too small or financially weak to attract the interest of private operators, or because the public authorities do not consider PPP suitable for their situation.

The Professionalization Contract concept has been developed with the needs of mid-sized towns and cities in mind, in particular those to which water service responsibilities have been devolved to the municipalities (Urban Local Body or ULB) in line with the requirements of the 73rd and 74th Amendments to the Constitution of India. It is not intended that the Professionalization Contract model should be adopted by all such ULBs. Rather, it would be one among a number of improvement options they could consider. Nor is it intended that the concept would be used only by such bodies—larger and small water providers, including State Water Boards and PHEDs, may also find it useful. However, the target market for which the concept has been developed is underperforming ULB water departments in mid-sized towns and cities, which are not pursuing a PPP reform route.

The need for improvement, and the category of towns and cities targeted, may be illustrated by reference to Maharashtra. Figure 2.1 shows the distribution of ULB sizes in Maharashtra (excluding Mumbai). Populations of Maharashtra ULBs range widely from 1,000 to 2.5 million. The ULBs at the larger end—above about one million in population—are good candidates for PPP. The ones below 100,000 in population are probably too small for professionalization or PPP on their own, at least in the pilot phase. The middle group, between 100,000 and 1,000,000 in population, could make good candidates to pilot Professionalization Contracts. In Maharashtra's case, there are 31 towns in this group. Of course, as the concept develops, it may be that larger and smaller towns and cities are also suitable for inclusion in the target group.

Figure 2.1: Distribution of ULB Sizes in Maharashtra, and Reform Options



The towns of Thane, Mira Bhayander, and Nashik were visited by consultants from the Uganda National Water and Sewerage Corporation to assess their current levels of service performance and benchmark them against professional utility management practices. While Thane and Nashik fall into the largest population category, all three ULBs exhibit performance problems that are typical of ULBs in general, regardless of size. Table 2.1 shows the service and efficiency levels of these three towns judged against Government of India benchmarks. Important areas for improvement include:

- **24/7 supply**—The ULBs surveyed only had two to three hours of water supply daily, compared to the Government’s benchmark of 24/7 supply
- **Coverage**—Up to 20 percent of households in the ULBs surveyed are not covered by the water supply network. The benchmark for water coverage is 100 percent
- **Cost-Recovery**—Two of the three ULBs surveyed cover only about three-quarters of their costs, despite the Government target of 100 percent cost recovery. Some of the reasons for low cost recovery are:
 - **High non-revenue water**—Two of the three ULBs surveyed are above the Government’s benchmark of no more than 15 percent non-revenue water. The town of Thane is slightly above, with 25 percent non-revenue water, and the town of Nasik is far above, with 57 percent non-revenue water
 - **Metering**—In Thane only four percent of connected households are metered, compared to a benchmark of 100 percent metering

- **Collection efficiency**—Thane only collects about 72 percent of water supply-related charges, compared to a benchmark of 90 percent collection.

All three of these towns are interested in improving their management. Two of them are considering PPPs as an improvement route. For the third—and for the many other similar towns in Maharashtra and other states—the Professionalization Contract could be a suitable reform route.

Table 2.1: Performance of Three Maharashtra ULBs

Indicator	Government Benchmark	Performance		
		Thane Municipal Corporation (pop. 1,262,551)	Mira Bhayander Municipal Corporation (pop. 520,388)	Nashik Municipal Corporation (pop. 1,077,236)
Coverage (percentage of households connected)	100%	82.88%	80%	88%
Per capita supply of water (liters per day)	135	167	80	140
Extent of metering	100%	3.96%	100%	95%
Extent of non-revenue water	20%	24.82%	20%	57.1%
Continuity of water supply	24 hours	2 hours	2 hours	3 hours
Quality of water supplied	100%	91.52%	95%	96.2%
Efficiency in addressing customer complaints	80%	80%	95%	89.22%
Cost recovery in water supply services	100%	75.44%	100%	77.46%
Efficiency in collection of water supply-related charges	90%	72.71%	92%	92.4%

Source: Analysis by Uganda National Water and Sewerage Corporation. March 2011.

Note: Population data is from 2001, most recent available

3 The Professionalization Contract Concept

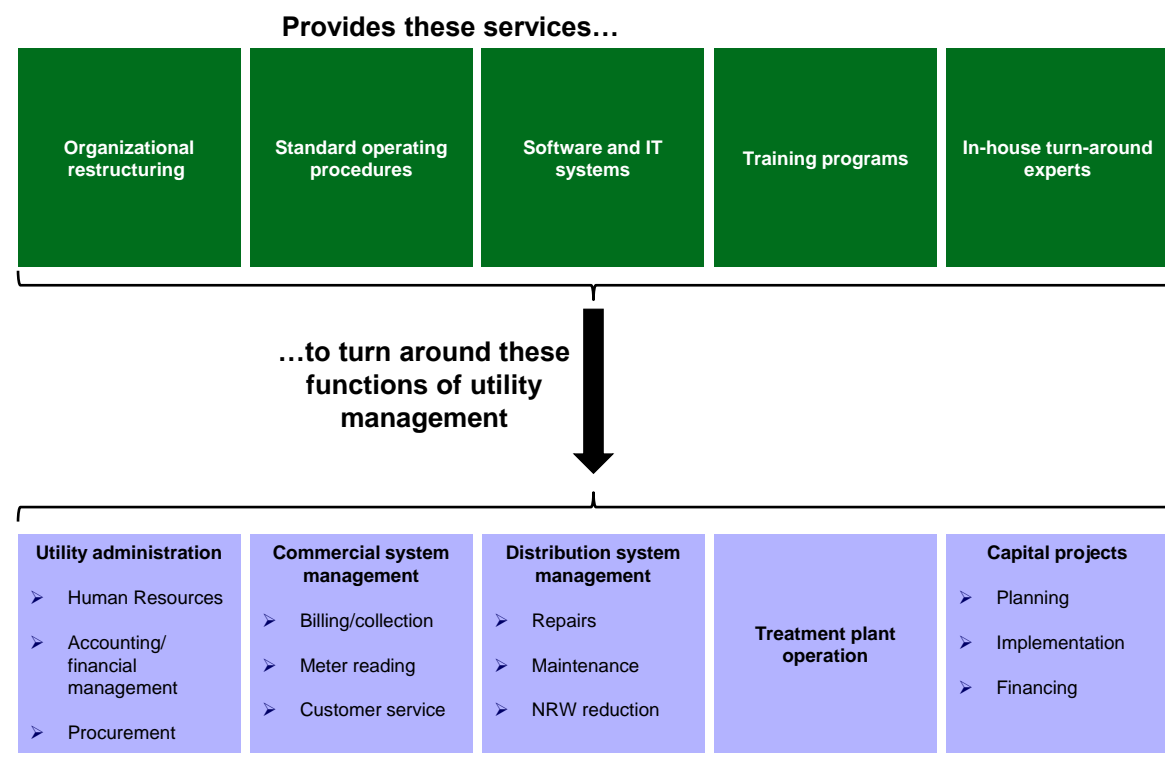
The Professionalization Contractor would boost the capacity of a ULB-owned water provider in a comprehensive way. The Contractor would provide a standard set of management tools and systems, experts to help implement these and train staff, and also equipment and software, such as leak-detection gear, trucks for transport, billing systems, asset management systems, and the like. This would go far beyond a traditional twinning or capacity building system. However, it would also differ from a traditional management contract or other form of PPP, in that the public utility would retain management control.

3.1 What the Professionalization Contractor Would Do

The Professionalization Contractor would create and implement the “standard utility operating system”—a set of well-defined processes and systems to turn around utility management and embed sustainable, professional working practices throughout the organization.

Figure 3.1 shows the services that would be provided, and the various functional areas of utility management to which they would be applied. In the initial period of engagement with ULBs, the Contractor would provide turn-around experts to tailor and implement standard processes and systems.

Figure 3.1: Role of the Professionalization Contractor



The full details of the services and equipment to be provided are set out in a separate technical report prepared by the National Water and Sewerage Corporation of Uganda. To give a flavor of it though, some highlights would include:

- Commercial System Management—the Contractor will provide:
 - The billing system, and the hardware to run it on
 - Management of a customer cadastre exercise to ensure that customer records are accurate and up-to-date
 - Manuals describing the Standard Operating Procedures for all commercial functions including adding customers, meter-reading, billing, collections and disconnections
 - Training for all staff in the Standard Operating Procedures
 - Guidance and on-going management coaching for the utility's Commercial Manager
- Distribution System Management—the Contractor will provide:
 - A GIS-based Asset Management and Maintenance Planning Software Package (AMMP), as well as an Hydraulic Modeling Package
 - Assistance in populating the AMMP and calibrating the Hydraulic Model
 - Standard Operating Procedures for routine and reactive maintenance
 - A Standard Non-Revenue Water Management system and procedures
 - Equipment needed for Non-Revenue Water Reduction and Distribution Management, including trucks for transport, leak-detection equipment, and any specialized equipment needed for distribution system repairs
 - Training for staff in leak detection and maintenance
 - Guidance and on-going coaching for the Distribution Manager and for the NRW Management Cell
- Capital Project Management—the Contractor would provide:
 - Standard planning techniques for the identification and prioritization of a capital expenditure program. These would include identification of service needs, and establishment of least cost ways to meet those needs
 - Standard Operating Procedures for stakeholder consultation prior to finalizing plans
 - Standard Operating Procedures governing procurement of capital projects, as well as construction supervision
 - Standard interfaces between the creation of new assets and the asset management and maintenance processes
 - Training of staff in use of the above Procedures
 - Help with creation of the first Capital Expenditure Program

- On-going coaching to the Manager responsible for planning and implementing capital projects.

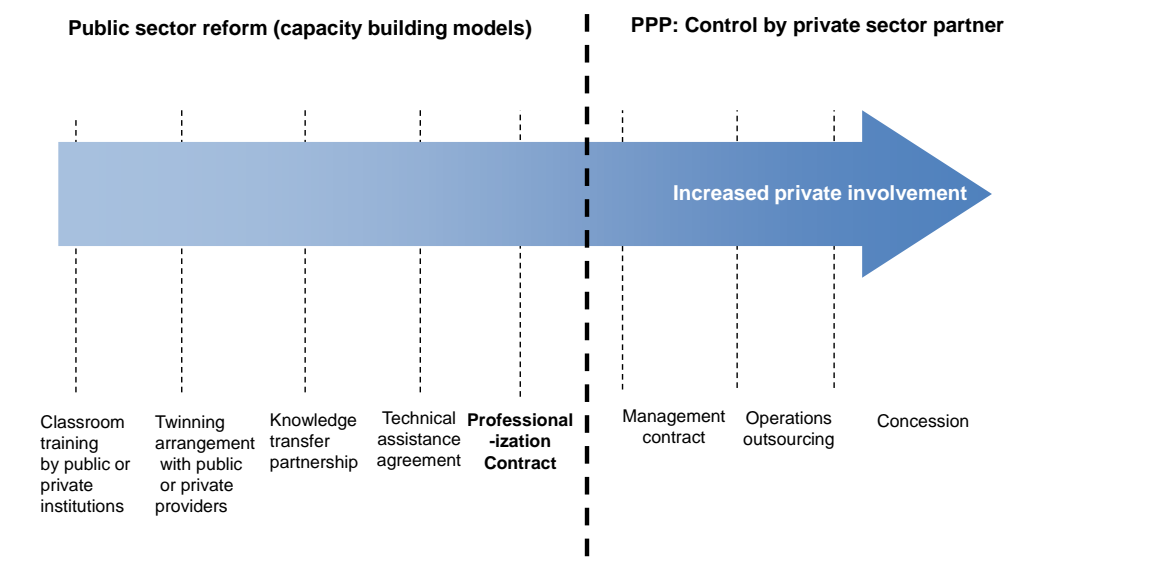
Similar assistance would be provided in all other areas of the utility, creating a comprehensive and integrated management assistance package that includes not just provision of advice, but fully documented Standard Operating Procedures, management systems, and operating assets such as trucks and leak detection equipment needed to make the utility function professionally.

3.2 How the Professionalization Contract Differs from Traditional Capacity Buildings or PPPs

It should be clear from the foregoing that the Professionalization Contract is a kind of capacity building contract. However it differs from the traditional capacity building contract in its comprehensive and integrated nature, and in the provision of complementary tools and equipment. The idea is that over a three to five year period the Professionalization Contractor will provide all the inputs (other than actual infrastructure investments) that are necessary to turn the utility into a well-managed, well trained and properly equipped utility, providing good service to its customers.

At the same time the Professionalization Contract is not a PPP. The key difference is that management control remains with the publicly-appointed Chief Executive of the utility, and his or her management team. Management is not delegated to the Professionalization Contractor. In this way the Professionalization Contract may be seen as a point on a spectrum of private involvement in public utilities that maximizes the assistance provided, without transferring management control, as Figure 3.2 illustrates.

Figure 3.2: Comprehensive Capacity Building, not Delegated Management



4 Complementary Policy and Institutional Reforms

For the professionalization concept to work, the ULBs will need to be restructured to create town water utilities. In States which have devolved water provision to towns, this is typically the responsibility of one department in the ULB. However some functions, like accounting and procurement, may involve other departments. To be professionalized, the water provider will first need to exist as a discrete entity.

Because the changes at the local level will be quite innovative and far-reaching, ULBs may not have the confidence or desire to take them on alone. Reforms will likely need to be driven by the State Government.

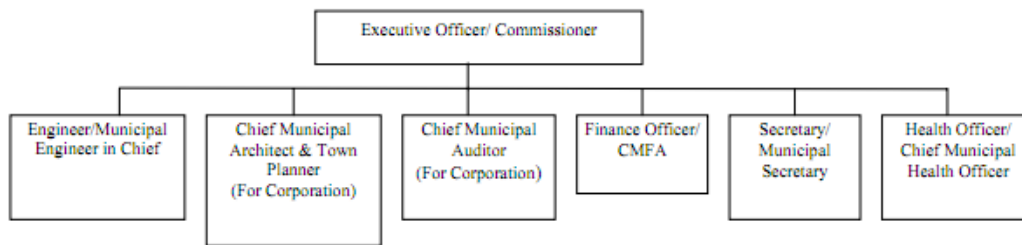
4.1 Corporatization and Governance Reform at ULB-level

Ring-fencing of ULB water functions is needed to prepare local water utilities for professionalization. This is because administrative arrangements at most ULBs do not provide accountability for water sector outcomes. Simply put, there is no water utility currently, and so no distinct entity to professionalize.

Deficiencies in the current arrangements include:

- **Officials exclusively responsible for water do not have enough power to execute decisions**—In a typical ULB management hierarchy, managers exclusively responsible for water service might be several rungs below where decisions are made. They might lack control over hiring and firing, funding, business planning related to water utility functions
- **Officials with the power to execute decisions are distracted by other considerations**—Similarly, the ULB managers with the power to make decisions are distracted by various other priorities competing for their attention. Water service outcomes are only a fraction of what the typical District Manager is responsible for
- **Critical functions are dispersed throughout ULB**—Figure 4.1 shows the organizational structure of a typical ULB. In this ULB, the chief engineer might be responsible for water engineering functions; the chief town planner might be responsible for network expansion planning; the finance officer and chief municipal auditor might be responsible for billing, funding the utility and auditing its spending; and the health officer might be responsible for monitoring water quality. With water functions dispersed in this way, coordination between different functions is difficult, and accountability for overall sector performance is lacking.

Figure 4.1: Structure of a Typical Indian ULB



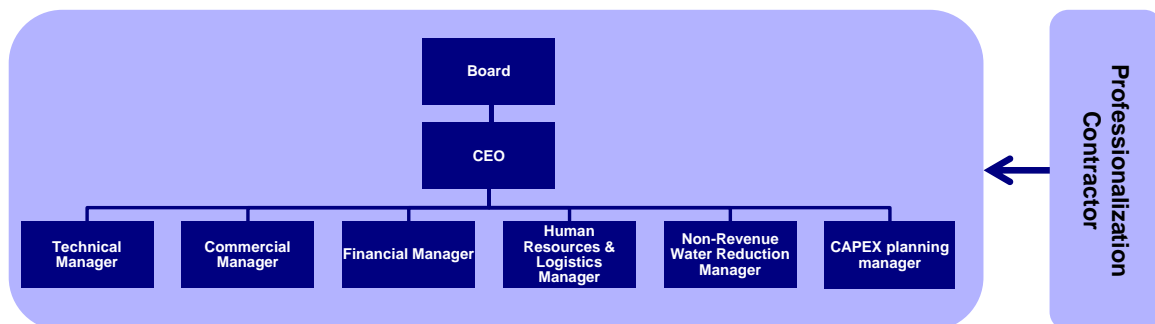
Source: "Audit Report on ULBs for the year ending 31 March 2008." Comptroller and Auditor General of India. saiindia.gov.in/cag/sites/default/files/LB/wb07_08/ulb_chap1.pdf (accessed March 29, 2011).

Ring-fencing and corporatization of water management functions is the best way for ULBs to overcome the obstacles mentioned above. The ULB would need to corporatize its water service provision functions, appoint a Board, hire a CEO and sign a performance agreement with the newly corporatized entity. The CEO would be accountable for the new entity's performance. The managers of various utility functions would all report to the CEO. This structure should improve accountability, and coordination between different functions responsible for the water sector.

The utility's Board would comprise independent directors, state representatives and ULB appointees. The CEO would be an experienced manager recruited through a competitive hiring process. Similarly, managers of functional departments would be competitively recruited, from among both external and internal candidates, on terms comparable to what similar professionals would be offered in the private sector.

The Professionalization Contractor would assist the CEO with the human resource restructuring plan, providing job descriptions and hiring protocols for the hiring of various professionals. Figure 4.2 shows the corporatized ULB, with the Professionalization Contractor providing support.

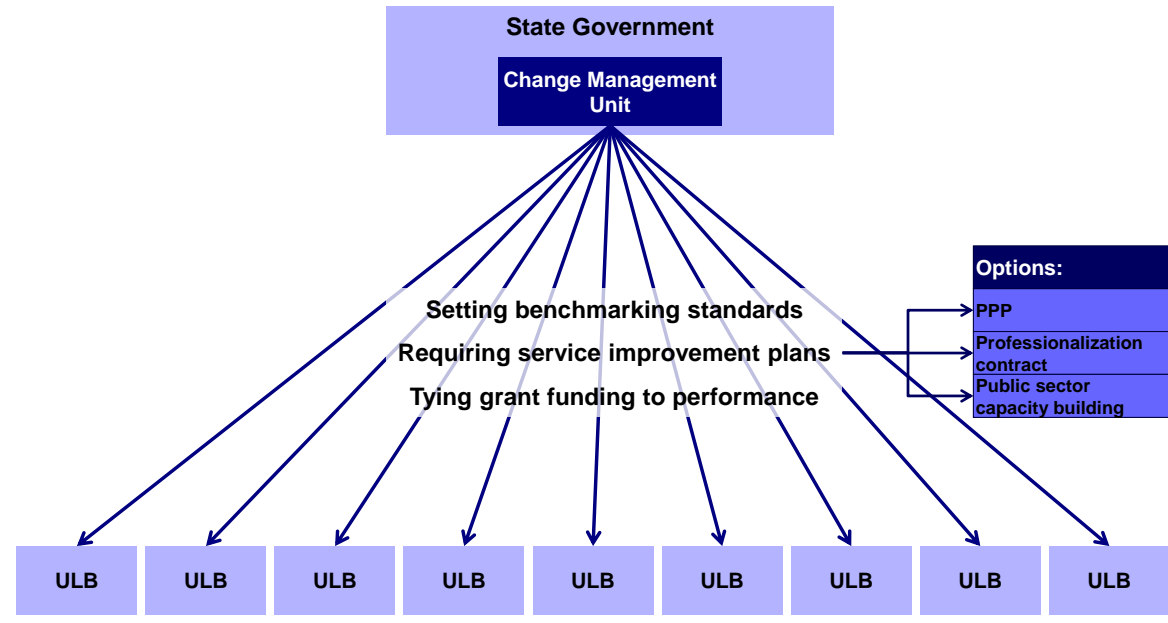
Figure 4.2: The Corporatized Provider



4.2 State-Level Reform Program

Change at the local level will be most effective and widespread if driven from the State level. Ideally, the State Government would create a Change Management Unit to lead the water reform process. This leadership would involve setting performance standards, requiring service improvement plans, and tying grants to performance—as illustrated in Figure 4.3.

Figure 4.3: State-Driven Reform Program



The Change Management Unit would be a State Government agency with a mandate to bring about service improvements at ULBs. The Change Management Unit would develop service and efficiency standards, based on Government of India benchmarks.

State funding of ULBs would be made contingent on ULBs meeting the service standards. Where ULBs do not meet these standards, they would need to prepare and follow an approved Service Improvement Plan to be eligible for funding.

The Service Improvement Plan would need to include a credible program for professionalizing the management of the water utility. Opting into a Professionalization Contract would be among the options considered credible. (ULBs might also be able to opt into a PPP reform track, or develop their own reform program, which would need to be assessed to see if it was credible.)

5 Political Economy of Professionalization Contracts

As we have seen, Professionalization Contracts will involve significant institutional reforms at both local and State levels. These reforms will not necessarily be easy to implement. There is political economy equilibrium in the current system. To put that another way—vested interests will want the system to stay the way that it is. Among the important political economy risks are:

- **A triangle of corruption among staff, managers, and politicians**—Most of these stakeholders stand to lose from professionalization as by definition it would cut off the corrupt flows that currently are valuable to them
- **Political control of water allocations**—Because of perceived water scarcity, allocation of water between areas of the towns is a big political issue. Political battles are fought over which part of town gets supply when. This culture is so entrenched that telling people ‘that will no longer be an issue when we have 24/7 supply’ simply does not get through—it is too far from people’s experience for anyone to believe
- **Political control of connections**—Related to the above point, the ability of politicians to decide who gets water connections, and to allow free water to some, is another important part of the political economy in urban India which the political decision-makers will not want to give up
- **Patronage**—Politicians can influence who gets jobs and certain groups expect jobs as of right. Loss of these employment-gifting opportunities will be bitterly contested
- **Unions**—Unions compete for union dues and influence by demonstrating their value to workers. Demonstration effects and competition between unions leads to a tendency to focus on short term gains and confrontation rather than cooperating for long-term win-win solutions. Things that are good for workers will still be opposed by unions if the reform is bad for the union. For example, generous early retirement packages reduce union membership, performance-based pay weakens union control, so these things will be fought, and especially so in places with a culture of strong union activism. Table 5.1 gives an overview of the incentives of various stakeholders in the water sector related to the Professionalization Contract, what their position is likely to be on reform, and how potential opposition to reform might be mitigated.

In order for reform to succeed, we need a coalition of stakeholders to believe that they are better off because of reform. Veto-players in the political system need also to be persuaded to at least acquiesce in the reforms. Table 5.1 reviews which stakeholders could be expected to support the reforms, which to oppose, and how the opposition of key groups could possibly be overcome.

Table 5.1: Stakeholders' Incentive Analysis

Stakeholder	Natural Wins	Losses	Likely Position	Mitigants and Design Features
Customers of ULB	More reliable service Greater access Better customer service More efficient utility	Free illegal connections	Support	Identify key voting blocs (e.g. slum dwellers) and include specific benefits for them
Utility managers	Performance pay Training Job satisfaction	Autonomy Free time Corrupt income	Oppose	Recruit new people from outside system for key positions Total pay package must match private sector salaries, or exceed public salaries + corrupt income Professional Certification of staff to add value to them
Utility staff	Performance pay Training Right tools for job Job satisfaction	Corrupt income Undemanding work	Oppose	Must be able to 'park' poor staff elsewhere in ULB Performance pay must exceed loss of corrupt income Professional certification
Local politicians	Citizens vote for politicians who deliver better water service	Corrupt income Patronage opportunities Control of connections and water allocation	Oppose	Certification provides a seal of credibility that helps politicians State and federal funds—some need to be put under political control? Strong supervision from State Govt. / World Bank / Independent actors introduced to governance system

As the Professionalization Contracts are developed, more detailed governance and political economy analysis will be needed. It is worth noting two points in the above analysis:

1. The winners and losers in the professionalization approach, and their gains/losses, are not dissimilar to those that will arise in any attempt to introduce reform that leads to demands for better and more transparent service delivery in the sector

2. Within each category there will be those that would oppose the “likely position” presented above, for example staff and managers who would see opportunities for professional improvement through the professionalization approach, or politicians who would support improved service delivery to their constituents.

6 Indicative Costs

Achieving the professionalization of ULB service providers will entail a mix of costs comprising the equipment, software, training and support needed to upgrade the performance of the public sector service providers. These costs will include:

- Cost to the Contractor of creating the Standard Operating Systems for a utility—this is mostly the cost of documenting a master set of standard operating procedures that can be applied in each utility with small variations. We guesstimate this at US\$1 million in one-off costs to create
- Consulting time in helping the utility to implement the Standard Operating System, including staff training, and provision of the equipment and software needed. This could be around US\$5 million per utility, implemented over a two year period
- On-going advice and coaching over a five year contract could cost around US\$3 million in total.

If one assumed a ‘pilot program’ in which three Contractors were engaged, and each Contractor worked with three ULBs, then the total cost over five years, across nine ULBs, would be around US\$75 million. Note that the assumption of three Contractors at the pilot stage reflects an intention to create three firms with capacity in this area, so that the subsequent market is competitive.

After the pilot program, cost per ULB served would go down. It would no longer be necessary to fund creation of the Standard Operating Systems. Moreover, economies of scale, and learning by doing would probably push down the cost of implementation and coaching in each ULB.

Reference points for the costings

The costings above are derived from expert judgment and familiarity with the cost of similar models. A Castalia review of management contracts in 2005 showed that US\$1 million per year was a typical all-in cost. For this fee, the management Contractor would typically provide three to four senior expatriate staff to manage the utility, as well as limited shorter-term specialist inputs and training.

The Professionalization Contract will likely involve a greater quantity of staff time, and also the provision of IT tools. These factors suggest that the total cost could be higher than for a typical management contract. On the other hand, if the services can be provided largely or entirely by Indian specialists, the labor costs and travel expenses would be lower than for a typical expatriate team.

Another data point is the fee one French water utility charged to Czech water utilities in which it was a strategic but minority shareholder. This fee was around 2 percent of revenue. In exchange the Czech utility was provided with the French utility’s ‘standard utility operating system’ in the form of a thoroughly documented set of processes for each functional area of the utility, as well as a single long-term resident advisor.

Finally, Castalia recently develop a comprehensive Management Assistance Contract for the water utility in Port-au-Prince, Haiti. This contract is similar to the Professionalization Contract in that the private partner provides management advice but does not actually

assume management control. Box 6.1 gives an overview. An international water utility won the contract, and will be paid around US\$3 million per annum to provide a comprehensive set of management improvement services, and to manage a sizeable capital expenditure program.

Box 6.1: Port-Au-Prince Comprehensive Management Assistance Contract

In 2010 an earthquake ravaged the capital city of Haiti, Port-au-Prince. The local water utility, CAMEP (Centrale Autonome Métropolitaine d'Eau Potable et d'Assainissement) was already very weak before the earthquake, with water losses estimated at over 60 percent, and only 55,000 connections, only 32,000 of which were active (for a city with more than 700,000 inhabitants). After the earthquake, the utility required immediate rehabilitation in order to be able to continue providing water to damaged city.

Castalia was engaged by the Inter-American Development Bank and Government of Haiti to develop a contract for technical assistance to rehabilitate the city. The contract, called a Management Assistance Contract, is a hybrid between technical assistance and a management contract. As such it provides a useful benchmark for the Professionalization Contract, which sits on the spectrum of public utility reform between technical assistance capacity building and management contract PPP (see Figure 3.2 on page 8).

Under the Haiti Management Assistance Contract the Contractor, an international water engineering firm, will oversee a program of investments of about \$30 million and will assist in managing the utility. The costs of the contract are about \$3 million per year.

Source: Castalia

Haiti Project Profile. Inter-American Development Bank

7 Funding Sources

The indicative costs outlined in the previous section will need to be funded through grants from State and Union Governments, and from bilateral and multilateral support. This grant funding will likely be made available in separate streams to fund operating and capital costs. Some of these grants can be financed as a component of existing urban development projects in India, or as a standalone urban water supply project developed specifically to operationalize the professionalization model presented in this report. To promote efficient management and accountability under the reforms, financial flows from State Governments to the water providers would need to be reformed to allow performance-based disbursement of funds. Below we discuss the capital investment support required, and the operating support required.

Payment of the Professionalization Contractor

The target ULBs lose money on their water operations currently, and are generally short of cash. Irrespective of the benefits they will reap, it is not realistic to expect the ULBs to be able to pay the costs of the Professionalization Contractors in the short term. During the pilot phase, and for some time after, these costs will need to be covered by someone else. A workable approach would be for bilateral donors to cover the costs as the program starts up. After success was demonstrated, State governments might be expected to pick up much of the cost, with ULBs covering some part from other resources.

Capital investment support

In order to meet service improvement targets, capital investment would be required. The water provider, with assistance from the Professionalization Contractor, would develop the capital improvement plan required to meet service standards. The State Government would then need to commit to fund the investment program on a multi-year basis.

At this stage the level of capital investment required is not clear. However, if one assumes that \$20–40 million over five years would be enough, then this \$180–\$360 million would be needed to support nine municipalities.

Operating support

Many of the utilities that use Professionalization Contracts will not be able to cover their operating costs. Moreover in the short term, the professionalization process may worsen their operating position: salary costs may go up, for example.

Providers that are not covering operating costs are already subsidized by ULB or State Governments. Accountability would be improved, and the professionalization process made more effective, if the operating subsidies were better structured. This should be done through setting a fixed, multi-year subsidy based on the difference between forecasts of reasonable costs, and the revenues that can reasonably be expected at current tariff levels. Paying a subsidy on this basis would provide the utility with the confidence that it can pay necessary expenditures. It would also allow the profitability of the utility (after agreed subsidy) to be used as an indicator of its efficiency. Funding for such a fixed and explicit subsidy would be needed. This could be provided by State governments, supported by bilateral donors with an interest in results-based financing, or by the World Bank loan, or both.

In time, as efficiency improves, costs may reduce, and customers may accept higher tariffs for better service, removing the need for an operating subsidy.

8 Payment and Incentive Structures

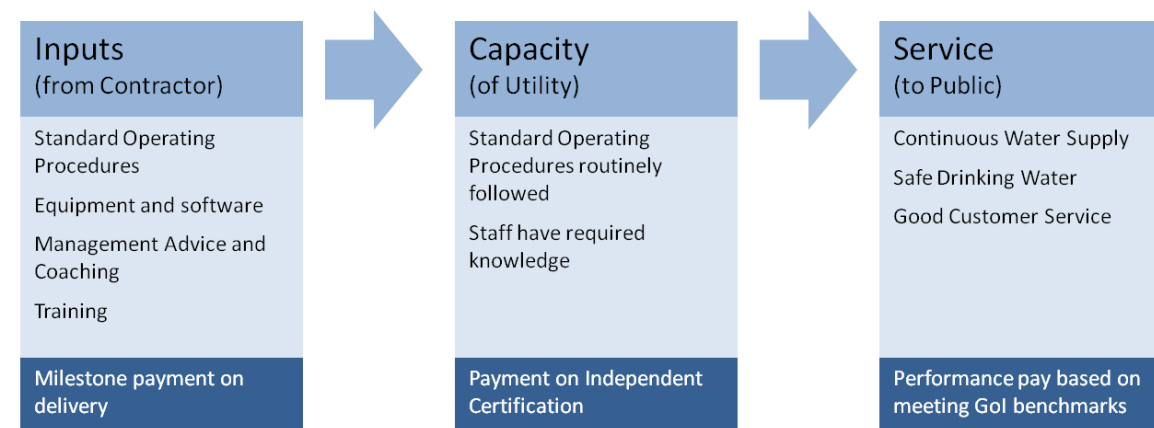
For Performance Contracts to work, it will be necessary to incentivize the Contractor, the Utility Management, and Utility Staff, to make it work. This section outlines first how the Contractor can be incentivized, and then proposes a way to motivate utility management and staff.

Incentives for the Professionalization Contractor

The prime incentive for the Contractor will be the fees it receives. The strongest incentive would therefore seem to be paying the Contractor for achieving the intended results—in this case, a well performing water utility. The problem is that the Contractor does not manage the utility, and so is not fully in control of whether the intended results are achieved. Contractors will therefore not be willing to put their payment at risk, as they will see a strong probability that despite their best efforts, the staff and management of the utility, or the political system in which it operates, will prevent the utility from being successfully professionalized. Contractors will demand that their costs are covered with payments for doing things that are within their control.

A good way through this puzzle starts by breaking out the chain of causation from the Contractor inputs, to increased capacity in the utility, and finally to improved services to the public, as Figure 8.1 illustrates.

Figure 8.1: Causation Chain and Payment Structure



Contractors will need to be paid their costs for preparing the Standard Operating System for a utility, and for working with each utility to customize the system to the extent necessary, train the staff, provide advice, and so on. For this work the Contractor can largely be paid on the basis of implementation milestones achieved—installing a new billing system, or training staff in NRW management, for example. Some things, such as supply of equipment and software, might need to be paid at cost, following an open-book competitive procurement by the utility, while staff time spent on *ad hoc* advice and hand-holding might be charged per hour.

These payments based on milestones and reasonable costs achieved will incentivize the Contractor to deliver the inputs required. However, they do not provide a strong financial incentive to ensure that the systems are adopted by the Utility, that capacity increases, and that service improves. To provide this incentive, additional performance payments will likely be needed.

The first performance payments would depend on the Contractor increasing the capacity of the utility. Increases in capacity can be measured through independent certification of the utility's management processes, and of the staff's skills. Therefore we recommend that the Contractors be asked to help the utilities to achieve ISO 9000 series certification, or an equivalent. This independent certification is only granted if the utility has all its processes documented, and it follows these processes. Achieving certification would therefore be a good indication that the capacity building has worked.

In similar manners, the Contractor should be required to help utility staff to achieve relevant professional certification in their areas of work. This staff certification would show that the training provided has worked, in that the staff members have learned enough to gain relevant professional qualification.

The last layer of incentive would be for actual service improvements. Here, service targets should be set using the Government of India benchmarks. If the ULB achieves the service targets, then the Contractor should be paid a performance incentive. The structure of the incentives might vary according to the improvement plan chosen. As an example, one way to structure the incentives would be to pay a bonus for every thousand customers who were receiving water service 24 hours per day, and had been receiving this level of service for six continuous months. Another bonus might be paid for every thousand customers receiving water that was free of bacteriological contamination. Table 8.1 shows the Government of India minimum performance benchmarks. Payment of the performance bonus could be based on the utility's progress toward achieving these benchmarks.

Table 8.1: Government of India Minimum Performance Standards

Indicator	Benchmark
Coverage of Water Supply connections	100%
Per Capita Supply of Water	135-lpcd
Extent of Non Revenue Water	15%
Extent of Metering	100%
Continuity of Water supplied	24-Hours
Efficiency in redressal of customer complaints	80%
Quality of Water Supplied	100%
Cost Recovery	100%
Efficiency in Collection of Water Charges	90%

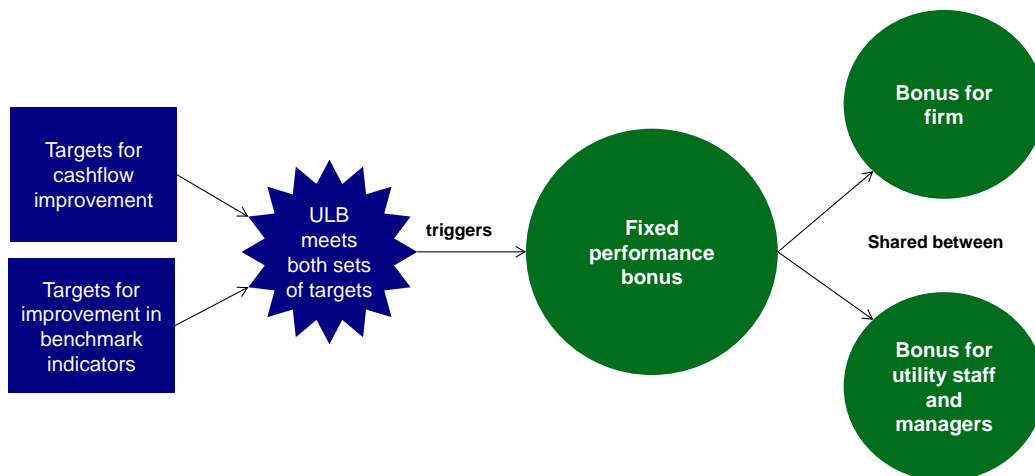
Sewerage	
Coverage of Sewerage Network	100%
Collection efficiency of Sewerage Network	100%
Adequacy of Sewage Treatment Capacity	100%
Quality of Sewage Treatment	100%
Extent of Reuse and Recycling of Sewage	20%
Extent of cost recovery in wastewater management	100%
Efficiency in redressal of customer complaints	80%
Efficiency in Collection of Sewage Water Charges	90%

Source: "Service Level Benchmarks." Ministry of Urban Development.
<http://www.urbanindia.nic.in/programme/uwss/slb/slb.htm> (accessed April 24, 2011).

Incentives for Management and Staff

Because the efforts of utility managers and staff will be even more important than the efforts of the Contractor in turning around the utility, they too need to be incentivized. The suggestion is that managers and staff get performance pay that would be triggered by the exact same performance indicators as the Contractor is measured against. This will help ensure that all parties are working toward the exact same end. Figure 8.2 provides an illustration.

Figure 8.2: Meeting Targets Triggers a Performance Bonus



Thus for example, when the utility achieves ISO 9000 certification, a certain payment pool would be triggered. This payment pool would then be shared, in pre-set proportions, between the Contractor, the utility managers, and the utility staff. Similarly, if, say, 5,000

households had been receiving continuous water supply for six months, this would trigger a fixed performance bonus. The fixed bonus would then be shared between Contractors, managers and staff, in the same agreed proportions. Providing managers and staff with incentives has worked well for public water service providers in Uganda and Indonesia, and we believe it to be a powerful tool to motivate professionalization and good performance. NWSC has done this successfully.³

Funding for the incentive payments will need to be found. One good option is that the utility receives a transitional subsidy to cover the differences between reasonable cost of services, and socially acceptable tariffs. In this case, the utility, if it is well managed, should be generating profitable cash flow. A proportion of the improved cash flow could then be used to fund the incentive payments. That is the approach illustrated in Figure 8.2. Another approach would be simply for Government or donors to provide the payments directly.

³ Marin, Philippe, William Muhairwe, Silver Mugisha, and Josses Mugabi. Internal delegation contracts for water in Uganda. Washington: PPIAF, 2010. Print.
Mugisha, Silver, Sanford Berg, and William Muhairwe. Using Internal Incentive Contracts to Improve Water Utility Performance. Kampala: National Water and Sewerage Corporation, 2006. Print.

9 Potential Contractors and their Incentives to Participate

Crucial to the success of this model will be attracting good quality Professionalization Contractors. This Section looks at the market of potential Contractors, and examines their incentives to participate.

Indian conglomerates

We have spoken with the Tata group company JUSCO. We got a clear signal that if the contract is well designed, JUSCO would be interested in bidding (see Box 6.1). JUSCO is a company set up by the Tata group to pursue water operations opportunities. The firm considers the Professionalization Contract model to be closely aligned to their current area of business, but to potentially allow them to avoid some of the risks that plague the Indian municipal PPP market in this early stage of its development. The Tata group already runs a number of utility-related concerns, notably North Delhi Power Ltd, which the group transformed from a shambolic public entity into a highly professional modern utility within a few years of taking over management.

Other India conglomerates such as Reliance (which also owns a number of power utilities) might be interested, but this is less clear, as they have not made the same kind of strategic commitment to the water sector that Tata has with JUSCO. The Jindal Group is one other conglomerate that has signaled an interest in the water sector in India, but again one would need to see how serious this is before knowing whether or not they would bid on such contracts.

Box 9.1: JUSCO Feedback on the Model

Jamshedpur Utilities & Services Company Ltd (JUSCO) is a Tata group company that operates water PPP Contracts in Jamshedpur, Haldia, and Mysore. The Tata group is credible in utility management. JUSCO would most likely be the Tata company that would pursue Professionalization Contract opportunities. We traveled to Kolkata to meet with senior JUSCO executives and get their feedback on the professionalization concept.

JUSCO executives confirmed that the company would be interested in bidding for Professionalization Contracts. Among the things JUSCO would want to see in any Professionalization Opportunity it bid on are:

- **ULB Political support at top level**—The opt-in concept makes sense, but we need to better develop the reasons why ULBs would opt in
- **Employee willingness to change**—This should be a criterion for selecting ULBs
- **Ensuring that CEO is competent and professional, not politically captured**
- **Governance of whole system, for example:**
 - Independent Directors
 - World Bank and State Government Supervision
 - Joint Monitoring Committee between the CEO and the Contractor
 - Independent certification of payment milestones
 - Independent auditors with appropriate reporting lines
 - Inter-agency coordination on government side
- **Procurement**—should be limited to shortlist of qualified firms, and there should be processes in place to ensure professional award.

Indian construction and civil engineering firms

India has a number of large and successful engineering companies, including: Infrastructure & Projects, Larsen and Toubro, and SPML. We spoke with SPML, a pipe-manufacturing group that has expanded into infrastructure project delivery and financing. SPML was clear that its major interest is in large construction projects. The Professionalization Contracts do not involve major construction, and so would not be aligned with the company's core interests. SPML is pursuing PPP projects in the India water sector, in association with a major international operator.

General lessons that emerged from the discussions are that:

- Large Indian civil contracting firms may not have the skills needed for Professionalization Contracting, though they could team with other firms to put together a skilled consortium
- To attract a large construction contracting firm to the Professionalization Market the firm would have to see a significant pipeline of opportunities at attractive margins, or be deciding to diversify into water service management as a strategic new business line
- Some firms may seek to win Professionalization Contractors in order to put themselves in prime position to secure large construction contracts from the same utilities. This could give rise to conflicts of interest, and so the transaction and contracts should be designed in a way that stops this from happening.

Management and Engineering Consultancies

The Professionalization Contract is similar to 'business process re-engineering' assignments, and also to 'program management' contracts that engineering consultancies often have with large utilities. International and Indian management consultancies and engineering consultancies could likely be attracted to this Professionalization Market.

These firms are likely to see the contracts as being of a size and general type that they normally pursue, making them likely to be interested in bidding. The risk is that these firms may not bring enough of a utility management mentality to the work. However, some firms may see this as an opportunity to be paid to develop the capacity to manage water utilities, which would be ideal.

An exemplar of this type of company would be Net Group, a South African-based utility consulting firm that has also performed successfully on management contracts.

International water operators

It would be ideal to attract experienced international water operators to the Professionalization Contract market. These firms include Manila Water, Mea Aqua, Suez Environment, Veolia Water and Vitens. However, their interest in the contracts cannot be taken for granted. These water operators may see the Professionalization Contracts as involving:

- A distraction from, or threat to, their current PPP business models (management contracts, leases, concessions etc.)
- Applying their brand name in a situation in which they do not have management control, and thus risking considerable reputational damage

- Transferring proprietary utility operating systems in a setting in which they cannot protect their intellectual property (IP) easily, and in which they may not reap what they consider to be an adequate return on the IP transfer.

That said, if the Professionalization Contract program goes ahead, and if the contracts can be designed so that risks to reputation and intellectual property are kept within reasonable limits, then our view is that the international water operators are likely to participate. The smaller ones, such as Manila Water, will see these contracts as offering a way to boost their skills and credentials. The larger ones, such as Veolia, will be keen to reduce risk to their core business by reducing the chance that another firm wins the contract, and uses it as an opportunity to build itself into a competitor. Moreover, if Professionalization Contracts become more prevalent than traditional PPP contracts, the large operators will want to be positioned to take advantage of the market, and so have another reason to get in early, once it is clear that the program is going ahead. Overall, we see the Professionalization Contracting approach as a new form of contracting for assistance from private firms that targets a different market segment where traditional models would be inappropriate, primarily because of the size of the participating ULBs. In India, with 5000 ULBs, only a relatively small number would warrant traditional PPP approaches. Thus there is a large number of ULBs where this alternative model could be implemented, without taking away from traditional PPP models.

10 Steps in Developing the Concepts

The best way to pilot the professionalization concept would be as part of a broader program to reform and upgrade water services in a reform-minded Indian State or States. This section lists things that need to be done to further develop the concept to the point where it would be put into practice. Appendix A then pulls these together into an indicative program, showing how the concept could be piloted in one State.

Among the steps in taking the concept forward would be

- **Agreeing on a State or Region in which it could be implemented**—There is a need to find a reform-minded state that is on-board with the model as described in the concept note, and then to identify reform-minded ULBs within that state. This should start with marketing the concept to a number of States to find one that wishes to commit. That needs to be done early, as the design of the program will depend on the specifics of the State or States in which it is implemented. To market the concept to States, a ‘Pitch Document’ will be needed. This document should describe the concept in a way that speaks to States, explaining how it benefits them. The Pitch Document should spell out the ‘size of the prize,’ or the specific benefits that could be expected from adopting the model. This should include an indicative financial analysis and analysis of risks. Box 10.1 discusses a number of possible States and regions
- **Identify Precedents**—Nothing exactly like the Professionalization Contract has been tried before, but in developing the concept we should identify other places and sectors in India and internationally where aspects of the model have been tried. This will be crucial for building support for the concept. This may need to be done early in the process of marketing to States, as a natural question from any State Government will be ‘where has this been done before?’
- **Carry out a Cost-Benefit and Financial Analysis**—It will be necessary to have a feasibility study showing in more detail not just what the expected costs of the program will be, but also the expected benefits. This study should scope out the financial support the project will require. It should also demonstrate the economic returns—given the social value of improved service—as well as the eventual financial savings
- **Carry out a Governance Analysis**—Detailed governance analysis would include an estimate of the financial value of rents accruing to managers, politicians and other stakeholders under the status quo. Adequately compensating the losers would then become a key to successfully implementing the model. Other parts of the analysis should include the development of governance models that provide sufficient independence to allow the utility to work in a professional way, while also providing accountability for service provision
- **Develop the concept in a more detailed, State-specific way**—Once a State has been selected and is on board with the model, a more detailed model can be developed. This model would include the governance analysis, detailed financial analysis, and other aspects such as, state-specific legal analysis.

Box 10.1: Which State or Region to Implement in First

At the Delhi workshop, participants discussed a number of ideas about which reform-minded areas might be suitable to locate the pilot project. These areas include the following:

- **Maharashtra State**—The broader team had carried out an assessment of management and technical performance in three ULBs in Maharashtra. Following that, the team met with the Permanent Secretary of Water for Maharashtra, and staff from the state government and the ULBs visited. The State Government expressed interest in applying the professionalization concept, but wanted to understand it better
- **Gujarat or West Bengal**—Gujarat and West Bengal are (like Maharashtra) more advanced than most States in implementing the 73rd and 74th Constitutional Amendments, and might be more capable than other states of implementing reforms. This would make these states natural candidates within which to find reform-minded ULBs and try to implement the model
- **Chhattisgarh** —This State is reform-minded and moving ahead rapidly, but from a low base. It currently has little in the way of water infrastructure and providers. So the professionalization concept might seem like a good way to close the gap, and would run into less opposition from vested interests than in other States
- **Delhi-Mumbai Industrial Corridor Project**—This project is a \$100 billion development of an industrial and commercial zone across six States in northern India, focusing on upgraded transport infrastructure.⁴ The project is a national priority of the Government, and if the water professionalization project is associated with the Corridor project, there will be particular Government focus on making sure water professionalization succeeds
- **States where the Public Health Engineering Department is withdrawing from the water sector**—Public Health Engineering Departments (PHEDs) are State Government engineering bodies that typically build water infrastructure. In States where these State-level bodies are withdrawing from the water sector as part of implementing the 73rd and 74th Constitutional Amendments, there is an opportunity to manage the water sector under a new arrangement. These States might welcome the professionalization concept as filling an institutional vacuum
- **Industrial Growth Centers (IGC)**—There are 43 towns in India managed under a specific administrative arrangement known as 'IGC'. The professionalization concept might be most feasible in these towns, given that they already have a more professional administration. However, the disadvantage of pursuing the professionalization model in Industrial Growth Centers is that, because they are not typical towns, the demonstration effect of a successful Professionalization Contract would be more limited than that for a successful contract in a typical town.

⁴ "India proposes USD 9 billion fund for Delhi to Mumbai corridor project." Steel Guru. http://www.steelguru.com/indian_news/India_proposes_USD_9_billion_fund_for_Delhi_to_Mumbai_corridor_project/191363.html (accessed March 23, 2011).

Appendix A: Indicative Plan for a Pilot in One State

This Appendix assumes that a State has decided that it wants to pilot the Professionalization Contract as part of an integrated approach to improving its water services. It further assumes that that State has already devolved water service responsibilities to ULBs, and provides funding from the State budget to ULBs for water services. Maharashtra, Gujarat and West Bengal are all States that fit this general profile. The key steps involved are described below, first at the State level, then those involving transaction design and management, and finally the implementation of the Contracts.

State Level

Actions at the State Level would include the following:

- The State creates a Water Sector Change Management Unit
- This Change Management Unit creates a system for Benchmarking the performance of ULBs in water service provision. The Benchmarking would be based on the Government of India Benchmarking Guidelines
- The State Government informs ULBs that additional funding will be available for those ULBs that are performing well on the Benchmarking indicators, or that have a Service Improvement Plan that the Change Management Unit has certified as being likely to improve service, and which the ULB is following
- A 'Professionalization Contract Route' is developed as a model for Service Improvement Plans, and assistance is offered to ULBs that want to go this route. (Ideally, other options, such as a PPP Route, would be developed in a similar way, so that ULBs have two or three good options to choose between)
- Nine ULBs opt into a Professionalization Contract Route. Ideally the concept would be marketed to many towns, creating competition to be among the nine selected. No ULB would be pressured into the program, since the reform will probably only work with the support of the ULB.

Transaction Design and Management

The State, with the assistance of its development partners, would select a firm to design and manage the transaction. The transaction strategy would be to bid out three Professionalization Contracts, each one mandating service provision to three ULBs. The reason for this is to create competition for future contracts (since there will be three contractors) and also to test the one-to-many professionalization concept. Key tasks, to be led by the selected firm, would include:

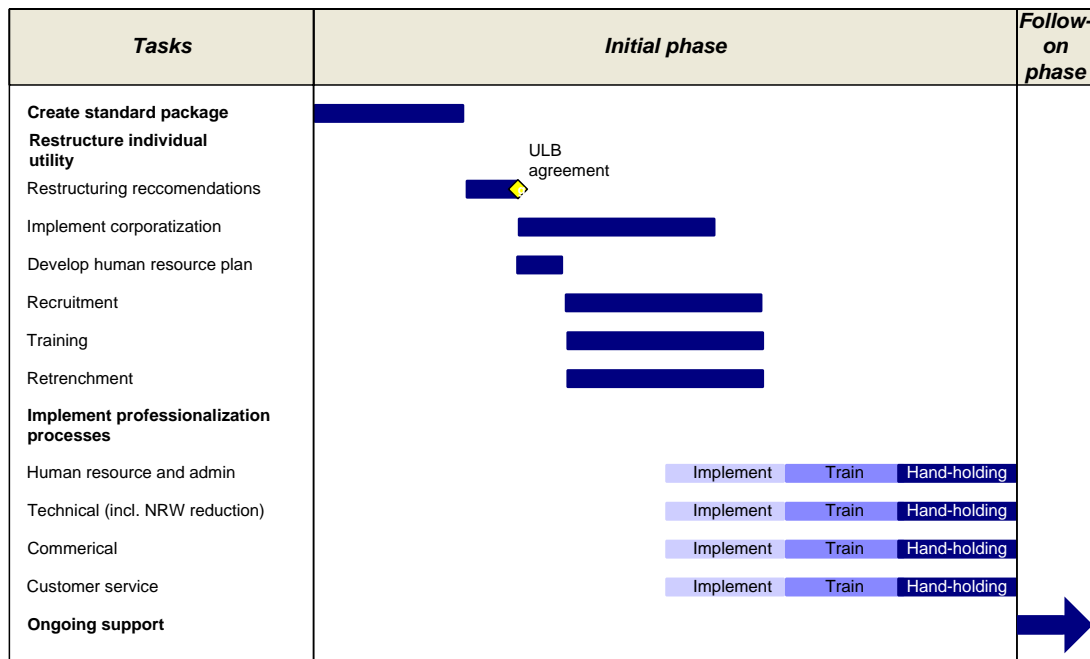
- Drafting the Professionalization Contracts
- Helping the ULBs to start the process of Governance Reform, such as selecting Boards for the to-be-corporatized utilities, and starting stakeholder consultation
- Marketing the transaction to potential Professionalization Contractors
- Preparing the Request for Proposals and running the tender process to select the Professionalization Contractors

- Helping the ULBs to reach agreement with the winning bidders and assisting a smooth start to the work.

Steps in Implementation of the Professionalization Contracts

After this, the contractors would start work. Figure A.1 shows the phases of implementation of the Professionalization Contract.

Figure A.1: Professionalization Contract Phases of Implementation



The Work Plan above assumes that, prior to engagement with the ULB, the Contractor will develop the “standard utility operating system”. Upon engagement with the ULBs, the Contractor will recommend how the utility organization should be restructured. The Contractor will reach agreement with the ULB or Board of the utility on the recommendations before proceeding to the next phase of implementation. In the next stage, the Contractor will assist the water provider to corporatize.

The Contractor would develop and help the utility to implement a human resource plan. This plan would involve matching the existing staff to the new organization structure. Training needs would be identified, and a training program developed. Gaps in the organization structure would be filled through recruitment. Some of the existing staff might not be suitable for any of the positions in the new structure. In this case, they would need to be retrenched from the utility. Of course this would need to be handled sensitively. For example, these employees might be transferred to other roles in the ULB.

Once the utility is corporatized and reorganized, the Contactor will implement the professionalization processes under the “standard utility operating system” by functional area. This entails putting systems and procedures in place, training staff in the new systems,

and then a “hand-holding” phase in which the Contractor provides support to trained utility staff as they become familiar with the new systems.

The reform functions undertaken by the Professionalization Contractor would correspond with the needed reform steps outlined by consultants from the Uganda National Water and Sewerage Corporation (NWSC) in its review of Maharashtra ULBs. Box A.1 gives an overview of these recommendations.

Box A.1: NWSC Recommendations for Improvement

Consultants from Uganda’s NWSC reviewed ULBs in Maharashtra, determining steps that would need to be taken to improve service. This list of steps corresponds to what the Professionalization Contractor would need to do. Below is an abbreviated list of suggested reform tasks.

- Technical Process Management
 - Design and carry out appropriate change management programs
 - Develop & institutionalize standard operating procedures
 - Instill skills in and adopt a clear performance planning process
 - Develop a Maintenance and Asset Management Policy
- Commercial Process Management
 - Re-orient staff & key stakeholders towards being customer-centric
 - Review the structure by uplifting the profile of the Commercial Function within the corporate structure
 - Instill skills in and adopt a clear performance planning process
 - Develop and implement well-customized Billing System
 - Put in place a structure for a water loss reduction unit and develop a proactive framework for water loss management
- Financial Process Management
 - Study cost structure with a view of optimizing costs
 - Develop & institutionalize standard operating procedures governing the financial operations
- Human Resources (HR)
 - Institute participatory transparent Performance Appraisal System
 - Document the Policies into a Manual to guide HR operations
 - Develop a practice of regularly carrying out Training Needs Assessments
 - Establish a clear occupational health and safety framework
 - Review the institutional setting with a view of ring fencing the operations and management of water and sewerage supply.

Source: SIP Matrix: Towards Best Practices. Uganda National Water and Sewerage Corporation. March 2011.