The Water and Sanitation Program is an international partnership for improving water and sanitation sector policies, practices, and capacities to serve poor people

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Field Note

Public Toilets in Urban India

Doing Business Differently

Delhi has witnessed a new initiative that involves private entrepreneurs via Build, Operate, and Transfer contracts. This field note looks at both the achievements and challenges in the use of these contracts for public toilets. It presents some significant lessons for meeting the sanitation needs of the city as a whole.

In Delhi, the idea of private sector development of public toilets via Build, Operate, and Transfer contracts first emerged in 1998. It offered two benefits: private financing of public infrastructure and an incentive for maintenance.

Executive Summary

India faces a daunting urban sanitation challenge. Over one-fourth of urban households lack a private toilet and there is an evident lack of hygienic facilities in public places. Communal facilities may be essential not simply as a convenience to travellers and shoppers, but as the only possible means of providing access to sanitation in crowded slums that are characterized by small plots and little open space.

Historically, municipalities were the main providers of public toilets, but these facilities suffered from poor maintenance and cleanliness and were largely avoided by the public.

Today, pay-and-use public toilets have become well established across India, most of them funded by municipalities and a large proportion operated by nongovernmental organizations (NGOs) or small contractors. These are often better maintained than standard municipal toilets and are consequently more popular with the public.

While NGO- and Community-Based Organization (CBO)-run toilet complexes are now quite common, much less has been done to develop the role of the private sector in financing, developing, and managing public toilet complexes. Recently, however, the city of Delhi has witnessed a new initiative that involves private entrepreneurs via Build, Operate, and Transfer (BOT) contracts.

Some 60 public toilet blocks have been developed, and a novel feature of the contracts is that the operators are allowed to use the external walls of the premises as advertising space. This enables them to generate substantial revenues.

The results of this innovation have been mixed, but some contractors have provided an excellent service. This field note looks at both the achievements and challenges in the use of BOT contracts for public toilets in Delhi, and draws out some important lessons for meeting the sanitation needs of the city as a whole.

The BOT Initiative in Delhi

Private sector development of public toilets via Build, Operate, and Transfer (BOT) contracts is relatively new in India. In Delhi, the idea first emerged in 1998 under the auspices of the New Delhi Municipal Corporation (NDMC). Fumes International, a local company, had noticed the dismal state of public toilets in the city and approached NDMC with an idea. It proposed to construct new toilet blocks using its own resources, then operate them for a fixed period, after which ownership would transfer to the municipality. The right to use the road-facing walls of the complexes as advertising space would enable the operator to offset some of the development costs. The NDMC agreed.

The proposal was attractive as it potentially offered two important benefits:

1. *Private financing of public infrastructure*. The new services would be both financed and operated by the contractor. All the municipality had to do was provide the land and monitor the facilities once they were running. In return, it would receive a monthly licence fee from the operator, funded by advertising revenue.

2. *An incentive for maintenance.* It was anticipated that the potential for advertising revenue would create an incentive for the contractor to construct a good quality building and keep it in working order—many toilet blocks developed under this contract featured well-kept gardens and plants.

On the initiative of the operators, BOT contracts now include a clause allowing

Box 1: Management Models for Public Toilet Facilities in India

Communal toilet facilities fall into two broad categories: *community toilets*, which are provided to meet the basic needs of poor residential areas; and *public toilets*, which serve mobile populations in public places such as shopping centers, as well as bus and train stations. This field note is concerned with the latter. The three most common management models for public toilets are shown below, though there are numerous variations on these themes.

Public sector management	Toilet blocks owned and maintained by municipal agencies. Usually, no charge is levied on users. These are becoming rarer as cleanliness and maintenance are generally poor, there being no real obligation or incentive for caretakers to maintain a good service.
Private leasing	Toilet blocks built using municipal funds but operated by NGOs, private contractors or individuals who are responsible for routine maintenance and charge user fees. The municipality may provide water and power supplies free of charge, and/or retain responsibility for structural repairs. The nongovernmental organization Sulabh International operates a huge number of pay-and-use toilets on this basis, many of them in public places but some serving poor residential areas.
Private sector development	Toilet blocks funded, constructed, operated, and maintained by the private sector, usually on land provided by the municipality. User fees apply. Under Build, Operate, and Transfer contracts, ownership of the premises transfers to the municipality when the lease period expires, typically after five or seven years.

Following the successful pilot, in 2002 the New Delhi Municipal Corporation issued an open tender for additional 40 sites. The toilets soon proved to be profitable but it was advertising, not service delivery, that generated the profits.

Box 2: Financing Public Facilities through Advertising

JCDecaux makes a wide range of street furniture from billboards to automatic public conveniences, and has very efficient systems for their installation and maintenance. The company operates in over 800 cities in 40 countries and in 2005 generated revenues of US$2.5 million.

For decades, bus shelters in the Netherlands were subject to graffiti and vandalism. In the 1990s, JCDecaux offered to finance and build new shelters in a number of cities, and thereafter to maintain them, with an obligation to repair damage within 24 hours of it being reported. In exchange, it acquired the right to display advertisements in bus shelter windows. The company now owns most of the bus shelters in the Netherlands and the results have been impressive.

The approach is based on three principles:

- Offer the best, receive the best.
- Don't compromise on maintenance.
- Don't sub-contract operation and maintenance.

Recently, JCDecaux won its first contract in India, for 192 bus stops in New Delhi.

the operator to landscape the site, making it more attractive both to users and advertisers.

Toilet blocks built under this and subsequent contracts had separate facilities for men and women (four to six compartments for each) plus two or three urinals and one or two showers. The first site proposed by the private contractor was at a busy shopping complex in a high income neighborhood. Subsequent sites were selected in consultation with the NDMC and it was initially possible to find places with both a high demand for toilets and strong advertising potential. The contract period for this first batch was set at 10 years; subsequent contracts, though, had shorter periods.

To exploit the advertising potential, the private contractor entered into a contract with a public outdoor advertising[1] agency that paid the contractor to use the advertising space and thus bore the business risk. The contractor employed a caretaker on a fixed salary, and set user charges at Re. 1 (US$0.02)[2] for the urinal and Rs. 2 (US$0.05) for the toilet, in line with limits set by the NDMC. The project was a great success—both the private contractor and the outdoor advertising agency made good revenues, users received a good quality service, and the municipality was relieved of the onerous task of providing public toilets in some key locations.

Globally, the practice of subsidizing public services from advertising revenue is now widespread (see Box 2).

[1] Outdoor advertising is also known as billboard or hoarding space.
[2] USD 1 = INR 39.13 (as of October 10, 2007). Conversion rates are from www.xe.com; all conversions in the text are approximations.

Expansion of the Program

Following the successful pilot, in 2002 the NDMC issued an open tender for additional 40 sites. Bidders were selected solely on the basis of their technical skills and experience; there was no financial bidding. The monthly advertisement licence fees per public toilet were fixed at Rs. 5,000 (US$128) for the first two years, Rs. 8,000 (US$204) for the subsequent two, and Rs. 10,000 (US$255) for the fifth and final year. From 64 pre-qualifying bids, eight companies were selected—most of them engineering or construction companies—and each was assigned five toilet complexes.

At this time, the NDMC had no revenue objective for the toilets and the monthly licence fee was fixed low because the advertising potential was unknown. Since the operators had little knowledge of advertising, they appointed outdoor advertising agencies to exploit the value of their road-facing walls. The toilets soon proved to be profitable but it was advertising, not service delivery, that generated the profits; operation and maintenance costs exceeded revenue from users by a substantial margin.

At this stage the operators kept the toilets clean and in good working order, for several reasons. First, monitoring systems were in place and the NDMC had the right to terminate contracts in the event of poor performance. Second, there was a general perception that the advertising potential would drop if the toilets were poorly maintained. Third, contractors wanted to build up a track record in anticipation of contract extensions or new business.

The results were satisfying and in 2002 the NDMC issued a second open tender, this time for 25 sites. By this time, the revenue potential of the facilities was evident and this prompted the municipality to adopt an alternative tender procedure where bidders would no longer be assessed on their technical merits; instead they would bid for the advertising licence fee. The market price for the fee would therefore be established through competition. The expectation was that operators' profit margins would drop but remain at a viable level, while municipal revenue would rise. On this occasion most of the contracts went to outdoor advertising agencies, who were able to make higher bids for the licence fee than normal contractors, since the latter would have needed to appoint a third party to deal with the advertising component. As expected, monthly licence fee payments went up dramatically, from an average of Rs. 7,000 (US$179) per month to Rs. 50,000 (US$1,279); some were as high as Rs. 75,000 (US$1,918), depending on the location.

Encouraged by the NDMC experience, the Municipal Corporation of Delhi (MCD) also decided to tender for new public toilets, using the same criteria to assess bids. However, contractual disputes meant that only a small portion of these toilet blocks came to be built.

Box 3: Key Content of the Delhi Build, Operate, and Transfer Contracts

- The contract is for five to seven years, after which ownership transfers to the municipality.
- The municipality provides land free of cost but retains the title; it provides power, water, and other facilities on payment.
- The contractor must build sound and aesthetically appealing facilities, at his own cost, and may plant flowers and shrubs around each convenience.
- The contractor must maintain the complex, keep it clean (internally and externally), and provide continuous clean water, exhaust fans, hand dryers, tissues, soap, towels, and so on.
- User charges are limited to Rs. 2 (US$0.05) per head for a compartment, Re. 1 (US$0.02) for a urinal.
- The contractor may use road-facing walls for advertising, paying a licence fee and tax.
- The municipality may terminate the contract if conditions are breached.

Encouraged by the New Delhi Municipal Corporation's experience, the Municipal Corporation of Delhi also decided to tender for new public toilets. Contractual disputes meant that only a small portion of these blocks were built.

The Commercial Viability of Public Toilet Complexes

It is difficult to present a generic financial picture for BOT toilets in Delhi, since many of the variables are location-specific, but typical incomes for the operating models used since 1998 are presented in Table 1. These are based on information obtained from interviews with operators. The first scenario is that established between 1998 and 2000, where the contractor appoints an outdoor advertising agent. The second is that which emerged after 2002, where the winning contractor manages the advertising aspect directly. Both scenarios provide good returns on investment, whether the contract period is five or seven years. It is clear, however, that the bulk of the operator's revenue comes from advertising and that operation and maintenance costs are almost five times greater than revenue from user fees.

Outcome of the 2002 Contracts

The increased revenue was a bonus for the NDMC and the MCD. However, from this point onwards there was a marked deterioration in the performance of BOT toilets, with much lower operation and maintenance standards than had been achieved under the 1998 and 2000 contracts. One reason for this was that the monitoring mechanisms that had operated under the initial contracts were

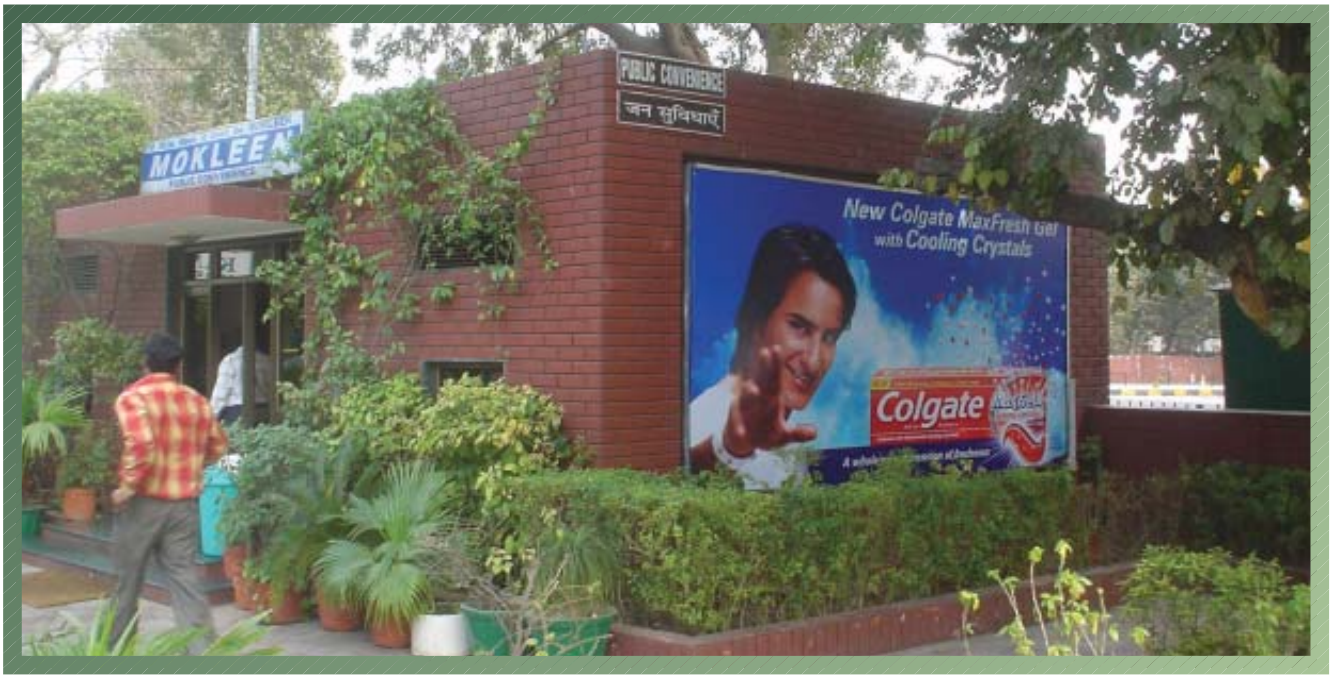
Table 1: Typical Income per Annum from BOT Toilet Complexes in Delhi (in Rs.)

	Fixed licence fee, contractor uses advertising agent	Financial bidding, contractor does not use an agent
Initial investment	800,000	800,000
User fee revenue (240 users per day)	60,000	60,000
Advertising revenue	960,000	1,680,000
Total revenue	1,020,000	1,740,000
Operation and maintenance (see Table 2)	295,500	295,500
Licence fee	84,000	600,000
Statutory advertisement tax	108,000	108,000
Depreciation (-)	160,000	160,000
Gross income	372,500	576,500
Income tax (30%)	111,750	172,950
Net income	260,750	403,550
Depreciation (+)	160,000	160,000
Net after-tax cash flows	420,750	563,550
Internal rate of return (five-year contract)	44%	65%
Net present value (five-year contract)	925,158	1,510,666
Internal rate of return (seven-year contract)	48%	67%
Net present value (seven-year contract)	1,393,633	2,163,973

Table 2: Typical Annual Running Costs (in Rs.)	
Electricity	46,000
Salaries	112,000
Materials (mops, soap, and so on)	34,000
Painting (quarterly)	16,000
Plants, greenery	34,000
Staff uniforms	2,000
Coupons and tickets, and so forth	5,000
Electrical fixtures (replacements)	11,000
Plumbing maintenance	12,000
Overhead tank replacement (every two-three years)	5,500
Borehole/pump maintenance	8,000
Mirrors, beading	5,500
Floor polishing	4,500
Total	295,500

Source: Based on information supplied by operators.

not applied to the new ones, either by the NDMC or the MCD. Profits were derived from advertising revenue, and with insufficient user revenue to cover operating costs there was little incentive to spend money on cleaning and maintenance. Having no expertise in running toilet complexes, most of the advertising agencies had sub-contracted this task to small entrepreneurs. The sub-contractors were responsible for funding and executing all operation and maintenance tasks, in exchange for which they were paid between Rs. 5,000 (US$128) and Rs. 15,000 (US$384) per month and allowed to retain user fee revenues. The sub-contractors soon realized that their service was loss-making and so began to cut corners in the absence of any enforcement of their obligations by the municipality or main contractor. The consequences were disastrous—some opted to minimize opening hours while others understood that closing the doors was the most profitable option.



Challenges Ahead

Motivation to maintain the toilet complexes was further weakened when it became clear that there were few prospects for contract renewal or expansion after 2007. NDMC officials declared that there were now sufficient BOT toilets, while both the NDMC and the MCD announced plans to bundle all of their BOT toilets into a single contract. Most operators knew they could not win such a large contract and from then on sought to reduce their overheads further.

More recently, the NDMC and the MCD have indicated their intention to make BOT toilets free to users in future, on the basis that provision of sanitary facilities is a government responsibility and that the contractors are already earning high revenues from advertising.

Lessons from the Delhi Experience

A number of cities including Chandigarh and Jaipur have now adopted the BOT model, and Mumbai has announced plans to do so in the near future. The Delhi experience illustrates both the benefits and risks of this form of private sector participation and provides some valuable lessons for investments elsewhere.

- *The importance of financial incentives.* A fundamental weakness of the contracts awarded since 2002 is that there is no financial incentive to keep the facilities operational, since all of the operators' profit comes from advertising revenue. It is also clear that companies are prepared to advertise on filthy toilets provided the building looks presentable externally.
- *The need for monitoring and accountability mechanisms.* Whatever financial incentives are in place, the need for monitoring and enforcement of contract conditions is fundamental, including the termination of contracts in the case of serious nonperformance. Ineffective monitoring after 2002 was a critical gap.
- *The need to prioritize service delivery.* Excluding technical criteria from the bidding process can result in contracts being awarded to organizations that have neither the capacity nor motivation to fulfil the public service component of the lease, without which the facilities have no purpose.

Options for Improving Service Delivery

While the outcomes since 2002 have been disappointing, the inclusion of advertising rights in the contract does at least make toilet complexes profitable, so that cleaning and maintenance is commercially viable as part of the total package. The challenge is to design and supervise BOT contracts so that the public service element—even if it generates little profit—is delivered to an acceptable standard. The following could help in achieving this.

Assess Local Demand Before Developing New Toilet Blocks

It may be that some complexes were sited in locations with high advertising potential but only limited demand for toilets. There is evidence from other schemes that where demand is high, toilets can be profitable even without advertising revenue (see Box 4). Local demand should be a prerequisite for awarding a contract, and the size of the facility should be appropriate to its anticipated level of use.

Box 4: Profitable Toilet Complexes

Data provided by Sulabh International for one toilet complex in a very busy location in Delhi indicate that, above certain usage levels, user fee revenue can exceed operation and maintenance costs. The facility has 20 seats and six showers and each user pays Rs. 2 (US$0.05) per visit to use them, while the urinals are free. On average, 700 people per day use the facility, producing revenues of Rs. 42,000 (US$1,074) per month (Rs. 504,000, or US$12,890, per annum). The operation and maintenance costs are reported as being Rs. 400,000 (US$10,230) per annum.

Revitalize Monitoring and Strengthen Accountability

Municipalities need to monitor and enforce contract compliance, but monitoring systems are commonly neglected and easily undermined. There are no easy answers here but some creative options could perhaps be explored, for example, holding an annual competition for the best-kept toilet complex. Media interest would add transparency to the process and increase municipal accountability, as could systems for consumer monitoring and feedback.

Many cities have now adopted the Build, Operate, and Transfer model, and some have announced plans to do so in the near future. The Delhi experience illustrates both the benefits and risks of this form of private sector participation.

Increase the Lease Period

With lease periods fixed at just five or seven years, operators have been under great pressure to recover their investment quickly. Longer lease periods would enable them to make longer term cost recovery plans with proper attention to maintenance of the premises. This said, operators may feel less pressure to deliver a high quality service when they have the reassurance of a long contract period—unless of course they face the risk of penalties for poor performance.

Review the Assignment of Responsibilities and Revenues

The current practice of assigning financial responsibility for operation and maintenance to sub-contractors is clearly not viable. It should, however, be possible to design a package where the sub-contractor is paid enough to cover the costs of cleaning, but not maintenance, and is motivated to keep the premises in good order by retaining all or a defined portion of the user charges. The operator would then be responsible for maintenance and repair costs, which would be covered by advertising revenue.

If user fees are abolished, as currently proposed, then it is difficult to see how cleaning and maintenance will be achieved. There will be no financial incentive to do it and compliance will depend on enforcement by the municipality, which has been very poor to date.

Review the Bidding Criteria

The dual objectives of service delivery and advertising revenue have so far proved to be incompatible. One option for resolving this would be to amend the bidding criteria for operators, for example, giving a weighting of 80 percent to operational factors and 20 percent to financial aspects.

Bundle BOT Contracts

Bundling a large number of toilet complexes into a single contract would simplify municipal administration and reduce the monitoring burden, since the municipality could inspect a few facilities regularly and on that basis deal with the portfolio as a whole. Assigning all public toilets in a city to one contractor could, however, be counter-productive since it would eliminate competition. A set of bundled contracts, each awarded to a different operator, may therefore be more appropriate. This would also limit the competition to larger operators and would increase the likelihood of attracting bidders with proven competence and a reputation to protect.

There may also be scope for putting a mixture of sites into each bundled contract so that the operator is forced to serve some high priority locations that are not commercially attractive, subsidizing them with income from more lucrative sites. Again, the key would be enforcement to prevent the operator 'cherry picking sites': maintaining the profitable ones while neglecting the rest. There is also some thinking of initiating this model in low income areas. However, the applicability of this model in high density, low income communities, particularly in slum settlements, requires further investigation.

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Conclusion

The Delhi BOT initiative has been very successful in attracting private sector investment in public toilets. However, the model has been less successful in securing the delivery of high quality services where the contracts were not well managed and where the selection of sites vis-à-vis sanitation demands was skewed. It has not found a

universal solution to the sanitation needs of public spaces—especially those in poor areas—but it nevertheless provides valuable insights into both the opportunities and challenges presented by BOT contracts. Finding private sector incentives to deliver high quality, affordable sanitation services remains a challenge but in this case the outcomes could be improved significantly through effective monitoring and enforcement of contract conditions. This confirms that, whether services are delivered in-house or contracted out, the role of the municipality remains paramount.

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Doing Business Differently

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