

Domestic Private Sector Participation in Peru

Sanitation Markets at the Bottom of the Pyramid

A Win-Win Scenario for Government, the Private Sector, and Communities

June 2011

INTRODUCTION

Peru has benefitted from macroeconomic stability and growth in the last few years. At the same time, it also presents important contradictions in terms of unresolved access to basic sanitation. This is characterized by a) an on-going gap that reflects the high levels of inequity between rural and urban coverage, b) unused services and low levels of customer satisfaction with current sanitation solutions, and c) unsustainable and inefficient public investments.

During the 1990s, the Peruvian Government allocated US\$ 833 million to the water and sanitation sector, representing an important increase over previous decades. Only 15 percent (US\$ 123 million), though, was allocated to rural areas and small towns.

Likewise, in the last four years (2006 to 2010) the government allocated the highest amount of budget in Peruvian history for water and sanitation, roughly US\$ 2 billion for improving access in urban areas, and again without explicitly prioritizing the poor. Despite this historic investment, only 54 percent was executed¹.

Despite of the important infrastructure investments of the last 20 years, significant gaps remain, as well as the need to address quality and sustainable sanitation service. Moreover, it has not impacted the improvement of health and environment-related indicators. According to the National Statistics Institute, while national sanitation coverage has increased by 20 percent (1993-2007), in the same period the percentage of prevalence of chronic malnutrition in children under five years old has decreased by 9 percent and that of diarrhea by only 5 percent.

PROBLEM STATEMENT

New ways to increase access to sustainable sanitation are required in countries like Peru. The *Creating Sanitation Markets* initiative is a multi-stakeholder approach, aimed at the market promotion of sanitation for population at the

KEY FINDINGS

- Public infrastructure investments in water and sanitation need complementary strategies for assuring families access to affordable products and services, healthy behaviors, and adequate maintenance of new sanitary infrastructure. The link of infrastructure programs with sanitation markets has the potential to contribute to improved policies aimed at achieving real impacts on poor people's lives.
- The paradigm shift from "beneficiary" to "consumer" can produce significant changes that have yet to be fully explored.
- Both market segmentation tools and client satisfaction assessments represent great opportunities to improve public policy by incorporating new elements in a demand-driven perspective.
- Domestic private participation at the bottom of the pyramid is viable. Key factors to harness this potential include: (i) shared investments within public-private-community partnerships, (ii) new business models, (iii) community resources and networks, (iv) support of local entrepreneurship, and (v) clear definition of a long-term investment return.

bottom of the pyramid; it pays special attention to the active involvement of the domestic private sector (large-scale providers, microfinance institutions, and community based microenterprises) in sanitation supply, and enhances public

1. Ministry of Economy and Finance of Peru, 2010.

awareness of sanitation as a business opportunity that also benefits local opportunities for development. The model relies on key alliances and interactions among public, private and community actors. These alliances operate at national and sub-national levels, and are meant to allow sustainability and scalability for sanitation markets.

Illustration 1: Location of Pilot Areas



District	Population	Households	% without access to proper sanitation*	% of poverty
La Encañada	22,397	8,430	65.5%	92.0%
Namora	8,552	4,493	71.0%	
Chinchero	9,958	2,948	68.7%	84.0%
Independencia**	15,595	6,229	73.1%	99.0%
Pachacutec**	118,280	25,713	51.2%	70.0%
Total	174,782	47,813	59.5%	80.6%

* includes unimproved latrines

** In these districts the pilot did not cover the whole population.

Source: Baseline Studies of Creating Sanitation Markets, 2007; and National Institute of Statistics and Informatics (INEI), 2009.

ACTION

In the 2007-2010 period, the Water and Sanitation Program, in conjunction with national and local authorities, the domestic private sector, NGOs, and communities, began testing the *Creating Sanitation Markets* initiative in four pilot areas in

Peru (La Encañada & Namora, Chinchero, Independencia, and Pachacutec). These four pilot areas are representative of the country's geographic and cultural diversity and are characterized by high levels of poverty (4 of 5 are poor, and 3 of 5 do not have access to proper sanitation), with an estimated population of 174,000 people living in around 47,813 households.

Four components were designed and tested in order to build a responsive linkage between supply and demand:

- Demand motivation.** Motivating demand targeted sanitation-related attitudes, practices, and knowledge of the population by marketing behavioral change tools. Promotional campaigns, door-to-door messages, and post-sale educational activities were tested. Local leaders, community sales promoters, school teachers, and health workers were all trained to deliver sanitation information and counseling.
- Local supply.** To improve the local supply of goods and services (suppliers, hardware stores, sales promoters, and foremen), articulation mechanisms were designed requiring the capacity-building of masons, plumbers, artisans, and hardware store owners. Large-scale suppliers have been involved in this training session's offerings, as well as local educational centers and municipalities.
- Product design.** Market research tools and partnership building were applied in order to ensure that the sanitation catalogue of products and related service delivery was responsive to people's expectations. This has implied domestic private sector involvement in research and development, as well as the design of a new business model for sanitation micro-enterprises (hardware stores, service providers, and artisans).
- Household financing options.** The demand studies of pilot areas showed that low-income families have been paying for sanitation facilities, and are willing to pay for improved sanitation; but they need proper information and financial solutions to strengthen their demand. The *Creating Sanitation Markets* initiative tested diverse financing alternatives tailored to households, working with banks, micro-financial institutions, government subsidy programs, and NGOs.

PILOT PHASE RESULTS

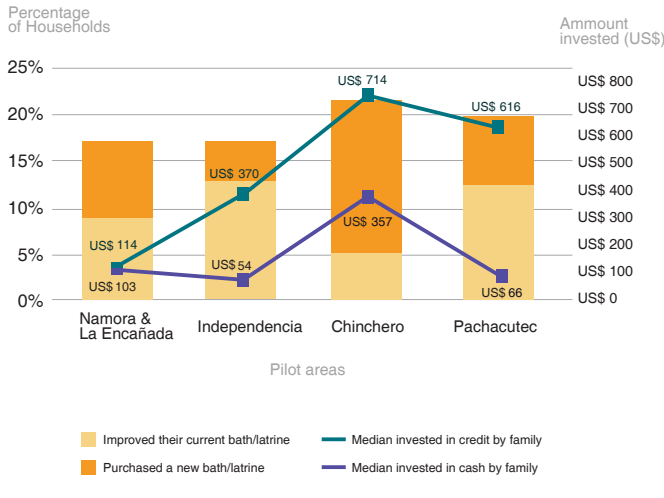
Following 24 months of sustained promotional activities, and almost a full additional year of sanitation market development, the following results were achieved:

Around nine thousand households have improved their sanitation services.

18 percent of households (roughly nine thousand) in the pilot areas made improvements in their sanitation facilities (11 percent improved their current household sanitary

infrastructure, and 7 percent purchased a new facility). Total household investment reached US\$ 1.2 million, while the private sector has contributed about US\$ 570,000 for training, promotion, and lending.

Figure 1: Households that purchased or improved their bathroom/latrine, and amount invested

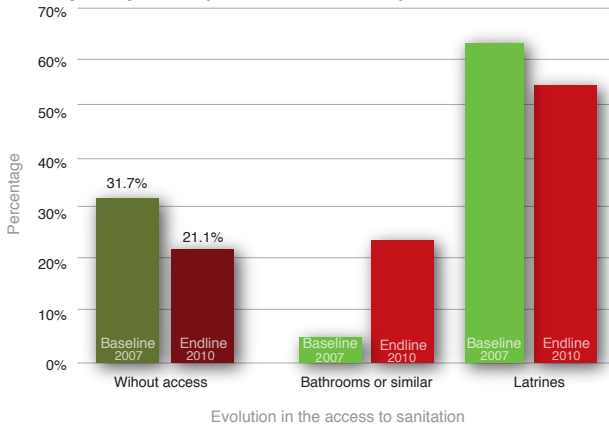


Source: Creating Sanitation Markets - Endline Studies. March-April, 2010.

The number of households without access to sanitation decreased by 35 percent.

Deficient access to basic sanitation was reduced from 32 percent in 2007 to 21 percent in 2010. This result can be explained by the impact of the communication campaigns, which have successfully mobilized people to effective action. 85 percent of people who remembered the promotional campaign also remembered the key messages, 25 percent looked for information, and 32 percent invested in sanitation facilities.

Figure 2: Evolution in the access to sanitation as a result of the pilot phase (baseline-endline)

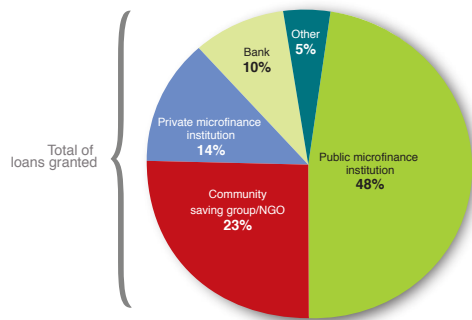


Source: Creating Sanitation Markets [Baseline Studies. June, 2007]; [Endline Studies. September, 2010].

The sanitation loan portfolio has been estimated at around US\$ 500,000.

US\$ 536 thousand were granted to households by eight financial institutions and through three non-regulated financial mechanisms, which designed products adequate for the granting of loans to families living in the intervention areas (village banks, community saving groups, individual credits). Although 48 percent of loans have been granted by the public micro-financial institution in Cusco (CMAC Cusco), an interesting 23 percent have been granted through community financial mechanisms (village banks and saving groups) reaching low-income populations.

Figure 3: Sanitation loan portfolio by kind of financial institution

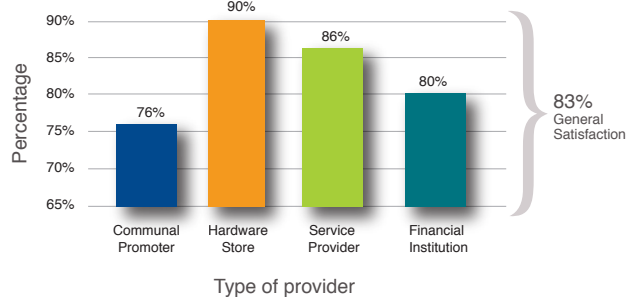


Source: End Line Studies of Creating Sanitation Markets. March-April, 2010.

There is a high level of client satisfaction with the local supply of sanitation goods and services.

The sales monitoring system tracked the progress of client satisfaction regarding local actors. According to the latest measurement, 90 percent of clients are satisfied with hardware store goods and services, 86 percent with provider services, 80 percent with the micro-financial institutions' services, and 76 percent with communal promoter performance. Global satisfaction regarding local sanitation supply is around 83 percent, a highlight of market sustainability.

Figure 4: Customer satisfaction with service delivered by domestic local providers



Source: Monitoring System of Creating Sanitation Markets. Sample: 100 people. September, 2010.



"It is so good to have a bathroom for our family, we feel well, happy at home. My daughter feels safer; she says that the bathroom is good for our health. With a bathroom there is more hygiene, especially for the children so they are not walking around ... and we can take a relaxed bath".

Ms. Juana Ramirez
Chontayoc Community, Huaraz

MAIN FINDINGS

1. Important paradigm shift: from beneficiary to consumer

One of the most important lessons in starting the market process is the promotion of new thinking among market actors, moving their vision of target groups from that of beneficiaries to that of consumers. This involves having market actors take responsibility for finding solutions, rather than merely awaiting for solutions.

The NGOs leading the pilot programs invested significant effort in this paradigm change. They succeeded in convincing local actors, as well as their own staff, that this new sanitation approach was providing subsidized sanitation solutions to the poor.

In facing this great challenge, their first step was to understand consumers' expectations, needs, and desires. This led to the

development of behavioral studies focused on finding the drivers of change, going beyond socioeconomic research. The studies found that health is not a top family motivator for investing in sanitation; in fact, there is a weak link between health conditions and sanitation in people's perceptions. The studies demonstrated that the main motivator to invest in sanitation is actually improving the home, thereby enhancing social status. A symbol of progress, water and sanitation systems are considered part of the urban culture and part of modernity. That is why, in the minds of many poor Peruvians, latrines are perceived as a factor of social differentiation.

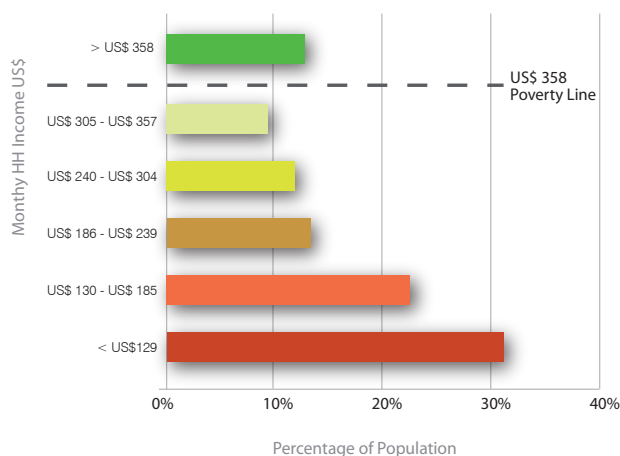
The pilot phase showed that families who invest in sanitation help to improve the use, maintenance, and sustainability of sanitation facilities. Although 39 percent of families in the four pilot areas are definitely willing to invest in a new sanitation facility, while 31 percent are willing to invest in the improvement of an existing facility. Sixty-two percent think this investment will allow them to feel that they are progressing; 55 percent believe that their house will look more modern; and 50 percent think this investment will make them feel proud of themselves.

The interesting findings of the pilot phase have prompted the *Creating Sanitation Markets* initiative to open the discussion into core questions, such as: Are we ready to respond to demand expectations? What is the border between the "right" solution for people and the "desired" solution? Who decides?

2. Better segmentation of the population: identify the diverse segments at the bottom of the pyramid.

Poor households have different expectations regarding sanitation facilities, and the pilot interventions have shown the dual nature of these perceptions. First, there is the private

Figure 5: Clients of Creating Sanitation Markets grouped by household income



Source: Creating Sanitation Markets - Endline Studies, 2010; National Institute of Statistics and Informatics (INEI), 2009.

aspect to be considered by families. Then, there is a public dimension that relates more to a vision of development and community, and that takes shape in subjects such as the final disposal of sludge and solid waste, sanitation base infrastructure development (networks, systems, treatment plants), and operation and maintenance.



"In the past, we didn't worry much about cleaning or keeping the bathroom neat. We didn't pour water down the toilet bowl. We left everything dirty. Now I always check that everything is clean, because, can you imagine having a nice but dirty bathroom?"

Mrs. Jovita Gutiérrez Briones
Namora, Cajamarca

Evaluation studies conducted by the *Creating Sanitation Markets* initiative found that discretionary criteria for segmentation are related to at least five categories: the household's income and ability to save, housing ownership, access to credit, the urban experience of family members, and family preferences regarding bathroom conception and methods of installation and purchase.

Taking into account the dual perceptions as well as the discretionary criteria, it is possible to define six preliminary

segments. Four are household segments based on a mix of income and saving capacity with bathroom preferences; one segment focuses on sanitation as a community investment; and the other involves entrepreneurs, looking at sanitation as a mechanism to increase business profits.

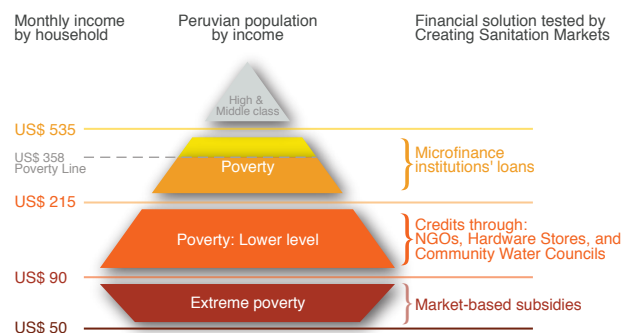
The payment capacity of poor segments is diverse, and responds to a wide range of economic activities, income levels, expectations, and demands for social inclusion and progress in life. Some 87 percent of *Creating Sanitation Markets* clients are below the poverty line in Peru; 86 percent of these families have purchased sanitation facilities, using exclusively their own resources; 8 percent have made the purchase through credit; and 6 percent used a mixture of both. The median household investment was US\$ 57, and the median credit amount was US\$ 536 (in an average of 12 monthly payments). Toilets (43 percent) and sinks (21 percent) were the most frequently purchased products.

3. Affordable household sanitation involves more than simply finding the cheapest technology.

The objective of providing an affordable sanitation option does not mean that the quality of products and facilities must be lower. By using a mix of cost-saving measures, addressing financing needs, and spreading costs out over time, the *Creating Sanitation Markets* experience has shown that almost any household can have a high-quality sanitation facility on site. An affordability strategy should provide options to the consumer with respect to financing, product, construction, and installation; the timing of all of these components should ensure that all consumers, regardless of economic status, can install the toilet or bathroom they desire and not be obligated to accept products they do not want.

The *Creating Sanitation Markets* initiative worked to develop an attractive and accessible "sanitation package," based on a technology catalogue, installation and maintenance

Figure 6: Financial solution tested according to income



Source: Creating Sanitation Markets - Endline Studies, 2010; National Institute of Statistics and Informatics (INEI), 2009.



"(The bathrooms) are... a good system; it prevents contamination, while silos usually brought bad odor. In the past, I was damaging my house by making a lot of holes for silos in my yard, I built up to 3 silos. Now everything is nice and clean, the flies have already gone away".

Ms. René Cruzado Moreno
Pachacutec, Callao

services, financing services, and information and orientation for customers. It also worked to create an accessible point of sale for communities, building a good-quality local sanitation supply, using local materials and resources, and supporting local providers through validation of diverse certification programs. These programs were run in conjunction with educational institutions, private suppliers' enterprises, and local governments.

The promotion of market mechanisms at the local level helped to enhance the social and economic dynamic. Local employment in pilot areas was increased, and 41 percent of the bath/latrine installations were done using local service providers, who were trained by the Creating Sanitation Market initiative. At the same time local hardware stores have increased their sales, with 48 percent of families now preferring to acquire toilets, sinks, showers, and baths locally.

Despite these results, questions remain. The sustainability of the actors' interaction continues to be a desirable goal, along with the development of a sustainable accreditation mechanism for service providers in order to assure quality standards in an "informal" country such as Peru. Another question involves how to link people's desires (a bathroom with shower, sink, and toilet), and their willingness to pay, with the need to use water more efficiently and ensure that domestic wastewater is eventually treated.

One promising effort is headed by six private enterprises (four suppliers, one international commercial bank, and one private foundation), and involves scaling up a sanitation package under a unique umbrella brand tentatively called "Mi Baño" (My Bath). The package includes goods, construction and installation services, financing options, information, and orientation through community promoters and points of sale, as well as guaranty and maintenance mechanisms.

4. Target financial solutions according to income level.

Reaching all income levels of the population requires innovative financing alternatives, such as group lending, retail direct credit, or market-based subsidies. The *Creating Sanitation Markets* results have shown that there are clearly three segments: the upper poor, who can be easily reached by the traditional financial sector (banks and microfinance institutions, or MFIs); the middle poor, a key target segment of the population that does not usually have access to formal financial supply; and the bottom poor, people in extreme poverty who receive government subsidies.

The first segment has sustainable incomes and/or limited saving capacity (US\$ 215 to US\$ 358 per month household income scale). Progressive home improvement financial products are a great opportunity for this group. The *Creating Sanitation Markets* has not had enough success in involving banks and micro-finance institutions in launching ad-hoc sanitation loans, but there are promising signs, such as dissemination activities to increase sanitation awareness and the benefits of their prioritization in home upgrading; implementation of a system to pay commissions to promoters or retailers who provide loan clients; and establishment of alliances for sharing sanitation promotion investments.

For those in the middle poor category (US\$ 90 to \$ 215 per month household income scale), the challenges are greater. The *Creating Sanitation Markets* initiative has validated diverse financial alternatives to figure out how to reach that segment with a viable, cost-effective financial product. These include the village banking model through NGOs, and credits directly from hardware stores and community water councils. Although the first *Creating Sanitation Markets* monitoring reports show client satisfaction, very low delinquency rates, and increasing access, critical barriers remain in replicating these community financing approaches in a sustainable manner. The obstacles are related to inadequate population profile evaluation tools, and to limited credit terms. The low education level of this

Before and After



"I am very happy with my bathroom. It is close, at hand. Now I do not have to walk so far, as I did when I had a latrine. My son, who has arrived from Lima, is happy with the bathroom".

Mrs. Ida Reyes
Cochac Community, Huaraz

segment also requires significant investments in training, regarding how to operate those financial mechanisms. The NGOs' successful management of village banks indicates that an intermediary is required to promote the formation of the group and to provide continuous training and monitoring, which need resources and expertise.

Finally, the as yet unanswered question is whether subsidies are the only alternative for the extremely poor (less than US\$ 90 per month household income scale). The initiative has tried to prove the viability of market-based subsidies by offering households opportunities to choose the toilet or bathroom they would like to have. In the Cajamarca pilot zone, for example, the initiative has formed self-help savings and lending groups with women members of the direct transfer cash program "Juntos", a government antipoverty social program that provides a bimonthly subsidy of US\$ 70 per household. The lending model has a cross-guarantee system that allows households to improve sanitation access through the purchase of materials or by paying for labor.

5. Do not underestimate the private sector's role.

The *Creating Sanitation Markets* results show enormous potential for the domestic private sector to contribute to improved sanitation services for the poor. Peruvian economic growth rates highlight opportunities to identify new actors, particularly those interested in improving people's living conditions. Today, more than in the past, private sector enterprises understand that they need consumer satisfaction to survive. When people feel comfortable with their own well-being (self-perception, access to basic services, education, etc.), they have greater expectations and needs.

The domestic private sector has proved a number of things, namely that it is able to deliver household loans for sanitation; that it is able to enhance the knowledge of retailers, improving the supply chain and service quality at the point of sale; that it can support research and innovation to discover new materials and processes in accordance with environmental policies, resulting in better products in terms of quality, price, and environmental impact; that it can create quality information systems for consumers and invest in educational campaigns; and that it can improve the quality of health and sanitation-related conditions for its workers, creating a better physical and emotional business environment—which in turn can lead to enhanced productivity and well-being.

INSIGHTS FOR FUTURE PROGRAMMING

The *Creating Sanitation Markets* pilot projects have shown the existence of sanitation demand among poor segments at the bottom of the pyramid. It is a heterogeneous demand which, despite the restrictions generated by limited payment capacity, is investing in sanitation services.

Why invest in demand development, if it already exists?

For two main reasons: (i) because poor households do not necessarily make the best investment they could make with their tight resources; and (ii) because there is a latent sanitation demand that requires activation of behavior drivers to be transformed into real demand. Some of the key behavioral determinants identified during the intervention process are access to financing and information, sanitation value perceptions, and skills development.

There is promising evidence that private investments by families generate ownership, use, and maintenance of the services, contributing to sustainability. That investment practice is related to the capacity to choose among diverse sanitation facilities; the possibility to fit the selected facility to their preferences; the right to appeal against goods and services that do not meet their expectations; and the sense of social inclusion in the chance to afford modern, high-quality sanitation access. Therefore, **partial or complete subsidy schemes could be incorporated in the Creating Sanitation Markets approach, if the practice continues in all its aspects. This is not necessarily about income capacity; it is more about citizenship-building.** An inclusive market approach opens new ways to face social development challenges, because customer behavior is finally based on rights and responsibilities, in the correct use of information for decision-making, and in building capacity for empowerment and ownership.

The nurturing of markets for sanitation generates local development, improved business opportunities, local employment and income, and interest in other home improvement investments. *Creating Sanitation Markets* efforts at the local level have demonstrated that sanitation can add value to small businesses, promote the launch of new enterprises, stimulate providers' organizations and orient youth

to new technical education opportunities. Local entrepreneurs are not only looking for profits, they also have a commitment to their community: they seek the progress of their surroundings, and they want to live in a place they feel proud of. In short, there is a new social process going on. It is supported by economic stability and tranquility, and is generating genuine Peruvian ownership, where families seek progress and welfare inside their communities, and not outside as in the past.

In addition, the *Creating Sanitation Markets* experience has proven that the promotion of **sanitation markets adds value to different sectors: private, public, and communities**. Moreover, it is not possible to get those benefits without synergy within a shared results framework. The diverse, multi-stakeholder platforms at national and sub-national levels have allowed the *Creating Sanitation Markets* experience to go forward and indeed “outside the box.” Most likely such a nationwide alliance is the most promising opportunity to scale up sanitation access at the bottom of the pyramid, and with genuine quality and sustainability criteria including the environmental sustainability. Was the great effort made at this level an efficient investment, even if there is not enough evidence of its contribution to the results? Yes it was, because any partnership building is based on trust, a long-term process which probably represents the most valuable acquisition of the whole *Creating Sanitation Markets* inversion.

Therefore, **this new approach to sanitation implies a change of paradigm and renewed roles for different actors, especially the customers** (households and communities) who prioritize sanitation investments, demand information, and use and maintain their sanitation services. An articulated local supply offering, and an integrated solution to customers that includes goods, services, financing, and information, are also needed.

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IFC SmartLessons is a contest promoted by the International Finance Corporation of the World Bank Group. This competition seeks to share lessons learned in development-oriented advisory services and investment operations.

Full report

The complete report on Promoting Sanitation Markets at the Bottom of the Pyramid in Peru will be released in late 2011.

Contact us

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