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Transforming Markets, Increasing Access: Early Lessons on Base-of-the-Pyramid Market Development in Sanitation

The four billion global consumers at the base of the pyramid (BOP) – that is, those earning less than two dollars a day – are increasingly recognized by the private sector as a major untapped market segment. The sanitation industry is no exception. Across sub-Saharan Africa, more than half of the population lives without access to minimum levels of improved sanitation. Beyond the reach of urban sewerage networks, most BOP families require self-funded, household-level sanitation solutions. While the needs of this vast market are often pigeonholed as a development issue to be dealt with by the public sector and nongovernmental organizations (NGOs), it represents a sizable market opportunity for the private sector.

This SmartLesson captures early experiences from the Selling Sanitation initiative, a partnership between IFC and the World Bank's Water & Sanitation Program (WSP). Using a market transformation approach, Selling Sanitation is demonstrating strong potential to unlock new market opportunities and dramatically increase access to sanitation for low-income consumers.

Background

About 600 million people across Africa, 70 percent of the continent's population, do not have access to adequate sanitation. In Kenya alone, there are 6.6 million households (29.5 million people) in need of upgraded or new sanitation facilities. Households spend an average of \$85 to build on-site sanitation facilities, typically basic pit latrines that do not meet minimum hygienic standards. Few affordable products and services are available for those looking to upgrade from a basic latrine or to build a new facility. Despite interest, private firms have been unable to penetrate this market segment, partly because they have not understood BOP consumer needs, preferences, and profit potential.

IFC's traditional engagements in the water

and sanitation sector have focused on capital-intensive urban infrastructure projects which, while often commercially attractive, largely fail to benefit low-income consumers living outside formal urban centers. Poor consumers have long been considered the responsibility of the public sector, a perception sharpened by the existence of donor and charity initiatives providing free or heavily subsidized sanitation facilities directly to households. However, it is clear that public or donor financing for subsidized facilities will be unable to meet the scale of sanitation needs. Subsidized facilities can also cause market distortions and dampen overall consumer demand, while offering no guarantee that facilities will be used sustainably.

In 2011, IFC's Sanitation and Safe Water for All (SSAWA) Program began assessing how to harness private sector innovation, technical

skills, and financing to reach Africa's BOP consumer market to water and sanitation. Early discussions revealed a clear interest from private firms to explore opportunities in the sanitation sector. To understand how to structure support for these firms, SSAWA learned from the *Lighting Africa* Program, which was already demonstrating how IFC could substantially expand access to services and unlock commercial opportunities in challenging but high-impact BOP markets.

To translate *Lighting Africa's* success in off-grid lighting to the sanitation sector, SSAWA partnered with WSP to design *Selling Sanitation*, an initiative that aims to remove market barriers and catalyze the market for on-site sanitation. *Selling Sanitation* provides the industry with market intelligence, consumer research, product-design support, business development, and other advisory services to help firms understand the market opportunity and develop viable market-entry strategies. The program also works with the government to support demand-creation strategies and a consumer awareness campaign that can help drive consumer uptake of improved sanitation (see Box 1).

Box 1: Key Activities of *Selling Sanitation*

1. Business Development Services: Removing barriers to market entry by supporting development of affordable sanitation products and BOP distribution and business models.

2. Consumer Awareness: Providing support to the government to deliver a national behavior change and consumer-education campaign.

3. Market Intelligence: Demonstrating market viability and market-entry opportunities by assessing market size, consumer preferences, key target segments, and current trends.

4. Public-sector Engagement: Fostering an enabling environment for sanitation by supporting government efforts to increase uptake of improved sanitation and regulate the consumer market for sanitation.

5. Pro-poor Financing: Addressing financial constraints and bottlenecks for both consumers and businesses.

Lesson 1: A market transformation approach can be applied to multiple sectors, provided there is a sizable near-term market opportunity, competitive product solutions that meet market needs, and evidence of industry-wide market barriers.

During the concept-development stage, the *Selling Sanitation* team worked with colleagues in *Lighting Africa* to learn what was needed to transform a market. The *Lighting Africa* team set out four key prerequisites for an effective market transformation, and four corresponding steps to assess the suitability of this approach.¹

¹ For further discussion of IFC's market transformation steps and their application in the *Lighting Africa* program, see *Designing Market Transformation Project for the Base of the Pyramid: The Lighting Africa Program*

Step 1: ASSESS THE MARKET POTENTIAL. Is there a sizable commercial market opportunity and evidence of sufficient demand?

To determine whether market demand represented a viable commercial opportunity, the team carried out initial assessments, including in-depth industry interviews and extensive consumer research. Conservative estimates suggested a potential market of over three million rural Kenyan households in need of latrine slab improvements or new facilities in the near term.

About 47 percent of all Kenyan households own basic, unimproved sanitation facilities, and an additional 16 percent have no latrine at all. Unimproved latrines typically comprise deep unlined pits, packed mud or timber floor slabs, and simple natural shelters. Households spend an average of \$85 on materials and labor to build their latrines, including about \$25 for the slab. While market research indicated that 50 percent of households intended to improve their sanitation situation, most were unaware of options between the traditional dry pit and the much more expensive poured concrete dry pit slab and shelter. Both options generally offer poor value for the money, provide little guarantee of durability or quality, and involve a complex purchase process for the consumer.

Industry assessments revealed that plastics manufacturers active in the water-storage tank market were eager to tap the commercial sanitation market. Appropriately priced plastic slabs seemed a good potential fit for the market niche between traditional and high-end, and offered the possibility to easily upgrade an existing facility and thereby eliminate the costs of rebuilding that recur when pits fill up.

Step 2: ASSESS THE LOCAL BUSINESS ENVIRONMENT. Is there sufficient investment incentive for the industry to be confident of the market opportunity?

Although private sector interest was evident, most firms had little experience serving BOP markets. Before investing in affordable sanitation products, private firms needed to be confident they could achieve sufficient sales volume and profitably distribute products to harder-to-reach consumers.

Selling Sanitation was able to point to the existence of functioning distribution networks for other fast-moving and durable BOP products in rural Kenya. The experience of some firms with rural distribution of water-storage tanks made it easier to win industry buy-in. *Lighting Africa's* track record and WSP's sanitation marketing efforts in other countries likewise served as powerful examples of success.

The *Selling Sanitation* team was also able to demonstrate the government's substantial commitment to private sector participation in sanitation. *Selling Sanitation* is supporting the government to deliver a national communications campaign that aims to improve household sanitation behavior and raise awareness of affordable improved

sanitation options. The campaign was seen by many firms as the critical ingredient to drive demand from the rural market.

Step 3: EVALUATE THE PRODUCT OR TECHNOLOGY SOLUTION. Is there sufficient demand for technology solutions that meet market needs?

Industry confidence was necessary but, by itself, insufficient. The next step was to evaluate existing plastic product offerings to understand whether these would meet BOP consumer needs, while offering better value and more competitive prices than other available options. Market distortions created by a long history of subsidies in the on-site sanitation industry soon became apparent.

Many manufacturers had historically relied on bulk sales to subsidy or emergency programs for their sanitation sales. With donor agencies and NGOs as their primary customers, manufacturers had developed products that met the needs of program managers and engineers rather than consumers. Industry players had little understanding of the rationale for particular design features, and received little or no feedback on consumer satisfaction. Existing designs needed to be tested with BOP consumers directly, but no single manufacturing firm was willing to shoulder all the associated research and development (R&D) costs, in part because the sector is vulnerable to imitations.

The *Selling Sanitation* team brought in design expertise to assist a pool of plastics manufacturers as they tested and refined a small range of hygienic latrine slab options that addressed consumer needs and preferences. The design support helped manufacturers improve aesthetic and functional product features, reduce retail costs, improve production efficiency, and meet minimum quality standards. The range of plastic designs tested very well, compared to traditional and concrete pit slab models. Product testing suggested that the newly designed slabs offered the features consumers were looking for: durability, cleanliness, ease of use, and affordability. The light-weight plastic products could be easily transported to the home and transferred from filled pits to new pits, eliminating the need for on-going slab construction costs. Once superior market offerings had been developed, manufacturing firms invested in further R&D and capital costs for new molds and equipment to bring them to market.

Step 4: IDENTIFY MARKET BARRIERS IN THE CONTEXT OF THE EMERGING MARKETPLACE. Why can't the private sector develop new markets without assistance?

The *Selling Sanitation* team discovered several significant barriers to private sector market entry. The near absence of market data on BOP consumers resulted in the lack of attractive, affordable sanitation options. Most firms were wary of shouldering first-mover costs and risks associated with entering a poorly understood market. Weak linkages between government-led demand promotion and product availability, as well as fragmented rural distribution

networks, created the perception that reaching the rural BOP market would be too difficult and costly. Although some firms had experience with rural distribution, their existing channels rarely covered the "last mile" to rural households.

Among private manufacturing firms, latrines were mainly seen as charity products, for sale to NGOs rather than to BOP households themselves. No firm had attempted commercial distribution of sanitation products, and consequently distributors, retailers, masons, and households were almost completely unaware of these options. Developing workable business models for rural distribution and understanding how to simplify the consumer purchase and installation process were essential steps. For any single firm, these market barriers would have been insurmountable, but with IFC providing support to the entire industry, they are being overcome.

Understanding market barriers and designing the right advisory services to address them required substantial lead time and flexibility on the part of the *Selling Sanitation* team. Industry consultations, market research, product-design support, and extensive government engagement required about two years before program launch. The team found it useful to adopt a learning-by-doing approach, as it was impossible to predict at the outset precisely which advisory services and program strategies would be required to respond to evolving market and client needs.

Lesson 2: Strategic partnerships with the World Bank can provide IFC with the local presence and government relations needed to effect a market transformation.

Strategic collaboration across World Bank Group agencies enables the *Selling Sanitation* team to take a comprehensive approach to market transformation that leverages the capacity of both private and public sectors. IFC has been able to focus on its comparative strengths in market and business development, whereas WSP brings technical expertise, a wide local presence, and strong relationships with governments and sanitation-sector networks. Particularly in sanitation, which is a public good, government leadership is essential. WSP not only secured government buy-in for private-sector participation in the sanitation market, but it has also helped government take the lead in ensuring that new products meet minimum health and quality standards.

WSP also leads in providing support to the Ministry of Health's national behavior change communications campaign. Embedding communications and consumer awareness activities within the network of trusted local health officials and volunteers enables the government to build on its existing community demand-creation activities while ensuring the sustainability and reach of the campaign. Since the government-led campaign benefits the entire sanitation industry, it is also boosting the private sector's incentive and willingness to invest in branded marketing and sales activities.

Lesson 3: Market transformation programs have the potential to achieve significant development results by expanding access to services for the poor. Creative approaches may be needed to realize these results, because such programs may not have straightforward ways to generate client fees.

The success of *Selling Sanitation* will be measured in terms of increased access to improved sanitation among low-income households. As with *Lighting Africa*, which has thus far increased access to modern lighting for seven million people, *Selling Sanitation* is gearing up to achieve very high access targets. These types of results demonstrate a substantial role for the private sector in addressing the development needs of the poor, and also contribute significantly to achievement of IFC's Fourth Development Goal: Access to Infrastructure Services.

Market transformation initiatives are inherently different from IFC's typical advisory services projects. Market transformations deploy strategic finance to catalyze or accelerate commercial markets to reach development goals. Such initiatives require far-sighted private sector partners that are willing to make investments in untested markets, and rely on the subsequent demonstration effect to impact markets at scale. The provision of advisory services is structured in a way that benefits the entire industry rather than a single firm or client. In this context, IFC's standard fee-for-service approach may present a challenge.

How can IFC develop pricing strategies that are fit-for-purpose while moving toward full-cost recovery where practicable? In the case of market transformations, this may require thinking broadly about longer-term benefits, such as the development of new investment opportunities as firms and industries mature. More flexible and innovative pricing strategies could create a win-win situation. For example, client agreements might include success fees based on the level of market penetration achieved. As IFC deepens its experience with market transformations, it is worth exploring creative pricing structures, as programs that tap BOP markets hold the greatest promise for expanding access to basic services.

Conclusion

Early experience with market transformation in the *Selling Sanitation* initiative underscores the importance of strong market research to assess the viability of a commercial opportunity, help the industry develop marketable product solutions, and design advisory services that address market-wide barriers to entry. *Selling Sanitation* has so far demonstrated the business case to successfully generate substantial up-front private investment in the new market, while building strong public-sector support for a national campaign to drive demand. As the program moves into the next phase, we expect to see industry players reaching low-income consumers with new products and services as the commercial market for on-site sanitation emerges. *Selling Sanitation* will keep learning about what works, but one thing is clear: Doing business at the base of the pyramid will not be business as usual.



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