

# WaterHealth International, Inc. (WHI)

## COMPANY BACKGROUND

WaterHealth International, Inc. (WHI) is a company that develops, installs, and operates water purification and disinfection systems that provide affordable, high-quality potable water for underserved populations in rural and peri-urban areas. WHI houses these water treatment systems in small-scale, decentralized facilities called WaterHealth Centers in local communities. At an initial investment of less than \$10 per person, WHI can provide more than a decade of healthy drinking water to communities in need.

After its establishment in 1995, WHI focused on market development and pilot installations in Mexico and the Philippines. In 2002, the company was restructured and formally entered the distributed water services market in 2003 via a joint venture, WaterHealth Philippines Inc., with

Bendix Sales Corporation. As of 2012, WHI is headquartered in California and has affiliate offices in India, Bangladesh, Ghana, Nigeria, Liberia, and the Philippines. Its largest market is India where the company operates through its wholly-owned subsidiary WaterHealth India Private Limited. In Bangladesh, WHI operates as A.K. Khan WaterHealth Bangladesh Limited – a joint venture between the A.K. Khan Group, IFC, and WHI. In West Africa, WHI has 100% owned subsidiaries in each country. Along with the Coca Cola Africa Foundation, Diageo and IFC, WHI is a key member of the Safe Water for Africa Initiative whose objective is to expand the use of clean water in underserved communities. WHI's investors include Dow Venture Capital, Sail Venture Partners, Plebys International, Tata Capital Innovations Fund, Acumen Fund, and IFC.

## WHI'S INCLUSIVE BUSINESS MODEL

WHI offers low-income customers, typically those earning \$2 - 5 per day, an affordable, high quality, and long-term solution for potable water. The company serves predominantly rural and peri-urban communities that have limited or no access to a guaranteed source of safe drinking water at an affordable cost. WHI builds modular WaterHealth Centers that are on average 25 square meters in size where it uses off-the-shelf technologies such as reverse osmosis and ultraviolet light to disinfect water, as well as multi-stage filtration to remove silt, contaminants, bad taste, and odors. Its superior water purification equipment can purify water from most available water sources to meet the standards for drinking water quality of the World Health Organization.

WaterHealth Centers have been designed to be built quickly in approximately four to six weeks using a modular infrastructure that can be easily transported and constructed using local labor. WHI's water treatment system is offered in two main configurations providing 21,000 liters per day or 65,000 liters per day. The configuration depends on the population size of the community which can be 3,000 to 10,000 plus. To be fully sustainable, population size needs to be in the 5,000-10,000 range or higher. Once WHI builds a center, it is contracted by the local community or government agency to operate and maintain the center for a period of 10 to 15 years. As of early 2012, WHI has built 500 centers worldwide, of which over 95% are in rural areas.

WHI charges a user fee of approximately \$0.10 per 20 liters, which is typically 15 times cheaper than sachet water consumed in Africa and on par or cheaper than untreated water from tankers or bore wells. WHI's customers in India on average consume 2.5 to 3 liters of water per person per day. In Africa, per capita consumption is higher. Customers visit centers to buy purified water which is sold in reusable containers and branded as Dr. Water. In India, customers up to 15 kms from a center may have water containers delivered to their homes. These are delivered at an additional cost by WHI-owned trucks or third party distributors who ferry the water containers for customers, earning commissions for every container delivered. WHI supports distributors with business training.

The company uses the BOT (Build, Operate, and Transfer) model for WaterHealth Centers. Local governments sanction the land, water, and

electricity connection for centers. Around 30 to 40% of the upfront capital expenditure is covered through a mix of individual and corporate donations. WHI raises the balance through long-term loans which it takes out on its own books. However in smaller communities where debt financing may not be suitable, WHI uses a combination of grants and equity. The company operates a center for a period of 10 to 15 years during which the revenue from providing clean water to the community covers operation and maintenance, debt service, and profits to WaterHealth. The center transfers to the community at the end of the 10-15 year term via the local government body such as the Panchayat in India. To the extent that the debt has not been paid off during the term, the term is extended until the debt is retired. At the time of the transfer of operations, the community has the option of entering into a new operations and maintenance contract with WHI.

Centers are operated and maintained by workers employed from the community with WHI's central oversight. A center is managed by one or more operators based on community size, while a roving team of technicians support maintenance of several centers. WHI trains local workers in water quality testing, dispensing water, maintenance, and other functions. In the future, WHI plans to use wireless remote monitoring and sensing equipment to transmit real-time information from each center to a central quality control system. This will enable WHI to identify problems in advance and reduce downtime. WHI also plans to introduce customer smart cards to manage revenue collection and consumer records more efficiently.

Partnership with the local community is a key feature of WHI's business model. Prior to building a center, WHI engages the representatives of key institutions including the local government to solicit support for the concept of setting up a WaterHealth Center. The company also involves local people in construction as well as operation and maintenance, which strengthens community acceptance and prepares the community for eventual ownership of a center. Education campaigns held by WHI in conjunction with community service organizations and schools reinforce the relationship between clean water, hygiene, and good health.

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## WHI'S INCLUSIVE BUSINESS DRIVERS

- Global need and company mission to reduce the incidence of morbidity and mortality due to the lack of access to clean drinking water
- Business opportunity to develop a low-cost, high-quality, and sustainable potable water solution for underserved populations
- Availability of water treatment technology that could be harnessed and further developed

More than two billion people worldwide face health risks due to their lack of access to clean drinking water. In India alone, approximately 70% of the population lives in rural communities with limited or no access to treated water. Lack of access to clean drinking water creates significant health problems. Every year, 3.75 million people die from water-borne diseases. Reducing the incidence of morbidity and mortality from water-borne diseases requires solutions that address water access, as well as water quality and sustainability of supply. WHI identified a business opportunity to create a potable water solution that addressed the limitations of existing options. Bore wells, for example, can dry up or become irrevocably contaminated, while tanker trucks can carry water from unreliable sources.

At the same time, WHI recognized that underserved populations require a solution that is low-cost, high quality, and sustainable. To develop its solution, WHI harnessed groundbreaking, low-cost water purification technology developed by researchers at the Lawrence Berkeley National Laboratory following the cholera epidemic in 1993, which killed thousands of people in Bangladesh, India, and Thailand. This technology uses ultraviolet light to purify and eliminate harmful pathogens and microbes from contaminated water. WHI was able to use this low-cost technology in its centers when it launched operations in 2006, and has since further developed the technology and expanded into using reverse osmosis to improve the taste of the water.



## IFC'S ROLE AND VALUE-ADD

In 2002, IFC's Environmental Opportunities Facility provided a small grant to WHI to help the company assess its business model and identify target markets. In 2005, IFC invested \$1.2 million in equity. Subsequently, in 2009, IFC provided a \$10 million senior loan to WaterHealth India Private Limited. IFC's most recent investment in WHI was \$5 million in equity in 2010-2011 to support the company's further expansion in India, Bangladesh, and West Africa. In Bangladesh, IFC partnered with WHI via IFC InfraVentures, a fund created to support and proactively develop private and public-private partnership infrastructure projects.

IFC's financial participation in WHI has been important in several respects. The success of a WaterHealth Center depends on customer utilization. This in turn calls for changing consumer attitudes toward water and increasing willingness to pay for potable water, both require a long time-frame. IFC meets WHI's need for a partner financier that understands the role of long-term finance in delivering an affordable, high-quality potable water solution for low-income customers. Since WHI's model is relatively new, IFC's investment in WHI improves the company's risk profile and helps build the confidence of other commercial investors and lenders, which is critical for WHI to attract capital and foster further growth.

## WHI'S INCLUSIVE BUSINESS RESULTS

- Over 500 WaterHealth Centers established as of 2012
- Rapid growth in customer base from 1.5 million customers in 2008 to 5 million in 2012
- WaterHealth Centers on average dispense over 700 million liters of water annually

As of early 2012, WHI had built over 500 WaterHealth Centers, of which more than 400 were in India with the remainder in Bangladesh, Ghana, Liberia, and the Philippines. In 2012, WHI plans to build more than 100 centers, including in Nigeria. WHI has expanded its customer base rapidly from 1.5 million low-income customers in 2008 to 5 million customers in 2012. Over 90% of customers are in rural areas. WaterHealth Centers, on average, are dispensing about two million liters of water per day and over 700 million liters of water annually – both metrics are increasing rapidly on a monthly basis.

WaterHealth Centers have brought various benefits to the local communities they serve. The community has seen productivity and

economic gains through job creation, time savings for procuring water on a daily basis, and entrepreneurship opportunities, among others. The company employed over 500 low-income people for construction as well as operation and maintenance of its centers as of early 2012. It has also created opportunities for entrepreneurs to enter into the water distribution business. As of March 2012, WHI has 115 distributors in rural and semi-urban areas in India and new distributors are being added each month.

WHI's achievements include a two-time recognition in 2010 and 2011 as a Global Cleantech 100 Company by the Cleantech Group.



### IFC's Investment:

**\$6.2 million in equity and \$10 million in long-term debt financing**