Role of the Private Sector in Providing Sanitation Services to the Poor in India

By

Suneira Rana

B.A. Economics
Lady Shri Ram College for Women, University of Delhi, 2007

Master of Business Administration
Judge Business School, Jesus College, University of Cambridge, 2013

SUBMITTED TO THE MIT SLOAN SCHOOL OF MANAGEMENT IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF SCIENCE IN MANAGEMENT STUDIES
AT THE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

JUNE 2015

©2015 Suneira Rana. All rights reserved.

The author hereby grants to MIT permission to reproduce and to distribute publicly paper and electronic copies of this thesis document in whole or in part in any medium now known or hereafter created.

Signature of Author: Signature redacted

MIT Sloan School of Management
May 8, 2015

Certified by: Signature redacted

Aleksandra Kacperczyk
Assistant Professor
Technological Innovation, Entrepreneurship & Strategic Management
MIT Sloan School of Management
Thesis Supervisor

Accepted by: Signature redacted

Michael A. Cusumano
SMR Distinguished Professor of Management
Program Director, M.S. in Management Studies Program
MIT Sloan School of Management
Role of the Private Sector in Providing Sanitation Services to the Poor in India

By

Suneira Rana

Submitted to MIT Sloan School of Management on May 8, 2015 in Partial Fulfillment of the requirements for the Degree of Master of Science in Management Studies.

ABSTRACT

“Sanitation is more important than independence.” - Mahatma Gandhi

Lack of sanitation causes nearly three million deaths around the world annually. This issue compounded by the negative economic impact of poor sanitation, costing developing countries billions of dollars a year. Despite decades of effort, provision of basic sanitation facilities still remains one of the largest global development challenges. In some countries, problems with public sector supply of sanitation services have led to increasing awareness that more participation of the non-state sector is needed in the provision of these services. On the other hand, sanitation enterprises comprise primarily of small players that struggle with high upfront capital costs required for toilet installation. Thus, owing to resource and capacity constraints, such enterprises will find it challenging to work alone in this area. One way to engage the private sector is to encourage partnerships with the government and community in developing creative new approaches and encouraging lasting services over the long term.

To this end, the paper explores all activities involved in the sanitation sector and how different entities define and understand the sanitation value chain. In particular, it develops an understanding of the types of enterprises engaged in toilet construction and the methods of engagement. Next, it undertakes a global review of enterprise models in the sanitation sector and identifies key organizing principles for successful Public Private Community Partnerships (PPCPs) models. Selected elements from the global learnings are then modified to situate the learnings in Indian experiences.

The key idea of this paper is not to prescribe any specific methods of functioning but to lay out different models and consequently generate new learnings for enterprise solutions to deliver on rural sanitation services in India. Lessons and findings from the paper reveal ideal ways to engage with the private sector - through Franchise Models, Corporate Social Responsibility (CSR) Models, Community Models and Integrated Models. While enterprise solutions can bring scale, sustainability and innovation, the government plays an integral role through enabling policies and provision of local institutional platforms. The paper shows how strategic alliances through PPCPs would effectively tackle the problem through scalable business solutions.

Thesis Supervisor: Aleksandra Kacperczyk
Title: Assistant Professor, MIT Sloan School of Management
ACKNOWLEDGEMENTS

I wish to thank Professor Aleksandra Kacperczyk, my thesis advisor, for giving me the guidance and opportunity to undertake this research. Thank you for your direction, honest feedback and mentorship. I am forever grateful for the several hours you devoted from your busy schedule; and Professor Susan Murcott for connecting me to invaluable resources and for providing great insights on my thesis topic.

From the World Bank, I would like to express my sincere gratitude to Mr. Sitaramachandra Machiraju and Amir Hamza for supporting me through my research every step of the way. This research piece would not have happened if it wasn’t for your encouragement and direction. Thank you for all your support, especially during my time in India.

A special shout out to Harsh Vardhan and Vaibhav Somani for helping me gain a systems dynamics perspective on my thesis. A big hug to Faizan Jawed, Abhimanyu Chaudhry and Pronitha Shankarananda for helping me manage my time well and ensuring that I don’t overdose on caffeine during the final few days before the thesis deadline.

A big thank you to my Cambridge University Professor Allegre Hadida, who introduced me to the concept of value chain analysis, which has formed the basis of my thesis. Allegre, you will always be a rock star and a sixth force!

I owe everything I have to my parents – Deepika Rana and Ajit Rana. Thank you for the blind faith you have in me and for being the fun lovable people you always are. Love you to pieces!

And finally, I dedicate my thesis to my baby brother – Karnavir Rana. He will be starting his first year of under graduate student life this year and I dedicate this paper to him in the hope that someday he writes something much bigger and better and gives me all the credit for it.

At the end, thank you, dear reader. If you are reading this line, you’ve at least read one page of my thesis.
TABLE OF CONTENTS

1 INTRODUCTION ......................................................................................................................... 8
  1.1 Background .......................................................................................................................... 8
  1.2 Problem Statement .............................................................................................................. 9
  1.3 The Magnitude of the Problem .......................................................................................... 9
  1.4 The Way Forward .............................................................................................................. 10

2 ORGANIZATION OF THE PAPER ............................................................................................. 11

3 METHODOLOGY AND DATA COLLECTION .............................................................................. 12

4 THE SANITATION VALUE CHAIN .............................................................................................. 13
  4.1 Definition of a Value Chain ............................................................................................... 13
  4.2 A Value Chain Approach to Sanitation ............................................................................. 14

5 ENTERPRISES ACROSS THE SANITATION VALUE CHAIN .................................................. 17
  5.1 Nature of Enterprises in Sanitation ................................................................................... 17
  5.2 Enablers and Constraints Faced by Sanitation Enterprises ............................................... 20

6 STRATEGIC PARTNERSHIPS AND ALLIANCES: A BUSINESS CASE FOR SANITATION ENTERPRISES ...................................................................................................................... 21
  6.1 Current Situation of Stakeholders in the Sanitation Value Chain ...................................... 21
  6.2 Benefits of a PPCP Arrangement and Strategic Alliances ................................................. 22
  6.3 Business Case for PPCP in Sanitation – A Success Story ................................................ 23
  6.4 Counterfactuals to a PPCP Arrangement and Strategic Alliances .................................... 24

7 THE INDIAN CONTEXT – UNDERSTANDING THE POLITICAL ECONOMY ......................... 25
  7.1 Background ....................................................................................................................... 25
  7.2 Rural Livelihood Programs (RLP) and the Swachh Bharat Mission (SBM) ....................... 25
  7.3 Rural Sanitary Marts (One Stop Shops in Last Mile Communities) ................................ 26
  7.4 RSM links with Supply Chain ............................................................................................ 27
  7.5 RSMs in Action in India .................................................................................................... 27
  7.6 Stakeholders Consultation ................................................................................................ 28

8 TYPOLOGY OF PRACTICE MODELS .................................................................................... 29
  8.1 Typology 1: Franchise Model .............................................................................................. 30
    8.1.1 SaniShop .................................................................................................................... 30
  8.2 Typology 2: CSR Model ...................................................................................................... 33
    8.2.1 American Standard – Bangladesh .............................................................................. 33
    8.2.2 Bharti & Sulabh Model – India .................................................................................. 35
  8.3 Typology 3: Community Based Model ............................................................................ 37
    8.3.1 Bala Vikasa – India ................................................................................................... 37
  8.4 Typology 4: Integrated Value Chain Model ...................................................................... 39
    8.4.1 Sanergy .................................................................................................................... 39
    8.4.2 Wherever the Need – EcoSan Model ....................................................................... 40

9 KEY LESSONS AND SUGGESTED RECOMMENDATIONS FOR INDIA ................................. 41

10 CONCLUSION .......................................................................................................................... 45

11 APPENDIX .............................................................................................................................. 45
List of Figures

Figure 1: Growth Rates Required to Achieve Universal Sanitation by 2030 ........................................... 9
Figure 2: Thailand Achieved Universal Sanitation through Supply, Demand, Subsidy and Enforcement ................................................................. 11
Figure 3: The Sanitation Value Chain ........................................................................................................ 14
Figure 5: Enablers and Constraints of Sanitation Enterprises ............................................................. 20
Figure 9: Successful PPCP Model in Sanitation ....................................................................................... 23
Figure 12: SaniShop Cambodia Business Model and Stakeholders Across its Value Chain ............... 31
Figure 13: SaniShop India Business Model and Stakeholders Across its Value Chain ...................... 33
Figure 14: American Standard Business Model and Stakeholders Across its Value Chain ............... 35
Figure 15: Bharti-Sulabh Business Model and Stakeholders Across its Value Chain ....................... 36
Figure 16: Bala Vikasa and Stakeholders Across its Value Chain ......................................................... 39
1 INTRODUCTION

1.1 Background

Access to basic sanitation remains one of the largest development challenges as lack of hygienic sanitation facilities causes 2.7 million deaths annually (United Nations, 2012). Open defecation remains most common in Southern Asia where 38% (Liu, 2012) of the population defecates in open spaces. The Millennium Development Goals (MDGs), which pledged to halve the number of people without access to improved water and sanitation, will end in 2015. With 2.5 billion people lacking quality sanitation and hygiene, the goal for sanitation of 75% global coverage is far from being achieved. So far, only 64% of the world can access improved sanitation. Further, the use of improved sanitation by a child’s household does not reduce the risk of stunted growth for this child if other households in the community continue to use unimproved latrines.

Universal usage of improved sanitation and open defecation free (ODF) communities are needed to adequately address stunting.

To this end, many global foundations and Corporate Social Responsibility (CSR) departments, including the Bill & Melinda Gates Foundation (BMGF), World Bank, UNICEF, etc., have dedicated fund outlays to address this issue. Despite these initiatives, sanitation remains a missed opportunity. While the clean water access agenda is closer to meeting its MDGs, the sanitation target appears to be out of reach. (Unicef, 2014). This is primarily attributed to lack of political motivation, though technical and economic concerns may also be considered.

Box 1: Definitions

The UN Millennium Development Goals established the target of reducing by half the number of households without access to improved sanitation. While the definition of improved sanitation is debated, most experts agree on the following categorization (WHO-UNICEF, 2012):

• **Improved Sanitation** – The household has a flush toilet with water seal that empties into a concrete septic tank or other lined pit. Alternately, the household has a latrine (an outdoor toilet where waste material drops directly into a hole beneath the toilet) with a permanent cover and lined pit.

• **Open Defecation** – The household defecates outdoors, typically in a body of water or in the woods or bushes.

• **Open Defecation Free Status** – A community can achieve this status only if 100% of its members have access to improved sanitation facilities.
1.2 Problem Statement

Recent WHO-UNICEF monitoring data (WHO-UNICEF Joint Monitoring Report, 2014) shows that many of those who still lack access are among the most challenging populations to reach: the poorest, the most remote and the most marginalized. These groups, the ‘last mile’, are falling further and further behind, and matching the growth seen by wealthier populations will require innovative new approaches, as well as a much stronger focus on gender. Meeting this challenge demands careful stewardship of water resources and groundbreaking new wastewater management solutions.

1.3 The Magnitude of the Problem

At current growth rates, the world will likely not see universal access to sanitation until the year 2063. 216 million people per year need to gain access and use improved sanitation to reach universal coverage by 2030 – nearly a threefold increase in current rates (Perez, 2014). In India alone, 745 million people living in rural areas will need to gain access to sanitation in order to achieve universal coverage. Doing so will require a 5% increase in coverage every year for the next 15 years, since India is home to a large segment of the poorest 40% of rural households (Perez, 2014). This is clearly shown in Figure 1.

Achieving universal access to sanitation in the 13 countries where Water and Sanitation Program (WSP) of the World Bank currently has rural sanitation projects will require significantly faster growth than now seen. Based on WSP forecasts using DHS and MICS data, to achieve universal access by 2030 these countries will need to increase annual growth rates to nearly four percent per year every year to reach the 1.2 billion people in these countries who still lack safe, hygienic sanitation. Compounding this challenge, inequalities in access to sanitation between richer and poorer households mean that the poorest 40% will need to see five percent growth rates in order to catch up – nearly eight times current growth in access for the

Figure 1: Growth Rates Required to Achieve Universal Sanitation by 2030
1.4 The Way Forward

So far, public sector approaches have not been very successful in reaching the poor and there is a need to have realistic expectations about what stand alone private sector enterprises can achieve (Institute for Sustainable Futures, 2013). Engaging the domestic private sector to extend water and sanitation services for the poor not only leverages public funds, it also encourages partnerships that help serve the poor more efficiently while also developing creative new approaches and encouraging lasting services over the long term. Thus, leveraging the role of the private sector and social enterprises through strategic partnerships can help tackle this problem and facilitate the provision of sanitation services in rural areas.

Global success stories have further highlighted the significance of bringing together different stakeholders from the public and private sectors to ensure universal sanitation for all. One such example in Thailand showed how enabling policies and support to water and sanitation (WASH) enterprises were integral in paving the path for universal sanitation in the country. Figure 2 reveals how Thailand achieved universal sanitation over a span of thirty years, by aligning activities that triggered demand, supply, subsidy and enforcement in the right sequence. In the early years, state funding was channelized towards activities that triggered demand for toilets and sanitation. Subsequently, support to WASH enterprises was augmented to cater to supply side requirements. With this revolving fund subsidies had been put in place to further boost and incentivize toilet installation. Finally, by 1990, all houses were required by law to have a toilet installed, prior to registration.

Box 2: Defining Social Enterprises

Social entrepreneurship is defined as running a business that drives social innovation rather than being focused only on obtaining financial goals. Business-minded entrepreneurs with a social agenda seize opportunities by creating innovative processes that can help solve major social issues. They relentlessly focus

---

1 A revolving fund subsidy an entitlement or loan to households, including microcredit for sanitation or home improvement. It is an innovative approach to using microfinance for increased access to sanitation that has so far yielded very high leverage of user contributions (Trémolet, Kolsky, & Perez, 2010).
Thailand achieved universal sanitation through supply, demand, subsidy and enforcement

Figure 2: Thailand Achieved Universal Sanitation through Supply, Demand, Subsidy and Enforcement

This trend takes on the shape of an S shape curve, which displays the path and rate of universal toilet diffusion in Thailand. Interestingly, this graph is comparable to the more general product diffusion S shape curve\(^2\), which explains how why and at what rate new ideas and technology spreads through cultures.

2 ORGANIZATION OF THE PAPER

This paper attempts to analyze the role of the private sector, particularly sustainable businesses and social enterprises in delivering affordable sanitation facilities and services to the bottom forty percent of the poor in India. The first section of the paper provides a background on the sanitation sector, the problem of open defecation and the ideal way forward. Sections 2 and 3 describe how the paper is structured as well as the methodology used for data collection. Section 4: The Sanitation Value Chain develops a framework that forms the basis of the paper. It explores the sanitation industry, the nature of activities across the value chain and the stakeholders involved. It also pinpoints where the challenges lie and which part of the value chain to focus on and justifies why the paper is focused on

---

Everett Rogers, a professor of communication studies, popularized the theory in his book *Diffusion of Innovations*; the book was first published in 1962, and is now in its fifth edition. (Rogers, 2003)
activities such as toilet installation that attempt to solve the open defecation problem. In Section 5: Enterprises Across the Value Chain, we bring in the role of the private sector and where it fits along the sanitation value chain. Here, we study the types of enterprises across the value chain, the constraints and enabling factors that impact these enterprises and how to overcome them. Section 6 then builds a case for strategic alliances and public private community partnerships (PPCP) in providing sanitation services to the poor. In Section 7: The Indian Context – Understanding the Political Economy, we learn about the sanitation industry within the Indian political economy and the working of local institutional platforms. In section 8, Typology of Practice Models, we identify four kinds of business models at work and position their learnings in the Indian context through strategic alliances and PPCPs. Each model talks about a global example and how this has been applied or can be applied to the Indian context. Section 9: Lessons and Recommended Strategies – provides key lessons, potential barriers and tailored recommendations from the case studies and suggested strategies for the way forward for the stakeholders involved in the Indian context.

3 METHODOLOGY AND DATA COLLECTION

This paper undertakes a global review of enterprises focused on last mile service delivery solutions in the rural sanitation sector. The process of data collection was two-fold. First, it involved a review and understanding of the various private enterprise models outside India that have successfully ventured into rural sanitation. Second, it synthesized these findings and attempted to apply these global learnings to the context of the Indian political economy. Based on this, lessons and recommendations were developed to determine the best way to engage and partner with various types of private players to enhance rural sanitation in India.

To this end, the research and data collection for this paper embraces the following methodology:

1. Desk Research and Literature Review
2. In-Persons and Phone Interviews
3. Field Work in India
4. Stakeholder Consultation
5. Analysis and Recommendations

Through desk research, the paper explored all activities involved in the sanitation sector and how different entities define and understand the value chain. Based on this, the author developed a sanitation value chain framework in an attempt to better assess the pain points, where the private sector fits in and what kinds of enterprises fit into different parts of the supply chain. In particular, it enabled an understanding of the types of enterprises engaged in toilet construction and the reasons for engagement.
Next, the study undertook a global review of enterprise models in the sanitation sector and identified key organizing principles for successful Public Private Community Partnerships (PPCPs) models. Based on this, a few global enterprises were selected for a deeper study. This included in person and phone interviews with enterprises across the value chain such as Kanoot, Waste Venture Capital and Sanergy and American Standard.

Selected elements from the global learnings were then modified to situate the learnings in Indian experiences. This was supplemented by field trips in India that were undertaken to validate findings from desk research. Field trips included visiting selected enterprises such as e-Kutir, Bala Vikasa, TATA and Sulabh International in Orissa, Telangana, Maharastra and Delhi. Fieldwork also involved visits to selected villages in Maharastra, Andhra Pradesh and Telangana, to see the local institutional platforms of the Rural Livelihoods Projects in action. (See Section 7 for details). Consequently, we gained a thorough understanding of the structure of the local political economy.

Subsequently, the World Bank organized a workshop on March 25, 2015 on the integration of water and sanitation enterprises into the Rural Livelihood Projects in India. All results and analysis of the desk research and field visits were shared and discussed with relevant stakeholders in the workshop (see appendix A for details). Outcomes from the workshop discussion are also documented in this paper.

Finally, all this information was synthesized and recommendations on the way forward have been presented in this paper.

4 THE SANITATION VALUE CHAIN

4.1 Definition of a Value Chain

A value chain is a set of activities that an organization operating in a specific industry performs in order to deliver a valuable product or service for the market (Arline, 2015). Such a framework provides a systemic overview of all the activities and stakeholders involved and enables a better understanding of where the different participants fit in the value chain, the roles they play and where the potential pain points are within that industry. Thus, a value chain analysis is a good starting point in gaining a macro understanding of a particular sector. It attempts to determine which activities in the value chain are disjointed and fragmented, leading to unnecessary duplication of work and costs; and endeavors to synchronize all activities and stakeholders for smooth functioning of the industry. Such integration of activities and players along the value chain maximizes efficiency of services within that sector. According to (Dobbs), in integrated value chains, multiple enterprises come together and collaboratively plan, implement and manage the flow of goods, services and information along the entire value chain, from the point of origin to the point of consumption. This increases
4.2 A Value Chain Approach to Sanitation

In the sanitation sector, a value chain approach would provide a big picture overview of all the activities involved in solving the problem of open defecation. It would enable us to pinpoint where the private players fit in and subsequently develop private sector supply chain interventions that reflect consumer needs and desires. While enterprises can offer solutions in expanding access to sanitation, effective enterprise solutions require a holistic view of the entire market. A value chain approach that incorporates these requirements can identify areas for enterprise linkages to ensure capacity building to the poor.

Therefore, efficient provision of sanitation services can be analyzed as we move along the sanitation value chain. At each stage, multiple stakeholders - government, civil society organizations, NGOs and private enterprises - come together and play their respective parts in varying degrees of significance. However, the roles of these stakeholders tend to overlap and are often disjointed. Thus, rather than integrating these activities, the patchy roles of different parties further reflect the fragmented nature of the value chain.

A fragmented value chain is vastly problematic. Provision of sanitation services at scale is constrained by such supply chains. Presently, the final delivery of sanitation products such as toilets lies either with individual households or small-scale firms that are reliant on customization at the local level. Thus, the current setup of the value chain is not geared towards generating value at scale nor towards scalable models and solutions (Sy, 2013).

Further, sanitation can also be viewed as mainly a construction supply chain where inputs pass through agents for whom sanitation is only a small part of their business. Since no one is innovating and vertically integrating inputs, the cumulative impact results in high input costs. This adds to the

---

**Figure 3: The Sanitation Value Chain**

A value chain approach to sanitation would provide a big picture overview of all the activities involved in solving the problem of open defecation. It would enable us to pinpoint where the private players fit in and subsequently develop private sector supply chain interventions that reflect consumer needs and desires. Effective enterprise solutions require a holistic view of the entire market.
final price, often having the effect of sanitation being out-of-reach at the last mile. Thus, under the current fragmented structure, households require a lot of coordination increasing the difficulties in installing a toilet (Sy, 2013).

**Box 3: Fragmented Value Chains - Learning from Other Industries**

Other industries are also witness to such value chain fragmentation. One such example is the healthcare industry.

**The Problem:** Millions of people worldwide have little or no access to health care services, must travel great distances to find care and cannot afford quality tests, diagnoses, treatment or follow up. India is typical: Only 37.5% of births in rural areas are attended by skilled health personnel. There are 450 maternal deaths per year in the country and 43% of children under five years of age are underweight. For these risks, only 6 physicians in India per 10,000 people, with the number being less in rural areas (Budinich, 2012).

**The Solution:** A for profit venture in India, E Health Points (EHP) are units owned and operated by Healthpoint Services India (HSI) that provide families in rural villages with clean drinking water, medicines, comprehensive diagnostic tools and advanced tele-medical services that bring a doctor and modern, evidence-based healthcare to their community. The E Health Point concept builds upon proven models to achieve unique synergies and efficiencies through value chain integration and strategic partnerships. These synergies have the potential to transform rural healthcare and improve wellness, productivity and quality of life (E Health Point). Its model includes the following elements:

a. Uses the sale of water to underwrite initial costs  
b. Sets up systems of telemedicine to increase quality and reduce costs of tests, diagnoses, and access distant specialists  
c. Develops mobile apps to integrate, archive and update patients’ medical records at low cost  
d. Aggregates pharmaceutical providers to ensure quality and low cost

Taken together, these activities create net revenues to repay investors, expand the model and sustain it. Thus, EHP has tapped into the business opportunity by unifying the currently fragmented pieces of the comprehensive health care value chain and creating a ‘Hybrid Value Chain’*.

Thus, the sanitation sector can learn from other industries and the value of strategic partnerships in bringing together fragmented value chains.

* According to (Budinich, 2012), the Hybrid Value Chain Framework, coined by Ashoka, is a defined as a chain of collaborative activities of private and social sector partners, along which products pass and gain economic and social value – more value than any one actor could have created alone. It is the dynamic of including multiple perspectives to develop business solutions to fix broken value chains and scale innovations to solve major social problems.
Figure 3 captures a snapshot of all sanitation activities involved across the value chain. Broadly speaking, there are three types of activities, which form the organizing principles of the value chain, based on which private enterprises are broadly categorized.

1. Behavioral Change Activities: are those which trigger demand for sanitation services and evoke behavioral change, where required. They consequently have high social value and tend to lie in the initial stage of the value chain.

2. Waste Management Activities: are at the tail end of the value chain and focus on the conversion of waste into energy or compost. These activities generate substantial revenue and have high economic value and consequently tend to attract private sector attention and innovation.

3. Activities Tackling Open Defecation: lie in the middle of the value chain and attempt to solve the open defecation problem through toilet installation and maintenance. However, installation and construction require significant capital expenditure and bring relatively low returns, given the customers low buying power. Consequently, it presents itself as a deterrent for private enterprises. For this reason, the focus of the paper will be on enterprises that focus their activities on behavioral change and tackling open defecation by setting up toilets.

Servicing the poor is challenging, and usually not a priority for businesses since entrepreneurs tend to gravitate to customers who can pay for services (Institute for Sustainable Futures, 2013). Businesses aim to capture the least poor as customers first and create a model where poorer households aspire to safer sanitation options (Norman & Narracott, 2011). Further, given the profit driven nature of most enterprises, capturing business beyond the early adopters is more difficult, and instead entrepreneurs prefer to expand to new areas, again capturing those more able to take up their business offers (Pedi, 2012). Thus, the challenge lies in bringing in private players and developing successful sustainable business models that would aid in solving the open defecation problem, particularly for the bottom 40% of the poor. Social business models, through targeted design of sanitation products and continued investment

Box 4: Defining Strategic Alliances

A Strategic Alliance can be defined as an agreement of co-operation between two or more independent entities, which work together towards common objectives. Unlike a joint venture, strategic alliances do not form a new entity to further their aims; rather they collaborate while remaining apart and distinct (Cravens & Percy). An alliance is a close collaborative relationship between two or more entities that share complementary assets and strengths to create increased value for their customers and their own organizations that couldn’t be accomplished independently (Association of Strategic Alliances Professionals, 2002).
beyond the construction phase, could enable scaling up of businesses leading to lowered unit costs, thus allowing access to the poorest of the poor (Norman & Narracott, 2011). A step in this direction could be developing successful partnership models and strategic alliances that would ensure long term sustainability of enterprises, while simultaneously solving the problem of open defecation, particularly in the bottom 40% of poor.

5 ENTERPRISES ACROSS THE SANITATION VALUE CHAIN

5.1 Nature of Enterprises in Sanitation

At a global level, private sector involvement usually takes the form of smaller firms and is often fragmented and highly localized. Each stage of the sanitation value chain brings in a unique set of complexities. Consequently, the nature and scale of enterprises tend to differ as we move along the value chain and each have their own set of issues to tackle. Figure 4 highlights examples of business models and their roles across the value chain.

Stand-alone start-ups and small enterprises such as Kanoot\(^3\) tend to gravitate towards the waste management part of the value chain where returns are high. Kanoot focuses on converting waste into valuable resources by manufacturing transportable bio processors.

Further up the value chain, enterprises considering the market for toilet installation perceive the

\(^3\) Based on information gathered from in person interviews with the CEO of Kanoot
business risk to be high and return on investment to be low. Building sanitation facilities such as toilets requires high upfront costs but brings relatively low returns due to weak demand. Consequently, larger enterprises, corporations with a corporate social responsibility agenda and foundations can be found in this space. Such corporations, such as American Standard (AS, see Figure 4) tend to focus on distribution, installation and/or fund product innovation of sanitation facilities (King, 2013).

Startups and social enterprises, lacking the capital to tackle the initial upfront costs, tend to stay away from this part of the value chain, unless they introduce a low cost innovative product to the market. Those that build toilet facilities, such as Sanergy and DMT, supplement their revenue by also engaging in waste management activities. This way, they integrate stakeholders and activities across the entire value chain.

On the other hand, Figure 4 shows SaniShop and Bala Vikasa, a social enterprise and NGO respectively, which are only focused on activities impacting behavioral change and tackling the issue of open defecation. Here, social value is high but economic value is low. The only way these organizations can stay afloat is by fostering effective partnerships through strategic alliances with community, government and other establishments. This fits in seamlessly with the Hybrid Value Chain framework mentioned in Box 3. According to (Budinich, 2012), the framework lists all activities of private and social sector partners, who work collaboratively to create products that gain much more economic and social value than any one actor could have created alone. It leverages multiple perspectives to develop business solutions to fix broken value chains and scale innovations to solve major social problems.

In the case of the sanitation sector, particularly the toilet installation phase, barriers to entry are high because of significant upfront capital investment and hence market power is required to be a successful entrant in this space. However, the industry is disjointed with many small private players, especially at a local level. Such high costs compel business models to rely on partnering up with larger firms in order to be profitable. Business models from other industries such as health, water and nutrition have seen the hybrid model work successfully through public private community partnerships. One such example is WaterHealth India - a for profit venture in the clean drinking water industry. Details of the business model are shown in Box 5.
Box 5: Public Private Community Partnerships – Learning from the Clean Water Sector

WaterHealth India* (WHIN) is a subsidiary of Water Health International – a for profit enterprise which aims to provide scalable, safe drinking water solutions to underserved areas in India through advanced technology and an innovative business model.

WHIN’s path breaking business model sets an example of a Public Private Community Partnership approach wherein all the stakeholders work together to ensure the sustainability, scalability of the project and maximum social impact. All the stakeholders have a stake in the success of the project.

a. *The customer* i.e. the state government or corporate funder which funds the installation of the water plan, aims at optimum returns on its investment.

b. *WaterHealth’s* focus is on maximizing water sales and social impact to sustain its business operations.

c. *The community* benefits from clean drinking water as well as the revenues generated from water sales after 10-15 year period. Thus all work together towards a common goal – to provide safe drinking water to underserved areas.

A detailed flow of the work process starts with the customer indicating the preferred locations for installing the water plant, called a Water Health Center (WHC). A WHIN representative does a recce of the village in which the WHC is said is set up in. The executives validate the villages from a business viability and socio-economic standpoint. The villages are selected based on population size (over 7500), presence of commercial activity, need and existence of competition. Now the task is to convince the village leader (panchayat) to partner with WHIN by providing raw water source, a 3-phase electricity connection and a 50ft by 50ft of land. Once the village is selected, WHIN collects 100% payment from the customer. The customer funds capital expenses involved in setting up the WHC. The product team designs the appropriate product customized to treat the water contamination in the selected village. The project team installs and commissions the equipment at site with approval from the local community (panchayat).

WHIN has demonstrated its strong execution ability by installing and successfully running over 500 plants in Andhra Pradesh, Gujarat, Punjab and Tamil Nadu.

*Information based on in person interviews and field visits with WaterHealth employees*
On applying these learnings to the sanitation space and drawing parallels from the success stories in the clean water sectors, it is safe to conclude that strategic partnerships and alliances can help to ensure efficient service delivery to the bottom 40% of the poor.

5.2 Enablers and Constraints Faced by Sanitation Enterprises

There are several factors that impact the development of social enterprises and sustainable businesses in sanitation. These factors are sources of both development and constraint for enterprises. A snapshot of these factors is show in the Figure 6 below.

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>ENABLERS</th>
<th>CONSTRAINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW DEMAND</td>
<td>• Businesses tend to respond to low demand by diversifying products and services, which tend to be more sustainable</td>
<td>• Irregular or low demand for products and services compromises business viability.</td>
</tr>
<tr>
<td>FINANCIAL SUPPORT TO BUSINESSES</td>
<td>• Financial challenges (e.g. sourcing and maintaining trucks in the pit business) can be overcome through scale, which in turn correlates with successful businesses</td>
<td>• Limited access to finance is a constraint for small businesses</td>
</tr>
</tbody>
</table>
| INCREASING REGULATION/ POLITICAL WILL | • Can restrict illegal activity  
• Have positive outcomes on businesses through enhanced consumer confidence | • Can provide barriers to entry through disincentives and lack of support to sanitation enterprises  
• Corruption of officials is a constraint to business viability |
| COMPETITION             | • Healthy competition enhances productivity and efficiency of enterprises | • Competition can be seen as a risk to the viability of an enterprise |
| FRAGMENTED SUPPLY CHAIN | • This can be overcome through one stop shops for sanitation products, piggy backing on existing distribution channels and bulk purchasing | • Poses a constraint to business viability by preventing customers from accessing better alternatives  
• Stifles innovation of affordable products |

Figure 4: Enablers and Constraints of Sanitation Enterprises  
Source: (Institute for Sustainable Futures, 2013)

Figure 5 demonstrates that several factors can inhibit the growth of private enterprises in the sanitation. For instance, it is apparent that low demand for sanitation products and services compromises business viability. Limited access to finance, lack of enabling policies, competition and fragmented supply chains also inhibit development of private sector enterprises. However, rather than seeing them as constraints, private players can use these factors as inspiration for innovation, scaling up and venturing into new markets with new products. For example, in India the issue of fragmented supply chains is being tackled with the development of rural sanitary marts, or one stop shops for sanitary products in rural areas (See Indian context for more details).
6 STRATEGIC PARTNERSHIPS AND ALLIANCES: A BUSINESS CASE FOR SANITATION ENTERPRISES

In some countries, sanitation problems are sometimes left solely to the government sector or solely the private sector or even to individual households. Problems with public sector supply of sanitation services have led to increasing awareness that more participation of the non-state sector is needed in the provision of these services. However, we have already established that sanitation enterprises comprise primarily of small players that struggle with high upfront capital costs required for toilet installation. Thus, owing to resource and capacity constraints, private enterprises will find it challenging to work alone in this phase of the value chain.

6.1 Current Situation of Stakeholders in the Sanitation Value Chain

From the previous section, we have recognized the fragmented nature of the value chain. The stakeholders involved include government, civil society organizations (CSO), non-government organizations (NGO), local communities, local government and private sector enterprises. Private sector involvement can take the form of corporate social responsibility (CSR) funding, foundations, local enterprises, social enterprises and start-ups. These stakeholders have their own vested interests and skillsets. Their role in the value chain is disjointed and tends to overlap. Even within the private sector, different enterprises play different roles across the value chain depending on their capacity, nature and size.

Systemic Overview of Stakeholders and their Disjointed Role in the Value Chain

![Figure 5: Overview of Overlapping Roles of Stakeholders that Focus on Toilet Installation Along the Value Chain](image-url)
Figure 6: Overview of Overlapping Roles of Stakeholders that Focus on Toilet Utilization Along the Value Chain

Figure 6 and Figure 7 provide a systemic overview of the role of stakeholders involved in toilet construction and utilization, the activities performed and the linkages between them. For example, the state and local governments put in place enabling policies, which in turn boost the installation and utilization of toilets. The positive and negative signs on the graph represent the relationship between the activity and the effect on toilet installation and/or toilet utilization. For example, the private sector (i.e. NGO or social enterprises) and the community (i.e. local institutions such as self help groups) undertake activities that focus on social mobilization and demand triggering. The greater the focus on demand triggering, higher the chances of the toilet utilization; hence the positive sign. Conversely, the figure also reveals a negative relationship between toilet construction and the prices of raw materials required for construction. Lower prices increase the chances of toilet construction. Thus the figure has a negative sign next to this linkage.

6.2 Benefits of a PPCP Arrangement and Strategic Alliances

We can now safely conclude that at each phase of the sanitation value chain, different players can be found playing varying roles, which tend to overlap. However, each player also has distinct strengths over certain tasks. Alliances would play a key role in enhancing efficiencies and reducing inconsistencies. Strategic alliances and public private community partnerships (PPCPs) with sanitation stakeholders will enable effective service delivery solutions. Figure 8 shows the main roles performed by the public sector, communities and private entities. The circled activities reflect the
areas of strengths of each stakeholder. All parties are most effective when they come together to form linkages to solve the problem of open defecation.

![Table showing tasks performed and strengths of each stakeholder]

**Picture 2: Tasks Performed and Strengths of Each Stakeholder**

Additionally, there is clear evidence about the effectiveness of such partnerships through successful social enterprise models. An example of one such success story in India is demonstrated in the Figure 9.

### 6.3 Business Case for PPCP in Sanitation – A Success Story

![Diagram showing demand promotion, product development, and installation]

**Figure 7: Successful PPCP Model in Sanitation**

6. Based on information gathered from interviews with E-Kutir
E-Kutir is a for-profit social enterprise, which runs on the SaniShop Franchise Model (see section 8.1.1 for details) by franchising operations to local community members called ‘Sanishop entrepreneurs’. E-Kutir provides raw materials in a bundled package and partners with Domex, a brand of Unilever and the government to ensure high quality, low cost sanitation solutions to the poor. The model leverages existing local institutions and platforms that are in place such as self-help groups (SHGs) in villages. Women from local SHGs are appointed as Sanishop entrepreneurs, while Unilever through the Domex academy trains the entrepreneurs and provides funding wherever required.

This example clearly highlights the business case for PPCPs. All the private parties involved are for-profit entities, which successfully work together with the community, the local government and state to ensure effective service delivery.

6.4 Counterfactuals to a PPCP Arrangement and Strategic Alliances

On the other hand, a danger lies in the underperformance and failure of strategic alliances and PPCPs. At a general level, reasons for failure include lack of trust among partners, a change in strategy, the champions moved on, the value did not materialize, the cultures did not mesh, and the systems were not integrated (Kalmbach & Roussel, 1999). 5

While some of these issues are also relevant to strategic alliances and PPCPs formed in the sanitation sector, a few are insignificant to the industry. For example, lack of integrated systems is relatively inconsequential given the nature of the players and markets that cater to the last mile communities. Additionally, since the sanitation industry is known to be fragmented, strategic alliances are formed keeping in mind the disjointed nature of the sector.

On the other hand, in the context of service provision to last mile communities, the barriers that limit successful partnerships come to play in a manner specific to the sanitation (toilet) industry. These include:

a. Lack of communication among players due to a fragmented supply chain.

b. Limited knowledge and information about the strengths, assets and needs of each stakeholder.

This is particularly because social enterprises are new players venturing into the market for

---

5 Other reasons for a failed PPCP or alliance according to (Elmuti & Kathawala) include poor operational planning and integration, diverging strategies, underdeveloped value added proposition, unclear strategic return on investment, rigidity, focus on internal alliance issues and not customer mission, hidden agenda leading to distrust, unrealistic expectations and complexities in management
toilet construction at the last mile; previously unchartered territory. Thus, the business models and community partnerships developed are nascent and needs of the community are yet to be fully understood.

c. Inadequate or inappropriate product offering, given the heterogeneous nature of last mile communities.

d. Lack of affordable integrated toilet solutions for new markets.

e. Limited access to appropriate last mile micro financing.

With time, as these constraints are appropriately understood and tackled while developing PPCP models, there is no reason why such partnerships will not be successful.

7 THE INDIAN CONTEXT – UNDERSTANDING THE POLITICAL ECONOMY

7.1 Background

Latent demand for toilets exists in many parts of India as households want pour-flush toilets (Monitor Deloitte, 2013). Globally speaking, India extends one of the largest subsidies - Rs 62,000 crore (USD 9.7 million) (Indian Express, 2014) in the sanitation sector to the poor. The Government of India subsidizes rural toilet construction through the Nirmal Bharat Abhiyan Campaign (previously known as the Total Sanitation Campaign) and over the years has approved funding of over INR 200 Billion (USD 4 billion) (Press Trust of India, 2015). Further, the Modi government has made a new amendment in the Companies Act, which is expected to facilitate faster channelization of the Rs 20,000 crore (USD 3.1 million) CSR budget. Of this sum, around 45-50 per cent (Press Trust of India, 2015) will find its way in the area of clean drinking water, hygiene and sanitation, given the impetus of the recently initiated Swachh Bharat Mission6 (Clean India Mission). Under the new amendment, the Government has allowed companies to enter into collaboration with each other to engage in consolidated CSR funding. This clears the way for continuous flow of funds for social enterprises, which earlier would have to approach individual corporates for CSR contribution.

7.2 Rural Livelihood Programs (RLP) and the Swachh Bharat Mission (SBM)

Further, the rural livelihood programs/projects (RLPs) play a key role in India’s poverty reduction strategy. National Rural Livelihoods Mission (NRLM) in India is one of the world’s largest poverty reduction initiatives of approximately USD 7.7 Billion aiming to reach 350 million poor (Ministry of Rural Development, Government of India, 2015). It was launched by the Ministry of Rural Development (MoRD), Government of India in June 2011, to create effective institutional platforms

6 Swachh Bharat Mission (SBM) is a national campaign by the Government of India covering 4041 statutory towns, to clean the streets, roads and infrastructure of the country (Wikipedia, 2015)
for the rural poor, enabling them to increase household income, through sustainable livelihood enhancement, such as provision of good quality WASH services. Nearly 150 million poor in these States have been mobilized in 1.3 million Self Help Groups (SHGs) and their Federations (Ministry of Rural Development, Government of India, 2015). The institutional platforms of rural poor, particularly women, serve as a backbone for pulling together all other poverty reduction efforts helping India move closer to some of the key MDGs. WASH related business models would benefit from integrating into these existing platforms of the core model of RLP. SHGs may also be utilized for working as Rural Sanitary Marts (RSMs) in remote areas where bulk procurement and delivery of quality hardware for toilet construction may be assured through such a system. Funding for this is to be permitted under the Swachh Bharat Mission (SBM) guidelines.

7.3 Rural Sanitary Marts (One Stop Shops in Last Mile Communities)

According to the guidelines of the Swachh Bharat Mission, (Ministry of Drinking Water & Sanitation, 2014), “A Rural Sanitary Mart is an outlet dealing with the material, hardware and designs required for the construction of sanitary latrines, soakage and compost pits, vermi-composting, washing platforms, certified domestic water filters and other sanitation and hygiene accessories etc. The main aim of having a RSM is to provide material, services and guidance needed for constructing different types of latrines and other sanitary facilities for a clean environment at a place near the residence of the beneficiaries. RSMs need to ensure that a variety of pans (Rural, Ceramic, HDP, Fiberglass) are available for choice by the beneficiaries at reasonable rates. RSM should necessarily have those items, which are required as a part of the sanitation package. It is a commercial venture with a social objective.

In certain Indian States, the penetration of the market with respect to sanitary materials is still inadequate. In such cases, States can decide to utilize the provision of the Rural Sanitary Marts (RSM) and Production Centres (PC). The Production Centers/Rural Sanitary Marts can be opened in areas where they are required and operated by SHGs, Women Organizations, Local Governments, and NGOs etc. Support of private entrepreneurs may also be taken for ensuring an effective supply chain.

In all cases, the Gram Panchayats have to ensure the availability of a pool of trained masons in the area whose services can be utilized for the construction of toilets. An interest free loan up to Rs.5 lakh can be given by the government in each case for establishing a RSM/PC out of the Revolving fund available with the district.”
7.4 RSM links with Supply Chain

The SBM guidelines also mention that, “there are an increasing number of SHGs that have come into being under various livelihood support programs. These SHGs are present extensively in many States. The World Bank is exploring the potential for a sanitation supply chain built around SHGs and set up by states, which can address the problem of reach, given the widespread adoption of SHGs in the country. States can decide to extend suitable financial support to the SHGs in line of the RSMs and PCs, if necessary, by adopting suitable convergence frameworks with the parent program. (Ministry of Drinking Water & Sanitation, 2014)

In some States where local governments are situated in remote areas a RSM is an inevitable requirement for ensuring supply chain of individual household toilets, community toilets and school toilets. Community Based Organizations (CBOs), NGOs, SHGs and other organizations may be engaged effectively in ensuring quality bulk supply of hardware for toilets. However, to ensure sustainability through supply of quality components and construction of toilets, the specifications of materials like ceramic pans, pan traps, pipes, super structure of bricks, brick lining in pits or rings made of concrete, depth and diameter of pit, roof of asbestos/tin, doors with iron frame, twin pits etc. should be stipulated.”

7.5 RSMs in Action in India

An example of RSMs in action in India can be taken from the Ramakrishna Mission Lokasiksha Parishad (RKMLP). UNICEF and RKMLP conceived, designed and initiated a Demand Driven Sanitation Strategy (DDSS) in Medinapore district in the year 1990 in collaboration with Government of West Bengal and Medinapore Zilla Parishad. Several practitioners as well as the Government recognized the strategies and the methodologies adopted by RKMLP mission. A few of them were also implemented country wide in the Total Sanitation Campaign (TSC) and are carried out in the current Swachh Bharat Abhiyaan. This endeavor resulted in the increased coverage of household toilets to 96% in Purba Medinapore with a total households of 7,84,160 and 81% in Paschim Medinapore with a total households of 9,14,042 households in December 2004, against 4.74% in 1991.

---

* Based on information from internal documents and primary research reports from the WSP team, World Bank.
* This photo is from field visit by the author to villages under the Maharashtra State Rural Livelihoods Mission (MSRLM)
RKMLP aimed at improving access to sanitation by working on both supply and demand sides. It worked on changing hygienic behavior of rural communities by adopting innovative demand creation approaches, leveraging Community Led Total Sanitation (CLTS) models and building a number of key supporting institutions for sustaining the program. One of these includes improving the access to affordable and appropriate sanitation and hardware services. Market based solutions exhibit the most potential for scaling up and sustainability of enterprise initiatives especially in rural sanitation. However due to non prioritization for a long time, poorly developed rural sanitation market still remains unorganized resulting is a limited outreach. Thus, RMLP has called for innovative and market led approaches to reach the bottom 40% of the poor, mainly catering to people across the socio-economic spectrum. Community led and managed initiatives such as the establishment of Rural Sanitary Marts (RSM) provided a great opportunity to identify the markets thus also increasing the access for poor people. RSMs reprise the ability to cater to the marginalized sections, households living in poverty, ethnic minorities and low caste groups. The strategy and approach of RMLP included working with the local governments and improve the uptake of household sanitation.

RSM's were established catering to specific villages and blocks that were connected with a mother RSM at the block as well as district level. Cluster level RSM’s procured the toilet inputs in bulk and supplied to the down line RSMs. Specifically, procurements were done from Gujarat and other states while some basic pans as well as rings were made in the RSMs. The cluster level RSM’s and the clubbing of villages under one rural RSM ably supported through a “Satellite RSM” (in a few cases) improved the sustainability of the program. Rural RSMs were established based on the fund availability and the subsidies available from the Government. RMLP worked with District administration to sanction funds for RSM creation and also with UNICEF to support and sponsor the establishment. UNICEF provided with adequate funding to balance proportional expenditures on Hardware and Software, which acted as a key reason for improved sanitation and also in improving NGP status in the district.

7.6 Stakeholders Consultation

Further, the World Bank organized a workshop on March 25, 2015 on the integration of WASH enterprises in Rural Livelihood Projects in India. Here, the speakers discussed the role of the state and the need to create an enterprise culture in providing WASH services. It was established that sanitation tends to be viewed as a private good and the challenge lies in converting this private activity into a
service and enterprise option. An integrated program towards service delivery, involving both the private sector and the state, is the way to go. Discussants also stressed the importance of leveraging existing models and local government institutions (SHGs, rural livelihoods team etc.) in bringing about a mindset change rather than starting something completely new.

8 TYPOLOGY OF PRACTICE MODELS

Based on the value chain analysis done in sections 4 and 5 we have identified various types of private sector models across the different phases of the value chain. To recap, each stage of the sanitation value chain comes with certain complexities. Thus, the nature and scale of enterprises tend to differ as we move along the value chain and each have their own set of issues to tackle. Enterprises working on tackling the problem of open defecation focus mainly on toilet installation and maintenance in last mile communities. It is rare to find stand-alone start-ups present in this space, given the high capital expenditure involved in toilet installation and low returns due to weak demand. Start up enterprises; typically supplement their revenue by also engaging in waste management activities. This way, they integrate stakeholders and activities across the entire value chain. Others stay afloat by fostering effective partnerships. Large enterprises present in this space tend to focus on funding or product innovation. Alternatively, local enterprises developed by community members stem from community action and mobilization. Thus, from this analysis, four types of models emerge at a broad level:

a. Franchise Model
b. CSR Model
c. Community Based Model
d. Integrated Value Chain Model

Such a typology enables us to categorize firms based on similarities of their core operations. Through this, we will be able to study at ease different models with similar processes that exist globally and then bring in best practices to India. Such categorization shows how partnership models at each stage of the value chain play a key role in ensuring effective service delivery to the poor

This paper will now attempt to review the four kinds of business models at work and bring their learnings to the Indian context through strategic alliances and PPCPs. Each model talks about a global example and how this has been applied or can be applied to the Indian context.
8.1 Typology 1: Franchise Model

8.1.1 SaniShop

SaniShop is a for-profit social enterprise that has been set up by the World Toilet Organisation (WTO) and has presence in Cambodia, Vietnam, India and Mozambique (World Toilet Organisation). SaniShop follows a franchise model in which operations are franchised to entrepreneurs called “SaniShop entrepreneurs”. WTO believes in approaching access to sanitation as a business, by promoting local production (via local entrepreneurs) and demand creation/sales (via respected community leaders and private players). The demand creation strategy involves bundling toilets and associated products as an appealing and aspirational priority item for villagers to purchase (World Toilet Organisation, 2014). SaniShop integrates the first two stages of the value chain, thus bringing together the sanitation ecosystem to expand toilet installation and boost the local economy through job creation and skills development. Further, the commitment shown by purchasing a toilet, demonstrates successful behavior change and a sense of ownership. Experience has shown that buyers who pay for their toilets maintain them much better than if they received them for free (World Toilet Organisation, 2014).

8.1.1.1 SaniShop Cambodia

a) Country Context: There were over 11.5 million people living in rural Cambodia as of 2006. Cambodia has been classified as one of the countries in the world with the lowest sanitation coverage in the rural areas (Unicef Cambodia). According to (WHO-UNICEF, 2012) (WHO-UNICEF, 2012), 69% still practice open defecation, making Cambodia the highest open defecation rate in East Asia and the Pacific. Improved sanitation coverage is only 33%, the lowest in East Asia region. Cambodia is also one of the top ten countries to achieve highest reduction in open defecation. Many rural households in Cambodia lack basic sanitation facilities and awareness of good hygiene practices is limited. There is often no toilet or any soap for hand washing at home or in school. Children are more likely than adults to touch unclean surfaces and particularly vulnerable to unhealthy environments. Poor sanitation and hygiene leads to the transmission of numerous water-borne diseases including Diarrhea, Dysentery, Typhoid, Cholera, and Hepatitis A (World Toilet Organization, 2014). The World
Toilet Organization’s (WTOs) SaniShop was built to address the lack of improved sanitation in rural areas in Cambodia. It later expanded to other countries.

b) The Business Model: In Cambodia, SaniShop is franchised to masons to ensure empowerment & expand impact. It promotes local production via masons and demand creation via community leaders & local entrepreneurs (World Toilet Organisation, 2014). Figure 13 details SaniShop business model in Cambodia and also chalks out all the stakeholders involved in each activity across the value chain for toilets. According to the report by the World Toilet Organization, SaniShop, together with local NGOs and MFIs such as Vision Fund, focus on demand triggering for toilets within a selected community. SaniShop then designs and sources for appropriate toilets and sheds, which is then distributed by masons. The masons, also called SaniShop entrepreneurs proceed to construct and install the toilets.

c) Product: So far, SaniShop has used Sulabh one pit pour flush toilets

d) Impact: Currently, 11,000 toilets have been built in Cambodia (World Toilet Organisation).

Figure 8: SaniShop Cambodia Business Model and Stakeholders Across its Value Chain

8.1.1.2 SaniShop India

Several issues were discovered with the Cambodia model. Franchising operations to masons was rendered a poor business decision, as masons did not make for suitable entrepreneurs or partners. Further, the cost and quality of toilets installed were low. Consequently, when SaniShop entered India, the model was revamped completely.

---

1 Source of information is from in person interviews with the CEO of E-Kutir in Bhubaneswar India.
a) The Business Model: SaniShop business model in India is run by a for profit social enterprise called E-Kutir. According to K.C. Mishra, founder of E-Kutir, the for-profit enterprise selects villages based on lucrativeness of market and provides raw materials in a bundled package. Operations are franchised to local entrepreneurs who are selected based on a pre-defined criteria. Government triggers demand by monetarily incentivizing entrepreneurs. Several women from self help groups (SHGs) have been converted to SaniShop entrepreneurs, who in turn trigger community demand, supported by E-Kutir. On being trained by the Domex Academy of Unilever, SaniShop entrepreneurs arrange for local masons, brick sand, ring, local labour etc. required to build toilets. The quality of toilets was upgraded to twin pit Sulabh toilets. These entrepreneurs, mainly consisting of members of women SHGs, were trained by the Domex Academy, a brand of Unilever. Unilever also provided bundled products that comprised of items such as soaps and other hygiene related products.

b) Product: In India, the product was upgraded to twin pit pour flush toilets.

c) Impact: With the modified business model, the India team is confident of increasing the number of toilets from 3,000 to 26,000 within the year 2015 itself.10

---

SaniShop - Cambodia v/s India

<table>
<thead>
<tr>
<th>Point of Difference</th>
<th>Cambodia</th>
<th>India</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Franchise Model</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Twin Pit Toilet</td>
<td>✗</td>
<td>✔</td>
<td>Cambodia uses single pit low quality toilets</td>
</tr>
<tr>
<td>Product Bundling</td>
<td>✗</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Masons as franchisees</td>
<td>✔</td>
<td>✗</td>
<td>India selects franchisees based on defined criteria</td>
</tr>
</tbody>
</table>

IMPACT
Present: 11,000 toilets in Cambodia, 3,000 in India
Plan: build 26,000 toilets by end 2015 (just in India)

Picture 4: Bundled Products from Unilever

Source of information is from in person conversation with the Founder – K.C Mishra and from field visit to E-Kutir’s operations
* Photo taken from a customer during a field visit to E-Kutir's operations in Bhubaneshwar, Orissa
10 Based on information gathered in person conversation with the Founder of E-Kutir – K.C Mishra
Figure 13 details SaniShop business model in India, which is run by a for-profit social enterprise called E-Kutir. It also chalks out all the stakeholders involved in each activity across the value chain for toilets and how they work together through the PPCP model.

Figure 9: SaniShop India Business Model and Stakeholders Across its Value Chain

8.2 Typology 2: CSR Model

8.2.1 American Standard – Bangladesh

a) **Country Context:** Over the last decade, Bangladesh has emerged as a global reference point in experimenting with and implementing innovative approaches to rural sanitation. The Community-Led Total Sanitation (CLTS) approach was one such innovation that helped to move over 90 million people from open-defecation towards fixed-point defecation (Water and Sanitation Program, 2013). However, challenges and problems remain in the country.
Diarrheal diseases are still the second-leading cause of child and infant mortality (Water and Sanitation Program, 2013). According to the Joint Monitoring Program, improved sanitation coverage is at about 54 percent (2010) and only 37 percent are in fact hygienic (Water and Sanitation Program, 2013). Hence, many toilets do not meet the hygiene standards needed to stop infections from spreading, as they are of low quality.

b) **Background:** Based in the USA, American Standard, is a wholly owned subsidiary of Lixil Corporation, a global leader in the housing and toilet products and building materials industry (King, 2013). In 2013, American Standard launched the Flush for Good Campaign (King, 2013) to raise awareness of the global sanitation crisis. American Standard follows a typical CSR model, in which they primarily play the role of funders and product developers. They have a presence in Bangladesh and Sub Saharan Africa and invented the SaTo sanitary toilet pan (name for SAfe TOilet).

c) **Business Model:** American Standard works with its customers to further the cause of ending open defecation (King, 2013). For every purchase of its top of the line ‘Champion’ toilet model, American Standard donates a SaTo pan to villages in Bangladesh and Sub Saharan Africa. Distribution is aided by NGOs such as BRAC and Save the Children, while procurement is done through local manufacturing companies. It has also partnered with the Bill & Melinda Gates Foundation to develop and test a low-cost prefabricated toilet system as part of a challenge to improve safety and sanitation in developing countries (American Standard, 2014).

d) **Product:** The sanitary SaTo toilet pan (see Figure 14) uses simple mechanical and water seals (American Standard, 2014) to close off pit latrines from the open air, preventing the spread of pathogens back out of the pit via flying insects. Keeping in mind the existing community infrastructure in Bangladesh, it was invented to work without sewer infrastructure. The SaTo pans were also designed to accommodate existing cultural and sanitation practices in Bangladesh, which aided their acceptance within the communities. Careful planning took place during the research and development process to ensure that the SaTo pan incorporated local bathroom practices while being affordable for the local population to purchase. On the other hand, in Sub Saharan Africa, the two elements necessary for correct functioning of the SaTo toilet pan — water and concrete — are not readily available. People in this region are also more prone to sitting, rather than squatting, when defecating, which opens up additional design possibilities. These local Sub-Saharan Africa realities require a different sanitation solution. Through a grant from the Bill and Melinda Gates Foundation, American Standard sent a team of product engineers to visit Zambia and Kenya in late 2013. Working again with iDE field experts in Zambia, their objective was to learn more about the sanitation practices and needs in this part of the world. Incorporating usual bathroom behaviors into the sanitation solution can help its acceptance into the existing culture. Presently, the Company is
developing and testing prototypes of two alternative sanitation concepts for use in this Sub-Saharan Africa environment. Part of the process includes determining what is possible to manufacture locally and economically so that the residents can afford the product. This type of sustainable business model can help deliver ongoing, attainable results for years to come (American Standard, 2014).

e) Impact: So far around 1.2M SaTo sanitary toilet pans have been donated that have positively impacted the lives of an estimated 2.5 million people (King, 2013).

![Figure 10: American Standard Business Model and Stakeholders Across its Value Chain]

8.2.2 Bharti & Sulabh Model – India

While American Standard reflects a typical CSR model that has worked globally, the Bharti Foundation follows a similar model in India. The Bharti Foundation has tied up with NGO - Sulabh International to set up over household and community toilets in Ludhiana, India within the next three years (Bharti, 2014). Sulabh is a social service organization that works to promote human rights, environmental sanitation, non-conventional sources of energy, waste management and social reforms through education (Sulabh International, 2012).
a) **Business Model:** Since Bharti has no expertise in toilet construction, its only role in the value chain is funding, while Sulabh works on everything else, from demand promotion, to product development to toilet installation. Bharti has invested Rs 100 crore for construction, while Sulabh charges a 15% implementation fee. No Panchayat money is involved (Bharti, 2014). Sulabh will conduct a survey of target villages to identify beneficiaries, undertake the construction of household toilets and carry out education campaigns. Figure 15 captures the business model and all the actors involved in each activity across the sanitation value chain.

b) **Product:** The product is a typical twin pit pour flush toilet.

c) **Impact:** The aim of the partnership is to set up over 12000 toilets in Ludhiana, India within the next three years (Bharti, 2014).

---

**Figure 11: Bharti-Sulabh Business Model and Stakeholders Across its Value Chain**

---

*Source of Information is in person interview by author with Sulabh International*
8.3 Typology 3: Community Based Model

8.3.1 Bala Vikasa – India

**WHO THEY ARE**
- Largest NGO in Telangana
- Follows an Asset Based Community Model
- Beneficiaries are mainly women & children

**VALUE CHAIN**
- **DEMAND PROMOTION**
- **PRODUCT DEVELOPMENT**
- **INSTALLATION**

- AP, Telangana, Karnataka, Maharashtra
- Demand Promotion, Product Development
- CIDA, corporates
- Rs 13,000 (simple), Rs 20,000 (multipurpose), Rs 27,000 (fancy)

**A) Background:** Bala Vikasa is the largest NGO in Telangana India, founded in 1977. To ensure sustainability, they believe that building communities first before starting a project is essential. For them, building communities mean mobilizing and motivating the members and providing the required capacity. They are strong advocates of community partnership and ownership. Beneficiaries are mainly women and children and the focus is on household toilets only. These beneficiaries are mainly farm labor and marginal farmers, who fall in bottom 40%12. Bala Vikasa follows an asset based community development model (ABCD Model) where the community itself is in charge of procuring and building an asset. In this model, all stakeholders come together to form an effective PPCP model to ensure good quality sanitation to the bottom 40% in the last mile (Bala Vikasa, 2014).

**B) Product:** Bala Vikasa only builds double pit toilets for households. Toilet costs include Rs 13,000 (USD 202) for a simple toilet, Rs 20,000 (USD 311) for a multi purpose toilet, Rs 27,000 (USD 420) for a fancy toilet.

**C) Impact:** 20,000 twin pit toilets have been developed across Telangana and Andhra Pradesh, impacting 100,000 people (Bala Vikasa, 2014) across Andhra Pradesh, Telangana, Karnataka and Maharashtra. Bala Vikasa works on different livelihood projects (health, water, capacity building, sanitation etc.) across 6,000 villages. Toilet construction is not a focus in all these villages. Each village with sanitation facilities has a range of 10-120 toilets

---

**Interesting Fact**

Gangadevipalli is a village 1 hour away from Bala Vikasa’s office in Warangal, Telangana. The village is open defecation free and has attained the status of a model village. After visiting Gangadevipalli, Prime Minister Modi was inspired to launch the Adarsh Gram Yojna (Rural Program). Bala Vikasa was integral to the village’s development and its current model status.

---

12 Based on information gathered from interviews with Bala Vikasa
constructed, depending on the population. In the past, developing open defecation free (ODF)\textsuperscript{13} villages was not in their agenda. However, with increasing CSR funding and the ODF mandate, they are now prioritizing this on their agenda.

d) The Business Model: A snapshot of the business model is shown in Figure 16. In this model\textsuperscript{14}, While Bala Vikasa provides inputs for construction, the community members build toilets, thus, following a soft PPCP model. The business model is as follows:

- **Funding:** The main funding for Bala Vikasa comes from CSR funding or CIDA (Canadian Government), who allocates funds on an annual basis.
  - i. Sopa, the Canadian arm of Bala Vikasa, budgets for 3-5 year programs.
  - ii. CIDA conducts internal and external evaluation of Bala Vikasa along with audits such as social impact, finance and monitoring.

- **Village Selection:** Usually village selection for toilet construction takes place from within villages where they have existing operations, in other sectors.
  - o Women Self Help Groups (SHGs) and Mahila Mandals (MMs - Informal Women Groups) play a crucial role in mobilizing the community for toilet construction. Thus, the effectiveness and discipline of the existing SHGs/MMs is a key factor for village selection.

- **Partner Organizations:** Once a village is selected, Bala Vikasa conducts sanitation awareness programs through implementing partner organizations, such as local NGOs and SHGs. Bala Vikasa also hands over operations and maintenance to these organizations.

- **Community Involvement:** Beneficiaries are identified in each village with the help of the panchayat. Bala Vikasa asks the beneficiaries (household owners) to put forward some amount of money. These funds are then pooled together and the beneficiaries form a 'Bala Vikasa appointed SHG'. The group then proceeds to appoint masons, procure materials etc. required for construction.

- **Funds:** are released in installments.

- **Procurement:** Usually local dealers. The government helps procure raw materials at a cheaper (or tax free) rate.

- **Post construction:** After toilet completion, Bala Vikasa ensures that the toilets are maintained through regular awareness sessions.

\textsuperscript{13} ODF villages are those in which 100% of the village has toilets and has achieved an open defecation free status

\textsuperscript{14} Source of information is from field visits and in person interviews conducted by the author with Bala Vikasa
The integrated value chain model and the franchise model are largely similar, yet there are a few subtle differences. While the latter only focuses on the first three phases of the value chain, the former cuts across the entire sanitation value chain. In addition to franchising their operations, these models also supplement the income generated from toilet construction by converting waste into compost or energy and thus integrate the presently fragmented value chain.

### 8.4.1 Sanergy

<table>
<thead>
<tr>
<th>WHO THEY ARE</th>
<th>VALUE CHAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develops and franchises low cost toilets called FreshLife</td>
<td>SANERGY</td>
</tr>
<tr>
<td>Main revenue comes from waste reuse</td>
<td>IMPACT</td>
</tr>
<tr>
<td>Integrated value chain</td>
<td>LOCAL COMMUNITY</td>
</tr>
</tbody>
</table>

- **Kenya**: Product Development, Installation, Maintenance, Reuse
- **Local Community, Franchise Model**: USD 500 for toilet sale, 0.06 for pay for use

#### Country Context

In East Africa, 1.2 million tons of synthetic fertilizer is imported every year, leading to high transportation and tariff costs, which is ultimately borne by farmers. In fact the price of fertilizer is so high that farmers can only afford to purchase 9 kg/hectare of fertilizer compared to the 206 kg/hectare used in the industrialized world. Sanergy tackles this problem by selling organic fertilizer to a variety of Kenyan farms (Sanergy, 2013).
b) **Background:** Sanergy is a social enterprise based in Kenya that develops and franchises low cost toilets called FreshLife. Its main revenue comes from waste reuse, where 100% of its waste is safely treated. Such enterprises provide low cost toilets through a franchise model and also convert waste into fertilizers and renewable energy\(^\text{15}\).

c) **The Business Model:** Through informal settlements, Sanergy builds a network of Fresh Life Operators – local residents who purchase and operate their hygienic sanitation facilities. The operators become franchise partners: Sanergy provides the fresh life toilet, training, access to financing, ongoing operational and marketing support, and a daily waste collection service. The Fresh Life Operator generates local demand and ensures that the toilet is kept clean. Waste is collected on a daily basis. The waste is safely removed from the community by wheelbarrow, handcarts, and/or truck. The wheelbarrows and handcarts ensure that Fresh Life Toilets can be installed in deep in informal settlements where there are only narrow, unpaved roads as access points (Sanergy, 2013).

d) **Impact:** Currently, Sanergy has developed 639 Fresh Life toilets that have impacted 26,000 people and created over 600 jobs so far (Sanergy, 2013).

![](Picture_5.png)

**Picture 5: Sanergy Product: Fresh Life Toilets**

### 8.4.2 Wherever the Need – EcoSan Model

Stand-alone start-ups don’t exist in India for several reasons, ranging from tight regulation to perceived lack of demand. Though integrated models are yet to show proof of scale globally, they have great potential to scale up if provided with an enabling environment. In India integrated models exist in the form of PPCPs. One such example is the international NGO - Wherever the Need.

\(^{15}\) Based on information gathered from interviews with Sanergy
a) **Product:** Wherever the Need builds EcoSan toilets because they are sustainable. Other sanitation solutions have a finite life. For example, once a pit latrine is full, a new one has to be dug, but EcoSan toilets can last for decades. EcoSan toilets do not require any sewer infrastructure, so they can be used from over-populated urban slums to the most remote underdeveloped areas. They also require minimal amounts of water, so are ideal in areas where water shortage is a real issue (Wherever the Need, 2012).

b) **The Business Model:** Wherever the Need believes that a long-term sustainable solution to poverty is through ecological sanitation or EcoSan. It sets up EcoSan toilets (composting toilets) with the help of subsidies from the state government. Waste is stored, composted, and collected from the toilets, and later sold to generate income. A care-taking team from the community empties the toilets and makes sure the facilities are well maintained and clean (Wherever the Need, 2012).

c) **Impact:** Wherever the Need is one of the biggest providers of EcoSan in the developing world. In India alone, over 30,000 people use our EcoSan toilets every day.

9 **KEY LESSONS AND SUGGESTED RECOMMENDATIONS FOR INDIA**

We have seen how partnership models at each stage of the value chain play a significant role in ensuring effective service delivery to the poor. We have also explored global models and how they can be applied to the Indian context in tackling the problem of open defecation through scalable PPCP.
business solutions. The key idea of this paper is not to prescribe any specific methods of functioning but to lay out different models and consequently generate new learnings for enterprise solutions to deliver on WASH services. The key lessons and from the above case studies, potential barriers and suggested recommendations for the way forward in the Indian context are highlighted below:

a) **Strong Business Case for Franchise Models:** As evidenced in the previous sections, franchise models in sanitation have been successful in targeting the bottom 80% of the poor in India, but not the desired bottom 40% of the poor. This is primarily because, as mentioned in section 2, entrepreneurs tend to gravitate to customers who can pay for services. Building a franchise business model for toilet construction that targets the bottom 40% can be challenging and potentially unsustainable, given the low buying power of its target customer. Integration strategies should think about how franchise models can work with other players and leverage the asset-based community models (see section on Bala Vikasa) to ensure scale and impact to the bottom 40% of the poor in India. Enterprise linkages with the community through existing platforms such as SHGs and one stop shops can enable scale, develop ODF villages and create segmented strategies in order to effectively target the different socio-economic groups of people that live within the same village.

b) **CSR models and Funding should be effectively leveraged in India:** Given the current political mandate in India, a significant amount of CSR funding and subsidies will be channeled towards toilet installation. Thus grant capital and subsidies will play a major role in enterprise development in India. Private players should look towards developing effective business models that can efficiently leverage this funding. However, over-reliance on grant capital and subsidies would hamper long-term sustainability of operations. It should also be kept in mind that foundation and CSR funding is not ‘free money’ for social enterprises and NGOs. Over dependence on private funding comes at a cost. For instance, Sanergy spent a large chunk of its time on reporting to donors and the application processes for funding. Integration strategies should be wary of overdependence on subsidies and should focus on aiding enterprises to supplement funding through revenue streams or well-knit strategic partnerships and alliances.

c) **Integrated Value Chain Models have High Potential:** Global learnings of integrated value chain models show that the impact and numbers are presently not very large. These social enterprises have potential to innovate both in terms of product and business models and can create effective sustainable solutions that serve the bottom 40% of the poor in the long term. However, enabling policies and enforceable regulations that encourage demand creation and development of such sustainable models do not exist. This in turn deters enterprise creation

---

16 Based on primary research with organizations working on Franchise model (E-Kutir) and Community based model (Bala Vikasa)
and disincentivizes global start-ups from venturing into India. No start-up wants to build a business solely around a subsidy. Thus, creating the right enabling environment would go a long way in attracting more of these integrated business models into the Indian context.

d) **Aligning Incentives**: The construction of toilets includes fund management, community procurement for sanitary items, training of masons and their services for construction of toilet, preparation bills as norms and reimbursement of all eligible members. Enterprise development involves capacity building through training the masons, building community enterprises and engaging with private sector players. While the business case for PPCPs has been established in this paper, it is essential to keep in mind the issues that come with such alliances. Thus, integration strategies need to closely observe the interplay between the overall strategy of solving the issue of open defecation and the aligning roles and incentives of each alliance in that overarching strategy.

e) **Leveraging RSMs**: As mentioned in previous sections, the rural sanitary mart (RSM) is expected to provide services to households for setting up toilets including information on various toilet options and superstructures and their cost implications. It will also provide a list of masons having the skills to set up such toilets. Thus RSM will act as a sales counter for sanitary requirements of community. The expected cost of per RSM will be work out to support the basic establishment requirement of RSM-PC. Existing private players in India, such as e-Kutir have built their models by leveraging existing institutional platforms such as self-help groups rural livelihood programs. Integration strategies should now think about how franchise and integrated value chain models can work with these existing RSMs to ensure scale and impact to the bottom 40% of the poor in India.

f) **Boost Enabling Environment for Innovation**: Global start up social enterprises and organizations such as Sanergy and American Standard have attempted to solve the open defecation problems in countries such as Bangladesh and Sub Saharan Africa, but have chosen to stay away from India, which suffers from the biggest problem of open defecation. Though these organizations haven’t reached scalable numbers yet, they are innovative both in their product and in their business models and have substantial potential to grow. A common deterrent from entering India is the lack of an enabling environment and perceived demand for the product. Integration strategies should tap into the Swachh Bharat Mission and the amended companies act to attract such enterprises.

g) **Community Based Models are Sustainable and Target bottom 40% of the poor**: However, these tend to be implemented by local NGOs who focus on selected geographies and lack the motivation and resources to scale up. Partnering with corporates and with budding social enterprises and linking them with Self Help Groups (SHGs) can facilitate scaling up of operations. At a community level, SHGs in India play a crucial role in mobilizing the community for toilet construction. Given the increasing number of SHGs that
have emerged under the rural livelihood programs, WSP is exploring the potential for a sanitation supply chain built around SHGs, which can address the problem of reach, given its widespread adoption in the country. This would require a lot of client mobilization, client training and maintenance services at a local level, which the existing enterprises in value chain partners are unable to provide. Therefore, partnering with local communities for such local support is crucial. Thus this reiterates the importance of the community-based model where community organizations would act as the last mile institutional mechanisms to deliver services. The figure below chalks out how the WASH enterprise agenda is promoted in communities.

1. Market Diagnostics
   - This involves assessing market demand and the existing players whether community platforms exist, and how communities are organized.

2. Enterprise Promotion
   - Once the diagnosis is complete, the focus moves to enterprise development. Here we determine local masons and labor exists in that community. This is because ultimately, the solutions will be delivered locally.

3. Value Chain Linkage
   - On determining the last mile solutions, we need to understand what kind of value chain linkages are possible. In this step, we attempt to understand who the potential private players and social enterprise players are in the value chain.

4. Coordinate with WASH Governance
   - This stage involves coordinating with other stakeholders such as public programs, local government, CBOs and financing arrangements.

**Figure 13: How to Promote the Wash Enterprise Agenda in Communities**

**Box 6: Example of Community Based Sanitation Business in Indonesia**

Budi Model is a sanitation business model in Indonesia is a one-stop shop sanitation business model targeted at entrepreneurs and other stakeholders. The model is based around a sanitation entrepreneur Mr. Budi, who produces healthy toilet facilities at an affordable price. Mr. Budi’s experience highlights steps needed to become a successful sanitation entrepreneur, such as close cooperation with various stakeholders, as well as coordination from local health offices. Mr. Budi goes through the sanitation business process in stages, from drawing a social map and identifying customers to receiving orders, creating a work plan and settling payments. As a sanitation entrepreneur, Mr. Budi is creating more jobs, supporting the community, and helping the government program improve access to sanitation.
10 CONCLUSION

Open defecation is a huge challenge in India and WASH enterprises cannot solve the problem by themselves. The solution lies in aligning supply, demand, incentives and enforcement, in the appropriate sequence. As part of a broader strategy, WASH enterprise solutions can bring scale, sustainability and innovation. The government plays an integral role through enabling policies and provision of local institutional platforms. Global learnings show how partnership models at each stage of the value chain play a key role in ensuring effective service delivery to the poor. Further, as per the hybrid value chain approach such partnerships would ensure that products gain more economic and social value than any one actor could have created alone. The alternative to strategic partnerships is a fragmented value chain, which in turn poses a constraint to business viability by preventing customers from accessing better alternatives. This further stifles innovation of affordable products and can be overcome through one-stop shops for sanitation products, piggy back on existing distribution channels and bulk purchasing. PPCPs are integral in bringing together the value chain through different stakeholders, which would maximize efficiency. Strategic alliances through public private community partnerships (PPCPs) would tackle the problem through scalable business solutions in India.

11 APPENDIX

11.1 APPENDIX A – Stakeholders Consultation

The World Bank organized a workshop on March 25, 2015 on the integration of WASH enterprises in Rural Livelihood Projects in India. The author presented the findings of this paper during this event. The flow of events and the discussion points are summarized below.

Summary of Discussions - Day 1; March 25 2015

<table>
<thead>
<tr>
<th>Session 1: Introduction &amp; Context Setting: WASH Integration in Rural Livelihoods Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panelists</td>
</tr>
<tr>
<td>Parmesh Shah, Lead Rural Development Specialist World Bank</td>
</tr>
<tr>
<td>Murali Akunuri, IAS, CEO, TSERP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Session 2: Global Overview of Sanitation Enterprise Solutions and Implications for WASH integration in RLPs. (Parmesh Shah, Session Moderator)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. WSP experience in Global Sanitation Solutions</td>
</tr>
<tr>
<td>John Ikeda, Water &amp; Sanitation Specialist, WSP, Washington DC</td>
</tr>
<tr>
<td>2. Indonesian experience in Sanitation Enterprise Promotion</td>
</tr>
<tr>
<td>Deviariandy Setiawan &amp; Ari Kamasan, WSP Jakarta</td>
</tr>
</tbody>
</table>

Discussants
The first session of the workshop provided an introduction and set the context of WASH integration in Rural Livelihood Projects. The speakers discussed the role of the state and the need to create an enterprise culture in providing WASH services. It was established that sanitation tends to be viewed as a private good and the challenge lies in converting this private activity into a service and enterprise option. An integrated program towards service delivery, involving both the private sector and the state, is the way to go. Mr. Akunuri mentioned the importance of segmented strategies in order to effectively target the different groups of people that live within the same village. Mr. Shah highlighted the importance of leveraging existing models in the livelihoods team in bringing about a mindset change rather than starting something completely new. The second session provided a global overview of sanitation solutions presented by John Ikeda, while Deviariandy Setiawan and Ari Kamasan offered a snapshot of the Indonesian experience in WASH enterprise service delivery. John touched upon how universal sanitation has been achieved through global examples of how WSP has supported different WASH enterprise solutions. Deviariandy spoke about how
service delivery models in Indonesia function through CLTS and supply side enabling environment indicators, i.e. subsidies, and government supported WASH enterprises/entrepreneurs. Deliberations were mainly focused on who is involved in demand creation and how to organize enterprise finance, evaluate social entrepreneurs, and sustain demand. The key takeaway was that WASH enterprise solutions could bring scale, sustainability and innovation through better understanding of the role and sequencing of supply, demand, incentives and enforcement. Sanitation needs to be looked at in totality and not just as one-time constructions.

The afternoon session explored how business models and PPCP experiences across the WASH value chain delivered sanitation services at the last mile. Suneira Rana spoke about global success stories of WASH enterprises across the value chain and the integration of these learnings to the Indian context. Mathews Mullackal spoke about lessons from SBM implementation in Rajasthan. The key idea of this session was not to prescribe any specific methods of functioning but to lay out different models and consequently generate new learnings for enterprise solutions to deliver on WASH services. Discussants reflected on how focusing on ODF at a household level was a more effective strategy than at a village level. They also considered how sanitation is a government centered discussion and explored the idea of moving towards a more customer centered and entrepreneurial centered discussion. Through global learnings, this session revealed how partnership models at each stage of the value chain play a significant role in ensuring effective service delivery to the poor. The key takeaway was the significance of bringing these learnings to India in tackling the open defecation problem through scalable PPCP business solutions. The final session conveyed real time learnings on collaborations and partnerships from practitioners such as Bala Vikasa (NGO), state (MSRLM), E-Kutir (for profit social enterprise) and Tata (CSR funder). Discussants agreed on a model of greater convergence, better synergies and not reinventing the wheel to bring about greater impact. RLPs were seen as complementary programs, which could leverage their existing local community institutions (SHGs). It was agreed that involving local and community resources was more economical and essential to bring about greater awareness, impact and sustainability of WASH initiatives.

11.2 APPENDIX B – Types of Private Players in Sanitation

The table below lists the various types of private sector enterprises involved in the sanitation value chain.
<table>
<thead>
<tr>
<th>#</th>
<th>Type of Enterprise</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NGOs &amp; CBOs (Non Government Organisations &amp; Community Based Organisations) (Tiberghien, 2013)</td>
<td><strong>CBOs</strong> are gradually becoming more formalized in their provision of services, with the need to be increasingly “bankable” (i.e. gain access for formal credit through banks)</td>
</tr>
<tr>
<td>2</td>
<td>Public Private Partnerships (PPPs) (WSP, 2012)</td>
<td>PPPs with private sector operators aim to <em>maintain and manage</em> larger systems under contract. PPPs tend to consist of rural communities and private firms who work with government on contract.</td>
</tr>
</tbody>
</table>
| 3  | User Associations (Kleemeier, 2010)                                                | Participate in **Private Sector Type Operations**  
For example, in Senegal, user associations hold operating leases and engage entrepreneurs to operate services |
<p>| 4  | Formal Private Operators (Sima, 2013) (Lockwood, 2011)                            | Operate with a <strong>Formal License</strong>. Include truck companies collecting waste                                                                                                                              |
| 5  | Franchise Models (Ikeda, 2012)                                                     | Franchises offer franchisees <strong>branding, marketing and other services</strong> in return for payment or minimum standards of quality, in case of social franchises                                                                 |
| 6  | Informal Private Sector Providers (Sima, 2013) (Pedi, 2012)                        | Provide services such as <strong>Vacuum Truck Owners, Pump Operators, Masons</strong> (skilled, simple and laborers)                                                                                                    |
| 7  | Importers, Retailers, Wholesalers (Indonesia, 2011)                               | Include <strong>Building &amp; Construction Material Stores</strong> selling sanitation related items (cement, pans, tiles)                                                                                                    |
| 8  | One Stop Shop (Ikeda, 2012)                                                       | Are <strong>Business Aggregator Stores</strong> that offer bundled products – services solutions, often not through a physical retail shop but a bundled solution                                                              |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Rural Sanitation Marts (WaterAid, 2009)</td>
<td>Are Retail Shops, staffed and built by government or community members. They are similar to Sani Centers that offer sanitation related marketing and products through local entrepreneurs.</td>
</tr>
<tr>
<td>10</td>
<td>Prefabricated Concrete Suppliers (Salter, D, 2008)</td>
<td>Sell Concrete Rings for well, water tanks, latrines and slabs.</td>
</tr>
<tr>
<td>11</td>
<td>Micro Entrepreneurs (Kleemeier, 2010)</td>
<td>Are Family Managed and Financed. Services respond to demand and local opportunity and tend to overlap with informal private sector operators.</td>
</tr>
<tr>
<td>12</td>
<td>Large Companies/MNCs (Gia, 2010)</td>
<td>Are active in Provision of WASH services in developing countries across the value chain.</td>
</tr>
</tbody>
</table>

12 WORKS CITED


Tiberghien, J. (2013). Hybrid management models: blending community and private management. WSUP and BPD.


Dijk, M. P. Sanitation in Developing Countries: Innovative Solutions in a Value Chain Framework. UNESCO-IHE Institute for Water Education.


Elmuti, D., & Kathawala, Y. An overview of strategic alliances.


Bharti. (2014, 12 1). Bharti Foundation appoints Sulabh for construction of toilets under the ‘Satya Bharti Abhiyan’. New Delhi, Delhi, India.


Indian Express. (2014, 09 25). Rs 62,000 crore to be spent on Swachh Bharat programme. New Delhi, Delhi, India.


World Toilet Organization.


