Improving Sanitation Chain Services:
A multi-stakeholder approach needed for success

Simavi is an international non-profit organisation, striving for a world in which basic health is accessible to all. We aim to structurally improve the basic health of 10 million people in marginalised communities in Africa and Asia by 2020. By doing so, we enable them to build a better existence and get out of poverty. Our experience has shown us that investments in water, sanitation and hygiene (WASH) and in sexual and reproductive health and rights (SRHR) are crucial for people to be able to lead a healthy life. Therefore we are specialists in these two thematic areas. Our programmatic approach consists of three integrated pillars: 1) empowering communities to demand quality services and to practice healthy behaviour; 2) creating a supportive, enabling environment in which all stakeholders are aware of their roles and responsibilities, work together and can be held accountable; and 3) getting in place affordable, suitable and sustainable WASH and SRHR services that are actually utilized by the people. In our work we apply this threefold approach to realise impact that lasts.

Improvements of the sanitation chain services
A lot has been done to reach the Millennium Development Goal on improving sanitation coverage but the challenge remains. 2.5 billion people lack access to improved sanitation and 1.1 billion still practice open defecation. At the same time, sustaining the gains made from increased usage of toilets, raises new issues about the management of human waste. A huge number of people rely for their sanitation on non-sewerage systems which generate a mix of solid and liquid wastes, generally termed “faecal sludge”. Without proper management, faecal sludge is often allowed to accumulate in poorly designed pits, or is discharged into storm drains and open water, or is dumped into waterways, wasteland and insanitary landfill sites. Only a very small percentage of faecal sludge is managed and treated in a safe and proper way. Particularly in the poor areas of rapidly expanding cities, this represent a growing challenge, affecting public health and posing environmental risks.

The way forward
Different stakeholders need to become aware, committed and actively engaged in order to overcome critical constraints for scaling up sanitation chain services, in particular for the poor. Households need to willingly invest in available, affordable, quality and user friendly sanitation services; offered by entrepreneurs who are capable of offering such services. Scalable innovation which addresses the changing needs of the sanitation chain services everywhere needs to be promoted. It is also vital to strengthen policies and regulations which stimulate/enable entrepreneurship and private sector involvement in different aspects of sanitation chain services, and to monitor the quality of the services they provide. Entrepreneurs need access to affordable financial resources (i.e. loans, revolving funds) which enable them to address the needs of their target groups. Sufficient investments need to be made to ensure that proper sanitation (including safe management of sludge) within the public places (i.e. schools, health centres, hospitals) functions properly. Public-private partnership and investments are also required to ensure appropriate and efficient treatment of faecal sludge.
About one billion people worldwide live in slums around the world with few or no sanitation options. Confronted with the global challenges in sanitation, Simavi strategically focuses on entrepreneurship and innovation. Simavi with its partner PeePoople Kenya successfully introduced a unique pilot to create access for and use of safe sanitation in the Nairobi slums. In Kenya, poor sanitation costs the country 324 million USD annually. The Peepoo sanitation system is providing a safe personal sanitation solution. It is a single-use, self-sanitising, and biodegradable ‘toilet’ alternative that prevents faeces from contaminating the immediate area as well as the surrounding ecosystem. After use, human waste is quickly composted in a valuable fertiliser that can improve livelihoods and increase food security. PeePoo fertiliser is safe to be re-used. Objective of the pilot was to scale up access and use of safe sanitation for 20,000 people and 3,000 school children in low income communities and to develop a viable business model.

Problem
Kibera is the largest informal settlement in Nairobi. It consists of twelve villages, houses almost 1 million inhabitants and is the second biggest slum in Africa and one of the biggest in the world. Most of Kibera’s residents fall in the market category known as the Bottom of the Pyramid and live on extremely low incomes. They live on small crowded plots without space to construct latrine solution. In the slum area people defecate in the open or are using for example “flying toilets” which are plastic bags that are used to defecate in and then thrown over the fence or along the road. Informal settlements in Nairobi lack proper infrastructure and have poor access to safe water and sanitation. Latrine emptying is handled by small scale operators working under unsanitary conditions. The lack of proper sanitation creates a serious health hazard for the residents. According to the World Health Organisation in developing countries 80% of all diseases and 20% of all deaths are caused by polluted water from pathogens found in faeces such as viruses, bacteria and parasites. 2 million people die every year from diarrhoeal diseases, of which 90% are children under the age of five.

PeePoo solution for urban slums
The Peepoo sanitation system is an ideal solution in case there is not enough space to construct toilets (such as in urban slums), when settlements are illegal and when people, in particular women and girls, don’t feel safe to use the shared latrine at night. The Peepoo urban slum business model and value chain are based on two components: the Sanitation component and the Agriculture component. Production and supply of Peepoos is required as input. The Peepoo project consists of three programmes: the Community Sales and Engagement Programme, the Peepoo School Programme, and the Agricultural Programme.

Pilot project 2011-2013
Simavi decided to facilitate this innovative pilot project investigating how Peepoo could be implemented and sold as a product on the BoP market. 20,000 slum dwellers and 3,000 school children living in Kibera slums in Nairobi were targeted. The project demonstrated quite a few challenges to make it work in larger scale. The value chain of distribution, collection and reuse of PeePoos was tested successfully. Especially collection and reuse provided lessons learnt.
Results and learnings
The major and most obvious achievement is that today there is a unique and well functioning sanitation system up and running in a slum settlement. Direct sales and hygiene promotion is done by Women from the communities. PeePoo bags are also for sale in (branded) kiosks. Peepos have been distributed in schools and used bags are collected and transported out of Kibera to a sanitation yard on daily basis. Research in the field of biodegradability, nutrients and composting has continued simultaneously.

Results

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<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of Peepoos sold in community</td>
<td>195,759</td>
<td>147,825</td>
<td>588,760</td>
</tr>
<tr>
<td>No of Peepoos collected in community &amp; schools (usage)</td>
<td>119,705</td>
<td>130,670</td>
<td>839,939</td>
</tr>
<tr>
<td>No of sales entrepreneurs</td>
<td>6</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>No of kiosks selling Peepoo</td>
<td>1</td>
<td>13</td>
<td>25</td>
</tr>
<tr>
<td>No of collectors</td>
<td>3</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>No of drop-points</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>No of people in Kibera earning an income from Peepoo</td>
<td>33</td>
<td>50</td>
<td>80</td>
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Many valuable lessons have been learned during the pilot. A few important are mentioned here:

- Preparing the market and creating demand for a push product like PeePoo requires substantial investment in education and promotion to succeed, and takes much longer time than predicted. For these reasons the original target of 20,000 daily users by the end of 2013 have not been reached, but during 2013 great progress have been achieved growing the daily users from about 500 in the beginning of the year to the current level of about 5,000.
- To work closely with the community and the informal leaders is vital for the success in implementing any project in an urban informal settlement.
- After a lot of trial-and-error successful models to scale up have been found
- In poor settlements, there are many projects that have been running for several years and an “NGO mentality” has developed, where support is expected for free. To give credit or anything for free sends the wrong message to the community, and therefore it has been of high importance to position Peepoo as a consumer product.

Simavi managed to introduce a viable business approach in a hard-to-reach area by hygiene promotion, awareness raising and community dialogue to accept PeePoo solution. The combined approach of demand creation, community involvement and offering a cheap, safe and convenient sanitation product makes the business approach successful and improved health environment in low income communities. Simavi-PeePoo case shows a unique applied solution that looks into the whole sanitation value chain. It offers a safe and affordable solution and directly contributes to reuse of human waste for agriculture and food production.