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Strengthening the sanitation market system: WaterSHED's Hands-Off experience

Paper for the WASH systems symposium

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WaterSHED is a local NGO that builds markets to improve the water, sanitation, and hygiene practices of rural households across Cambodia, in support of the Sustainable Development Goals and the Government of Cambodia's targets. This paper describes the systems approach and guiding principles that WaterSHED has developed to strengthen markets for better sanitation and hygiene under its flagship 'Hands-Off' market-based sanitation (MBS) development programme. The current approach has evolved over successive phases of investment activity, learning, adaptation and testing with the goal to accelerate sanitation and hygiene access and use for all in Cambodia. We review the strategic direction, key actors, important insights and results of the programme, from the start-up phase of design and testing, to market facilitation, and through the present phase of market system-strengthening. We conclude with reflections on how to strengthen the capacity and relationships of actors in the sanitation market - and in the wider rural sanitation system - in order to ensure that both are dynamic, inclusive and resilient.

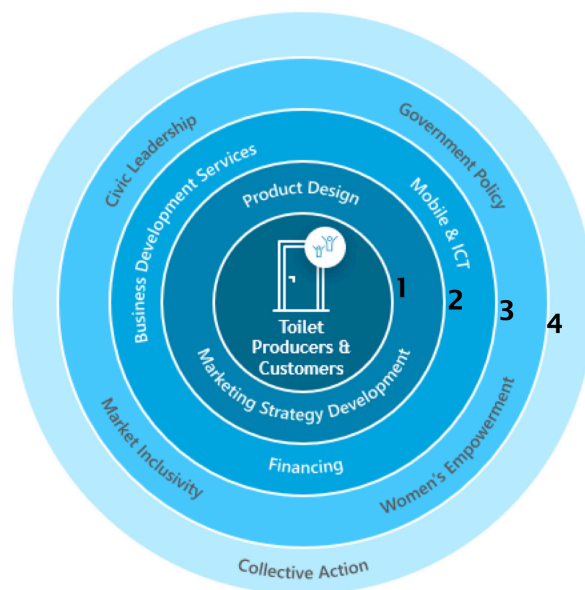
Introduction

Achieving and sustaining the sanitation and hygiene Sustainable Development Goals (SDGs) requires, among other things, robust demand for and sustained supply of appropriate and affordable sanitation, hygiene, and related WASH products and services. Significant private sector participation is needed. Market-based sanitation (MBS) approaches aim to develop a market in which the private sector offers a supply of affordable and desirable sanitation goods and services, and the user makes a full or partial monetary contribution toward the purchase, construction, upgrade, and/or maintenance of those goods and services (Cairncross, 2004). Such an approach should also lead to the strengthening of the private sector (USAID, 2018). Typically, rural MBS programmes intervene at the firm- and household-level of the sanitation market, but there are also barriers to scaling up MBS in the wider business enabling environment and rural sanitation context. These systemic barriers require different interventions at multiple levels (USAID, 2018). In this paper, we share WaterSHED's systems approach to developing and strengthening the rural sanitation market in Cambodia, and trace the evolution of experience and learning under WaterSHED's Hands-Off programme.

Overview of WaterSHED's systems approach in sanitation

WaterSHED engages actors at the centre of the rural sanitation system, including small businesses, customers, financiers, and local government. It also engages stakeholders operating at higher levels, including sub-national and national government officials and non-governmental organisations (NGOs), to facilitate the adoption of hygienic household toilets across rural Cambodia. The goal is to build a market that functions independent of traditional aid. The approach draws on in-depth research to identify strategic opportunities and gaps in the wider system, and then works to strengthen the capacity and relationships between key actors to create a more dynamic and resilient market and network. WaterSHED intervenes to address barriers at multiple levels of the sanitation market system, as shown in Fig. 1, starting with the inner core demand and supply functions, and moving out to address business context, enabling environment and activities to enhance sustainability and inclusion.

Figure 1. Interventions by level within the rural sanitation market system



Ring 1 Core sanitation market

WaterSHED facilitates the development of sanitation products and services, businesses, sales agents, and customers. Activities promote effective sales and marketing; accessible and affordable supply of the right products by local focal point businesses; and engagement with government agencies and local officials to take the lead in promoting safely managed sanitation as new markets are penetrated.

Ring 2 Business environment

WaterSHED strengthens the capacity, performance and sustainability of local sanitation entrepreneurs. These interventions engage lenders to increase access to credit for businesses and consumers, provide services to professionalise businesses, and introduce tools for greater efficiency in areas such as inventory and sales order management.

Ring 3 System context and enabling environment

To strengthen the broader sanitation market system and to address equity and inclusion barriers, WaterSHED intervenes under four programme areas: *Civic Leadership* to activate local, elected officials to leverage markets in the drive toward universal sanitation; *Women's Empowerment* to engage and empower women across the sanitation market system, including in government; *Government Policy support and advocacy* to address context-level barriers; and *Market Inclusivity* research and initiatives to enable access by vulnerable groups.

Ring 4 Collective action

Sustainable impact at scale in WASH often depends on national coordination and alignment of approaches among actors and stakeholders. In an environment like Cambodia, that is dense with actors and donor funding, improving the broader context and market conditions for sustainability requires collaboration. It is necessary to address the weak points in coordination with important system actors (e.g. those who control regulation, affect social norms, offer subsidies, etc.). Change at this level requires convening actors, including government, to align around a shared vision of the future, to coordinate mutually reinforcing activities, and to continuously learn and exchange information. To that end, WaterSHED supports facilitated collaboration at the sector level. Building on existing structures, the goal is to achieve collective action in Cambodia's rural sanitation subsector. This requires improved infrastructure for communication and collaboration; shared metrics; and mutually-reinforcing activities.

Hands-Off philosophy and vision

The name Hands-Off refers to WaterSHED's behind-the-scenes role as an industry facilitator, engaging both the private sector and government to lead improvements in WASH sustainability, access, and behaviours. A key feature is discipline – both to maintain a light touch and to avoid actions that create dependencies. It requires a concrete vision of how the activities will work post-intervention, when external funding for programme activities ends. It means constantly asking: *'who is going to do what, how and with what resources once our programme has ended?'* This focus on sustainable outcomes requires the

facilitator to have an exit strategy from the beginning and a game plan for progressively withdrawing from key roles as they are taken up by private and public sector actors.

Results to date

Since 2011 more than 200,000 pour-flush toilets have been purchased by rural customers, generating at least USD 10 million in revenue for more than 300 focal point business partners. These businesses serve an area that comprises roughly 40% of the population of Cambodia. More than 1,000 elected local government officials - nearly 40% of them women despite female representation of less than 20% in local government (MOWA, 2014) - have developed new leadership skills and capacities to address sanitation deficits in their jurisdictions, accelerating household adoption of improved toilets. Women have also been supported to take other roles in the sanitation market, as consumers, community-based sales agents and retailers, and latrine suppliers. Rural improved sanitation access jumped from 22.9% of households in 2009 (CSES, 2010) to 67.4% in 2016 (CSES, 2017) across the country.

How did WaterSHED get here?

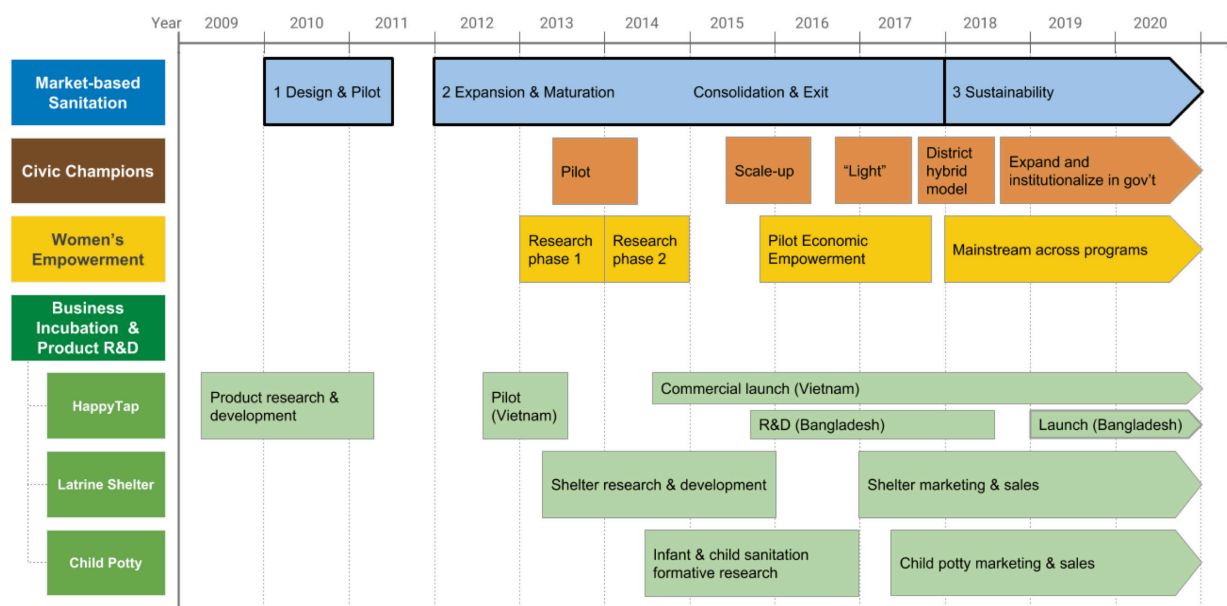
We trace the development of the Hands-Off programme through three phases of its evolution to extract lessons for building and strengthening a rural sanitation market system. Figure 2 provides a timeline of major interventions. Table 1 (p5-6 below) summarises core activities and learnings in each phase.

Phase 1. Start-up – design and piloting [2009-2011]

WaterSHED conducted formative research to identify opportunities for market development in rural sanitation. The initial focus was inner rings 1-2 (Figure 1), with interventions primarily at the firm and consumer level (Table 1). With the support of provincial government, WaterSHED engaged elected commune officials (commune councillors) before launching market facilitation activities in each commune – including them in the design of the new approach from the start (Pedi et al., 2011).

Establishing a sustainable system to activate household demand¹ was particularly challenging. Building an in-house team of sales agents would have been a relatively quick way to generate toilet sales, but would have compromised sustainability. Instead WaterSHED chose to support local businesses to recruit independent community-based latrine promoters who received commissions directly from the businesses for latrine sales. This was a strategic choice to enable WaterSHED's future exit from its role of facilitating market transactions, in line with the *Hands-Off* guiding philosophy.

Figure 2. Timeline of selected programmes



Note: selected programmes are discussed below.

Phase 2. Expansion, maturation and consolidation [2012-2017]

The second phase proved that the original *Hands-Off* market development model that was developed and tested in the pilot phase (Pedi et al., 2011) was robust and could achieve scale - reaching 40% of the Cambodian population (Table 1). It expanded from four districts in Kampong Speu and Takeo provinces during the 2009-2011 pilot to a total of 54 districts across eight provinces during the 2012-2014 expansion phase.

This rapid expansion required adaptive monitoring for timely course correction; monitoring staff management indicators alongside programme outputs helped maintain a light touch, which in turn allowed for a high level of programme cost-efficiency (USAID, 2018). A WaterSHED market facilitation specialist, based in each district, identified and trained businesses, local government actors, and community-based sales agents – brokering new relationships and supporting them to work together.

In 2015, the facilitation specialists focused on elevating their interaction with sanitation enterprises to a more consultative, business-driven relationship. This was an important step toward obsolescence and was accompanied by efforts to consolidate and streamline ring 2 activities as WaterSHED began to evaluate gaps in ring 3. These efforts included refining consumer financing options; using business intelligence tools to improve operations; and simplifying and standardising business support tools.

WaterSHED also identified critical challenges for focal point businesses. Rural small and medium-sized enterprises (SMEs) were typically weak in recruiting, training and managing a rural salesforce. WaterSHED needed to find a more effective and sustainable way to activate sanitation demand.

Civic leadership: innovation to increase impact, efficiency and outcomes

Noting that exceptional results were achieved in some communes but not in others, the field team hypothesised that the discrepancy was due to the behaviour of local leaders. On their own initiative, some commune councillors and village chiefs had conducted behaviour change promotion, results-based monitoring, and honest brokering. Meanwhile, early experiments connecting suppliers with commune councillors for demand activation had generated promising results.

WaterSHED learned that, when committed and inspired, commune councillors could achieve better results, quicker and cheaper than other sales and marketing or behaviour change efforts. They were present in every commune in the country, had a mandate to improve community development and sanitation; and would be present for the foreseeable future. Recognising their latent potential to influence their communities to adopt sanitary behaviours, WaterSHED designed a leadership development programme, *Civic Champions*, to activate commune-level officials in the drive toward universal sanitation.

Recognition of participants who demonstrated improved leadership skills and who achieved sanitation goals proved to be a powerful, enduring motivator. Those participants who had met coverage targets in their communes were eligible to present their leadership strategy to their peers; this opportunity for peer-learning doubled as a chance to reward participants for putting their leadership skills into practice, as the winning presenter received an award and cash prize.

The success of the 2013 pilot iteration (2 districts) demonstrated the feasibility and impact of the *Civic Champions* programme and led to a larger iteration (16 districts), which explored ways to make the approach scalable. A subsequent iteration (30 districts) focused on lower-cost implementation, while the most recent iteration (18 districts) emphasised provincial leadership and engagement of the national Ministry of Interior. The programme exemplified how strengthening a complex market system could make it more sustainable. By enabling commune officials to rally their communities, set a vision for development, and execute against it, a gap in the system that had previously manifested as difficulties in sustained demand generation could be addressed - and even transformed into an opportunity.

Market inclusivity: Financing for customers and businesses

WaterSHED worked with microfinance institutions (MFIs) to develop toilet loans for customers. Instead of subsidising and/or guaranteeing loans (potentially distorting the market and creating a dependency), WaterSHED facilitated new and direct relationships between MFIs, focal point businesses and community sales agents to enable customers with liquidity constraints to acquire toilets (Plan, 2014).

During this phase, WaterSHED also tested targeted hardware subsidies in the form of a time-bound discount voucher for the poorest households. Importantly, the subsidies were only offered in villages with high sanitation coverage ($\geq 80\%$) and strong local leadership to minimise demand distortion. Evaluations concluded that the level of subsidy offered by the vouchers triggered latrine purchase by raising its priority for those who had some financial means, but that it was insufficient to overcome purchase barriers for the very poor.

Women's empowerment

Beginning in 2013, WaterSHED conducted formative research on gender in rural WASH markets. While market interventions provided scope for women's economic engagement, there were gender-specific challenges

hindering access to the opportunities presented (such as starting a sanitation enterprise, or working as a sales agent of WASH products and services). To tackle the barriers, WaterSHED implemented the *WEwork Collective* - a professional training, coaching, and mentoring network of more than 200 rural Cambodian women aimed at improving women's decision-making power and productivity as actors in the rural sanitation value chain. WaterSHED also developed a campaign focused on the recruitment and retention of female sales agents to be used by focal point businesses (BMGF, 2018).

The programme was carefully designed to not create dependencies nor provide prescriptive technical training. To increase the likelihood of sustainability the programme emphasised entrepreneurial attitudes and professional networks, and where possible it prioritised participant-driven elements such as peer mentoring circles.

Product design: Addressing product gaps in the market

Early monitoring during the pilot phase found that middle income customers often delayed installation of their purchased latrine core package while saving for a high-end latrine shelter. Formative research by WaterSHED also revealed a critical need for consumer-oriented products to enable the safe disposal of infant and child faeces (Miller-Petrie et al., 2016) and to encourage consistent handwashing with soap (Jenkins, Anand, Revell, & Sobsey, 2013).

In response to these and other identified product gaps (and while simultaneously turning outward to expand activities in ring 3) WaterSHED implemented additional iteration and streamlining at the level of ring 1. This included continued human-centred design, consumer-testing, and supply chain engagement to realise: i) a flat-pack affordable latrine shelter; ii) the HappyTap portable handwashing basin designed for behaviour change; and iii) the distribution of child-friendly potties in rural markets. In 2015-16 a group of social enterprises was spun-off to produce and distribute these products in Cambodia, Vietnam and Bangladesh. The new teams brought the skills and business management capabilities needed to produce new products and bring them to market.

Exiting the market

The ultimate aim of Hands-Off MBS is for WaterSHED's role to become obsolete. Therefore, this phase also included a 'dry run' of the cessation of the programme's direct market facilitation work (activities primarily in rings 1-2). Beginning in late 2016, the field staff tentatively stopped such activities (e.g. meeting with focal point businesses and sales agents to coordinate schedules, prompting

the creation of monthly sales plans, helping to track/plan product inventory). WaterSHED kept field staff in place and continued monitoring transactions in the market so that if they suddenly dropped, the programme could investigate and address the weak points in the chain. However, consumer purchase and adoption continued strongly, allowing WaterSHED to withdraw its district-based market facilitation specialists by the end of 2017.

Phase 3. Sustainability [2018-2020]

Following its exit from the inner two rings², WaterSHED aims to bolster the sustainability of the sanitation market system by focusing on the outer rings. It also supports the continued growth of its social businesses with the ultimate goal of selling its stake in them.

In 2018, WaterSHED introduced the Provincial Sustainability Support (PSS) programme, which succeeds the Hands-Off MBS programme and supports provincial government staff to take over key market facilitation, multi-stakeholder coordination, and monitoring roles that are critical to ensure universal access (see Table 1). PSS teams work closely with Provincial Working Groups³ (PWGs) to strengthen their capacity and networks, so that they are able to refine and execute provincial action plans (PAP). Concurrently, WaterSHED is working at the national level to institutionalise key elements of the Civic Champions programme. It is seen by the Ministry of the Interior as a highly effective, broad-based enabling programme that supports decentralisation across multiple development sectors – not only in sanitation.

This phase also emphasises the need for structured facilitation of collective action in order to weave a cohesive WASH sector – comprising government, NGOs, private sector and academia – that is collectively accountable for shared goals.

By 2020, WaterSHED aims for a more comprehensive exit with a specific endgame (e.g. commercial adoption, government adoption, or replication) depending on each intervention (Gugelev & Stern, 2015). With greater advocacy and partnership, WaterSHED expects that these approaches will achieve systems change that can be integrated across a more diverse and geographically extensive set of WASH programming.

Table 1. Activities & selected learnings from the Hands-Off MBS programme

Phase	Core Activities	Selected Learnings
1. Start-up – design and piloting [2009-2011]	<ul style="list-style-type: none"> • Product development • Market assessment • Marketing strategy development • Supply chain development • Test-selling • Initial business development services • First rural sanitation industry conference bringing together latrine supplier businesses and sub-national and local government front-line actors 	<ul style="list-style-type: none"> • Encourage competition / keep barriers to entry low for new suppliers • Work with existing best-fit businesses where possible • Provide training and support to businesses, but require them to take the risk and make the investment • Understand that sanitation can and often should be a complementary product line within a larger business • Identify exit strategies for the market facilitator (in this case, WaterSHED) prior to implementation • Involve the local government in behaviour change promotion, results-based monitoring, and honest brokering, from the start • Encourage recruitment of facilitation staff and sales agents from within local community
2. Scale-up, maturation, replication & consolidation [2012-2017]	<ul style="list-style-type: none"> • Replication across 8 provinces representing 40% of the population of Cambodia • Conducted <i>Rural Sanitation Consumer Adoption Study</i> to evaluate pilot outcomes against baseline, and assess scale-up process • Development of business mobile app to facilitate sales tracking and improve business management • Establishment of Business Intelligence Unit (BU) within WaterSHED to track sales of each FP business across 8 provinces • Civic Champions leadership development programme for local commune-level officials, designed, tested, evaluated, and scaled up across all target provinces • MFI engagement to develop and offer household toilet loan packages to support consumer financing • External evaluation of <i>Hands-Off</i> programme • Piloting of a targeted consumer voucher program to provide access to poorest households (lower 30% income distribution) • Operational partnerships with agencies conducting CLTS⁴ and behaviour change campaigns • Development of a national, open-source social marketing campaign (adopted by over 30 agencies across 8 countries) • Establishment of <i>WaterSHED Ventures</i> (Cambodia), to develop and promote affordable & aspirational sanitary products • Design, testing, and scale-up of the Women’s Empowerment Program, which included a nine-month workshop series, job-specific coaching, and regular peer-mentorship groups • Exit from facilitation work in inner two rings - district-based field teams transitioned to support sustainability and province-led coordination of rural sanitation actors 	<ul style="list-style-type: none"> • Build in monitoring processes and opportunities for formative research (especially in-depth, consumer-centric research) to identify critical bottlenecks/ gaps in the system and possible evidence-based solution (e.g. WaterSHED’s research revealed the strong influence on purchase decisions of product exposure and peer pressure; the importance of home delivery, affordable prices, and in-person promotions; the key role of government officials in brokering trusted connections; and other lessons) • Building for sustainability means recognising there is a local system and figuring out how to strengthen and use it - rather than creating a substitute / dependency: <ul style="list-style-type: none"> - <i>Focal point business</i>: rather than creating demonstration businesses, work with existing business; support organic rather than artificial growth; it’s their business, they need to own it (invest their own resources; pay commissions, build own relationships, etc.) - <i>Demand generation</i>: develop emotionally compelling, commercial-grade tools; make them open-source, remove logos, and integrate with government-led campaigns - <i>Local government</i>: require real buy-in - even funding; the engagement of local officials must be genuine in order to persist beyond facilitator’s project and budget timeframe - <i>MFIs</i>: encourage direct relationships with business and the use of market-sourced capital; direct subsidies and loan guarantees may compromise sustainability - <i>Monitoring</i>: strengthen government staff who have an existing mandate to collect relevant data; where possible, avoid using third-party enumerators • Developing the leadership potential of local government officials can significantly accelerate outcomes. More importantly, it enables local officials to lead and convene the networks of actors who are critical to advance WASH goals. In that way, it builds resilience and represents systems strengthening in the strictest sense • Pro-poor subsidies: <ul style="list-style-type: none"> - introduce targeted subsidies once coverage is high - monitor patterns in uptake to ensure true inclusivity (i.e. poverty is multidimensional and many constraints will not be addressed with price discounts alone) • Iterate on and strengthen core components of the market using new learnings while expanding to and identifying upstream gaps in the market (outer rings) • Create an enabling environment in which higher levels of government ‘grant authority’ for local leaders to take initiative and influence change • Deliberately strike a balance between recognition of embedded social norms (e.g. hierarchical authority, taboos, gender norms) and provocative programming that accelerates progress

Phase	Core Activities	Selected Learnings
3. Sustainability [2018-2020]	<ul style="list-style-type: none"> • Implement <i>Graduation Programme</i> to recognise and celebrate the independent achievement of focal point businesses on the path to long-term viability - Focal point businesses and demand activators are encouraged to use appropriate technology for business data to increase long-term viability • <i>Provincial Sustainability Support (PSS)</i> programme supports Provincial Working Groups in each province to: <ul style="list-style-type: none"> - play facilitation role in continued development and strengthening of subnational systems - develop monitoring information system (MIS) - collect and analyse data using MIS - know, disseminate, enforce, collect feedback on relevant regulations and guidelines - link subnational authorities, suppliers, MFIs, and NGOs for increased coordination and to encourage shared buy in to objectives - engage district officials to work alongside their commune counterparts in support of PAPs - host industry conferences that include private sector actors • Institutionalise key elements of <i>Civic Champions</i> in government systems • Convene local actors to develop / refine and implement highly contextualised solutions for challenges such as fecal sludge management, child sanitation, and households that are poor or living in challenging environments • Encourage government mechanisms, especially at subnational level, to provide ‘backbone’ support (Kania & Kramer, 2011) for more effective, structured collective action 	<p>Tentative learnings:</p> <ul style="list-style-type: none"> • Recognition is a powerful motivator; mechanisms to recognise achievement can be built into the system and thereby ensure sustained engagement of local actors: <ul style="list-style-type: none"> - Celebrating graduation of focal point businesses helps overcome the perverse incentive for them to request continued support - Local officials recognised by higher administrative levels for their contribution can achieve greater results than those paid by NGO facilitators; and their effort is self-actuating and therefore more likely to be sustained • MIS and ICT solutions are most effectively adopted and sustainably used when they build on existing local systems and when users (especially local government) internalise the value of the information they produce • ‘Can it be institutionalised?’ as part of the system is a more nuanced question than ‘can it be scaled or replicated?’ - balance innovation with familiarity and feasibility: a highly sophisticated solution or model may be very attractive, but is of little use if it cannot be incorporated into existing systems due to low familiarity, high cost, etc. • Development of professional and organisational networks may be an effective way to measure and strengthen systems: <ul style="list-style-type: none"> - measuring changes in networks may offer insight into system-level changes over time - measuring gender-disaggregated changes in professional networks of sanitation actors may offer insights into changes in gender dynamics in the system

Reflections

Focus on obsolescence - building systems rather than delivering services

Planning an exit strategy, conducting sustainability checks on every intervention, and having a light footprint are all sides of the same 'local system building' coin. However, withstanding the pressure to deliver services requires top-level commitment and internalisation at all levels of the facilitator's staff.

The local system may not be obvious (e.g. for data collection, partner coordination, demand generation, and distribution) but facilitators must avoid concluding 'it doesn't exist' or 'local capacity is low so we'll do it ourselves.' Instead, implementers must redouble efforts to identify the local system, then carefully consider the incentives and support needed, as well as who will pay and who will implement. In MBS, this includes 'organic business development': identifying existing businesses interested in expanding, prepared to shoulder the financial risk, and willing to use their own resources.

Leadership development for local government holds immense potential

Leadership development for local officials is a system-strengthening approach with immense potential, but one that is often overlooked as beyond the scope of a sanitation development programme or simply unfeasible. Much like the organic approach to develop focal point businesses, WaterSHED only worked with government officials willing to submit a written application, commit to a 9 to 12-month programme, and pay an enrolment fee. Recognition proved to be a powerful, enduring motivator.

A cornerstone of WaterSHED's *Hands-Off* MBS programme was early recognition of the fundamental role of government. This was counter-intuitive in private sector development, where conventional wisdom is for business to comply with but generally avoid government. WaterSHED's programme operated on the premise that, because of the significant externalities associated with sanitation, government must be the fundamental duty-bearer. Consequently, local government must be the critical frontline actor to drive progress. When WaterSHED's programme ended, genuine government engagement was critical not only to avoid a collapse in supply and demand, but also to the significant progress that followed.

Decision-making that is both research-driven and cost-conscious

The systematic use of formative research before developing solutions paid off. Testing innovations (with controls, where possible), regular monitoring, and

evaluating new and existing programmes required time and commitment to developing local capacity. For example, in-depth consumer research helped identify messages and images that strongly resonated with the target audience, and which underpinned widespread demand generation. Having a small-business mentality was critical to better understand focal point business decision-making. It meant rationalising every expenditure in terms of long-term value; delaying expenditure where possible rather than accelerating it to meet a funds acquittal timeline; and always using existing local resources. Being frugal was well aligned with having a light footprint.

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Note/s

1. 'Demand activation' is meant to be separate from 'demand generation', for which there were numerous interventions based on the Hands-Off guiding philosophy (e.g. an open-source demand generation toolkit). The distinction is elaborated in USAID 2018.
2. At the end of 2017, WaterSHED stopped activities focused on firm- and household-level (rings 1-2). The exception was that WaterSHED continued developing and supporting the introduction of mobile technology for improved business management.
3. PWGs are technical teams of provincial officials working on water and sanitation in their respective departments.
4. CLTS refers to Community-led Total Sanitation, which is a community-wide participatory approach aimed at ending open defecation, widely used in rural contexts in developing countries.

Keywords

market-based sanitation, local leadership, sanitation marketing, sustainability, systems approach

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