

# CRITICAL SUCCESS CRITERIA FOR EVALUATING SANITATION MODELS

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The 'share' logo, consisting of a stylized orange and white circular icon followed by the word 'share' in a lowercase, sans-serif font.





**BOYS** **BATHROOM**

**GIRLS**

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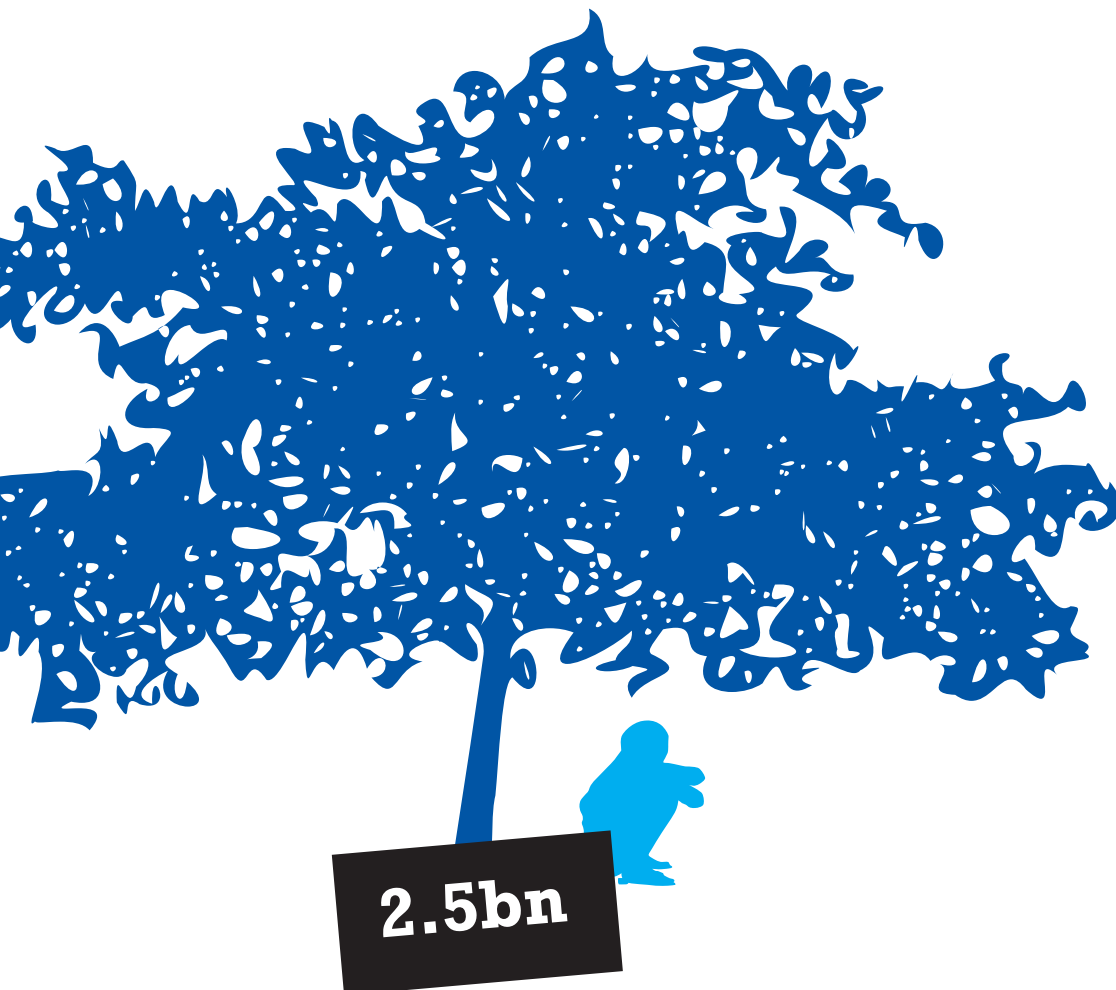


# INTRODUCTION

**Unilever believes that business has a role to play in solving the global sanitation crisis that leaves 2.5 billion people without access to improved sanitation. In 2012, Unilever convened the Toilet Board, a group of like-minded companies, NGOs and research professionals, with expertise in sanitation and a desire to take immediate action to address this issue. The Toilet Board aims to foster commercial approaches to address this crisis.**

The Toilet Board created a set of Critical Success Criteria (CSC) that evaluate current sanitation models. These criteria are designed to achieve two aims:

- (i) To help identify the most promising Current Models, including identification of limitations within these; and
- (ii) To help prioritise and shape Future Models.



As part of this process, The Toilet Board developed a tool to simply and easily rank the success of sanitation interventions. This tool can be used in the following ways:

- A model to describe Critical Success Factors, their inter-relationship and relative importance;
- A diagnostic tool that can be used to score/rate sanitation models; and
- A ranking method for the Current Models matrix.

**It could also be used to support longer term planning:**

- As a tool for continuous improvement.
- As a rating / grading system inspiring competition / gaming to achieve a 'best in class' status.
- As a foundation for a sanitation roadmap, establishing a firm commitment to improve sanitation within a fixed time period, with specific goals and targets.

**The criteria were developed following a rigorous analysis of the current tools available:**

- There is a clear lack of defined factors to measure successful sanitation interventions.
- Various methods to measure WaSH already exist and are used successfully.
- Studies have already been conducted to analyse multi-location sanitation interventions. The conclusions from these studies were built into the CSC.
- Toilet Board Members provided insights, based on experience, in various aspects of sanitation. For example, the London School of Hygiene and Tropical Medicine helped to score some of the current models.

Special thanks Elisa Roma, Val Curtis, Guy Hutton, Lisa Smith, Carolyn Jones, Jessica Graf & Jonathan Hague for their contributions around scoring current models and suggestions to include additional relevant information

## Development of Critical Success Criteria

### THE CRITICAL SUCCESS CRITERIA FOR SANITATION ARE BASED ON THREE PILLARS:

- Economic
- People
- Environmental & Technical

### SPECIFIC ISSUES THAT WERE CONSIDERED WHEN DEVELOPING THE CSC INCLUDED:

- Women / gender issues relating to dignity and continuing education for the adolescent girl child
- Dignity of workers involved in various sanitation services
- Evolution of the sanitation ladder to include the environmental aspects, including recovery of materials and fuels from sewage
- Users, their need / desire to use an improved facility and their willingness to pay



## How to use the criteria

The proposed criteria are qualitative in nature. They do not define the on-the-ground performance standards for a sanitation model. For each criterion, quantitative KPI's could be further defined. For example, for "Consumer engaged", the potential KPI's could be: sales per sales visit, consumer satisfaction (one month on, one year on), % sales resulting from peer recommendation etc.

The definition of these KPI's are beyond the scope of this phase of work, but could be investigated in the future. Also, it is possible that some KPI's could be applied across all models whilst others would be model-specific (on basis of available data etc.).

- The criteria aim to be applicable to any sanitation model. Sharper sets of criteria could be set out if they were specific to a model segments (household, shared household, community, public).
- The criteria rate the sanitation model. The models are judged in their current setting. They may score differently in different contexts (e.g. type of habitat –rural / urban, progress of sanitation in the specific country/ region), e.g. the Toilet Academy model is established and working well in Cambodia but is in its infancy in Vietnam.
- For each criteria a score ranging from 0-3 could be assigned. The maximum score a model can achieve is 33 (3x11). Scoring will be done by the Toilet Board for the purposes of guiding the Toilet Board's future work. Neither the scoring system nor the scores will be made public.
- A model's total score is a measure of its attractiveness to the Toilet Board for further exploration and potential investment, but it's not 'the full story' as we recognise that not all criterion are equally important. Rather than weigh the criteria into an algorithm, we have specified a "minimum acceptable standard" for each criterion in red. The Toilet Board would help redesign any element of a model that falls below the minimum standard, before investing in taking that model to scale.
- Beyond initial use as a screening / assessment tool for Current Models and opportunity identifier for Future Models (e.g. enabling us to spot critical capabilities in which all models are weak).
- It is assumed that any intervention that the Toilet Board might consider associating with, will have a minimum scale (few hundred/ thousand). The criteria may not apply very well to pilots involving a small number of toilets / households.

# CRITICAL SUCCESS CRITERIA



## Critical Success Criteria – Economic

	<b>Score = 0</b> major deficiencies	<b>Score = 1</b> common practice, some deficiencies	<b>Score = 2</b> good practice	<b>Score = 3</b> the ultimate
<b>Value chain set-up</b>	No holistic view of value chain, who is providing which services, necessary hands-off etc. Patchy co-operation between players. Unskilled field force/ community workers.	<b>Some parts of the value chain are integrated and hands-off (e.g. between sales force &amp; masons) take place. Other parts of the value chain are not operational or do not meet the needs of the setting. Predominantly male workforce. Review streams ill-defined.</b>	Value chain is appropriately designed for the setting and is operating reasonably well although some weaknesses exist (e.g. in demand, disposal). Services levels to customers are monitored. Revenue streams tied up and transparent. Gender-balanced workforce is in place. Compliance with relevant regulations throughout the value chain.	The value chain is inclusive & well integrated with established businesses working together to deliver a complete service of a high standard. Customer service levels are monitored and complaints dealt with swiftly & efficiently (care-lines!).
<b>Rewards</b>	Individuals & groups involved in the value chain do not make sufficient money to meet their needs. Model is propped up by donor funding.	<b>Individual players in the value chain (e.g. sales people, masons) make salaries around minimum wage levels. At project level, donor funding is required to ensure continuity of the model.</b>	At the level of the project (e.g. people who supervise the sales force, marketers, latrine manufacturer...) sufficient profit is made to ensure that employees are well paid and the model continues. High-level head-office/ organisation overheads relating to the model are not covered.	At the level of the initiative (e.g. head-office staff, co-ordination, communications resources), revenues from the model cover costs, whilst all those involved make returns that incentivise their continued involvement.
<b>Scalability*</b>	Local/single town-based model using local materials and services. Less than 10,000 users use the facilities daily. Cannot cope with increasing demand for neighbourhood and farther habitats.	<b>Regional model that can potentially serve populations up to 100,000+ across a few habitats within a region. Service levels and user satisfaction drops beyond a scale of 200,000 users &amp;/or locations (towns / villages) expanding beyond 10.</b>	Model equipped to serve a population of over a million with standard suite of materials and services catalogued and ready to deploy. Modern business enablers (Internet/ phones/ banking/ credit card) actively deployed across the business model to ensure efficiency in services and satisfy increasing demand (up to 10 million).	Global partnership-based model where all partners across the technical value chain, demand creation specialists finance and state/ country leads are committed to the sanitation priority through a strategic vision and 3-4 country relevant implementation plans are developed to reach a scale of 50 million population.
<b>Attractive returns on investments</b>	Capital/ one time investment (mainly from donor funding) for setting up improved sanitation facilities. Little consideration for running expenses and ROI.	<b>Capex &amp; Opex both considered. Besides the field operators and managers making money investors believe they will get healthy returns but may be disappointed at times (e.g. when large numbers of users move over to another model).</b>	Besides consistent financial returns, monitoring of social ROI (e.g. reduced school dropouts, improved health confidence & dignity) is considered.	Ideal model. Financers and social entrepreneurs keen to invest in the partnership and are assured of financial returns and enhanced reputation/ goodwill.

\*Scalability could be considered across both existing as well as future models (for future models relevant predictive tools to estimate the scalability/ replication potential may need to be developed/ deployed)



## Critical Success Criteria – People (users)

	<b>Score = 0</b> major deficiencies	<b>Score = 1</b> common practice, some deficiencies	<b>Score = 2</b> good practice	<b>Score = 3</b> the ultimate
<b>Value Equation - people want a toilet</b>	People are not aware of the option of having/ using the model's toilet.	People are aware of the option of having/ using better sanitation facilities (including the model's toilet) and are interested in it, but are not clear on what benefits they would derive or the costs (financial & non-financial) of having one v/s not having one.	High awareness among individuals & communities to improve existing sanitation. Mixed appreciation of its value. In field trials, innovators & early adopters have picked up the model resulting in penetration >15% but struggling to reach tipping point.	Best in class demand creation. Consumers are motivated to advocate/ promote (with friends and relatives) improving existing sanitation conditions. In field trials >50% penetration is achieved as the model delivers on its promised benefits. Innovative products, services & communication ensure the model does not lose customers to lower cost/ lower quality copycat competitors.
<b>Usage - ease of getting and using the toilet</b>	<u>Purchase:</u> Logistical barriers (lack of space, transport, installation skills) prevent installation. <u>Pay-per-use:</u> Logistical barriers (distance to facility, opening hours...) prevent use.	<u>Purchase:</u> Specialist equipment & expertise required for installation at additional cost. <u>Pay-per-use:</u> Logistical barriers (distance, opening hours...) mean facility is used c.50% of time.  Facility design does not meet one or more of the basic functional needs of a toilet (safety, security, cleanliness, queuing time/ conditions...).	<u>Purchase:</u> To keep costs down, toilet can be installed by householder or with help from neighbours. <u>Pay-per-use:</u> There are no logistical barriers to use so compliance is high, >75% of time.  Facility design meets the basic functional needs (safety, security, cleanliness, queuing time/ conditions...) of the whole community incl. women, children, elderly, disabled.	<u>Purchase:</u> Toilet is easy to install and expert services are accessible and affordable. <u>Pay-per-use:</u> Value-adding associated services drive compliance close to 100%.  Facility design also delivers emotional needs for dignity, privacy. It's considered a pleasant place to go.

## Critical Success Criteria – Environmental & Technical

	<b>Score = 0</b> major deficiencies	<b>Score = 1</b> common practice, some deficiencies	<b>Score = 2</b> good practice	<b>Score = 3</b> the ultimate
<b>Waste</b>	Waste (including menstrual waste) is not securely contained under most conditions (e.g. heavy rain). Mismatch between installed & actual waste capacity. Waste transportation, disposal & / or treatment is not managed.	Waste (including menstrual waste) is securely contained but services around removal (e.g. pit emptying) not fully harmonised. Waste capacity adequate but gaps may exist in transport, disposal and treatment services.	Waste (including menstrual waste) is contained, ongoing management services in place and treatment (inactivation of infectious material) and disposal complies with global health and environmental standards.	Value is derived from waste (via household use or sale) in the form of fuel / fertiliser.
<b>Water</b>	Water is required but is not readily and constantly available.	Water is required and is available for most applications. Water scarcity might be experienced from time to time.	Minimal water required (for hand-washing & cleaning) & is available, or significant water is required but is readily available.	Water use is minimised in water-scarce countries. Solid waste is dewatered to lower transport & treatment costs & enhance value (of waste).
<b>Robust design &amp; manufacturing</b>	By design, the installation has a limited (<3 yr) lifespan. Wide variable in materials & construction methods result in variable quality of finished product.	The installation is designed for long-term use (3+ years). Basic systems in place to guarantee materials & manufacturing quality.	The installation is proven to withstand long-term (3+ years) use, either in field or via product-testing. Materials sourcing & manufacturing enables high quality installations.	World-class design has created a product that consumers love (vs. like). Manufacturing is optimised not only for quality/ cost, but also to offer flexibility & choice, providing a desirable product line of sanitation options.
<b>Maintenance &amp; cleaning</b>	Facility is not designed with ease of maintenance in mind. No maintenance services are operational.  There are no arrangements for cleaning, with resulting problems of dirt, odour, pests & disease.	Some aspects of the design lend themselves to ease of maintenance. Maintenance services (spare parts, technicians) can be found but are not readily available.  Communities/ consumers/ operators have the products & knowhow to keep the toilet sufficiently clean to use. Occasionally malodour and pests/ insects encountered in the facility.	Design optimised for minimal, easy maintenance. Maintenance services are readily available.  Products & knowhow are available to keep the toilet free from malodour & premises are pleasant to use/ visit.	Design optimised for minimal, easy maintenance. Maintenance is proactively managed, pre-empting blockages & service disruption.  Products & knowhow are available to keep the toilets hygienically clean on a routine basis.
<b>Hygiene</b>	No facilities for hand-washing with soap. Little consideration to prevent exposure of field operators to human waste. No ventilation for dry pit latrines resulting in breeding ground for flies.	Facilities for hand-washing with soap exist but at some distance from toilet. Provision to address exposure of field operators to human waste. Provision of ventilation for dry pit latrines.	Facilities for hand-washing with soap are next to toilet and are well maintained. Technical provisions and good training of field operators, minimises exposure to human waste.	Integrated hygiene/ hand-washing promotion results in high levels of compliance and protection across consumers and field operators.

# EXAMPLE: CLEAN TEAM, GHANA



**TOTAL  
SCORE  
25/33**

- Strengths in users / demand creation, scalability potential, robust design and water management
- Areas to improve appear to be maintenance & waste management, among others

**SCORE  
10/12**

## Critical Success Criteria – Economic

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**SCORE**  
6/6

## Critical Success Criteria – People (users)

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## Critical Success Criteria – Environmental & Technical

**SCORE**  
9/15

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## Key References

- Hugh Waddington, Birte Snilstveit, Howard White, and Lorna Fewtrell (2009). Water, sanitation and hygiene interventions to combat childhood diarrhoea in developing countries. The international initiative for impact evaluation – Synthetic Review
- Jennifer R. McConville (2006). Applying Life Cycle Thinking to International Water and Sanitation Development Projects: An assessment tool for project managers in sustainable development work. Michigan Technological University
- Sarah Parry-Jones (1999) Optimising the selection of demand assessment techniques for water supply and sanitation projects London School of Hygiene & Tropical Medicine, UK.WEDC, Loughborough University, UK
- [www.pottyproject.in](http://www.pottyproject.in)
- UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water Report (2012)
- Guy Hutton, Laurence Haller and Jamie Bartram (2007) Global cost-benefit analysis of water supply and sanitation interventions Journal of Water and Health | 05.4 | P 481-502



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