Scaling Sanitation
Lessons learned from HWTS users and entrepreneurs
PATH’s Vision: A world where innovation ensures health is within reach for everyone.

PATH is working in countries shaded orange. Area of bubble indicates staff per office.
How can household sanitation reach global scale?
PATH’s Safe Water Project

To what extent do market-based approaches help accelerate widespread adoption and sustained use of household water treatment and safe storage solutions by low-income populations over time?
Addressing Gaps In The Market

ACCEPTABILITY: Make it easier to design products that meet the needs of low-income consumers

REACH: Catalyze partners to explore new and creative distribution & sales channels

AWARENESS: Better understand how to influence purchase and sustained use

Health Impact Through adoption and sustained use by vulnerable populations

Research and development -> Product design -> Production -> Marketing -> Sales and distribution -> Customer service
Microfinance (MFI) Pilot

**Gap:** Rural low-income consumers are not reached by commercial HWTS manufacturers due to **high distribution costs** and lack of product **affordability**

**Strategy:** Combine partner strengths

- Hindustan Unilever (HUL): product, marketing and distribution
- Spandana: reach, customer consolidation and credit (payments of $1 or $2 per week)
- PATH: negotiate on behalf of end-users, absorb some risk and evaluate results
Hindustan UniLever
PureIt typical consumer:

Strivers
*Income range* - $31-$60

Seekers
*Income range* - $12-$30

MFI Pilot consumers

Seekers
*Income range* - $12-$30

Aspirers:
Income range - $5-$11

Deprived
Income range – less than $5

*Household Incomes. Adapted from ‘The Bird of Gold’ : The Rise of India’s Consumer Market (Mckinsey Global Institute, May 2007)
Market penetration with PureIt product

Commitment to scale
- Partners plan to replicate in more states using their own money
- PATH is starting similar models with new partners in new settings
Gap: Existing products not designed for low-income users

Strategy:
- Find out what the user wants and needs
- Make it easier for providers to meet users’ needs
Example: Extended user testing

Partner: Quicksand Design
March – December 2009, Andhra Pradesh, India
Product-specific user insight

Ceramic water purifier:

- Aspirational appeal and perceived value influence initial adoption

- But the user experience drives sustained use

Day 1: “This is what I get?!?”

Day 90: “This is what I want!”
Targeted product improvements

Partners
Hydrologic, Cambodia
CAD-Based Solutions, USA
UNC Watershed, Cambodia
Start Up Partner Support

• Help Hydrologic Scale
  – Sales force management and logistics
  – Consumer segmentation research to direct efforts
  – Strategy for retail outlets and point of sale promotion
  – Sales tracking and customer feedback
  – Consumer credit models
Only 12% of the market is not accessible – not motivated to treatments other than boiling.
Latrine-Based Sanitation Value Chains

**Demand PUSH – get it out of here!**

- Lighter platform
- Easier removal of sludge

**Demand PULL – this stuff has value!**

- Waste water, fertilizer & biogas consumers

**Desirable features and benefits**
- Localizable and upgradeable
- Lower cost basis for Ag/Energy outputs
- Lower price/higher availability of safe Ag/Energy Input Products

**Lower manufacturing/Installation costs**

**Easier cleaning and maintenance**

**Latrine Installers and Service Providers**

**R&D**

**Materials**

**Marketing**

**Build**

**Service**

**Latrine Users/consumers**

**Capture**

**Storage**

**Transport**

**Treatment**

**Disposal/Reuse**

**Latrine Users/consumers**

- Micro enterprise, income generation
- Shame, stigma, aspiration, norms
- Safer user experience
- Upgradeable

**Waste water, fertilizer & biogas consumers**

**Lead with**

**Latrine Users/consumers**

- Demand PUSH – get it out of here!
- Demand PULL – this stuff has value!
Sanitation today- good enough?
User Needs/User Experience

area automatic bath bathroom beautiful bigger brick built cement concrect construction costs current days door flush installs mirror money nice pan pipe point puts rainspout roof size slab spends standard strong superstructure system tank tiled wall water western wet zinc
SANITATION
6.18.06

MODULES
(IN ORDER OF FUNCTIONAL FAMILIES)

1. DECK/PLATFORM
   FUNCTION
   BASIC FUNCTIONAL PIECE
   COVERS TANK/HOLE/ETC
   SUPPORT WEIGHT OF USERS & SPOILERS
   MODULAR PLATE OR SQUARING PLATE
   CONNECTION FOR PONTA PIPE
   LASH POINTS FOR WALLS/DOORS

   BENEFITS
   ONE PIECE DECK - LOW COST, PORTABLE
   CLEANABLE, SELF DRAINING
   FUNCTIONAL MODULARITY

2. VENT/CAP
   CONNECTS TO DECK
   FUNCTION
   VENT ODOURS FROM POOL
   BENEFIT
   PREVENT INSERT EYES/EXIT

3. TANK (MULTIPLE VERSIONS)
   - CONTAIN/CONTROL WASTE
   - DRAIN/DISPENSE THROUGH EASE
     PORTABLE
     STATIC/PROXIMATE
     A. ABOVE GROUND
     B. IN GROUND
     COMPOSTING
     DEHYDRATING
     STATIC

LOCAL OPTIONS

4. PRIVACY WALLS/GROWN

5. ROOF
   - ROOF HAS MATCHING

6. DOOR
SEED
Support for Entrepreneurs and Enterprise Development

• Equipping Local Entrepreneurs to go to scale
• Consumer segments and how to reach them
• Products that appeal and are easier to build
• Technical knowledge (e.g. IDE EZ Latrine)
Financial/Installments
Signs of Success – innovation & resources

- **Sulabh Toilet India** service spas introduced in slums
- Community led total sanitation being scaled and transplanted by the Water Sanitation Program (**WSP**) at the World Bank
- **Akvo-pedia** clearing house of sanitation information ([www.akvo.org](http://www.akvo.org))
- **Rigel Technology** - introducing new BoP toilet (to be introduced at the World Toilet Summit in Singapore Dec 2-4)
- Bill and Melinda Gates Foundation
Latrine-Based Sanitation Value Chain

- Latrine Installers and Service Providers
- R&D
- Build
- Service
- Latrine Users/consumers
- Capture
- Storage
- Treatment
- Disposal/Reuse
- Waste water, fertilizer & biogas consumers
PATH Safe Water Project

- Market-based approach
- Customer centered development
- Inclusive market ecosystem
- Systems: Value Chain and gap analysis
- Case Studies
  - Products designed by and for users
  - MFI distribution for access and affordability
  - Health-based provision
Addressing the gaps

**SUSTAINABILITY ACCEPTABILITY:** Make it easier to design products that meet the needs of low-income consumers

**SCALE - REACH:** Catalyze partners to explore new and creative distribution & sales channels

**IMPACT-AWARENESS:** Better understand how to influence purchase and sustained use

- Research and development
- Product design
- Production
- Marketing
- Sales and distribution
- Customer service
Spandana clients who purchased Pureit by SEC*

**Based upon data from Abt survey data profiling four Spandana branches**
Socio-economic profile of Spandana purchasers

Purchase rates by SEC

<table>
<thead>
<tr>
<th>SEC</th>
<th>Purchase Rate</th>
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<tbody>
<tr>
<td>A/B</td>
<td>18.2</td>
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<tr>
<td>C</td>
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<td>8.8</td>
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<tr>
<td>E2</td>
<td>9.2</td>
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</tbody>
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SEC Distribution of Purchasers

- SEC A/B: 4
- SEC E2: 18
- SEC E1: 11
- SEC D: 32
- SEC C: 35

*Based upon data from Abt survey data profiling four Spandana branches.*
Topics

- Perspectives on scale and systems
- Market-based approaches
- Lessons from the Safe Water Project
- Sanitation observations