



Interlock Brick Shelter Design for People Living With Disabilities

Session 4

Alicia May | August 2017



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Market-Based Solutions Around the World

Our mission is to create income and livelihood opportunities for poor rural households

About iDE

- WASH programs: Bangladesh, Cambodia, Ethiopia, Ghana, Nepal, Vietnam
- iDE develops markets for WASH products and services by:
 - Human-centered design
 - Working with private sector actors, ranging from SMEs to large lead firms
 - National sales networks
- >1 million WASH products sold through the private sector since 2010



The Cambodian Context

Bringing toilets to rural families

- Population of 15.5 Million; 80% rural
- 30% living below the national poverty line
- 47% practice open defecation in rural areas
- Estimated 10% of Cambodians live with a physical disability
- Continuous PWD advocacy, but limited focus on sanitation needs



Addressing the Limitations of Shelters for PWD

Existing suppliers fail to consistently meet the needs of this diverse population

- Challenges:
 - Product: How to address varying needs with one product?
 - Supply: How can local suppliers serve this market?
 - Sales: Consumer demand? How to identify communities for sales?



Exploring Interlock Brick Technology

Lego-like, high precision bricks made by a hydraulic press

- Pressurized brick composed of soil, sand, and cement
- Advantages:
 - Flexible construction options
 - Lower cost as no plaster or paint required; minimal mortar used
 - Requires less skilled labour
 - Faster than traditional bricks

Consumer Prototyping: Mr. Horn Vurthy



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Pilot Launch with Local Suppliers

Strong enthusiasm from local suppliers on the interlock brick technology

- Launched pilot with 3 models meet various needs of the PWD community
- Workshop with local suppliers received rave reviews:
 - Interest in bricks for walls, fences, and home construction
 - Interest in the hydraulic press itself
- Strong interest in interlock brick enables mainstream suppliers to meet the needs of the PWD community.



Targeted Sales Through Partnership

Targeted sales with specialized salesforce and local government

- Evolution of sales strategy
- Commercialization strategy with advocacy groups attempted
- Specialized salesforce works with local government for targeted approach



How well is your approach working?

Enthusiastic customer response and strong supplier interest

- Positive pilot results
- Unable to keep up with PWD and non-PWD demand; exceeding sales goals
- Nearly all suppliers wanted to produce shelter and the brick technology
- Wide appeal of bricks suggests mainstream supply chain is able to meet PWD needs



What advice would you give to others?

Smart partnerships to address a diverse community

- Partnership is key, but partners must have similar strategy and beliefs
- PWD community is diverse; one size doesn't fit all
- Aspirational designs are critical to consumer demand
- Limited supply offerings contribute to lack of latrines and shelters

Shared Resources

- Happy to share our PWD designs with anyone interested

Customer Profiles

Mr. Krouch Chnang



Mrs. Che Chemm



Interlocking Brick Workshop

