Stories changing a paradigm:
Social enterprises contributing to sustainable and resilient communities - sharing from Philippines & India
Snapshot of two social enterprises

**Base | Philippines**
- Products: Housing
- 16 professionals plus regional teams of builders
- 80 houses build since 2014, growth expected for 2016

**Wonder Grass | India**
- Products: Housing, Shades, Bridges, Sanitation Units
- Professionals plus team of 25 builders
- Significant growth expected in sanitation units segment
Complex challenges require partnership

Housing & Community Empowerment is at the confluence of urban mega trends and an entry point for overall improvement...
Stories of partnership

Base partners with Homeless Peoples Federation of the Philippines, UN Habitat and others
Paradigm of a dream house
Mostly temporary use of bamboo for housing
BASE houses guided by urban needs

Holistic Development is needed
Wonder Grass: Product Portfolio

Urban & Rural Housing and Infrastructure

Permanent Houses, Transitory Solutions and Post-Disaster Kits

Pedestrian Bridges

Sanitation units

Focus: Competitive solutions at par with available solutions,
Diverse portfolio to address a range building needs in market

• Urban Retail market – e.g. permanent housing
• Institutional market – e.g. Construction-Workers housing
• Rural – Settlements & Infrastructure – e.g. ‘Home-Extension Kits’, Sanitation Units
Wonder Grass: Value Chain Integration

The Model

Bamboo – Farms & plantations near villages

Artisans – from the communities

WonderGrass

Identify → Setup → Design → Manufacture → Sales

- Village Entrepreneur
  Village Bamboo Enterprise

- Training
- Financing

- Engineering
- Prototyping
- Industrial Design

- Materials Management
- Process Management

- Provide Warranty & Maintenance service

Building Market

- Government business Infrastructure & Disaster mgmnt
- Urban applications
- Hospitality
- Transit housing
‘Shuchita’; Sanitation Unit – A case in point

Sanitation, a critical challenge in India: 40 Mio Units needed by 2022

→ Think outside of box, and contribute to need at scale across India

1000 units per year...
• Can be fabricated & installed by 50 artisans
• Require a bamboo plantation of 50 acre to provide sustainable supply

1 unit...
• Is ≈ 4 ft deep and 4’ wide
• Is well lit, ventilated & spacious compared to other available solutions
• Costs INR 17,500/- (US$275), aiming to bring down to INR 12,500 (US$190)
• Can accommodate different waste-disposal systems

Only 10% of Annual Bamboo yield in Orissa is enough to provide 100,000 Toilet Units
Thank You!

Let`s build a better future together!

Wonder Grass
Building Bamboo Habitat

Base
Back-Up
Research & Implementation Roadmap

**Research about Building Concept**
- Species Selection, Properties & Grading
- Connectors align with Dev. Criteria
- Building System align with Dev. Criteria
- Fire Resistance
- Wind & Earthquake Resistance
- Climate adjusted Comfort
- Legal Approval

**Implementation Of Building Concept**
- Design align with Development Criteria
- Structural Design align w research results
- Ease of application align w skills
- Prefabrication
- Construction
- Quality Control
- Continuous Improvement & Innovation
Human Capacity & Bamboo Supply Roadmap

Stakeholder Involvement & Capacity Building

- Identify needs of urban stakeholders
- Learn from local practices & global cases
- Define Development Criteria
- Participatory Design and Application
- Capacity Building & Skill Development
- Feedback and User Guidelines
- Sharing and Policy Advocacy

Supply Chain of Graded Raw Material

- Sourcing
- Selection
- Harvesting
- Quality Control
- Drying and Storage
- Treatment
- Logistic Chain