

# SlumLav Millionaire

**Morgan Stanley Sustainable Investment Challenge**

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# Approach

## Challenge and Need

Details of the Financial & Operational Solution

Roadmaps and Risks

# Key Objective

Develop institutional quality investment vehicles that seek **positive social impact**  
and **competitive financial returns**

Social  
Impact



Financial  
Return



The Microfinance Institutions have **higher proportions of female borrowers** have **A LOWER PORTFOLIO-AT-RISK**

**2.5 billion** DO NOT  
HAVE BASIC  
**SANITATION**

**1.5 Billion** Women  
in the World are Not  
Financially Independent

**EVERY**



**S E C O N D S ,  
A C H I L D D I E S  
A S A R E S U L T  
O F P O O R  
S A N I T A T I O N**

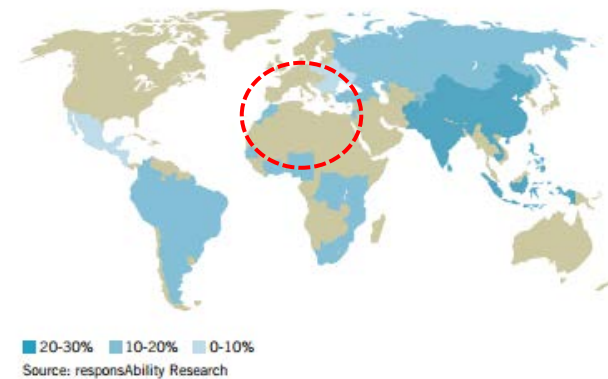
# Target Market

**India** faces multiple challenges in not only sanitation but also microfinance and women empowerment

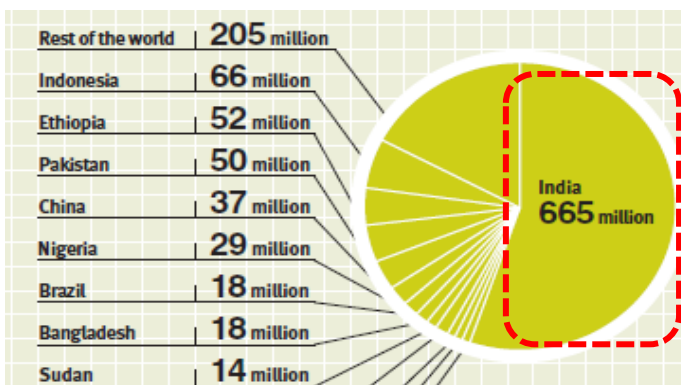
List of countries with child deaths due to diarrhea <sup>1</sup>

| RANK | COUNTRY                          | TOTAL NUMBER OF ANNUAL CHILD DEATHS DUE TO DIARRHOEA |
|------|----------------------------------|--|
| 1    | India                            | 386,600  |
| 2    | Nigeria                          | 151,700  |
| 3    | Democratic Republic of the Congo | 89,900   |
| 4    | Afghanistan                      | 82,100   |
| 5    | Ethiopia                         | 73,700   |
| 6    | Pakistan                         | 53,300   |
| 7    | Bangladesh                       | 50,800   |
| 8    | China                            | 40,000   |

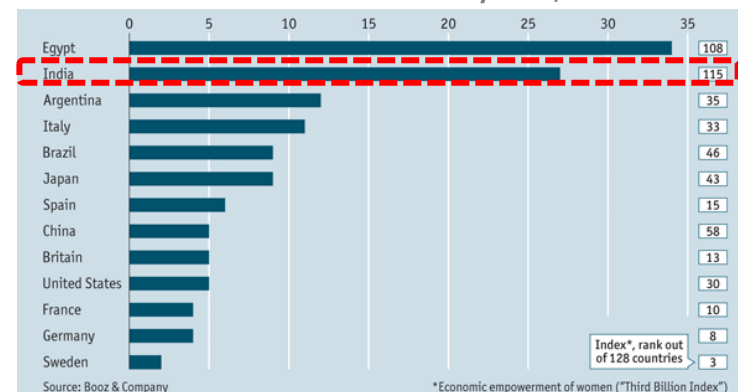
Microfinance growth outlook by region <sup>3</sup>



Population practicing open defecation, by countries <sup>2</sup>



Economic contribution of women <sup>4</sup>  
Forecast increase in GDP by 2020, %



1. World Health Organization, Global Burden of Disease, 2007. 2. World Health Organization/United Nations Children's Fund, Progress on Drinking Water and Sanitation: Special focus on sanitation, UNICEF, New York, 2008.

3. Microfinance Market Outlook 2013, responsAbility Social Investments AG, 2013

4. Economic contribution of women, [www.economist.com/news/economic-and-financial-indicators/21564857](http://www.economist.com/news/economic-and-financial-indicators/21564857), based on Booz & Company, 2012

# Concept

## Women Operated Microfinance Driven Portable Toilet Installations for Women across Urban Indian Slums



# Existing Solutions

## Non Profit Organizations



**Sulabh International Social Service Organisation**  
(NGO in General Consultative Status with the Economic and Social Council of the United Nations)

Home Mission History Scavenging Technology Facts Worldwide News Gallery

You are here: Home » Technology » Sulabh Technologies » Sulabh Public Toilet Complexes

**Sulabh Public Toilet Complexes**

SULABH TECHNOLOGIES

Two-pit System  
Different Designs of Sulabh Shauchalayas and Costs  
Sulabh Public Toilet Complexes  
Biogas Technology  
Effluent Treatment Systems

Provision of the Sulabh public toilet complexes in public places and slums on 'pay-and-use basis' is an important landmark in the field of community health, hygiene and environmental sanitation. Although as far back as 1878, the Bengal Government had enacted a law to set up toilet facilities in Calcutta, but due to many reasons such facilities could not be provided/maintained for the next 100 years. The concept of construction of public toilets and

Dispatches From Delhi: The Toilet Fair is Not Your Average Business ExPo  
Wednesday, March 26, 2014 - 21:35  
The 'ToiletFair Live' crew is in India producing an hour long

**World Toilet Day**  
19 November

UN Home  
Main Page  
Secretary-General's Message  
Multimedia  
Resources  
Fact Sheets  
UN Observances

"By working together – and by having an open and frank discussion on the importance of toilets and sanitation – we can improve the health and well-being of one-third of the human family"

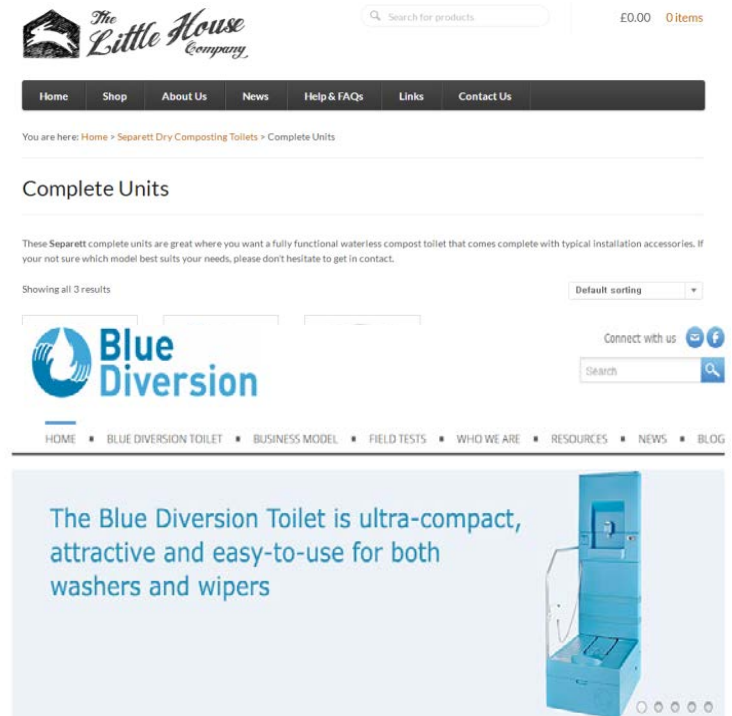
Secretary-General Ban Ki-moon  
Message for the World Toilet Day

Statement by the UN Deputy Secretary-General on the adoption of the General Assembly resolution 'Sanitation for All'

Join the UN in celebrating **WORLD TOILET DAY**  
World Toilet Day will help the United Nations member states (which are members of UNICEF, WHO and WFP) to focus on the need for improved sanitation for all. The day will also help to raise awareness of the need for improved sanitation for all. The day will also help to raise awareness of the need for improved sanitation for all.

**JAN ELIASSON**  
President

## Private Sector



**The Little House Company**

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You are here: Home » Separett Dry Composting Toilets » Complete Units

**Complete Units**

These Separett complete units are great where you want a fully functional waterless compost toilet that comes complete with typical installation accessories. If your not sure which model best suits your needs, please don't hesitate to get in contact.

Showing all 3 results

Default sorting


**Blue Diversion**

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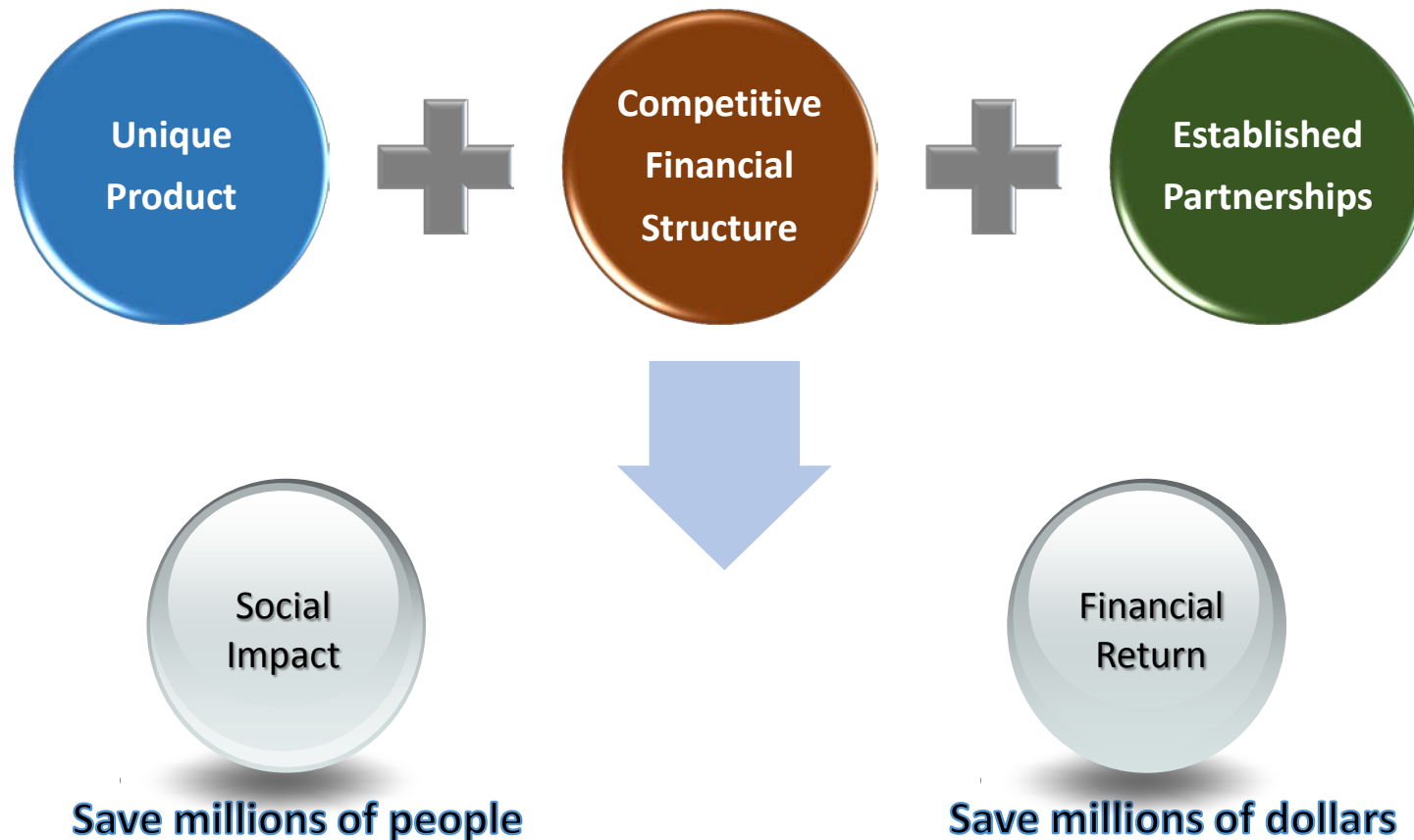
The Blue Diversion Toilet is ultra-compact, attractive and easy-to-use for both washers and wipers



**Idea** of installing compost toilet in India **has been around the market** for several years, **However**, they are **focused on** either **Social Impact or Financial Return**

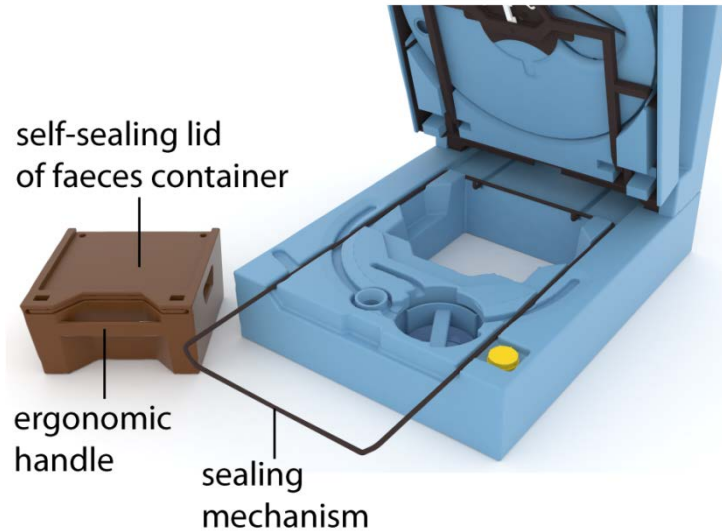


# Our Value Proposition

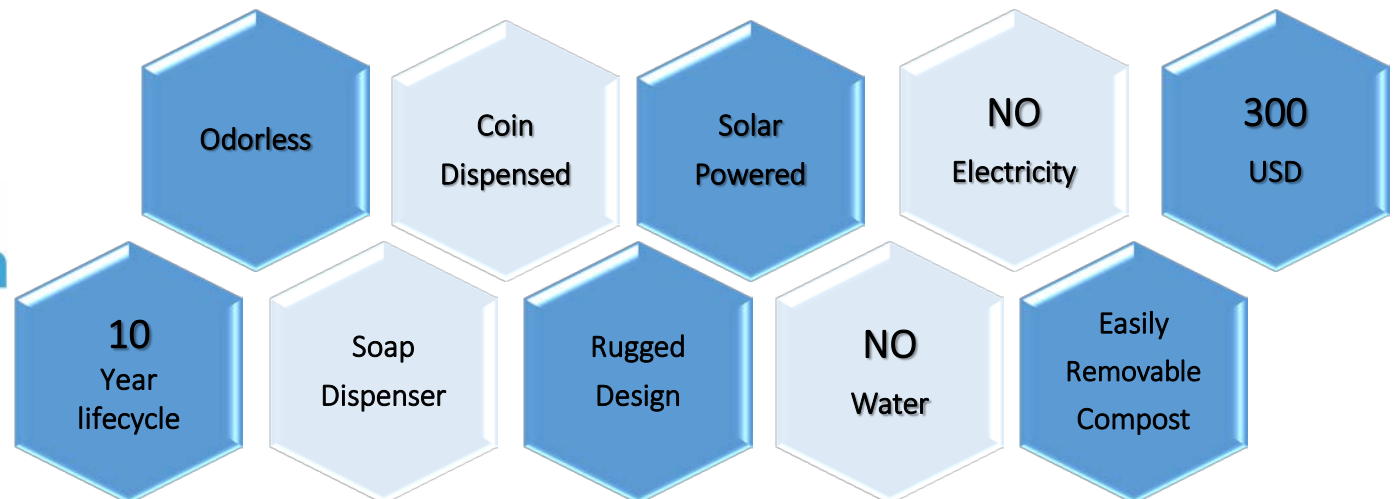




# Unique Product

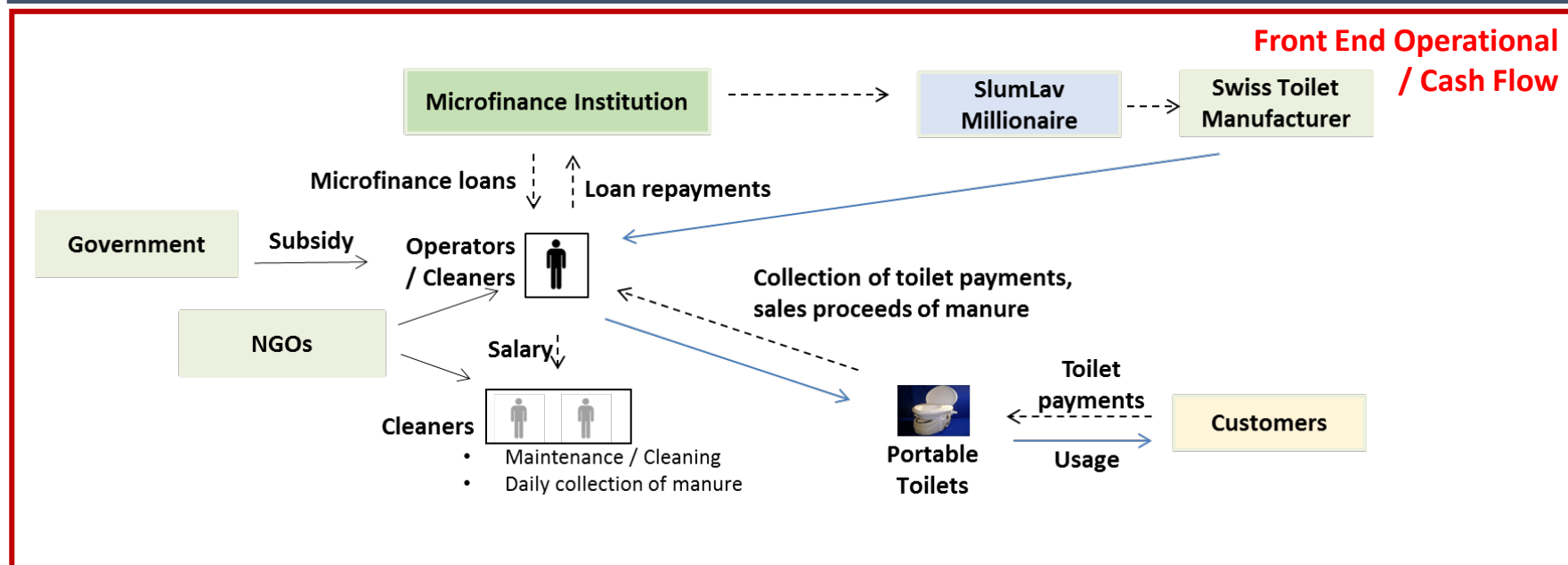
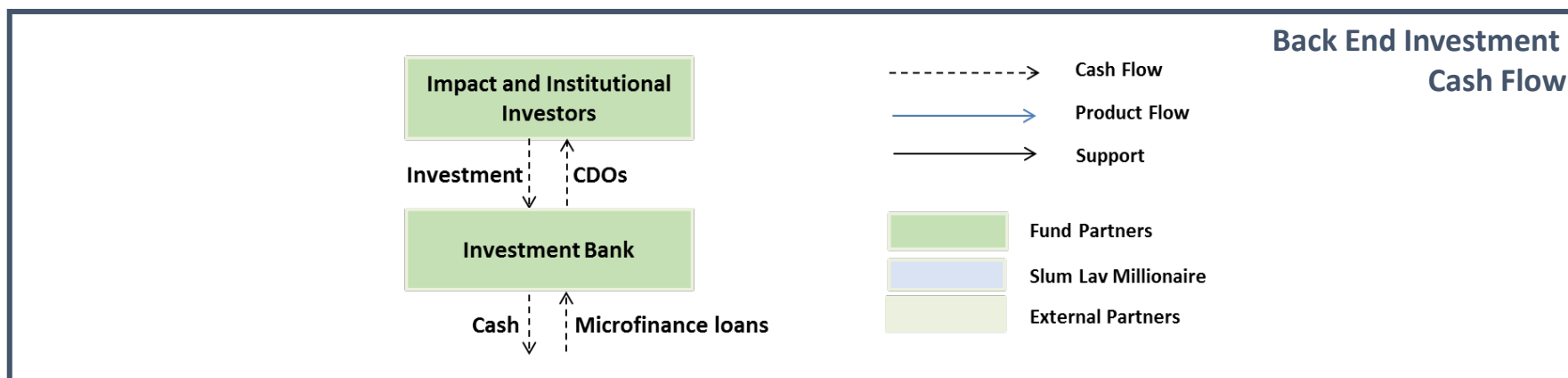
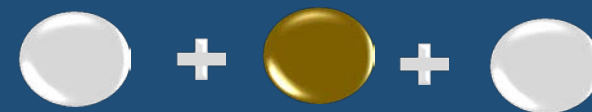


**Compost  
Separator**

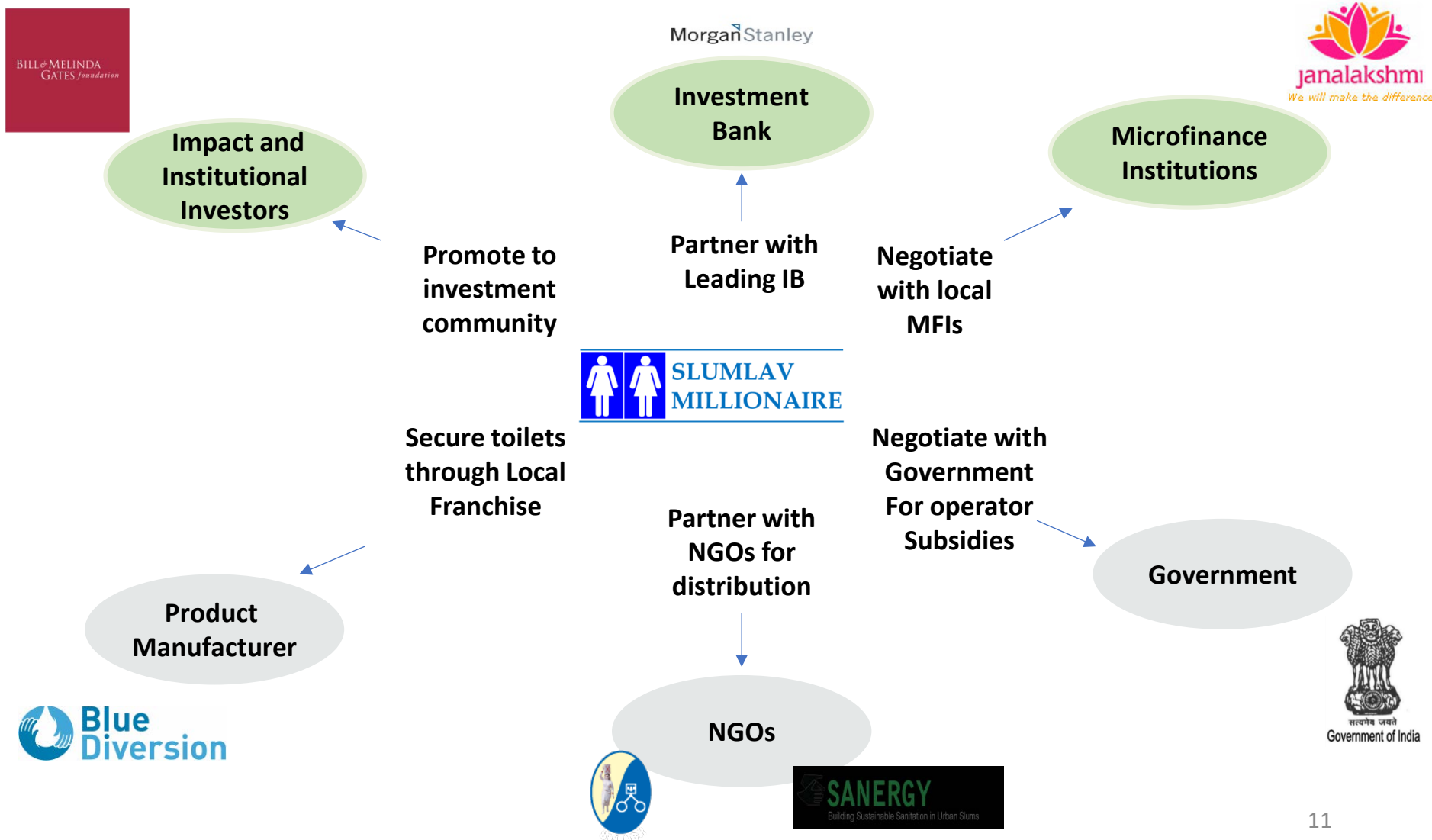


# Competitive Financial Structure

## Operating & Financial Model



# Partnership Ecosystem



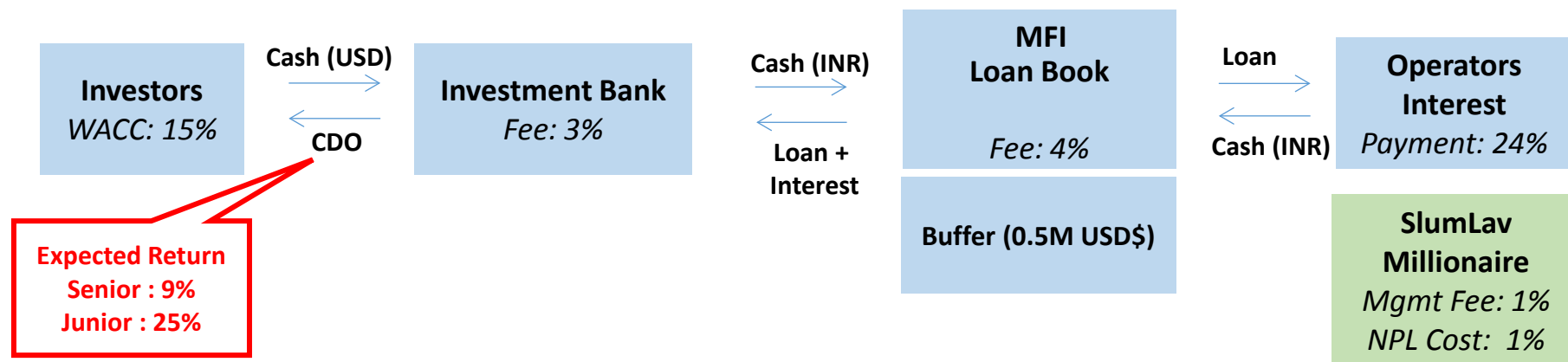
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# Back End Investment Cash Flow



## CDO Structure

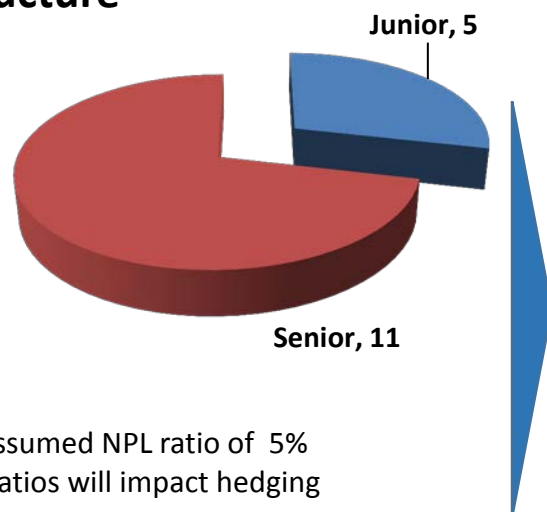
- 16M US\$ CDO
- 3 Year Maturity

### Senior Tranche

- 11 units of USD\$ 1M
- 100% FX Hedged

### Junior Tranche

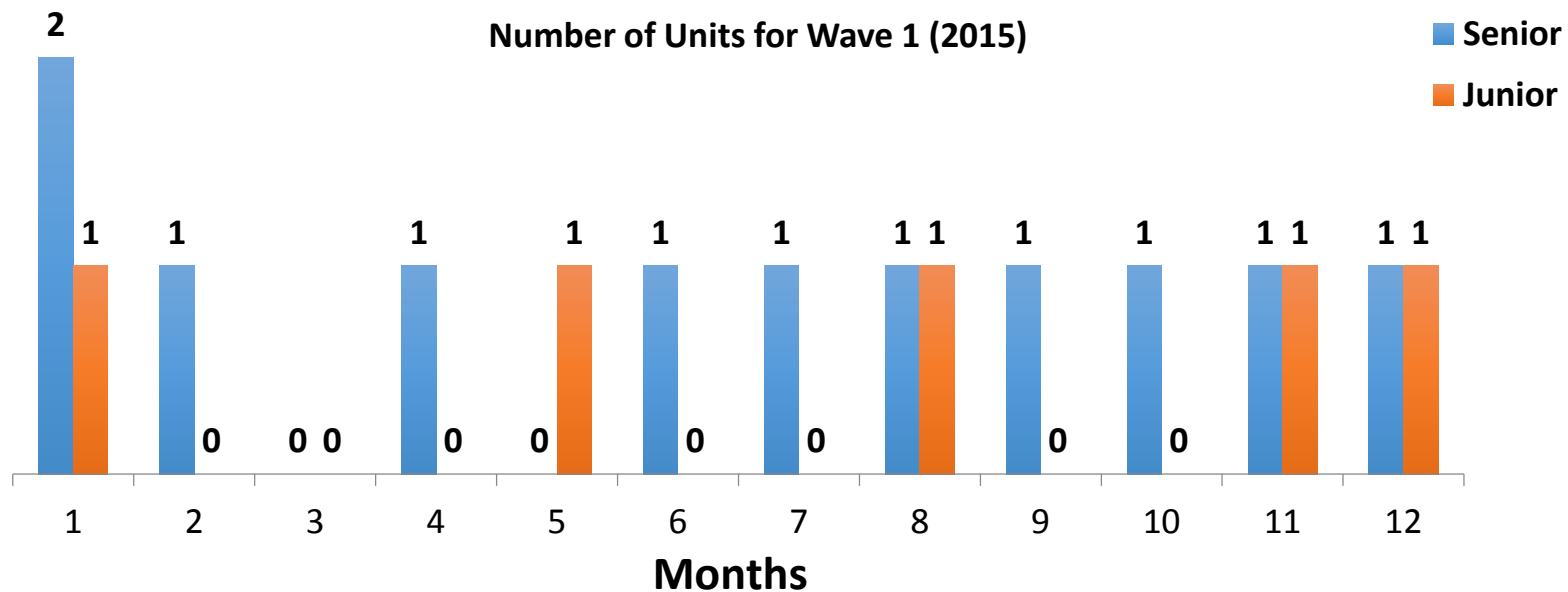
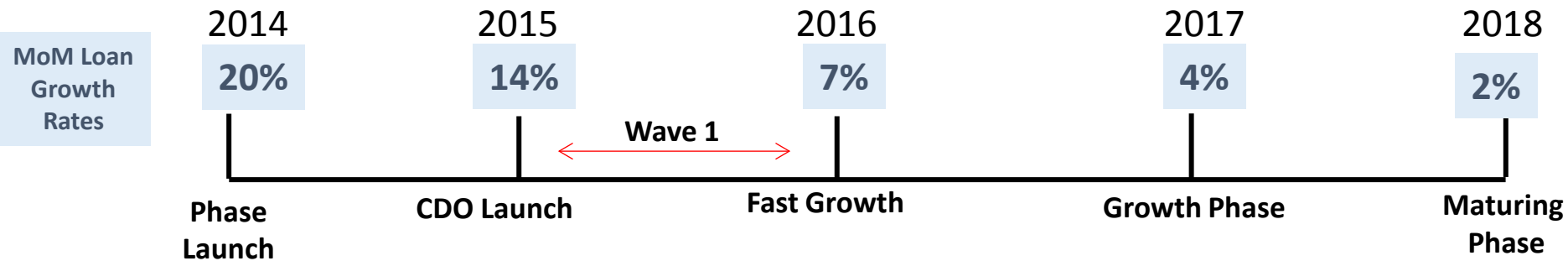
- 5 units of USD\$ 1M
- 100% FX Hedged with assumed NPL ratio of 5%
- Above and Below NPL Ratios will impact hedging



## CDO Features

- Investors receive above market returns for comparable risk profile: US CLO BBB- 7.5%, US CLO Equity 15%
- MFI is incentivized to write loans backed by toilets
- MFI must keep a buffer of 500k USD of loans on it's own books in order to ensure quality of back ground checks
- Increased investors demand for CDO will help push loan rates lower

# Issuance of CDO Units



# Operator Financials

## Total Value

|                    |         |
|--------------------|---------|
| Total Value        | 18,000  |
| Downpayment        | (2,000) |
| Loan               | 16,000  |
| Interest %         | 25.0%   |
| Monthly Interest   | 2.1%    |
| Monthly Payment    | 1,333   |
| Sqft               | 15.0    |
| Rent per Sqft      | \$3     |
| Monthly Rent       | \$45    |
| INR F/X            | 60      |
| Monthly Rent (INR) | 2,700   |

## Loan Amortization Schedule

| Month | BoM    | Interest | Principal | EoM    |
|-------|--------|----------|-----------|--------|
| 1     | 16,000 | (333)    | (1,000)   | 14,667 |
| 2     | 14,667 | (306)    | (1,028)   | 13,333 |
| 3     | 13,333 | (278)    | (1,056)   | 12,000 |
| 4     | 12,000 | (250)    | (1,083)   | 10,667 |
| 5     | 10,667 | (222)    | (1,111)   | 9,333  |
| 6     | 9,333  | (194)    | (1,139)   | 8,000  |
| 7     | 8,000  | (167)    | (1,167)   | 6,667  |
| 8     | 6,667  | (139)    | (1,194)   | 5,333  |
| 9     | 5,333  | (111)    | (1,222)   | 4,000  |
| 10    | 4,000  | (83)     | (1,250)   | 2,667  |
| 11    | 2,667  | (56)     | (1,278)   | 1,333  |
| 12    | 1,333  | (28)     | (1,306)   | 0      |

## Monthly

|                       |                 |
|-----------------------|-----------------|
| Usages per Day        | 200             |
| Price per Usage (INR) | 2               |
| Days                  | 30              |
| <b>Usage Fees</b>     | <b>12,000</b>   |
| Fertilizer            | 2,000           |
| <b>Total Revenue</b>  | <b>14,000</b>   |
| Cleaner               | (4,000)         |
| Misc.                 | (3,000)         |
| EMI                   | (1,333)         |
| Rent                  | (2,700)         |
| <b>Total Expenses</b> | <b>(11,033)</b> |
| <b>Net Income</b>     | <b>2,967</b>    |
| <b>Net Profit %</b>   | <b>21%</b>      |

**ROI = 120%**



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# Road Map

Short Term

April - June

- Build up solid partnerships with toilet manufacturers, NGOs, MFI, and investors

July - August

- Kick-off of first micro loans
- Distribute first toilets

September - December

- Complete 1<sup>st</sup> 3m USD microfinance loans in order to trigger launch of CDO

Long Term

2014

2015

2016

2017

2018

Issuance

Wave 1 – USD 16m CDO

Maturity

Issuance

Wave 2 – USD 22m CDO

Maturity

# Impact – Wave 1 Target



**108,000+**  
toilets installed

**21,000+**  
female operators



**120%**

Returns for the Operators

**25%**

Returns for the Impact / Private investors

**9%**

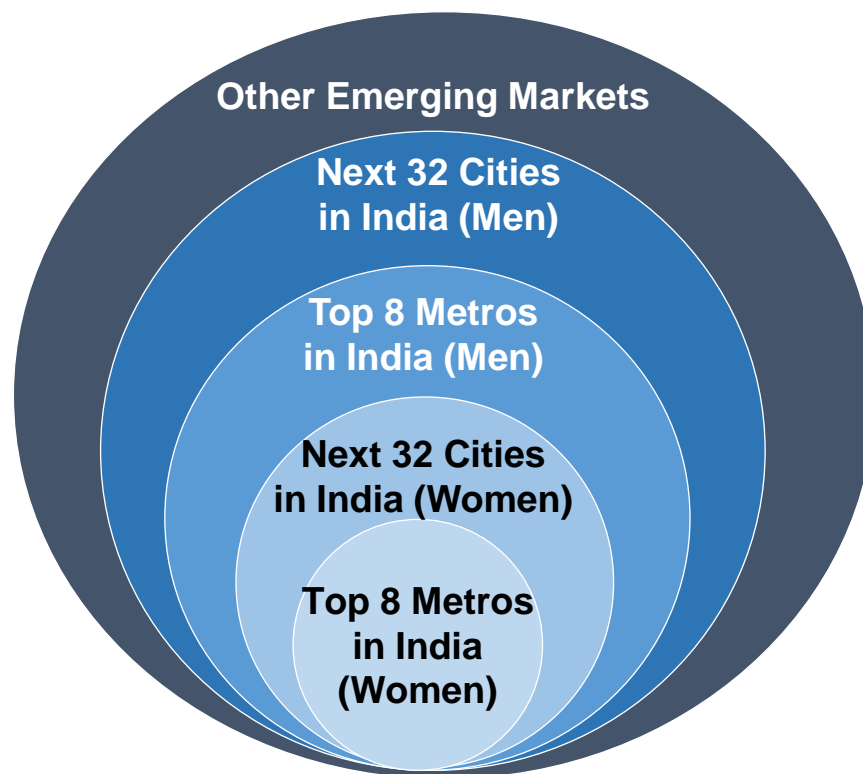
Return for Pension Fund investors

**USD 16 million CDO**

# Risks & Mitigation

| Risk Factors                          | Mitigation Measures   |
|---------------------------------------|---|
| Default risk of operators             | <ul style="list-style-type: none"> <li>Partnering with the local microfinance institution</li> </ul>  |
| Availability of resource              | <ul style="list-style-type: none"> <li>Conflict with the existing subsidies programs: Discussion will be held with the Government of India to reduce toilet subsidies in the target areas</li> </ul>    |
| Conflict with existing Sulabh program | <ul style="list-style-type: none"> <li>Consultation will be made to Sulabh International</li> </ul>   |
| Lack of technical skills of operators | <ul style="list-style-type: none"> <li>Provide initial technical training to operators as needed</li> </ul>   |
| Default risk of operators             | <ul style="list-style-type: none"> <li>Partnering with the local microfinance institution will mitigate this default risk through MFI's frequent visits and business advise to the operators</li> </ul> |
| Confrontation with local operators    | <ul style="list-style-type: none"> <li>Partnering with government &amp; local NGOs will help mitigate risk</li> </ul>   |

# Expansion Plan



## Wave 1

All slum dwelling women 15+ Years in Top 8 Metro (\$8M market)

## Wave 2

All slum dwelling women 15+ Years in 32 Tier II cities (\$16M market)

## Wave 3

Extending to Men in India's Top 8 Metros (\$14M market)

## Wave 4

Extending to Men in India's Next 32 Tier II cities (\$22M market)

## Wave 5

Extending to other emerging markets

2015

Wave 1

2017

Wave 2

2020

Wave 3

2023

Wave 4

2025

Wave 5

# Acknowledgements

- **Our Mentor : Ian Potter, Distinguished Fellow at INSEAD**
- **Credit Suisse: David Wille, Special Situations Banker**
- **Indian Government Health Ministry: Mr. CPS Rao**
- **Sanergy: Miranda Lewis**
- **Sulabh International**
- **Blue Diversion Ltd.**