



Development Impact Bond for Safe Sanitation

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This study was carried out by the Center for Water and Sanitation (CWAS), CEPT Research and Development Foundation (CRDF), CEPT University in partnership with IPE Global.

It was funded as a part of the HSBC CSR Project

Acknowledgements

India is seen as potential market by impact investors. As per McKinsey report, Impact investing in India has the potential to grow to USD 6 to 8 billion per year by 2025. Development Impact Bonds (DIB) or Social Impact Bonds (SIB) have been launched successfully in education and health sector. Our attempt here is to develop a structure for India's first impact bond for urban sanitation. This slide deck describes CWAS's exploration to develop India's first DIB for sanitation. It outlines a review of recent DIBs in India, discussions with various stakeholders, and conceptualization of the bond. Various options are developed for the proposed DIB structure in relation to the role of risk investors, outcome funders and the possibility of using CSR funds.

The idea of a Sanitation Impact Bond was first discussed at a workshop in 2019. Subsequently, we presented this idea at the Stockholm Water Week in 2019. Discussions at these for a heave helped sharpen our approach.

We are grateful for the significant inputs provided by IPE Global team in developing the structure of sanitation DIB. We also benefited from inputs provided by various stakeholders – service providers, and potential investors and outcome funders. Support from HSBC for this study is gratefully acknowledged.

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Introduction

Need for impact investment in sanitation and emergence of Development Impact Bonds

Strong Government of India focus on FSSM



Swachh Bharat Mission (2014-2019) achieved significant success to make India Open Defecation Free. In 2017 the GOI adopted its national policy on “Fecal Sludge and Septage Management” (FSSM)

KEY ACHIEVEMENTS

SBM **Urban** Phase 1 Focus mostly on toilet construction



6.6 MILLION TOILETS
CONSTRUCTED

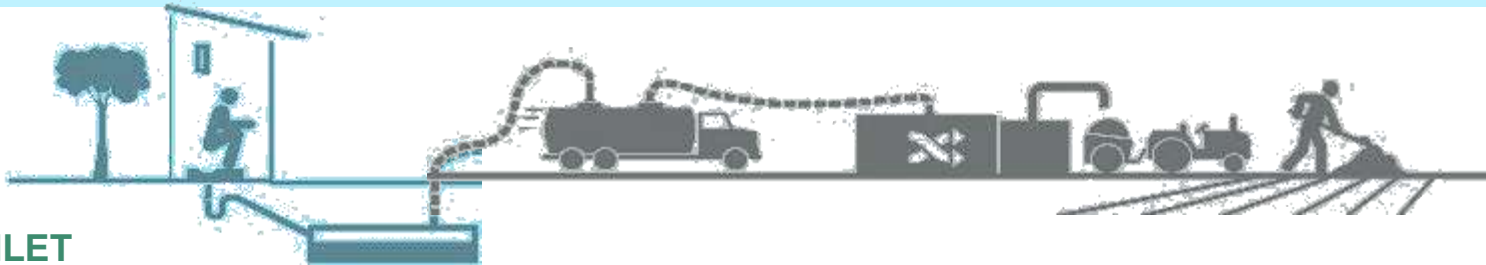


98% CITIES
OPEN DEFECATION FREE



35 STATES / UTs
CERTIFIED AS ODF

FSSM OPERATION VALUE CHAIN



ACCESS TO TOILET

Access to hygienic toilets to all households

CONTAINMENT

Toilets connected to efficient systems like septic tanks

EMPTYING AND TRANSPORT

Desludging of septic tanks by suctions machines and transportation to treatment plant

TREATMENT

Treatment at centralized or decentralized plants

DISPOSAL/REUSE

Reuse of treated effluents and other byproducts for agricultural or other uses or disposal at designated site

Need to focus on entire 'sanitation value chain (both desludging & treatment) to obtain ODF+ and ODF++ status

Sanitation challenge in India

Septage management has been neglected in Indian cities due to lack of technical guidance, inadequate resources, skills and lack of finance



64% Indians use on OSS (on site sanitation) ¹



600 people died cleaning septic tanks and sewers in the past 25 years



Lack of an **Integrated Citywide approach** towards faecal sludge and septage management



48% of urban Indian households depend on **onsite facilities** such as septic tanks ³



70-80% of the sewage in Urban India is left **untreated** posing environment & health risks ²



365,000 – 500,000 deaths in children (under 5 years) due to Diarrheal diseases


Source:

1. <http://cpheeo.gov.in/upload/uploadfiles/files/Advisory%20Note%20on%20Septage%20Management%20in%20Urban%20India.pdf>

2. http://amrut.gov.in/upload/newsrelease/5a5dc55188eb0FSSM_Policy_Report_23Feb.pdf

3. Census 2011

Benefits from investment in FSSM / sanitation



The public health consequences of untreated sewage are immense; for example, diarrheal diseases contribute to 20% of deaths in children under the age of 5.²

Large social, economic and environmental benefits

- Improved health – morbidity and mortality
- Time savings
- Improved environment – river and ground water quality,
- Reduced exposure to FS in environment
- Improved safety and dignity for women
- Increase in property values

Studies by UNICEF, World Bank and BMGF



The health and environmental impacts of inadequate sanitation in India add up to Rs. 2.44 trillion (US\$53.8 billion) a year –this was the equivalent of 6.4 percent of India's GDP in 2006.³

Why a Development Impact Bond?

DIB is an innovative financing tool that: a) focuses on outcomes; b) ensures proper monitoring systems, c) fosters collaboration among different partners, and d) attracts social impact investors.

Monitoring systems

Introduce a culture of good and strong monitoring systems



Attract new investors

Create opportunities to attract new impact investors for sanitation

Attract CSR funding

Attract CSR funding focusing on to results based outcomes and for sanitation- possibly as outcome payers

Focus on outcomes

Rather than only inputs or outputs

Collaboration

Collaboration and partnerships are critical

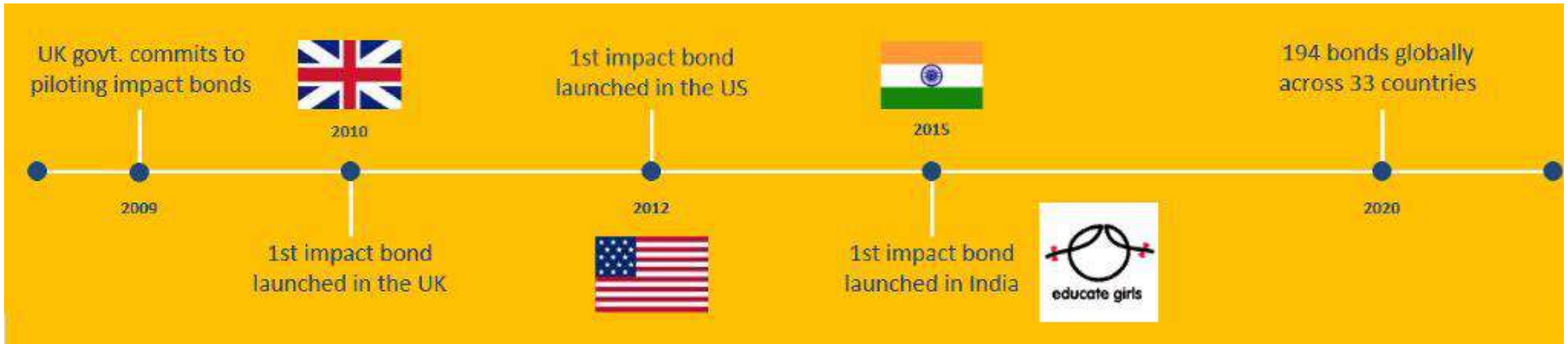
Structure to attract large and small investors

Create structures to attract both large impact investors (new generation of families/ Foundations) ones, but also smaller ones of the type that have invested in HDFC Cancer Debt Fund

Emergence of Development Impact Bonds?

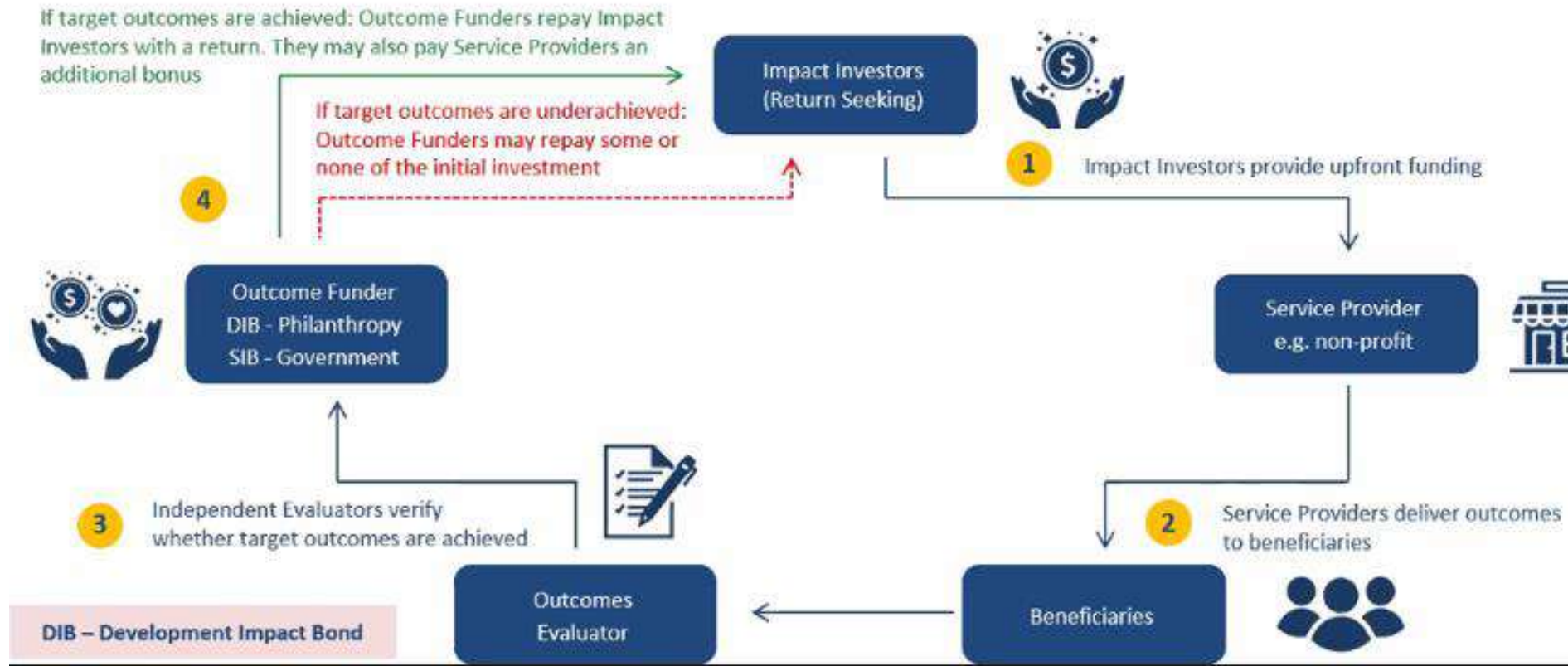
- **Traditional approaches focus on inputs rather than outcomes** leaving little room for innovation. Often **projects in development sector struggle to attract enough and flexible funding** to scale-up social viable services, even if the delivery of such services can potentially generate a profit.
- **Development Impact Bonds (DIBs)** help finance development programs with funding from private investors who earn a return if the program is successful. Development impact bonds attract socially motivated private investors for development projects.
- With greater focus on outcomes instead of inputs, **DIBs create space for more innovation, local problem-solving, and adaptation.**
- Impact bonds have been used in developed countries as well as developing countries to generate investment for a range of social issues.

Impact bonds are also known as pay for success contracts



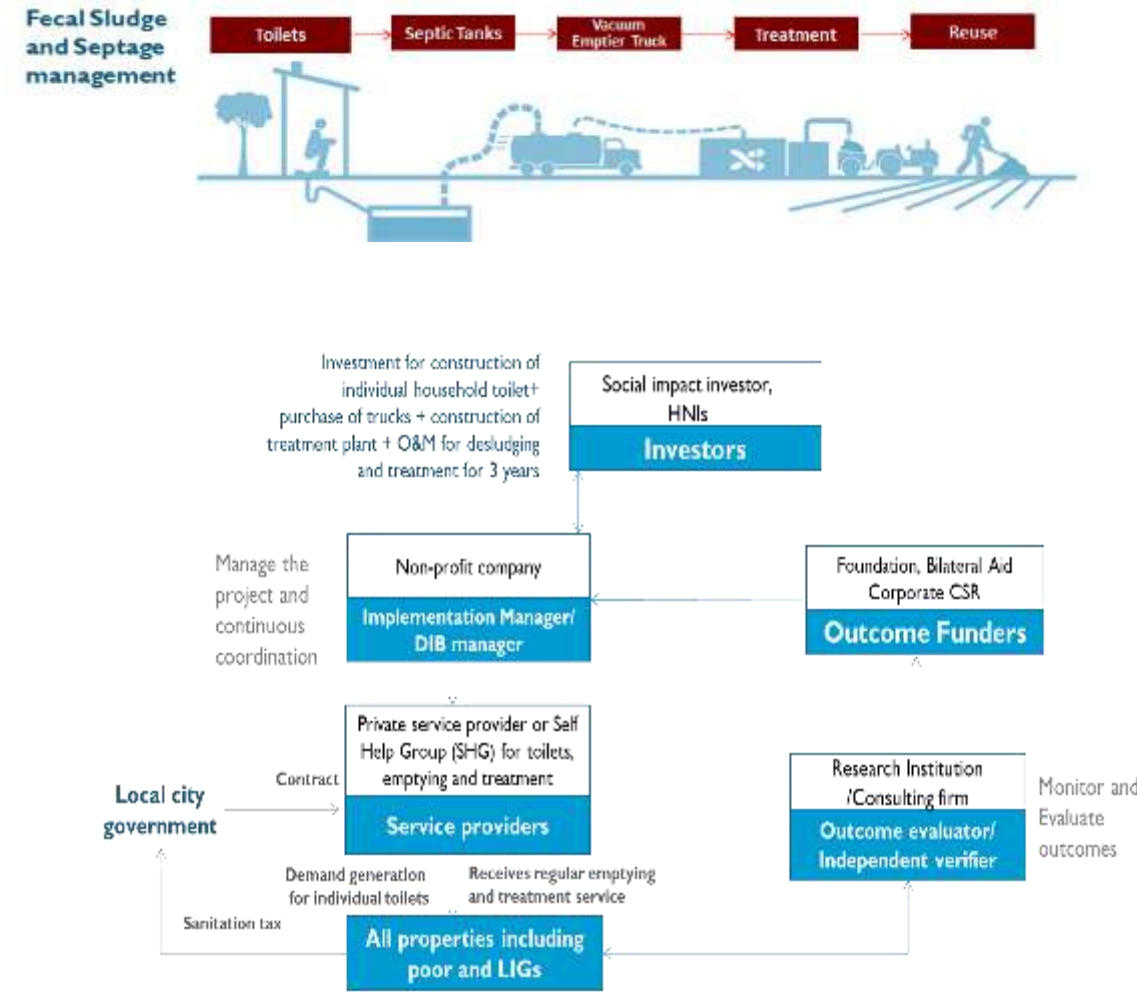
Typical structure of Development Impact Bonds

In a Development Impact Bond model, an investor (or group of investors) provides up-front financing for the operations of a service provider, receiving a return from the outcome payer (usually a government or donor) once results have been achieved.



HSBC CSR Grant for developing a sanitation DIB approach (1/2)

- In 2020, under a HSBC CSR grant, **CWAS** aimed to develop a **DIB structure** for financing FSSM in pilot cities of Maharashtra.
- The **objectives** of this project were to develop a DIB project proposal and structure ready for implementation and identify a few potential impact investors, implementation partners and outcome funders for implementation of this DIB.
- **CWAS** partnered with **IPE Global** to develop the DIB structure and financing model.
- Based on a review of various DIBs in India, potential structures were developed for an urban sanitation bond, focused on integrated FSSM services for cities in Maharashtra. It was developed for measurable outcomes for: i) scheduled desludging, and ii) treatment. A number of options for DIB structure were developed and assessed.



HSBC CSR Grant for developing a Sanitation DIB approach (2/2)

- The Urban Sanitation (FSSM) -DIB aims to :
 - Provide citywide inclusive **safely managed FSSM services**
 - Build capacity of **local private sector and SHGs** to provide services
 - Introduce **digital mechanisms for monitoring** and an open **digital platform for payments** to private service providers / SHGs
- The proposed DIB is a results-based pay for performance instrument that will also contribute towards achieving **SDG 6.2** along with **improving livelihoods for women and small and medium private service providers**.
- Discussions were held done with **potential implementation partners, risk investors and outcome funders**.
- Based on stakeholder discussions, one option was selected. This is being currently discussed further with an investor group.





Review of recent Development Impact Bonds in India

Structure, bond size, objective and outcomes and assess
key lessons and learnings from the case studies

Recent Development Impact Bonds in India

- World's first Development Impact Bond (DIB) was launched in India.
- In June 2014, Educate Girls Development Impact Bond was launched to reduce the gender gap in education in Rural India by getting girls into school and learning.
- Success of Development Impact Bond in education and health sector provide encouraging signs as well as ideas around structuring such instruments.
- Over the years many different versions of Development Impact Bonds have emerged.
- Efforts are now being made to develop models to use the Corporate Social Responsibility (CSR) funds. Overall, there is also an attempt to use simpler structures, reduce development and administration costs, also a move towards reducing the high monitoring costs.
- However, there is no DIB for sanitation in India. In Sanitation, globally there is only one impact bond in Cambodia. The Cambodia DIB for sanitation was developed in November 2019 to make 1,600 villages open defecation free. This DIB focused mainly on toilet construction in six provinces of Cambodia.

Five Recent Development Impact Bonds in India

Impact bonds	Educate Girl DIB	Utkrisht DIB	Quality Education DIB	Haryana Early Literacy bond	Skill Impact Bond
Target Sector	Primary Education	Maternal and Newborn Healthcare	Primary Education	Primary education	Skilling
Objective	<ul style="list-style-type: none"> Improve enrollment of girls in grade 2-8 Improve Learning for ~18K boys and girls in Grade 3-5 	Support up to 444 private facilities to achieved and sustain a standard of quality that will result in decreased maternal and newborn mortality	Improvement in numeracy and literacy learning of ~3,20,000 students	Language and Learning Foundation's evidence-based program to 115,000 children in 3,330 schools across 7 districts in Haryana	Employment ready young India; support 50,000 young people in India- 60 percent of whom will be women and girls
Partners	<ul style="list-style-type: none"> Service Provider: Educate Girls Impact Investor: UBS Optimus Foundation Outcome funder: Children's Investment Fund Foundation Outcome Evaluator: ID-Insight 	<ul style="list-style-type: none"> Service Provider: HLFPPT, PSI Impact Investor: UBS Optimus Foundation Outcome funder: MSD for Mothers, USAID Outcome Evaluator: Mathematica 	<ul style="list-style-type: none"> Service Provider: Gyan Shala, KEF, PIF & EI, SARD Impact Investor: UBS Optimus Foundation Outcome funder: MSDF, Comic Relief, Larry Ellison Foundation, and Mittal Foundation Outcome Evaluator: Gray Matters 	<ul style="list-style-type: none"> Service Provider: Language and Learning Foundation Risk Guarantor – Central Square Foundation Outcome funder: IndusInd Bank & SBI Capital Markets Outcome Evaluator: Educational Initiatives 	<ul style="list-style-type: none"> Service Provider: NSDC's affiliated training partners Risk Guarantor – NSDC and MSDF Outcome funder: CIFF, HSBC India, JSW Foundation and Dubai Cares Outcome Evaluator: Oxford Policy Management
Bond Size	0.4 M USD	9 M USD	11 M USD	2.3 M USD	14.4 M USD
Expected results	Achieved 160% of total learning target Achieved 116% of total enrollment target	Upto 600,000 pregnant women positively impacted upto 10,000 lives saved over a five year period	0.2 -0.4 SD per annum depending on intervention type	Students will have the fluency to read grade-level test by the end of Grade 11.	Equip youth with skills and vocational training and provide access to wage-employment

Case study 1: The Educate Girls Development Impact Bond (1/2)

**THE EDUCATE GIRLS
DEVELOPMENT
IMPACT BOND:**
A NEW FINANCE MODEL FOR
INTERNATIONAL DEVELOPMENT



IMPROVING EDUCATION FOR 18,000 CHILDREN IN RAJASTHAN

About the Bond

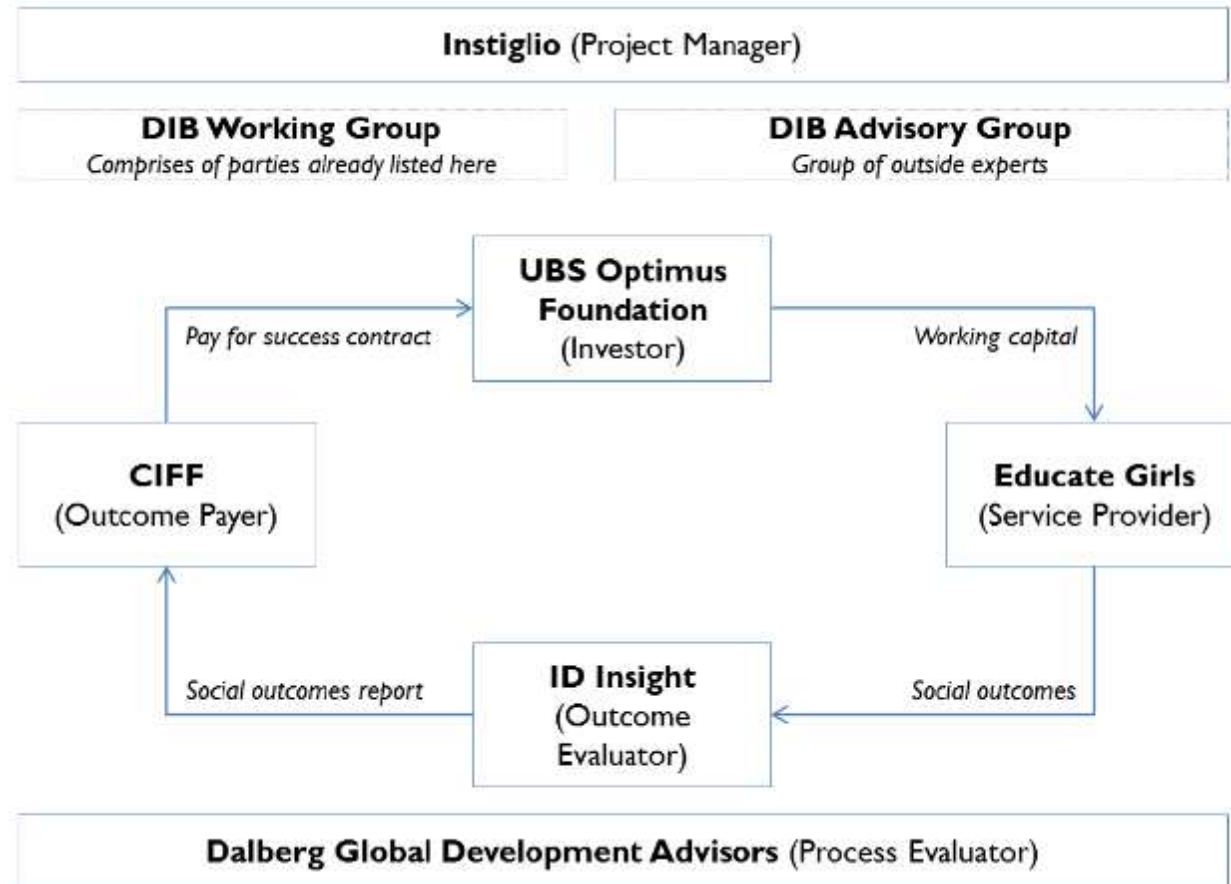
The Educate Girls Development Impact Bond (the “EG DIB” or the “DIB”) is a joint project between the Children’s Investment Fund Foundation (“CIFF”), Educate Girls (“EG”), the UBS Optimus Foundation (“UBS Optimus” or “UBS Optimus”), IDinsight, and Instiglio (collectively, the “Working Group”) to provide and improve education for girls in rural India.

The goal of the EG DIB is to test a new model for improving social outcomes in international development, and, more specifically, to test the application of DIBs to improving educational outcomes in India.

Target area and population

- Mandalgarh and Jahajpur blocks in the Bhilwara district : 140 villages, which contain 166 government schools.
- Educate Girls is expected to reach approximately 18,000 children

DIB structure



Case study 1: The Educate Girls Development Impact Bond (2/2)

Outcomes and Metrics

- **Learning outcome** - 80% of the total outcome payment is allocated to this outcome; the target population is made up of girls and boys in grades 3-5; learning will be measured using the ASER test, administered by IDinsight
- **Enrollment outcome** - 20% of the total outcome payment is allocated to this outcome; the target population is made up of girls ages 7-14 that would be eligible for enrollment into grades 2-8; Enrollment will be measured by calculating the percentage of out of school girls who are enrolled into government schools, as verified by Idinsight.
- **Incentives**- UBS Optimus will pass on an incentive payment to Educate Girls equal to 32% of UBS Optimus' payment above principal.

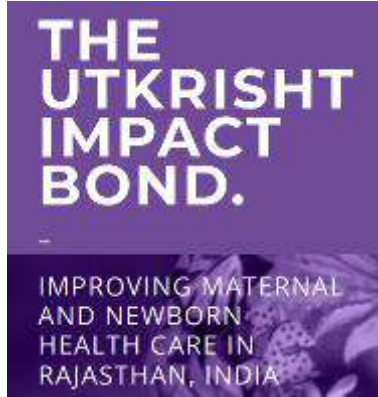
Bond Size

- Service provision will cost **INR 17,332,967**
- Maximum outcome payment will be **USD 422,000**
- UBS Optimus will disburse to Educate Girls in two payments: 40% of the working capital requirement in the Spring of 2015, and 60% of the requirement in the Spring of 2016
- Enrollment and learning are the payment outcomes
- CIFF will make one outcome payment to UBS Optimus in 2018, based fully on outcomes
- Price per outcome will be constant in CHF
- UBS Optimus' return on investment will be 10% expected IRR, 15% maximum IRR (before incentive payments to Educate Girls)

Impact

- **Educate Girls' DIB surpassed both its target outcomes!** 160% of the final learning target achieved and 116% of the final enrolment target achieved

Case study 2: The Utkrisht Impact Bond for private healthcare facilities (1/2)



IMPROVING MATERNA AND NEWBORN HEALTH CARE IN RAJASTHAN, INDIA

About the Bond

The Utkrisht Impact Bond supports private healthcare facilities in Rajasthan, India to achieve and sustain a standard of quality that will result in decreased maternal and newborn mortality.

The impact bond will be implemented over three years, providing funding for HLPPT and PSI to support a base case scenario of 360 private healthcare facilities to become accredited under the JQS. Palladium will be the implementation manager, with Merck for Mothers and USAID as outcome funders, and UBS Optimus Foundation as the primary investor.

Target area and population

- The impact bond will support a base case of 360, and up to 444, private facilities across Rajasthan, which represents 20- 30% of the 1,700 private facilities in Rajasthan.

Contract structure



Case study 2: The Utkrisht Impact Bond for private healthcare facilities (2/2)

Outcomes and Metrics

- 25% of the payment will be made on verification that a facility has reached a defined progressive standard, reflecting good progress towards the Joint quality standard (JQS), and
- 75% will be made on verification that a facility is ready for accreditation under the JQS.
- Incentive- An additional USD 1,281,500 of outcome payments is available to incentivize achievement of stretch targets and paid out if service providers perform above the baseline.

Bond Size

- Outcome funders will commit up to USD 9M in total (USD 4.5M from Merck for Mothers, USD 4.5M from USAID). USD 1M will be set aside for independent verification and future costs including impact evaluation. The remaining USD 8M is allocated to investors and service providers on achievement of pre-agreed results.
- Investment commitments will total USD 4.8M. This will adequately cover the working capital needs of achieving the base case of 360 facilities, as a portion of outcome payments will be recycled as working capital, reducing the need to draw down additional investor capital.
- Expected IRR for the impact bond with the base case of 360 facilities is ~7.1%. UBS Optimus Foundation will have first call in the distribution of outcome payments up to a capped maximum return of 8%.

Impact

- The expected impact of the structure is reduced maternal and newborn mortality in Rajasthan across a forecasted 600,000 births in supported facilities over the lifetime of the project. A separate LiST analysis conducted by USAID calculated that this intervention could save up to 10,000 lives over a five-year period.

Case study 3: Quality Education Development Impact Bond (1/2)



Quality Education India
Development Impact Bond:

About the Bond

Planned to run from April 2018 – July 2022, the QEI DIB is the world's largest education DIB, funding four interventions by three service providers (Gyan Shala, KEF, SARD). The project is building on the successes of the first DIB in education, Educate Girls, which funded one service provider to achieve outcomes in enrolment and learning in Rajasthan.

A important aim of the QEI DIB is to drive focus towards outcomes based contracts in the development sector in India and provide evidence of the benefits of private sector participation in service delivery.

Contract structure



Target area and population

- 200,000 children across three districts of India: **New Delhi, Ahmedabad and Surat**

Case study 3: Quality Education Development Impact Bond (1/2)

Outcomes and Metrics

- Over four years, the Quality Education India DIB will enable approximately 200,000 children to improve their literacy and numeracy, contributing to a significant improvement in their life chances, and providing them with the skills to bring themselves out of poverty.
- The primary outcome in the QEI DIB is improvement in learning outcomes (namely grade appropriate numeracy and literacy skills).
- The DIB's focus on outcomes transforms the traditional approach to grant-making and philanthropy. Every partner in the DIB is incentivised to achieve learning outcomes, not just deliver services. The result is maximum impact for money spent.

Bond Size

- The program has an outcome funding pot of \$9.2 million, provided by the Michael and Susan Dell Foundation, Comic Relief, Larry Ellison Foundation, and Mittal Foundation. The consortium of funders, convened by British Asian Trust, covers service delivery costs and an interest rate up to 8 percent per annum if outcomes are met, and incentive payments to service providers if targets are exceeded. An additional \$1.4 million in evaluation and performance management support has been funded primarily by the Foreign, Commonwealth & Development Office (formerly DFID) and the UBS Optimus Foundation.

Impact

- **Educational:** Improve literacy and numeracy skills for primary school children by tying funding to learning outcomes.
- **Financial:** Increase the amount of private, philanthropic, and public funding allocated to outcomes-based development initiatives.
- **Systemic:** Demonstrate the benefits of outcomes-based funding to drive innovation in the global education sector.

Case study 4: The Haryana Early literacy Outcomes Development Impact Bond – with CSR funds (1/2)



Contract structure

About the Bond

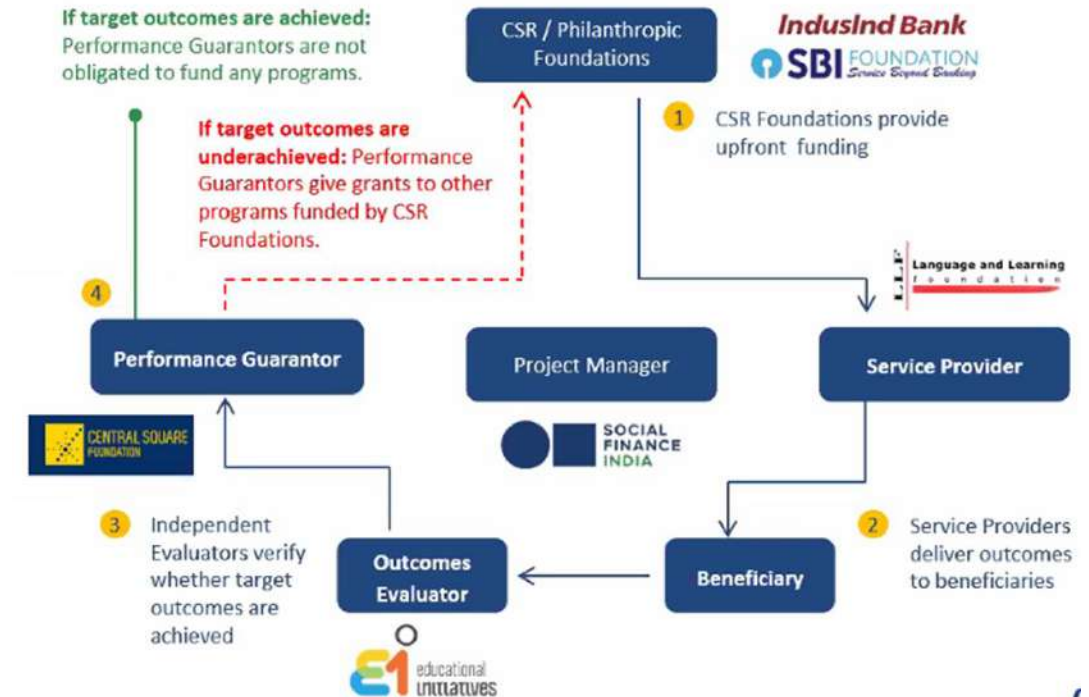
Government of Haryana's landmark “Pay for Success” program to improve students' foundational learning outcomes.

The Haryana Early literacy Outcomes Development Impact Bond (DIB), a CSR funded Development Impact Bond project aimed at improving foundational language learning is underway in Haryana.

The program is led by Haryana School Shiksha Pariyojna Parishad (HSSPP) in partnership with IndusInd Bank and SBI Capital Markets implemented by Language and Learning Foundation.

Target area and population

- The project is working to bring Language and Learning Foundation's evidence-based program to 115,000 children in 3,330 schools across 7 districts in Haryana



Case study 4: The Haryana Early literacy Outcomes Development Impact Bond – with CSR funds (2/2)

Outcomes and Metrics

- Program to focus on the ability of Grade 1 and 2 students to understand appropriate texts and understand simple sentences, in line with National Foundational Literacy Mission.
- Result expected- Students will have the fluency to read grade-level test by the end of Grade II.
- The outcomes will be assessed by Educational Initiatives, an independent and specialist evaluator with over 20 years of experience in this area.

Bond Size

- First Development Impact Bond to use CSR budgets in India
- 14 crore commitment by IndusInd Bank; 2.8 crore commitment by SBI Capital Markets (through SBI Foundation)
- The performance or impact guarantee is provided by Central Square Foundation and will make up to 20% in payments in case of underachievement of outcomes.
- IndusInd Bank, Central Square Foundation (CSF), Language and Learning Foundation and SBI Capital Markets co-own project; Social Finance India leads the design of pay-for-outcomes structure

Impact

- This DIB will pave the way for CSR funds to be used for outcome payment in the impact bond structure. This proposed model retains the advantage of an impact bond, ensuring that donor funds are only used for verifiable outcomes, focusing on flexible and adaptive program implementation, and transferring the delivery/performance risk to the guarantor.
- To develop a state specific early literacy and learning package to help improve students' language learning outcomes.

Case study 5: Skill Impact Bond (1/2)



About the Bond

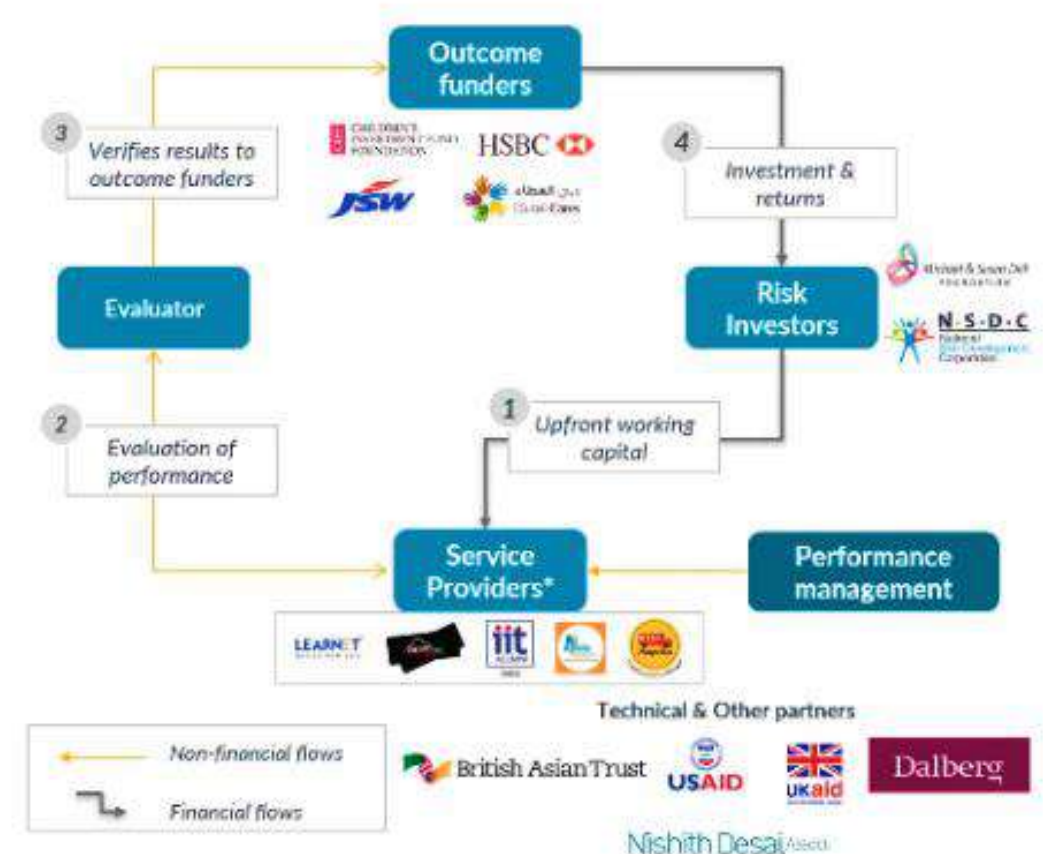
Skill Impact Bond is an initiative of the National Skill Development Corporation (NSDC) in collaboration with a coalition comprising British Asian Trust, the Michael & Susan Dell Foundation, The Children's Investment Fund Foundation, HSBC India, JSW Foundation and Dubai Cares, with FCDO (UK Government) & USAID as technical partners.

The attention of the impact bond is to address the youth employment crisis and specifically that for young women.

Target area and population

- The Skill India Impact Bond will support 50,000 young people in India over four years, 60 percent of whom will be women and girls and provide them with skills and training and access to wage-employment in Covid-19 recovery sectors including retail, apparel, healthcare, and logistics.

Contract structure



Case study 5: Skill Impact Bond

Outcomes and Metrics

- The agreed outcomes will be assessed by an independent evaluator, Oxford Policy Management. Dalberg Advisors, the performance manager, will regularly measure outcomes so that delivery partners can reiterate and adapt to stay on track to achieve outcomes.
- Service Providers deliver skilling interventions to improve employment outcomes. Skilling outcomes are measured by an independent evaluator.
- Verified achievement of skilling outcomes that translate into employment triggers outcome payments to repay the risk investors

Bond Size

- Outcome funders commit US\$14.4Mn over 4 years. CIFF, HSBC India, JSW Foundation and Dubai Cares support the outcome fund.
- NSDC and MSDF are the risk investors that have committed US\$4 million to provide upfront working capital to the service providers to implement the programme for four years.
- The training will be imparted through NSDC's affiliated training partners, namely, Apollo Medskills Ltd, Gram Tarang Employability Training Services Pvt Ltd, Learnet Skills Ltd, Magic Bus India Foundation and PanIIT Alumni Foundation. Nishith Desai Associates is the legal partner for the impact bond.

Impact

- The Skill India Impact Bond will support 50,000 young people in India over four years. Create sustained improvements in the quality and efficiency of service provision in the skilling ecosystem by shifting focus from outputs to outcomes.
- The target group includes 60 percent women and girls and to equip them with skills and vocational training and provide access to wage-employment in Covid-19 recovery sectors including retail, apparel, healthcare, and logistics.

Summary of Experience of Recent DIBs in India

- **Innovative and flexible approach-** Innovative financing has the potential to compliment government resources and drive efficiency in operations in a scalable and sustainable manner. It provides more flexibility than a traditional grant to test innovative approaches and outcomes-focused adaptive management techniques.
- **Multi-stakeholder partnership** - The DIB brought together multiple sector-leading experts to work collaboratively and openly in shared areas of interest in impact investing, creating a significant opportunity to support high performing Non-Governmental Organisations (NGOs) to deliver at scale.
- **Focus on outcome and achieving targets-** An impact bond places particular emphasis on the achievement of outcomes, rather than outputs. The impact bond mechanism incentivizes constant program improvement for delivery of results, allowing partners to leverage its strengths in rigorous data analysis and adaptive performance management to achieve outcomes. Performance is evaluated and paid based on successful achievement of outcomes.
- **De-risk business Models-** The structure and financing instrument helps to ensure the right balance of flexibility and control towards pooling in and disbursement of funds, stakeholder management etc. Structure also helps improved financial viability of service providers and affordability of their services to create financially and environmentally sustainable models.
- **Simplicity of DIB structure is needed to improve speed and reduce transaction costs** - A good example of this is the Cambodia DIB that was set up in nine months at a cost of approximately 3% of total outcomes funding, significantly lower than other DIBs in India. This was facilitated by having only three partners involved, which made it easier for negotiating key terms. The transaction costs of DIBs can be further reduced by developing templates that can be easily re-used for contracting.



Need and Opportunity for a Sanitation Impact Bond in India

**Need for a bond in urban sanitation sector with focus on
Fecal Sludge and Septage Management**

FSSM as a viable solution for safely managed sanitation (1/2)



Image source:
<http://www.campaign.exchange/campaigns/sustainable-development-goals/>



Image source:
<https://www.ice.org.uk/eventarchive/achieving-sdg-6-the-water-goal>

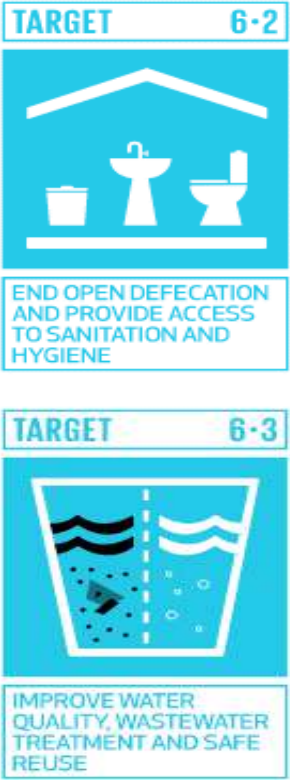


Image source:
<https://textilesforsdgs.org/sdgs/goals/6-clean-water-and-sanitation/>

FSSM as a viable solution for safely managed sanitation (2/2)

Sanitation ladder of JMP (WHO-UNICEF)¹

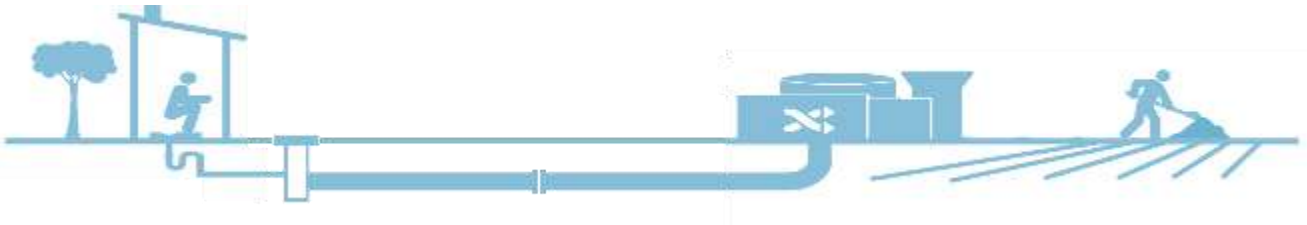
Service Level	Definition
SAFELY MANAGED	Use of improved facilities that are not shared with other households and where excreta are safely disposed of in situ or transported and treated offsite
BASIC	Use of improved facilities that are not shared with other households
LIMITED	Use of improved facilities shared between two or more households
UNIMPROVED	Use of pit latrines without a slab or platform, hanging latrines or bucket latrines
OPEN DEFECCATION	Disposal of human faeces in fields, forests, bushes, open bodies of water, beaches or other open spaces, or with solid waste

Note: improved facilities include flush/pour flush to piped sewer systems, septic tanks or pit latrines; ventilated improved pit latrines, composting toilets or pit latrines with slabs.

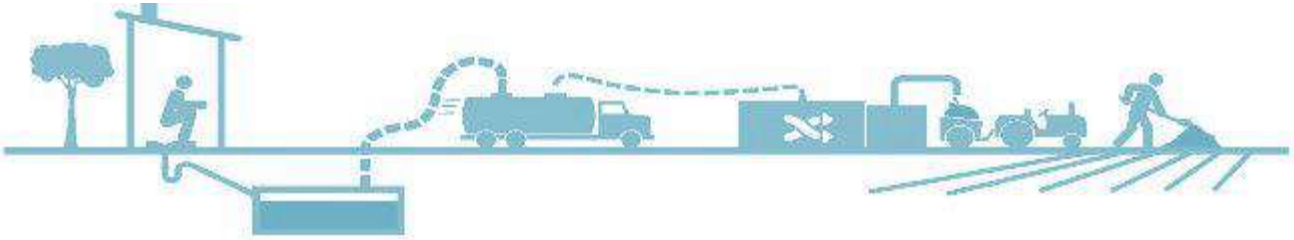
Safe management across sanitation value chain



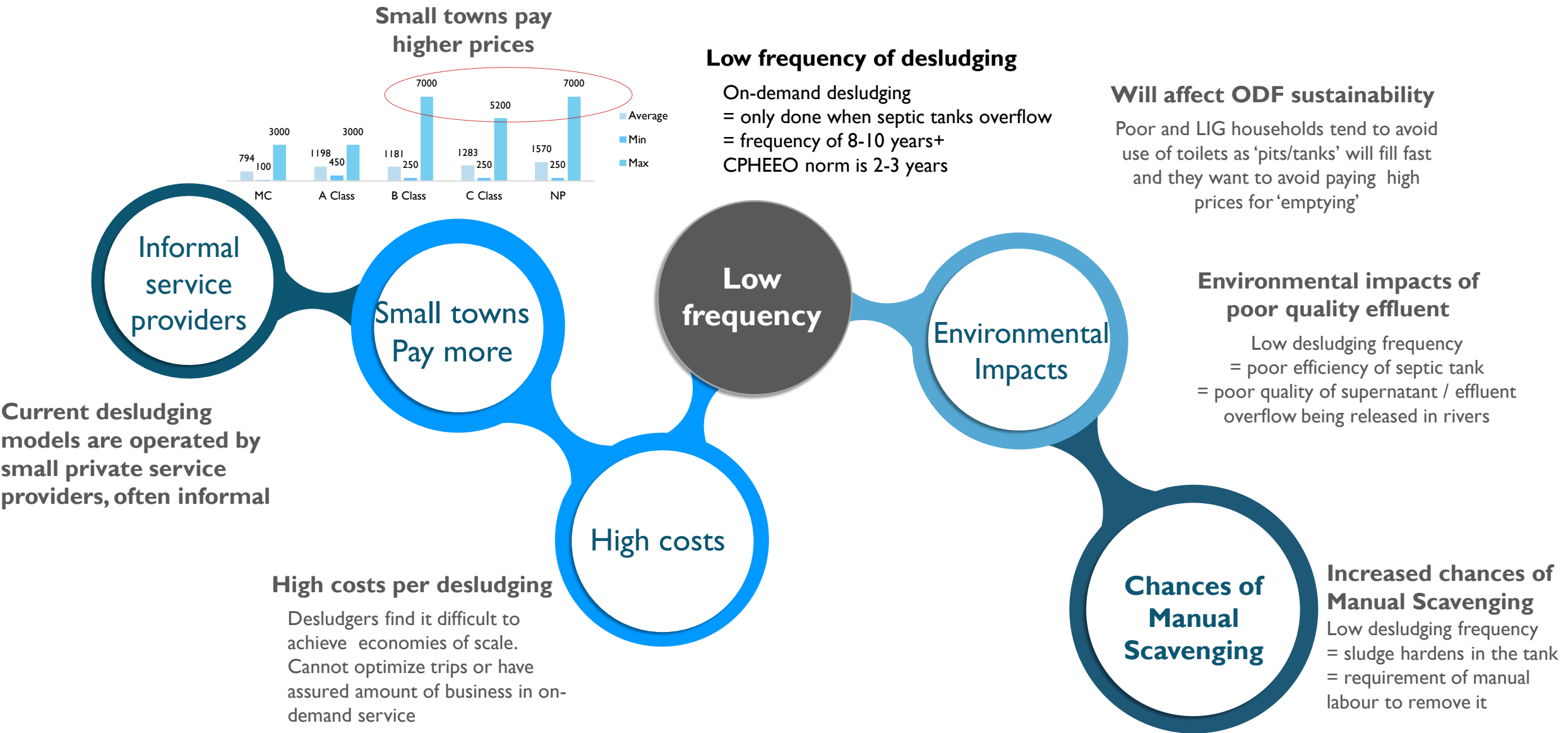
Conventional Sewerage



Faecal Sludge and Septage management



Need for scheduled desludging in India



Benefits of scheduled desludging



Equitable and inclusive services - all households / properties are covered by services. The payment is linked to property tax.



Pricing – Services are offered at lower prices, due to efficiency gains and the pricing is much less than the distress fee that households had to pay previously



Behavior change - Contribution to ODF sustainability as toilet usage can increase



No manual labour - Removal of need for manual labour due to regular emptying

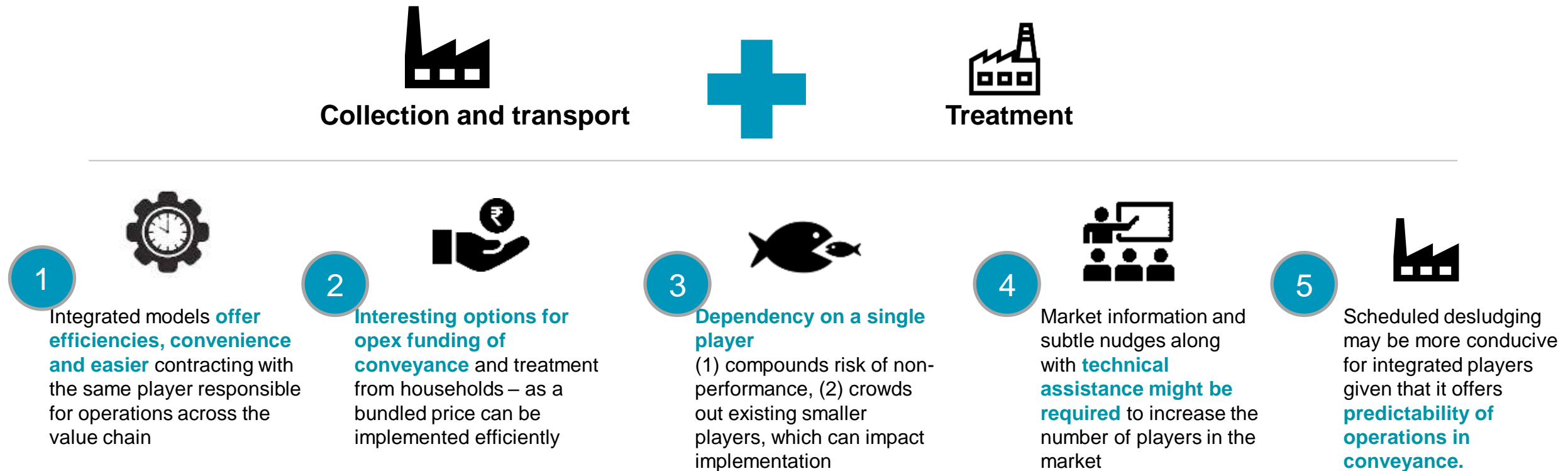


Infrastructure optimization – Planned schedule and frequency for all. Clustered service visits. More predictable loads for treatment facility and route optimization of trucks



Environmental benefits - Lowered likelihood of septic tank overflows, increased efficiency of septic tanks resulting in lower pollutants (such as faecal coliforms) in drain effluent

Need for Integrated model for scheduled desludging and treatment



Different Business Models

- 1** **Integrated model for scheduled desludging and treatment :** *Same private firm operates both desludging and treatment service for one city*
- 2** **Integrated model with a cluster based approach :** *Same private firm operates both desludging and treatment service for a group of nearby cities*

Positive Social Impacts – livelihoods for women SHGs and SMEs

Viable business models for desludging through SMEs



Capacity building to private sectors - Mechanical emptying and safe transportation of fecal sludge hence represent significant positive outcomes

Livelihood opportunities for Women SHGs and Sanitation workers SHGs

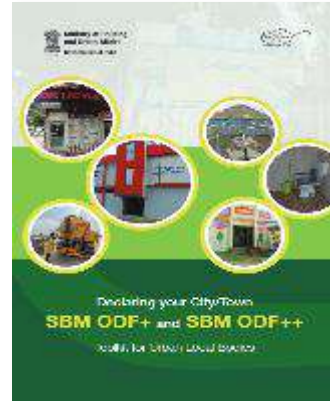


Engaging with women SHGs for FSTP O&M/ FSTP landscape/gardening. Strengthening capacity of existing sanitation workers SHGs to promote engaging in mechanised desludging and managing FSTPs

Wai and Sinnar experience has led to national and international recognition for scheduled desludging services

At National level

- Scheduled desludging is one of the mandatory requirements to get ODF++ certification from MoHUA, GoI
- Marks have been assigned for adequate infrastructure availability for scheduled desludging under Swachh Sarvekshan
- Scheduled desludging has been included in the Advisory on Onsite and Offsite sewage management by CPHEEO, MoHUA . The case of Wai has been documented in the advisory ([link](#))
- Niti Aayog has shown interest in this service / business model implemented in Wai



At International level

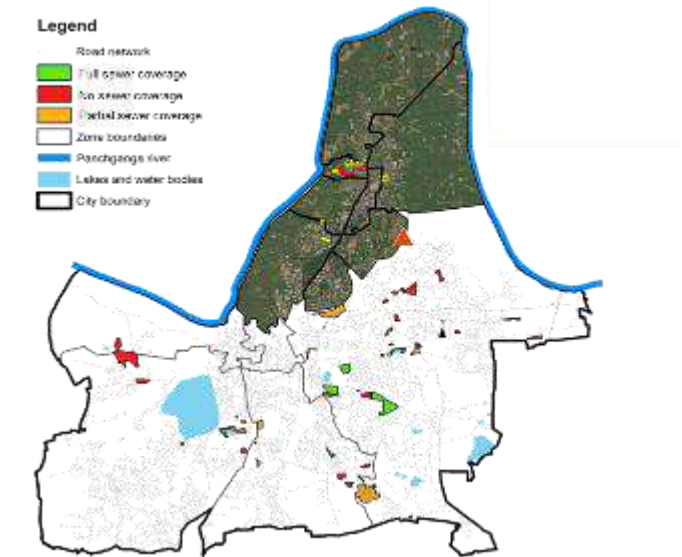
- The case of Wai model has been documented in OECD document on 'Blended Finance for Water and Sanitation' ([link](#))
- A paper ([link](#)) on Citywide Inclusive Sanitation Through Scheduled Desludging Services: Emerging Experience From India has been published in the Special Issue of the journal 'Frontiers in Environmental Science' on Citywide Inclusive Sanitation
- The experience from Wai has been shared at various international platforms like SIWI Stockholm World Water Week, IWA Water Development Congress and Exhibition, MEDs convening and FSM 5/6 ([Link](#))



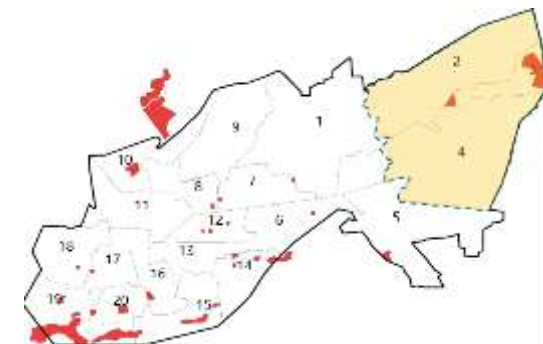
Kolhapur and Satara in Maharashtra also take up scheduled desludging

- **One pilot zone** is selected in each city to start implementation of scheduled desludging.
- The criteria for selection of pilot zone for scheduled desludging include: zone without any sewerage network, high coverage of septic tanks, and the presence of slum settlements.
- **The project is implemented through funding under CSR grant.**
- The **capital cost** of desludging trucks are funded **through CSR grant.**
- Both **cities will bear Operation and Maintenance Costs** and deploy their staff for scheduled desludging.

Pilot zone for scheduled desludging in Kolhapur

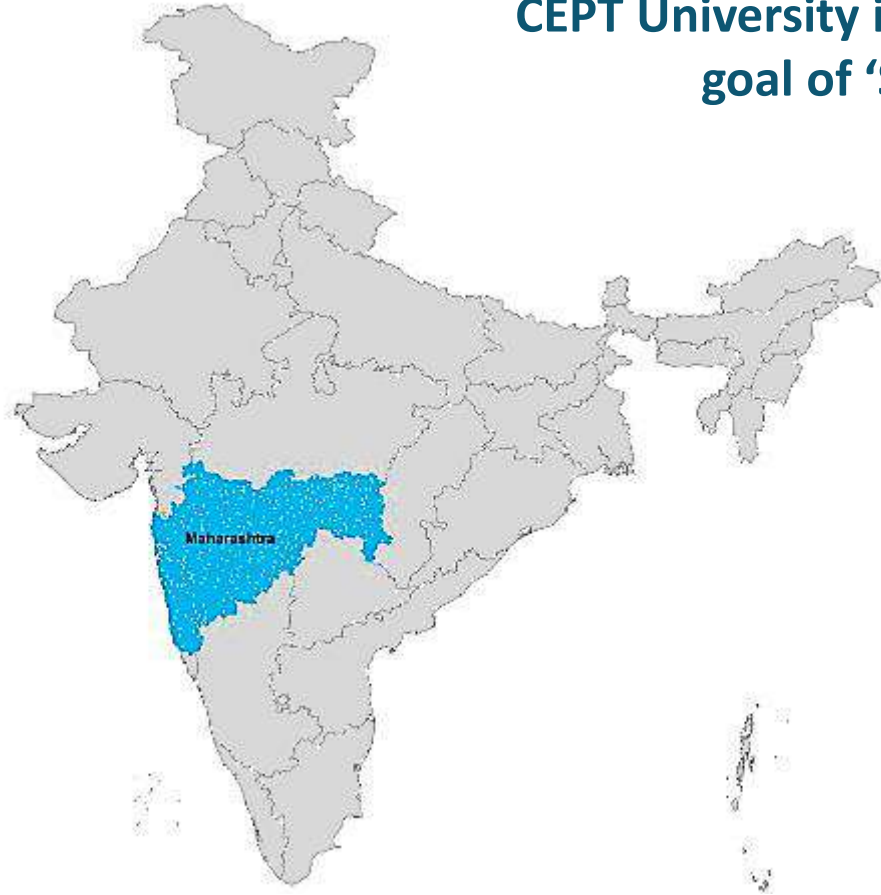


Pilot zone for scheduled desludging in Satara

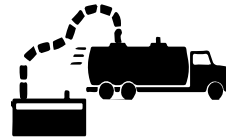


Government of Maharashtra plans to scale up scheduled desludging across cities in Maharashtra

CEPT University is a technical support partner to Govt. of Maharashtra to achieve the goal of 'Sustainable sanitation services at scale' under a BMGF grant



~50 million urban population in Maharashtra

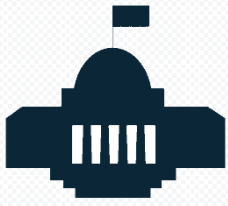


300+ cities with onsite sanitation systems



5.7 Million Households dependent on onsite sanitation systems

Key considerations for successful scheduled desludging practice



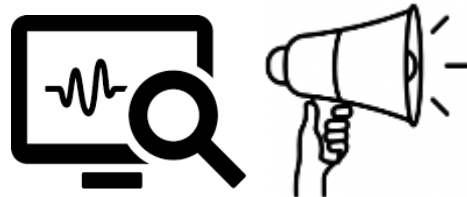
Providing scheduled desludging service as a Municipal Service

- Like provision of SWM door to door collection service
- Promote supply driven approach and not demand driven.
- The onus of desludging the septic tank must not be on the HHs



Higher degree of desludging acceptance rate linked to indirect cost recovery

- Avoid/ user chargers based model (Based on international experiences)
- Should promote indirect cost recovery mechanism such as sanitation tax or sewerage tax as percentage of property tax.



Proper monitoring and IEC campaigns

- Involving various stakeholders for Awareness generations i.e. Citizens, NGOs, ULB officials, SHGs, etc.
- Paper based or IT based monitoring systems



Proposed Urban Sanitation Impact Bond

Option for proposed sanitation impact bond – geography, proposed activities, outcomes and structure

Genesis for development of an Urban Sanitation Impact Bond

- In 2018, team at Centre for Water and Sanitation (CWAS) started brainstorming ways to bring in additional financing in urban sanitation space. Under a financing project funded by BMGF, CWAS began exploring various innovative financing options and framework for sustainable Fecal Sludge and Septage Management (FSSM) services.
- In 2019, CWAS organized a **round table discussion** in Mumbai to explore development impact bonds in urban sanitation space particularly FSSM. It was attended by sanitation and finance experts, private service providers, legal expert and social organizations. ([Presentation](#) and [meeting note](#))
- Later, the Development Impact bond idea was also presented in **World Water Week at Stockholm**. A sofa session ([Video link](#)) and pitch presentation ([link](#)) was made by CWAS team.
- Initial DIB structure and ideas were also discussed with **various stakeholders** (Grameen Capital, IndusInd Bank, Omidyar Network, India Impact Investment council, etc) and with sector experts at various workshops.

SIWI Sofa Session on Development Impact Bonds for Urban Sanitation in India



Discussion on Development Impact Bonds for Urban Sanitation in Financing workshop at Mumbai



An example of the first Sanitation Impact Bond, Cambodia (1/2)



2019 - 2023 |
**BRINGING SAFE
SANITATION TO RURAL
COMMUNITIES IN
CAMBODIA**



About the Bond

The world’s first Development Impact Bond (DIB) for Water, Sanitation, and Hygiene (WASH), the Cambodia Rural Sanitation DIB, aims to eradicate the high rates of open defecation in the country and accelerate the Cambodian government’s efforts to reach universal sanitation and eliminate open defecation by 2025.

A groundbreaking effort to finance a push toward eradicating the high rates of open defecation in Cambodia. The goal is for 1,600 villages to become open defecation free in six Cambodian provinces by 2023, accelerating the Cambodian government’s efforts to achieve universal sanitation as part of its National Action Plan for Rural Water Supply, Sanitation and Hygiene II.

Target area and population

- Rural communities across six provinces in Cambodia: Svay Rieng, Kandal, Prey Veng, Kampong Thom, Siem Reap, and Oddar Meanchey—focusing especially on poorer and harder-to-reach groups including women, children, people living with disabilities, and older people.

Contract structure



An example of the first Sanitation Impact Bond, Cambodia (2/2)

Outcomes and Metrics

- USAID will make an outcome payment for each village (up to a maximum of 1,600 villages) in the program area achieving open defecation free (ODF) status. This metric was chosen to reflect the goal of minimizing fecal matter in the environment, which is closely linked to positive health outcomes.
- The DIB will use the Government of Cambodia's definition of ODF, which has recently evolved from simply requiring 85% latrine coverage to a much more rigorous set of criteria that brings this metric closer to measuring health outcomes.
- This is an incentive mechanism for the implementer.

Bond Size

- Maximum outcome payments: \$9,999,999
- The Stone Family Foundation (the impact investor) has provided the upfront capital, which is 100% at risk. If pre-agreed outcomes are achieved, the impact investor will be repaid by USAID (the outcomes funder), including a premium that reflects the risk taken on by the investor. If outcomes are not achieved, USAID has no obligation to make outcomes payments.
- Alongside the Stone Family Foundation's upfront risk investment, iDE has also made a financial contribution to the DIB, with the opportunity to share in the potential returns

Impact

- New strategies for reaching the poorest and most vulnerable households with improved sanitation, ensuring that all people benefit from the drive toward total sanitation.
- It also aligns with the Cambodian government's aim of eliminating open defecation in these areas by 2025—an example of how impact investors can engage with the sanitation sector and support the delivery of national and global targets.

Key challenges that need to be addressed by impact bond (1/2)

Emphasis on improving efficiency of infrastructure, service delivery and private sector participation

DEMAND

User based demand for regular desludging



Low frequency of desludging leads to lesser use of toilets



High cost per desludging



Low Awareness & acceptance of desludging

DESLUDGING

Barriers in supply side for regular tank cleaning and septage collection



Lack of formal players



Illegal Manual Scavenging



Inability to recover costs & achieve scale



Underutilization of assets & sustainability pricing



Low business prospects and profit margins in on-demand services

TREATMENT

Barriers for proper fecal sludge treatment



Lack of adequate treatment plants



Lack of an integrated city-wide approach



Lack of designated sites for septage treatment and disposal



Environmental & Health impact of un-monitored septage dumpage

An integrated strategy needed for FSSM through inclusive, efficient and affordable FSSM services

Key challenges that need to be addressed by impact bond (2/2)

Small businesses and service providers are an integral part of the **sanitation value chain**

FINANCING

Need to improve financial viability



Small informal operators,
lack collateral & underutilized
assets



Limited working capital/
funding & High interest
cost



Low margins,
Delayed Payments,

TRAINING

Limited compliance and
enforcement of regulation



Limited guidance, training,
enforcement on disposal &
treatment



Unregulated service
providers



Limiting monitoring and
compliance

SCALING

Need to unlock growth
potential



Limited Risk-taking capacity/
access to new technologies



Lack of an Integrated
approach /non-recovery of
cost



Skill sets, mind set.
Technical ability

For sustainable FSSM Services **viable business models** are needed

Urban Sanitation Impact Bond - A Pay for Performance Instrument

The proposed intervention is a result based innovative financing approach focused to build on ODF towards ODF++ by catalyzing national and state policy on “**Fecal Sludge and Septage Management**” (FSSM)

Our GOAL is to take an integrated approach to improve sanitation outcomes in the areas of



Promote Innovative and Disruptive technologies and processes



Timely and safe emptying of On-Site Sanitation (OSS) for all



Safe transportation of Fecal sludge to designated disposal sites



Treatment of Fecal sludge for healthy community and environment



Ensure Urban Local Bodies (ULB) can sustain operations and maintenance costs from own financial resources



Promote social entrepreneurs with financially sustainable models and institutionalize best practices & regulations

A collaborative performance-based financing mechanism focused on improving **sanitation outcomes**

Focus geography - Maharashtra

One of the most urbanized states in India, achieved **ODF status in 2017**.
It is among the first states to adopt a state level septage management policy for FSSM management

SCALE OF INTERVENTION



15
CITIES

6
DIVISIONS

IMPACT ENVISIONED



0.8 Million

People positively impacted

STATUS OF CITIES for FS TREATMENT

100 K

Septic tanks

380 KLD

Current FSTP capacity

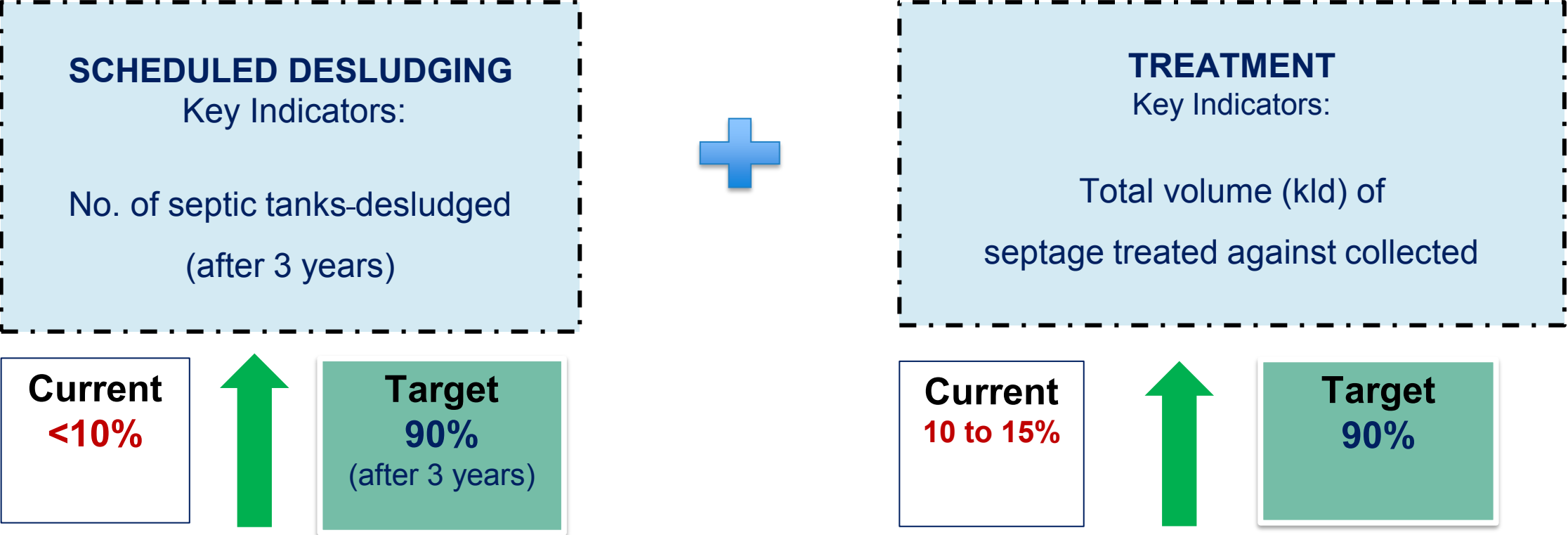


7x Coverage of
septic tanks

The intervention will be implemented in a phased manner with **financial and operating support from the Government, Urban Local Bodies (ULBs)**

Target outcomes and payment indicators

The ‘pay for performance’ intervention uses **two key measurable outcomes**, against which **performance-linked payment** will be released



Quarterly Payments to Service Providers , upon **independent evaluation** . Additional Incentive Payments at the end of 3 year at a city level for exceeding targets beyond 90%.

Potential options for an Urban Sanitation DIB

Five options have been developed for the proposed DIB for urban sanitation. These are developed in relation to the role of risk investors, outcome funders and the possibility of using CSR funds for the proposed DIB.

Option-1

Sanitation DIB –
Conventional DIB structure

Risk Investor will pay upfront to sanitation bond entity for Cost of facilitation and capacity building support. Outcome funders will repay to risk investor (initial payment +return) if target outcomes are achieved.

Eg: **Educate girl development impact bonds**

Option-2

Sanitation DIB – with CSR

In this structure, CSR funds will be used for facilitation and capacity building support. The performance guarantee will be provided by the investors or philanthropic foundations and will be used only when target outcomes are under-achieved.

Eg: **Haryana Early Literacy Outcomes Development Impact Bond**

Option-3

Sanitation DIB – as a Pay
for Performance model

In this structure, Outcome funder will pay to bond management entity against performance. Bond entity will work with urban local government and service providers to achieve targeted outcomes.

Eg: **Mukti Impact bond for TB patients**

Option-4

Sanitation SIB – Hybrid DIB/
SIB structure

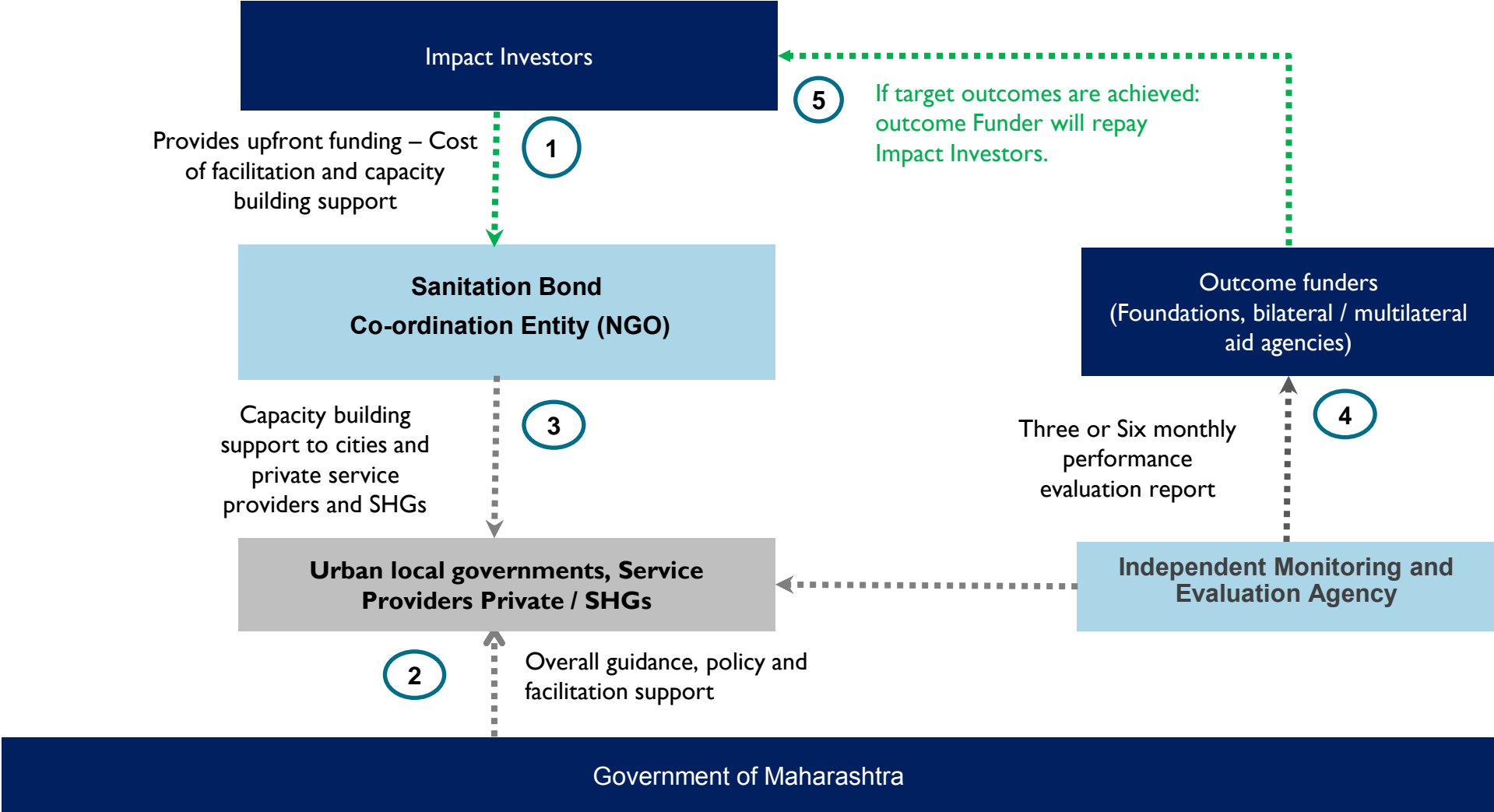
In this structure, Impact investors will provide working capital loans to service providers. Outcome funder will pay to bond management entity against performance. Eg: **Stockholm Health Impact Bond**

Option-5

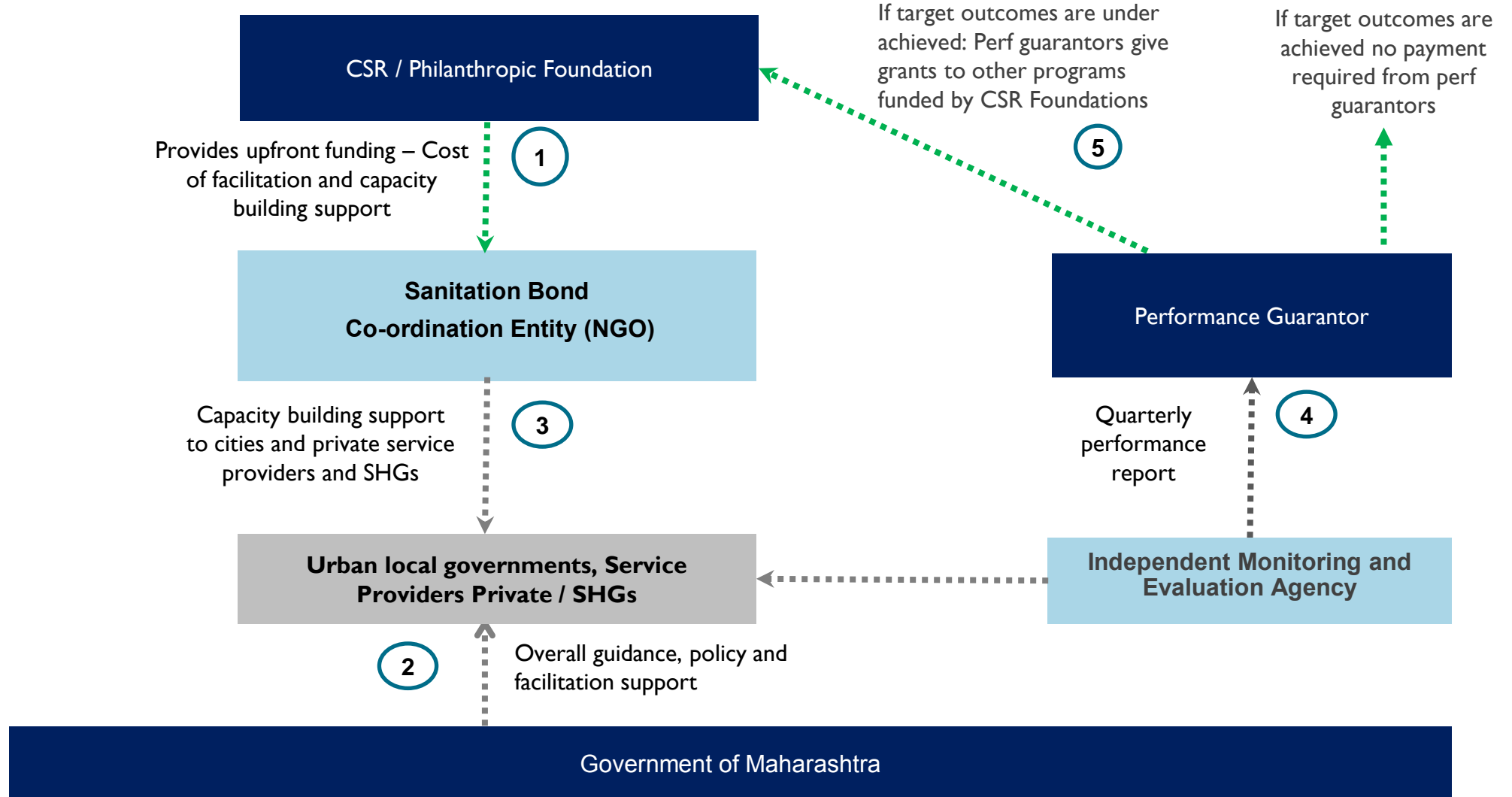
Adapting Hybrid DIB-SIB
with credit guarantees

This is similar to option -4. One additional aspect added in this structure is credit guarantee to impact investors to reduce risk of lending to private service providers. Eg: **Finish Mondial sanitation impact bond**

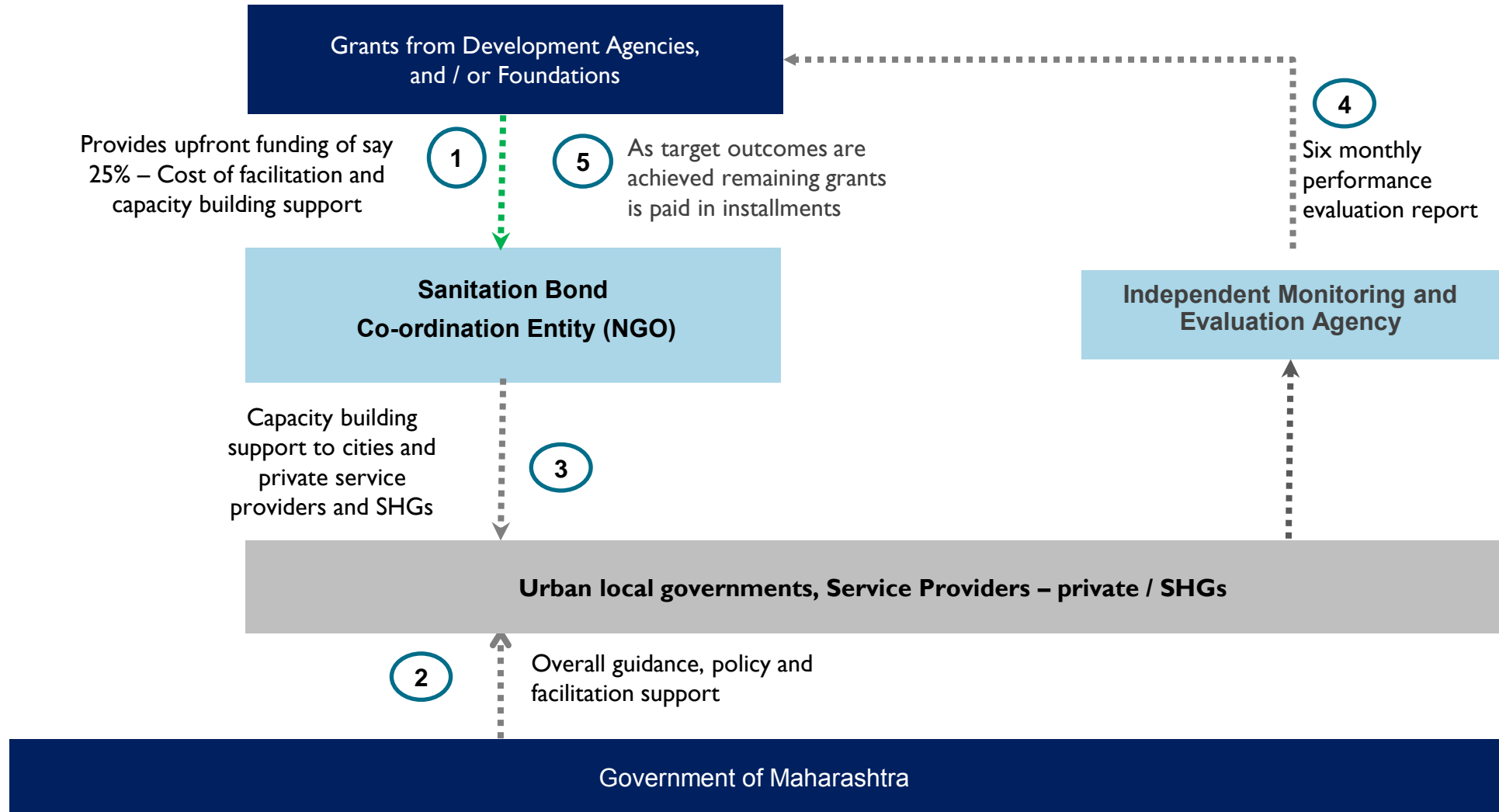
Option 1: Sanitation DIB – Conventional DIB structure



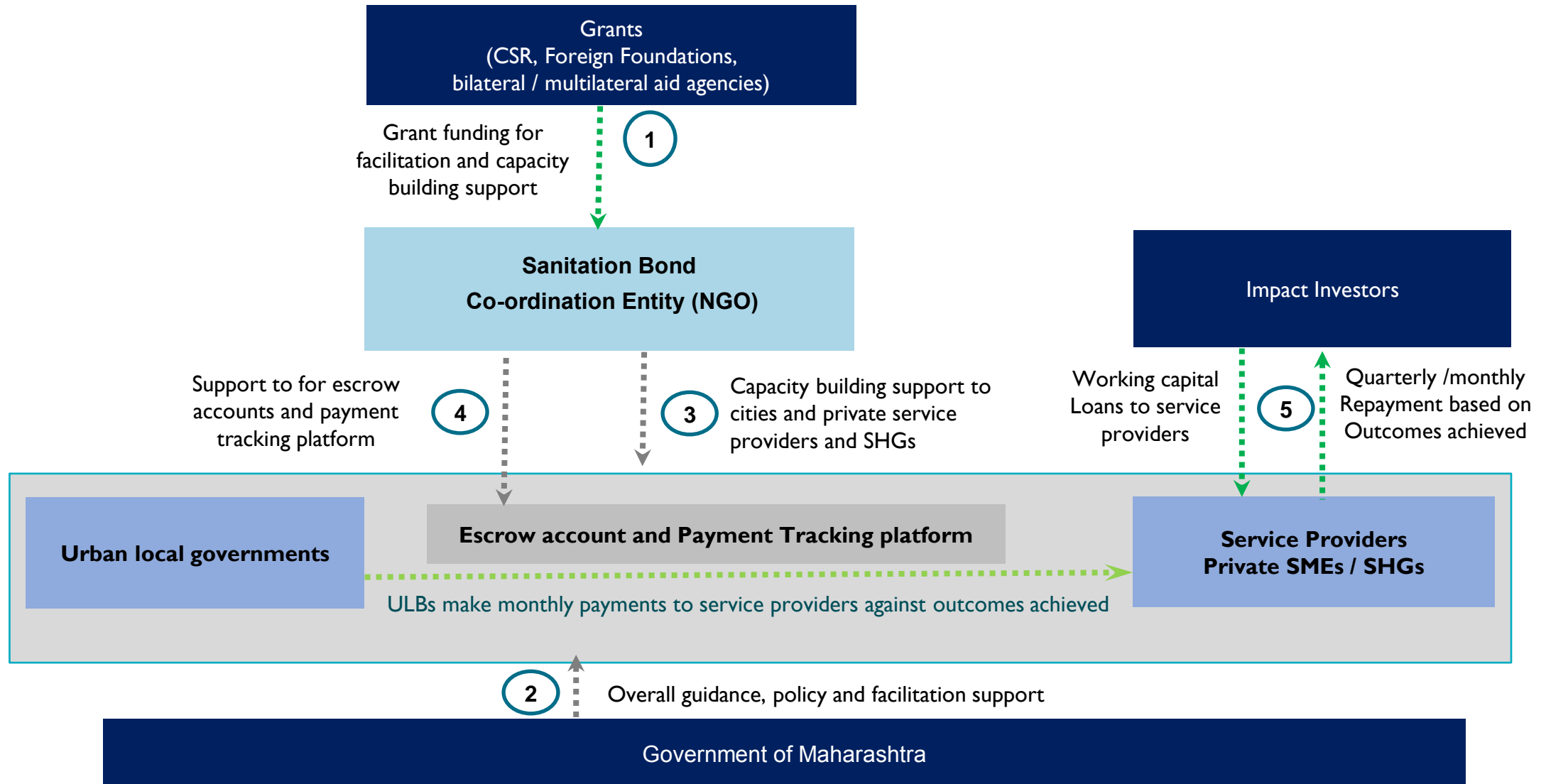
Option 2: Sanitation DIB – with CSR



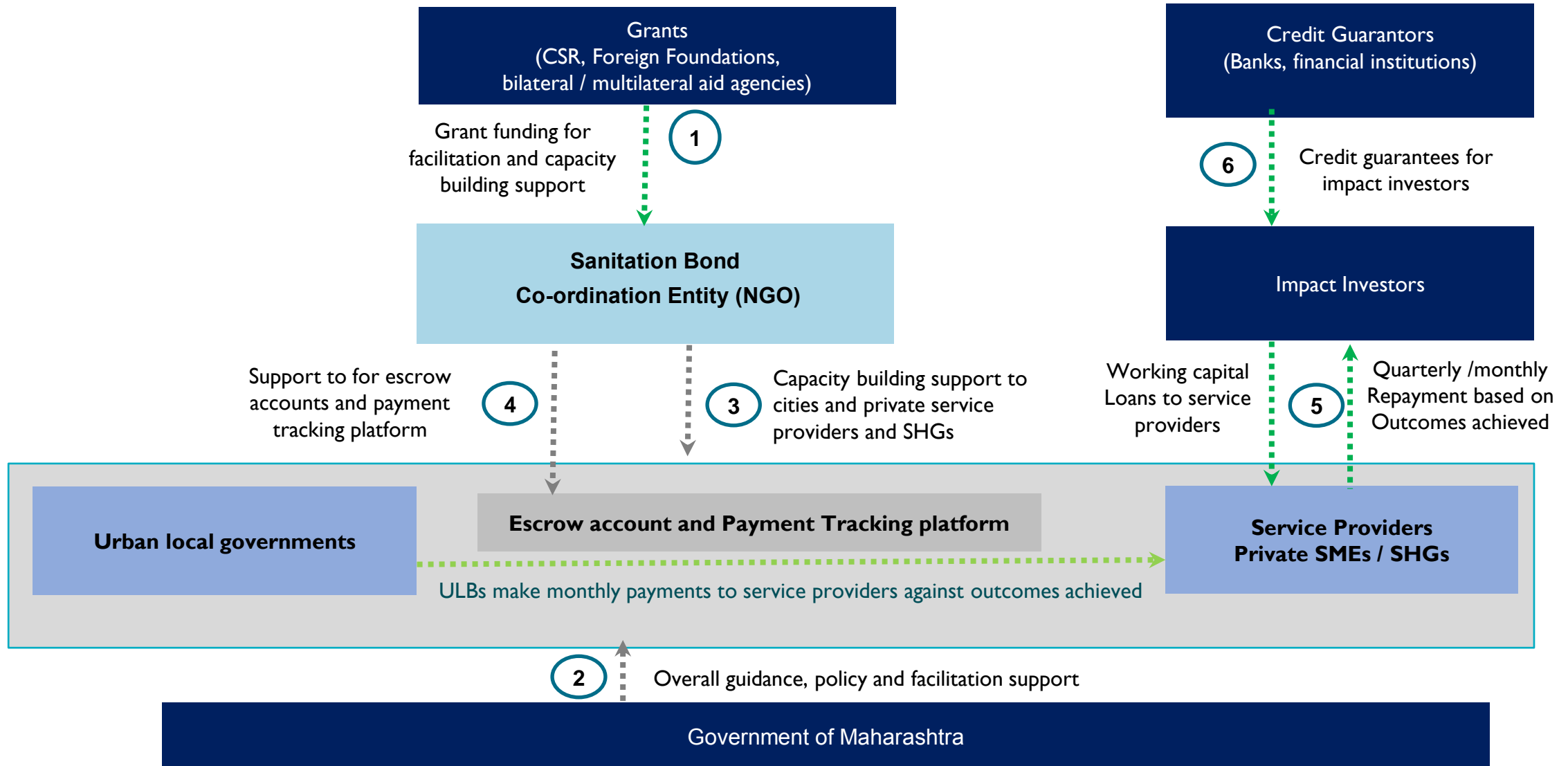
Option 3: Sanitation DIB – as a Pay for Performance model



Option 4: Sanitation SIB – Hybrid DIB/ SIB structure



Option 5: Adapting Hybrid DIB-SIB with credit guarantees

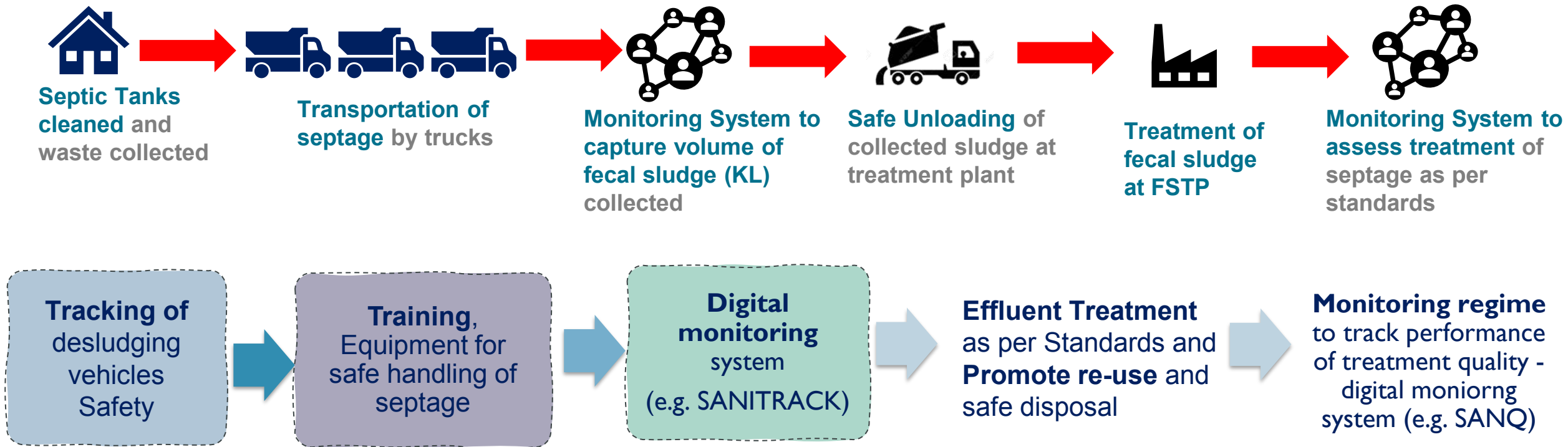


Comparison across different options

	Options	Advantages	Limitations
1	Sanitation DIB – Conventional DIB structure	<ul style="list-style-type: none"> Traditional structure> successful examples from education and health sector 	<ul style="list-style-type: none"> Any delay in payment by urban local government to service providers may impact outcomes.
2	Sanitation DIB – with CSR	<ul style="list-style-type: none"> Reduces overall cost by not having to pay to impact investor Allows CSR money to be used at scale Guarantor involved in design, governance and technical advise 	<ul style="list-style-type: none"> New CSR and FCRA regulations may increase complexity and initial timeline for developing of this structure.
3	Sanitation DIB – as a Pay for Performance model	<ul style="list-style-type: none"> Simple contract structure with limited stakeholders resulting in lower cost of design and contracting Reduces overall cost by not having to pay to impact investor 	<ul style="list-style-type: none"> Access to finance for service providers will be difficult as direct dependency on ULB payment. Any delay in payment by urban local government to service providers may impact outcomes.
4	Sanitation SIB – Hybrid DIB/ SIB structure	<ul style="list-style-type: none"> Easy access to working capital finance by impact investors Encourage private sector/service provider to adopt newer technologies/innovation in the sector. 	<ul style="list-style-type: none"> Risk of delay in repayment by service providers as direct dependency on ULB payment.
5	Adapting Hybrid DIB-SIB with credit guarantees	<ul style="list-style-type: none"> Credit guarantee schemes will reduce the risk of impact investors associated with lending to private service providers 	<ul style="list-style-type: none"> Increase complexity of structure as more stakeholders are involved> high cost of design and contracting

Support local government for scheduled desludging and treatment

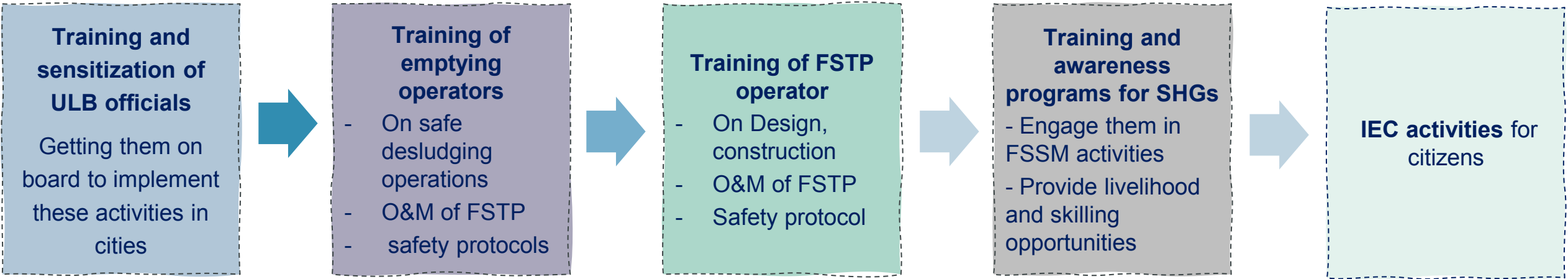
DESLUDGING PROCESS and FECAL SLUDGE TREATMENT PROCESS



Different urban local governments will adopt different business models of their choice. This could be through **private service providers, women SHGs or their own staff** for scheduled desludging and operation and maintenance of treatment plants.

Capacity building and technical support

Improve demand generation, awareness among communities,
Build capacity of private service providers, ULBs and SHGs for sustained outcomes



Improved awareness of ULB officials, private operators on good practices and safety protocols



Improved livelihood opportunities, increased incomes & safety of Sanitation workers



Profitable, Sustainable & Scalable operations

Digital monitoring systems and payment tracking dashboard

IT enabled monitoring systems for FSSM, especially to monitor safe and inclusive service delivery . . .

“Real time” monitoring
No need to process data for results



Easy to Operate,
Reduce paper work,
Minimize human error



Monitors performance of
FSSM services



Photo stamping,
Geo stamping,
Signatures

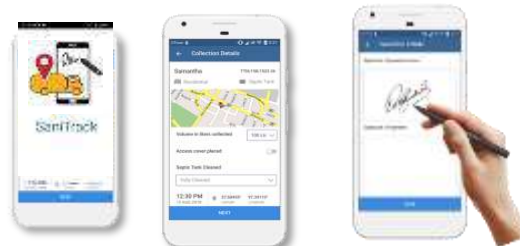


These systems have been used in cities in Maharashtra and can be scaled up to other cities

SaniTab



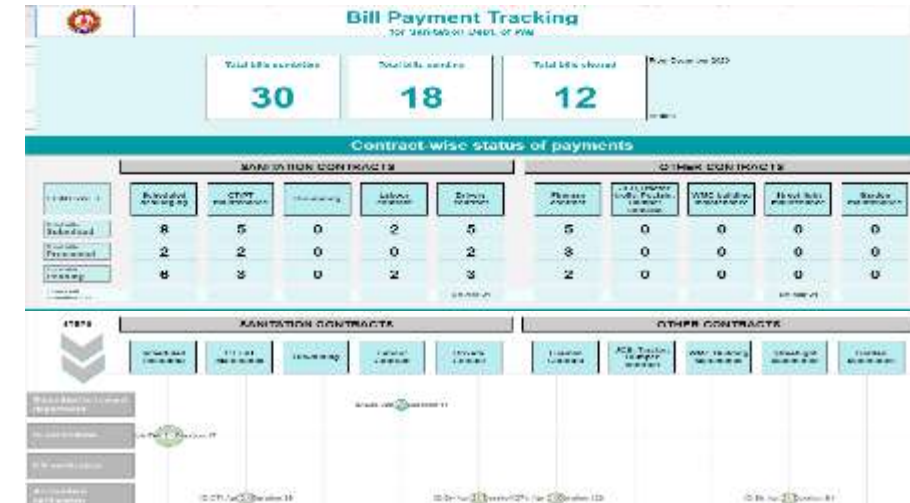
SaniTrack



SanQ



Payment tracking platform dashboard



- Transparent payment process
- Payments will be routed through an escrow mechanism
- Payments/transfers will be made as per the payment/transfer charter agreed upon by stakeholders
- Payment dashboard to ensure that there are no delay in payments

Proposed activities, outcomes and impact

Integrated Scheduled De-sludging, Transportation and Treatment with a common service provider

ACTIVITIES	OUTCOME	IMPACT
1 <p>SCHEDULED DESLUDGING</p> <ul style="list-style-type: none"> - Safe collection and conveyance - Tracking of desludging vehicles - Training, Equipment for safe handling of septage - Digital monitoring system (e.g. SANITRACK) 	<ul style="list-style-type: none"> - Increased frequency of septic tanks emptied per year - Equitable & Inclusive services esp. for poor/low-income - Affordable Pricing for all 	<p>TIMELY & AFFORDABLE Scheduled and economical desludging</p>
2 <p>FECAL SLUDGE & SEPTAGE TREATMENT</p> <ul style="list-style-type: none"> - Improved Operations and management - Effluent Treatment as per standards - Promote re-use and safe disposal - Track performance of treatment quality (SANQ) 	<ul style="list-style-type: none"> - Proper treatment and disposal of all collected waste - Improved business opportunity/ viability (of private providers/ operators) 	<p>HEALTH & ENVIRONMENT Improved morbidity & mortality Improvement in water/soil quality</p>
3 <p>CAPACITY BUILDING</p> <ul style="list-style-type: none"> - Awareness/demand generation at community - Training of (SHGs/sanitation entrepreneurs, ULB & Municipal Staff, Transporters, Treatment Plant Operators) 	<ul style="list-style-type: none"> - Augmented Institutional Capacities - Scale-up by ULB and Government Bodies - Improved livelihood opportunities 	<p>VIABLE BUSINESS MODELS sustainable earnings</p>
4 <p>Support to Service Providers for Financing</p> <ul style="list-style-type: none"> - Development and operationalization of an online Payment Platform to reduce the risks of delayed payments - Supporting service providers to access credit for infra and working capital 	<ul style="list-style-type: none"> - Financial sustainability of Service providers - Reducing the risks of delayed payments 	<p>ENHANCED AWARENESS Regulations, safety standards, benefits</p> <p>LIVELIHOOD GENERATION SHGs, Private Operators, Services Providers have regular income</p>

Incentive awards to urban local bodies and incentive payments to private service providers

Incentive Awards to ULBs

Under the DIB, it is proposed to have **incentive prizes** or awards given each year to ULBs and service providers (private and SHGs) on achievement of target outcomes. These will be a part of the total bond costs. Awards will be made jointly with Government of Maharashtra.

Special incentive payment beyond outcome threshold

Incentive payments will be made to those service providers at the end of the third year in each city that exceed the 90% target outcomes for the number of septic tanks desludged and faecal sludge treated.

Special prizes will be made also to women SHGs.

The proposed DIB addresses key sector issues (1/2)

	Key Issues	Activities	Targeted Outcomes
User based demand	<ul style="list-style-type: none"> Irregular De-sludging High Cost per trip High user charges act as a deterrent to regular desludging 	<ul style="list-style-type: none"> 100% septic tanks Scheduled for De-sludging with no payment at the time of desludging 	<ul style="list-style-type: none"> Affordable Pricing through a sanitation tax, and transfer from property taxes Equitable/Inclusive Services
Unviable business models	<ul style="list-style-type: none"> Low frequency, unmet costs Poor unit level economics Underutilised assets Lack of formal players 	<ul style="list-style-type: none"> Route Planning / asset utilisation Price Discovery through tenders Access to working capital 	<ul style="list-style-type: none"> Improved business opportunity/ viability New entrepreneurs Predictable Business
Delayed payments	<ul style="list-style-type: none"> Erosion of profit margins Limited working capital & inability to scale operations 	<ul style="list-style-type: none"> Monthly/ Quarterly Payments linked to performance Online payment platform to improve transparency 	<ul style="list-style-type: none"> Improved business opportunity/ viability (of private providers/ operators)
Financing options	<ul style="list-style-type: none"> Small players lack collateral. High Interest Costs 	<ul style="list-style-type: none"> Support for access to loans for private service providers and SHGs 	<ul style="list-style-type: none"> Entry and scale up of newer players/ operators, including private players and SHGs

The proposed DIB addresses key sector issues (2/2)

	Key Issues	Activities	Targeted Outcomes
Limited training	<ul style="list-style-type: none"> Low awareness Skill set- Mindset. Technical ability 	<ul style="list-style-type: none"> Training and capacity building of sanitation entrepreneurs, SHGs, ULB staff, FSTP operators 	<ul style="list-style-type: none"> Augmented institutional capacities Livelihood generation
Limited compliance	<ul style="list-style-type: none"> Unregulated providers No proper Disposal Safety standards not adhered 	<ul style="list-style-type: none"> Payment linked to desludging and delivery at treatment facility IT enabled monitoring. Payment linked to Effluent Treatment as per standards 	<ul style="list-style-type: none"> Enhanced compliance to regulations, safety standards
Proper Treatment	<ul style="list-style-type: none"> Lack of Proper Disposal 	<ul style="list-style-type: none"> Encourage reuse 	<ul style="list-style-type: none"> Proper Disposal Improved re-use
Sustainability of operations by Urban Local Bodies	<ul style="list-style-type: none"> Non recovery of operations and maintenance costs 	<ul style="list-style-type: none"> Capacity building of ULBs and sustainability through property /sanitation tax 	<ul style="list-style-type: none"> Scale-up by ULB and Government Bodies
Adoption of newer technologies	<ul style="list-style-type: none"> Limited access and adoption of newer technologies 	<ul style="list-style-type: none"> Identify and encourage newer technologies 	<ul style="list-style-type: none"> Efficiency of operations Encourage private sector

Envisaged impacts of sanitation impact bond

Large Social, environmental and economic benefits

SOCIAL

TIMELY DESLUDGING

Transition from on-call/ irregular services to scheduled services

AFFORDABLE PRICING

Innovations & efficiency make desludging available at lower prices

ENHANCED COMMUNITY AWARENESS

Awareness generation on toilet use, regular desludging,

EQUITABLE & INCLUSIVE SERVICES

All households pay “Sanitation Tax” & receive services every 3 years

ECONOMIC

BUSINESS OPPORTUNITIES

Improved & sustainable earnings, regular profits, Viable business model for entrepreneurs

AUGMENTED INSTITUTIONAL CAPACITIES

Greater FSSM capacities across the city and state, Generate evidence to scale in other states

SKILL & EMPLOYMENT GENERATION

Skilled manpower for FSSM through capacity building (Regulations, safety standards) & evolving career opportunities

LIVELIHOOD OPPORTUNITIES

Involvement of Self-Help Groups (SHGs) to give dignified livelihoods and increased income

HEALTH and ENVIRONMENT

HEALTH IMPACT

Improved health outcomes (morbidity and mortality)

ENVIRONMENTAL IMPACT

Significant improvement in water/ soil quality due to reduced contamination

Comparative analysis of proposed outcomes and impacts in DIBs for Education, health and sanitation

Sector	Outcomes for Bond payments	Impacts
Quality Education impact bond	<ul style="list-style-type: none"> Improvement in numeracy and literacy learning of 3,20,000 students 	<ul style="list-style-type: none"> Better education leading to 'better life' and employment later
Utkrisht Health impact bond	<ul style="list-style-type: none"> 444 private health care facilities to achieve and sustain standards of quality of health care 	<ul style="list-style-type: none"> Improving maternal and newborn health care and decrease in mortality rate
Proposed Sanitation impact bond	<ul style="list-style-type: none"> Citywide inclusive FSSM services for safely managed sanitation in 15 cities including scheduled desludging (90,000 of septic tanks desludged) and treatment of faecal sludge (300 KLD septage collected and treated) 	<ul style="list-style-type: none"> Cleaner water and environment Improved health conditions Improved livelihoods for private operators and SHGs



Discussion with stakeholders

Overview of discussions with key stakeholders

Key stakeholders and their roles

Government of Maharashtra

- Overall Guidance and Support
- Policy Making based on scientific evidence generated
- Catalyze like minded stakeholders, foundations and CSR
- Explore the scaling up to more ULBs

Urban Local Body

- Local Guidance and Support, Pass city level resolutions to enable implementation and collect sanitation tax/ charges
- Enter into an MLU/ agreement with the implementation partner to provide services
- Select the service provider through a tender and pay against performance

Implementation Partners

- Aggregators will provide FSSM services and meet agreed outcome targets through local private service provider and/or SHGs, build their capacity by 'on-the-job' training
- Receive payments linked to performance targets
- Mobilize initial working capital if/ as needed

DIB Program Manager Group

- Co-creation, intervention design, investment structure and support to align various stakeholders
- Liaison with state and local governments
- Technical assistance for investment management, Program management and coordination,, monitoring and evaluation.
- Dissemination of learnings and policy advocacy for statewide scale-up by State Government.
- Appoints and manages the outcome evaluation and reporting
- Set up a Contract Payment Platform

Outcome Funders

- To provide funding to repay impact
- To support digital monitoring and payment platform, capacity building activities

Impact Investors

- Provide working capital to Implementation Partners for FSSM services and get repaid by outcome funders based on performance on outcomes.
- They will be repaid by Outcome Funders

Discussions with potential stakeholders

- CWAS team along with IPE global conducted a series of discussions with various stakeholders like Implementation partners, Outcome funders, risk investors and other government partners.
- Suggestions and feedback from these discussions were incorporated in the DIB structure.
- Few investors have shown interest in the DIB proposal. So far, Asha Impact have shown interest in DIB and further discussions are ongoing with them as well as USAID.
- **CWAS continue discussion with these investors to explore potential funding for the DIB proposal.**

Implementation partners	Potential Outcome funders	Risk investors	Technical support
<ul style="list-style-type: none">▪ Blue Water Company▪ Kam Avida▪ Sumeet facilities▪ 3S- Saraplast	<ul style="list-style-type: none">▪ BMGF▪ USAID▪ JICA▪ HSBC▪ FCDO, UK▪ UNICEF	<ul style="list-style-type: none">▪ Responsibility▪ Asha impact▪ Samhita, Revive platform▪ Grameen Capitals▪ Water.org	<ul style="list-style-type: none">▪ British Asia Trust▪ Convergence▪ Nishith Desai Associates

Discussion with implementation partners (1/3)

- Web meetings were conducted with private service providers to get their insights for designing the DIB structure.
- Discussions were held with four service providers namely Blue water Company, 3S-Saraplast, Kamavida Enviro Ltd and Summet facilities.
- **Key discussion points:**
 - Implementation Structure- Two-three large implementation partner taking up cluster of 4-5 cities and then they could engage with local private service providers which are already present in cities, in some cities work with SHGs and build their capacity; bring in new private service providers/new entrepreneurs in few cities and in some cities do it themselves if required. Also build capacity of local government in cities where local government themselves is providing desludging service.
 - Reuse economics is very less- especially for FSM as scale is very small. It would be good to include environmental benefits factors for certain towns and link small percentage of payment also to it. Should add **dignity of workers** as one of key outcomes in our impact bond.

Discussion with 3S- Saraplast



Discussion with Blue water company



Discussion with implementation partners (2/3)

Large private service providers (LPSS)

- 3-4 large service providers - each takes up 3-6 cities

Aggregator/ Franchise model – Local service provider/ SHGs

- In some cities, where there are existing private service providers and/ or SHGs, the LPSS will work with through a service contract. They will also train the local service providers / SHGs.

Kam-Avida Enviro Engg Pvt Ltd

Kam Avida manufactures equipment and sells to civic bodies, also run fleets (where trucks are owned by the municipality) at some places. they work on a BO basis i.e. invest in the asset and operate on behalf of the civic body. They operate around 100 trucks. It applies for tenders to operate trucks, and O&M is a part of these tenders. Some examples where the company has done this include: Kanpur, Delhi, Odisha, Indore. For more information, visit <http://www.kamavida.com/>

Sumeet Group

SUMEET GROUP is a fast-growing business service provider in India. It has 25000+ Employees, managing a clientele of 650+ in 13 States with 21 Branch Offices across India.. For more information, visit www.sumeetgroup.com. It has been in the desludging industry for over a decade. They are providing Scheduled Desludging services in the cities Wai and Sinnar. They are also active in Pune and Pimpri Chinchwad. The Sumeet group does business in facilities management, e-surveillance, environmental engineering.

3-S SaraPlast

3S is a brand owned by Saraplast Pvt Ltd. It is India's first professionally scaled portable sanitation and waste management company, a leading quality temporary restroom manufacturer, cleaning services provider and most recently a harbinger for setting up bio digester based low cost household and community toilets for rural and urban India. For more information, visit <https://www.3sindia.com/>. They are active in Pune, Mumbai, Ahmedabad, Chennai, Hyderabad, Bangalore, Gurgaon, Noida, etc.

Blue Water company

Blue water company is involved in providing operations and maintenance services in India with special focus on Feacel sluge management . It aspires to provide quality O & M services leading to efficient service delivery. They have been engaged in FSM services in Leh (desludging service and construction and O&M pf FSTP) and Dhenakanal (O&M of desludging and treatment plant) since many years.

Discussion with implementation partners (3/3)

Implementation Partner – as a Direct Service Provider or an Aggregator

- Implementation Partner directly provides services in a city for scheduled desludging and FSTP operations
- Implementation Partner works as an Aggregator to bring in different service providers together - coordinate, manage and build capacity of local private service providers and SHGs, monitor performance of services and is responsible for achieving outcomes
- Have 2-3 Implementation Partners, with each taking up 3-5 cities as an aggregator

Engages Local Private Service Providers

- In some cities, where there are existing local private service providers, aggregators may engage with them and provide necessary trainings and capacity building support.

Engages SHGs

- In some cities, which have SHGs with interest in sanitation aggregators will engage with SHGs for service provision and provide necessary training and capacity building support.

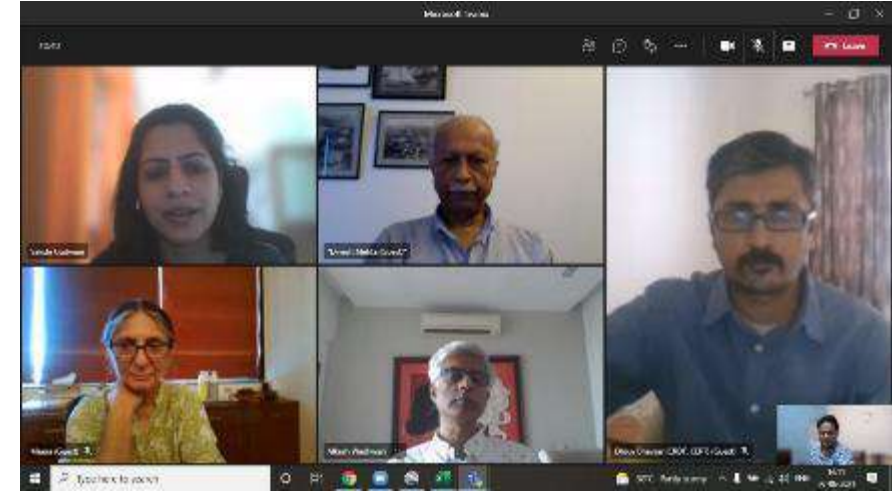
Supports new entrepreneurs

- In some cities, where there are no existing private service providers, the aggregator will bring in new service partners/ providers

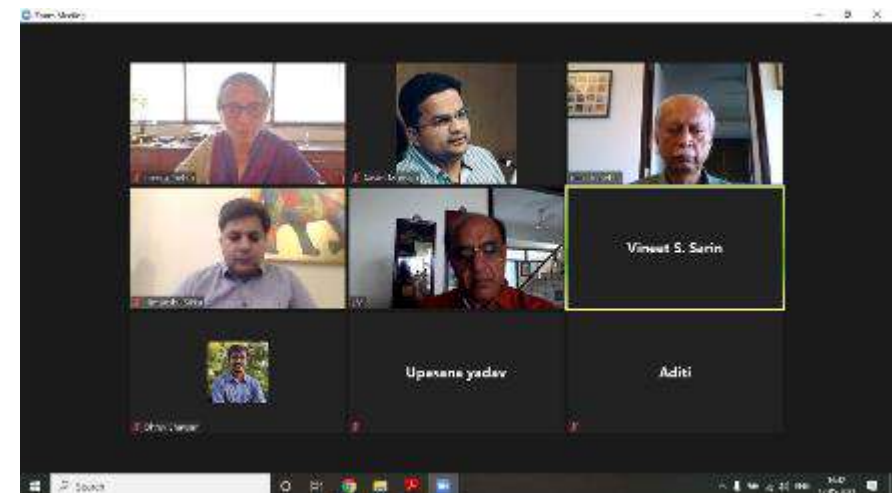
Discussion with potential outcome funders

- Virtual meetings were conducted with potential outcome funders to assess their interest and suggestions on urban sanitation impact bond. Their feedback was incorporated in the proposed DIB structure. Discussions were held with potential outcome funders such as USAID, BMGF, FCDO, JICA and HSBC.
- The key suggestion was to keep the DIB structure simple and ensure Sustainability and Scaling up
- Emphasis was placed on articulating innovative aspects that this model will bring in beyond what the government is doing currently.

Discussion with BMGF



Discussion with JICA



Discussion with risk investors

- Virtual meetings were conducted with potential risk investors namely Responsibility, UNICEF, Asha Impact, Samhita-Revive platform and Grameen Capital.
- **Key discussion points:**
 - Should consider recycling of funds in the structure. Consider 2 to 3 phases for operation cycle. Keeping scale small initially to attract smaller amounts from the donors like CSR and Foundations.
 - Some investors seem interested in funding a few components like SBCC, capacity building, monitoring etc.
 - Need to ensure a buy In from the State and City ULB prior to launching the intervention.

Discussion with Responsibility



Discussion with UNICEF



Discussion with Asha Impact



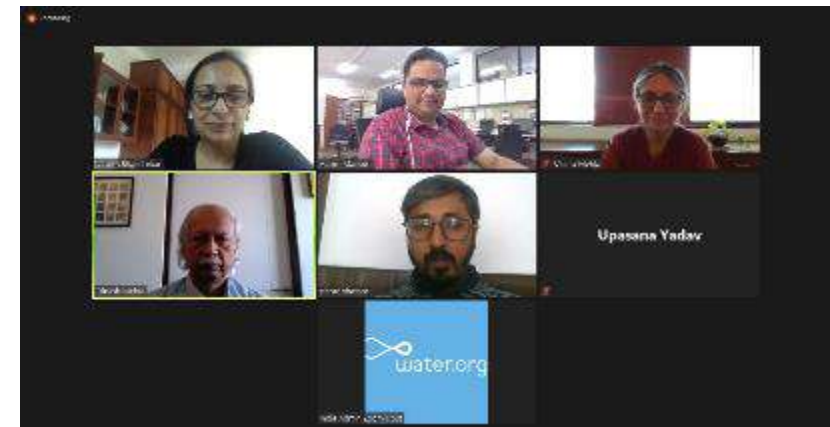
Discussion with other development partners

- Discussions were also conducted with experts in finance and sanitation sector, organizations with experience of impact bonds and government partners.
- Meetings were held with:
 - British Asian Trust (involved in education impact bond)
 - Water.org (finance and sector experts)
 - Convergence (expert in innovative financing models/blended finance)

Discussion with British Asian Trust



Discussion with Water.org



Conclusions and way forward

- While there is interest among risk investors, it has been difficult to get outcome funders. Many donors were either preoccupied with COVID response or waiting for clarity on legal compliance required under new CSR/FCRA regulations.
- CWAS will continue discussion with these investors and outcome funders for the DIB proposal. Once there is some interest from outcome funders, CWAS will seek buy-in from State government of Maharashtra for overall guidance and coordination.
- DIB structure is kept flexible to accommodate starting with 3, 5 or 10 cities and gradually expand to other cities of Maharashtra as per interest from outcome funders.
- The DIB structure will be kept simple to avoid high costs of development and monitoring. The legal and monitoring templates will be standardized for further use.
- It is envisaged that success of a DIB in urban sanitation will act as a model case for future potential investors. This will contribute to the progress of achieving SDG 6, which seeks better sanitation outcomes.

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CWAS acts as a catalyst to provide access to every household to safe water and safely managed sanitation

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About us

The Center for Water and Sanitation (CWAS) is a part of CEPT Research and Development Foundation (CRDF) at CEPT University. CWAS undertakes action-research, implementation support, capacity building and advocacy in the field of urban water and sanitation. Acting as a thought catalyst and facilitator, CWAS works closely with all levels of governments - national, state and local to support them in delivering water and sanitation services in an efficient, effective and equitable manner.



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