



# FSM Business Models in India

# EMERGING EMPHASIS ON FSSM IN INDIA



## SDG

Target **SDG 6.2** states that by 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation.

## National policy on FSSM

## National ODF+ and ODF++ protocol

## Swachh Survekshan

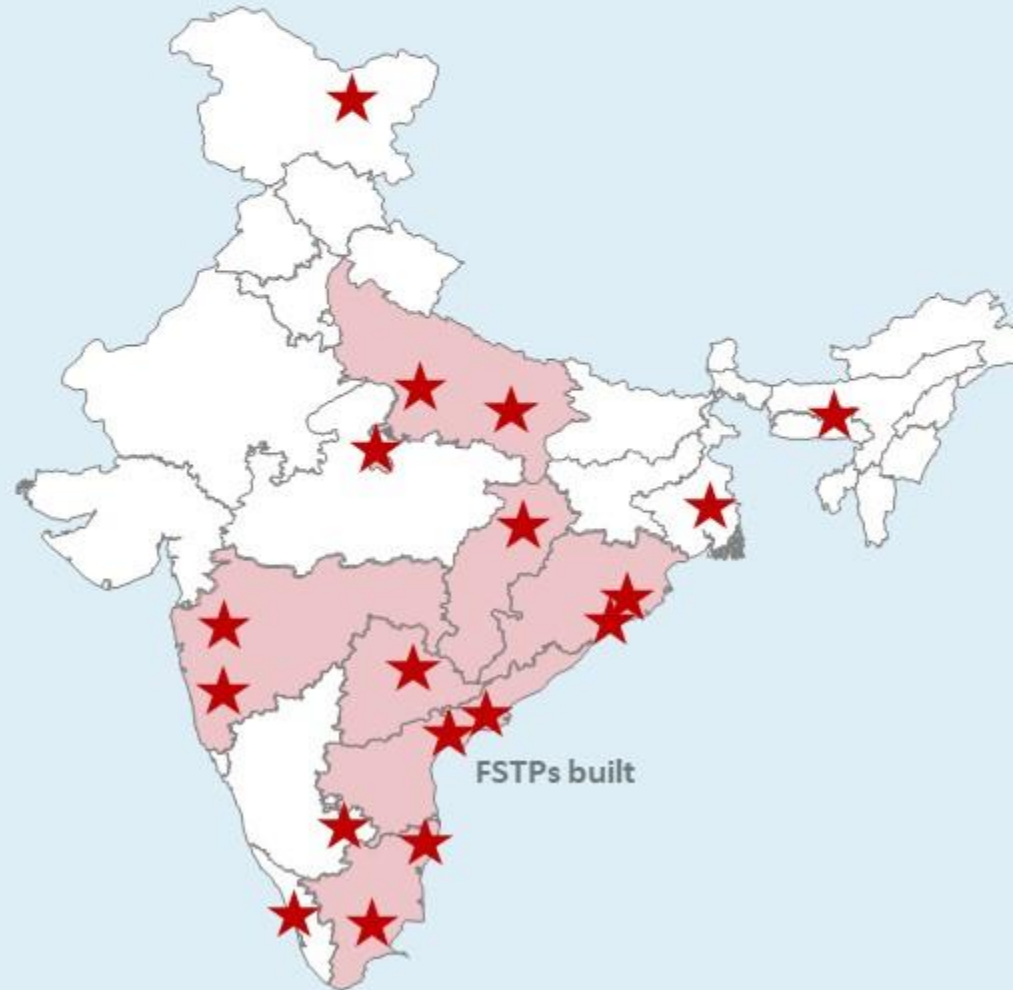


**~two-thirds of** urban population in India are dependent on FSSM.

WHILE SEWERAGE NETWORKS HAVE RECEIVED PRIORITY IN THE PAST FSSM IS NOW RECEIVING ATTENTION ACROSS MANY STATES

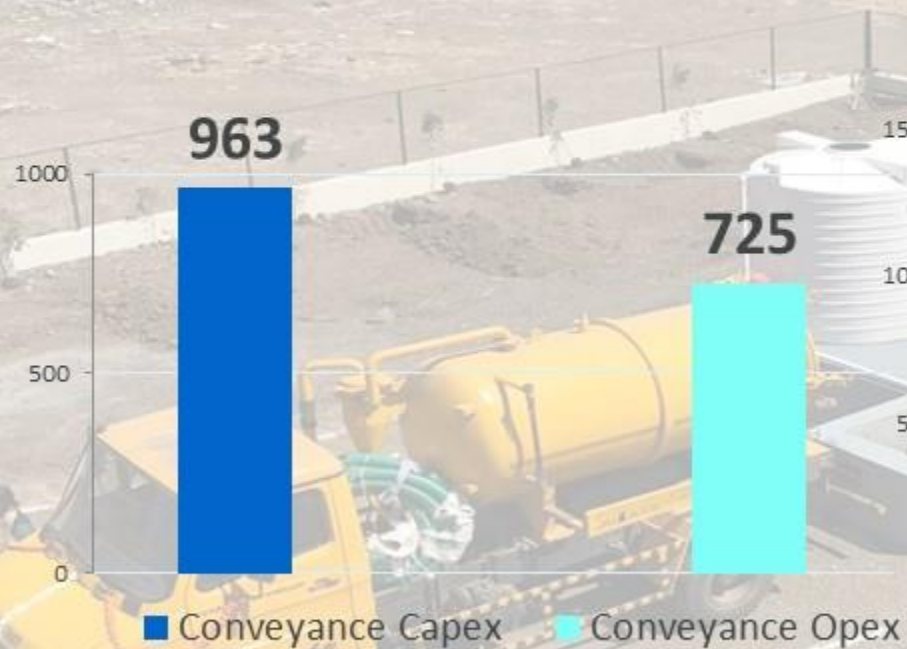


*~400+ FSTPs at planning or implementation phase*

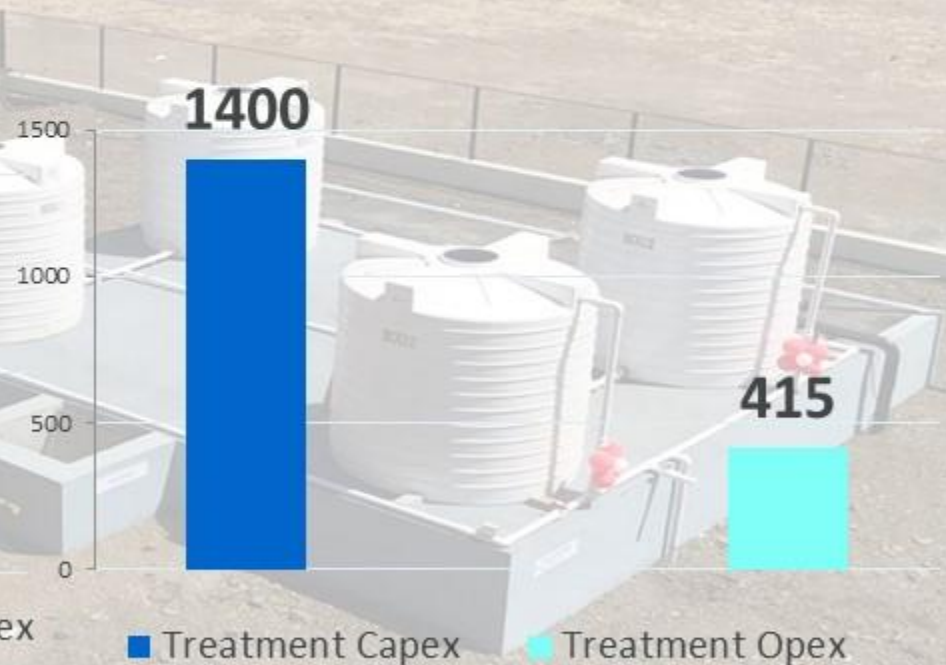


# FSSM SERVICES IN INDIA - USD 4.5 BILLION

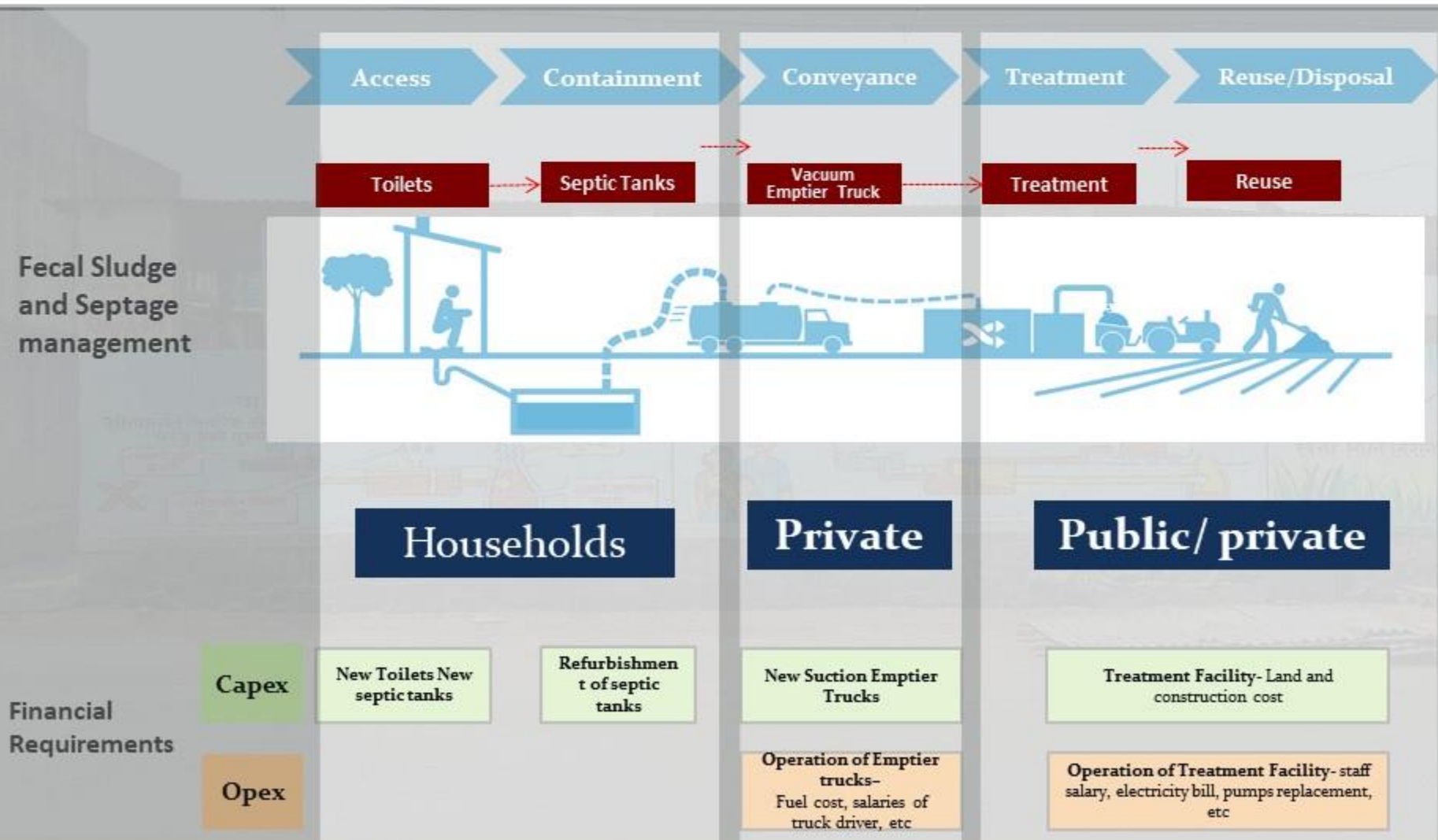
All India Financing requirement for  
**Conveyance** ( in million USD)



All India Financing requirement for  
**Treatment** ( in million USD)



# FINANCING FSSM SERVICES FOR SAFELY MANAGED SANITATION SYSTEMS



# EMERGING BUSINESS MODELS IN CONVEYANCE

## Demand desludging business models

1

Truck Capex and  
Operations by  
Private Operator

2

Truck Capex and  
Operations by Local  
Government

3

Government-  
Owned Vehicles and  
Leased to Private  
Players for  
Operations

## Scheduled desludging business models

4

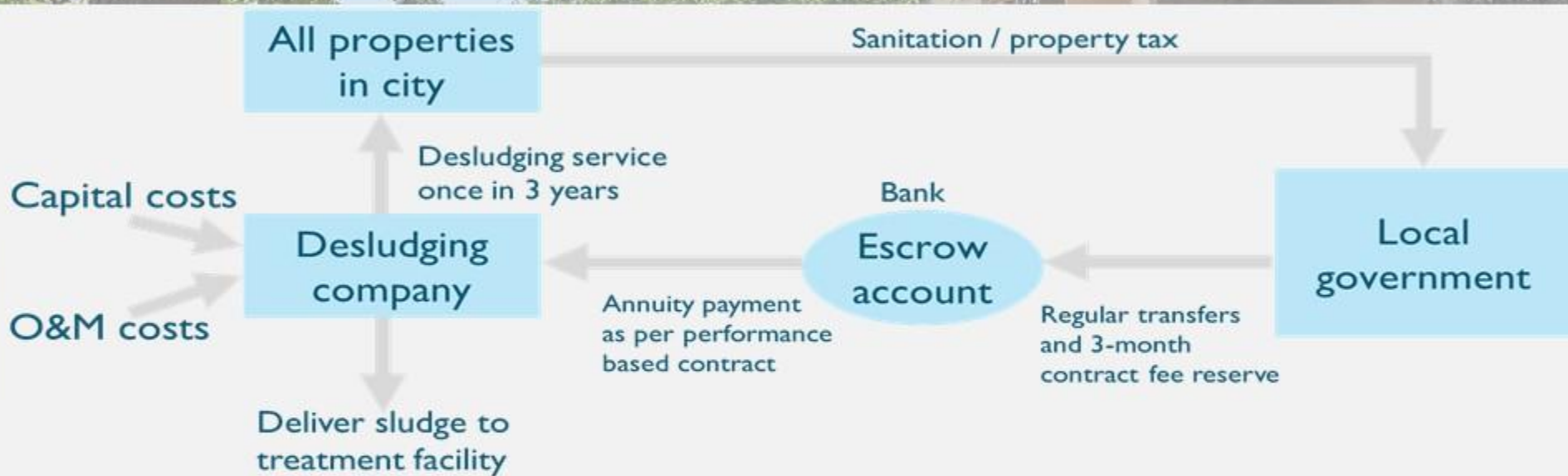
Truck capex and Operations  
by Private Operator with  
Performance Based Annuity  
Contract With Local  
Government

5

Truck Capex by Government  
and Operations by Private  
operator with Performance  
Based Annuity Contract with  
Local Government

\*In conveyance, capex will involve buying of trucks

# PERFORMANCE LINKED ANNUITY MODELS FOR SCHEDULED DESLUDGING



**Scheduled emptying**

**Performance based fixed monthly payments**

**Sanitation Tax**



# SCHEDULED DESLUDGING INTRODUCED IN INDIAN CITIES



Wai and Sinnar *First cities to implement scheduled desludging services in India*

- Regular desludging as per regulations
- Inclusive - Citywide coverage of all properties
- Equitable and affordable - Tax based charges
- Introduced as a PPP – Performance-linked annuity model



# PERFORMANCE LINKED PAYMENTS. . .

- **Payments based on achieving agreed targets of septic tanks emptied**
  - *Payment deduction for non-achievement of targets*
  - *Need to submit signed receipts for emptying and safe disposal*
- **Clauses to ensure safety standards - use of PPE and vigilance against manual scavenging**
- **Clauses to ensure safe disposal of septage and non - spillage**
- **Emergency emptying also included in contract**



LG's copy



Property  
owner's copy



Treatment  
plant's copy



Private  
operator's copy



# DEDICATED SOURCE OF REVENUE : SANITATION TAX

## Differential taxation rates

Residential Properties **with /  
without toilets**—  
\$ 4 / annum

Non Residential Properties **with  
toilets** —  
\$ 4 / toilet seat

**Non-residential** properties  
**without toilets**—  
\$ 1.5 / annum

## LG resolution for taxation

सिन्नर नगरपरिषद, सिन्नर ये.विशेष सभा  
ठराव क्रमांक ६९ दिनांक २४/०३/२०१७

विषय क्रमांक ५) सिन्नर नगरपरिषद तर्फे आकारण्यात येणारा स्वच्छता कर, घनकचरा व्यवस्थापन कर व मैला व्यवस्थापन कर यांची पुनर्रचना करणेबाबत घर्षा करून निर्णय घेणे.

प्रस्तावाचा मजकूर - कार्यालयीन टिपणीचे सभागृहात घर्षा होणुन सिन्नर नगरपरिषदे तर्फे सद्या आकारण्यात येणारे विशेष स्वच्छता कर, विशेष घनकचरा कर व मैला व्यवस्थापन कर यांची पुनर्रचना करून यापुढे सन २०१७-१८ या आर्थिक वर्षापासुन खालील प्रमाणे मैला व्यवस्थापन कर व घनकचरा कर म्हणुन आकारण्यात यावेत व त्याप्रमाणे बिल तयार करून मात्मात घारकांना देण्यात यावेत.

वार्षिक कराचे दर (रुपये)

अ.क्र.	कराचे नांव	निवासी मात्मात		विगर निवासी मात्मात	
		शौचालय असलेले	शौचालय नसलेले	शौचालय असलेले	शौचालय नसलेले
१.	मैला व्यवस्थापन कर	३००/- (प्रति सिट)	३००/-	३००/- (प्रति सिट)	४००/-

वार्षिक कराचे दर (रुपये)

अ.क्र.	कराचे नांव	निवासी	विगर निवासी
१	घनकचरा व्यवस्थापन कर	१००/-	३००/-

वरीलप्रमाणे कर आकारणी करणेस सदरची सभा सर्वानुमते मान्यता देत आहेत. त्याप्रमाणे प्रहासकीय कार्यवाही करण्यात यावी.

सुचक :- श्री. लोखंडे गो.वि.  
अनुमोदन :- श्री. लोखंडे द्र.डु.  
ठराव सर्वानुमते मंजूर



अध्यक्ष

सिन्नर नगरपरिषद, सिन्नर

# POSITIVE IMPACT OF SCHEDULED DESLUDGING IN WAI

**800+**

Septic tanks desludged in  
a year

**1921**

Properties covered

**5.5 ML**

Septage delivered  
to FSTP

**88%HH**

Acceptance rate for  
scheduled service

**7-8**

Septic tanks desludged  
per day

**800+**

Septic tanks  
Unique database created

**Eliminated manual  
scavenging**

**Regular use of  
safety gear by  
Sanitation workers**

**Households pay lower  
sanitation tax in  
comparison to user  
charges**

# EMERGING BUSINESS MODELS IN TREATMENT

## Treatment business models

1

Philanthropic  
funded  
treatment facility

2

State government  
funded through  
national/ state  
programs for capex  
and opex

3

Local Government  
funded for capex  
and opex

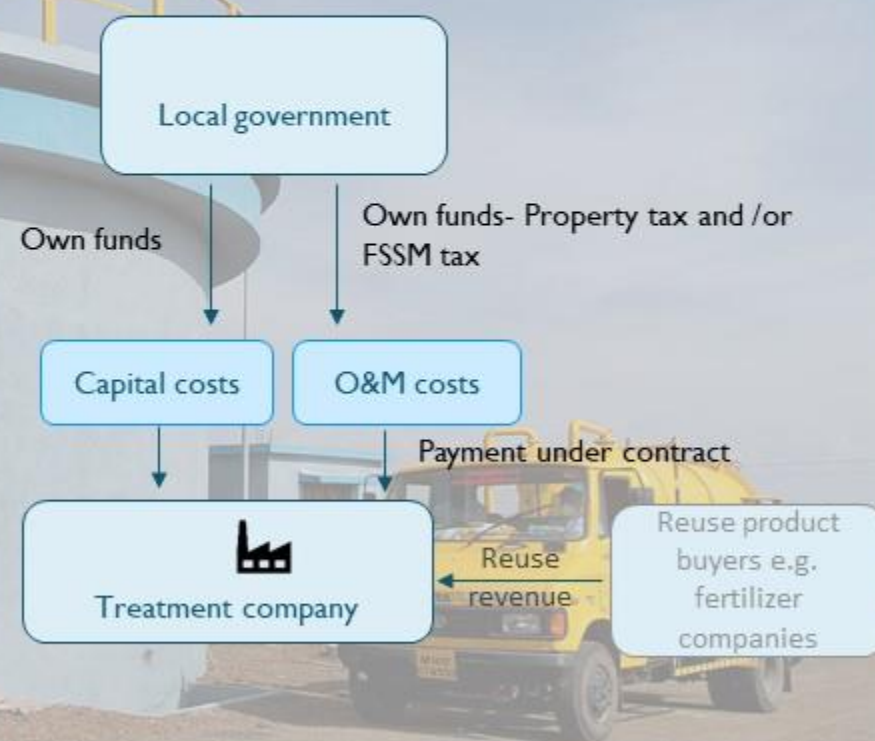
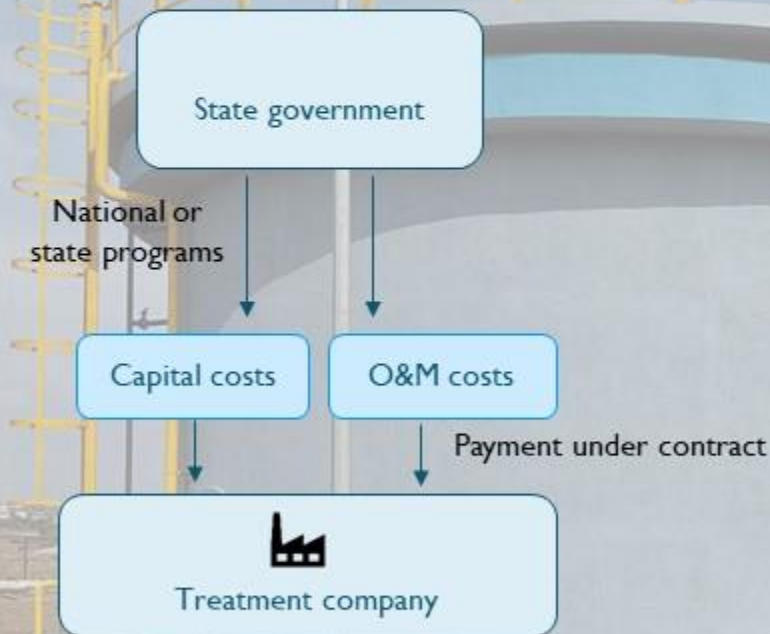
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Partially funded by  
private sector and  
state government  
and operated by  
private

# FSTP WITH PUBLIC FUNDS

State government funded through national/  
state programs for capex and opex

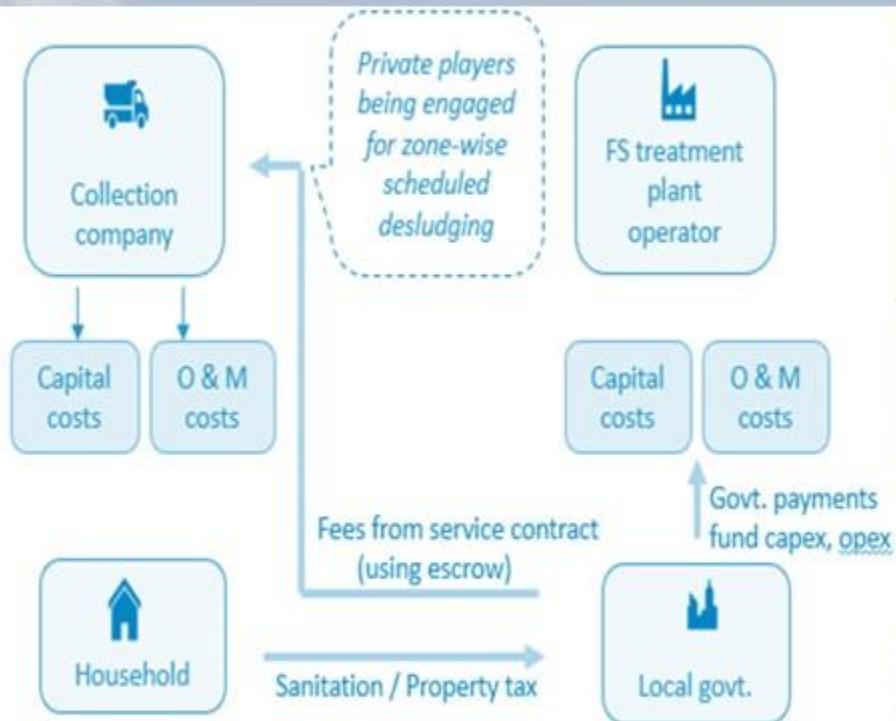
Local Government funded for capex and opex



Example in Odisha state of India

Example Sinnar, Maharashtra

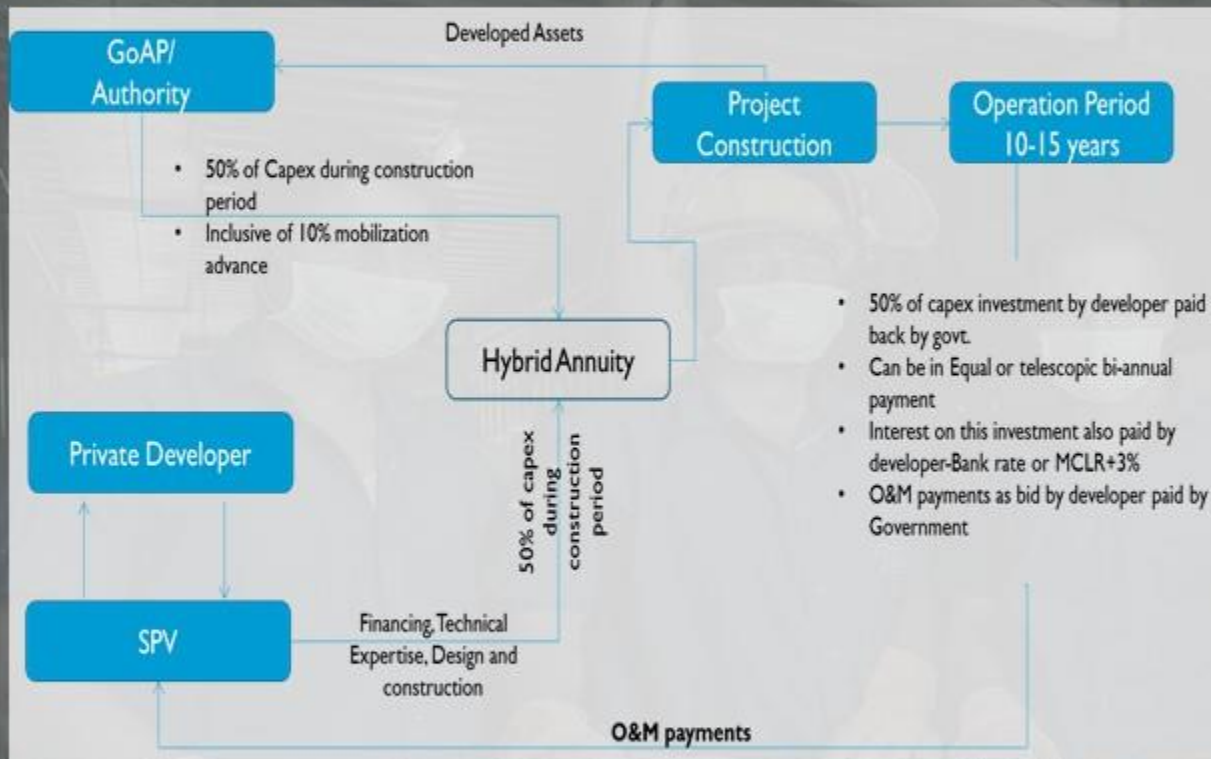
# SINNAR, MAHARASHTRA- LOCAL GOVERNMENT FUNDED TREATMENT PLANT



- Sinhar is the first city in India to fund an FSTP through its own funds
- Private operator is selected through DBOT tender.
- Private operator is responsible for construction and/ or operation of treatment plant
- Plant O&M to be funded by ULB through sanitation tax and property tax.



# PARTIALLY FUNDED BY PRIVATE SECTOR AND STATE GOVERNMENT AND OPERATED BY PRIVATE



HAM model proposed through city clusters for  
76 ULBs in AP  
72 ULBs in Telangana

- Private companies - undertake construction, operation and maintenance on a DBOT basis. Cost determined by bidding
- CapEx – 50% by government , 50% by private company
- Annuity payments cover a) CapEx repaid through annuity payments over contract period, b) and OpEx
- Funding by state government entity



# STRONG MONITORING SYSTEMS NEEDED TO IMPROVE OPERATIONAL PERFORMANCE

Database



Real time monitoring



Dashboard



# Thank you

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**[cwas@cept.ac.in](mailto:cwas@cept.ac.in)**  
**[pas.org.in](http://pas.org.in)**

#### About us

The Center for Water and Sanitation (C-WAS) at CEPT University carries out various activities – action research, training, advocacy to enable state and local governments to improve delivery of services

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and Sanitation

