



# Introduction of Scheduled Desludging Services in Indonesia

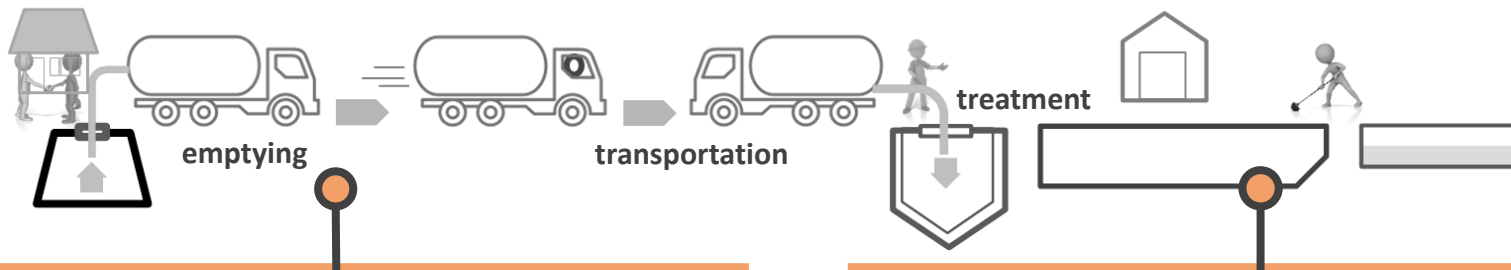
## **Fort Bustraan**

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# OVERVIEW

## current situation/problems



- On-call basis
- No Health and Safety procedures
- No collection SOP
- No license needed
- No transport monitoring
- Direct payment to driver
- (often) illegal disposal



- Built for most big cities (but often far from city)
- Rarely mechanized
- Underutilized or unused, because limited collection
- Inadequate O & M funding

# SCHEDULED DESLUDGING (Layanan Lumpur Tinja Terjawal or LLTT)

**regularly** and according to an **agreed schedule**,  
a **licensed desludging unit** comes to  
a **registered customer**,  
to conduct **mandatory desludging**  
and deliver it to a **Treatment Plant**.

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All of this is done for a **Cost Recovery Tariff**,  
covering all **direct operational cost** of  
collection, treatment & direct management.

Except **Investment cost** of the Treatment Plant,  
which is covered by **Central Government**

# THE 7 ASPECTS of Scheduled Desludging (LLTT)

- desludging period
- service area
- desludging scheme
- transportation scheme

- registered & eligible septic tank users
- classified based on building use & size

- desludging units
- transfer stations
- treatment plants
- laboratory
- MIS & GIS
- vehicle monitoring

- designated operator
- regulator & supervisor
- private desludger

- customer relation
- billing
- emptying
- transportation
- mon-ev

- tariffs cover operating cost
- capital by government
- can involve private investment

- use of proper septic tanks
- mandatory periodic emptying,
- tariff & mechanisms.



**SCHEDULED  
DESLUDGING**

# PREPARING Regular Desludging (LLTT) (14 steps)

1. Assess  
POTENTIAL

2. Agree on  
PRINCIPLES

4. Obtain  
BLESSING (of mayor)

3. Prepare  
BASIC CONCEPTS

5. Understand / Map  
CUSTOMERS

6. Prepare  
OPERATIONAL PLANS

7. Prepare  
OPERATOR

8. Finalize  
REGULATIONS

9. Establish  
FINANCIAL SYSTEM

10. Involve  
OPERATION PARTNERS

11. Arrange  
SEPTAGE FLEET

12. Agreement by  
MANAGEMENT

13. promoting  
SERVICE

14. LAUNCHING



# ACTIVITIES

since mid 2012  
with the Govt of Indonesia, WB/WSP  
& local stakeholders



- Android & Web-based septic tank sensus tool
- Financial models & tools
- MIS & customer database
- SOPs on admin & technical
- Regulation on sludge management
- Contract for private desludgers
- Exposure workshops and trainings
- Promotional materials
- Manuals and training programs

# FIELD ACTIVITIES

## formal LLTT launching in 2 cities

October 2015

# SOLO

(CENTRAL JAVA)

Followed by:

**DKI JAKARTA  
KOTA BEKASI  
KAB GRESIK**

August 2015

# MAKASSAR

(SOUTH SULAWESI)



# 11 SUPPORTED CITIES for LLTT

by IUWASH and IUWASH PLUS

*All 11 cities joined FSM4*



..... there will be more



# LLTT GUIDELINES

*but only in Indonesian!*

main book



... endorsed by the **Government** as the **guiding document** across Indonesia



**4 supplements**

(financial, marketing, health & safety, information system)

# LESSON-LEARNED (I)

◉ **early & strong commitment**  
by city leadership (mayor)  
is **crucial** to **LLTT initiation**

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◉ **regulations** on  
mandatory desludging & cost recovery tariff  
**takes time & must be promoted early**

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◉ **> 80% households** prefer  
**regular desludging** above **“on-call”**

# LESSON-LEARNED (2)

○ **increasing collection efficiency is crucial for cost reduction**

*scheduling a truck (4 m<sup>3</sup>) to empty 2 tanks (@ 2m<sup>3</sup>) before go to STP + construct STP nearby so truck can make 2 trips / day*

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○ **most efficient billing is for a water utility to combine it with the monthly water bill**

*If not possible, it is recommended to appoint a local community group as “billing agent”*

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○ **existing septage treatment plant almost always be **the bottleneck****

*consider implementing an incremental approach to increase capacity of the septage plant*

# INCREMENTAL APPROACH

## to increase capacity of septage treatment plant

10 m<sup>3</sup>

A, F, M  
ponds  
&  
SDB



low capacity, low cost,  
low efficiency, low skills

30 m<sup>3</sup>

A, F, M  
ponds  
&  
SDB

A, F, M  
ponds  
&  
SDB



**Aerated lagoons**

**presses**



higher capacity, higher cost  
higher efficiency, higher skills

100 m<sup>3</sup>

aerated lagoons

SDB + limited  
mechanical dewatering

300 m<sup>3</sup>

aerated lagoons

Mechanical dewatering

**Guide, Syllabus and Training**  
**to start in April 2017**

**“We will build a great  
desludging system and ..  
we will build it cheaply..”**



**“...Thank you.”**