Piloting Regular Desludging in Balikpapan City, Indonesia

From Planning to Implementation......

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BALIKPAPAN CITY GOVERNMENT
• **City population**: 664,600 inhabitants (132,919 households)

• **City water utility (PDAM)** currently serves 76% of households with piped water

• PDAM manages **piped water** and **domestic waste water** (off-site and on-site systems) since:
  - 2006: Sewerage system with capacity of 5000 house connections (currently connected to 1300+ HCs)
  - 2016: Fecal Sludge management
Activities for piloting regular desludging

• Teams established to develop preparatory work and bridge the process:
  - PDAM special team
  - City promotion team
• New local laws on domestic wastewater
• Set Tariff and payment mechanism
• Select pilot area and conduct on-site sanitation census using android application
• Develop Information and communication technology applications to support FSM
• Promotion for regular desludging in pilot area
New Regulations on Domestic wastewater

- **Local Law No. 10 2014**: PDAM is appointed to manage wastewater – off-site system and FSM, besides piped water
- **Local Law No. 8 /2016**: Integration of off-site and on-site systems
- **Mayoral Decree No. 24 / 2016**: implementing regulation:
  - defining the responsibilities of city government, PDAM, private operator and households
  - On-site system in one of requirement in building permit
  - Regular emptying every 4 years
  - mandatory to provide access lid
- **Tariff regulation**: in process....
Tariff for regular desludging

- Tariff is set lower (USD 34) than on-demand emptying (USD 43)
- Monthly payment of USD 0.71 for over four years
- Charges in monthly water bill
- Using existing payment mechanism
Partnerships with Private Operators

- Regular and on-demand emptying will be served by private companies
- PDAM not to provide vehicles to reduce capital investment
- PDAM provides initial budget to fund private companies
- Piloting of regular desludging is included in PDAM business plan 2017
Tariff components

• Tariff calculation for *regular emptying* - all expenses:

  - overheads
  - Septage Transportation
  - Septage Treatment Plant

  Tariff = IDR 9,500 (USD 0.71) /Household /Month.

• Fees for private operator is included in the tariff.
E-census in selected pilot area for regular desludging

- Census for on-site system conducted in selected area covering 1100 households
- The results:
  - 98.5% (1085) PDAM customers for piped water
  - 99% (1074) had on-site system
  - Only 30% (325) had access lid

Table: Tank’s Access hole

<table>
<thead>
<tr>
<th>Access Hole</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>With access hole</td>
<td>325</td>
</tr>
<tr>
<td>Access hole can be opened</td>
<td>152</td>
</tr>
<tr>
<td>On-site System</td>
<td>1074</td>
</tr>
</tbody>
</table>

0 500 1000 1500

[Diagram showing access hole counts]
Information and Communication Technology applications to support operation

- To support the operation services, track and monitor and scheduling plan
- Two emptyings per trip with total volume of 1.5 m³/location
- Trial test conducted in 8 locations
PROMOTION activities

Using the “10-step toolkits promotion” method

- KICK OFF WORKSHOP INVOLVING STAKEHOLDERS
- FORM A PROMOTION TEAM
- TRAINING AND PRACTICE

The promotion team involving communities in the pilot area in designing and testing the promotion products
Media campaign Products

- **public service announcements Vid**
- **Balikpapan Sanitation Spot Vid**
- **Banner For on-demand emptying service**
- **Brochure for regular emptying service**
Promotion Implementation and evaluation

The results:

• Understanding of regular desludging : 92 %

• Willingness to be a customer : 70 %

• Willingness to pay USD 0.71/mo : 63 %

• (through city water utility’s billing system)
Integrating septage management into PDAM System

The desludging plan, work order for emptying

On-site system Census using android application

Administration

Banking Bill Payment

Using a GIS Program
Lessons learned /Recommendations

✓ City promotion team to develop promotion strategy to households have no access to their tanks - for next batch
✓ Census results will be used together by other city agencies to develop city integrated sanitation program
✓ PDAM will need training program for staff to support existing wastewater division for operation, planning and scaling up
✓ Inclusion of FSM into tasks of PDAM’s Customer Services
✓ FSM Standard operating procedures are required
The City Team Activities

One of training sessions for Promotion Team

One of Workshops: Sharing progress and experience with other cities

Training of using e-census application

Create media campaign

Promotion implementation

Simulation Process using ICT application
L2T2 YES!

THANK YOU