ATHENA
INFONOMICS

Non-intrusive Monitoring Systems

ATHENA INFONOMICS
Data Science for Development

Challenges in Promoting Safe Desludging

- Low demand from households
- Lack of transparency in pricing and mismatch between demand and supply
- Failure to meet safety requirements while desludging
- Illegal disposal by some service providers
- Resistance of service providers to be monitored

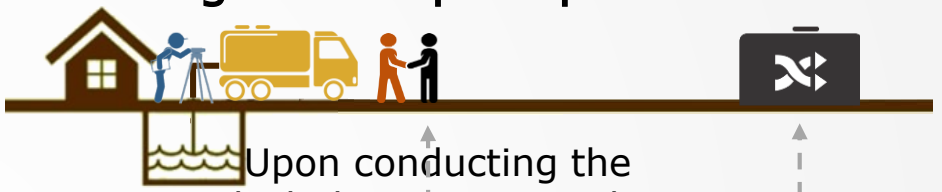
Desirable Solution Features: Able to…

- Stimulate household demand
- Connect customers to the service providers that best match their specific demands
- Non-intrusive monitoring of desludging operations

FSM CONNECT

So how does it work?

The laser assessment brings two additional benefits:
- Assessing design compliance
- Allowing service prompts



Desludging Operators

Notifies operators of the request and successful bidder details

Interested operators respond with prices

Matching supply with demand

Home Owner

Sends confirmation to the customer and provides OTP

FSM CONNECT

System sends an SMS with a list of lowest bidders and their ratings

Requests for desludging service through the mobile app or by calling. This includes answering a few questions:
- Location;
- Time;
- Facility type & volume;
- Acceptance of market price range or max WTP

Notifies other households in the neighbor of group disc

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Demand

Upon receiving t number from th considered comp

System sends a for ratings of th operator's comp standards.

Laser assessment team is notified when the unit is empty

Upon conducting the desludging service, the

When the truck reaches the treatment plant, a time-stamped picture of the truck plate will be taken automatically and recorded in the system.

If the combined volume attached to all the OTPs that a truck has accumulated reaches its registered capacity and no disposal is recorded, the system generates a reminder.

With high resistance to be regulated, monitoring the desludging operator behavior has been traditionally challenging. The USP of the proposed non-intrusive monitoring system ensures safe outcomes rather than

Assumptions /Precedent Conditions

Presence of FSM regulations and supporting policies covering registration of service providers, safe operational standards, safe disposal, etc.

Close to universal or high enough household subscription to ensure that operators rely on the system and abide by the rules