

Feedback from FSM3 Workshop 2: *Scaling-up sanitation businesses in low- and middle-income countries*

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Learning objectives

1. Understanding key challenges for cartridge-based sanitation systems
2. Scaling process from the pilot study to a city-scale sanitation provision
3. Optimizing the sanitation chain (e.g., collection, waste treatment, and resource recovery)
4. Understanding the impact of decentralized faecal sludge management infrastructure and transfer stations on the sanitation chain

Agenda

Introduction: Key challenges in scaling-up sanitation business

Eawag

Session 1: Lessons From Scaling Cartridge-Based Sanitation: Working Towards Viable Service Provision In Dense Urban Settings

re.source sanitation, SOIL, x-runner, Sanergy, EAWAG, Loowatt, WSUP/ Clean Team.

Session 2: From Small Businesses to Big Utilities: Scaling New Sanitation Solutions

Loowatt, Climate Foundation, Waste Enterprisers, re.source, SOIL, x-runner, Sanergy, EAWAG.

Session 3: The Role of Decentralised Faecal Sludge Management Infrastructure in Securing the Sanitation Service Delivery Chain

GOAL, GIZ, BORDA

Summary and conclusion: Moving toward sanitation as a business

Eawag

Feedback on satisfaction

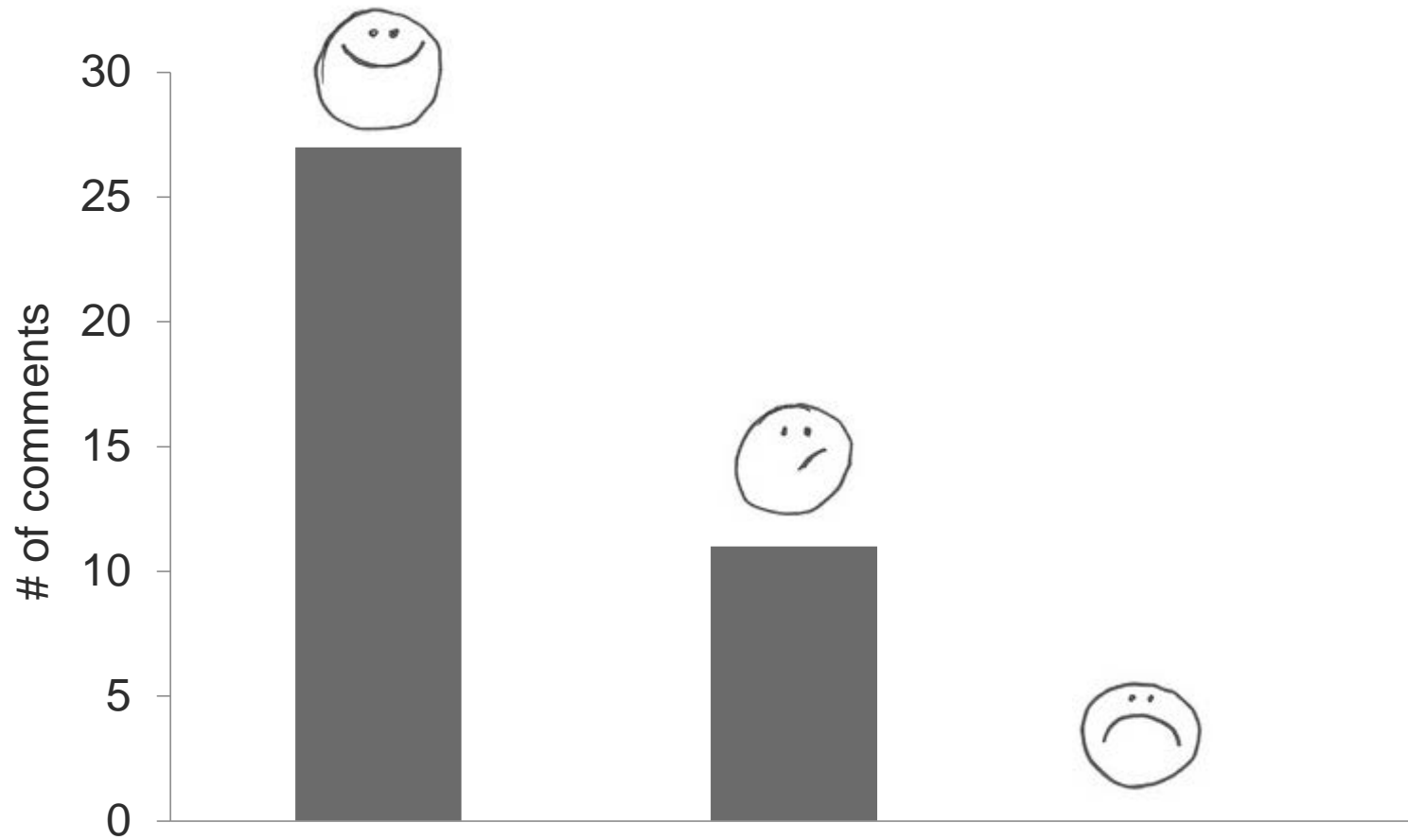
Excellent!

Great comments!



Very well structured and interactive!

Generally satisfied



General feedback

- Liked the introduction to "real" cases, their variety and the closer look at CBS examples.
- Enjoyed the participative aspect of the sessions with the activities as well as the exchanges and comments that came out of it.
- Some found the workshop too much oriented on CBS.
- Would have appreciated if break-out sessions were more specifically oriented and would have left more time to better work the exercises.

Lessons learned from the Workshop

- Complexity of a business model for decentralized treatment system.
- Extremely variable scenarios (legal/rules, environments, culture, economic) requires tailor made solutions.
- Viable service provision for different contexts and how to optimize the sanitation businesses.
- Resource recovery is key in sanitation.
- Government partnerships and regulation is key for proper scaling.
- There are still challenges with dealing with governments. We need champions from the government agencies!
- Helped understand decision flows.
- Importance of stakeholder assessment in developing a business model.
- Sharing experiments is very crucial and constructive.
- Good to understand stakeholders environment for successful businesses.
- FS can be a good business if it is designed and managed properly.
- There is no magic bullets for scaling-up.

Session 1

Lessons From Scaling Cartridge-Based Sanitation

re.source sanitation



Session 1 Format (1.5 hours)

Introduction of Cartridge-based Sanitation (Kory Russel, re.source) – 5 minutes

Rapid descriptions of CBS Services- 2-3 minutes each

- X-runner, Peru (presented by Sebastien Tilmans, re.source)
- Sanergy, Kenya (David Auerbach, Sanergy)
- SOIL, Haiti (Grégoire Virard, SOIL/EAWAG)
- Clean Team, Ghana (Andy Narracott, WSUP/CleanTeam)
- LooWatt, UK & Madagascar (Polly Gardiner, LooWatt)

Q&A Session with Audience and CBS Service providers- 15-20 minutes

Breakout Sessions: Objective to define Key Performance Indicators (KPIs) for successful CBS services at scales of 1000, 10,000, 100,000, 1 million, and 10 million toilets – 30 minutes

Report-Back from Breakout sessions- 2-3 minutes each

Session 1 Lessons learned

Scaling Cartridge-Based Sanitation: Working Towards Viable Service Provision In Dense Urban Settings

Logistics of session & debrief:

- Strong positive feedback on first part of session, sharing experiences on CBS from current practitioners around globe
- Breakout sessions yielded mixed results; Large, complex question, probably too much to take on in short time
- Strongest interest/participation was in table examining challenges for 100,000 toilets (households) served.
- Future Alternative Breakout Session Format
 - Perhaps list 5 stakeholders, and have breakout participants role-play (as in Session 2. One actor assumes role of regulator, one of customer, etc. and then focuses on their specific requirements/expectations from a service.
 - or, focus on one particular scale and have each table analyze KPIs from a specific perspective (financial, sales, customer service, operations, etc.)

Stakeholders & KPIs (Session 1)

While breakouts did not generally produce specific KPIs, these are the main general requirements of the service:

High-quality customer service

- On-time collection; Possible KPI- 0% missed collections, or X% on-time collections
- Customer satisfaction; Possible KPI- less than Y complaints/month

Positive impacts on customer health; Safe working environment for laborers

- Possible KPI- Less than Z work-related hospitalizations of personnel/year; Less than Q% diarrheal incidence in population, X% reduction in stunting among children under five

Existence of enabling environment

- Clear standards and regulations (necessary to attract capital); More important as scale increases

Organizational/Operational credibility

- Transparent tendering process (both in gov't tendering for companies wishing to operate CBS services and for CBS service when subcontracting); Tendering process needs to be realistic
- Multiple companies in a geography are proof of competition

Stakeholders & KPIs (Session 1, cont'd)

As scale increases, challenges:

- Increasing systematization of processes (automation, standardization) to monitor and improve efficiency
- Financing constraints- too many toilets on corporation balance sheet in toilet renting model at scale?
- Increasing importance of clear relationship with local government;

Session 2

From Small Businesses to Big Utilities: Scaling New Sanitation Solutions

Loowatt



WORKSHOP CONTEXT: ASSUMPTIONS

The workshop **imagined a future** in which...

- The sanitation technology is **considered a given**, and not specific to any one company working today;
- It meets the KPIs discussed earlier;
- Container Based Sanitation has become the **Perceived Gold Standard**.

The solution includes:

- Mix of HH and Public Toilets;
- Transfer stations and Treatment Hubs;
- Treatment hubs treat waste for 10,000 users in 1km catchments with byproducts sold for agriculture.

STAKEHOLDERS: END TO END

**TOILET
CUSTOMERS**

**TRANSFER
STATION OWNERS**

AGRI CUSTOMERS

**PRODUCT
PROVIDERS**

**LOCAL SERVICING
COMPANY**

**TREATMENT HUB
OWNERS**

Toilets

Transport

Treatment

Byproducts

STAKEHOLDERS: ENABLING ENVIRONMENT

TOILET
CUSTOMERS

TRANSFER
STATION OWNERS

AGRI CUSTOMERS

PRODUCT
PROVIDERS

LOCAL SERVICING
COMPANY

TREATMENT HUB
OWNERS

Government

**Utilities – Scale
Dependent**

Funders

SCALING UP

WE TOOK A FREEZEFRAME FOR YEAR 1:

Ready to install 1,000 toilets

AND A FREEZEFRAME FOR YEAR 4:

Ready to install 100,000 toilets

MAP STAKEHOLDERS AND INCENTIVES

Each Group was asked to assign roles within:

- Funders, Government, Toilet Customers, Agri Customers, Treatment Hub Owners, Local Service Company, Media

Each group was asked to diagram the service, and to map incentives and contracts between stakeholders.

Before starting, we provided a demonstration.

SUMMARY OF TASKS

Each group then presented their map

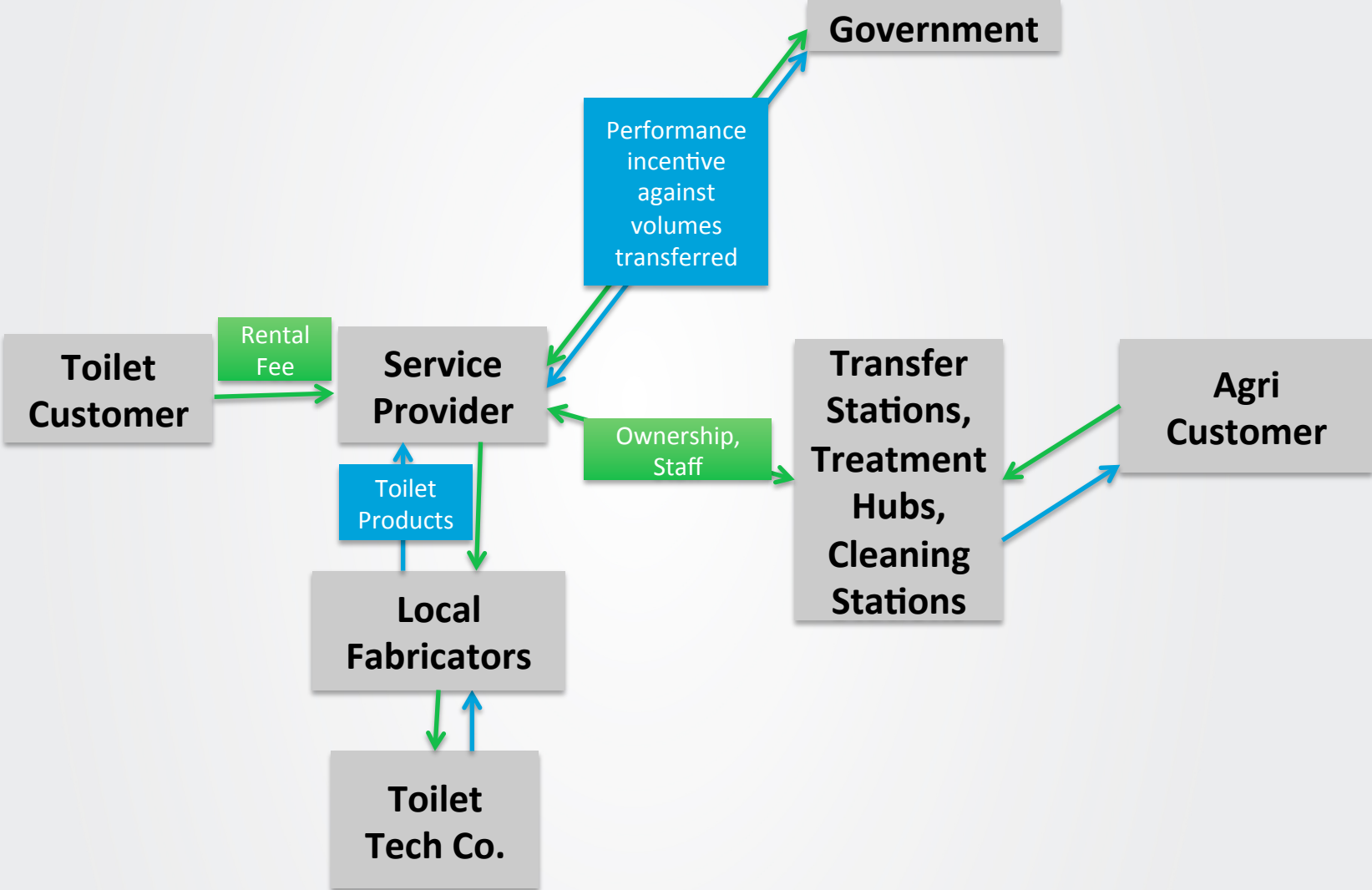
- Some for 1,000 Households
- Some for 100,000 Households

Covering issues such as:

- Capital Requirement
- Cash Flows
- Subsidy flows
- Contracts
- Regulatory Role
- Monitoring & Evaluation

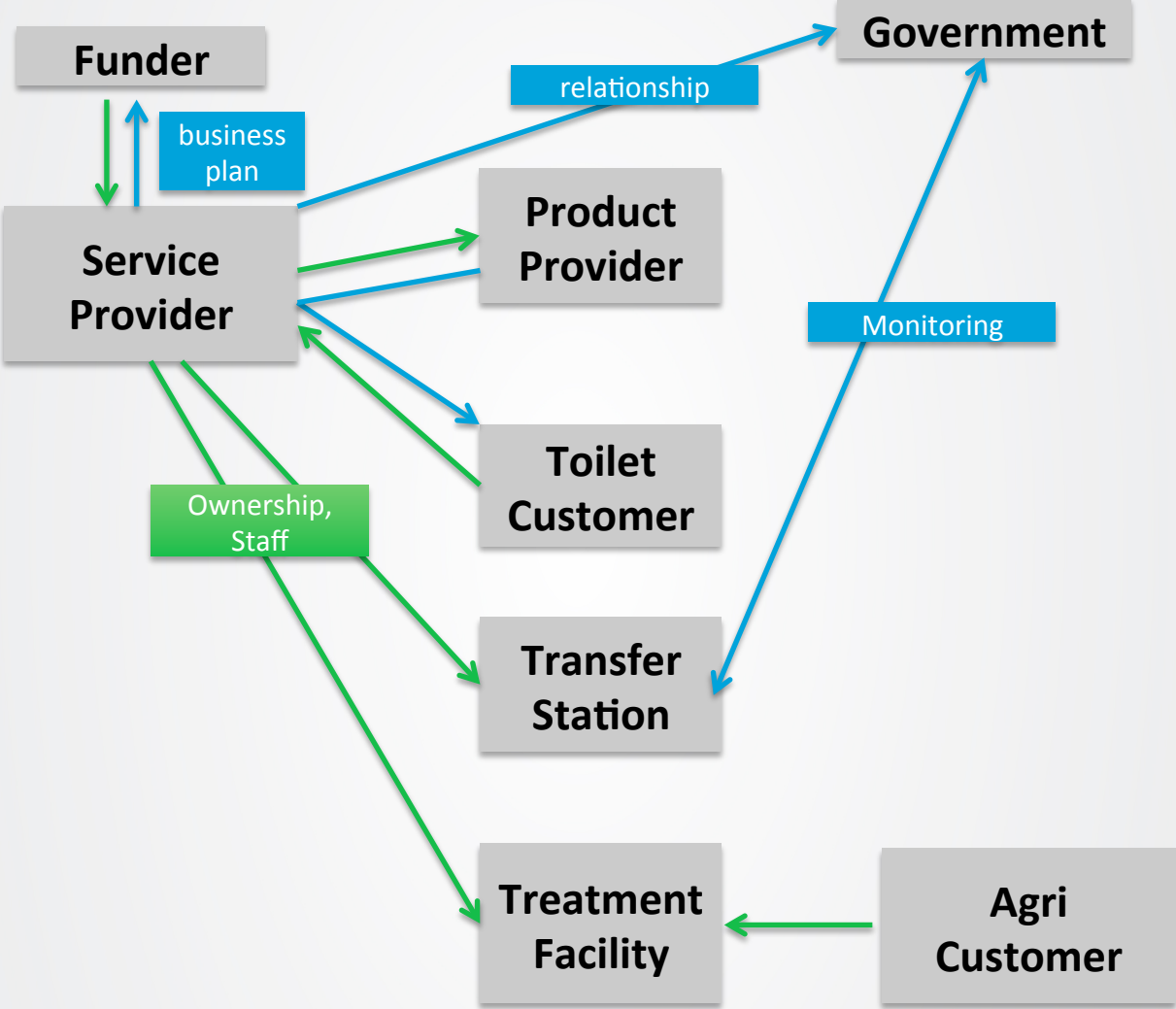
GROUP 1: 1,000 HOUSEHOLDS

→ Info
→ Money



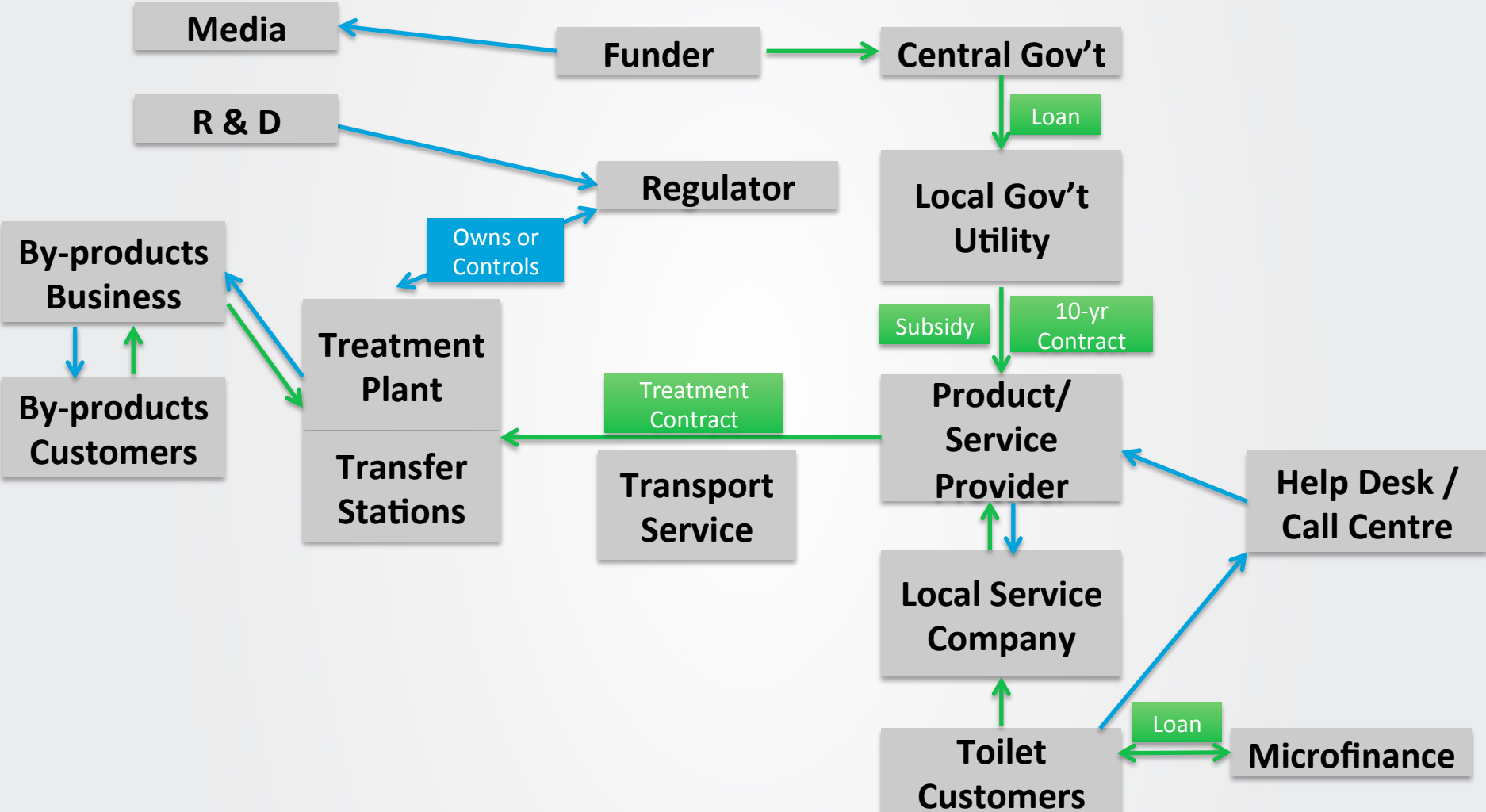
GROUP 2: 1,000 HOUSEHOLDS

→ Info
→ Money



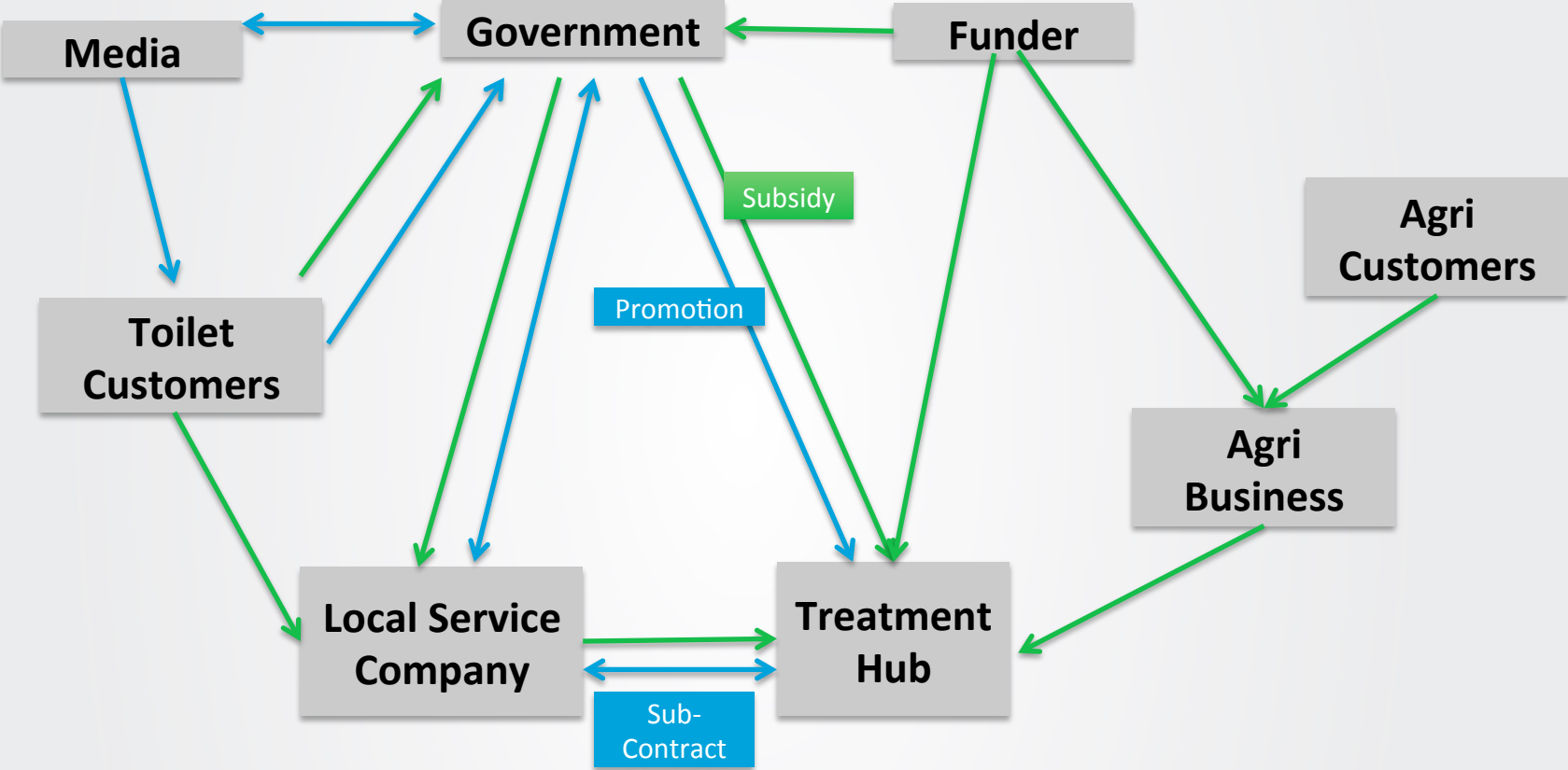
GROUP 3: 100,000 HOUSEHOLDS

→ Info
→ Money



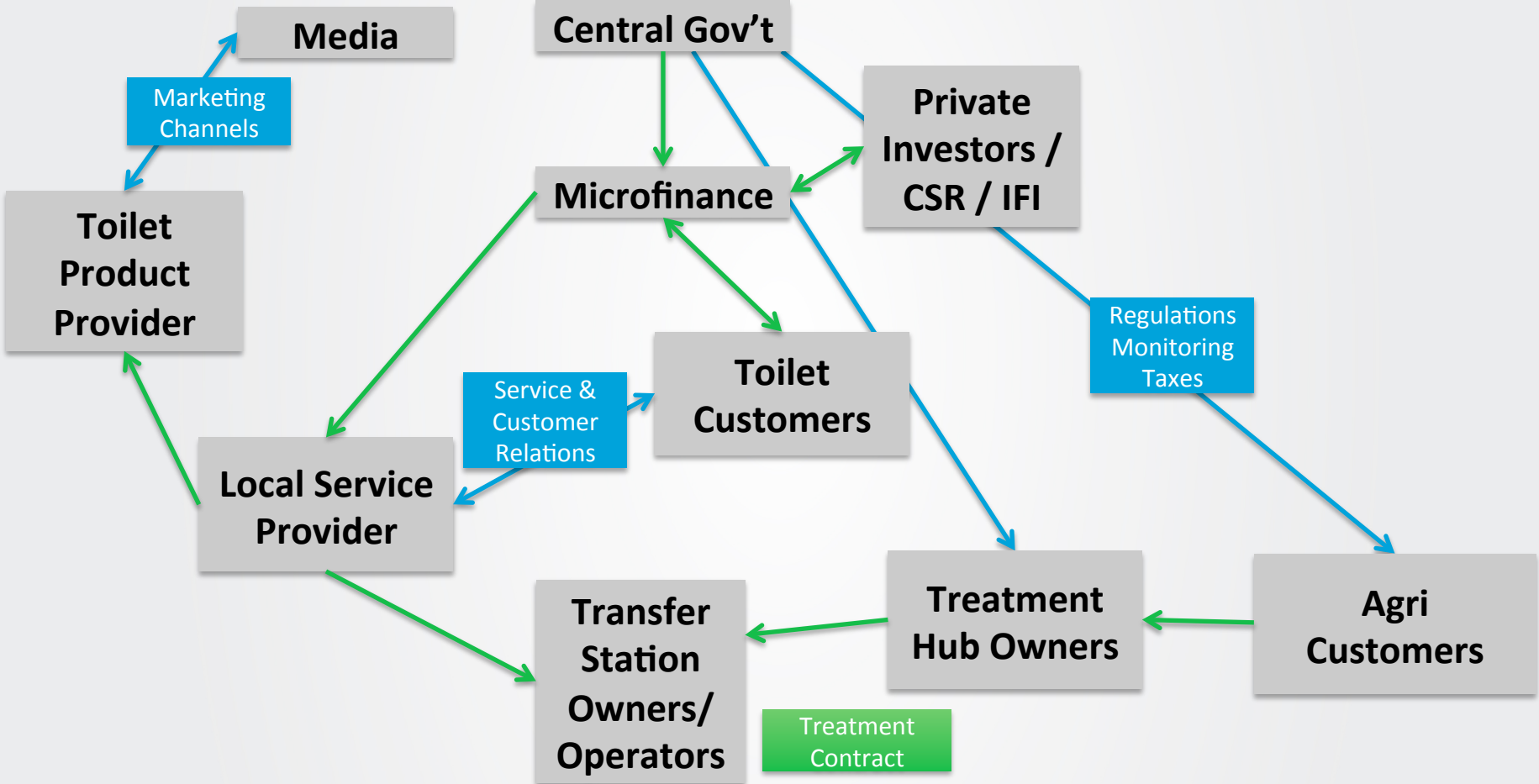
GROUP 4: 100,000 HOUSEHOLDS

➔ Info
➔ Money



GROUP 5: 100,000 HOUSEHOLDS

→ Info
→ Money



GROUP 5

... in detail



- Govt
- Regulations
- monitoring
- Taxes
- licensing
- performance based contract
- Subsidy for construction
- PPP contracts
- Use media for dissemination
- Creating CitySanitation fund for investment

- Set up a complaint redressed system
- call centre

- LSP
- content of toilet manufacturers
- number, quality
- reliable supply

- Media
- * As a channels for public pressure
- * Marketing across channels for everyone to get new customers, more pressure
- * Get toilets for general government to share the success in one local government & encourage other LG for scaling up
- * Tools for education campaign
- * Tools for CSR to keep transparency & provide surge on mortgage, social & long term investment
- * As part of performance monitoring tools

- Toilet Customer
- 1. needs quality service
- 2. Takes up a loan
 - toilet
 - livelihood
- 3. Complaining to government & media

- LSP
- contract of transfer station (based on volume # of containers)

- Farmer
- Insurance
- 14% interest
- Guarantee from insurance company
- What other roles?
- AGRARIAN CUSTOMERS
- Certified fertilizer (standard)
- Quantity of fertilizer
- Apply for an Insurance
- The Price of the Organic Fertilizer/Chemical Fertilizer
- Needs for Dissemination

Channel into market getting more single customers ??

RESULTS: EMERGING THEMES

- Scale-up describes movement from single operation into partnerships between stakeholders, which evolve over time.
- **1,000 Households:** Self Regulating
- **100,000 Households:** Partnerships have evolved. Stakeholder ecosystem needs to function well.

RESULTS: EMERGING THEMES

1,000 Households – Features

- Requirement of minimum service standards
- Performance-based incentives such as volume-based contracts
 - Can create a positive effect
 - But can lead to perverse incentives

100,000 Households – Features

- Importance of leadership in local context
- Different regulators within government (water, byproducts, etc.) do not necessarily have aligned agendas
- Aim to make treatment systems break even or make profit so they don't rely on subsidy
- Engage active input from the agri sector
- Ensure that the sanitation service aspect of the value chain is self sufficient

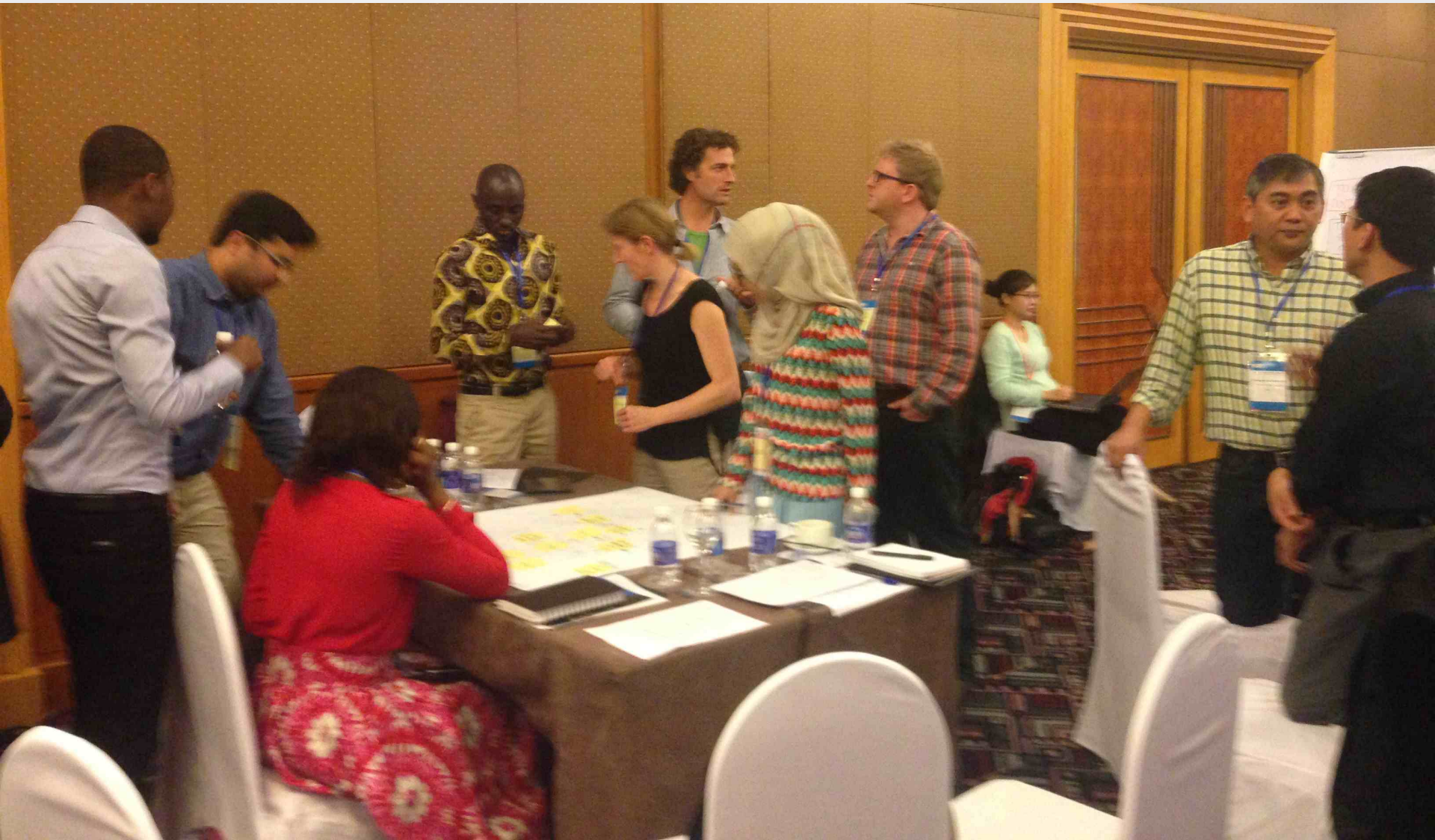
100,000 Households – Features cont'd

- Create packages within value chain that will appeal to private sector
- Enable good incentives in contracts to private sector providers
- Role of Tarrif in mature stage
 - Regulation of the market can function like subsidy
 - Avoid perverse incentives
 - In unregulated markets, implementing stakeholders need to work together with close communication, MOUs and clarity of function

THE TEAMS IN ACTION: GROUP 1



GROUP 5: “FRAGMENTATION”



GROUP 3: “DYNAMIC PROGRESS”



To our participants – Thank you!
We had a lot of fun.

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Session 3

The Role of Decentralised Faecal Sludge Management
Infrastructure in Securing the Sanitation Service Delivery Chain

GOAL/BORDA/GIZ/Sanergy



Format

Four case studies:

- Freetown
- Lusaka
- Karnataka
- Humanitarian Response

Presented to four groups:

- Management
- Financial
- Technical
- Governance

Format

Each group then had 10 minutes with each case study presented to try and understand the project in more detail

The groups then produced feedback on the common themes from the four case studies to try and determine what research and programming can focus on in the future

Management Outcomes

Transfer stations at this point seem to generally have a stronger relationship with manual pit emptiers than with waste treatment end of the chain; maybe this should be reconsidered

It is a challenge to coordinate transfer stations in networks, which is ultimately what is required

There is a lot of uncertainty around regulation models related to transfer stations

Financial Outcomes

Without clear ownership of transfer stations it can be difficult to understand the finances

There is inconsistency between case studies on financial management models

Clients must be confident in the profitable nature of the investments they are making, which maybe not so much at the moment

Technical Outcomes

Transport is still the underlying major issue when it comes to costs, both transporting to and from the transfer stations

There is still a challenge in the functionality of the transfer e.g. problems with siltation

The land-use/footprint of the transfer station is critical and needs to be balanced against the need for mobility

Governance Outcomes

Need for people power – empowering the community from grass roots to demand such important infrastructure and see importance of it

Need strong local leadership and involve them in the process to choose what to do and help deliver it

Need for clear roles and responsibilities between multitude of stakeholders