

Sanitation worker safety and livelihoods in India: A blueprint for action

Phase 4: City Blueprint – Trichy

8 December, 2017



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Sanitation worker ecosystem in Trichy

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We employed multi-mode research method in Trichy to uncover insights on demand- and supply-side issues, and needs and aspirations of workers



Desk research

Overview

Review of government policies & initiatives, media, academic reports, and content developed by IiHS

Points of inquiry

- Understanding Trichy's sanitation system (offsite V/s onsite) and plans for expansion
- Current and proposed initiatives w.r.t. sanitation work
- Identification of key stakeholders
- Govt. organisation structure



Stakeholder interviews

Interactions with government officials at the TCC, contractors, NGOs and experts

- Scale of problem and extent of unsafe sanitation work
- Key drivers of the issue
- Interventions done by govt. and others to alleviate the situation; their impact and efficacy
- Potential solutions for Trichy



Field research

- **Interactions with 29 workers** across different types of sanitation work
- **Multiple methods used:** observation, interviews, group discussions

- Profile and background; how they entered the job
- Challenges faced on-the-job and in exiting the profession
- Key financial, health, and social challenges
- Aspirations and goals

We interviewed 16 stakeholders including CSOs, government officials, and experts in Trichy

| # | Name | Position | Organization |
|----------------------------|-------------------------------|---|-------------------------|
| <i>Trichy – Government</i> | | | |
| 1 | Mr. Ravichandran | Municipal Commissioner | Trichy City Corporation |
| 2 | Dr. Chithra | Chief Health Officer | |
| 3 | Ms. Amuda | Chief Engineer | |
| 4 | Mr. Thalaiviruchan | Sanitary Officer | |
| 5 | Mr. Guru | Health Section Officer | |
| 6 | Mr. Ravindran | Assistant Executive Engineer, Golden Rock Zone | |
| 7 | Mr. Ravi | Vehicle In-charge, Engineering section | |
| 8 | Mr. Loganathan | Assistant Executive Engineer, Mechanical | |
| 9 | To be confirmed | Junior Engineer, Golden Rock Zone | |
| 10 | Ms. Raj Laxmi | District Manager | TAHDCO*, Trichy |
| 11 | Mr. Vijay Kumar | Assistant Manager | |
| <i>Trichy – CSOs</i> | | | |
| 12 | Mr. V. Ganapathy | Journalist/Activist | The Hindu (retd.) |
| 13 | Mr. S. Damodaran | Founder | Gramalaya |
| 14 | Ms. Kavita Wankhade | Senior Lead | IIHS |
| 15 | Mr. Rajesh Ramamoorthy | Specialist – TNUSSP | |
| 16 | Ms. Srinithi Sudhakar Moopnar | Specialist – TNUSSP | |

*: TAHDCO (Tamil Nadu Adi Dravidar Housing and Development Corporation)

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Our approach

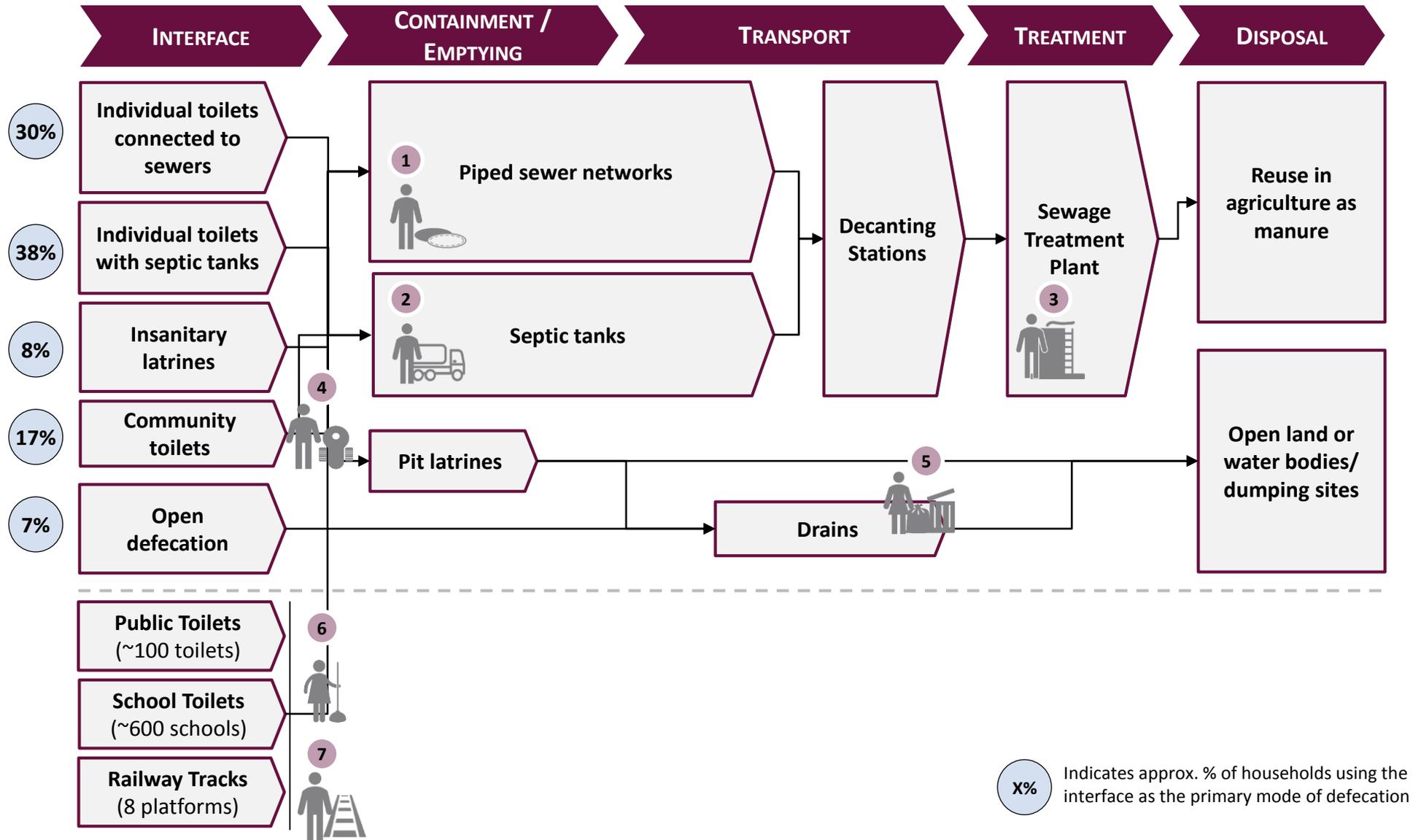
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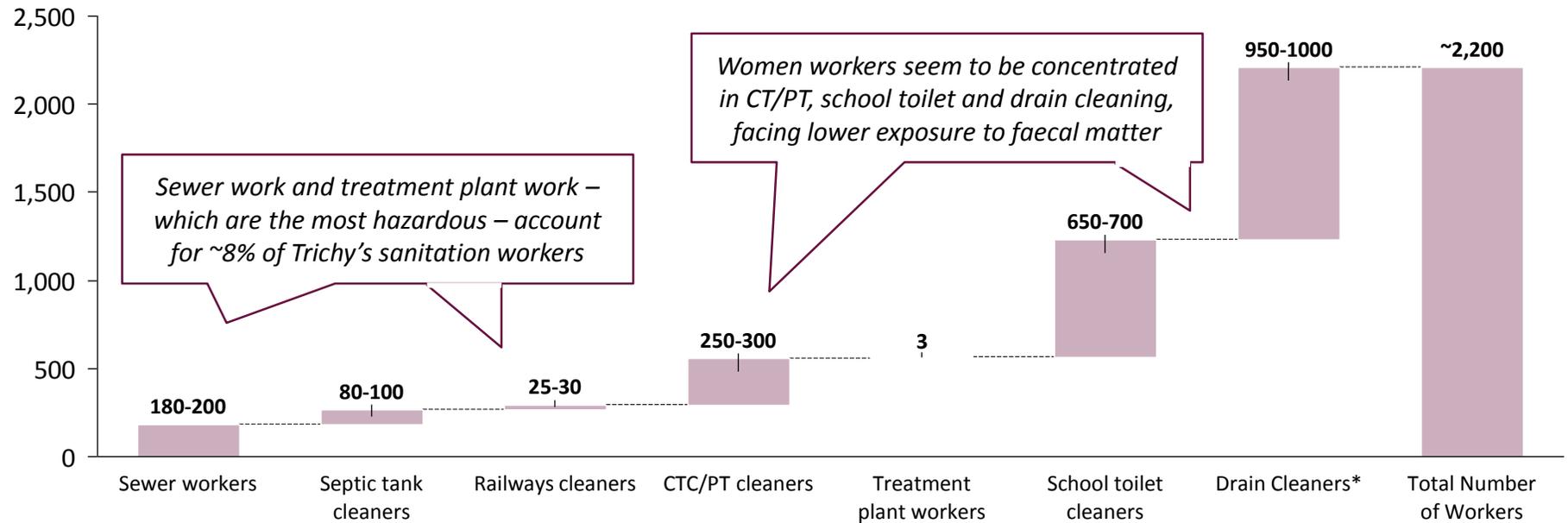
High-level implementation plan

Given Trichy's sanitation system, there are seven types of sanitation work that are relevant for our study

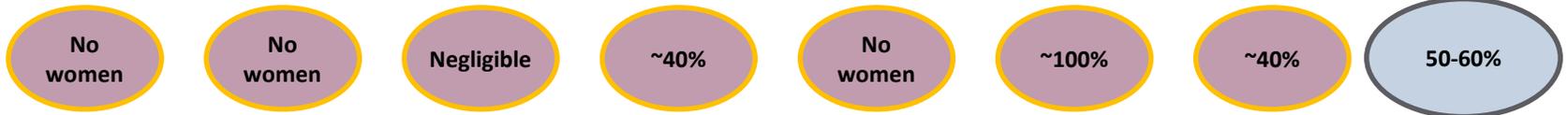


Our estimates indicate that there are ~2,200 sanitation workers in Trichy, three quarters of whom are drain or school toilet cleaners

Number of sanitation workers in Trichy, 2017 (Dalberg estimate)



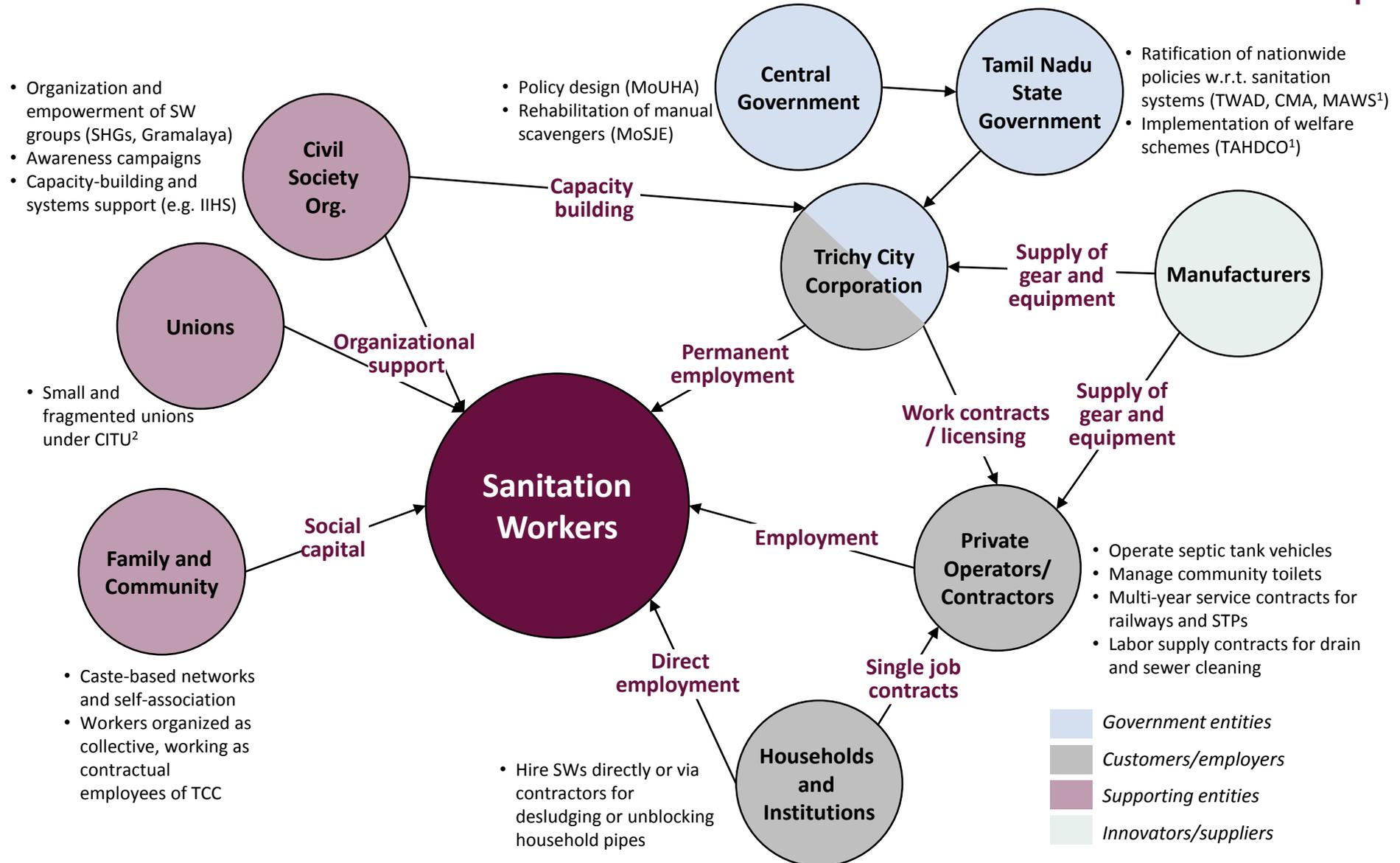
Percentage of women (est.)



* Drain Cleaning involves sweeping roads and then unblocking roadside drains

Source: Data from Trichy field visits and Dalberg analysis

Sanitation workers in Trichy engage with various entities in the sanitation ecosystem; we have evaluated the role of each type



(1): TWAD (Tamil Nadu Water Supply and Drainage Board), MAWS (Municipal Administration and Water Supply Department), TAHDCO (Tamil Nadu Adiravdar Housing and Development Corporation), CMA (Commissionerate of Municipal Administration); (2): CITU (Centre of Indian Trade Unions)

[Policy] In Trichy, operating and cleaning guidelines have been specified for the riskiest types of sanitation work; however, adherence to norms is suspect



Sewer cleaning

- **Follow the Manual Scavenging Act 2013, which specifies:**
 - **Conditions under which manual intervention is allowed:** damaged manholes, emergency, machine inability etc.
 - **Safety gear** to be provided to workers in these cases: 44 types, incl. air purifier gas masks and nylon safety belts
 - **Cleaning equipment** to be provided by ULBs: 14 including suction, jetting, etc.



Septic tank cleaning

- In line with the Manual Scavenging Act, Tamil Nadu rolled out **operative guidelines for septage management** in 2014. This includes:
 - **Specifications for building septic tanks;** frequency of desludging
 - **Licensing of desludging vehicles** if they meet a minimum requirement of mechanization
 - **Cleaning equipment and safety gear** for workers if they are required to enter tanks



Sewage treatment plant work

- Terms of contract with the private contractor specify the provision of:
 - **Safety gear:** masks, gum boots, gloves, safety belts, etc.
 - **Tools to aid unblocking**
- The contract also specifies **penalties for contravention**
 - e.g., INR 500 p.m. for no safety belt; INR 500 p.m. for no gas mask

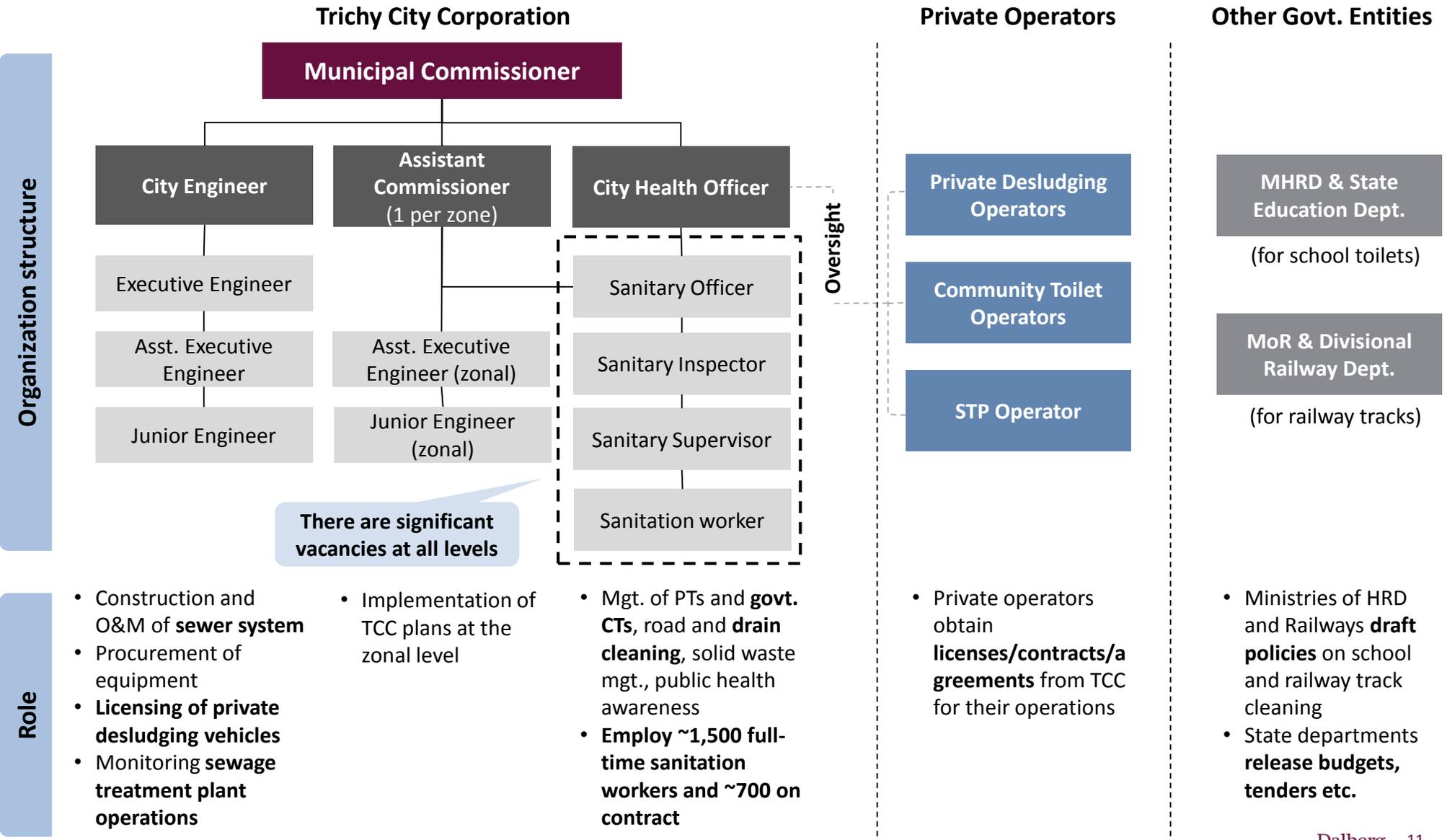
- **Guidelines not specified for other types of work E.g., toilet cleaning**
- **Even where specified, there is only partial compliance**

[Policy] Rehabilitation and financial assistance schemes for manual scavengers have had limited impact due to faulty design and identification

| Scheme | Details | Impact |
|--|---|---|
| Scheme for Rehabilitation of Manual Scavengers | <p>Rolled out first in 2007; revised in 2013; salient features include:</p> <ul style="list-style-type: none">• One-time cash assistance of INR 40,000• Business loans of INR 1-5 lakh• Skilling for alternate employment<ul style="list-style-type: none">○ TAHDCO* has provided textile training and multimedia training in the past | <ul style="list-style-type: none">• 104 beneficiaries identified between 2014-16 for one-time cash assistance, but disbursed only to 59• Since then, 200 more have identified themselves, but haven't been given the assistance |
| Financial support to Manual Scavengers and their families | <ul style="list-style-type: none">• TAHDCO responsible for this in the state• Cash assistance provided in case of death of dependents (INR 15,000), marriage/ birth of children, education of children (INR 1,500 p.a.), etc.• To avail the assistance, MS' need a government ID card – this excludes those working with SHGs/ private operators | <ul style="list-style-type: none">• Very few people have benefited from the scheme over the last decade <p><i>"I went to the TAHDCO office several times to claim education assistance for my daughter, but was always turned away with lame excuses."</i> - A sanitation worker</p> |

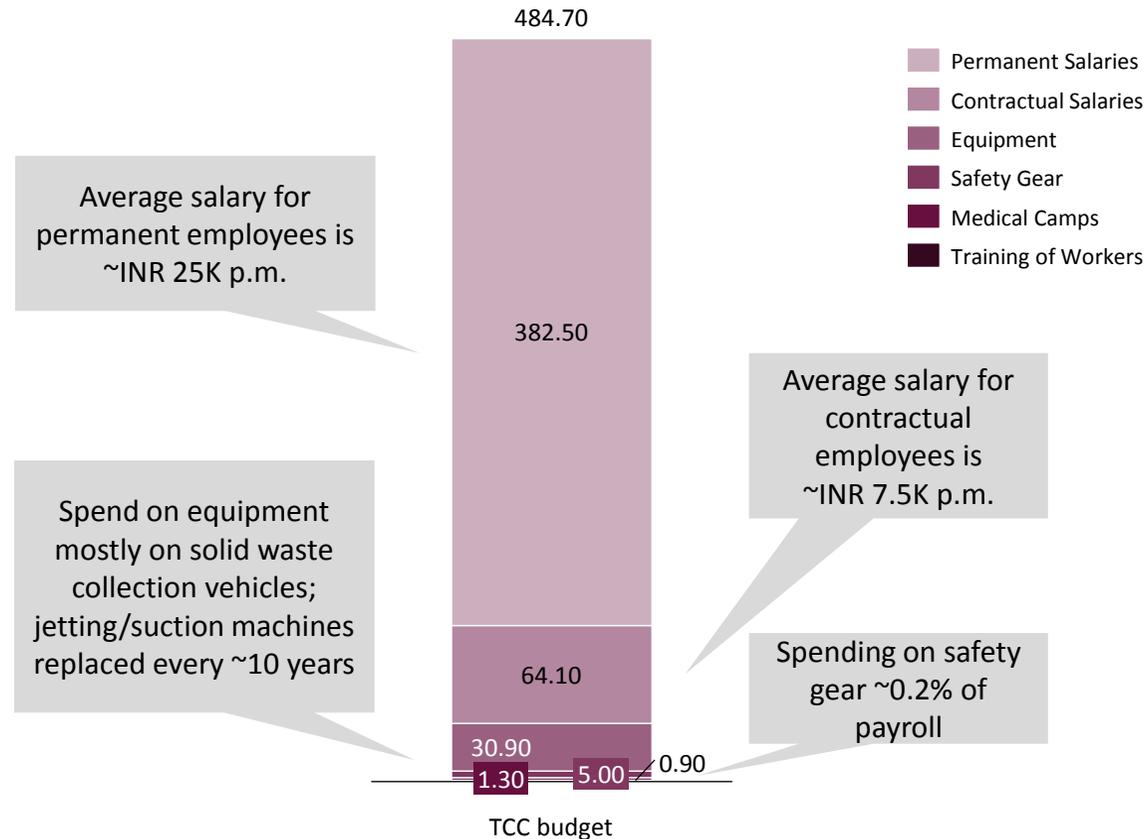
- Interventions have had limited impact due to poor targeting and identification
- There are several instances of ex-sanitation workers relapsing into their old occupation

[Governance] Within TCC, the Health and Engineering departments are responsible for different aspects of sanitation



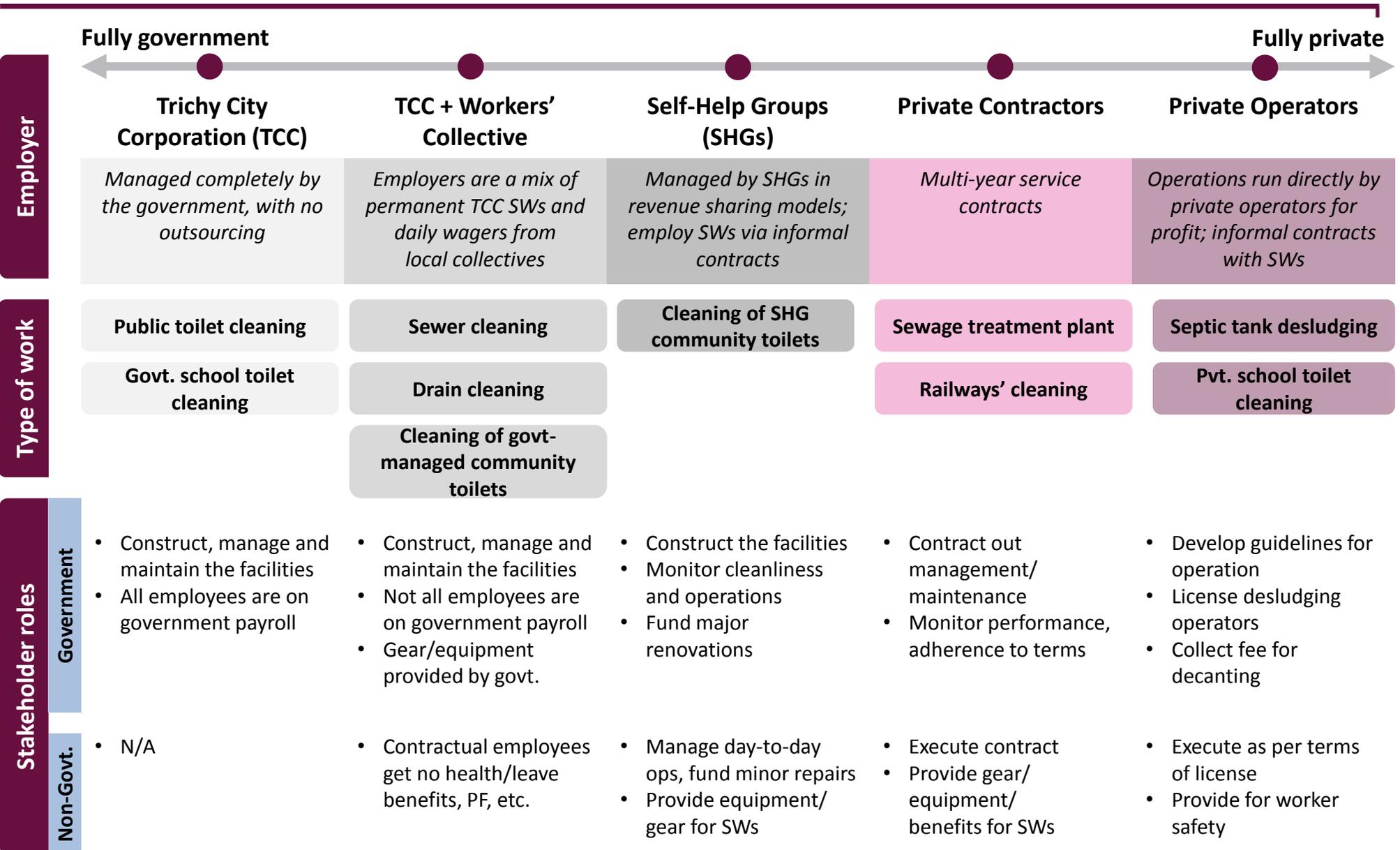
[Funding] TCC spent ~INR 500 mn on sanitation workers in 2016-17, 90% towards salaries; limited spending on worker safety, training, and health

TCC budget relevant to Sanitation Workers (2016-17), INR mn



TCC has been allotted INR 0.3 bn under AMRUT for Phase-II of its UGD extension, to double the length from ~450 km to ~900 km by 2019

[Employment] There are five models of sanitation worker employment, with TCC playing roles of varying importance in different types of sanitation work



[Employment] ~50% of workers are contractual or private, with their salaries being significantly lower than that of government employees

| Type of worker | Type of employer | | | | | Riskiness of work and income levels | | |
|-------------------------|------------------|--------------------|--------|-------------|-------------------|-------------------------------------|------------------------------------|--------------------|
| | TCC | Workers Collective | SHGs | Contractors | Private operators | Risk | Monthly income (INR) | Daily wage (INR) |
| Sewer cleaners | 80-100 | 100-120 | | | | | 25-30k (TCC); ~7.5k (non-govt.) | 500 (non-govt.) |
| Septic tank cleaners | 4 | | | | 80-100 | | 25-30k (TCC); 4k (non-govt.) | NA |
| Railway track cleaners | | | | 25-30 | | | ~10k | 450 |
| CTC/PT cleaners | 100-150 | 40-60 | 80-100 | | | | ~7k | NA |
| Treatment plant workers | | | | 3 | | | ~7k | 300 |
| School toilet cleaners | 180-200 | | | | 450-500 | | ~5k | 230 |
| Drain cleaners | 600-650 | 375-400 | | | | | 25-30k (TCC); ~7k (non-govt.) | 294 (non-govt.) |

Total:
(~2,200)

~1050 ~500 ~100 ~30 ~550

Govt. is increasingly outsourcing work/ engaging contract employees given budget constraints

- Govt. employees are paid significantly higher than non-govt.
- Salaries do not reflect riskiness of job, but purely depend on type of employer

[Unions and CSOs] There are no large unions for sanitation workers in Trichy; TCC is supported by a few CSOs in building capacity and implementation



Worker Unions

- **Workers are highly fragmented, and rates of unionization are low**
- **Some workers are in politically-backed unions** (e.g., CITU) that are linked to mainstream left-wing political parties, but their issues are likely crowded out of these platforms (given their small share)
- **Some workers have informally organized themselves as SHGs/collectives of 15-20 workers**
 - These groups have eliminated labor suppliers in their contracts
 - They are in long-term collective contracts with the TCC for drain cleaning, road sweeping, PT cleaning, etc.



Civil Society Organizations

- **Gramalaya has organized groups of low-income housewives into an SHG that operates ~115 CTCs in the city, on revenue sharing bases**
 - These CTCs give cleaners opportunities for progression into supervisory roles
- **IIHS runs a Technical Support Unit with the TCC that does capacity building across the sanitation value chain**
 - Organizing better septic tank desludging and conveyance practices
 - Construction of a faecal sludge treatment plant
 - Behaviour change campaigns for improved solid waste management and faecal sludge management
 - Training of officers on faecal sludge management

Workers rely primarily on their informal social networks based on caste and community

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High-level implementation plan

We have uncovered 26 insights across four dimensions: behavioural, social, infra, and governance

| Dimension | What we have looked at |
|---|---|
| 1 Behavioural <i>(7 insights)</i> | <ul style="list-style-type: none">• Entry into profession: Worker mental models• On-the-job: Worker perceptions and behaviours• Pathways for progression: Worker motivations and aspirations |
| 2 Social <i>(8 insights)</i> | <ul style="list-style-type: none">• Caste lens: Role of caste in perpetuating unsafe conditions for workers• Gender lens: Women's choices and constraints |
| 3 Infra <i>(4 insights)</i> | <ul style="list-style-type: none">• Toilet/sanitation system interface and corresponding public behaviour• Sanitation infra for containment and transport: sewers, drains, septic tanks, etc.• Cleaning equipment: availability, suitability, etc.• Safety gear: availability, suitability, etc. |
| 4 Governance <i>(7 insights)</i> | <ul style="list-style-type: none">• Focus/ priorities of government on sanitation workers• Policy design• Financing• Organization• Systems and processes• Capacity |

[Behavioural] Familial legacy seems to influence entry into sanitation work, with the worksite lacking a formal culture of safety

Entry

Family and spousal history are the key drivers of entry

- Most workers enter because parents were sanitation workers as well, and have internalized a rite of passage
- Workers are pulled into jobs to supplement partners' SW incomes, as was evidenced particularly prominently among female CT cleaners in Trichy

On-the-job

Workers feel invisible, often operate without formal contracts, and are not aware of terms of employment

- Contractual workers lack formal identification
- Workers are unaware of payment structures and terms of contracts, particularly when services are routed through labour suppliers like in the case of sewer workers

Workers are fragmented and lack a unified voice for collective bargaining

- Workers usually operate in small groups and have low bargaining power
- Small unions operate in Trichy but aren't formally organized/recognized

Mental model of safety is incomplete and heuristic driven

- Baseline of 'normal safety' is very low because of years of inertia
- Models of risk-assessment in the case of sewer workers, for instance, are driven by hearsay and personal experience
- Conflicting relationship with safety gear; not aware of their operability; drain cleaners in Trichy alleged that the gear actually hampered their operations



[Behavioural] Workers perceive occupational health risks to be personal and lack progression opportunities

On-the-job

Cost of workplace related injuries and illnesses is internalized and not perceived to be the liability of the employer

- Have normalized regular illnesses, perceive illness as personal cost
- Workers we spoke to in the city regularly spend 8 – 10% of their income on over-the-counter medicines for their ailments

Pathways

Sanitation workers are risk averse and value assured wages more than potentially higher entrepreneurial incomes or personal safety

- Workers are wary of outside opportunities, and hope to get permanent roles within these jobs

Most sanitation workers are in dead-end jobs without any pathways for growth and this dampens ambition

- Caste ceiling to their progression in the job, workers can't get ahead in their roles
- Workers have been in contractual modes of employment with the TCC for over 8 – 10 years without any progression



[Social] The rigidity of caste biases systematically denies other livelihood opportunities to sanitation workers

Due to under-employment, sanitation workers perceive themselves as disposable and guard even risky sanitation work from outsiders

- Generations of inertia have led workers to be protective of their jobs from outside entry; for instance, drain cleaners in Trichy demanded reservation in current jobs

Sanitation workers have limited exposure to other types of work and have an irrationally high risk-assessment of external opportunities

- Artificially high risk perception of the outside world because they lack reference points; workers don't believe there are other viable sources of stable income

Caste labels prevent sanitation workers from finding employment in other informal urban labour markets

- Highly regimented labour market in urban areas creates rigid barriers to entry for these workers, e.g. the load-men labour market in Trichy is also difficult to break into for sanitation workers due to caste barriers

Sanitation workers are risk averse and wary of self-employment opportunities due to low self-efficacy and access to markets

- Workers are sceptical of customer-facing businesses (e.g. tea stalls) and feel like they won't be accepted in the mainstream

Sanitation workers have a low awareness of livelihood schemes, and are systematically denied access

- Low awareness of TAHDCO welfare schemes among workers
- Given their position in the sub-caste hierarchy, they are denied access to even the caste-based schemes, e.g. several workers in Trichy didn't have caste certificates



[Social] Women face unsafe work environments due to constant interaction with the public at odd hours, and lack any mechanism to raise issues

Women's entry into these jobs is compelled by the need to supplement or replace spousal income

- Women typically end up working in these jobs when their husbands drop out of the workforce due to sudden accidents

Women workers are also exposed to an unfriendly and unsafe work environment

- Women lack facilities and face harassment at work; for instance, female CT cleaners in Trichy often have to encounter men drinking inside toilets and feel threatened as a result

Women workers lack “empathetic” supervision at the workplace

- There are male supervisors in most types of work, and they don't understand women's issues and frequently harass workers
- In the cases where there is female supervision (such as SHG-managed CTs in Trichy), female workers were found to be more satisfied with their job and more aspirational as well



[Infra] Current sanitation infra regularly puts workers in hazardous conditions; equipment and gear don't fully mitigate unsafe conditions

Sanitation sys. interface

Poor use of sanitation systems by end-users and the lack of public resources exacerbates the problem for sanitation workers

- Poor civic sense and lack of resources leads to regular breakdowns that necessitate manual intervention
- No disincentives for poor-use; several restaurants in Trichy dump their waste directly into open drains and manholes

Sanitation hardware

Legacy sanitation systems are unable to handle the increasing and changing nature of waste and break down frequently

- Increasing population in Trichy is leading to stress on systems; TCC receives 25-30 sewer blockage complaints everyday, the number is higher in the monsoons; TCC barely able to keep up with complaints at current capacity
- Higher frequency of blockages and breakdowns necessitates manual intervention

Machinery

Machines are not designed for the full range of use cases and procedural bottlenecks in India necessitating human intervention

- Machines are not designed for all types of work and are outdated; most machines in Trichy are 10-15 years old
- Workers developing artificial relationships with machines

Safety Gear

Safety equipment is primitive and an impediment to workers

- Failure to use gear seen as a behavioural problem but gear not suited to nature of work which often requires delicate operations, esp. in sewer and septic tank work
- Lack of formal safety culture



[Governance] Government agencies are disinclined to acknowledge and monitor unsafe sanitation work; funding insufficient to affect big changes

Focus

TCC officials view manual scavenging narrowly and deny that workers come in contact with faecal matter in the operations

- Narrow and inconsistent understanding of manual scavenging
- Perverse incentives to identify workers, authorities inclined to deny existence of unsafe sanitation work

Financing

TCC does not have adequate budgets for sanitation worker safety or comprehensive mechanization

- Insufficient spending on gear and equipment: less than 1% of sanitation worker payroll is spent on gear
- TCC has deployed 12 jetting machines for unblocking operations, and they are all engaged in reactive maintenance for 12+ hours in a day, leaving no time for preventive maintenance



[Governance] The contractual model of hiring workers is leading to several accountability challenges; there is poor monitoring of processes

TCC is increasing its use of sub-contractors and labour suppliers, exacerbating the problem for workers

- Contracting processes are inefficient, opaque and ignore worker safety; provisions on worker safety are routinely ignored

Sanitation systems are reactive & complaint-based rather than proactive & maintenance-based; data & monitoring are weak due to loopholes and the lack of oversight

- No mapping of existing systems to aid preventive maintenance; reactive maintenance soaks up all existing capacity; no job IDs for assignments
- Lack of systems to document areas with regular and frequent blockages, reliance on individual memory

Processes to avail welfare and rehabilitation schemes are arduous and come at a significant cost to workers

- Burden of proof is on sanitation workers and processes are tedious

Many workers relapse into sanitation work after having been part of an upskilling program due to lack of ongoing support

- No effort to monitor post-rehabilitation pathways of workers

There is a complete absence of any safety or operations training for sanitation workers and their immediate supervisors

- Workers not made aware of occupational risks; officials don't have formal training



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Our approach

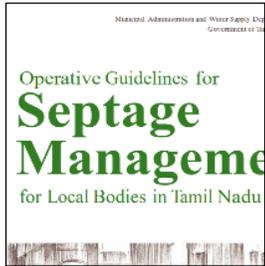
Sanitation worker ecosystem in Trichy

Key insights

City blueprint for worker safety and livelihoods

High-level implementation plan

Efforts are being made to address unsafe sanitation in Trichy, but there is still urgent need for focused intervention



Governance

Adoption of FSM guidelines

- TCC has adopted Tamil Nadu's operative guidelines for septage management (released in 2014) – which will make de-sludging safer. This includes:
- Specifications for building septic tanks; frequency of desludging
 - Licensing of desludging vehicles if they meet a minimum requirement of mechanization
 - Cleaning equipment and safety gear for workers



Infra

Better sanitation systems design

- TCC is piloting design changes in its underground drainage (UGD) network:
- Mandating households and institutions to build chambers that trap materials likely to cause blockages; order released 2013, compliance being monitored
 - Re-designing sewer network in upcoming phases to place manholes closer to internal lines, will aid unblocking



Behavioural

Safety training and orientation programs

- Indian Institute of Human Settlements (IIHS), which supports the TCC across the sanitation value chain, has conducted:
- Orientation program for de-sludging operators on safe sanitation and best practices in de-sludging
 - Training of government officials on FSM and adopting a worker safety lens

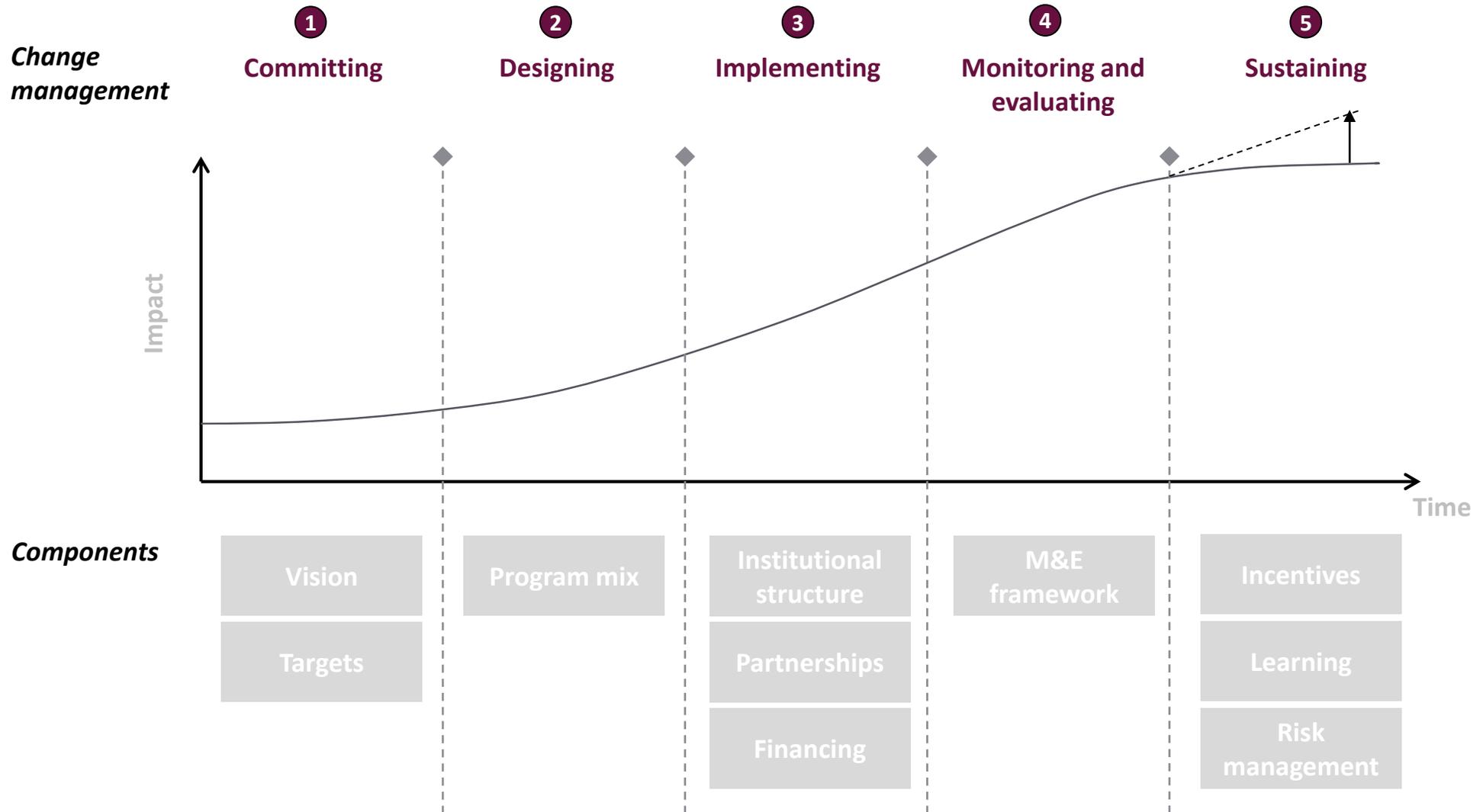


Social

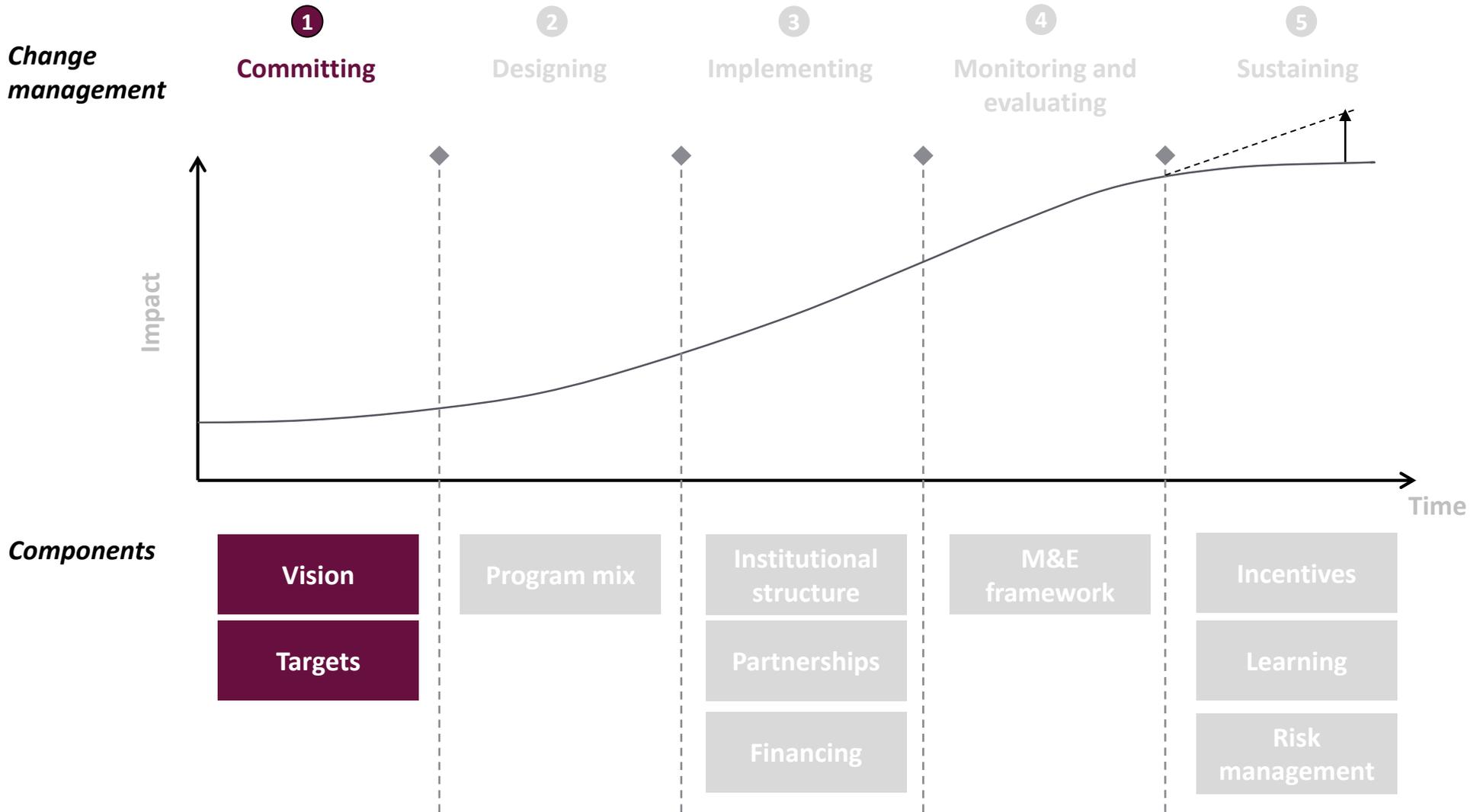
Women SHGs operating CTs

- Gramalaya has organized groups of low-income housewives into an SHG that operates ~115 CTCs in the city, on revenue sharing bases
- These CTCs hire cleaners and give them opportunities for progression into supervisory roles

To address the problem at scale and sustainably, we believe a comprehensive change management model should be adopted



1. Committing to change



[Vision] There is opportunity for the Trichy government to make sanitation work completely safe, and become a model for other cities

*“By 2022, eliminate unsafe sanitation work, ensure financial security and social inclusion for workers, and provide equal opportunity for mobility into other sustainable livelihoods, and become a **model city** for others to take inspiration from.”*

Infographic: End-state for a sanitation worker by 2022

Illustrative

ENTRY

1

Choice-based entry vs. legacy based entry: Worker sees stability and high risk-adjusted payments; chooses sanitation work from among other viable alternatives



2

Registry: Receives worker-friendly and easy-to-understand contract + ID card

ON-THE-JOB

3

Training: Worker on-boarded and trained on health and safety risks, use of gear and equipment, and rights and redressal mechanisms

4

Access to and use of gear: Worker has regular access to full safety gear kit and cleaning equipment and uses them everyday

5

Access to redressal mechanisms: worker has camaraderie with co-workers, supervisor, and operator; doesn't feel discriminated against; knows that has access to "safe" platforms to raise concerns

6

Family involvement: Family oriented on the risks of the job, benefits of using safety gear, etc. and kept abreast through health updates, etc.

7

Improvement in financial security and health: Worker feels healthier; feels financially secure as savings increase

PROGRESSION

9

Example-setting: Dynamic worker becomes role model for others in the system

8

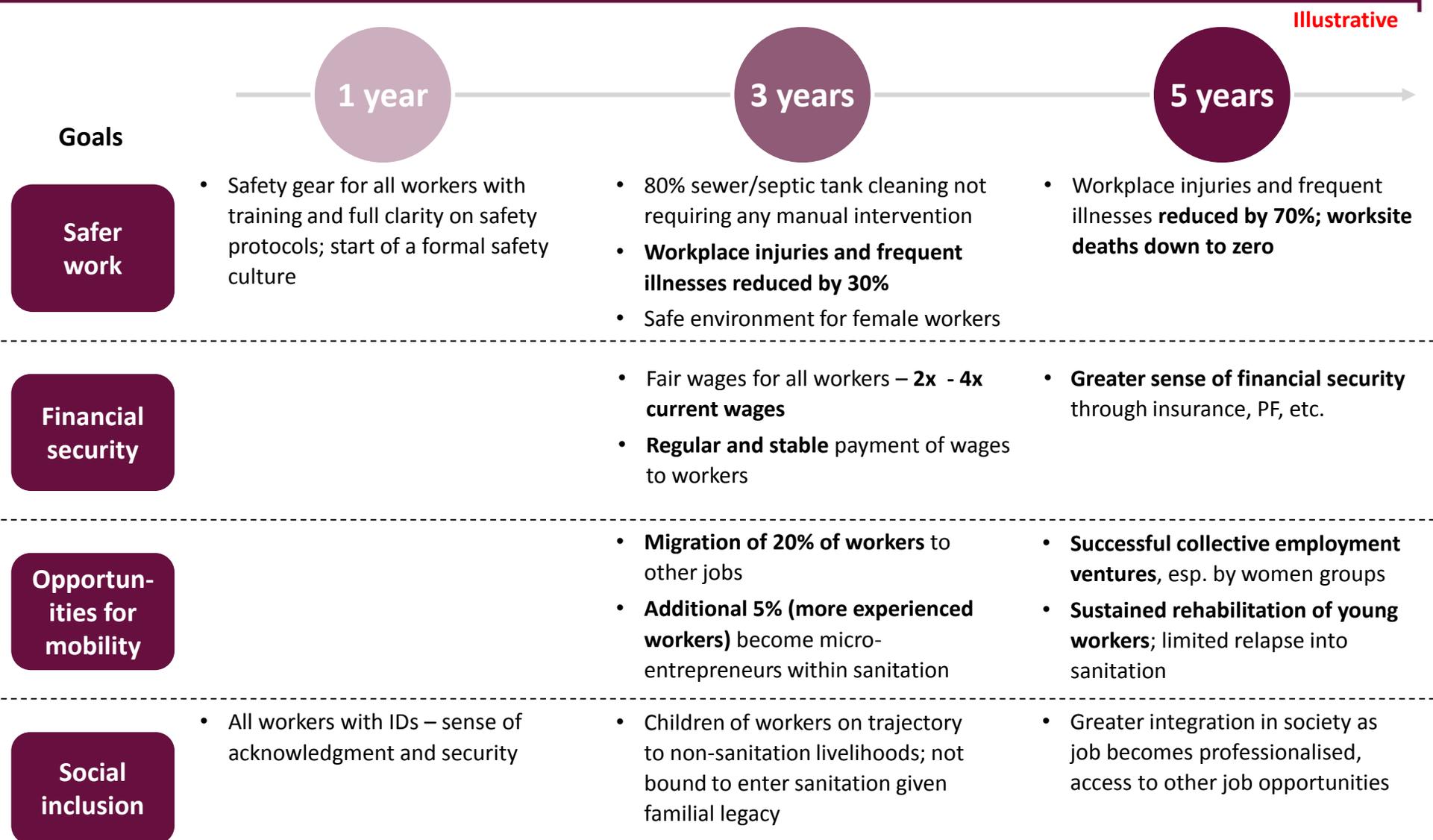
Access to other livelihood opportunities: Worker can upskill, start own business and try for other jobs; has access to recruitment platforms, capital, etc.

10

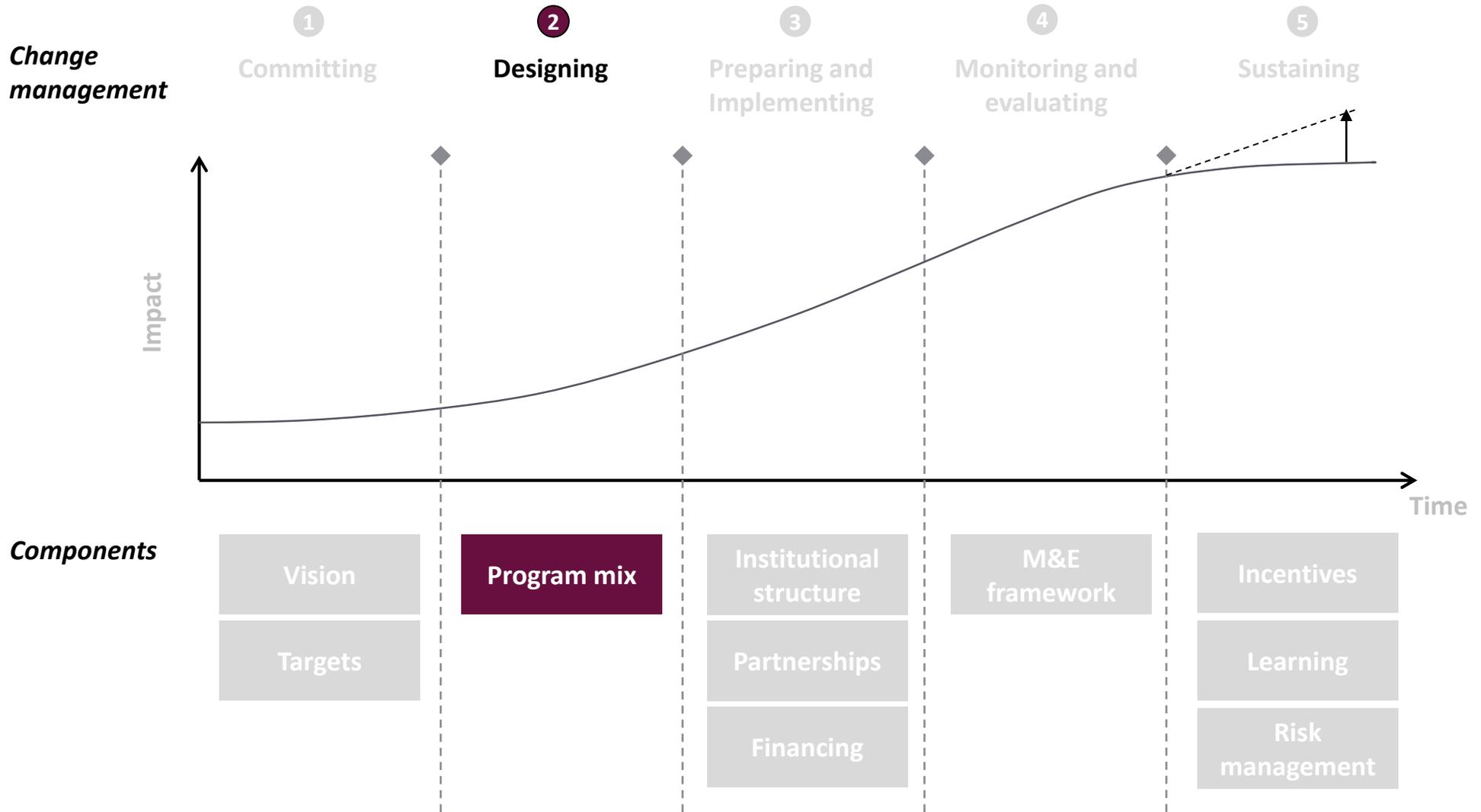
Family legacy broken: Worker feels comfort that children are not forced to do sanitation work



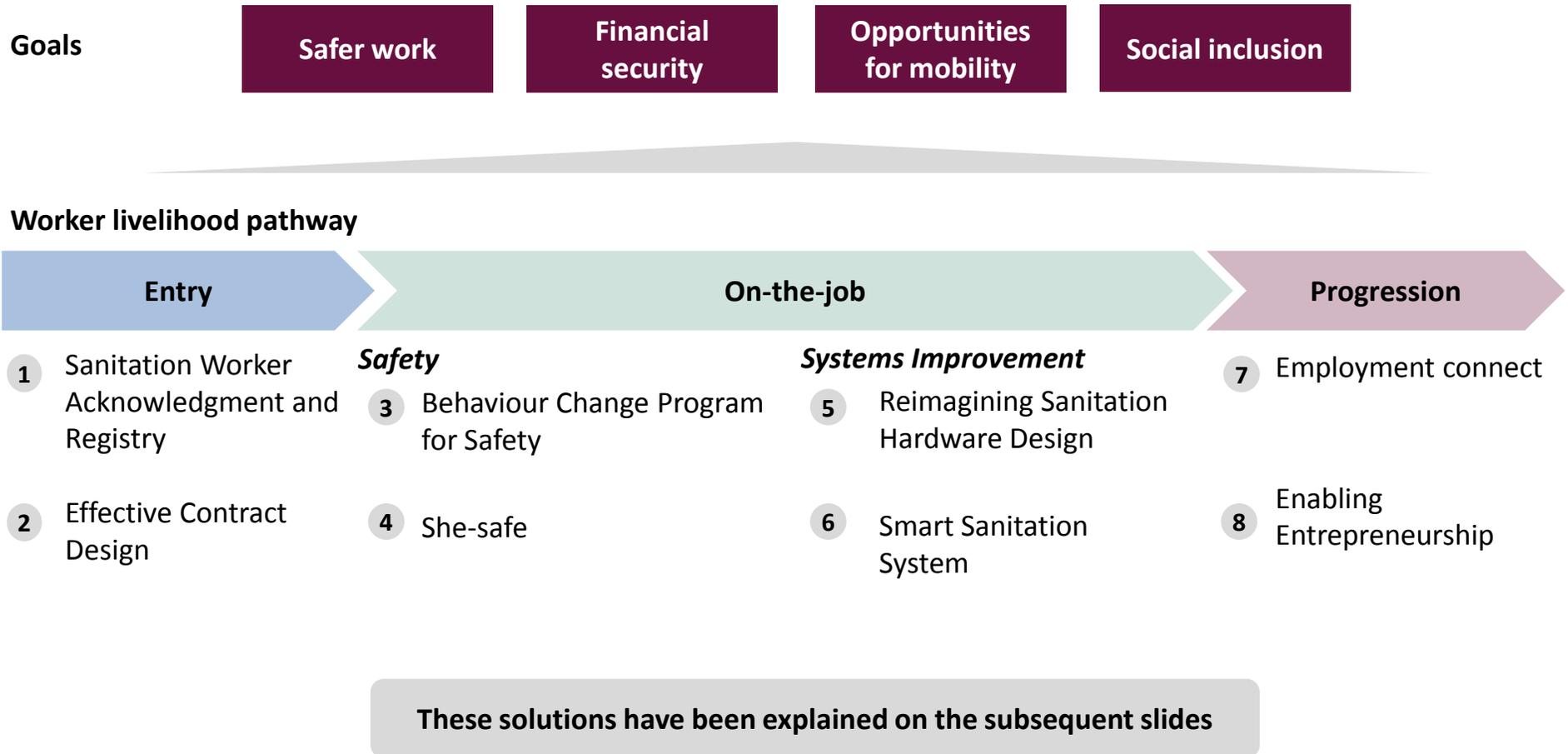
[Targets] The broader vision will need to be translated into short-mid-long term goals and milestones which stakeholders can work towards



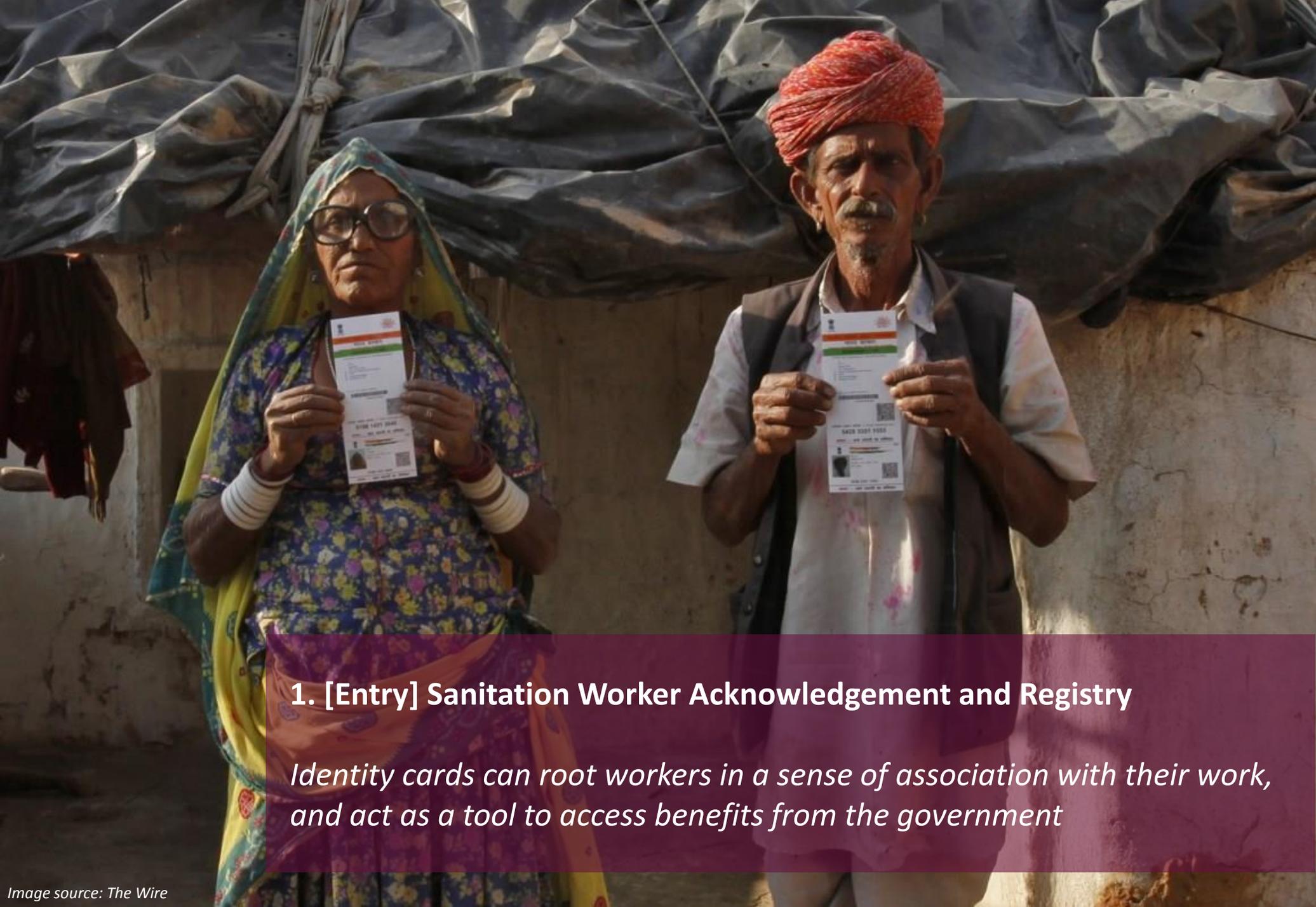
2. Program design



[Program mix] We have identified eight actionable solutions for the Trichy government to improve worker safety and livelihoods



While there are other value adding solutions (e.g., innovation in cleaning equipment and safety gear), we have prioritized what can be actioned at the city level



1. [Entry] Sanitation Worker Acknowledgement and Registry

Identity cards can root workers in a sense of association with their work, and act as a tool to access benefits from the government

[Entry] Sanitation Worker Acknowledgement and Registry

Will provide a sense of identity and serve a springboard for other interventions



DESCRIPTION



Acknowledgement

- Well-funded comprehensive 3rd party survey to identify number of workers in Trichy



Registry

- Aadhar-linked ID for sanitation workers
- Database of sanitation workers, containing:
 - Demographic and contact information
 - Type of work
 - Employer details
 - Family information
- SMS alerts to workers for:
 - Registration
 - Payment of salary
 - Attendance
 - Training programs
 - Schemes

WORKERS IMPACTED (~2200)

1. **Types of work** *All workers in Trichy*
2. **Gender** *Male and Female*
3. **Employment nature** *Contractual and Permanent*
4. **Personas** *All personas*

SUCCESS ENABLERS

- Third party involvement to ensure unbiased, swift data collection
- Empowered host organisation (Sanitation worker unit) that can coordinate across departments (urban development, railways, schools)
- Sophisticated IT infrastructure

FUNDING REQUIRED

(~INR 0.25 MN/YR)



- One-time cost to build digital infrastructure, conduct a robust third-party survey and give formal identification to all workers would be **INR 1 – 1.5 mn**
- Additional dissemination costs to send SMS alerts to workers, and printing costs for new ID cards of **~INR 0.05 mn/year**

TIMEFRAME FOR IMPLEMENTATION



Proposed

TCC Role:



Implementation



Facilitation



Funding

Dalberg 35

2. [Entry] Effective Contract Design

Fair and transparent contracts will enable workers to have agency over their working conditions, and hold contractors accountable



[Entry] Effective Contract Design

Will formalize employer-worker relationship and hold employers accountable



DESCRIPTION



Worker-friendly contracts for all workers, provisions include:

- Fair wages
- Escalation clauses
- Provident Fund
- Mandatory sick leaves
- Health, accident and life insurance
- Bi-annual health check-ups with allowance for medicines
- Information on safety protocols, safety gear and equipment
- Worker rights (refusal to work in case of unsafe conditions, access to gear and equipment, timely payment of salaries, etc.)
- Issue resolution or escalation mechanisms



Contracts **designed in a way that it is easy to understand for workers**. Possible features could include:

- Use of regional language
- Visual aids to account for low education of workers
- Condensed version of a lengthy formal contract

TIMEFRAME FOR IMPLEMENTATION



WORKERS IMPACTED (~2,200)

- Types of work** *All workers in Trichy*
- Gender** *Male and Female*
- Employment nature** *Contractual and Permanent*
- Personas** *All personas*

SUCCESS ENABLERS

- Investment to create user experience optimised contracts
- Contracts tailored to the different types of sanitation work, while meeting a minimum baseline across all
- “Safety officer” at TCC to ensure enforcement of provisions, coordinate between various departments
- Sufficient funding from the central and Tamil Nadu governments to accommodate provisions

FUNDING REQUIRED (~INR 90 MN/YR)

-
- A horizontal scale with three points: 'Low', 'Medium', and 'High'. A blue box with a gear icon is positioned above the 'High' end.
- Inclusion of minimum wage terms, PF, health insurance and gear in the terms of contracts between the TCC and current labor supply and service contractors would **increase the value of contracts** and the outlay bill for contractual workers from the TCC by **~INR 90 mn/year**
 - Initial capital expenditure on gear will amount to **~INR 3 mn**





3. [On-the-job] Behaviour Change Program for Safety

Safety training programs will establish and sustain a culture of safety

[On-the-job] Behaviour Change Program for Safety

Will build and sustain a formal culture of safety



DESCRIPTION



Building a safety culture

- **Townhall and demo days** held by TCC for SWs to demonstrate commitment to safety and secure their buy-in on use of gear and equipment
- **Formal training** program for new workers, including **simulation-based training for risky jobs**
- **Master trainers** (potentially informal leaders from groups) to train workers on safety and use of gear
- Safety orientation for supervisors and govt. officials



Sustaining a safety culture

- **Video-based refresher trainings**, SMS alerts for using gear
- **Worksite visuals for reinforcement** (signs indicating proper protocol for jobs, implications of not using gear, etc.)
- **Role models** who use safety gear and equipment
- **Incentives for workers** who use gear regularly and influence others to use gear
- **Family counselling** to make families aware of health risks and importance of using gear

TIMEFRAME FOR IMPLEMENTATION



WORKERS IMPACTED (~2,200)

1. **Types of work** *All workers in Trichy*
2. **Gender** *Male and Female*
3. **Employment nature** *Contractual and Permanent*
4. **Personas** *All personas*

SUCCESS ENABLERS

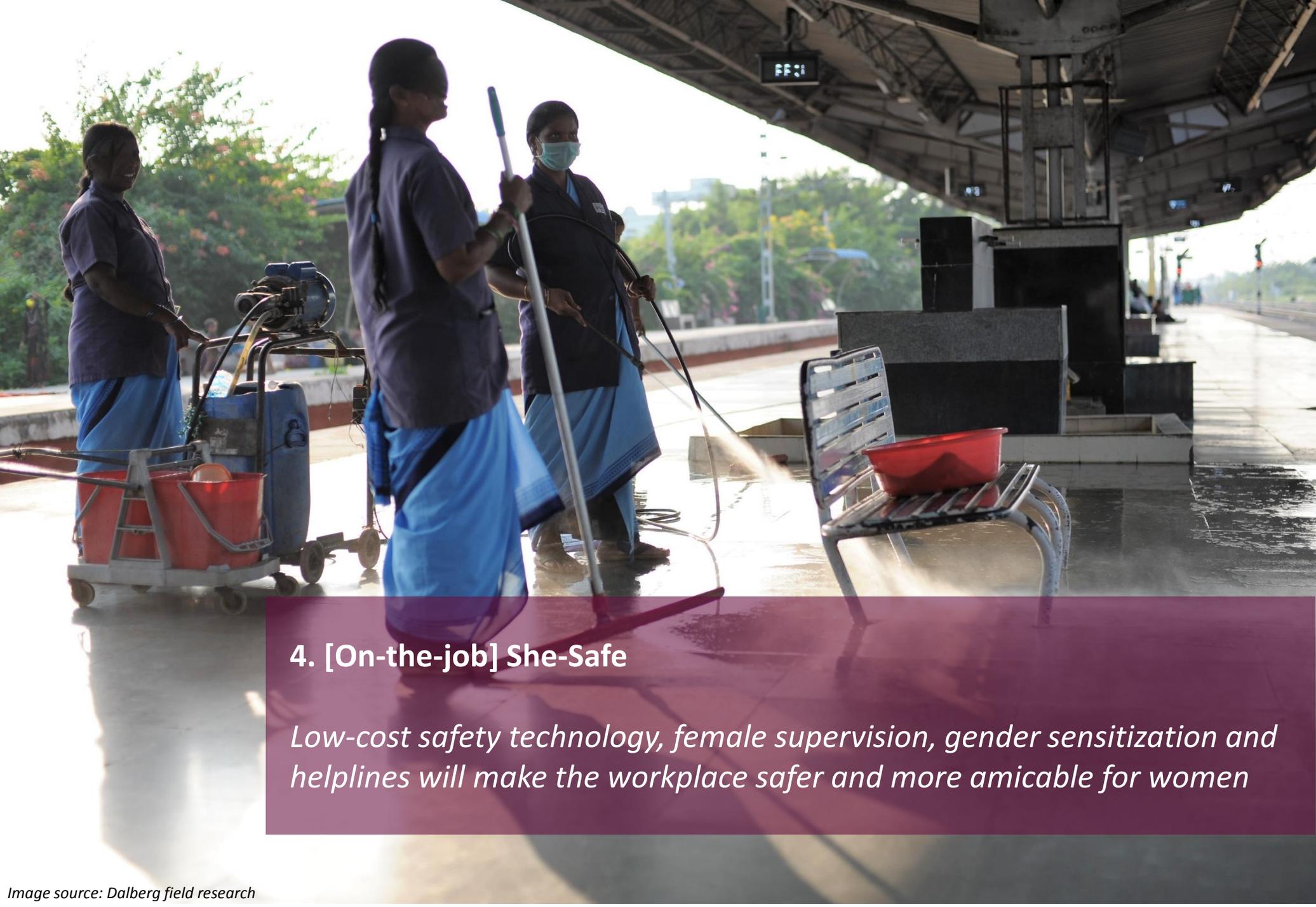
- Well-designed training program and visuals, contextualized attitudes and behaviours of workers in Trichy
- Penalties for not complying with safety training and protocols
- Identification of influencers in worker groups and communities

FUNDING REQUIRED (~INR 8 MN/YR)



- The cost of conducting regular safety trainings for all workers, including components that familiarize workers with gear and equipment, is expected to cost **~INR 8 mn/year**





4. [On-the-job] She-Safe

Low-cost safety technology, female supervision, gender sensitization and helplines will make the workplace safer and more amicable for women

[On-the-job] She-Safe

Will lead to a safer workplace and amicable work environment for women



DESCRIPTION



Tech and infra initiatives

- **Panic buttons and whistles** for women to raise alarms
- **Anonymous helpline** for women to raise complaints, coupled with fast-track redressal
- **Information about and access to washroom facilities** for work that doesn't have a permanent location (E.g., drain cleaning)



Trainings

- **Self-defence classes** for women workers
- **Gender sensitisation trainings** for male supervisors



Processes

- **Work schedules** that are conducive for women (E.g., avoid late nights and early mornings)
- **Appointment of female supervisors** from within the worker group; number can be determined as a ratio to female workers
- **Work-site safety audits** and modifications (such as lighting in dimly lit areas, surveillance cameras, etc.)
- Bi-annual third party surveys to get **feedback on workplace safety**

TIMEFRAME FOR IMPLEMENTATION



WORKERS IMPACTED (~500)

1. **Types of work** *Drain cleaners, CT/PT cleaners*
2. **Gender** *Female*
3. **Employment nature** *Contractual and Permanent*
4. **Personas** *All personas*

SUCCESS ENABLERS

- Buy-in from contractors and supervisors who might be reluctant to implement this, as they are mostly male
- Robust monitoring and feedback systems for gauging effectiveness of and enforcing initiatives

FUNDING REQUIRED

(~INR 1 MN/YR)



- Panic buttons and whistles for the ~1100 female sanitation workers will cost **~INR 0.3 mn**
- Helplines and gender sensitization trainings held for all workers estimated to cost **~INR 0.5 mn/year**





5. [On-the-job] Reimagining Sanitation Hardware Design

Redesigning sanitation systems from a worker lens can reduce the need for manual intervention and fix accountability on households and institutions

[On-the-job] Reimagining Sanitation Hardware Design

Will improve sanitation infrastructure, reducing the need for manual intervention



DESCRIPTION

Design of infrastructure can be improved to reduce instances of blockages and need for manual intervention

Illustrative hardware design improvements for sewer networks:-



- **Installation of inspection or diaphragm chambers** at household and institution connections to sewer network to filter out unwanted material; TCC passed a directive in 2013 for all hotels and apartments to install chambers but compliance is poor

- Internal manholes linked directly to households for increased accountability; TCC considering modified designs for construction of newer phases of the sewer network



- **Innovation in sewer network design**
 - City-level assessment of materials, dimensions and gradients in the Trichy UGD network to optimize flow

Illustrative hardware design improvements for septic tanks:-



- Septic tank improvements to account for inconsistency of sludge due to unwanted waste materials (e.g., kitchen waste, etc.)

TIMEFRAME FOR IMPLEMENTATION



WORKERS IMPACTED (~1,300)

- | | |
|-----------------------------|----------------------------------|
| 1. Types of work | Sewer, drain and septic tank |
| 2. Gender | Male and Female |
| 3. Employment nature | Contractual and Permanent |
| 4. Personas | All except complacent part-timer |

SUCCESS ENABLERS

- Strong systems to monitor compliance with designs at the household and institution level
- Survey of existing designs and execution of new designs without large-scale overhauls or disruptions

FUNDING REQUIRED (~INR 13 MN/YR)



- Improving existing sewer design and re-laying sewers in internal areas will incur substantial expenses but can likely be sourced from central funds (like AMRUT)
- The liability to build diaphragm chambers rests on the households and institutions; however, if the TCC offers a 20% subsidy on the construction, their share works out to ~INR 2.5 mn p.a.

Proposed

TCC Role:



Implementation



Facilitation



Funding

Dalberg 43

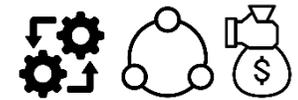
6. [On-the-job] Smart Sanitation System

Transitioning to a smart sewer network will help optimize operations, and prevent workers from getting into hazardous situations to clear blockages



[On-the-job] Smart Sanitation System

Will reduce the need for manual intervention



DESCRIPTION



Identification of issues and blockages in the sanitation system

- **Mobile app for citizens and staff** to log complaints about blockages in sewer systems, drain overflow, etc.
- Use of **sensors, lasers, infra-red or U.V. rays** in sewer networks to detect blockages
- **Tagging of septic tanks** to monitor frequency of de-sludging



Resolution of issues

- Vehicle tracking via **GPS**
- Real-time monitoring of sewer cleaning via **CCTVs fitted on vehicles**
- Sewer monitoring equipment and screens fitted to vehicle



Tracking

- **“Control room”** at city-level to view the entire sewer network
- **Robust MIS** where all cleaning jobs are assigned “Job IDs”; resolution status and time, comments, and next steps logged in
- **Strong analytics backend** to identify “hotspots” (i.e. those parts of the sewer and drain networks that give the most problem) for proactive upgradation and maintenance

TIMEFRAME FOR IMPLEMENTATION



WORKERS IMPACTED (~1,300)

1. **Types of work** *Sewer, drain and septic tank*
2. **Gender** *Male and Female*
3. **Employment nature** *Contractual and Permanent*
4. **Personas** *All except complacent part-timer*

SUCCESS ENABLERS

- Adoption by users, who are not necessarily tech savvy
- Strong business case for making these investments

FUNDING REQUIRED (~INR 30 MN/YR)



- Cost of fitting sensors in the existing sewer network and introducing high-fidelity data in the sanitation system would be of the order of **~INR 200 mn**, with additional maintenance costs; tagging of septic tanks **~INR 38 mn**
- Developing a mobile app for the TCC and users is estimated to cost **~INR 2 mn**
- Cost of shifting to GPS-enabled systems in all machines is estimated to be an additional **~INR 0.1 mn**
- Annualized over 10 years and adjusted for overheads, this would amount to **~INR 30 mn/year**



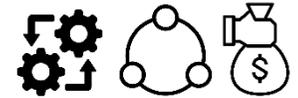


7. [Progression] Employment Connect

Skills training and placement arrangements with corporates will help transition workers and their children to sustainable alternate jobs

[Progression] Employment Connect

Will provide workers with access to lucrative, safer job opportunities



DESCRIPTION



Sources of job opportunities

- **Incentives to companies for skilling and hiring** sanitation workers; provisions such as tax rebates or qualification of spend as CSR can be provided as incentives
- **Reservations for jobs** for sanitation workers in non-WASH sectors (public sector units, mid-day meal cooks, Anganwadi helpers, manufacturing units, etc.)



Interventions to facilitate access and transition

- **Incentive program** for intermediaries (e.g., local CSOs) to provide non-WASH work in a family
- **Soft skills training** by CSOs
- **Time-bound monthly stipend** for sanitation workers migrating to lower-paying (but safer) jobs
- **Recruitment helpline** for sanitation workers for information on:
 - Available employment opportunities or networks which provide employment opportunities
 - Livelihood schemes
 - Processes for application



TIMEFRAME FOR IMPLEMENTATION



WORKERS IMPACTED (~700)

1. **Types of work** *All*
2. **Gender** *Male and Female*
3. **Employment nature** *Contractual*
4. **Personas** *Caged bird and transient hustler*

SUCCESS ENABLERS

- Identifying target segments within sanitation workers who are better placed for jobs
- Identifying local employment opportunities and being able to match them with worker skills and aptitudes
- Building the case for corporates to hire from the pool
- Integration with existing schemes (e.g., NULM)

FUNDING REQUIRED (~INR 1.5 MN/YR)



- Existing rehabilitation scheme funds to be leveraged to aid transition to other jobs
- Government and private skilling programs to be leveraged to train and place sanitation workers in alternate jobs
- Time-bound monthly stipend for smooth transition to other jobs estimated to cost, as well as the facilitation of job fairs, etc. will cost ~INR 0.3 mn/year



8. [Progression] Enabling Entrepreneurship

Empowering communities of sanitation workers to adopt entrepreneurial models can help lift them out of their current jobs into more dignified sources of livelihood

ICAR
Agriculture Research Organisation
Ag research with a human touch

উপজাতি মহিলাদের জন্য পাটের ব্যাগ তৈরীর মাধ্যমে
পাটের মূল্য সংযোজন বিষয়ক প্রশিক্ষণ
ENTREPRENEURSHIP DEVELOPMENT THROUGH VALUE ADDITION
IMPROVING THE LIVELIHOODS OF RURAL WOMEN THROUGH MAKING OF JUTE BAGS

তারিখ: ২১ - ২৪ সেপ্টেম্বর, ২০১৩
Date: September 21-24, 2013

স্থান: কৃষি সম্প্রসারণ শাখা
Venue: Agricultural Extension Section

Organized by
Agricultural Extension Section
Under
Tribal Sub Plan (TSP)
Central Research Institute for Jute and Allied Fibres (ICAR)
Nilgunj, Barrackpore, Kolkata - 700120

[Progression] Enabling Entrepreneurship

Will provide workers with the support needed to realise business opportunities



DESCRIPTION



Within sanitation

- First preference given to sanitation workers to become sanitation entrepreneurs when mechanising a process



Collective employment outside sanitation

- Collective employment groups (SHGs) supported with:
 - Capacity building and mentorship from CSOs
 - Financing (including small ticket size loans) and subsidies for raw materials, land, etc.
 - Guaranteed purchase agreements by corporates or govt.



Individual businesses outside sanitation

- Single-window, fast-track clearance based on SW id for small ticket-sized loans
- Varying loan amounts, especially micro loans
- Broader list of income-generating activities that qualify for rehabilitation loans; allow activities that are feasible in local areas such as dairy farming, fisheries, etc.

WORKERS IMPACTED (~700)

1. **Types of work** *All*
2. **Gender** *Male and Female*
3. **Employment nature** *Contractual*
4. **Personas** *Reluctant inheritor*

SUCCESS ENABLERS

- Partnerships with financial institutions and corporates
- Availability of CSOs to facilitate and support businesses
- Integration with existing schemes (e.g., schemes for SCs)

FUNDING REQUIRED (~INR 2 MN/YR)



- Limited direct cost to TCC; most of the cost will be directed towards the private sector for facilitating purchases, and on NSKFDC (SCAs and RRBs¹) for adjusting for risk in loans
- Entrepreneurial models should make use of subsidies available to SCs/STs through the central and state govt.
- TCC can enable partnerships with CSOs and provide platform for collectives to organize, for a low estimated cost of ~INR 0.1 mn/year

TIMEFRAME FOR IMPLEMENTATION

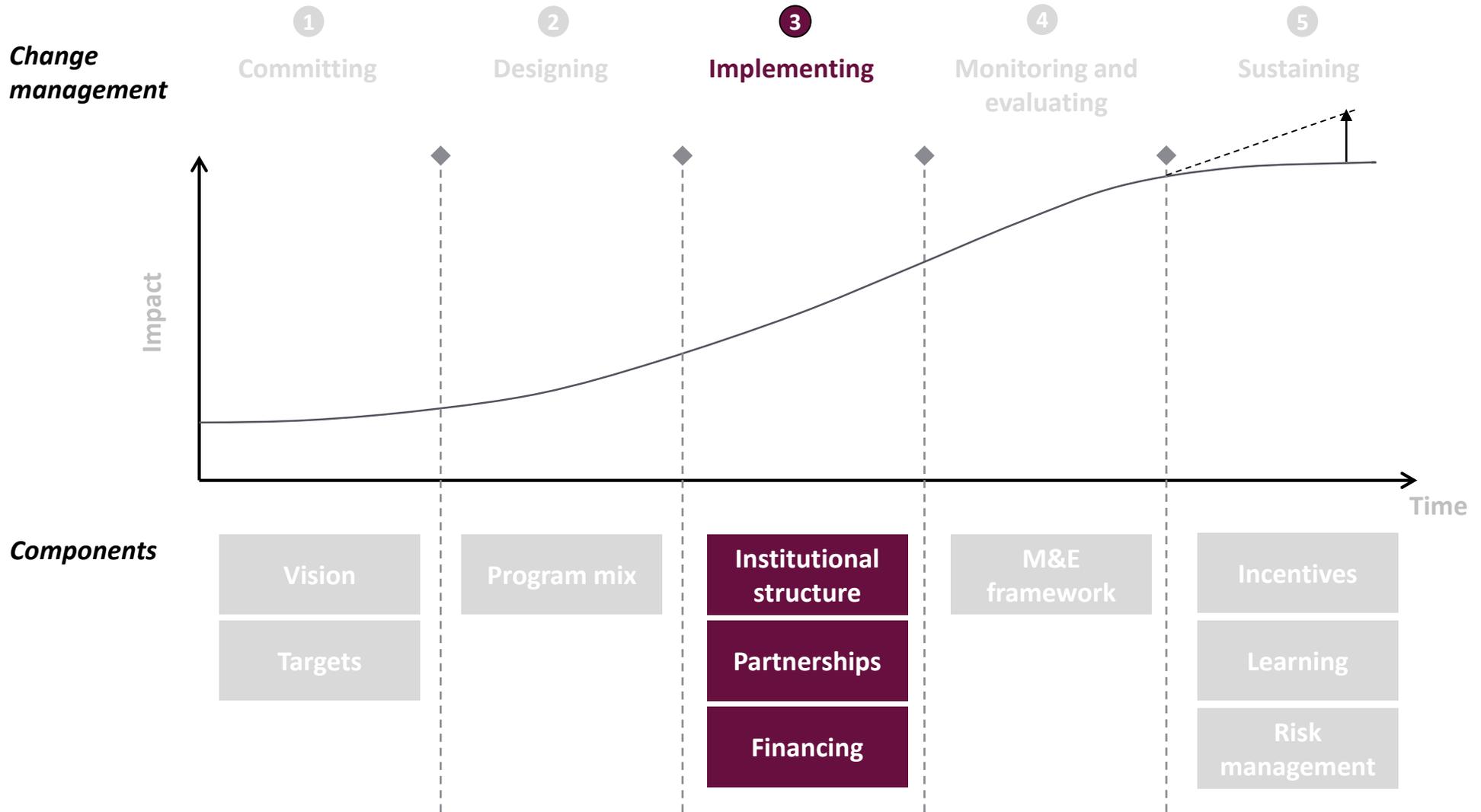


(1): SCAs: State Channelising Agencies, RRBs: Regional Rural Banks

Source: Dalberg analysis



3. Implementing the programs



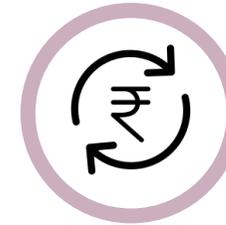
There are some prerequisites for effective implementation of the programs



1. A robust institutional structure
that is geared to act
and enforce



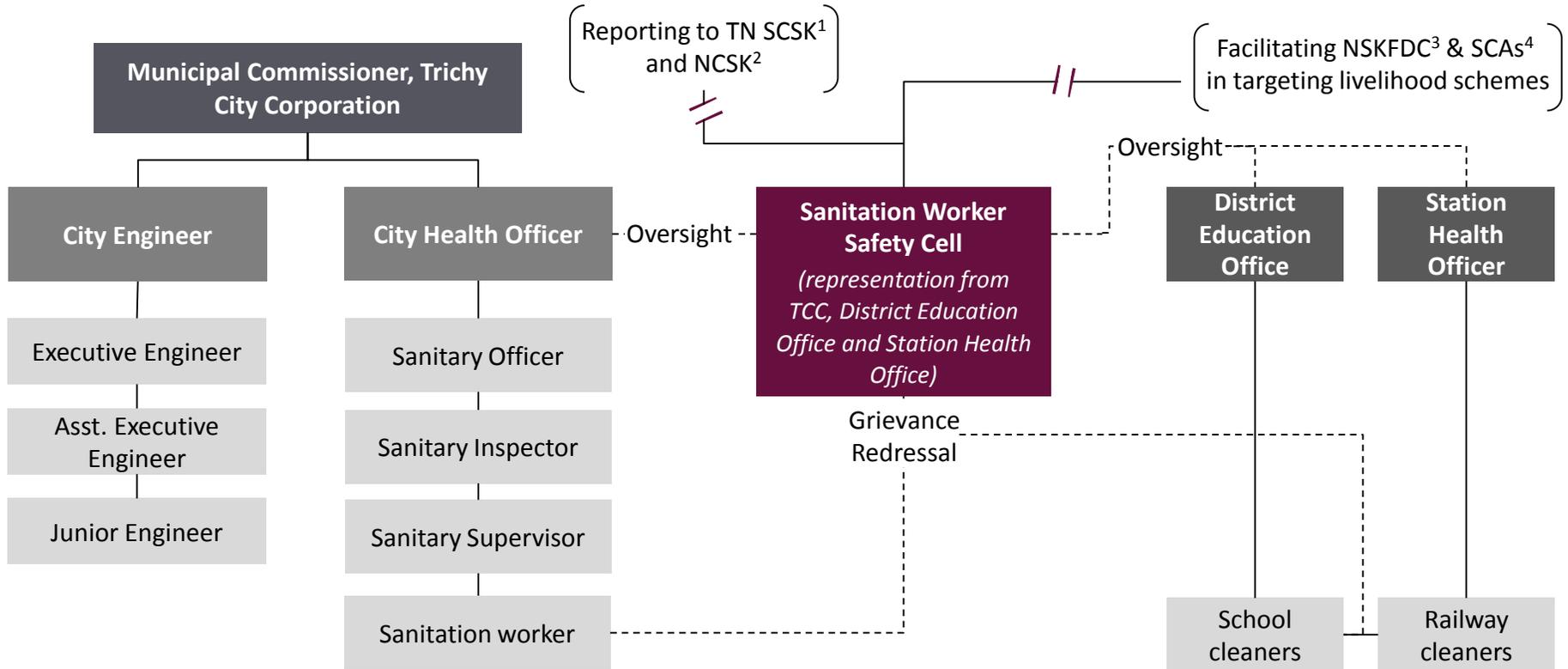
2. Partnerships with non-government stakeholders
to effectively implement
interventions



3. Adequate funding
from various sources to
support program
implementation and
scale-up

These enablers have been explained in the following slides

[Institutional structure] We propose that a Sanitation Worker Safety Cell be instated to safeguard the interests of workers



Role of the SW Safety Cell

1. Awareness & Welfare

- Awareness campaigns
- Training programs
- Grievance redressal
- Assisting NSKFDC rehabilitation schemes

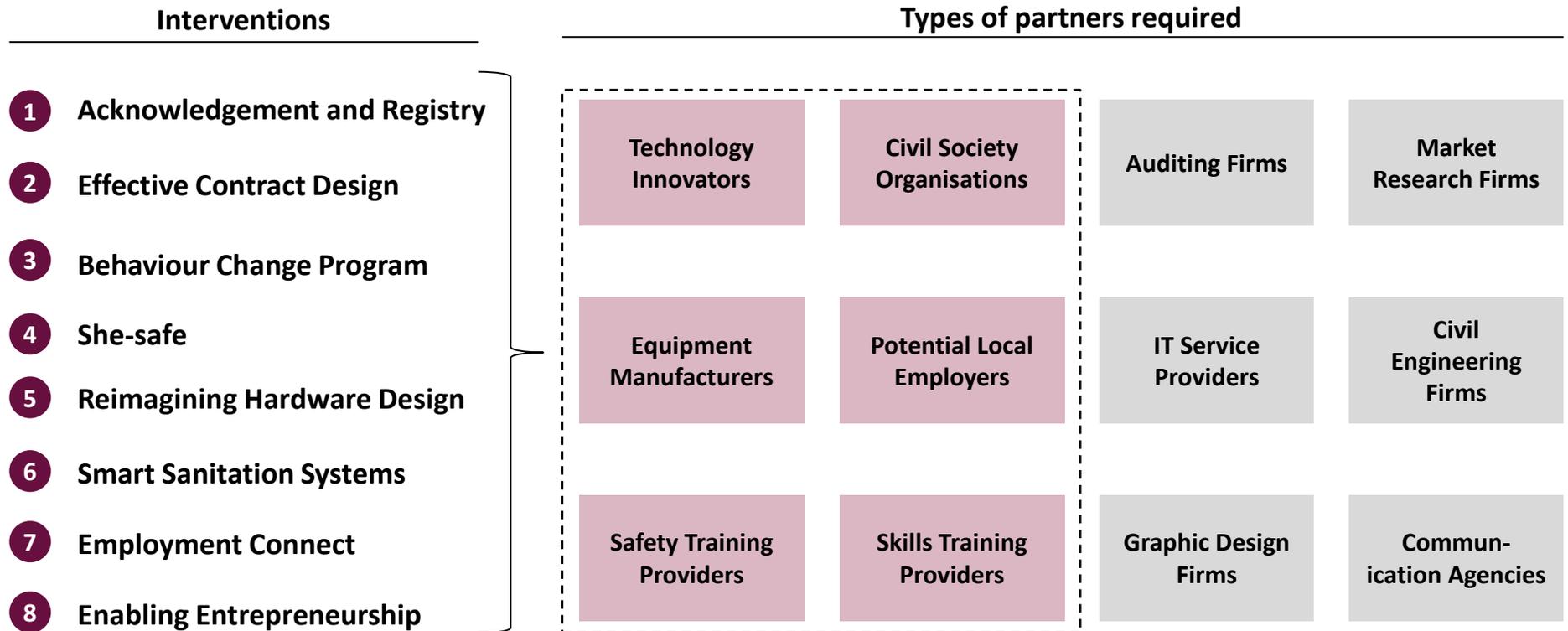
2. Monitoring & Evaluation

- Maintaining the Trichy database of workers
- Reporting to stakeholders
- Monitoring adherence to policies and norms

[Institutional structure] Various government departments will need to carry out different functions to implement the proposed programs

| Government Department ↓ | | Programs → | | | | | | | |
|----------------------------|-------------------------------|---------------------------------|---------------------------|---------------------------|----------|---------------------------------|--------------------------|---------------------------|--------------------|
| | | SW Registry and Acknowledgement | Effective Contract Design | Behaviour Change Programs | She-safe | Reimagining Sanitation Hardware | Smart Sanitation Systems | Enabling Entrepreneurship | Employment Connect |
| Sanitation | Engineering | | | | | ✓ | ✓ | | |
| | TCC Health | ✓ | ✓ | ✓ | ✓ | | | | |
| | Sanitation Worker Safety Cell | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ |
| Schools | District Education Office | ✓ | ✓ | ✓ | ✓ | | | | |
| Railways | Station Health Officer | ✓ | ✓ | ✓ | ✓ | | | | |

[Partnerships] To execute and monitor the programs, the city will need to partner with various service providers



Examples of potential partners in these categories are given on the next two pages

[Partnerships] There are some relevant organizations that the city can initiate conversations with (1/2)

Tech Innovators

CSOs

Equipment Manufacturers



Hindustan Aeronautics Ltd.

- Has partnered with the Hyderabad Metropolitan Water Supply and Sewerage Board to develop innovative safety gear for workers and innovative solutions to unblock sewers and drains
- Can partner with them to solve challenges specific to Trichy



Gramalaya

- Gramalaya is a well-established CSO in Trichy with access to communities of sanitation workers
- They can become an effective agent to collectivize workers for entrepreneurial schemes
- They would also be well-placed to carry out safety trainings and behaviour change efforts



Kam-Avida

- Kam-Avida is a leading cleaning equipment manufacturer in India
- Has strong R&D capabilities; manufactured the mini-jetting machine for Hyderabad
- Can make Trichy-specific machines
- Can also organize trainings for workers

Other potential partners:



IIT Delhi



Other potential partners:



Other potential partners:



[Partnerships] There are some relevant organizations that the city can initiate conversations with (2/2)



Potential Local Employers



Bharat Heavy Electricals Ltd.

- BHEL is one of the largest employers in Trichy and runs a High Pressure Boiler Plant in Trichy; employs ~10,000 people
- Through back-end commitments for training and placements, unskilled and semi-skilled jobs can be opened up for sanitation workers and their children in Trichy

Other potential partners:



The two largest IT companies in the Trichy SEZ



Safety Training Providers



Bremen Overseas Research and Development Association

- BORDA has led community level projects on disseminating information and practical assistance on better sanitation practices
- Can be used as partners to develop modules for long-term behaviour change pertaining to the use of safety gear and equipment among sanitation workers

Other potential partners:



Skills Training Providers



Tamil Nadu Skill Development Corporation

- TNSDC and NSDC have several local training partners in Trichy that impart specialized courses on agriculture, sewing machine operation and basic IT skills
- Additionally, NULM can be brought on board to create modules for sanitation workers to transition to other jobs and link with potential employers

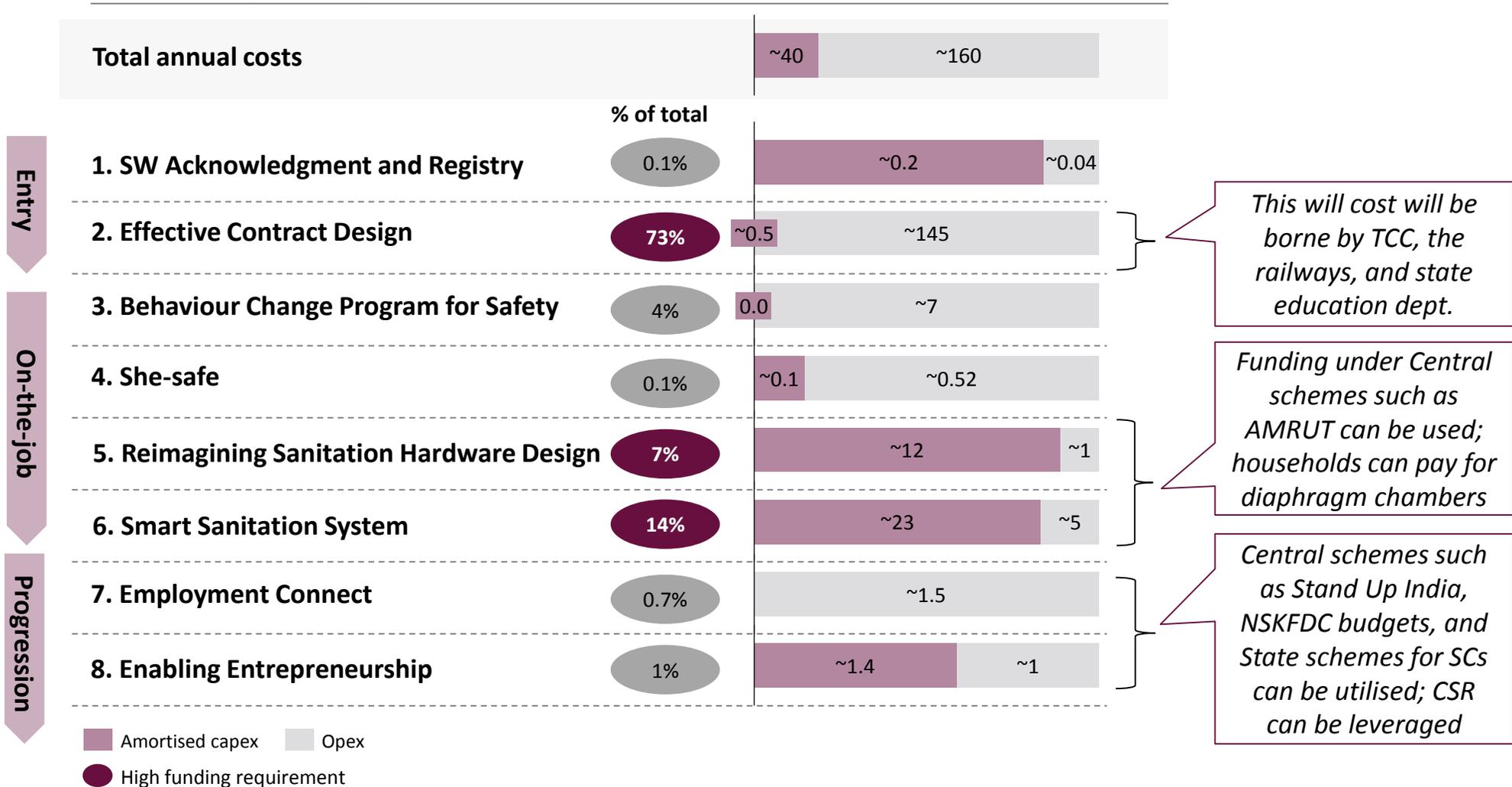
Other potential partners:



[Financing] As per our preliminary estimates, ~INR200 mn (~USD 3 million) is required annually for implementing the programs in Trichy

Preliminary estimates

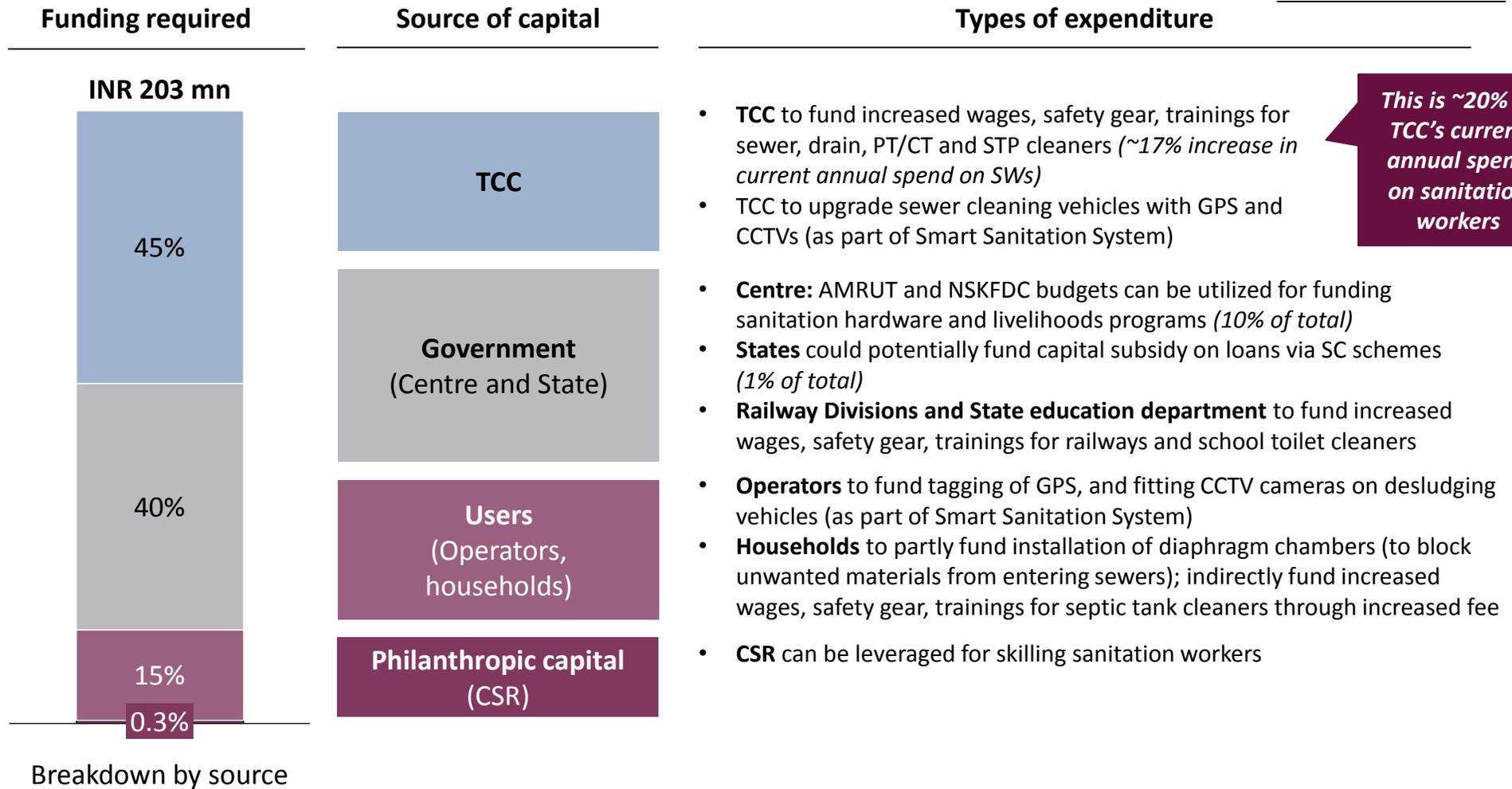
Annual costs (INR mn) (2017)



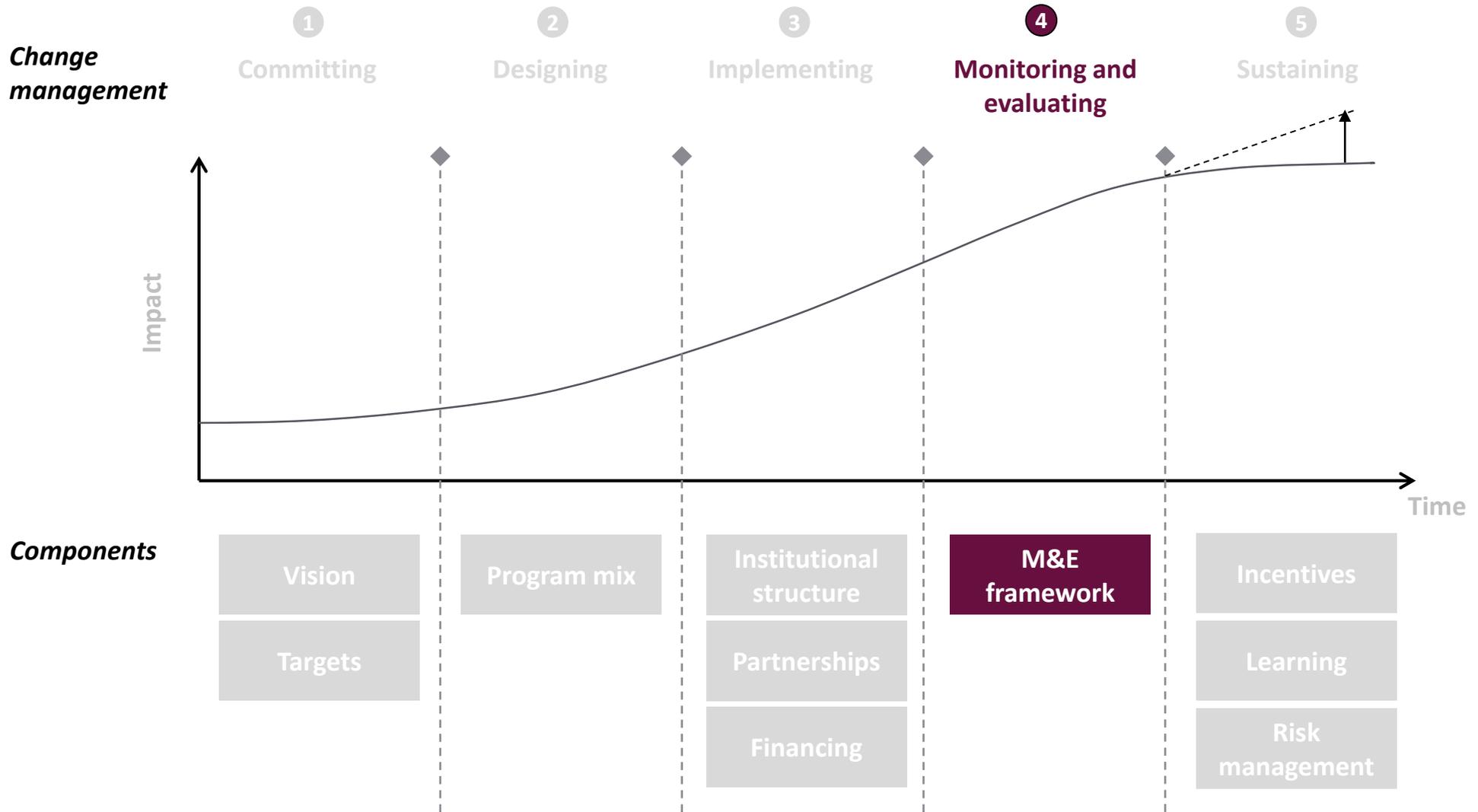
Note: Costs based on existing number of workers, infrastructure, does not account for change in number of workers, economies of scale and change in infrastructure; AMRUT funding not included for Reimagining Hardware since that amount has already been sanctioned; Source: Dalberg analysis

[Financing] TCC will need to spend an additional ~20% of its current spend on sanitation workers to implement the programs

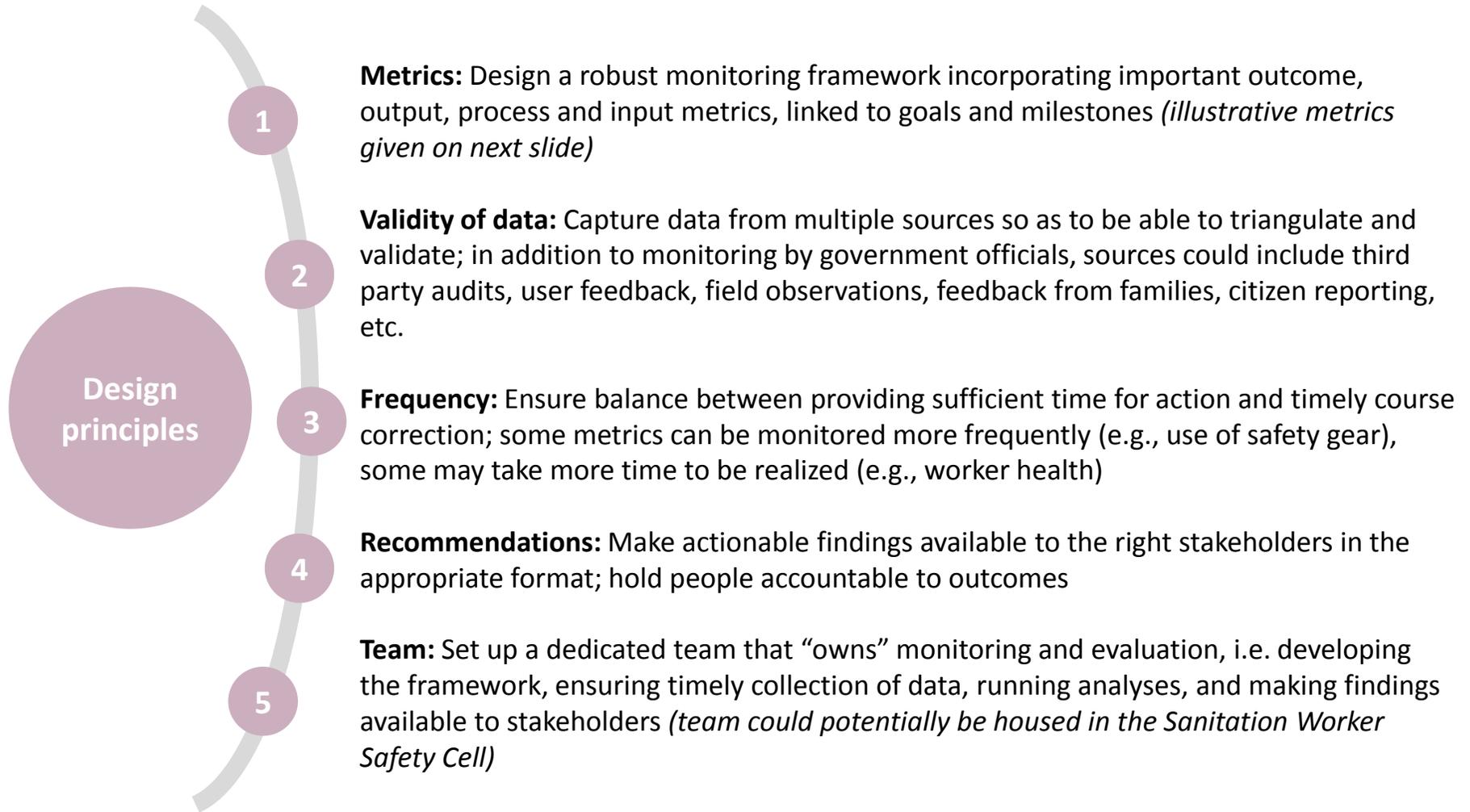
Preliminary estimates



4. Monitoring and evaluating change



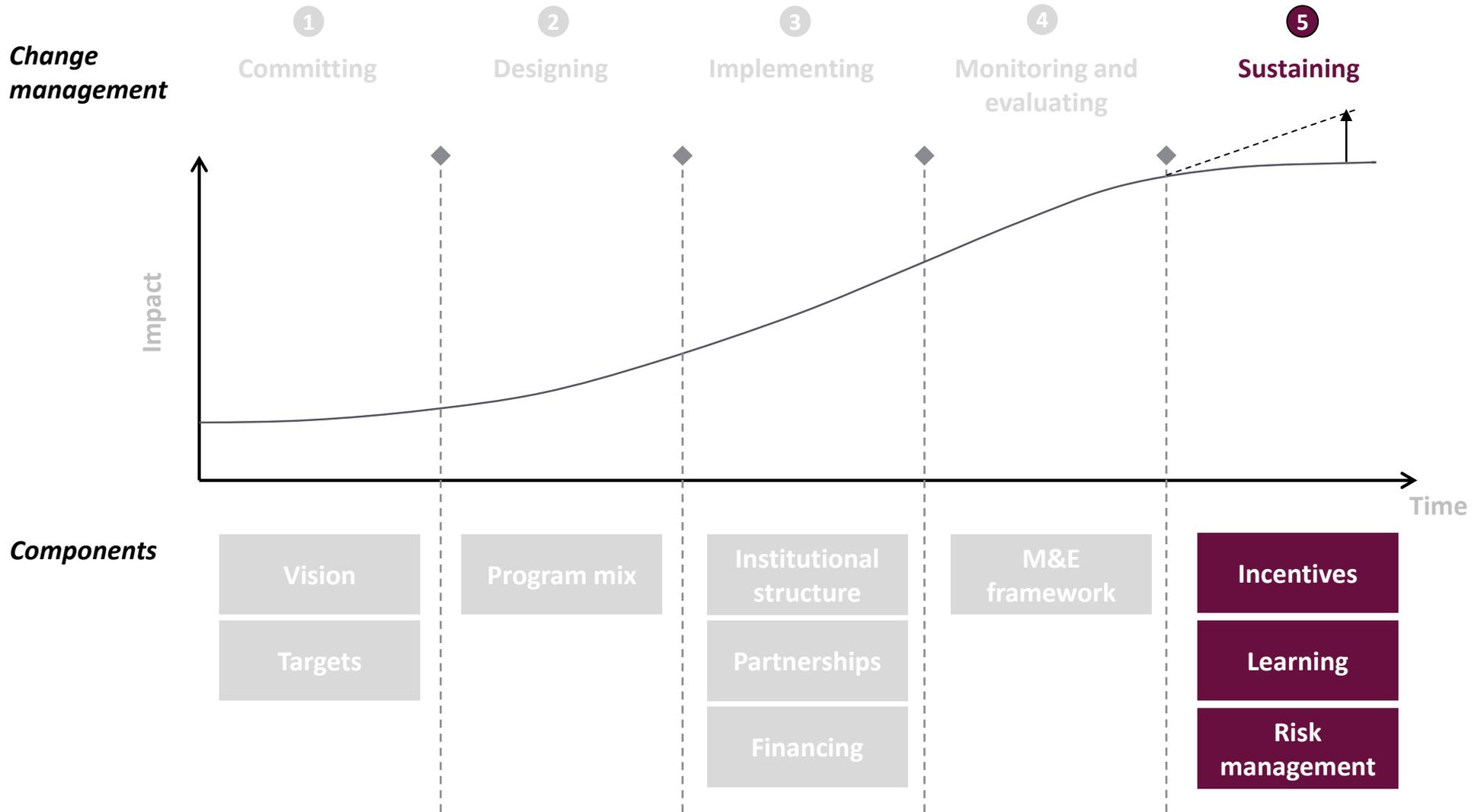
[M&E framework] The city should put in place a robust framework to monitor and evaluate program impact and efficiency on an ongoing basis



[M&E framework] Illustrative metrics and potential sources of data are given below

| | | <i>Illustrative</i> | | |
|--------------|--|---|--|--|
| | Impact | Effectiveness | Efficiency | Sustainability |
| | How has sanitation workers' lives improved? | Have operational targets for programs been achieved? | What is the operational and financial efficiency of meeting the targets? | Are there adequate systems and capacity to ensure program sustainability? |
| Parameters | <ul style="list-style-type: none"> - Health (e.g., reduction in frequency of illness, reduction in injuries, deaths) - Financial (e.g., increase in absolute pay, increase in benefits) - Social (e.g., satisfaction of workers) | <ul style="list-style-type: none"> - % cleaning jobs that have been mechanized - % workers with safety gear - % workers trained - Adherence to SOPs - No. of citizen complaints w.r.t. sewer blockages | <ul style="list-style-type: none"> - Time to achieve program targets V/s planned - Cost to achieve program targets V/s planned | <ul style="list-style-type: none"> - Adequacy of staffing - Viability of business models (if applicable) or availability of sustained funding - Degree of stakeholder buy-in - Institutionalization of processes |
| Data sources | <ul style="list-style-type: none"> • Government data • Third-party research and safety audits • Feedback from sanitation workers | <ul style="list-style-type: none"> • Sanitation Worker Safety Cell • Third-party audit • SW feedback | <ul style="list-style-type: none"> • Sanitation Worker Safety Cell • Third-party audit | <ul style="list-style-type: none"> • Third-party audit |

5. Sustaining change



[Incentives] Well-designed incentives can motivate stakeholders to act towards making sanitation safer, sooner

| Incentive | Description | Examples |
|---|---|--|
| 1 Empanelment of private operators | <ul style="list-style-type: none">Private operators and contractors can be rewarded with favourable terms and easier renewals for protecting worker safety and higher worker satisfaction |  <p>Worker Orientation Ceremony, GHMC¹</p> |
| 2 Incentives and recognition for workers, community leaders and CSOs | <ul style="list-style-type: none">Monetary incentives and awards for sanitation workers who adhere to SOPs and use gear and equipmentRecognition of community leaders and CSOs influencing positive behaviour change among workers | |
| 3 Incentives for government officials | <ul style="list-style-type: none">Awards / recognition for lower and mid-level officials for improving worker safetyEmbedding adherence to safety norms and worker in performance appraisals of officials |  <p>National Mining Safety Awards</p> |
| 4 Incentives for citizens | <ul style="list-style-type: none">Monetary incentives to citizens for reporting instances of workers cleaning without gear or equipment | |

(1): Greater Hyderabad Municipal Corporation

[Learning] Continuous learning should be embedded in the program

Key principles



Diagnosis of success drivers and challenges/ risks

- Analysis of data generated through the monitoring and evaluation framework (*see page 63*) to *diagnose what is working well and areas for improvement*
- Modify and re-design programs, as required, basis learning



Knowledge building

- Participation in conferences and seminars on the subject
- Learning tours to other cities, visits to organizations that are doing innovative and impactful work in the space
- Inviting experts from other sectors (e.g., mining, construction) to learn about best practices that can be applied in the sanitation worker context



Knowledge capture and dissemination

- Documentation of initiatives that are working well – along with their success enablers and design principles – to inform policy and program design, going forward
- Dissemination of key learnings to other cities, states, and nationally
- Dissemination of information to stakeholders – workers, contractors, households – via public reports
- Media coverage of initiatives

[Risk management] While there are some potential risks in the proposed city blueprint, there are ways in which they can be mitigated (1/2)

| Risk category | Risk | Potential mitigation strategies |
|--|---|--|
|  <p data-bbox="161 586 292 615">Political</p> | <p data-bbox="385 332 899 544">Lack of coordination between district-level bodies of different ministries (railways, schools) and TCC leading to limited or no implementation of initiatives</p> | <ul data-bbox="996 332 1912 544" style="list-style-type: none"> • ‘Sanitation Worker Safety Cell’ should be empowered to enforce guidelines and norms across different government departments within and outside TCC • Ensure representation from concerned city bodies in the proposed ‘Sanitation Worker Safety Cell’ |
| | <p data-bbox="385 642 824 719">Poor design and targeting of schemes and benefits</p> | <ul data-bbox="996 642 1929 853" style="list-style-type: none"> • Prototype and pilot interventions in Trichy zones before implementing at full-scale • Continuously iterate and refine based on user feedback and uptake from Trichy, send feedback to state and central departments |
|  <p data-bbox="161 1110 306 1139">Economic</p> | <p data-bbox="385 953 919 1031">Insufficient budgets to initiate and run programs</p> | <ul data-bbox="996 953 1949 1253" style="list-style-type: none"> • Hire a financial expert in TCC for budget forecasting; conduct viability funding gap analysis • Tap into multiple sources by setting up a platform inviting funding – multi-laterals, foundations, private sector and national schemes • Smartly structure programs to make them conducive for securing development and commercial capital |

[Risk management] While there are some potential risks in the proposed city blueprint, there are ways in which they can be mitigated (2/2)

| Risk category | Risk | Potential mitigation strategies |
|--|---|--|
|  <p>Technical</p> | <p>Difficult to upgrade legacy infrastructure or create new systems that are scalable across the city</p> | <ul style="list-style-type: none"> • Map the existing UGD network in Trichy and conduct rapid feasibility studies to identify sites that can be upgraded quickly or where new systems are required • Conduct pilots in hotspot zones (for instance, around the decanting stations) and iterate based on learning • Formulate partnerships with Indian and international tech experts, hardware experts, IT experts to draw on their technical expertise |
|  <p>Social</p> | <p>Inability or unwillingness to adjust on the part of contractors</p> | <ul style="list-style-type: none"> • Hold collaborative sessions with local contractors and private operators, particularly desludging operators and labor suppliers; identify willing contractors and get them on-board first • Provide monetary incentives to contractors for initial years |
| | <p>Resistance or reluctance to adopt certain programs by workers (e.g., ID system, safety programs, alternative livelihoods)</p> | <ul style="list-style-type: none"> • Conduct town halls and demonstration days in TCC with sanitation workers to make them comfortable with gear and SOPs • Sustained behaviour change programs with nudges, incentives and penalties to build and sustain safety culture • Provide workers with opportunities close to their home; provide capacity building support for assisted rehabilitation |

Table of contents

Our approach

Sanitation worker ecosystem in Trichy

Key insights

City blueprint for worker safety and livelihoods

High-level implementation plan

High-level implementation plan for the next 12 months



High-level implementation plan (1/2)

| | | MONTHS 1-3 | MONTHS 4-6 | MONTHS 7-12 |
|-------------------|-------------------------------------|--|---|--|
| Committing | Committing | <ul style="list-style-type: none"> Articulate vision, goals and targets; secure buy-in from stakeholders Establish task force for leading the change | | |
| | Acknowledgement and Registry | <ul style="list-style-type: none"> Contracts for third-party surveys Intimate contractors, operators, etc. that survey will be conducted | <ul style="list-style-type: none"> Conduct survey Develop back-end database | <ul style="list-style-type: none"> Issue Sanitation Worker IDs to all workers |
| Designing | Effective Contract Design | <ul style="list-style-type: none"> Customize and contextualize “model contracts” | | <ul style="list-style-type: none"> Optimise contracts for users experience |
| | Behaviour Change Program | <ul style="list-style-type: none"> Establish partnerships for designing and conducting worker safety training Set up town halls and demo days | <ul style="list-style-type: none"> Test training programs with select groups of workers Conduct trainings for supervisors | <ul style="list-style-type: none"> Refine based on feedback Design a nudges based program Roll out awareness campaign |
| | She-safe | <ul style="list-style-type: none"> Conduct FGD with women workers | <ul style="list-style-type: none"> Design and pilot initiatives | <ul style="list-style-type: none"> Refine based on feedback |
| | Reimagining Hardware Design | <ul style="list-style-type: none"> Source ideas and innovations for hardware design | <ul style="list-style-type: none"> Assemble a group of experts to conduct feasibility studies | <ul style="list-style-type: none"> Draw up budget and implementation plans |
| | Smart Sanitation Systems | <ul style="list-style-type: none"> Source ideas and innovations through expert partners and other contexts | <ul style="list-style-type: none"> Test innovations for applicability Build robust MIS | <ul style="list-style-type: none"> Draw budgets Plan roll out |
| | Employment Connect | <ul style="list-style-type: none"> Conduct design sessions to understand workers’ needs, requirements and aspirations | <ul style="list-style-type: none"> Establish back-end relationships with potential employers, align on workers’ needs | <ul style="list-style-type: none"> Set-up skilling programs |
| | Enabling Entrepreneurship | <ul style="list-style-type: none"> Conduct design sessions to understand workers’ needs, requirements and aspirations | <ul style="list-style-type: none"> Liaise with NSKFDC and other national agencies to secure financing | <ul style="list-style-type: none"> Organise local SHGs into collective manufacturing groups via CSOs |

High-level implementation plan (2/2)

| | | MONTHS 1-3 | MONTHS 4-6 | MONTHS 7-12 |
|--------------|--|--|---|--|
| Implementing | Institutional structure | <ul style="list-style-type: none"> Finalize role and responsibility, structure, and budgets of the proposed Sanitation Worker Safety Cell | <ul style="list-style-type: none"> Hire or appoint “Safety Officer” to lead the cell; staff the cell Acquaint Safety Officer with processes, guidelines, gaps, etc. Conducts meeting with other departments in ULBs, representative from railways, HRD | |
| | Partnerships | <ul style="list-style-type: none"> Identify partners required for various interventions | <ul style="list-style-type: none"> Contact existing players in Trichy and hold initial discussions Reach out to other potential partners to solicit interest Start signing MoUs with partners | |
| | Financing | <ul style="list-style-type: none"> Determine indicative funding required for initiatives planned in the first year; determine deficits, if any, that need to be bridged | <ul style="list-style-type: none"> Initiate discussions with financiers, multi-laterals, companies (CSR) Sign MoUs with financiers | |
| Monitoring | Monitoring and Evaluation | | <ul style="list-style-type: none"> Develop, test and align on a city-specific M&E framework Find a third-party agency for monitoring | <ul style="list-style-type: none"> Fully implement the M&E framework; start analysing data and taking corrective action |
| Sustaining | Incentives, learning, and risk management | | <ul style="list-style-type: none"> Assess potential risks for all programs Establish mitigation strategies and incentive structures | |