



Business Models **QUESTIONNAIRE**



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Module Description

This tool presents case studies on a range of business models implemented in different parts of the world across the FSM value chain, referenced from IWMI's Resource Recovery and Reuse Series 6 document. It also goes on to assist users evaluate the relevance of these different models to their context.

Note: This section should only be used as a pre-feasibility tool and not an end-to-end business solution tool. The main objective of this section is to function as a guiding tool for users who are interested to start a business in the FSM sector and already are familiar with the intricacies of the sector. This tool only showcases the possible business options which have been documented as part of IWMI's report - Business Models for Faecal Sludge Management - as part of the Resource Recovery and Reuse Series.

There is a total of 16 business models suggested in this tool. Each model has a set of mandatory and optional variables to which the user is expected to provide response as Yes / No. The tool evaluates the feasibility of implementation of the business models selected. While the presence of optional variables creates an enabling environment for the implementation of a business model, for the successful implementation of a business model, it is absolutely essential that the mandatory variables are present.

	Business Model 1: Public Toilet with Energy Recovery Model							
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol			
1	Is there any regulation (rules/guideli nes) for the construction of public toilets?	User Interface	Mandator y	By public toilets, it is implied that these are to be provided for the floating population /general public in places such as markets, train stations, tourist places, near office complexes, or other public areas	1. Kindly refer to relevant rules and guidelines for the construction of a public toilet. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the construction of a public toilet.			

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	Business Model 1: Public Toilet with Energy Recovery Model						
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol		
				where there are considerab le number of people passing by.			
	If yes, are the regulatory provisions enforced in the city?	User Interface	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced.		
	Is there an institution with mandate for provision of land, construction and maintenance of the public toilet?	User Interface	Mandator y		Conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.		
	If yes, is there budgetary allocation for the provision (land availability) of public toilets?	User Interface	Mandator y		Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads.		
2	Is there any regulation (guidelines/ru les) for improving	User Interface	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines.		
	the conditions (retrofitting/r edevelopme nt) of substandard toilet structures?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines.		
	If yes, are these regulatory provisions enforced in the city?	User Interface	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.		

	Business Model 1: Public Toilet with Energy Recovery Model							
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol			
	Is there an institution with mandate for improving sub-standard toilets?	User Interface	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.			
	If yes, is there a budgetary allocation or collection of fees for improving sub-standard toilets?	User Interface	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.			
3	Are there standards for inspecting the functionality of public toilets?	User Interface	Optional		Kindly refer to documents of the ministry and local government to check for prescribed standards. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards.			
	If yes, are these standards enforced in the city?	User Interface	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are enforced and followed in the city.			
	Is there an institution with mandate for inspection of public toilets?	User Interface	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and			

	Business Model 1: Public Toilet with Energy Recovery Model							
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol			
					responsibilities of relevant institutions.			
	If yes, is there resources (financial and human) for inspection of public toilets?	User Interface	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is			
					actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.			
4	Is there regulation for issuing penalties for not constructing proper public toilets?	User Interface	Optional		1. Kindly refer to documents published by the ministry and local government to check for norms specifying penalties for construction of improper public toilets. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify norms specifying penalties for construction of improper public toilets.			
	If yes, are these penalties enforced in the city?	User Interface	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the penalties are enforced and followed in the city.			
	Is there an institution with a mandate on enforcing the penalties	User Interface	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector			
					experts (government officials, engineers, NGO workers and activists, etc.) in the city to			

	Business Model 1: Public Toilet with Energy Recovery Model							
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol			
					understand the roles and responsibilities of relevant institutions.			
	If yes, is there enough resources (financial and human) to enforce this?	User Interface	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is			
					actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.			
5	Are there design standards for design, operation and maintenance of treatment facilities?	Treatmen t	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standards – which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for designing, operating and maintaining the treatment			
	If yes, are these standards followed and enforced in the city?	Treatmen t	Mandator y		plant. Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.			

	Business Model 1: Public Toilet with Energy Recovery Model							
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol			
	Is there an institution with mandate for monitoring design, operation and maintenance of treatment facilities?	Treatmen t	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.			
	If yes, are there resources (financial and human) for monitoring design, operation and maintenance of treatment facilities?	Treatmen t	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.			
6	Are there standards for effluent disposal?	Treatmen t	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of effluent 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of effluent into the environment.			
	Are these standards enforced in the city?	Treatmen t	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.			

	Business Model 1: Public Toilet with Energy Recovery Model							
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol			
	Is there an institution with the mandate for monitoring compliance to effluent disposal standards?	Treatmen t	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions			
	If yes, are there resources (financial and human) for monitoring compliance to effluent disposal standards?	Treatmen t	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.			
7	Are there standards for solids disposal?	Treatmen t	Mandator y	Here solids or bio- solids refer to dried faecal matter post treatment.	1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of solids 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of solids.			
	If yes, are these standards enforced in the city?	Treatmen t	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.			

	Business Model 1: Public Toilet with Energy Recovery Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	Is there an institution with mandate for monitoring compliance to solids disposal standards?	Treatmen t	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
	If yes, are there adequate resources (financial and human) for monitoring compliance to solid disposal standards?	Treatmen t	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
8	Are there regulatory provisions for legalizing reuse of treated end products	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the reuse of treated end products 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the reuse of treated end products.				
	If yes, are these provisions enforced in the city?	Reuse	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.				

	Business Model 1: Public Toilet with Energy Recovery Model							
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol			
	Is there an institution with mandate to legalese reuse of treated end products?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.			
	If yes, does the institution have enough technical capacity to conduct research on potential reuse options for treated faecal sludge?	Reuse	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.			
9	Are there standards prescribing the quality of reuse by-products for a particular use?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards prescribing the quality for faecal sludge reuse products. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the quality for faecal sludge reuse products.			
	If yes, are these standards enforced in the city?	Reuse	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.			
	Is there an institution with mandate to inspect the quality of byproducts	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector			

	Business Model 1: Public Toilet with Energy Recovery Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	generated for re-use?				experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions				
	If yes, are there enough resources (financial and human) to carry out regular/perio dic inspection?	Reuse	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				

	Business Model 2: Residential-Institutional Biogas Model									
SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol					
1	Are there design standards for design, operation and maintenance of treatment facilities?	Treatment	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it,					

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					may have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for designing, operating and maintaining the treatment plant.
	If yes, are these standards followed and enforced in the city?	Treatment	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with mandate for monitoring design, operation and maintenance of treatment facilities?	Treatment	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there resources (financial and human) for monitoring design, operation and maintenance of treatment facilities?	Treatment	Mandatory		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed

	Business Model 2: Residential-Institutional Biogas Model							
SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol			
					by the organogram to the existing staff structure.			
2	Are there standards for effluent disposal?	Treatment	Mandatory		Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of effluent Alternatively, conduct key			
					informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of effluent into the environment.			
	Are these standards enforced in the city?	Treatment	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.			
	Is there an institution with the mandate for monitoring compliance to	Treatment	Mandatory		Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions			
	standards?	disposal			2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions			
	If yes, are there resources (financial and human) for monitoring compliance to	Treatment	Mandatory		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads.			
	effluent disposal standards?				2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.			

3. With respect to understanding the institution's human resource

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
3	Are there standards for solids disposal?	Treatment	Mandatory	Here solids or bio-solids refer to dried faecal matter post treatment.	1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of solids 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of solids.
	If yes, are these standards enforced in the city?	Treatment	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with mandate for monitoring compliance to solids disposal standards?	Treatment	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there adequate resources (financial and human) for monitoring compliance to solid disposal standards?	Treatment	Mandatory		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol	
					3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.	
4	Are there regulatory provisions for legalizing reuse of treated end products	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the reuse of treated end products 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the reuse of treated end products.	
	If yes, are these provisions enforced in the city?	Reuse	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.	
	Is there an institution with mandate to legalese reuse of treated end products?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.	
	If yes, does the institution have enough technical capacity to conduct research on potential reuse options for	Reuse	Optional		Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. Also check the budget allocation for the previous years to understand how much is	

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
	treated faecal sludge?				allocated for the particular task and how much is actually spent.
5	Are there standards prescribing the quality of reuse by-products for a particular use?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards prescribing the quality for faecal sludge reuse products. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the quality for faecal sludge reuse products.
	If yes, are these standards enforced in the city?	Reuse	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with mandate to inspect the quality of byproducts generated for re-use?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions
	If yes, are there enough resources (financial and human) to carry out regular/periodic inspection?	Reuse	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource

	Business Model 2: Residential-Institutional Biogas Model									
SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol					
					availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.					

	Business Model 3: Private Emptying and Transportation Model							
SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol			
1	Are there standards for the construction of a particular type of On-Site Sanitation System (OSS)?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for standards specifying construction details of an on-site sanitation system. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company manufacturing prefabricated septic tanks will have their own specific standards – which may follow the government prescribed standards but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to			

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					identify standards specifying construction details of an on-site sanitation system.
	If yes, are these standards followed or enforced in the city?	Containment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are enforced and followed in the city.
	If no, is there an institution with mandate for inspecting containment unit?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions.
					2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
2	Are there regulations for improving improperly built On-Site Sanitation System (OSS)?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the construction of an onsite sanitation system.
					2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the construction of an onsite sanitation system.
	If yes, are these regulations enforced in the city?	Containment	Optional		Kindly conduct key informant interviews with sector experts (government officials,

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate for improving On-Site Sanitation System (OSS)?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there a budgetary allocation for improving (retrofitting/redevelopment) substandard On-Site Sanitation System (OSS)?	Containment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for this particular task and how much is actually spent.
3	Are there regulations (rules/guidelines) for issuing permits for On-Site Sanitation System (OSS) construction?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for issuing permits for the construction of an onsite sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for

SI. No.	Questions	Value Chain	Mandatory / Optional	Hints	Data Collection Protocol
					issuing permits for the construction of an onsite sanitation system.
	If yes, are these regulations enforced in the city?	Containment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate for issuing permits for On-Site Sanitation System (OSS) construction?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions.
					2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	Are there enough resources (financial and human) to verify and issue permits for On-Site Sanitation System (OSS) construction?	Containment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads.
					2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.
					3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					prescribed by the organogram to the existing staff structure.
4	Are there regulations (rules/guidelines) for desludging frequencies?	Collection and Conveyance	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for desludging of on-site sanitation systems 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for desludging of on-site sanitation systems.
	If yes, is the regulation enforced in the city?	Collection and Conveyance	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate towards enforcing the desludging frequency?	Collection and Conveyance	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there enough resources (financial and human) information) to enforce this?	Collection and Conveyance	Optional		1. Kindly check the relevant institution's financial budget and check for the budget

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
5	Is there a regulation for licensing of desludging operators and workers?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for licensing of desludging operators and workers. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for licensing of desludging operators and workers.
	If yes, is the regulation enforced in the city?	Collection and Conveyance	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
	Is there an institution with mandate for licensing desludging operators and workers?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes does it have the resources (financial and human) required for licensing desludging operators and enforcing it on ground?	Collection and Conveyance	Mandatory		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
6	Are there standard operating procedures (zone/time of operations, accidents, spills, proper disposal, record keeping, route planning) for desludging/transportation?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant standard operating procedures for desludging and transportation of faecal sludge. To be noted that standards may also be developed privately by companies or by the

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					industry sector. Wherever required, kindly also refer to sector specific standards (for e.g. a private desludging operator may have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standard operating procedures for desludging and transportation of faecal sludge.
	If yes, are these standards enforced in the city?	Collection and Conveyance	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed
	Is there an institution with mandate for monitoring of desludging operator's compliance to standard operating procedures?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
	If yes, is there enough resources (financial and human) for monitoring of desludging operator's compliance to standard operating procedures?	Collection and Conveyance	Mandatory		1. Kindly check the relevant institution's financial budget and check the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
7	Are there vehicle standards for determining the roadworthiness (whether the vehicle can access the roads in terms of elevation - steep climb, road width, etc.) of desludging vehicles?	Collection and Conveyance	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards determining the roadworthiness of desludging vehicles. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards determining the roadworthiness of desludging vehicles.
	If yes, are these standards followed in the city?	Collection and Conveyance	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					guidelines are enforced and followed.
	Is there an institution with mandate for monitoring whether the desludging vehicles meet the roadworthiness standards?	Collection and Conveyance	Optional		Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions Alternatively, conduct
					key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there resources (financial and human) for monitoring roadworthiness of desludging vehicles?	Collection and Conveyance	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads.
					2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.
					3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
8	Is there regulatory provision for setting the desludging tariff?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for setting the tariff for provision of

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					desludging service. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for setting the tariff for provision of desludging service.
	If yes, is the regulation enforced in the city?	Collection and Conveyance	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for setting the desludging tariff?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.

SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
1	Are there standards for the construction of a particular type of On-Site Sanitation System (OSS)?	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for standards specifying construction details of an on-site sanitation system. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company manufacturing pre-fabricated septic tanks will have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify standards specifying construction details of an on-site sanitation system.
	If yes, are these standards followed or enforced in the city?	Containme nt	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are enforced and followed in the city.
	If no, is there an institution with mandate for inspecting containment	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions.
	unit?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	Are there regulations for improving improperly built On-Site Sanitation	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the construction of an on-site sanitation system.
2	System (OSS)?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the construction of an on-site sanitation system.

SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
	If yes, are these regulations enforced in the city?	Containme nt	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate for improving On-Site Sanitation System (OSS)?	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there a budgetary allocation for improving (retrofitting/red evelopment) sub-standard On-Site Sanitation System (OSS)?	Containme nt	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for this particular task and how much is actually spent.
3	Are there regulations (rules/guidelines) for issuing permits for On-Site Sanitation System (OSS) construction?	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system.
	If yes, are these regulations enforced in the city?	Containme nt	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate for issuing permits for On-Site	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions.

SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
	Sanitation System (OSS) construction?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	Are there enough resources (financial and human) to verify and issue permits for On-	Containme nt	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how
	Site Sanitation System (OSS) construction?				much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Are there regulations (rules/guidelines) for desludging frequencies?	Collection and Conveyanc e	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for desludging of on-site sanitation systems
					2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for desludging of on-site sanitation systems.
4	If yes, is the regulation enforced in the city?	Collection and Conveyanc e	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate towards enforcing the	Collection and Conveyanc e	Optional		Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions
	desludging frequency?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city

SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
					to understand the roles and responsibilities of relevant institutions.
	If yes, are there enough resources (financial and	Collection and Conveyanc e	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads.
	human) information) to enforce this?				2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.
					3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Is there a regulation for licensing of desludging operators and workers?	Collection and Conveyanc e	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for licensing of desludging operators and workers.
	WOIKGIS:				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for licensing of desludging operators and workers.
5	If yes, is the regulation enforced in the city?	Collection and Conveyanc e	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for licensing desludging	Collection and Conveyanc e	Mandator Y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions.
	operators and workers?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.

SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
	If yes does it have the resources (financial and human)	Collection and Conveyanc e	Mandator Y		Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads.
	required for licensing desludging operators and enforcing it on				2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.
	ground?				3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
6	Are there standard operating procedures (zone/time of operations, accidents, spills, proper disposal, record keeping, route planning) for desludging/tran sportation?	Collection and Conveyanc e	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standard operating procedures for desludging and transportation of faecal sludge. To be noted that standards may also be developed privately by companies or by the industry sector. Wherever required, kindly also refer to sector specific standards (for e.g. a private desludging operator may have their own specific standards – which may follow the government prescribed standards,but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standard operating procedures for desludging and transportation of faecal sludge.
	If yes, are these standards enforced in the city?	Collection and Conveyanc e	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed
	Is there an institution with mandate for monitoring of desludging operator's compliance to	Collection and Conveyanc e	Mandator y		Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. Alternatively, conduct key informant interviews with sector experts

SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
	standard operating procedures?				(government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there enough resources (financial and human) for	Collection and Conveyanc e	Mandator y		Kindly check the relevant institution's financial budget and check the budget allocated under the relevant budget heads.
	monitoring of desludging operator's compliance to standard				2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.
	operating procedures?				3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Are there vehicle standards for determining the roadworthiness (whether the	Collection and Conveyanc e	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards determining the roadworthiness of desludging vehicles.
	vehicle can access the roads in terms of elevation - steep climb, road width, etc.) of desludging vehicles?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards determining the roadworthiness of desludging vehicles.
7	If yes, are these standards followed in the city?	Collection and Conveyanc e	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for monitoring whether the	Collection and Conveyanc e	Optional		Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions
	whether the desludging vehicles meet the roadworthiness standards?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city

SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
					to understand the roles and responsibilities of relevant institutions.
	If yes, is there resources (financial and human) for monitoring	Collection and Conveyanc e	Optional		Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads.
	roadworthiness of desludging vehicles?				2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.
					3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Is there regulatory provision for setting the desludging tariff?	Collection and Conveyanc e	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for setting the tariff for provision of desludging service.
					2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for setting the tariff for provision of desludging service.
8	If yes, is the regulation enforced in the city?	Collection and Conveyanc e	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for setting the desludging	Collection and Conveyanc e	Mandator Y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions
	tariff?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.

SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
9	Is there an institution with mandate for FSM related coordination between institutions/stak eholders?	Other Institutional Variables	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions which works towards strengthening the coordination between various stakeholders involved in the FSM ecosystem. Please note that such institutions can also be NGOs which works towards enhancing coordination between stakeholders. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of the relevant institutions.
	If yes, are there enough resources (financial and human) for FSM related coordination between institutions/stak eholders?	Other Institutional Variables	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.

Business Model 5: Non-Profit (Desludging) Model								
SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol			
1	Are there standards for the	Contain ment	Optional		Kindly refer to documents published by the ministry and local government to check for standards specifying construction details of an			

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	constructi on of a particular type of On-Site Sanitation System (OSS)?				on-site sanitation system. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company manufacturing pre-fabricated septic tanks will have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify standards specifying construction details of an on-site sanitation system.
	If yes, are these standards followed or enforced in the city?	Contain ment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are enforced and followed in the city.
	If no, is there an institution with mandate for inspecting containm ent unit?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
2	Are there regulation s for improving improperl y built On-Site Sanitation System (OSS)?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the construction of an on-site sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the construction of an on-site sanitation system.

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	If yes, are these regulation s enforced in the city?	Contain ment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate for improving On-Site Sanitation System (OSS)?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there a budgetary allocation for improving (retrofittin g/redevel opment) sub-standard On-Site Sanitation System (OSS)?	Contain ment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for this particular task and how much is actually spent.
3	Are there regulation s (rules/gui delines) for issuing permits for On-Site Sanitation System (OSS) constructi on?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for issuing permits for the construction of an onsite sanitation system.

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	If yes, are these regulation s enforced in the city?	Contain ment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate for issuing permits for On-Site Sanitation System (OSS) construction?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	Are there enough resources (financial and human) to verify and issue permits for On-Site Sanitation System (OSS) constructi on?	Contain ment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
4	Are there regulation s (rules/gui delines) for desludgin g frequenci es?	Collecti on and Convey ance	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for desludging of on-site sanitation systems 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for desludging of on-site sanitation systems.

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	If yes, is the regulation enforced in the city?	Collecti on and Convey ance	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate towards enforcing the desludgin g frequency ?	Collecti on and Convey ance	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there enough resources (financial and human) informatio n) to enforce this?	Collecti on and Convey ance	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
5	Is there a regulation for licensing of desludgin g operators and workers?	Collecti on and Convey ance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for licensing of desludging operators and workers. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for licensing of desludging operators and workers.
	If yes, is the regulation	Collecti on and	Mandator Y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	enforced in the city?	Convey ance			to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for licensing desludgin g operators and workers?	Collecti on and Convey ance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes does it have the resources (financial and human) required for licensing desludgin g operators and enforcing it on ground?	Collecti on and Convey ance	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
6	Are there standard operating procedure s (zone/tim e of operation s, accidents, spills, proper disposal, record keeping,	Collecti on and Convey ance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standard operating procedures for desludging and transportation of faecal sludge. To be noted that standards may also be developed privately by companies or by the industry sector. Wherever required, kindly also refer to sector specific standards (for e.g. a private desludging operator may have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government).

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	route planning) for desludgin g/transpor tation?				officials, engineers, NGO workers and activists, etc.) to identify relevant standard operating procedures for desludging and transportation of faecal sludge.
	If yes, are these standards enforced in the city?	Collecti on and Convey ance	Mandator Y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed
	Is there an institution with mandate for monitorin g of desludgin g operator's complian ce to standard operating procedure s?	Collecti on and Convey ance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there enough resources (financial and human) for monitorin g of desludgin g operator's complian ce to standard operating	Collecti on and Convey ance	Mandator y		1. Kindly check the relevant institution's financial budget and check the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.

Business Model 5: Non-Profit (Desludging) Model Mandato Hints **Data Collection Protocol** SI. Value **Questions** ry/ No. Chain Optional procedure s? Are there Collecti Optional 1. Kindly refer to documents published by the vehicle on and ministry and local government to check for standards Convey relevant standards determining the for ance roadworthiness of desludging vehicles. determini 2. Alternatively, conduct key informant ng the roadworth interviews with sector experts (government officials, engineers, NGO workers and activists, iness (whether etc.) to identify relevant standards determining the the roadworthiness of desludging vehicles. vehicle can access the roads in terms of elevation - steep climb, road width, etc.) of 7 desludgin vehicles? Optional If yes, are Collecti Kindly conduct key informant interviews with sector experts (government officials, engineers, these on and NGO workers and activists, etc.) within the city standards Convey followed ance to identify whether the rules and guidelines are in the city? enforced and followed. Is there an Collecti Optional 1. Kindly refer to documents published by the institution ministry and local government to check for on and with roles and responsibilities of relevant institutions Convey mandate ance 2. Alternatively, conduct key informant for interviews with sector experts (government monitorin officials, engineers, NGO workers and activists, g whether the etc.) in the city to understand the roles and desludgin responsibilities of relevant institutions. g vehicles

meet the roadworth

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	iness standards ?				
	If yes, is there resources (financial and human) for monitorin g roadworth iness of desludgin g vehicles?	Collecti on and Convey ance	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Is there regulatory provision for setting the desludgin g tariff?	Collecti on and Convey ance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for setting the tariff for provision of desludging service. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for setting the tariff for provision of desludging service.
8	If yes, is the regulation enforced in the city?	Collecti on and Convey ance	Mandator Y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for setting the desludgin g tariff?	Collecti on and Convey ance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.

	Business Model 6: Transfer Station Model										
SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol						
1	Are there standards for the constructio n of a particular type of On-Site Sanitation System (OSS)?	Containme	Optional		1. Kindly refer to documents published by the ministry and local government to check for standards specifying construction details of an on-site sanitation system. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company manufacturing pre-fabricated septic tanks will have their own specific standards - which may follow the government prescribed standards but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify standards specifying construction details of an on-site sanitation system.						
	If yes, are these standards followed or enforced in the city?	Containme nt	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are enforced and followed in the city.						
	If no, is there an institution with mandate for inspecting containmen t unit?	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.						

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
	Are there regulations for improving improperly built On-Site Sanitation System (OSS)?	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the construction of an on-site sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the construction of an on-site sanitation system.
	If yes, are these regulations enforced in the city?	Containme nt	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
2	Is there an institution with mandate for improving On-Site Sanitation System (OSS)?	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there a budgetary allocation for improving (retrofitting/ redevelopm ent) sub- standard On-Site Sanitation System (OSS)?	Containme nt	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for this particular task and how much is actually spent.

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
	Are there regulations (rules/guide lines) for issuing permits for On-Site Sanitation System (OSS) constructio n?	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system.
	If yes, are these regulations enforced in the city?	Containme nt	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
3	Is there an institution with mandate for issuing permits for On-Site Sanitation System (OSS) construction?	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	Are there enough resources (financial and human) to verify and issue permits for On-Site Sanitation System (OSS)	Containme nt	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze

SI.	Questions	Value Chain	Mandatory / Optional	Hints	Data Collection Protocol
	constructio n?		, optional		the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Are there regulations (rules/guide lines) for desludging frequencies ?	Collection and Conveyanc e	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for desludging of on-site sanitation systems 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for desludging of on-site sanitation systems.
	If yes, is the regulation enforced in the city?	Collection and Conveyanc e	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
4	Is there an institution with mandate towards enforcing the desludging frequency?	Collection and Conveyanc e	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there enough resources (financial and human) information) to enforce this?	Collection and Conveyanc e	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Is there a regulation for licensing of desludging operators and workers?	Collection and Conveyanc e	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for licensing of desludging operators and workers. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for licensing of desludging operators and workers.
	If yes, is the regulation enforced in the city?	Collection and Conveyanc e	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
5	Is there an institution with mandate for licensing desludging operators and workers?	Collection and Conveyanc e	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes does it have the resources (financial and human) required for licensing desludging operators and	Collection and Conveyanc e	Mandatory		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
	enforcing it on ground?				institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
6	Are there standard operating procedures (zone/time of operations, accidents, spills, proper disposal, record keeping, route planning) for desludging/transportati on?	Collection and Conveyanc e	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant standard operating procedures for desludging and transportation of faecal sludge. To be noted that standards may also be developed privately by companies or by the industry sector. Wherever required, kindly also refer to sector specific standards (for e.g. a private desludging operator may have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standard operating procedures for desludging and transportation of faecal sludge.
	If yes, are these standards enforced in the city?	Collection and Conveyanc e	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed
	Is there an institution with mandate for monitoring of desludging operator's compliance	Collection and Conveyanc e	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
	to standard operating procedures ?				understand the roles and responsibilities of relevant institutions.
	If yes, is there enough resources (financial and human) for monitoring of desludging operator's compliance to standard operating procedures ?	Collection and Conveyanc e	Mandatory		1. Kindly check the relevant institution's financial budget and check the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
7	Are there vehicle standards for determining the roadworthin ess (whether the vehicle can access the roads in terms of elevation - steep climb, road width, etc.) of desludging vehicles?	Collection and Conveyanc e	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards determining the roadworthiness of desludging vehicles. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards determining the roadworthiness of desludging vehicles.
	If yes, are these standards followed in the city?	Collection and Conveyanc e	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					the rules and guidelines are enforced and followed.
	Is there an institution with mandate for monitoring whether the desludging vehicles meet the roadworthin ess standards?	Collection and Conveyanc e	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there resources (financial and human) for monitoring roadworthin ess of desludging vehicles?	Collection and Conveyanc e	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
8	Is there regulatory provision for setting the desludging tariff?	Collection and Conveyanc e	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for setting the tariff for provision of desludging service. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for setting the tariff for provision of desludging service.

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
	If yes, is the regulation enforced in the city?	Collection and Conveyanc e	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for setting the desludging tariff?	Collection and Conveyanc e	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
9	Is there an institution with mandate for FSM related coordinatio n between institutions/ stakeholder s?	Other Institutional Variables	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions which works towards strengthening the coordination between various stakeholders involved in the FSM ecosystem. Please note that such institutions can also be NGOs which works towards enhancing coordination between stakeholders. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of the relevant institutions.
	If yes, are there enough resources (financial and human) for FSM related coordinatio n between institutions/	Other Institutional Variables	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.

	Business Model 6: Transfer Station Model								
SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol				
	stakeholder s?								

	Business Model 8: Emptying and Transportation Licensing Model							
SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol			
1	Are there standards for the constructio n of a particular type of On-Site Sanitation System (OSS)?	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for standards specifying construction details of an on-site sanitation system. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company manufacturing prefabricated septic tanks will have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify standards specifying construction details of an on-site sanitation system.			
	If yes, are these standards followed or	Containme nt	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the			

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	enforced in the city?				standards are enforced and followed in the city.
	If no, is there an institution with mandate for	Containme nt	Optional		Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. Alternatively, conduct key informant
	inspecting containmen t unit?				interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	Are there regulations for improving improperly built On-Site Sanitation System (OSS)?	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the construction of an on-site sanitation system.
					2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the construction of an on-site sanitation system.
2	If yes, are these regulations enforced in the city?	Containme nt	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate for	Containme nt	Optional		Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions.
	improving On-Site Sanitation System (OSS)?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	If yes, is there a budgetary allocation for improving (retrofitting/redevelopm ent) substandard On-Site Sanitation System (OSS)?	Containme nt	Optional		 Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. Also check the budget allocation for the previous years to understand how much is allocated for this particular task and how much is actually spent.
	Are there regulations (rules/guide lines) for issuing permits for On-Site Sanitation System (OSS) constructio n?	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system.
3	If yes, are these regulations enforced in the city?	Containme nt	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate for issuing permits for On-Site Sanitation System (OSS) construction?	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	Are there enough resources (financial and human) to verify and issue permits for On-Site Sanitation System (OSS) constructio n?	Containme nt	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Are there regulations (rules/guide lines) for desludging frequencies?	Collection and Conveyanc e	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for desludging of on-site sanitation systems 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for desludging of on-site sanitation systems.
4	If yes, is the regulation enforced in the city?	Collection and Conveyanc e	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate towards enforcing the desludging frequency?	Collection and Conveyanc e	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	If yes, are there enough resources (financial and human) information) to enforce this?	Collection and Conveyanc e	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Is there a regulation for licensing of desludging operators and workers?	Collection and Conveyanc e	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for licensing of desludging operators and workers. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for licensing of desludging operators and workers.
5	If yes, is the regulation enforced in the city?	Collection and Conveyanc e	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for licensing desludging operators and workers?	Collection and Conveyanc e	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	If yes does it have the resources (financial and human) required for licensing desludging operators and enforcing it on ground?	Collection and Conveyanc e	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
6	Are there standard operating procedures (zone/time of operations, accidents, spills, proper disposal, record keeping, route planning) for desludging/transportati on?	Collection and Conveyanc e	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standard operating procedures for desludging and transportation of faecal sludge. To be noted that standards may also be developed privately by companies or by the industry sector. Wherever required, kindly also refer to sector specific standards (for e.g. a private desludging operator may have their own specific standards – which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standard operating procedures for desludging and transportation of faecal sludge.
	If yes, are these standards enforced in the city?	Collection and Conveyanc e	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	Is there an institution with mandate for monitoring of desludging operator's compliance to standard operating procedures ?	Collection and Conveyanc e	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there enough resources (financial and human) for monitoring of desludging operator's compliance to standard operating procedures ?	Collection and Conveyanc e	Mandator y		1. Kindly check the relevant institution's financial budget and check the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
7	Are there vehicle standards for determining the roadworthin ess (whether the vehicle can access the roads in terms of elevation - steep climb,	Collection and Conveyanc e	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards determining the roadworthiness of desludging vehicles. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards determining the roadworthiness of desludging vehicles.

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	road width, etc.) of desludging vehicles?				
	If yes, are these standards followed in the city?	Collection and Conveyanc e	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for monitoring whether the desludging vehicles meet the roadworthin ess standards?	Collection and Conveyanc e	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there resources (financial and human) for monitoring roadworthin ess of desludging vehicles?	Collection and Conveyanc e	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
8	Is there regulatory provision for setting the	Collection and Conveyanc e	Mandator y		Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for setting the tariff for provision of

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	desludging tariff?				desludging service. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for setting the tariff for provision of desludging service.
	If yes, is the regulation enforced in the city?	Collection and Conveyanc e	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for setting the desludging tariff?	Collection and Conveyanc e	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
9	Are there design standards for design, operation and maintenanc e of treatment facilities?	Treatment	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for designing,

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol	
					operating and maintaining the treatment plant.	
	If yes, are these standards followed and enforced in the city?	Treatment	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.	
	Is there an institution with mandate for monitoring design, operation and maintenance of treatment facilities?	Treatment	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.	
	If yes, are there resources (financial and human) for monitoring design, operation and maintenanc e of treatment facilities?	Treatment	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.	
10	Are there standards for effluent disposal?	Treatment	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of effluent 2. Alternatively, conduct key informant interviews with sector experts	

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
					(government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of effluent into the environment.
	Are these standards enforced in the city?	andards y forced in			Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with the mandate for monitoring compliance to effluent disposal standards?	Treatment	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions
	If yes, are there resources (financial and human) for monitoring compliance to effluent disposal standards?	Treatment	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
11	Are there standards for solids disposal?	Treatment	Mandator y	Here solid s or bio-solid s refer to dried faec	1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of solids 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of solids.

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
				al matt er post treat ment	
	If yes, are these standards enforced in the city?	Treatment	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with mandate for monitoring compliance to solids disposal standards?	Treatment	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there adequate resources (financial and human) for monitoring compliance to solid disposal standards?	Treatment	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
12	Are there standard operating procedures for the treatment plant?	Treatment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
					sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standard operating procedure - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for designing, operating and maintaining the treatment plant.
	If yes, are these procedures enforced and followed in the city?	Treatment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the procedures are enforced and followed.
	Is there an institution with mandate to monitor the treatment plant's compliance to standard operating procedures ?	Treatment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there adequate resources (financial and human) for regular inspection of	Treatment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol	
	treatment operations and compliance to standard operating procedures ?				for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.	
	Are there regulatory provisions for legalizing reuse of treated end products	1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the reuse of treated end products 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the reuse of treated end products.				
	If yes, are these provisions enforced in the city?	Reuse	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.	
13	Is there an institution with mandate to legalese reuse of treated end products?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.	
	If yes, does the institution have enough technical capacity to conduct research on potential reuse	Reuse	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.	

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	options for treated faecal sludge?				
	Are there standards prescribing the quality of reuse byproducts for a particular use?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards prescribing the quality for faecal sludge reuse products. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the quality for faecal sludge reuse products.
	If yes, are these standards enforced in the city?	Reuse	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
14	Is there an institution with mandate to inspect the quality of by-products generated for re-use?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions
	If yes, are there enough resources (financial and human) to carry out regular/peri odic inspection?	Reuse	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol	
					prescribed by the organogram to the existing staff structure.	
15	Is there an institution with mandate for FSM related coordination between institutions/stakeholders?	Other Institutional Variables	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions which works toward strengthening the coordination between various stakeholders involved in the FSM ecosystem. Please note that such institutions can also be NGOs which world towards enhancing coordination between stakeholders. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of the relevant institutions.	
	If yes, are there enough resources (financial and human) for FSM related coordination between institutions/stakeholders?	Other Institutional Variables	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.	

Business Model 9: Call Centre Model (Desludging)

SI. No.	Questions	Value Chain	Mandatory / Optional	Hints	Data Collection Protocol
1	Are there standards for the construction of a particular type of On-Site Sanitation System (OSS)?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for standards specifying construction details of an onsite sanitation system. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company manufacturing pre-fabricated septic tanks will have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to

Business Model 9: Call Centre Model (Desludging)

SI. No.	Questions	Value Chain	Mandatory / Optional	Hints	Data Collection Protocol
					identify standards specifying construction details of an on- site sanitation system.
	If yes, are these standards followed or enforced in the city?	Containment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are enforced and followed in the city.
	If no, is there an institution with mandate for inspecting containment unit?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of

Business Model 9: Call Centre Model (Desludging)

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					relevant institutions.
2	Are there regulations for improving improperly built On-Site Sanitation System (OSS)?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the construction of an on-site sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the construction of an on-site sanitation system.
	If yes, are these regulations enforced in the city?	Containment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
	Is there an institution with mandate for improving On-Site Sanitation System (OSS)?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there a budgetary allocation for improving (retrofitting/redevelopment) sub-standard On-Site Sanitation System (OSS)?	Containment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for this particular task and how much is actually spent.

SI. No.	Questions	Value Chain	Mandatory / Optional	Hints	Data Collection Protocol
3	Are there regulations (rules/guidelines) for issuing permits for On-Site Sanitation System (OSS) construction?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system.
	If yes, are these regulations enforced in the city?	Containment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate for issuing permits	Containment	Optional		1. Kindly refer to documents published by the

SI. No.	Questions	Value Chain	Mandatory / Optional	Hints	Data Collection Protocol
	for On-Site Sanitation System (OSS) construction?				ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	Are there enough resources (financial and human) to verify and issue permits for On-Site Sanitation System (OSS) construction?	Containment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
4	Are there regulations (rules/guidelines) for desludging frequencies?	Collection and Conveyance	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for desludging of onsite sanitation systems 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for desludging of onsite sanitation systems.
	If yes, is the regulation enforced in the city?	Collection and Conveyance	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate towards enforcing the desludging frequency?	Collection and Conveyance	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there enough resources (financial and human) information) to enforce this?	Collection and Conveyance	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution.
					Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
5	Is there a regulation for licensing of desludging operators and workers?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for licensing of desludging operators and workers.
					2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					rules and guidelines for licensing of desludging operators and workers.
	If yes, is the regulation enforced in the city?	Collection and Conveyance	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for licensing desludging operators and workers?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					relevant institutions.
	If yes does it have the resources (financial and human) required for licensing desludging operators and enforcing it on ground?	Collection and Conveyance	Mandatory		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
6	Are there standard operating procedures (zone/time of operations, accidents, spills, proper disposal, record keeping, route planning) for desludging/transportation?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant standard operating

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					procedures for desludging and transportation of faecal sludge. To be noted that standards may also be developed privately by companies or by the industry sector. Wherever required, kindly also refer to sector specific standards (for e.g. a private desludging operator may have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standard operating procedures for desludging and transportation of faecal sludge.
	If yes, are these standards enforced in the city?	Collection and Conveyance	Mandatory		Kindly conduct key informant interviews with

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed
	Is there an institution with mandate for monitoring of desludging operator's compliance to standard operating procedures?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there enough resources (financial and human) for monitoring of desludging operator's compliance to standard operating procedures?	Collection and Conveyance	Mandatory		1. Kindly check the relevant institution's financial budget and check the budget allocated under the relevant budget heads.

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
7	Are there vehicle standards for determining the roadworthiness (whether the vehicle can access the roads in terms of elevation - steep climb, road width, etc.) of desludging vehicles?	Collection and Conveyance	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards determining the roadworthiness of desludging vehicles. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					workers and activists, etc.) to identify relevant standards determining the roadworthiness of desludging vehicles.
	If yes, are these standards followed in the city?	Collection and Conveyance	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for monitoring whether the desludging vehicles meet the roadworthiness standards?	Collection and Conveyance	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					responsibilities of relevant institutions.
	If yes, is there resources (financial and human) for monitoring roadworthiness of desludging vehicles?	Collection and Conveyance	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's
					human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
8	Is there regulatory provision for setting the desludging tariff?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					guidelines for setting the tariff for provision of desludging service. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for setting the tariff for provision of desludging service.
	If yes, is the regulation enforced in the city?	Collection and Conveyance	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for setting the desludging tariff?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
9	Are there design standards for design, operation and maintenance of treatment facilities?	Treatment	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standards - which may follow the

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for designing, operating and maintaining the treatment plant.
	If yes, are these standards followed and enforced in the city?	Treatment	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with mandate for monitoring design, operation and maintenance of treatment facilities?	Treatment	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there resources (financial and human) for monitoring design, operation and maintenance of treatment facilities?	Treatment	Mandatory		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
10	Are there standards for effluent disposal?	Treatment	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of effluent 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of effluent into the environment.
	Are these standards enforced in the city?	Treatment	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with the mandate for monitoring compliance to effluent disposal standards?	Treatment	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions
	If yes, are there resources (financial and human) for monitoring compliance to effluent disposal standards?	Treatment	Mandatory		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					the organogram to the existing staff structure.
11	Are there standards for solids disposal?	Treatment	Mandatory	Here solids or bio-solids refer to dried faecal matter post treatment.	1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of solids 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of solids.
	If yes, are these standards enforced in the city?	Treatment	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with mandate for monitoring compliance to solids disposal standards?	Treatment	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there adequate resources (financial and human) for monitoring compliance to solid disposal standards?	Treatment	Mandatory		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					number of staffs as prescribed by the organogram to the existing staff structure.
12	Are there standard operating procedures for the treatment plant?	Treatment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standard operating procedure - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					(government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for designing, operating and maintaining the treatment plant.
	If yes, are these procedures enforced and followed in the city?	Treatment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the procedures are enforced and followed.
	Is there an institution with mandate to monitor the treatment plant's compliance to standard operating procedures?	Treatment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					roles and responsibilities of relevant institutions.
	If yes, are there adequate resources (financial and human) for regular inspection of treatment operations and compliance to standard operating procedures?	Treatment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
13	Are there regulatory provisions for legalizing reuse of treated end products	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					reuse of treated end products 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the reuse of treated end products.
	If yes, are these provisions enforced in the city?	Reuse	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate to legalese reuse of treated end products?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, does the institution have enough technical capacity to conduct research on potential reuse options for treated faecal sludge?	Reuse	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.
14	Are there standards prescribing the quality of reuse by-products for a particular use?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards prescribing the quality for faecal sludge reuse products. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					workers and activists, etc.) to identify relevant standards prescribing the quality for faecal sludge reuse products.
	If yes, are these standards enforced in the city?	Reuse	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with mandate to inspect the quality of by-products generated for re-use?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
	If yes, are there enough resources (financial and human) to carry out regular/periodic inspection?	Reuse	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
15	Is there an institution with mandate for FSM related coordination between institutions/stakeholders?	Other Institutional Variables	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions which works towards strengthening the coordination between various

SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol
					stakeholders involved in the FSM ecosystem. Please note that such institutions can also be NGOs which works towards enhancing coordination between stakeholders. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of the relevant institutions.
	If yes, are there enough resources (financial and human) for FSM related coordination between institutions/stakeholders?	Other Institutional Variables	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs

	Business Model 9: Call Centre Model (Desludging)						
SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol		
					as prescribed by the organogram to the existing staff structure.		

	Business Model 10: Scheduled Desludging Sanitation Tax Model						
SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol		
1	Are there standards for the construction of a particular type of On-Site Sanitation System (OSS)?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for standards specifying construction details of an onsite sanitation system. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company		

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					manufacturing pre-fabricated septic tanks will have their own specific standards - which may follow the government prescribed standards but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify standards specifying construction details of an onsite sanitation system.
	If yes, are these standards followed or enforced in the city?	Containment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are enforced and followed in the city.
	If no, is there an institution with mandate for inspecting containment unit?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					check for roles and responsibilities of relevant institutions.
					2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	Are there regulations for improving improperly built On-Site Sanitation System (OSS)?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the construction of an on-site sanitation system.
2					2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the construction of an

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					on-site sanitation system.
	If yes, are these regulations enforced in the city?	Containment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate for improving On-Site Sanitation System (OSS)?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there a budgetary allocation for improving (retrofitting/redevelopment)	Containment	Optional		1. Kindly check the relevant institution's financial budget

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
	sub-standard On-Site Sanitation System (OSS)?				and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for this particular task and how much is actually spent.
3	Are there regulations (rules/guidelines) for issuing permits for On-Site Sanitation System (OSS) construction?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system.
	If yes, are these regulations enforced in the city?	Containment	Optional		Kindly conduct key informant interviews with

SI. No.	Questions	Value Chain	Mandatory / Optional	Hint	Data Collection Protocol
					sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate for issuing permits for On-Site Sanitation System (OSS) construction?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	Are there enough resources (financial and human) to verify and issue permits for On-Site Sanitation System (OSS) construction?	Containment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					for the previous years to understand how much is allocated for the particular task and how much is actually spent.
					3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
4	Are there regulations (rules/guidelines) for desludging frequencies?	Collection and Conveyance	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for desludging of onsite sanitation systems
					2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					rules and guidelines for desludging of on- site sanitation systems.
	If yes, is the regulation enforced in the city?	Collection and Conveyance	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate towards enforcing the desludging frequency?	Collection and Conveyance	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions
					2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
	If yes, are there enough resources (financial and human) information) to enforce this?	Collection and Conveyance	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads.
					2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.
					3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
5	Is there a regulation for licensing of desludging operators and workers?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for licensing of desludging operators and

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					workers. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for licensing of desludging operators and workers.
	If yes, is the regulation enforced in the city?	Collection and Conveyance	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for licensing desludging operators and workers?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes does it have the resources (financial and human) required for licensing desludging operators and enforcing it on ground?	Collection and Conveyance	Mandatory		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
6	Are there standard operating procedures (zone/time of operations, accidents, spills, proper disposal, record keeping, route planning) for desludging/transportation?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant standard operating procedures for desludging and transportation of faecal sludge. To be noted that standards may also be developed privately by companies or by the industry sector. Wherever required, kindly also refer to sector specific standards (for e.g. a private desludging operator may have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standard operating procedures for

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					desludging and transportation of faecal sludge.
	If yes, are these standards enforced in the city?	Collection and Conveyance	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed
	Is there an institution with mandate for monitoring of desludging operator's compliance to standard operating procedures?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions.
					2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
	If yes, is there enough resources (financial and human) for monitoring of desludging operator's compliance to standard operating procedures?	Collection and Conveyance	Mandatory		1. Kindly check the relevant institution's financial budget and check the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the
					number of staffs as prescribed by the organogram to the existing staff structure.
7	Are there vehicle standards for determining the roadworthiness (whether the vehicle can access the roads in terms of elevation - steep climb, road width, etc.) of desludging vehicles?	Collection and Conveyance	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards determining the roadworthiness of desludging vehicles.

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards determining the roadworthiness of desludging vehicles.
	If yes, are these standards followed in the city?	Collection and Conveyance	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for monitoring whether the desludging vehicles meet the roadworthiness standards?	Collection and Conveyance	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively,
					conduct key informant interviews with sector experts (government

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there resources (financial and human) for monitoring roadworthiness of desludging vehicles?	Collection and Conveyance	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
8	Is there regulatory provision for setting the desludging tariff?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for setting the tariff for provision of desludging service. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for setting the tariff for provision of desludging service.
	If yes, is the regulation enforced in the city?	Collection and Conveyance	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for setting the desludging tariff?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local

SI. No.	Questions	Value Chain	Mandatory / Optional	Hint	Data Collection Protocol
					government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
9	Are there design standards for design, operation and maintenance of treatment facilities?	Treatment	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					and operating it, may have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for designing, operating and maintaining the treatment plant.
	If yes, are these standards followed and enforced in the city?	Treatment	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with mandate for monitoring design, operation and maintenance of treatment facilities?	Treatment	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there resources (financial and human) for monitoring design, operation and maintenance of treatment facilities?	Treatment	Mandatory		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					the organogram to the existing staff structure.
10	Are there standards for effluent disposal?	Treatment	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of effluent 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of effluent into the environment.
	Are these standards enforced in the city?	Treatment	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with the mandate for monitoring compliance to effluent disposal standards?	Treatment	Mandatory		1. Kindly refer to documents published by the ministry and local government to

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions
	If yes, are there resources (financial and human) for monitoring compliance to effluent disposal standards?	Treatment	Mandatory		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution.

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
11	Are there standards for solids disposal?	Treatment	Mandatory	Here solids or bio-solids refer to dried faecal matter post treatment.	1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of solids 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of solids.
	If yes, are these standards enforced in the city?	Treatment	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with mandate for monitoring compliance to solids disposal standards?	Treatment	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there adequate resources (financial and human) for monitoring compliance to solid disposal standards?	Treatment	Mandatory		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					positions and the number of staffs as prescribed by the organogram to the existing staff structure.
12	Are there standard operating procedures for the treatment plant?	Treatment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standard operating procedure - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for designing, operating and maintaining the treatment plant.
	If yes, are these procedures enforced and followed in the city?	Treatment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the procedures are enforced and followed.
	Is there an institution with mandate to monitor the treatment plant's compliance to standard operating procedures?	Treatment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and

SI. No.	Questions	Value Chain	Mandatory / Optional	Hint	Data Collection Protocol
					responsibilities of relevant institutions.
	If yes, are there adequate resources (financial and human) for regular inspection of treatment operations and compliance to standard operating procedures?	Treatment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
13	Are there regulatory provisions for legalizing reuse of treated end products	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					reuse of treated end products 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the reuse of treated end products.
	If yes, are these provisions enforced in the city?	Reuse	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate to legalese reuse of treated end products?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, does the institution have enough technical capacity to conduct research on potential reuse options for treated faecal sludge?	Reuse	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.
14	Are there standards prescribing the quality of reuse by-products for a particular use?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards prescribing the quality for faecal sludge reuse products. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					prescribing the quality for faecal sludge reuse products.
	If yes, are these standards enforced in the city?	Reuse	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with mandate to inspect the quality of by-products generated for re-use?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions
	If yes, are there enough resources (financial and human) to carry out regular/periodic inspection?	Reuse	Optional		1. Kindly check the relevant institution's financial budget and check for the

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
15	Is there an institution with mandate for FSM related coordination between institutions/stakeholders?	Other Institutional Variables	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions which works towards strengthening the coordination between various stakeholders involved in the FSM ecosystem. Please note that such

SI. No.	Questions	Value Chain	Mandatory /Optional	Hint	Data Collection Protocol
					institutions can also be NGOs which works towards enhancing coordination between stakeholders. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of the relevant institutions.
	If yes, are there enough resources (financial and human) for FSM related coordination between institutions/stakeholders?	Other Institutional Variables	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.

	Business Model 11: Incentivised Disposal Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
1	Are there standards for the constructio n of a particular type of On-Site Sanitation System (OSS)?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for standards specifying construction details of an on-site sanitation system. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company manufacturing pre-fabricated septic tanks will have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify standards specifying construction details of an on-site sanitation system.				
	If yes, are these standards followed or enforced in the city?	Contain ment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are enforced and followed in the city.				
	If no, is there an institution with mandate for inspecting containmen t unit?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				

	Business Model 11: Incentivised Disposal Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	Are there regulations for improving improperly built On-Site Sanitation System (OSS)?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the construction of an on-site sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the construction of an on-site sanitation system.				
	If yes, are these regulations enforced in the city?	Contain ment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.				
2	Is there an institution with mandate for improving On-Site Sanitation System (OSS)?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
	If yes, is there a budgetary allocation for improving (retrofitting/ redevelopm ent) sub- standard On-Site Sanitation System (OSS)?	Contain ment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for this particular task and how much is actually spent.				
3	Are there regulations (rules/guide lines) for	Contain ment	Optional		Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for issuing permits for the construction of an on-site				

	Business Model 11: Incentivised Disposal Model								
SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol				
	issuing permits for On-Site Sanitation System (OSS) constructio n? If yes, are these regulations enforced in	Contain ment	Optional		sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system. Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules				
	Is there an institution with mandate for issuing permits for On-Site Sanitation System (OSS) construction?	Contain ment	Optional		and guidelines are enforced or not. 1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
	Are there enough resources (financial and human) to verify and issue permits for On-Site Sanitation System (OSS) constructio n?	Contain ment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
4	Are there regulations (rules/guide	Collecti on and	Optional		Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for desludging				

	Business Model 11: Incentivised Disposal Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	lines) for desludging frequencies ?	Convey ance			of on-site sanitation systems 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for desludging of on-site sanitation systems.				
	If yes, is the regulation enforced in the city?	Collecti on and Convey ance	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.				
	Is there an institution with mandate towards enforcing the desludging frequency?	Collecti on and Convey ance	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
	If yes, are there enough resources (financial and human) information) to enforce this?	Collecti on and Convey ance	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
5	Is there a regulation for licensing of desludging operators	Collecti on and Convey ance	Mandator Y		Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for licensing of desludging operators and workers. Alternatively, conduct key informant				

	Business Model 11: Incentivised Disposal Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	and workers?				interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for licensing of desludging operators and workers.				
	If yes, is the regulation enforced in the city?	Collecti on and Convey ance	Mandator Y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.				
	Is there an institution with mandate	Collecti on and Convey ance	Mandator y		Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions.				
	for licensing desludging operators and workers?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
	If yes does it have the resources (financial and human) required for licensing	Collecti on and Convey ance	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.				
	desludging operators and enforcing it on ground?				3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
6	Are there standard operating procedures (zone/time of operations, accidents,	Collecti on and Convey ance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standard operating procedures for desludging and transportation of faecal sludge. To be noted that standards may also be developed privately by companies or by the industry sector. Wherever required, kindly also refer to sector specific standards (for e.g.				

	Business Model 11: Incentivised Disposal Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	spills, proper disposal, record keeping, route planning) for desludging/ transportati on?				a private desludging operator may have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standard operating procedures for desludging and transportation of faecal sludge.				
	If yes, are these standards enforced in the city?	Collecti on and Convey ance	Mandator Y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed				
	Is there an institution with mandate for monitoring of desludging operator's compliance to standard operating procedures ?	Collecti on and Convey ance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
	If yes, is there enough resources (financial and human) for monitoring of desludging operator's compliance to standard operating	Collecti on and Convey ance	Mandator y		1. Kindly check the relevant institution's financial budget and check the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as				

	Business Model 11: Incentivised Disposal Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	procedures ?				prescribed by the organogram to the existing staff structure.				
	Are there vehicle standards for determining the roadworthin ess (whether the vehicle can access the roads in terms of elevation - steep climb, road width, etc.) of desludging vehicles?	Collecti on and Convey ance	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards determining the roadworthiness of desludging vehicles. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards determining the roadworthiness of desludging vehicles.				
7	If yes, are these standards followed in the city?	Collecti on and Convey ance	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.				
	Is there an institution with mandate for monitoring whether the desludging vehicles meet the roadworthin ess standards?	Collecti on and Convey ance	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
	If yes, is there resources	Collecti on and	Optional		Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads.				

	Business Model 11: Incentivised Disposal Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	(financial and human) for monitoring roadworthin ess of desludging vehicles?	Convey ance			2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
	Is there regulatory provision for setting the desludging tariff?	Collecti on and Convey ance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for setting the tariff for provision of desludging service. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for setting the tariff for provision of desludging service.				
8	If yes, is the regulation enforced in the city?	Collecti on and Convey ance	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.				
	Is there an institution with mandate for setting the desludging tariff?	Collecti on and Convey ance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
9	Is there provision of tipping fee for the desludging	Collecti on and Convey ance	Mandator y		Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines which prescribe the provision of tipping fee to desludging operators for disposing off the faecal sludge				

	Business Model 11: Incentivised Disposal Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	operators at the treatment facility?				at the treatment plant. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines which prescribe the provision of tipping fee to desludging operators for disposing off the faecal sludge at the treatment plant.				
10	Are there design standards for design, operation and maintenan ce of treatment facilities?	Treatme nt	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standards – which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for designing, operating and maintaining the treatment plant.				
10	If yes, are these standards followed and enforced in the city?	Treatme nt	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.				
	Is there an institution with mandate for monitoring design, operation and maintenan ce of	Treatme nt	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				

	Business Model 11: Incentivised Disposal Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	treatment facilities?								
	If yes, are there resources (financial and human) for monitoring design, operation and maintenan ce of treatment facilities?	Treatme nt	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
	Are there standards for effluent disposal?	Treatme nt	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of effluent 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of effluent into the environment.				
11	Are these standards enforced in the city?	Treatme nt	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.				
	Is there an institution with the mandate for monitoring compliance to effluent disposal standards?	Treatme nt	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions				

	Business Model 11: Incentivised Disposal Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	If yes, are there resources (financial and human) for monitoring compliance to effluent disposal standards?	Treatme nt	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
12	Are there standards for solids disposal?	Treatme nt	Mandator y	Here solid s or biosolid s refer to dried faec al matt er post treat ment .	1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of solids 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of solids.				
	If yes, are these standards enforced in the city?	Treatme nt	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.				
	Is there an institution with mandate for monitoring compliance to solids	Treatme nt	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				

	Business Model 11: Incentivised Disposal Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	disposal standards?								
	If yes, are there adequate resources (financial and human) for monitoring compliance to solid disposal standards?	Treatme nt	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
13	Are there standard operating procedures for the treatment plant?	Treatme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standard operating procedure - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for designing, operating and maintaining the treatment plant.				
	If yes, are these procedures enforced and followed in the city?	Treatme nt	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the procedures are enforced and followed.				

	Business Model 11: Incentivised Disposal Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	Is there an institution with mandate to monitor the treatment plant's compliance to standard operating procedures ?	Treatme nt	Optional		 Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions. 				
	If yes, are there adequate resources (financial and human) for regular inspection of treatment operations and compliance to standard operating procedures ?	Treatme nt	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
14	Are there regulatory provisions for legalizing reuse of treated end products	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the reuse of treated end products 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the reuse of treated end products.				
	If yes, are these provisions enforced in the city?	Reuse	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.				

	Business Model 11: Incentivised Disposal Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	Is there an institution with mandate to legalese reuse of treated end products?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
	If yes, does the institution have enough technical capacity to conduct research on potential reuse options for treated faecal sludge?	Reuse	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.				
	Are there standards prescribing the quality of reuse by-products for a particular use?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards prescribing the quality for faecal sludge reuse products. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the quality for faecal sludge reuse products.				
15	If yes, are these standards enforced in the city?	Reuse	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.				
	Is there an institution with mandate to inspect the	Reuse	Optional		Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions Alternatively, conduct key informant				

	Business Model 11: Incentivised Disposal Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	quality of by- products generated for re-use?				interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions				
	If yes, are there enough resources (financial and human) to carry out regular/peri odic inspection?	Reuse	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
16	Is there an institution with mandate for FSM related coordination between institutions/ stakeholder s?	Other Institutio nal Variable s	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions which works towards strengthening the coordination between various stakeholders involved in the FSM ecosystem. Please note that such institutions can also be NGOs which works towards enhancing coordination between stakeholders. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of the relevant institutions.				
	If yes, are there enough resources (financial and human) for FSM related coordinatio n between institutions/	Other Institutio nal Variable s	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				

	Business Model 11: Incentivised Disposal Model									
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol					
	stakeholder s?									

	Business Model 12: Full Private Model (Entire Service Chain)								
SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol				
1	Are there standards for the constructio n of a particular type of On-Site Sanitation System (OSS)?	Containme	Optional		1. Kindly refer to documents published by the ministry and local government to check for standards specifying construction details of an on-site sanitation system. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company manufacturing prefabricated septic tanks will have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify standards specifying construction details of an on-site sanitation system.				
	If yes, are these standards followed or	Containme nt	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the				

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	enforced in the city?				standards are enforced and followed in the city.
	If no, is there an institution with mandate	Containme nt	Optional		Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions.
	for inspecting containmen t unit?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	Are there regulations for improving improperly built On-Site	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the construction of an on-site sanitation system.
	Sanitation System (OSS)?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the construction of an on-site sanitation system.
2	If yes, are these regulations enforced in the city?	Containme nt	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate for	Containme nt	Optional		Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions.
	improving On-Site Sanitation System (OSS)?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	If yes, is there a budgetary allocation for improving (retrofitting/redevelopm ent) substandard On-Site Sanitation System (OSS)?	Containme nt	Optional		 Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. Also check the budget allocation for the previous years to understand how much is allocated for this particular task and how much is actually spent.
	Are there regulations (rules/guide lines) for issuing permits for On-Site Sanitation System (OSS) constructio n?	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system.
3	If yes, are these regulations enforced in the city?	Containme nt	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate for issuing permits for On-Site Sanitation System (OSS) constructio n?	Containme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	Are there enough resources (financial and human) to verify and issue permits for On-Site Sanitation System (OSS) constructio n?	Containme nt	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Are there regulations (rules/guide lines) for desludging frequencies?	Collection and Conveyanc e	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for desludging of on-site sanitation systems 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for desludging of on-site sanitation systems.
4	If yes, is the regulation enforced in the city?	Collection and Conveyanc e	Mandator Y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate towards enforcing the desludging frequency?	Collection and Conveyanc e	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.

SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
	If yes, are there enough resources (financial and human) information) to enforce this?	Collection and Conveyanc e	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Is there a regulation for licensing of desludging operators and workers?	Collection and Conveyanc e	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for licensing of desludging operators and workers. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for licensing of desludging operators and workers.
5	If yes, is the regulation enforced in the city?	Collection and Conveyanc e	Mandator Y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for licensing desludging operators and workers?	Collection and Conveyanc e	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.

Business Model 12: Full Private Model (Entire Service Chain) Mandato Hints **Data Collection Protocol** SI. Value **Questions** ry/ No. Chain Optional If yes does it Collection Mandator 1. Kindly check the relevant institution's have the and financial budget and check for the budget Conveyanc resources allocated under the relevant budget heads. (financial and human) 2. Also check the budget allocation for the required for previous years to understand how much is licensing allocated for the particular task and how desludging much is actually spent. operators and 3. With respect to understanding the institution's human resource availability enforcing it on ground? for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure. Collection Mandator 1. Kindly refer to documents published by Are there standard and the ministry and local government to check for relevant standard operating operating Conveyanc procedures procedures for desludging and (zone/time transportation of faecal sludge. To be of noted that standards may also be operations, developed privately by companies or by accidents, the industry sector. Wherever required, kindly also refer to sector specific spills, proper standards (for e.g. a private desludging disposal, operator may have their own specific record standards - which may follow the keeping, government prescribed standards, but is route not limited to the government standards). 6 planning) for 2. Alternatively, conduct key informant desludging/ interviews with sector experts transportati (government officials, engineers, NGO on? workers and activists, etc.) to identify relevant standard operating procedures for desludging and transportation of faecal sludge. Collection If yes, are Mandator Kindly conduct key informant interviews these with sector experts (government officials, and standards Conveyanc engineers, NGO workers and activists, etc.)

enforced in the city?

within the city to identify whether the rules

and guidelines are enforced and followed

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	Is there an institution with mandate for monitoring of desludging operator's compliance to standard operating procedures ?	Collection and Conveyanc e	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there enough resources (financial and human) for monitoring of desludging operator's compliance to standard operating procedures ?	Collection and Conveyanc e	Mandator y		1. Kindly check the relevant institution's financial budget and check the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
7	Are there vehicle standards for determining the roadworthin ess (whether the vehicle can access the roads in terms of elevation - steep climb,	Collection and Conveyanc e	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards determining the roadworthiness of desludging vehicles. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards determining the roadworthiness of desludging vehicles.

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	road width, etc.) of desludging vehicles?				
	If yes, are these standards followed in the city?	Collection and Conveyanc e	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for monitoring whether the desludging vehicles meet the roadworthin ess standards?	Collection and Conveyanc e	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there resources (financial and human) for monitoring roadworthin ess of desludging vehicles?	Collection and Conveyanc e	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
8	Are there design standards for design,	Treatment	Mandator y		Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	operation and maintenan ce of treatment facilities?				treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for designing, operating and maintaining the treatment plant.
	If yes, are these standards followed and enforced in the city?	Treatment	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with mandate for monitoring design, operation and maintenan ce of treatment facilities?	Treatment	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there resources (financial and human) for monitoring	Treatment	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	design, operation and maintenan ce of treatment facilities?				much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Are there standards for effluent disposal?	ndards y effluent y		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of effluent 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of effluent into the environment.	
	Are these standards enforced in the city?	Treatment	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
9	Is there an institution with the mandate for monitoring compliance to effluent disposal standards?	Treatment	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions
	If yes, are there resources (financial and human) for monitoring compliance to effluent disposal standards?	Treatment	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
					organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Are there standards for solids disposal?	Treatment	Mandator y	Here solid s or bio-solid s refer to dried faec al matt er post treat ment .	1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of solids 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of solids.
10	If yes, are these standards enforced in the city?	Treatment	eatment Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with mandate for monitoring compliance to solids disposal standards?	Treatment	Mandator y	tor	1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there adequate resources (financial and human) for monitoring	Treatment	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	compliance to solid disposal standards?				3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
11	Are there standard operating procedures for the treatment plant?	Treatment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standard operating procedure – which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for designing, operating and maintaining the treatment plant.
	If yes, are these procedures enforced and followed in the city?	Treatment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the procedures are enforced and followed.
	Is there an institution with mandate to monitor the treatment plant's compliance	Treatment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	to standard operating procedures ?				understand the roles and responsibilities of relevant institutions.
	If yes, are there adequate resources (financial and human) for regular inspection of treatment operations and compliance to standard operating procedures ?	Treatment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Are there regulatory provisions for legalizing reuse of treated end products	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the reuse of treated end products 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the reuse of treated end products.
12	If yes, are these provisions enforced in the city?	Reuse	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate to legalese reuse of	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO)

SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
	treated end products?				workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, does the institution have enough technical capacity to conduct research on potential reuse options for treated faecal sludge?	Reuse	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.
13	Is there an institution with mandate for FSM related coordinatio n between institutions/ stakeholder s?	Other Institutional Variables	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions which works towards strengthening the coordination between various stakeholders involved in the FSM ecosystem. Please note that such institutions can also be NGOs which works towards enhancing coordination between stakeholders. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of the relevant institutions.
	If yes, are there enough resources (financial and human) for FSM related coordinatio n between institutions/	Other Institutional Variables	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.

	Business Model 12: Full Private Model (Entire Service Chain)										
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol						
	stakeholder s?										

	Business Model 13: Farmer Truck Operator Partnership Model							
SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol			
1	Are there standards for the construction of a particular type of On-Site Sanitation System (OSS)?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for standards specifying construction details of an on-site sanitation system. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company manufacturing prefabricated septic tanks will have their own specific standards - which may follow the government prescribed standards but is not limited to the government			

	Business Model 13: Farmer Truck Operator Partnership Model						
SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol		
	If yes, are these standards followed or enforced in the	Containment	Optional		standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify standards specifying construction details of an on-site sanitation system. Kindly conduct key informant interviews		
	city?				with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are enforced and followed in the city.		
	If no, is there an institution with mandate for inspecting containment unit?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.		
2	Are there regulations for improving improperly built On-Site Sanitation System (OSS)?	Containment	Optional		Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the construction of an onsite sanitation system.		

	Business Model 13: Farmer Truck Operator Partnership Model						
SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol		
					2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the construction of an onsite sanitation system.		
	If yes, are these regulations enforced in the city?	Containment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.		
	Is there an institution with mandate for improving On-Site Sanitation System (OSS)?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.		
	If yes, is there a budgetary allocation for improving (retrofitting/redevelopment) sub-standard On-Site Sanitation System (OSS)?	Containment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to		

	Business Model 13: Farmer Truck Operator Partnership Model							
SI. No.	Questions	Value Chain	Mandatory / Optional	Hints	Data Collection Protocol			
					understand how much is allocated for this particular task and how much is actually spent.			
	Are there regulations (rules/guidelines) for issuing permits for On-Site Sanitation System (OSS) construction?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for issuing permits for the construction of an onsite sanitation system. 2. Alternatively,			
					conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for issuing permits for the construction of an onsite sanitation system.			
3	If yes, are these regulations enforced in the city?	Containment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.			
	Is there an institution with mandate for issuing permits for On-Site Sanitation System (OSS) construction?	Containment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and			

	Business Model 13: Farmer Truck Operator Partnership Model								
SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol				
					activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
	Are there enough resources (financial and human) to verify and issue permits for On-Site Sanitation System (OSS) construction?	Containment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads.				
					2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.				
					3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
	Are there regulations (rules/guidelines) for desludging frequencies?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for desludging of on-site sanitation systems				
4					2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules				

Business Model 13: Farmer Truck Operator Partnership Model							
SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol		
					and guidelines for desludging of on-site sanitation systems.		
	If yes, is the regulation enforced in the city?	Collection and Conveyance	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.		
	Is there an institution with mandate towards enforcing the desludging frequency?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions		
					2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.		
	If yes, are there enough resources (financial and human) information) to enforce this?	Collection and Conveyance	Mandatory		Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads.		
					2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the		

	Business Model 13: Farmer Truck Operator Partnership Model							
SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol			
	Is there a regulation for licensing of desludging operators and workers?	Collection and Conveyance	Mandatory		institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure. 1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for licensing of desludging			
5					operators and workers. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for licensing of desludging operators and workers.			
3	If yes, is the regulation enforced in the city?	Collection and Conveyance	Mandatory		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.			
	Is there an institution with mandate for licensing desludging operators and workers?	Collection and Conveyance	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively,			

	Business Model 13: Farmer Truck Operator Partnership Model								
SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol				
					conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
	If yes does it have the resources (financial and human) required for licensing desludging operators and enforcing it on ground?	Collection and Conveyance	Mandatory		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the				
	Are there regulatory	Reuse	Mandatory		organogram to the existing staff structure. 1. Kindly refer to				
6	provisions for legalizing reuse of treated end products				documents published by the ministry and local government to check for relevant rules and guidelines for the reuse of treated end products 2. Alternatively, conduct key informant interviews with sector experts (government				

	Business Model 13: Farmer Truck Operator Partnership Model							
SI. No.	Questions	Value Chain	Mandatory / Optional	Hints	Data Collection Protocol			
					officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the reuse of treated end			
	If yes, are these provisions enforced in the city?	Reuse	Mandatory		products. Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.			
	Is there an institution with mandate to legalese reuse of treated end products?	Reuse	Mandatory		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.			
	If yes, does the institution have enough technical capacity to conduct research on potential reuse options for treated faecal sludge?	Reuse	Mandatory		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.			

	Business Model 13: Farmer Truck Operator Partnership Model								
SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol				
	Are there standards prescribing the quality of reuse by-products for a particular use?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards prescribing the quality for faecal sludge reuse products. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the quality for faecal sludge reuse products.				
7	If yes, are these standards enforced in the city?	Reuse	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.				
	Is there an institution with mandate to inspect the quality of by-products generated for re-use?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions				
	If yes, are there enough resources (financial and human) to carry out regular/periodic inspection?	Reuse	Optional		Kindly check the relevant institution's financial budget and check for the budget				

	Business Model 13: Farmer Truck Operator Partnership Model								
SI. No.	Questions	Value Chain	Mandatory /Optional	Hints	Data Collection Protocol				
					allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				

	Business Model 14: Co-composting Town Cluster Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
1	Are there standards for the construction of a particular type of On-Site Sanitation System (OSS)?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for standards specifying construction details of an on-site sanitation system. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company manufacturing prefabricated septic tanks will have their own specific standards - which may follow the government prescribed standards but is not				

	Business Model 14: Co-composting Town Cluster Model							
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol			
					limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify standards specifying construction details of an on-site sanitation system.			
	If yes, are these standards followed or enforced in the city?	Contain ment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are enforced and followed in the city.			
	If no, is there an institution with mandate for inspecting containment unit?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.			
2	Are there regulations for improving improperly built On-Site Sanitation System (OSS)?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the construction of an on-site sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the construction of an on-site sanitation system.			
	If yes, are these regulations enforced in the city?	Contain ment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.			

	Business Model 14: Co-composting Town Cluster Model							
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol			
	Is there an institution with mandate for improving On-Site Sanitation System (OSS)?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.			
	If yes, is there a budgetary allocation for improving (retrofitting/r edevelopme nt) substandard On-Site Sanitation System (OSS)?	Contain ment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for this particular task and how much is actually spent.			
3	Are there regulations (rules/guideli nes) for issuing permits for On-Site Sanitation System (OSS) construction ?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system.			
	If yes, are these regulations enforced in the city?	Contain ment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.			

	Business Model 14: Co-composting Town Cluster Model						
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol		
	Is there an institution with mandate for issuing permits for On-Site Sanitation System (OSS) construction ?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.		
	Are there enough resources (financial and human) to verify and issue permits for On-Site Sanitation System (OSS) construction ?	Contain ment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.		
4	Are there regulations (rules/guideli nes) for desludging frequencies?	Collecti on and Convey ance	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for desludging of on-site sanitation systems 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for desludging of on-site sanitation systems.		
	If yes, is the regulation enforced in the city?	Collecti on and Convey ance	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.		

	Business Model 14: Co-composting Town Cluster Model							
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol			
	Is there an institution with mandate towards enforcing the desludging frequency?	Collecti on and Convey ance	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.			
	If yes, are there enough resources (financial and human) information) to enforce this?	Collecti on and Convey ance	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.			
5	Is there a regulation for licensing of desludging operators and workers?	Collecti on and Convey ance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for licensing of desludging operators and workers. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for licensing of desludging operators and workers.			
	If yes, is the regulation enforced in the city?	Collecti on and Convey ance	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.			

	Business Model 14: Co-composting Town Cluster Model							
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol			
	Is there an institution with mandate for licensing desludging operators and workers?	Collecti on and Convey ance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.			
	If yes does it have the resources (financial and human) required for licensing desludging operators and enforcing it on ground?	Collecti on and Convey ance	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.			
6	Are there standard operating procedures (zone/time of operations, accidents, spills, proper disposal, record keeping, route planning) for desludging/tr ansportation ?	Collecti on and Convey ance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standard operating procedures for desludging and transportation of faecal sludge. To be noted that standards may also be developed privately by companies or by the industry sector. Wherever required, kindly also refer to sector specific standards (for e.g. a private desludging operator may have their own specific standards – which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standard			

Business Model 14: Co-composting Town Cluster Model					
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
					operating procedures for desludging and transportation of faecal sludge.
	If yes, are these standards enforced in the city?	Collecti on and Convey ance	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed
	Is there an institution with mandate for monitoring of	Collecti on and Convey ance	Mandator Y		Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions.
	desludging operator's compliance to standard operating procedures?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there enough resources (financial and human) for monitoring of desludging operator's	Collecti on and Convey ance	Mandator y		1. Kindly check the relevant institution's financial budget and check the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.
	compliance to standard operating procedures?				3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
7	Are there vehicle standards for determining the roadworthine	Collecti on and Convey ance	Optional		Kindly refer to documents published by the ministry and local government to check for relevant standards determining the roadworthiness of desludging vehicles. Alternatively, conduct key informant

Business Model 14: Co-composting Town Cluster Model SI. **Questions** Value Mandato Hints **Data Collection Protocol** Chain ry/ No. Optional ss (whether interviews with sector experts (government the vehicle officials, engineers, NGO workers and can access activists, etc.) to identify relevant standards the roads in determining the roadworthiness of desludging vehicles. terms of elevation steep climb, road width, etc.) of desludging vehicles? If yes, are Collecti Optional Kindly conduct key informant interviews these with sector experts (government officials, on and standards engineers, NGO workers and activists, etc.) Convey followed in ance within the city to identify whether the rules the city? and guidelines are enforced and followed. Optional 1. Kindly refer to documents published by the Is there an Collecti institution ministry and local government to check for on and with Convey roles and responsibilities of relevant institutions mandate for ance monitoring 2. Alternatively, conduct key informant whether the desludging interviews with sector experts (government vehicles officials, engineers, NGO workers and activists, etc.) in the city to understand the meet the roadworthine roles and responsibilities of relevant institutions. standards? If yes, is there Collecti Optional 1. Kindly check the relevant institution's resources on and financial budget and check for the budget (financial allocated under the relevant budget heads. Convey and human) ance 2. Also check the budget allocation for the monitoring previous years to understand how much is roadworthine allocated for the particular task and how ss of much is actually spent. desludging vehicles? 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the

existing staff structure.

	Business Model 14: Co-composting Town Cluster Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	Is there regulatory provision for setting the desludging tariff?	Collecti on and Convey ance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for setting the tariff for provision of desludging service. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for setting the tariff for provision of desludging service.				
8	If yes, is the regulation enforced in the city?	Collecti on and Convey ance	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.				
	Is there an institution with mandate for setting the desludging tariff?	Collecti on and Convey ance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
9	Are there design standards for design, operation and maintenanc e of treatment facilities?	Treatme nt	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standards – which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards				

Business Model 14: Co-composting Town Cluster Model SI. Questions Value Mandato Hints **Data Collection Protocol** Chain ry/ No. Optional for designing, operating and maintaining the treatment plant. Treatme Mandator If yes, are Kindly conduct key informant interviews these with sector experts (government officials, nt У standards engineers, NGO workers and activists, etc.) followed and within the city to identify whether the standards are followed or not. enforced in the city? Is there an Treatme Mandator 1. Kindly refer to documents published by the institution ministry and local government to check for nt У with roles and responsibilities of relevant mandate for institutions monitoring 2. Alternatively, conduct key informant design, interviews with sector experts (government operation officials, engineers, NGO workers and activists, etc.) in the city to understand the and roles and responsibilities of relevant maintenanc e of institutions. treatment facilities? If yes, are Treatme Mandator 1. Kindly check the relevant institution's there financial budget and check for the budget У resources allocated under the relevant budget heads. (financial 2. Also check the budget allocation for the and human) previous years to understand how much is allocated for the particular task and how for monitoring much is actually spent. 3. With respect to understanding the design, operation institution's human resource availability for and the particular task, kindly check the maintenanc organogram of the institution. Analyze the positions and the number of staffs as e of treatment prescribed by the organogram to the existing staff structure. facilities? Are there Treatme Mandator 1. Kindly refer to documents published by the ministry and local government to check for standards for У effluent relevant standards for disposal of effluent 10 2. Alternatively, conduct key informant disposal? interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards

Business Model 14: Co-composting Town Cluster Model SI. Questions Value Mandato Hints **Data Collection Protocol** Chain ry/ No. Optional prescribing the disposal of effluent into the environment. Are these Treatme Mandator Kindly conduct key informant interviews standards nt with sector experts (government officials, У enforced in engineers, NGO workers and activists, etc.) within the city to identify whether the the city? standards are followed or not. Is there an Treatme Mandator 1. Kindly refer to documents published by the institution nt ministry and local government to check for У with the roles and responsibilities of relevant mandate for institutions 2. Alternatively, conduct key informant monitoring compliance interviews with sector experts (government to effluent officials, engineers, NGO workers and disposal activists, etc.) in the city to understand the standards? roles and responsibilities of relevant institutions If yes, are Treatme Mandator 1. Kindly check the relevant institution's there nt financial budget and check for the budget resources allocated under the relevant budget heads. (financial 2. Also check the budget allocation for the and human) previous years to understand how much is allocated for the particular task and how for monitoring much is actually spent. compliance 3. With respect to understanding the to effluent institution's human resource availability for disposal the particular task, kindly check the standards? organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure. Are there Treatme Mandator Here 1. Kindly refer to documents published by the standards for nt solid ministry and local government to check for solids s or relevant standards for disposal of solids disposal? bio-2. Alternatively, conduct key informant interviews with sector experts (government solid officials, engineers, NGO workers and S

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activists, etc.) to identify relevant standards

prescribing the disposal of solids.

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	Business Model 14: Co-composting Town Cluster Model								
SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol				
				post treat ment					
	If yes, are these standards enforced in the city?	Treatme nt	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.				
	Is there an institution with mandate for monitoring compliance to solids disposal standards?	Treatme nt	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
	If yes, are there adequate resources (financial and human) for monitoring compliance to solid disposal standards?	Treatme nt	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
12	Are there standard operating procedures for the treatment plant?	Treatme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standard operating				

	Business Model 14: Co-composting Town Cluster Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
					procedure - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for designing, operating and maintaining the treatment plant.				
	If yes, are these procedures enforced and followed in the city?	Treatme nt	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the procedures are enforced and followed.				
	Is there an institution with mandate to monitor the treatment plant's compliance to standard operating procedures?	Treatme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
	If yes, are there adequate resources (financial and human) for regular inspection of treatment operations and compliance to standard operating procedures?	Treatme nt	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
13	Are there regulatory provisions for	Reuse	Mandator y		Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the reuse of				

	Business Model 14: Co-composting Town Cluster Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	legalizing reuse of treated end products				treated end products 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the reuse of treated end products.				
	If yes, are these provisions enforced in the city?	Reuse	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.				
	Is there an institution with mandate to legalese reuse of treated end products?	Reuse	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
	If yes, does the institution have enough technical capacity to conduct research on potential reuse options for treated faecal sludge?	Reuse	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.				
14	Are there standards prescribing the quality of reuse by-products for a particular use?	Reuse	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standards prescribing the quality for faecal sludge reuse products. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards				

Business Model 14: Co-composting Town Cluster Model SI. Questions Value Mandato Hints **Data Collection Protocol** Chain ry/ No. Optional prescribing the quality for faecal sludge reuse products. If yes, are Reuse Mandator Kindly conduct key informant interviews these У with sector experts (government officials, standards engineers, NGO workers and activists, etc.) enforced in within the city to identify whether the standards are followed or not. the city? Is there an Reuse Mandator 1. Kindly refer to documents published by the institution ministry and local government to check for У roles and responsibilities of relevant with mandate to institutions inspect the 2. Alternatively, conduct key informant quality of byinterviews with sector experts (government officials, engineers, NGO workers and products generated activists, etc.) in the city to understand the for re-use? roles and responsibilities of relevant institutions Mandator 1. Kindly check the relevant institution's If yes, are Reuse there enough financial budget and check for the budget resources allocated under the relevant budget heads. (financial 2. Also check the budget allocation for the and human) previous years to understand how much is to carry out allocated for the particular task and how regular/perio much is actually spent. dic 3. With respect to understanding the inspection? institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure. Is there an Other Mandator 1. Kindly refer to documents published by the institution Institutio ministry and local government to check for roles and responsibilities of relevant with nal mandate for Variable institutions which works towards FSM related strengthening the coordination between 15 various stakeholders involved in the FSM coordination between ecosystem. Please note that such institutions/st institutions can also be NGOs which works akeholders? towards enhancing coordination between stakeholders.

2. Alternatively, conduct key informant

	Business Model 14: Co-composting Town Cluster Model									
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol					
					interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of the relevant institutions.					
	If yes, are there enough resources (financial and human) for FSM related coordination between institutions/st akeholders?	Other Institutio nal Variable s	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.					

	Business Model 15: Co-composting Pull Push Model									
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol					
1	Are there standards for the construction of a particular type of On-Site Sanitation System (OSS)?	Contai nment	Optional		1. Kindly refer to documents published by the ministry and local government to check for standards specifying construction details of an on-site sanitation system. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company manufacturing prefabricated septic tanks will have their own specific standards - which may follow the government prescribed standards but is not limited to the government standards). 2. Alternatively, conduct key informant					

ı	Business Model 15: Co-composting Pull Push Model							
SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol			
					interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify standards specifying construction details of an on-site sanitation system.			
	If yes, are these standards followed or enforced in the city?	Contai nment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are enforced and followed in the city.			
	If no, is there an institution with mandate for inspecting containment	Contai nment	Optional		Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions.			
	unit?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.			
	Are there regulations for improving improperly built On-Site	Contai nment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the construction of an on-site sanitation system.			
2	Sanitation System (OSS)?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the construction of an on-site sanitation system.			
	If yes, are these regulations enforced in the city?	Contai nment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.			
	Is there an institution with mandate for improving On-	Contai nment	Optional		Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions.			

	Business Model 15: Co-composting Pull Push Model							
SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol			
	Site Sanitation System (OSS)?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.			
	If yes, is there a budgetary allocation for improving (retrofitting/re development) sub-standard On-Site Sanitation System (OSS)?	Contai nment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for this particular task and how much is actually spent.			
	Are there regulations (rules/guidelin es) for issuing permits for On-Site Sanitation System (OSS) construction?	Contai nment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system.			
3	If yes, are these regulations enforced in the city?	Contai nment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.			
	Is there an institution with mandate for issuing permits for On-Site Sanitation System (OSS) construction?	Contai nment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the			

	Business Model 15: Co-composting Pull Push Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
					roles and responsibilities of relevant institutions.				
	Are there enough resources (financial and human) to verify and issue permits for On-Site Sanitation System (OSS) construction?	Contai	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
	Are there regulations (rules/guidelin es) for desludging frequencies?	Collect ion and Conve yance	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for desludging of on-site sanitation systems 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for desludging of on-site sanitation systems.				
4	If yes, is the regulation enforced in the city?	Collect ion and Conve yance	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.				
	Is there an institution with mandate towards enforcing the desludging frequency?	Collect ion and Conve yance	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the				

	Business Model 15: Co-composting Pull Push Model								
SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol				
					roles and responsibilities of relevant institutions.				
	If yes, are there enough resources (financial and human) information) to enforce this?	Collect ion and Conve yance	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
	Is there a regulation for licensing of desludging operators and workers?	Collect ion and Conve yance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for licensing of desludging operators and workers. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for licensing of desludging operators and workers.				
5	If yes, is the regulation enforced in the city?	Collect ion and Conve yance	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.				
	Is there an institution with mandate for licensing desludging operators and workers?	Collect ion and Conve yance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the				

	Business Model 15: Co-composting Pull Push Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
					roles and responsibilities of relevant institutions.				
	If yes does it have the resources (financial and human) required for licensing desludging operators and enforcing it on ground?	Collect ion and Conve yance	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
6	Are there standard operating procedures (zone/time of operations, accidents, spills, proper disposal, record keeping, route planning) for desludging/transportation?	Collect ion and Conve yance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standard operating procedures for desludging and transportation of faecal sludge. To be noted that standards may also be developed privately by companies or by the industry sector. Wherever required, kindly also refer to sector specific standards (for e.g. a private desludging operator may have their own specific standards – which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standard operating procedures for desludging and transportation of faecal sludge.				
	If yes, are these standards enforced in the city?	Collect ion and Conve yance	Mandator Y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed				

	Business Model 15: Co-composting Pull Push Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	Is there an institution with mandate for monitoring of desludging operator's compliance to standard operating procedures?	Collect ion and Conve yance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
	If yes, is there enough resources (financial and human) for monitoring of desludging operator's compliance to standard operating procedures?	Collect ion and Conve yance	Mandator y		1. Kindly check the relevant institution's financial budget and check the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
7	Are there vehicle standards for determining the roadworthines s (whether the vehicle can access the roads in terms of elevation - steep climb, road width, etc.) of desludging vehicles?	Collect ion and Conve yance	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards determining the roadworthiness of desludging vehicles. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards determining the roadworthiness of desludging vehicles.				

	Business Model 15: Co-composting Pull Push Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	If yes, are these standards followed in the city?	Collect ion and Conve yance	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.				
	Is there an institution with mandate for monitoring whether the	Collect ion and Conve yance	Optional		Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions				
	desludging vehicles meet the roadworthines s standards?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
	If yes, is there resources (financial and human) for	Collect ion and Conve	Optional		Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads.				
	monitoring roadworthines s of desludging	yance	-		2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.				
	vehicles?				3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
	Is there regulatory provision for setting the	Collect ion and Conve	Mandator y		Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for setting the tariff for provision of desludging service.				
8	desludging tariff?	yance			2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for setting the tariff for provision of desludging service.				

	Business Model 15: Co-composting Pull Push Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	If yes, is the regulation enforced in the city?	Collect ion and Conve yance	Mandator Y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.				
	Is there an institution with mandate for setting the desludging tariff?	Collect ion and Conve yance	Mandator y		Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions Alternatively, conduct key informant interviews with sector experts (government).				
					officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
9	Are there design standards for design, operation and maintenance of treatment facilities?	Treat ment	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and				
					activists, etc.) to identify relevant standards for designing, operating and maintaining the treatment plant.				
	If yes, are these standards followed and enforced in the city?	Treat ment	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.				

	Business Model 15: Co-composting Pull Push Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	Is there an institution with mandate for monitoring design, operation and maintenance of treatment facilities?	Treat ment	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
	If yes, are there resources (financial and human) for monitoring design, operation and maintenance of treatment facilities?	Treat	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
10	Are there standards for effluent disposal?	Treat ment	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of effluent 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of effluent into the environment.				
	Are these standards enforced in the city?	Treat ment	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.				

	Business Model 15: Co-composting Pull Push Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	Is there an institution with the mandate for monitoring compliance to effluent disposal standards?	Treat ment	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions				
	If yes, are there resources (financial and human) for monitoring compliance to effluent disposal standards?	Treat ment	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				
11	Are there standards for solids disposal?	Treat ment	Mandator y	Here solid s or bio-solid s refer to dried faec al matt er post treat ment	1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of solids 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of solids.				

Business Model 15: Co-composting Pull Push Model SI. Questions Value Mandato Hints **Data Collection Protocol** Chain ry/ No. Optional If yes, are Treat Mandator Kindly conduct key informant interviews with sector experts (government officials, these ment standards engineers, NGO workers and activists, etc.) enforced in within the city to identify whether the the city? standards are followed or not. Treat Is there an Mandator 1. Kindly refer to documents published by the institution with ment ministry and local government to check for roles and responsibilities of relevant mandate for institutions. monitorina compliance to solids disposal 2. Alternatively, conduct key informant standards? interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions. Mandator If yes, are there Treat 1. Kindly check the relevant institution's adequate ment financial budget and check for the budget У resources allocated under the relevant budget heads. (financial and human) for 2. Also check the budget allocation for the monitoring previous years to understand how much is compliance to allocated for the particular task and how solid disposal much is actually spent. standards? 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure. Are there Treat Optional 1. Kindly refer to documents published by the standard ment ministry and local government to check for operating relevant standards for the design, operation procedures for and maintenance of treatment plant. To be the treatment noted that standards may also be developed privately by companies or by the plant? 12 industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standard operating procedure - which may follow the

government prescribed standards, but is

	Busi	ness Mo	odel 15: Co	-com	posting Pull Push Model
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
					not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for designing, operating and maintaining the treatment plant.
	If yes, are these procedures enforced and followed in the city?	Treat ment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the procedures are enforced and followed.
	Is there an institution with mandate to monitor the treatment plant's compliance to standard operating procedures?	Treat ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there adequate resources (financial and human) for regular inspection of treatment operations and compliance to standard operating procedures?	Treat ment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
13	Are there regulatory provisions for	Reuse	Mandator y		Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the reuse of

Business Model 15: Co-composting Pull Push Model SI. Value Mandato Questions Hints **Data Collection Protocol** Chain ry/ No. Optional treated end products legalizing reuse of treated end 2. Alternatively, conduct key informant products interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the reuse of treated end products. If yes, are Reuse Mandator Kindly conduct key informant interviews these with sector experts (government officials, У provisions engineers, NGO workers and activists, etc.) enforced in within the city to identify whether the rules and guidelines are enforced or not. the city? Is there an Reuse Mandator 1. Kindly refer to documents published by the institution with ministry and local government to check for mandate to roles and responsibilities of relevant institutions legalese reuse of treated end 2. Alternatively, conduct key informant products? interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions. If yes, does the Reuse Mandator 1. Kindly check the relevant institution's financial budget and check for the budget institution have enough allocated under the relevant budget heads. technical capacity to 2. Also check the budget allocation for the conduct previous years to understand how much is allocated for the particular task and how research on much is actually spent. potential reuse options for

treated faecal sludge?

Reuse

Mandator

У

Are there

reuse byproducts for a

14

standards

prescribing

the quality of

particular use?

1. Kindly refer to documents published by the

ministry and local government to check for

relevant standards prescribing the quality

2. Alternatively, conduct key informant interviews with sector experts (government

officials, engineers, NGO workers and activists, etc.) to identify relevant standards

for faecal sludge reuse products.

Business Model 15: Co-composting Pull Push Model SI. Value Mandato Questions Hints **Data Collection Protocol** Chain ry/ No. Optional prescribing the quality for faecal sludge reuse products. Kindly conduct key informant interviews If yes, are Reuse Mandator with sector experts (government officials, these У engineers, NGO workers and activists, etc.) standards within the city to identify whether the enforced in the city? standards are followed or not. Mandator Is there an Reuse 1. Kindly refer to documents published by the ministry and local government to check for institution with mandate to roles and responsibilities of relevant inspect the institutions quality of byproducts 2. Alternatively, conduct key informant interviews with sector experts (government generated for re-use? officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions If yes, are there Reuse Mandator 1. Kindly check the relevant institution's enouah financial budget and check for the budget resources allocated under the relevant budget heads. (financial and human) to 2. Also check the budget allocation for the carry out previous years to understand how much is regular/periodi allocated for the particular task and how c inspection? much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure. Is there an Other Mandator 1. Kindly refer to documents published by the institution with Institut ministry and local government to check for roles and responsibilities of relevant mandate for ional

FSM related

between institutions/sta

keholders?

coordination

15

Variab

les

institutions which works towards

ecosystem. Please note that such

strengthening the coordination between various stakeholders involved in the FSM

institutions can also be NGOs which works

	Business Model 15: Co-composting Pull Push Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
					towards enhancing coordination between stakeholders. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of the relevant institutions.				
	If yes, are there enough resources (financial and human) for FSM related coordination between institutions/sta keholders?	Other Institut ional Variab les	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.				

	Business Model 16: Non-Movable UDDT Model									
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol					
1	Are there standards for the construction of a particular type of On-Site Sanitation System (OSS)?	Contai nment	Optional		1. Kindly refer to documents published by the ministry and local government to check for standards specifying construction details of an on-site sanitation system. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company manufacturing prefabricated septic tanks will have their own specific standards - which may follow the					

Business Model 16: Non-Movable UDDT Model SI. Value Mandato **Questions** Hints **Data Collection Protocol** Chain No. ry/ Optional government prescribed standards but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify standards specifying construction details of an on-site sanitation system. If yes, are Contai Optional Kindly conduct key informant interviews these with sector experts (government officials, nment engineers, NGO workers and activists, etc.) standards within the city to identify whether the followed or enforced in standards are enforced and followed in the the city? city. If no. is there Contai Optional 1. Kindly refer to documents published by the an institution nment ministry and local government to check for roles and responsibilities of relevant with mandate for inspecting institutions. containment unit? 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions. Are there Contai Optional 1. Kindly refer to documents published by the regulations for nment ministry and local government to check for

relevant rules and quidelines for the

construction of an on-site sanitation

2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and

activists, etc.) to identify relevant rules and quidelines for the construction of an on-site

Kindly conduct key informant interviews with sector experts (government officials,

engineers, NGO workers and activists, etc.)

within the city to identify whether the rules

and guidelines are enforced or not.

system.

sanitation system.

improving

improperly

Sanitation System (OSS)?

If yes, are

regulations

enforced in the city?

these

Contai

nment

Optional

2

built On-Site

Business Model 16: Non-Movable UDDT Model SI. Value Mandato **Questions** Hints **Data Collection Protocol** Chain No. ry/ Optional Is there an Contai Optional 1. Kindly refer to documents published by the institution with nment ministry and local government to check for roles and responsibilities of relevant mandate for improving Oninstitutions. Site Sanitation System (OSS)? 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions. If yes, is there a Contai Optional 1. Kindly check the relevant institution's budgetary nment financial budget and check for the budget allocation for allocated under the relevant budget heads. improving (retrofitting/re 2. Also check the budget allocation for the development) previous years to understand how much is sub-standard allocated for this particular task and how On-Site much is actually spent. Sanitation System (OSS)? Are there Contai Optional 1. Kindly refer to documents published by the regulations nment ministry and local government to check for (rules/guidelin relevant rules and guidelines for issuing es) for issuing permits for the construction of an on-site permits for sanitation system. On-Site Sanitation 2. Alternatively, conduct key informant System (OSS) interviews with sector experts (government construction? officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for issuing permits for the construction of an on-site sanitation 3 system. If yes, are Contai Optional Kindly conduct key informant interviews these nment with sector experts (government officials, engineers, NGO workers and activists, etc.) regulations within the city to identify whether the rules enforced in the city? and guidelines are enforced or not. Is there an Contai Optional 1. Kindly refer to documents published by the ministry and local government to check for institution with nment

mandate for issuing permits

for On-Site

roles and responsibilities of relevant

institutions.

Business Model 16: Non-Movable UDDT Model SI. Value Mandato Hints Questions **Data Collection Protocol** Chain No. ry/ Optional Sanitation 2. Alternatively, conduct key informant System (OSS) interviews with sector experts (government construction? officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions. Contai Optional Are there 1. Kindly check the relevant institution's enough nment financial budget and check for the budget resources allocated under the relevant budget heads. (financial and human) to 2. Also check the budget allocation for the verify and previous years to understand how much is issue permits allocated for the particular task and how for On-Site much is actually spent. Sanitation System (OSS) 3. With respect to understanding the construction? institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure. Are there Collect Mandator 1. Kindly refer to documents published by the regulations ion ministry and local government to check for (rules/guidelin and relevant rules and guidelines for desludging es) for Conve of on-site sanitation systems desludging yance frequencies? 2. Alternatively, conduct key informant

If yes, is the

regulation

the city?

enforced in

Is there an

mandate

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institution with

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Mandator

Mandator

4

interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and

guidelines for desludging of on-site

Kindly conduct key informant interviews

with sector experts (government officials,

engineers, NGO workers and activists, etc.)

within the city to identify whether the rules

and guidelines are enforced and followed.

roles and responsibilities of relevant

2. Alternatively, conduct key informant

1. Kindly refer to documents published by the ministry and local government to check for

sanitation systems.

institutions

SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
	desludging frequency?				interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there enough resources (financial and human) and information) to enforce this?	Collect ion and Conve yance	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Is there a regulation for licensing of desludging operators and workers?	Collect ion and Conve yance	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for licensing of desludging operators and workers. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for licensing of desludging operators and workers.
5	If yes, is the regulation enforced in the city?	Collect ion and Conve yance	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for licensing desludging operators and workers?	Collect ion and Conve yance	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government).

Business Model 16: Non-Movable UDDT Model SI. Value Mandato Hints Questions **Data Collection Protocol** Chain No. ry/ Optional officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions. If yes does it Collect Optional 1. Kindly check the relevant institution's have the ion financial budget and check for the budget resources and allocated under the relevant budget heads. (financial and Conve human) 2. Also check the budget allocation for the yance required for previous years to understand how much is licensing allocated for the particular task and how desludging much is actually spent. operators and enforcing it on 3. With respect to understanding the ground? institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure. Are there Collect Optional 1. Kindly refer to documents published by the standard ministry and local government to check for ion operating and relevant standard operating procedures for procedures Conve desludging and transportation of faecal zone /time of yance sludge. To be noted that standards may operations. also be developed privately by companies or by the industry sector. Wherever required. accidents. spills, proper kindly also refer to sector specific standards disposal, (for e.g. a private desludging operator may record have their own specific standards - which keeping, route may follow the government prescribed planning) for standards, but is not limited to the desludging/tra government standards). 6 nsportation? 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standard operating procedures for desludging and transportation of faecal sludge. Collect If yes, are Optional Kindly conduct key informant interviews with sector experts (government officials, these ion engineers, NGO workers and activists, etc.) standards and

enforced in

the city?

Conve

yance

within the city to identify whether the rules

and guidelines are enforced and followed

	Business Model 16: Non-Movable UDDT Model							
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol			
	Is there an institution with mandate for monitoring of desludging operator's compliance to standard operating procedures?	Collect ion and Conve yance	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.			
	If yes, is there enough resources (financial and human) for monitoring of desludging operator's compliance to standard operating procedures?	Collect ion and Conve yance	Optional		1. Kindly check the relevant institution's financial budget and check the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.			
7	Is there regulatory provision for setting the desludging tariff?	Collect ion and Conve yance	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for setting the tariff for provision of desludging service. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for setting the tariff for provision of desludging service.			
	If yes, is the regulation enforced in the city?	Collect ion and Conve yance	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.			

	Business Model 16: Non-Movable UDDT Model								
SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol				
	Is there an institution with mandate for setting the desludging tariff?	Collect ion and Conve yance	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.				
8	Are there design standards for design, operation and maintenance of treatment facilities?	Treat	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standards - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for designing, operating and maintaining the treatment plant.				
	If yes, are these standards followed and enforced in the city?	Treat ment	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.				
	Is there an institution with mandate for monitoring design, operation and maintenance	Treat ment	Mandator y		Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions Alternatively, conduct key informant interviews with sector experts (government)				

SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
	of treatment facilities?				officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there resources (financial and human) for monitoring design, operation and maintenance of treatment facilities?	Treat	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Are there standards for effluent disposal?	Treat ment	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of effluent 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of effluent into the environment.
9	Are these standards enforced in the city?	Treat ment	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with the mandate for monitoring compliance to effluent disposal standards?	Treat ment	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the

Business Model 16: Non-Movable UDDT Model SI. Questions Value Mandato Hints **Data Collection Protocol** Chain No. ry/ Optional roles and responsibilities of relevant institutions If yes, are there Treat Mandator 1. Kindly check the relevant institution's resources financial budget and check for the budget ment (financial and allocated under the relevant budget heads. human) for monitoring 2. Also check the budget allocation for the compliance to previous years to understand how much is effluent allocated for the particular task and how disposal much is actually spent. standards? 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure. Are there Treat Mandator Here 1. Kindly refer to documents published by the standards for ment solid ministry and local government to check for У solids relevant standards for disposal of solids s or 2. Alternatively, conduct key informant disposal? biosolid interviews with sector experts (government officials, engineers, NGO workers and s refer activists, etc.) to identify relevant standards to prescribing the disposal of solids. dried faec al matt er 10 post treat ment If ves. are Treat Mandator Kindly conduct key informant interviews these with sector experts (government officials, ment У engineers, NGO workers and activists, etc.) standards within the city to identify whether the enforced in standards are followed or not. the city? Mandator Is there an Treat 1. Kindly refer to documents published by the ministry and local government to check for institution with ment У

mandate for

roles and responsibilities of relevant

	Business Model 16: Non-Movable UDDT Model							
SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol			
	monitoring compliance to solids disposal standards?				institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.			
	If yes, are there adequate resources (financial and human) for monitoring compliance to solid disposal standards?	Treat	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.			
11	Are there standard operating procedures for the treatment plant?	Treat ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standard operating procedure - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for designing, operating and maintaining the treatment plant.			

SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
	If yes, are these procedures enforced and followed in the city?	Treat ment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the procedures are enforced and followed.
	Is there an institution with mandate to monitor the treatment plant's compliance to standard operating procedures?	Treat ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there adequate resources (financial and human) for regular inspection of treatment operations and compliance to standard operating procedures?	Treat ment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
12	Are there regulatory provisions for legalizing reuse of treated end products	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the reuse of treated end products 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the reuse of treated end products.

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	If yes, are these provisions enforced in the city?	Reuse	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate to legalese reuse of treated end products?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, does the institution have enough technical capacity to conduct research on potential reuse options for treated faecal sludge?	Reuse	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.

Business Model 17: Container Based Sanitation Model

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
1	Are there standards for the constructi on of a particular type of On-Site Sanitation System (OSS)?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for standards specifying construction details of an on-site sanitation system. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company manufacturing pre-fabricated septic tanks will have their own specific standards - which may follow the government prescribed standards but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify standards specifying construction details of an on-site sanitation system.
	If yes, are these standards followed or enforced in the city?	Contain ment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are enforced and followed in the city.
	If no, is there an institution with mandate for inspecting containm ent unit?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
2	Are there regulation	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	s for improving improperl y built On- Site Sanitation System (OSS)?				relevant rules and guidelines for the construction of an on-site sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the construction of an on-site sanitation system.
	If yes, are these regulation s enforced in the city?	Contain ment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate for improving On-Site Sanitation System (OSS)?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there a budgetary allocation for improving (retrofittin g/redevel opment) sub- standard On-Site Sanitation System (OSS)?	Contain ment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for this particular task and how much is actually spent.

SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
	Are there regulation s (rules/gui delines) for issuing permits for On-Site Sanitation System (OSS) construction?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for issuing permits for the construction of an on-site sanitation system. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for issuing permits for the construction of an onsite sanitation system.
	If yes, are these regulation s enforced in the city?	Contain ment	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
3	Is there an institution with mandate for issuing permits for On-Site Sanitation System (OSS) construction?	Contain ment	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	Are there enough resources (financial and human) to verify and issue permits	Contain ment	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.

SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
	for On-Site Sanitation System (OSS) constructi on?				3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Are there regulation s (rules/gui delines) for desludgin g frequenci es?	Collecti on and Convey ance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for desludging of on-site sanitation systems 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for desludging of on-site sanitation systems.
	If yes, is the regulation enforced in the city?	Collecti on and Convey ance	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
4	Is there an institution with mandate towards enforcing the desludgin g frequency ?	Collecti on and Convey ance	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there enough resources (financial and	Collecti on and Convey ance	Mandator Y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	human) and informatio n) to enforce this?				allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Is there a regulation for licensing of desludgin g operators and workers?	Collecti on and Convey ance	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for licensing of desludging operators and workers. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for licensing of desludging operators and workers.
5	If yes, is the regulation enforced in the city?	Collecti on and Convey ance	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
5	Is there an institution with mandate for licensing desludgin g operators and workers?	Collecti on and Convey ance	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes does it have the resources	Collecti on and	Optional		Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads.

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	(financial and human) required for licensing desludgin g operators and enforcing it on ground?	Convey			2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
6	Are there standard operating procedure s (zone /time of operation s, accidents, spills, proper disposal, record keeping, route planning) for desludgin g/transpor tation?	Collecti on and Convey ance	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standard operating procedures for desludging and transportation of faecal sludge. To be noted that standards may also be developed privately by companies or by the industry sector. Wherever required, kindly also refer to sector specific standards (for e.g. a private desludging operator may have their own specific standards – which may follow the government prescribed standards but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standard operating procedures for desludging and transportation of faecal sludge.
	If yes, are these standards enforced in the city?	Collecti on and Convey ance	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed

SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
	Is there an institution with mandate for monitorin g of desludgin g operator's complian ce to standard operating procedure s?	Collecti on and Convey ance	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, is there enough resources (financial and human) for monitorin g of desludgin g operator's complian ce to standard operating procedure s?	Collecti on and Convey ance	Optional		1. Kindly check the relevant institution's financial budget and check the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
7	Is there regulatory provision for setting the	Collecti on and Convey ance	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for setting the tariff for provision of desludging service.

SI. No.	Questions	Value Chain	Mandato ry/ Optional	Hints	Data Collection Protocol
	desludgin g tariff?				2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for setting the tariff for provision of desludging service.
	If yes, is the regulation enforced in the city?	Collecti on and Convey ance	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced and followed.
	Is there an institution with mandate for setting the desludgin g tariff?	Collecti on and Convey ance	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
8	Are there design standards for design, operation and maintena nce of treatment facilities?	Treatme nt	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standards – which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
					designing, operating and maintaining the treatment plant.
	If yes, are these standards followed and enforced in the city?	Treatme nt	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with mandate for monitorin g design, operation and maintena nce of treatment facilities?	Treatme nt	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there resources (financial and human) for monitorin g design, operation and maintena nce of treatment facilities?	Treatme nt	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	Are there standards for effluent disposal?	Treatme nt	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of effluent 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of effluent into the environment.
	Are these standards enforced in the city?	Treatme nt	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
9	Is there an institution with the mandate for monitorin g complian ce to effluent disposal standards?	Treatme nt	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions
	If yes, are there resources (financial and human) for monitorin g complian ce to effluent	Treatme nt	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	disposal standards ?				the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
	Are there standards for solids disposal?	Treatme nt	Mandator y	Here solid s or biosolid s refer to dried faec al matt er post treat ment .	1. Kindly refer to documents published by the ministry and local government to check for relevant standards for disposal of solids 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards prescribing the disposal of solids.
10	If yes, are these standards enforced in the city?	Treatme nt	Mandator y		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the standards are followed or not.
	Is there an institution with mandate for monitorin g complian ce to solids disposal standards ?	Treatme nt	Mandator y		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	If yes, are there adequate resources (financial and human) for monitorin g complian ce to solid disposal standards?	Treatme nt	Mandator y		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
11	Are there standard operating procedure s for the treatment plant?	Treatme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for relevant standards for the design, operation and maintenance of treatment plant. To be noted that standards may also be developed privately by companies or by the industry sector. So wherever required, kindly also refer to sector specific standards (for e.g. a private company constructing a treatment plant and operating it, may have their own specific standard operating procedure - which may follow the government prescribed standards, but is not limited to the government standards). 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant standards for designing, operating and maintaining the
	If yes, are these procedure s enforced	Treatme nt	Optional		kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	and followed in the city?				to identify whether the procedures are enforced and followed.
	Is there an institution with mandate to monitor the treatment plant's complian ce to standard operating procedure s?	Treatme nt	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions. 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, are there adequate resources (financial and human) for regular inspection of treatment operation s and complian ce to standard operating procedure s?	Treatme nt	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent. 3. With respect to understanding the institution's human resource availability for the particular task, kindly check the organogram of the institution. Analyze the positions and the number of staffs as prescribed by the organogram to the existing staff structure.
12	Are there regulatory provisions	Reuse	Optional		Kindly refer to documents published by the ministry and local government to check for relevant rules and guidelines for the reuse of

SI. No.	Questions	Value Chain	Mandato ry / Optional	Hints	Data Collection Protocol
	for legalizing reuse of treated end products				treated end products 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) to identify relevant rules and guidelines for the reuse of treated end products.
	If yes, are these provisions enforced in the city?	Reuse	Optional		Kindly conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) within the city to identify whether the rules and guidelines are enforced or not.
	Is there an institution with mandate to legalese reuse of treated end products?	Reuse	Optional		1. Kindly refer to documents published by the ministry and local government to check for roles and responsibilities of relevant institutions 2. Alternatively, conduct key informant interviews with sector experts (government officials, engineers, NGO workers and activists, etc.) in the city to understand the roles and responsibilities of relevant institutions.
	If yes, does the institution have enough technical capacity to conduct research on potential reuse options for treated faecal sludge?	Reuse	Optional		1. Kindly check the relevant institution's financial budget and check for the budget allocated under the relevant budget heads. 2. Also check the budget allocation for the previous years to understand how much is allocated for the particular task and how much is actually spent.