

MSS Technology Assessment

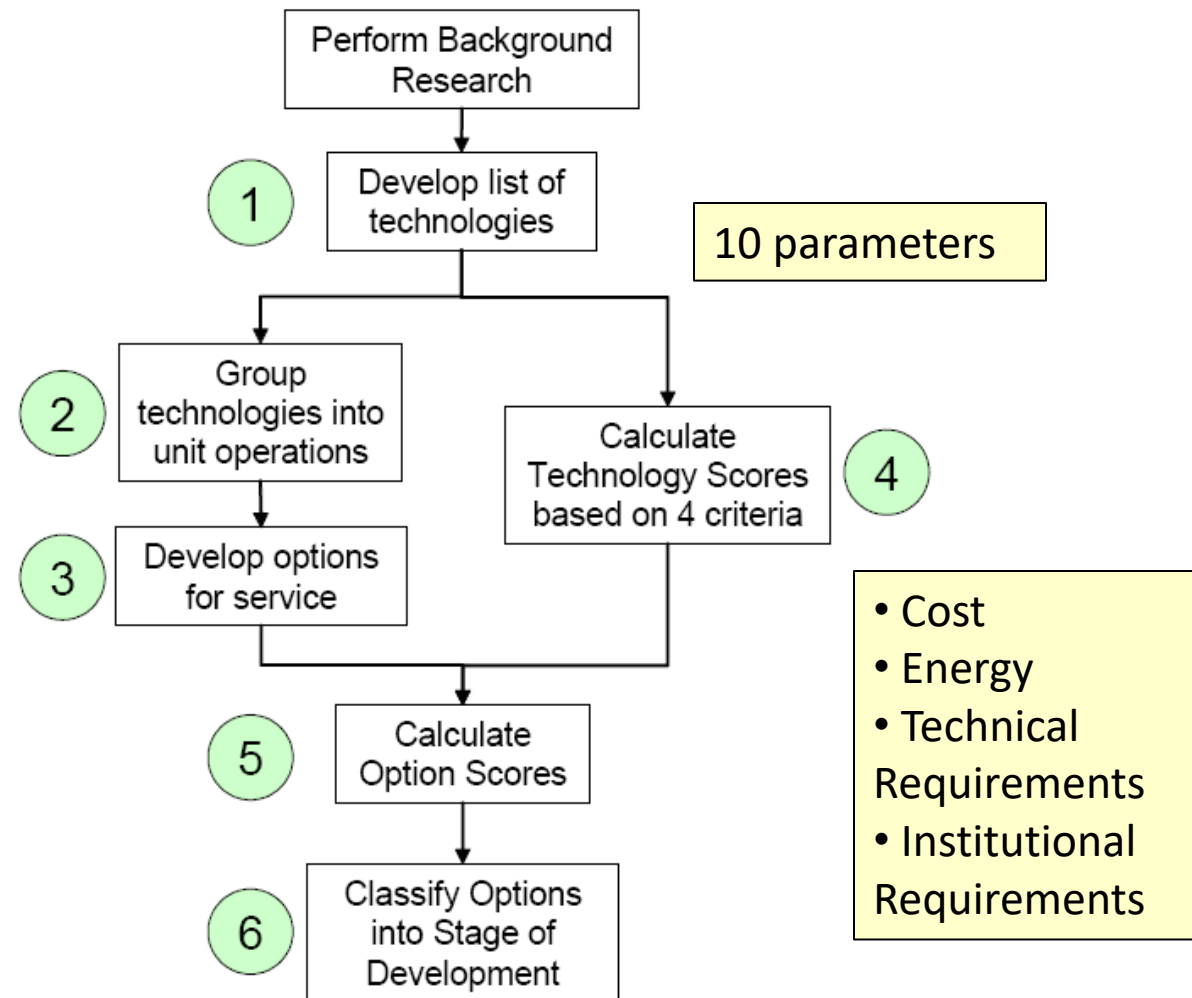


Figure 3-2: Flowchart Mapping Objectives to Options Classification

1. List of Technologies

- For each technology, 10 characteristics:
 - Description of Technology
 - Components
 - Schematics
 - Cost
 - Operation and Maintenance
 - Technical Knowledge
 - Environmental Impact
 - Cultural factors
 - Other factors
 - Sources

MSS Technology Assessment

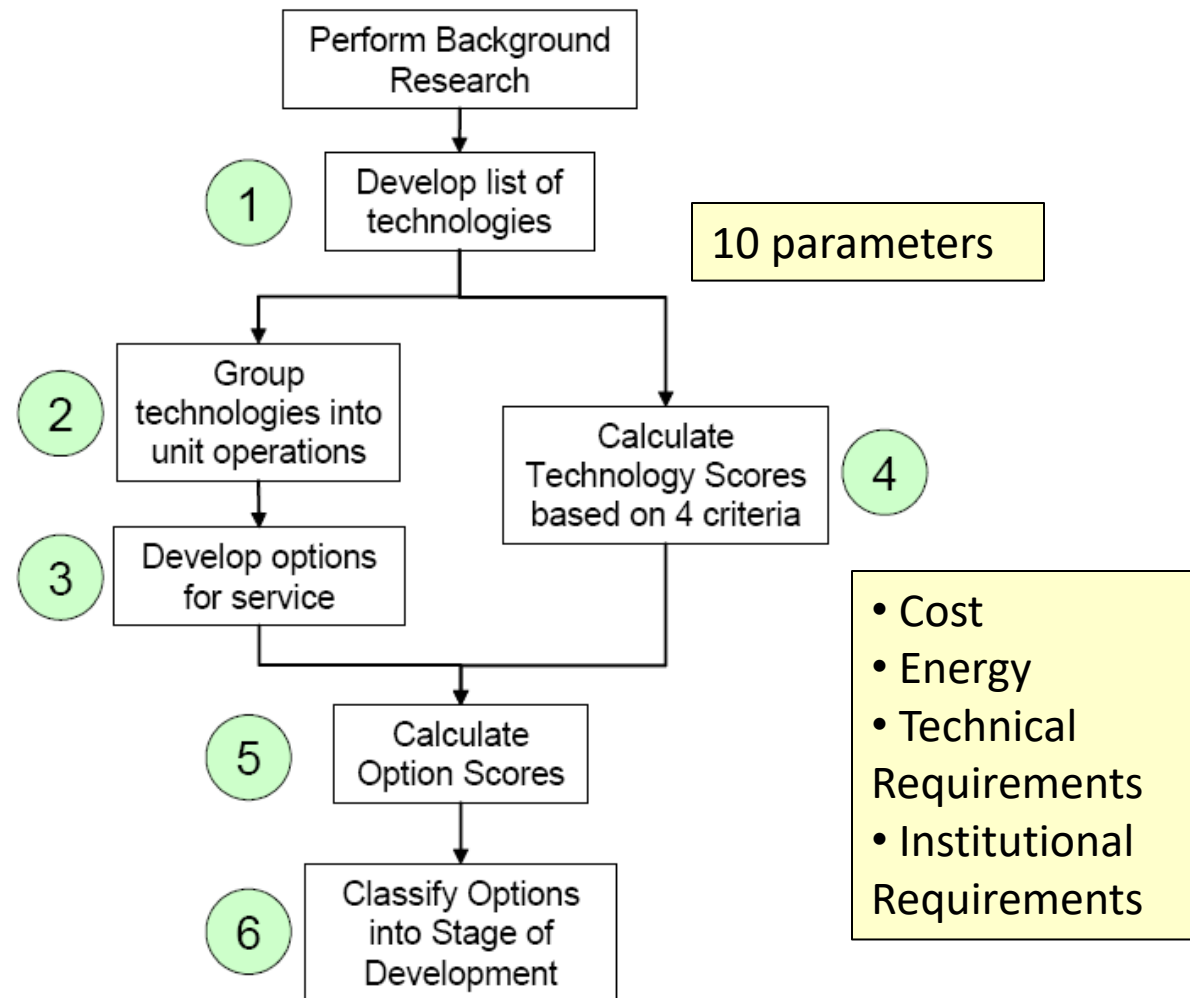


Figure 3-2: Flowchart Mapping Objectives to Options Classification

2&3. Drinking Water Supply

Source				Consumer
Source	Procurement	Storage	Treatment	Distribution
Rooftop water harvesting	Bucket	None	None	None
Ground level catchment	Handpump	Barrel	Chlorination	Household water connections
Subsurface Dam	Handpump - Deep well	Tank	Slow Sand Filter	Piped water (gravity)
Surface water abstraction	Rope and bucket w/ windlass	Reservoir	Boiling	Piped water (pumped)
Spring water captation	Motorized pump	Cistern	Ultraviolet light	
Hand dug well	Standpost			
Drilled well				

7 x 6 x 5 x 5 x 4 = 4200 combinations (service options)

No	Source	Procurement	Storage	Treatment	Distribution
1	Rooftop water harvesting	Bucket	None	None	None
2	Rooftop water harvesting	Bucket	None	None	Household water connections
3	Rooftop water harvesting	Bucket	None	None	Piped water (gravity)
4	Rooftop water harvesting	Bucket	None	None	Piped water (pumped)
5	Rooftop water harvesting	Bucket	None	Chlorination	None
6	Rooftop water harvesting	Bucket	None	Chlorination	Household water connections
7	Rooftop water harvesting	Bucket	None	Chlorination	Piped water (gravity)
8	Rooftop water harvesting	Bucket	None	Chlorination	Piped water (pumped)
9	Rooftop water harvesting	Bucket	None	Slow Sand Filter	None
10	Rooftop water harvesting	Bucket	None	Slow Sand Filter	Household water connections
11	Rooftop water harvesting	Bucket	None	Slow Sand Filter	Piped water (gravity)
12	Rooftop water harvesting	Bucket	None	Slow Sand Filter	Piped water (pumped)
13	Rooftop water harvesting	Bucket	None	Boiling	None
14	Rooftop water harvesting	Bucket	None	Boiling	Household water connections
15	Rooftop water harvesting	Bucket	None	Boiling	Piped water (gravity)
16	Rooftop water harvesting	Bucket	None	Boiling	Piped water (pumped)
17	Rooftop water harvesting	Bucket	None	Ultraviolet light	None
18	Rooftop water harvesting	Bucket	None	Ultraviolet light	Household water connections
19	Rooftop water harvesting	Bucket	None	Ultraviolet light	Piped water (gravity)

Wastewater and Sewage (WWS)

Collection	Transfer	Treatment	Disposal
None	None	None	Burial
Bucket	Small bore/Settled sewerage	Constructed wet lands	Composting
Vault/Cartage	Simplified Sewerage	Soil aquifer treatment	Pit Privy
Septic Tank	Conventional Sewerage (Drainage Field)	Oxidation ditch	Ventilated improved pit latrine
		Rotating biological contractor	Double-vault compost latrine
		Trickling filters	Aqua Privy
		Upflow anaerobic sludge blanket	Pour Flush Toilet
		Activated sludge process	Cistern-Flush Toilet
		Stabilization Ponds	Drainage Field

No	Collection	Transfer	Treatment	Disposal
1	None	None	None	Burial
2	Bucket	None	None	Burial
3	Vault/Cartage	None	None	Burial
4	None	None	None	Composting
5	Bucket	None	None	Composting
6	Vault/Cartage	None	None	Composting
7	Bucket	None	None	Pit Privy
8	Vault/Cartage	None	None	Pit Privy
9	Bucket	None	None	Ventilated improved pit latrine
10	Vault/Cartage	None	None	Ventilated improved pit latrine
11	Bucket	None	None	Double-vault compost latrine
12	Vault/Cartage	None	None	Double-vault compost latrine
13	Vault/Cartage	None	None	Aqua Privy
14	None	Drainage Field	None	Aqua Privy
15	Septic tank	Drainage Field	None	Aqua Privy
16	Septic tank	Small bore/Settled sewerage	Constructed wet lands	Aqua Privy
17	Septic tank	Small bore/Settled sewerage	Soil aquifer treatment	Aqua Privy
18	Septic tank	Small bore/Settled sewerage	Oxidation ditch	Aqua Privy

Municipal Solid Waste (MSW)

Storage	Transfer	Disposal	Recovery
None Household bin Communal bin	None Human power Animal power Non-compactor Trucks Compactor Trucks	None Waste discarded at source Open burning Open Dumps Controlled Dumps Sanitary Landfilling Incineration	None Composting Refuse Derived Fuel Pyrolysis Recycling/Reuse

No	Storage	Transfer	Disposal 1	Disposal 2	Recovery 1	Recovery 2
1	None	None	Waste discarded at source	None	None	None
2	Household bin	None	Waste discarded at source	None	None	None
3	Communal bin	None	Waste discarded at source	None	None	None
4	Household bin	None	Open burning	None	None	None
5	Communal bin	None	Open burning	None	None	None
6	Household bin	None	Open Dumps	None	None	None
7	Communal bin	None	Open Dumps	None	None	None
8	Household bin	None	Open Dumps	Open burning	None	None
9	Communal bin	None	Open Dumps	Open burning	None	None
10	Household bin	None	Controlled Dumps	None	None	None
11	Communal bin	None	Controlled Dumps	None	None	None
12	Household bin	None	Controlled Dumps	Open burning	None	None
13	Communal bin	None	Controlled Dumps	Open burning	None	None
14	Household bin	None	Open Dumps	None	Composting	None
15	Communal bin	None	Open Dumps	None	Composting	None
16	Household bin	None	Open Dumps	None	Recycling/Reuse	None
17	Communal bin	None	Open Dumps	None	Recycling/Reuse	None
18	Household bin	None	Open Dumps	None	Recycling/Reuse	Composting
19	Communal bin	None	Open Dumps	None	Recycling/Reuse	Composting