Expression from the Technology Library	Corresponding expressions in the table below
“d-“	Pdf (Probability density function)
“p-“	Performance
“cat”	Categorical
“range”	Uniform
“Scale”	Units

No.	Attribute name	Description	Case question and *Function(s)*	Technology question and *Function(s)*	Units
1	Water supply	Used if the technology requires water to work. The attribute applies only to technologies where water enters the system and not if it comes from a precedent technology (e.g. it applies to a flush toilet, but not to a sewer).	What type of water supply is available in the case?	How does the technology perform at a given water supply?	Categories (based on location of access): a-house b-yard c-public d-none
			Function(s): Pdf, Categorical	*Function(s)*: Performance, Categorical	
2	Energy supply	Used if electricity is essential for the technology (this includes electricity for possible features used during operation, e.g. pumps)	How many hours a day is electricity available at the household or facility level?	How does the technology perform at a given energy availability?	[hours/day]
			Function(s): Pdf, Uniform	*Function(s)*: Performance, Triangle/ Performance, Trapez	
3*	Water supply disruption	Used, if the technology uses the attribute "water supply"	How often does the water supply interrupt at the household level?	How does the technology perform at a specific water supply disruption?	frequency [hours/day, hours/week or hours/month] (e.g. 2h per week)
			Function(s): Pdf, Uniform/ Pdf, Categorical	*Function(s)*: Performance, Uniform/ Performance, Categorical	
4*	Power supply disruption	Used, if the technology uses the attribute "energy supply"	How often does the energy supply interrupt in a household?	How does the technology perform at a specific energy supply disruption	frequency [hours/day, hours/week or hours/month] (e.g. 2h per week)
			Function(s): Pdf, Uniform/ Pdf, Categorical	*Function(s)*: Performance, Uniform/ Performance, Categorical	

5	Frequency of O&M	Used, if the technology needs human labour for operation and maintenance (O&M).	How feasible is it to find O&M labour for a specific workload?	How many days of O&M are required to ensure performance of at household level?	[days/year/tech] or [days/ month/tech]
			Function(s): Performance, Uniform	*Function(s)*: Pdf, Triangle/ Pdf, Uniform	
6	Temperature range	Used, if the temperature can have an effect on the functionality of the technology.	What is the daily average temperature during one year?	How does the technology perform at a given temperature?	degree Celsius [°C]
			Function(s): Pdf, Triangle	*Function(s)*: Performance, Uniform/ Performance, Trapez/ Performance, Triangle	
7	Flooding	Used, if flooding damages or compromises the technology.	How high are flooding levels at households or the facility?	What is the technology performance given a certain flooding height?	water height [cm]
			Function(s): Pdf, Uniform	*Function(s)*: Performance, Trapez	
8	Vehicular access	Used, if the technology needs to be accessible with a vehicle for O&M	What is the width of the access roads to the technologies?	How feasible is access to the technology given a certain road width?	street width [m]
			Function(s): Pdf, Trapez	*Function(s)*: Performance, Trapez	
9	Slope	Used, if the slope has an impact on the functionality of the technology.	What is the slope distribution in the settlement?	How does the technology perform if implemented on a specific slope?	[%]
			Function(s): Pdf, Triangle	*Function(s)*: Performance, Trapez	
10	Soil type/ hydraulic conductivity	Used, if the type of underlying soil or the hydraulic conductivity has an impact on the functionality of the technology.	What is the soil type in the case-area?	How appropriate is the technology given a specific soil type/permeability?	Categories: a=clay b=silt c=sand d=gravel
			Function(s): Pdf, Categorical	*Function(s)*: Performance, Categorical	
11	Groundwater depth	Used, if the technology is directly influenced by the groundwater table	What is the groundwater depth at the households or the facility?	How appropriate is the technology given a groundwater depth?	water depth [m]
			Function(s): Pdf, Trapez	*Function(s)*: Performance, Trapez/ Performance, Uniform	
12	Excavation	Used, if the technology requires excavation.	How much of the area is easy/difficult to excavate?	How easy/difficult is excavation for this technology?	Categories: 1-easy 2-hard
			Function(s): Pdf, Categorical	*Function(s)*: Performance, Categorical	
13*	Population density	Describes how urbanised the area is.	What is the population density in this area?	What population density can be supported with this technology?	persons/km2
			Function(s): Pdf, Uniform	*Function(s)*: Performance, Uniform	

14	Construc-tion skills	Describes the type of professions needed for the construction of this technology. Used for all technologies besides irrigation and surface water disposal.	What levels of professions for construction are available in this area?	What level of professions are needed for the construction of this technology?	Categories: 1-none 2-mason 3-specially trained mason 4-construction engineer 5-supervisor
			Function(s): Performance, Trapez	*Function(s)*: Pdf, Triangle	
15	Design skills	Describes the type of professions which is needed for the design of this technology. Used for all technologies.	What levels of professions for design are available in this area?	What levels of professions are needed for the design of this technology?	Categories: 1-none 2-unskilled labour 3-mason 4-specially trained mason 5-planning engineer 6-supervisor
			Function(s): Perfor-mance, Trapez	*Function(s)*: Pdf, Triangle	
16	O&M skills	Describes the type of professions which is needed for the O&M of this technology. Used for all technologies.	What level of professions for O&M are available in this area?	What level of professions are needed for the O&M of this technology?	Categories: 1-none 2-unskilled labour 3-specially trained labour 4-technician 5-supervisor 6-administrator 7-engineer 8-scientist
			Function(s): Perfor-mance, Trapez	*Function(s)*: Pdf, Triangle	
17	Manage-ment	Describes the manage-ment level that is needed. Used for all technologies.	What kind of management is possi-ble/preferred?	How appropriate is the technology given a certain management level?	Categories: 1-household 2-shared 3-public
			Function(s): Pdf, Categorical	*Function(s)*: Performance, Categorical	
18*	Pipe supply	Used, if pipes are essential for this technology	How available are pipes of a specific diameter?	What pipe diameters are used percentagewise in the technology?	diameter [cm]
			Function(s): Pdf, Uniform/ Pdf, Categorical	*Function(s)*: Performance, Uniform/ Performance, Categorical	
19*	Pump supply	Used, if the pumps are essential for this technology	How available are pumps of a specific pumping capacity?	What pumps are used percentage-wise in the technology?	Categories (based on power): 1-small 2-medium 3-high
			Function(s): Pdf, Continuous/ Pdf, Categorical	*Function(s)*: Performance, Continu-ous/ Performance, Categorical	
20*	Concrete supply	Used, if concrete is essential for this technology	How much concrete is available in one year? How accessible is concrete?	How much concrete is needed for this technology? [tonnes/household] How applicable is this technology with/ without concrete?	[t]
			Function(s): Pdf, Uniform/ Pdf, Categorical	*Function(s)*: Performance, Uniform/ Performance, Categorical	

21	Spare parts supply	Describes the possibility of replacing broken parts of the technology. Used for all technologies.	How accessible are spare parts of each category?	What parts are most likely to break?	Categories: 1- low-tech 2- technical parts 3- specially manufactured
			Function(s): Performance, Categorical	*Function(s)*: Pdf, Categorical	
22*	Surface area	Refers to the plot area available at each household or construction site. Used, if space is "consumed" by this technology. Use two different attributes for on-site and (semi-) centralised technologies.	How much surface area (m2) is available between the houses or at the facility site?	How much area is needed for this technology (m2)?	[m2/household]
			Function(s): Pdf, Continuous/ Pdf, Uniform	*Function(s)*: Performance, Continuous	
23*	Potential to accommodate for changing water volumes	Use, if the technology interacts with water	How likely is an increased water volume?	How good does the technology perform given an increased water volume?	[l/capita/day]
			Function(s): Pdf, Uniform/ Pdf, Categorical	*Function(s)*: Performance, Uniform/ Performance, Categorical	
24*	Potential to accommodate for changing pollution load	Used, if the technology interacts with the pollution load	How likely is an increased pollution load?	How good does the technology perform given an increased pollution load?	BOD5 [mg/cap/day]
			Function(s): Pdf, Uniform/ Pdf, Categorical	*Function(s)*: Performance, Uniform/ Performance, Categorical	
25*	User awareness requirements (misuse)	Describes how respectful the people are towards sanitation technologies (proper use). Hereby, we are not considering the workers (O&M), but only the users of the technology. Used, if users have direct access to the technology	How likely are people to misuse a sanitation facility?	How does the technology perform under misuse?	Categories: 1-use as designed for 2-insufficient maintenance 3-occaisional disposal of small things 4-continuous disposal of waste 5-blocking through abnormal use 6-destruction
			Function(s): Pdf, Uniform	*Function(s)*: Performance, Uniform	

26*	Cleansing method	Describes what type of cleaning is recommended, only used for the user interface	What percentages of the population are comfortable with which cleansing method?	How applicable is each cleansing method for this technology?	Categories: 1- water 2- soft
			Function(s): Pdf, Categorical	*Function(s)*: Performance, Categorical	
27*	Odour	Refers to the odour to which the user/public is exposed during operation (not while maintenance) of a well-maintained technology	What level of odour is tolerated by the population?	How likely is a specific level of odour to occur at a household from this technology?	Categories: 1-no odour 2-few hours per month 3-few hours per week 4-few hours per day 5-contineous smell
			Function(s): Performance, Uniform	*Function(s)*: Pdf, Uniform	