

Protocol for workshops

Table S3: Protocol for guiding the process of precise question articulation, given a sustainability-oriented problem definition (opportunity).

Part	Goals	Example activity
Evaluation of context and role of sustainability within the context	<p>Get insight in the context of the assessment.</p> <p>Participants get insight in how each of the stakeholders views the situation.</p> <p>Participants get insight in the context of the sustainability assessment (it is not something on its own).</p> <p>Participants get insight in their own- and the other's views on sustainability.</p>	<p>Introduce yourself and use an object you identify with sustainability.</p> <p>Find one or two persons you do not know very well and interview each other on what makes proud or angry concerning the situation.</p> <p>Brainstorm individual on what you would like to see solved within your organization.</p> <p>Write all individual results on separate papers and cluster them together.</p> <p>Discuss which of the clusters are sustainability questions and why.</p>
Question articulation	Specify the question and define sustainability such that a (set of) methods can be defined that matches the question.	<p>Go into groups of 6-8 participants, with one process manager and someone that makes notes. Drop the central question and try to answer the underlying types of questions in Table S4 together. Try give one concrete answer. When there is an argument on what should be the answer score both answers as appropriate. When all groups are finished present each other the results and discuss differences. Try to harmonize the results. When this seems not possible leave the different options open.</p>
Search for a (combination of) pertinent method(s)	<p>Select a (set of) method(s) and refine it.</p> <p>Make an action plan on the route towards a decision.</p>	<p>Use the outcomes of the question articulation to fill in the tool.</p> <p>Discuss the resulting methods (an expert can present the different methods). Do the different options left open in the previous round result in different methods or not? Is there one method that fits all requirements or is a combination required?</p> <p>Make a timeline: when are the assessment results necessary and who are expected to use the results. Plan back who should be involved then and when the different phases of an SA should take place (goal/scope definition, inventory, impact assessment, interpretation etc.) and who should be involved in the different phases. Use also the questions and answers of Table S4, i.e. question 1 and 8.</p>
Optionally: Refine method selection	Check if selection can be executed and based on that refine method selection.	Of the selected (combination of) method(s) find out what the data, expertise and model (software) requirements are and, if necessary, adjust the design according to your findings, in accordance with the participants of the question articulation phase.

Table S4: Questions for the question articulation phase. Question 2 to 7 are also asked in the online tool and used to select a sustainability assessment method.

No.	Question
1	What is the goal of the assessment? Where should the assessment contribute to?
2	What is the central object of the question (a product, product group, organization, ...)?
3	What is the technical readiness level of the object (lab, development, pilot, commercial)?
4	What is the spatial scale the question focusses on (local, regional, national, global)?
5	What is the temporal scale the question focusses on (present, past, close future, far future)?
6	Which parts of the life cycle should be included?
7	Which sustainability themes are important to include in the assessment?
8	Which stakeholders that are not yet involved should be involved in this case study?
9	Will they have another view on the questions above then you just answered?
