

Scenario integration

Using scenario planning, this tool allows for collectively drafting possible future developments of a societal challenge.

What is the scenario integration workshop?	<p>The scenario integration tool uses qualitative and quantitative elements of scenario planning to collectively draft possible developments of a societal challenge. It is typically applied in a structured one-day workshop.</p> <p>The tool is suitable for use by heterogeneous groups of experts with diverse disciplinary backgrounds as well as various societal actors.</p>
Why should it be applied?	<p>In future or transition-oriented research projects, questions about possible developments abound. To accommodate qualitative and quantitative thought styles for generating such future outlooks, a platform and language for exchange and interaction are necessary.</p>
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How does it work?	<p>We suggest to organize the tool as group workshop of one day along the following steps:</p> <ol style="list-style-type: none"> 1) The facilitator introduces the objective of the workshop as well as the rationale and core terms of scenario planning. 2) The participants discuss and define specific system boundaries. 3) The participants collect and roughly structure a first set of impact variables. These variables are used to characterise the societal challenge and its future development. (Participants have to be asked to collect these individually when preparing the workshop). 4) The participants split into two groups (try to balance members of different subprojects, if applicable). <p>Group 1 further sorts und structures impact variables and defines for each impact variable the range of values that characterise a future development (projections – make sure that all variables are “owned”, i.e. determinable by at least one of the participants).</p> <p>Group 2 intuitively develops various visions of future developments and describes these visions in a crisply and well understandable text or picture.</p> 5) In the plenary: the two groups mutually present their results and answer questions of clarification. 6) Continuation in the two groups: <p>Group 1 tries to represent the visions of Group 2 as scenarios with impact variables and respective values; in doing so they try to detect incongruences between visions and gaps in their variables-based descriptions.</p>

Group 2 compares its visions with the impact variables and values provided by Group 1; in doing so they check whether the visions are diverse, i.e. cover impact variables with different values. In addition, they identify impact variables or values that are important for describing their visions but are missing.

- 7) In the plenary: the two groups mutually present their results, answer questions of clarification and discuss the following points:
- What adaptations in the visions are necessary to get comparable but distinct scenarios?
 - What adaptations in the impact variables and their possible values are necessary to adequately describe all scenarios?
 - Is the set of visions or scenarios complete, or should additional ones be constructed?

Follow-up:

It is recommended to clarify how the scenarios are going to be used by the different researchers or subprojects.

The developed scenarios can later be assessed by various methods and likewise strengths and weaknesses of different futures can be explored, all guiding the elaboration of adequate strategic actions.

How are thought styles bridged?	The scenario integration tool bridges qualitative visioning with quantitative modelling approaches. It offers both a platform (typically a full day of joint work) and a language (e.g. impact variables, values, consistency) which allow different thought collectives to communicate and exchange knowledge with each other.
What's the output/outcome?	At the end of the workshop a reasonably complete draft of a set of different scenarios should be available. All scenarios should be on the same level of abstraction and describe various possible future developments of a societal challenge using the same set of variables to which different values are assigned. Further, it should be clear who finalises these scenarios after the workshop. An agreement that all researchers (or subprojects) are using the developed scenarios in their subsequent research steps may be helpful. At the process level, an improved mutual understanding between the project team members will be achieved.
Who participates in what role?	All researchers involved, or at least one researcher representing each subproject, respectively, plus relevant societal actors should participate. Care should be taken when societal actors are invited: they should be familiar or willing to work with the abstract language of "impact variables" and "values of impact variables". Alternatively, the views of societal actors can be collected separately in form of narratives, storylines or visions. One or two facilitators are necessary to introduce scenario planning, moderate plenary sessions and assist in the working group sessions.
What do I need to prepare?	Invite all research team members or representatives (preparatory homework for all: individually collect possible impact variables), secure enough time (full day), organise a suitable room (big enough to allow work in subgroups in the same room), prepare material for group facilitation (cards, white board, flipcharts, enough pens, etc.).
When not to use the method?	The tool is useful in future oriented, prospective studies. It should not be used when disagreement about the aim and scope of building scenarios exist.
Where can I learn more?	Selected references: <ul style="list-style-type: none"> • Gausemeier J, Fink A, Schlake O 1998. Scenario Management: An Approach to Develop Future Potentials. <i>Technological Forecasting and Social Change</i>, V59, N2, pp 111-130. • Schoemaker P J H 1995. Scenario planning: A tool for strategic thinking. <i>Sloan Management Review</i>, V36, N2, pp 25-40. • Von Wirth T, Wissen Hayek U, Kunze A, Neuenschwander N, Stauffacher M, Scholz R W 2014. Identifying urban transformation dynamics: Functional use of scenario techniques to integrate knowledge from science and practice. <i>Technological Forecasting and Social Change</i>, V89, pp 115-130. <p>Check the online profile on www.transdisciplinarity.ch/toolbox for updated resources (e.g. most recent publications, experience reports, videos, links).</p>

Suggested citation

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SDGs: The International Sustainable Development Goals of the UN

In this publication, the Swiss Academies of Arts and Sciences make most notably a contribution to SDGs 4, 16, 17:

> sustainabledevelopment.un.org

> eda.admin.ch/agenda2030/en/home/agenda-2030/die-17-ziele-fuer-eine-nachhaltige-entwicklung.html

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