

Participatory foresight tools for Inter- and Transdisciplinary Research

Introduction



This guide introduces a range of participatory foresight tools which can be used as part of inter-and transdisciplinary research focused on societal challenges. It also highlights ways in which the arts humanities and social sciences can contribute to such approaches

Summary

Cross-cutting, highly complex and interconnected problems demand interdisciplinary research and innovation to produce solutions shaped by the needs and aspirations of a range of societal actors. Foresight is a group of methods for exploring, anticipating and shaping the future (EC, 2020) using techniques of structured debate to analyse possible developments around complex issues such as low carbon transport or democratic urban planning.

Foresight techniques aim to bridge scientific and humanistic knowledge and future-proof policymaking. Ideally, they improve governments' capacity to deal with new challenges and opportunities and helps them spurring reflective thinking and design strategies according to different scenarios (OECD, 2019). Participatory foresight offers a process to catalyse experts' and stakeholders' expertise together with tacit and collective knowledge, thereby providing crucial insights in a reflexive and strategic foresight process embracing researchers, citizens and policymakers. Participatory foresight methods can be used to co-create a shared understanding of the future where collective thinking shapes policies and guides research and innovation (Gudowsky and Peissl, 2016).

Since they analyse human behaviours and values, the expertise of Arts Humanities and Social Sciences (AHSS) disciplines should be key resources for such activities. A [SHAPE-ID Guide](#) to the different roles that the Arts Humanities and Social Sciences can play in inter-and transdisciplinary research explains these contributions in more detail. It explains, for example, that one core AHSS competency is the analysis of narratives and representations of complex societal issues. Such narrative analysis provides greater understanding of the framing concepts and norms embedded in such accounts. Deeper reflexivity combined with the understanding provided by AHSS disciplines makes it possible to reframe problems and their potential solutions by providing alternative models of the present and the future.

Additional research is still necessary to further integrate established forms of academic knowledge with stakeholders' and citizens' expertise. Nevertheless, this guide briefly describes foresight methodology and the main models for citizens engagement as tools to boost the impact of inter- and transdisciplinary research. The foresight process usually includes the following steps:

Horizon scanning

This activity systematically examines current trends, drivers, weak signals as well as potential wild cards and/or black swans. Once the research focus is defined, specific methods can be selected and information sources scanned. Among the available [techniques](#), some - like desk research and literature reviews - are purely analytic, whereas others - including [Delphi consultations](#), [workshops](#) and expert panels - are more participatory. The resulting identified factors are often clustered based on [STEEP¹ criteria](#) which rank them according to their impact and uncertainty. Those factors considered most impactful, as well as most uncertain, are then selected to build the scenarios.

Scenario building

[Scenarios](#) are descriptions of alternative and plausible futures. Scenarios can be sectoral (the future of a smart grid) or general (the future of energy). The storyline of the scenarios is highly dependent on the territorial scale adopted by the exercise (European versus city/neighbourhood). In addition, the time horizon of the process also influences the character of particular scenarios. Corporate foresight usually adopts a shorter time horizon (10-15 years). Conversely, policy exercises focus generally on a longer time frame (20-30). Scenarios explore the interconnection among factors to identify those drivers/critical uncertainties able to trigger changes among the factors scanned. Scenarios are described in a narrative fashion and often visualised by artistic and creative products, like graphics and videos. AHSS expertise is therefore crucial in developing believable and compelling scenarios. By identifying how strategic and uncertain factors might develop, the scenario building process invites experts and stakeholders to reflect upon dynamics of change and consider how today decisions might create long-term lock-in to particular futures.

Visioning

This step aims to define a common set of goals and objectives to outline a desirable future. The outputs from the earlier steps can be presented as a stimulus to the conversation, or it can be run as a standalone activity. It is important to manage and clarify participants' expectations and encourage them to be aspirational and not held back by the current reality. An unrealistic or impractical vision can be revised through a [SWOT analysis](#) or other [stress-testing techniques](#). Besides building a shared sense of purpose, the final aim of this step is to identify plausible scenarios, and agree on targets and goals to measure the scale of change required to achieve the desired vision (the "future we want"). Consensus can also be achieved by including - if necessary - statements about divergences that emerged in the debate.

Back casting

This is a method for determining the steps that need to be taken in order to deliver the preferred future. Participants work backwards from the future to effectively connect with the present, describing how a range of actions can be combined over time to shape future developments. Different techniques, like [morphological](#) or

¹ Social, Technological, Economic, Ecological, Political.

[multi-criteria analysis](#), can be applied to build a timeline that visually describes key events and breaking points. It is important to understand what lies within the control of participants – something they can contribute to change – and what is out of their control, in which case is also important to identify agents outside the group who can assist in achieving the preferred future.

Citizen engagement

[Innovative Citizen Participation and New Democratic Institutions](#) (OECD, 2020) illustrates many citizens engagement approaches. Here some of the most significant examples are briefly described.

1. Citizen Juries and Panels

This is the most widely adopted model of representative and deliberative approaches and there is also one institutionalised example of an ongoing panel – the [Toronto Planning Review Panel](#). All levels of government have introduced Citizens' Juries and Panels to address a broad range of policy issues, from health problems to urban planning. This approach has been combined with a wide range of citizens engagement approaches (surveys, focus group etc), which can be classified into three main types:

- meetings that have taken place over consecutive days (3 or 4 on average);
- face-to-face processes for a limited number of days over 4 or 5 weeks;
- an ongoing panel with regular meetings over 2 years.

On average groups of approximately 30 citizens are randomly selected in order to discuss, deliberate and agree on final recommendations about specific topics.

2. Citizen Dialogues

This is a two-day deliberative process where citizens address various policy topics, often several at once, to provide their ideas or feedback statements. The size of people involved can vary greatly, usually a large groups of roughly 150 citizens. Usually, they have an initial learning stage where citizens listen to experts and discuss with politicians. The deliberation meeting typically lasts for two days over 4 weeks. The Beltane public engagement network of Scottish Universities has produced a [short guide](#) for organisers of such events.

3. Citizen Initiative Reviews

This method has been developed in the early 2000s and institutionalised in the US State of [Oregon](#). The final goal is to provide policymakers with citizens' evaluation of specific measures. Approximately 20 citizens are involved for four consecutive days of face-to-face meetings, where:

- they participate to a training programme on fundamental principles of the deliberative process
- they question campaigners and independent experts to assess the evidence provided by policymakers
- focus groups evaluate costs, benefit and trade-off of the proposed measure, prioritising all the reviewed evidence.

Shaping interdisciplinary practices in Europe

- finally, citizens publically present a collective statement where they explain what they consider to be the strongest evidence for and against the measure.

4. City Observatories

This permanent deliberative body was implemented in Madrid City Council in 2019. Governing politicians and civil servants collect and analyse citizens' opinions and proposals submitted online, as well as developing their own proposals. An additional local referendum is used to determine which collective recommendations are suggested to governmental institutions. The City Observatory meets about eight times each year and so creates up significant opportunities for citizens' to participate in the City Councils agenda-setting and decision-making processes.

Further Resources

- ▣ SHAPE-ID Deliverable 3.1: [Matrix for integration of learning cases and framework of analysis](#)
- ▣ SHAPE-ID Deliverable 3.2: [Report of workshops and analysis of IDR/AHSS integration learning cases](#)
- ▣ SHAPE-ID Deliverable 3.3: [Recommendations and Measures to Maximise IDR Impact on Society](#)
- ▣ European Commission (2020) [2020 Strategic Foresight Report – Charting the course towards a more resilient Europe.](#)
- ▣ Gudowsky N., and Peissl W. (2016) [Human centred science and technology—transdisciplinary foresight and co-creation as tools for active needs-based innovation governance](#)
- ▣ OECD (2019) [Strategic Foresight for Better Policies. Building Effective Governance in the Face of Uncertain Futures](#)
- ▣ OECD (2020) [Innovative Citizen Participation and New Democratic Institutions](#)
- ▣ UK Government Office for Science (2017) [The Futures Toolkit: Tools for Futures Thinking and Foresight across UK Government](#)

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