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Engaging With Citizens

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Key takeaways:

- Citizen engagement is a vital component of Science for Policy 2.0. It opens the science for policy relationship towards more participatory approaches, with diverse publics being meaningfully included in complex matters that concern them.
- Citizen engagement goes beyond consultations, educational efforts or tools for persuasion of the public. It is a two-way relationship of learning and reflexivity.
- Several methods exist and are sketched in the chapter, including interviews and focus groups, material deliberation and co-design, participatory modelling and scenario workshops, citizen science, collaborative ethnography, e-participation, among others.
- Citizen engagement processes should be carefully designed, taking into account context dependencies, types of publics, past and ongoing engagement activities, expectations and follow-ups.



Citizen engagement rhetoric and practices have been discussed for many decades. The literature shows that the contexts, rationales, practices, expectations, politics and cultures of citizen engagement in matters of societal concern are very varied. Sherry Arnstein wrote in a 1969 landmark paper that ‘The idea of citizen participation is a little like eating spinach: no one is against it in principle because it is good for you’. Yet, citizen engagement involves much more than just organising different opportunities to mobilise citizens’ knowledge into debates, co-creation or other processes (e.g., policy, research, planning, monitoring, etc.). Citizen engagement requires that policymaking institutions recognise and accept participatory governance styles and therefore create *listening* mechanisms to bring citizens’ knowledge, expectations, values and imaginaries into the planning, decision or policy processes. Moreover, it means that institutions are willing to learn from citizens’ engagement initiatives. For the Joint Research Centre (JRC) and similar institutions, citizen engagement can be framed with multiple lenses: (1) better framing of science for policy questions; (2) enhancement of the quality (fitness for purpose) of the knowledge basis to address societal issues; (3) co-creation or co-design strategies to address societal issues and (4) empowering communities to address collective matters of concern. In this chapter, we first provide guidance about where this idea comes from and how it is framed, followed by a brief review of possible models of engagement. The chapter then gives some guidance on widespread methods, with an example of a JRC project.

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Participatory Governance: A Quick Historical Review

There has been a worldwide endeavour for the past 50 years to involve different publics in knowledge production that interest research and governance processes.

The ‘ladder of citizen participation’ (see Fig. 1) developed by Sherry Arnstein in the late 1960s (Arnstein, 1969) is a very useful heuristic to situate citizen engagement practices. There is a broad range of methodologies and approaches that can be distinguished roughly by the degree to which they aim for a redistribution of power in the decision-making process. Clearly, the upper levels of the ladder describe initiatives where citizens’ agency is higher.

The expression ‘Public Understanding of Science’ (PUS) is commonly used to summarise a debate that started in the late 1980s in the United Kingdom, when UK science policymakers faced a crisis in which the so-called ‘public’ **seemed to lose trust** in science, which in turn risked losing legitimacy (and funding). Scientists and policymakers argued that the reason for this lack of trust was that the public did not understand scientific facts, i.e., that members of the public suffered from a **cognitive deficit**. This was backed by surveys that demonstrated citizens’ lack of knowledge of ‘basic scientific facts’. In fact, given this framing, the only possible solution was to ‘**educate**’ the public and **science communication** was given a new function,

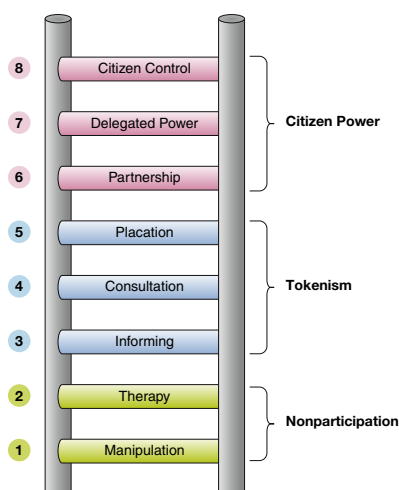


FIGURE 1 Arnstein's ladder of citizen participation.

reaction to this criticism, new forms of relations have emerged that can be described by the label of '**Public Engagement in Science and Technology**' (PEST).

The PEST framing aims at channelling public voices and enabling democratic participation in decision-making processes. This can be regarded as a necessary step towards acknowledging the complexities involved in attempts to integrate science, society and policy. However, such 'formalised mechanisms of voicing' (Felt et al., 2009; Michael, 2012) also have particular shortcomings: it is often not clear how engagement exercises actually **link to governance** or in what ways they become **consequential** for scientists or policymakers. In this sense, such 'mechanisms of voicing' need to be understood as a particular '**mode of governmentality**', which even runs the risk of **foreclosing more active forms of citizenship**, such as activism or grassroots movements.

with purposefully allocated funding *scientists* embarking on a pedagogical mission.

The expression PUS implies a condescending assumption that any difficulties in the relationship between science and society are due entirely to ignorance and misunderstanding on the part of the public. Many people have tried to demonstrate that this framework is simplistic given that it rests on the assumption of a somehow 'deficient' public (and science as universally comprehensible). In that perspective, such public needs to be either informed (cognitive deficit) or given a voice in decision-making processes (democratic deficit), which are often described as 'deficit models' about science–public relations (Wynne, 1993; Gilbert, Stocklmeyer and Garnett, 1999; Irwin and Michael, 2003).

The *urgent* call for citizen engagement in science for policy came prominently from scientific controversies that had serious implications for public life, such as for example the infamous BSE case – see [Box 1](#) – and so, as a

← A key moment was the publication of the 2000 House of Lords Report *Science and Society*, followed a year later by the European Commission's *Science and Society Action Plan* (2002).

Box 1: BSE: bovine spongiform encephalopathy

At the end of the 90s, the spread of the so-called 'mad cow disease', i.e., the bovine spongiform encephalopathy (BSE), a chronic neurological degenerative disease that has affected thousands of animals in various European countries, broke out. It was discovered that BSE was transmissible to humans and, in fact, several people died shortly thereafter. This event is considered by many social scientists as pivotal of the transition to a different way of conceiving the relationship between science and society. The incident led the House of Lords, one of the two chambers of the British Parliament, to publish in 2000 a report entitled *Science and Society*, which states that faced with a clear crisis of confidence in science advice, the relationship with the public must change. We can no longer think of giving the public only information on what to eat, but we need to build a dialogue based on mutual trust (House of Lords, 2000).



Citizen Engagement Institutionalisation

Challenges and Possible Responses

The institutionalisation of citizen engagement not only comes with different narratives – see Fig. 2 – but also may bring with it the increase of one-size-fits-all recipes engagement practices that try to circumvent the *situatedness* of those events and mainly frames them as ‘technologies of elicitation’ (Lezaun and Soneryd, 2007) and ‘technologies of participation’ (Soneryd, 2015). In such exercises, which function mainly as ‘formalized mechanisms of voicing’ (Michael, 2012), the problems are mostly predefined either in the form of a technological fix or as a social innovation. Citizens are brought into the process mostly for assessing potential impacts and ethical issues. This is a serious temptation, which could only discredit the exercise. Alternatives to this approach are available:

- *Publics as Collectives*

If engagement is an ‘event’ co-constituted with issues, publics and subject positions, where opinions and values can be negotiated and potentially changed within discussions, then understanding publics as *collectives* that interactively develop and contest various perspectives on certain issues is rather useful. If publics are understood as not stable but rather dynamic, then there is also not one *general* public with coherent and stable views that can be ‘surveyed’. Engagement in this understanding is not just about exploring opinions and interests, but about openly discussing ‘matters of concern’ (Chilvers and Kearnes, 2015).

- *A Participatory Model of Science for Policy*

A participatory model of knowledge co-creation is particularly relevant for the remit of the JRC and similar institutions. In his review of models of science and policy, Funtowicz (2006) suggests that one of the models to *cure* tensions on the current relationship between science and policy requires that ‘the ideal of rigorous scientific demonstration is succeeded by that of open public dialogue, in which citizens become both critics and creators in the knowledge production process as part of an extended peer community’ (*Op. cit.*, 139). This ‘extended participation’ model acknowledges that in the current state of affairs, different types of knowledge are produced and need to be circulated to underpin policymaking.

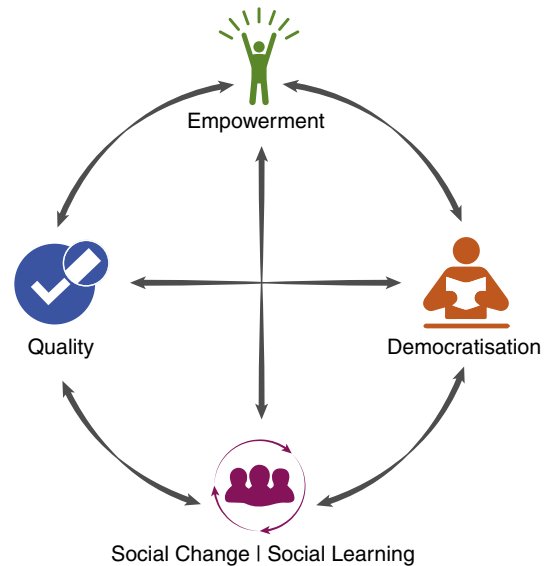


FIGURE 2 Narratives commonly found to justify citizen engagement: democratisation of expertise, governance, quality of evidence, empowerment and social change, social learning and social justice.



In Post-Normal Science (Funtowicz and Ravetz, 1990; see also Chapter 2), this extension will be carried out by an ‘extended peer community’, ‘consisting not merely of persons with some form or other of institutional accreditation, but rather of all those with a desire to participate in the resolution of the issue’ (*Op. cit.*, 651).

- *The Co-creation Turn*

Co-creation ideas are visible everywhere, from research agendas, policy design, regional planning and assessment framings; a lot of experiments are being done. The co-creation turn sets a much respectful relationship, which sees fellow citizens as partners (see Fig. 1).

Upfront Recommendations

- *Humility and Reflexivity*

The objective of engagement exercises is neither to simply educate or convince the public about certain policy or technology options nor to produce better engagement methods to learn more about opinions or even just concerns and expectations. Rather the strength of engagement is that it can function as a technology of humility (Jasanoff, 2003) about the use of scientific knowledge in decision-making and also increase the reflexivity of institutions in regards to their problem-framings and governance models (Stirling, 2008).

- *Reinvent the Wheel We Shall Not*

There is a great deal of citizen engagement already out there, organised by other institutions and organisations, such as academia and NGOs but also grassroots initiatives in the form of activism, ‘community’ action, making and hacking. Hence, space needs to be made to engage with ongoing engagements and organise citizen engagement on matters that have not been previously addressed.

- *Respectful and Honourable Relationships*

Engagement of citizens needs to be from the outset accompanied with respectful mechanisms, to listen, make sense and voice the engagements’ outputs. Any failure to channel those outcomes may compromise subsequent attempts to engage citizens in policymaking in any of its phases.

Exploring the Policy Cycle Opportunities

There are many ways in which citizen engagement can meaningfully contribute to the quality of policies. Institutions like the JRC can from the start ensure that the evidence provided in different steps of the policy cycle is inclusive of and open to citizens’ voices. In general, bringing different voices, especially those that usually do not find space to be heard, into a policy process enriches the quality of the knowledge base. Such quality is necessary to ensure the social robustness of a policy, as well as avoiding a Type III error, i.e., addressing the wrong societal problem. The types and formats of citizen engagement inputs are not a closed matter; they can range from collected data, experiential knowledge to structured recommendations.

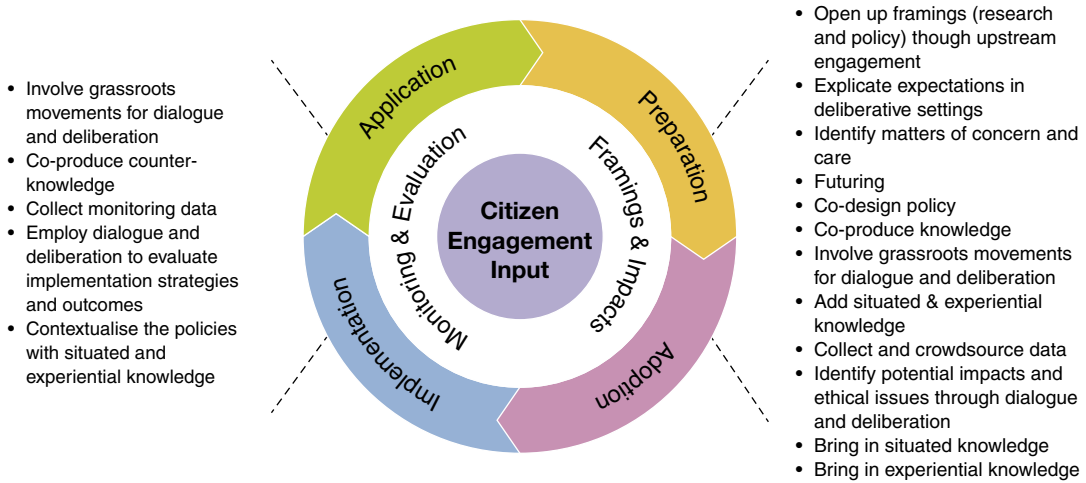


FIGURE 3 Function and types of input at all phases of the policy cycle. Policy cycle scheme adapted from the 'Better Regulation Package'.

Fig. 3 shows the function of citizen engagements inputs in the different phases of the policy cycle as described in the 'Better Regulation Package'.¹ It maps the types of inputs that citizen engagement can provide to the policy cycle. It is important to include upstream engagements, i.e., deliberations in the early stages of the policy cycle but equally important are engagements that help with monitoring and evaluation of outcomes, which occur later in the policy cycle. In the former, the function of engagements are mainly co-creating the framing of policy, exploring expectations and concerns and discussing outcomes of policies, relevant institutions and actors as well as challenges and possible solutions. In other words, citizen engagement can help not only with the design of policies but also in their monitoring and evaluation.

Methodologies Rough Guidance

In our institutional context, we understand citizen engagement practices as a reflexive action that provides the means to share and structure participants' knowledge, values and matters of concern into input to the research/planning/evaluation/policy process.

Planning

• *Before You Even Start*

A number of activities need to be carried out to avoid some pitfalls of engaging citizens, for example, avoid type III error, fatigue and reinvention of the wheel:

- identify existing citizen engagements on the same subject, taking stock of existing insights; these could include problem framings, matters of care, methodological aspects, recommendations, imaginaries, action, etc.

¹ https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en, accessed 05.05.2020.



- proper preparation for citizen engagement should build on a wide array of social sciences practices that include analysis of policy and (new and traditional) media narratives, institutional analysis, mapping and identification of the extended peer community.
- identify useful partnerships with people and organisations that could facilitate citizen engagement practices, such as citizen science networks, makerspaces, museums of science and technology, NGOs and communities.
- ensure that there is a mechanism through which citizen engagement activities will inform the process they were designed for.
- establish the mechanism through which citizens are informed about it.
- *Understanding Context Dependencies*



FIGURE 4 Interdependencies of context, methodologies, participants and expectable outcomes.

Fig. 4 illustrates the interdependencies of context, citizen engagement methodologies, participants and planned outcomes.

The context in which citizen engagement develops determines everything else. For example, the legal mandate, the stage at which citizen engagement is required in the policy cycle, geographic and temporal specificities, situation, etc.

Hence, context sets who the participants are, their level of involvement in the ‘process’ (early stages may mean co-design and sharing responsibility; final stages may mean seeking for legitimacy from the side of the organisers), the participatory methodology and the *contract* with participants. The latter is key to settle a priori expectations from both sides, organisers and participants. It is basically mutual understanding of what organisers expect from participants and how organisers expect to use the outcomes of the process (Box 2).

Box 2: Moderation of events

- Style of moderation: role should be explicit and open to discussion – negotiator, mediator, facilitator, arbitrator, etc.
- Number of moderators and composition of the moderators team – depends on case. More than 2 moderators in a group of 10 is a crowd.
- Rules of moderation agreed within the organising team before the engagement activity takes place
- Moderators should use the language of the country
- The importance of being ‘local’ needs to be considered
- Methodological choices



- *Identifying Who Should Be Involved*

Who are the citizens? Those concerned, the 'getroffen' (sufferers), stakeholders, voiceless and disempowered, community members?

The following tasks need to be carried out:

- Design the invitation
- Define recruitment criteria
- The number of participants (which varies, e.g., according to issue of concern and methodology employed)
- Tokens and 'contract'

- *Methodological Choices*

The methods and tools to carry out citizen engagement activities are heavily dependent on the situation, context, issues, the participants involved, requested inputs, imagined outcomes and on the process (whether policy, research or grassroots activism), where inputs from citizens shall be used. There is a myriad of methodologies, and whilst the choice is strongly linked to the factors above, one can say that they are also strongly linked to the model of participation; a citizen science project where participants help with collecting data does not require in principle deliberative formats; a co-creation model requires different approaches compared to a public hearing model. There is no definitive toolkit, but there are many tools and practices that can be deployed in a policy context. Ideally, citizens should be asked how they would like to be involved and in what terms. For a successful process, some aspects need to be thought through, namely

- Format of the participatory process and level of "orchestration" (e.g., participatory scenario development, participatory modelling and prototyping are strongly orchestrated approaches)
 - Who does the particular method exclude?
 - Should we be employing an array of formats rather than just one to address different situations?
- Organisation of the event(s) (duration, venue (offline, online and hybrid), draft agenda)
 - Does the process require continuous engagement activities or different phases?
 - The importance of the space where the engagement takes place, preferably
 - where citizens already meet (e.g., the pub or particular social media);
 - avoiding places that are alien or intimidating (e.g., a court building perhaps can be intimidating; online dialogue spaces—not necessarily 'comfortable' for everybody);
 - places related to the issues of concern (e.g., school and particular locations in the city, farm);
 - places which function citizens can recognise and connect to (e.g., museum of science and technology, garden, makerspace and library).

← **Definition of citizen, according to Collins Dictionary online:**

1. a native registered or naturalised member of a state, nation or other political community
2. an inhabitant of a city or town
3. a native or inhabitant of any place
4. a civilian, as opposed to a soldier, public official, etc.



- Organisation of prior knowledge that informs the participatory process (discursive vs. experiential or both)
 - Tools and props with which participants will reflect, deliberate and co-design the outputs of the engagement exercise;
 - Bringing in the expert;
 - ‘Progressive disclosure of information’ principle should be applied to deal with the complexity of the issue of concern: layers of growing complexity are progressively made available to participants possibly in different formats.
- Organisation of participants’ knowledge around the issues of concern
 - Desired outputs need to be envisaged, on the understanding that these frame the organisation of the activity;
 - The types and formats of citizen engagement inputs can range from *crowdsourced* data, experiential knowledge to rather structured recommendations or proposals for action, policymaking;
 - Expectations about formats should be aligned to participants’ resources and also to the operability of such formats within the institution – e.g., reports, manifestos, recommendations, multimedia materials, scenarios, model outputs, prototypes, data or simply moderator notes.
- Language: in the EU or any multilanguage context, language is an issue. Citizen engagements should be done in the language of the country, where it takes place – whether the engagement takes place *offline* or online.

- *Outcomes and Feedback Loops*

The expected or desired outcomes depend upon context and participants. The key question to ask is how those outcomes will influence the process for which they were planned. In any process, a key question is about the degree of influence that is promised in the ‘contract’ with the participants. For example, in the context of the European Commission, this could be articulated as policy binding or nonbinding outcomes. In a context of a research process, this could be articulated as framing of research questions.

The other key understanding with regards to the accomplishment of citizen engagement activities is feedback to those engaged. The outcomes and their use in the processes for which they were produced need to be known to the participants. This is one of the basic guarantors of both trust and continuity. Citizen engagement involves using other people’s time and people’ expectations of influencing the process they are engaged in. In practice, this realisation includes both a reflection and concrete steps on the following:

1. Institutional arrangements that voice outcomes to the process.
2. Feedback activities to get back to the citizens and explain how their input was used.
3. Accountable institutional mechanisms that ensure continuity.

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Frequently Used Methodologies

- *Qualitative Social Research Methodologies*

There is a great variety of methodological approaches with an equal number of variations, and so this listing is incomplete. Below we focus on qualitative research methodologies that have inspired citizen engagement activities at the JRC, but that are widely used in contexts that intersect science, policy and society. The methodologies are also often used together; hence, they are presented here as rough guidance for the future practitioner.

*Resource: <https://participedia.net/>

In-depth Interviews	Focus Groups
In-depth interviews are one of the most widely used qualitative methods to explore individuals' opinions and insights about a specific issue or idea (Kvale, 2008). They are useful to investigate a certain topic with more in-depth information (Boyce and Neale, 2006). In our context, this methodology has been particularly interesting in cases where there was genuine difficulty in having an a priori understanding about who is behind knowledge claims that inform policy, allowing for a deeper scrutiny of knowledge production and circulation. It has also been very useful, in cases, where different actors would not seat at the same table for mere logistic reasons or because of genuine tensions.	Focus groups are 'a research technique that collects data through group interaction on a topic determined by the researcher' (Morgan, 1996, p. 130), also described as a form of group interviewing (Gibbs, 1997), used as a social research method (Morgan and Krueger, 1993; Bloor et al., 2001) but also as a social event. FG help with collecting knowledge, experiences, expectations, feelings, tensions, beliefs, and hints on opinion formation that cannot be collected by other social research methods, such as observation, one-to-one interviews or questionnaire surveys (Morgan and Krueger, 1993; Kitzing, 1994; Gibbs, 1997). FG can take on very different formats and can develop with variable duration; the most typical is 2 and ½ hours but e.g., in-depth groups, a term coined by Burgess (1996), refers to a lengthy process, where the relationship of researchers and participants develops over time through their participation in several events (e.g., Darier et al., 1999).
Material Deliberation	Co-design
Material deliberation emerged to counteract the idea that a great deal of citizen engagement practices was based on notions of 'reasoned discourse' (Elam and Bertilsson, 2002), in other words that valued the spoken word and rational argument (Davies et al., 2006).	Co-design or participatory design for policy-making or within policy advice contexts is a participatory approach that uses design methods and tools to actively engage multiple stakeholders in the collaborative production of shared visions, solutions, projects, programs and other policy-related outputs.



MD acknowledges dimensions which go beyond the discursive, such as: embodiment and materiality, emotion and affect, (undervalued) genres of talk, openness to diversity, as well as the situated and relational nature of the deliberative process. Hence, ‘material deliberation’ is used as a shorthand for processes of deliberation and citizen engagement, which incorporate an awareness, openness or sensitivity to nontraditional modes of deliberative interaction, including, but not confined to, the sonorous (music, singing, laughter, shrieks and noise), the discursive (gossip, story-telling, anecdote, polemic and drama), the material (objects, bodies, sites and places) and the affective (hate, love, fear, attachment, nostalgia, intuition and pleasure). Such engagements show a sensitivity to the situated nature of all encounters, deliberative or not, as embedded in particular spaces, material configurations, and temporalities’ (In [Davies et al., 2012](#)). The techniques that support the access to these dimensions recur to art, games, immersive environments, walking tours and other experiential methodologies that value the contextual dimensions in which the engagement takes place. Emblematic examples of these methodologies are the Futurescape City Tours project around technology in the city (Selin and Pillen Banks, 2014) and also more recently the Food Futuring Tours project around food futures (Guimarães Pereira et al., 2018).

The main goal is to get results that are closer to the needs and requirements of those who might be impacted by the policy decisions in discussion, and ultimately reach conclusions which represent as many perspectives as possible, while also ensuring any outcomes generated become more than the sum of its original inputs ([Stappers and Sanders, 2012](#); [Bson, 2016](#); [Nascimento and Pól-vora, 2016](#); [Nascimento et al., 2016](#)). One of the multiple frameworks co-design approaches can make use of to inform or support policy is prototyping. For policy purposes, piloting and testing of services before implementation or scaling up stages needs to happen at multiple phases of a research project or experimental intervention. Participants may be called into trial prototypes through role playing, user journeys, contextual mappings towards fine tuning and possible iterations and a search for the best possible evidence on how to move plausible proofs-of-concept into working solutions ([Selin et al., 2017](#); [Blomkamp, 2018](#)). Other approaches include the creation of fictional artefacts meant to trigger forward looking discussions into the possibilities of yet to be fully fledged realities. The outputs are learning devices attached to imaginative leaps, which question potential policy realities to come ([Kimbell, 2015](#)). More on design for policy can be found in [Chapter 13](#).

Participatory Modelling

Applying tools typically used in expert realms in participatory settings has been proliferating since the early 1980s. Typically, issues where there is a strong component of scientific knowledge involved in the evidence and reasoning to use. Many experiments have been carried out, with for example participatory modelling ([Videira et al., 2003](#)), participatory multicriteria analysis ([Salgado et al., 2009](#); [Guimarães Pereira et al., 2005](#)), participatory foresight and so on. In practice, this amounts to tailor technical analytical tools to be used in participatory settings as the properties that guide, structure and, therefore, also frame the discussions. Examples of this usage have been in environmental governance, where models have been co-developed with participants.

Scenario Workshops

Scenario workshops practices raised during the middle 1990s as a means to foster democratisation of urban planning (see e.g., [Andersen and Jæger, 1999](#); [Mega, 2000](#)) or land-use change ([Van Asselt et al., 2005](#); [Herivaux et al., 2018](#)), but is now a widely used practice in policy settings, under different names or a part of compound engagement methodologies. It is in itself a compound methodology, given that it combines ideas of scenario development and workshop. It is also strongly linked to quite structured ways to think about the future, such as foresight. Typical outputs are future narratives which include a temporal vision, a reflection on drivers and uncertainties to achieve that future vision, and key actions to attain or to avoid the developed vision. More on scenario analysis can be found in [Chapter 12](#).



Participatory Games

The use of games and the more relatively recent hype around serious games (Sawyer, 2003) as properties in participatory events is quite a debated practice, even before the widespread use of digitally implemented games. Games are an appealing way to structure participatory events, also allowing to explore trade-offs in 'role play' fashion. The use of games in urban planning e.g., has been widely published. See, e.g., this database for games for city planning: <http://gamesforcities.com/database/>.

- *Crowdsourcing Methodologies*

Citizen Science

The practice of citizen involvement in scientific projects as citizen scientists is not really new (Cohn, 2008); in some fields, e.g., in environmental monitoring projects, including biodiversity the practice has more than one century and it has been on the rise (see e.g., Gouveia and Fonseca, 2008; Catlin-Groves, 2012; Morzy, 2014) because of information technologies, engaging citizens in larger numbers.² In the middle of the 1990s, two quite different perspectives on citizen science developed independently. Whilst for Irwin (1995) citizen science implied a form of science developed and enacted by citizens, for Bonney (1996, 2004) citizen science was a method to involve individuals in scientific studies, 'either by providing opportunities for people to serve as research assistants or by enabling them to conduct their own original investigations' (Bonney, 2004, p. 201). The two models, which we can roughly describe as bottom up and top down citizen science co-exist today. More recently, the ambition that citizen science becomes part of the scientific evidence base to inform policy has gained prominence. Many projects emphasise one or more of these opportunities (1) data gathering, e.g., to retrieve early warnings about the occurrence of invasive species (see: <https://easin.jrc.ec.europa.eu/easin/CitizenScience/About> and Roy et al., 2018) or localised information about air pollution (see box – making sense project and Schade et al., 2019); (2) models quality assurance by e.g., including citizens in the identification of species or in ground trothing (fact checking) the results of environmental models in their local neighbourhood; (3) data analysis and interpretation, e.g., to identify damaged images from buildings, or the blooming season of a certain crop. In addition, citizen science activities might result in new research framings, including research questions and methodologies to deal with them. See also the JRC citizen science projects inventory: <http://data.jrc.ec.europa.eu/dataset/jrc-citsci-10004> and the related study on citizen science for environmental policy by Bio Innovation Service (2018).

Collaborative Ethnography

A particular example of other forms of collaborative work is collaborative ethnography (see e.g., Lassiter, 2005). This framing of collaboratively enquiring one's environment has inspired some citizen engagement activities, such as those promoted by the OpenStreetMap project (see: <https://www.openstreetmap.org/>)

²Terminology around citizen science is also varied—see e.g., Nascimento et al. (2014).



- *Digital Participation*

e-participation

By e-participation, we mean here digital tools and platforms, connected to the Internet through which citizens can engage with different issues, through direct invitation by the institutions or by any organisations that invite them to do so. e-participation carries the promise of both e-democracy and also great citizen outreach. This includes both platforms and applications that facilitate citizen engagement. Many e-participation platforms attempt to mimic physical meetings, others work as working places, discussion forums, voting places, etc. The technologies have been constantly evolving and can include chatting, video conferencing, online gaming and scenario development. See, e.g., <https://decidim.org/>. <https://ec.europa.eu/futurium/en>.

- *Deliberative Methods*

In deliberative democracy, the concept of mini-publics (Goodin, Dryzek, 2006) is key to describe methods where randomly selected citizens, chosen through sortition by lot from the electoral roll which function as a representative sample of the relevant population³ affected by the topic of concern. There are different formats that include Citizens’ Juries, Consensus Conferences, Citizens’ assemblies, Deliberative polls, and Planning cells.

Citizens’ Juries	Consensus Conferences
‘Although they may produce rich qualitative insights, focus group and participatory appraisal techniques do not in themselves change the passive status of the people being studied. Drawing on the symbolism of the system of trial by jury, citizens juries have been seen as potentially challenging this separation between analyst and subject’. (In Wakeford, 2002, p. 1) CJ were described as potentially helpful to deal with matters of social justice and the legitimisation of nonspecialist knowledge. In this method of participatory research, panels of 12–20 nonspecialists meets for a large number of hours to examine carefully an issue of public significance. The method by which members of the jury are recruited is key to maintain their potential representativeness – e.g., randomly from the electoral register (Wakeford, 2002). An important application of CJ was about nanotechnology in the UK (Singh, 2008). Citizen juries are a form of the so-called mini-publics.	Consensus conferences also known as ‘citizens panel’ was a methodology widely used by the now extinct Danish Board of Technology (then an independent institution established by the Danish Parliament), but it was also in use in the Netherlands and the UK. Citizens were involved in the assessment of socially sensitive topics, namely new and emerging technology, through a recruitment procedure that included random invitation based on the telephone directory. 14 members that included experts as well typically composed the panels. The first consensus conference was organised in 1987 in Denmark focussing on ‘Gene technology in industry and agriculture’. (See, e.g., Joss and Durant, 1995 and Kliiver, 1995).

³See <https://www.newdemocracy.com.au/2017/05/08/forms-of-mini-publics/>, accessed 05.05.2020.



We need to mention here other formats of addressing citizens, which are used with expectations of representativeness. Our view is that they could be helpful if they were combined with qualitative work to solve their major pitfalls such as: framing (who decides what issues need to be consulted with the publics?), exclusions (who gets excluded from these types of methodologies?), uninformed and misinformed engagement processes (what knowledge needs to be shared before one can even start thinking about the issue?). These methods also assume that there is a public out there to be surveyed, which is in contrast with the view that participatory activities create both ‘publics’ and their relationships to institutions. Hence, beware of standalone usage of these methods as citizen engagement methods.

Surveys and Opinion polls	Consultations
Randomly sampled citizens are interviewed by means of questionnaires, usually in person. Sampling criteria need to be defined. In the EU, the Eurobarometer surveys are quite well-known. See: http://ec.europa.eu/commfrontoffice/publicopinion/	These can occur in a myriad of formats. In the European Commission, consultations made online are done through questionnaires in specific policy topics, during the policy development stage. The important thing to note is that the outcomes are not binding, even if as in the case of the Commission, consultation is done under legal mandate. See e.g., the Commission portal: https://ec.europa.eu/info/consultations_en .

Spaces

Here, we briefly refer to three prominent types of spaces that we have been experimenting with at the JRC and could be a source of inspiration for those interested in engaging with citizens. These (physical and online) spaces are the JRC starting infrastructure to carry out citizen engagement. Evidently, they do not exist in a vacuum as they purposefully resonate with kindred projects outside the commission (Box 3). Besides these, we use different public spaces to carry out citizen engagement, schools in school matters, the city if we engage citizens on city affairs, etc.



The EU Policy Lab	The JRC makerspace	The JRC Citizen Science Platform
The EU Policy Lab is a physical space designed to foster creativity and engagement, develop interactions, processes and tools contributing to bring innovation in the European policymaking. Like other policy labs, the emphasis is on testing, experimenting and co-designing with stakeholders by using tailored made approaches and relying a lot on visualisation. The Policy Lab explores, connects and designs for better policies. More on this can be found in Chapter 13. See also: https://blogs.ec.europa.eu/eupolicylab/	The JRC makerspace was imagined as a networked thinking and tinkering space, resonating with similar grassroots initiatives. Like other makerspaces, it is designed as a collaborative open space, designed to promote active participation, knowledge sharing, and citizenship through experimentation and prototyping. It is a place of material deliberation, allowing complex techno-science developments to be deliberated through an experiential (as opposed to discursive) approach. Also, being networked by default, it facilitates multisite projects with different communities. The JRC makerspace is also available as a van, allowing it to travel different locations. See: https://ec.europa.eu/jrc/en/publication/jrc-thinkers-n-tinkers-makerspace-concept-note	The Citizen Science Platform is a customisable tool to facilitate data collection, particularly supporting citizens' contributions. The received inputs are used to extend the evidence base for European policies. The idea is to improve the chances of providing timely and impactful citizen science inputs to European policymaking. In this way, policy debates are not supported only by scientific advice of a few selected experts, but can also benefit from targeted contributions from citizens. The citizen science platform especially welcomes data collected via mobile applications. See: https://ec.europa.eu/jrc/communities/en/community/citizensdata.

Box 3: Makersense project

Making Sense was an H2020 project funded under the CAPS 'Collective Awareness Platforms for Sustainability and Social Innovation' programme. It ran between 2015 and 2018, and combined the efforts of Waag Society (NL), Institute for Advanced Architecture of Catalonia (ES), Peer Educators Network (KS), University of Dundee (UK) and the Joint Research Centre (BE).

The project was focused on how open source hardware and software, digital maker practices and participatory design could be used by local communities to make sense of their environment and effectively address problems such as air or noise pollution in urban settings. This was achieved through nine community-driven pilots in the cities of Amsterdam, Barcelona and Prishtina.

The project's main results, best practices and lessons learnt can be found in Making Sense: Citizen Sensing Toolkit, a Creative Commons licensed on-line and printed book.



The Making Sense team developed the toolkit as an entry point for the project's approach to citizen sensing, aimed at both deepening and disseminating its understanding of sustainable processes, which can enable collective movements from sensing to awareness to action. The toolkit contains multiple portraits and stories from citizens involved in the project, together with a presentation of an 8 steps framework, 6 cases and 25 tools and methods drawn from the pilots, and 7 key overall insights. It is a guide for citizens, communities and middle ground organisations who would like to build or be engaged in similar projects, and ultimately transform their surrounding through a collective, participatory, and bottom-up hands-on approach.

Links:

Toolkit for download: <http://making-sense.eu/wp-content/uploads/2018/01/Citizen-Sensing-A-Toolkit.pdf>.

Project Website: <http://making-sense.eu/>

Twitter: <https://twitter.com/MakingSenseEU#MakingSenseEU>.

Facebook: <https://www.facebook.com/MakingSenseEU/>

A Case Study

- *Final Reflections*

This chapter aimed to give context of citizen engagement activities in science for policy milieus and food for thought to practitioners, when they attempt to implement citizen engagement. We would like to finalise this chapter with some recommendations and a reflection on expectations about citizen engagement.

Unreasonable Expectations: What You Cannot Expect From These Types of Citizen Engagement

A recent reflection within our Community of Practice on Citizen Engagement has brought light to the challenges that political ambitions for and expectations from citizen engagement practices in institutions like ours could put in jeopardy the whole endeavour. These are, for example:

- **Representativeness:** Whilst this is a perfectly legitimate ambition, it is unlikely that many citizen engagement practices can aspire to deliver outcomes representative of entire populations. First, the practitioner needs to decide whether representativeness is a relevant issue. In many citizen engagement projects, the objective is to collect other *knowledges* into the evidence base, or insights to establish possible framings to address the issues, and so on (see [Chapter 10](#) to read more about how interests influence the knowledge pool). If the issue requires representativeness, then some practices are more suitable than others to attain this ambition; electronic formats of participation promise wider scopes. By combining qualitative and quantitative methods, for example, one can test with a survey the outcomes of a qualitative research study. It must be noted that by reaching out wider numbers of citizens does not guarantee representativeness. *Recommendation: the practitioner needs to reflect on whether this is needed.*
- **Scalability:** There are no methodological panaceas and scalability might not be possible or even desirable. In the EU itself, we have 28 Member States with different histories and diverse cultures of civic engagement. For this aspiration to materialise, the practitioners



need to embrace large scale experiments before scalability becomes a goal in itself. In other words, scalability could turn out to be a great end-result but should not be a guiding criterion for development.

- **Publics:** Publics are not out there to be discovered or engaged; publics are constructed by the participatory events.
- **Replicability:** Methodologies and outcomes are greatly dependent on context. As for scalability, replicability could turn out to be a great end result, but should not be a guiding criterion for development. However, one should still investigate the contextual conditions for a particular citizen engagement initiative.
- **Consent fabrication and politics of acceptance:** Citizen engagements should rather be opportunities to understand why and how particular configurations of contestation emerge. They should also explore ways in which policymaking is creating unexpected and implausible normativities, or can help with those, namely by supporting the inclusion of different types of knowledge and evidence, relevant for the issue of concern.

Some Guiding Principles

- There is no definition of the ‘citizen’; he or she can be anyone or be very specific people.
- Realise who is included and who is excluded.
- Community is not ‘tabula rasa’: all citizens have resources that need to be respectfully recognised.
- Take stock of engagements organised by civil society; do not start from scratch and work in partnership if possible.
- Citizen engagement is about respectful knowledge sharing; participants are epistemic actors.
- Social contract: the requirements from those we engage with and the outcomes usage of those engagements is negotiated a priori.
- Trust: condition *sine qua no* for effective and creative collaboration.
- Diversity: aims at co-existence of methodological approaches.
- Mind the [Arnstein ladder \(1969\)](#): know what you are busy doing when you organise citizen engagement activities

Finally, [Chilvers and Kearnes \(2015\)](#) offer a framework for ‘remaking participation’, which we find particularly useful. Participation should be reconsidered as the following:

- ‘Experimental and reflexive’: this means paying attention to framing, but this also means preparedness to change.
- ‘Open up to wider systems and ecologies of participation’: recognise diversity.
- ‘Responsiveness’: Cultivation of institutional responsiveness to diverse forms of *public relevance*.