



Running Systems Mapping Workshops

Abstract This chapter explores the practicalities of organising and facilitating systems mapping workshops. It considers how you should plan them; how to choose venues, materials, and technology; how to record them; and how to improve your facilitation skills. It provides readers with guidance for dealing with some common issues, such as power dynamics, disagreement, confusion, disengagement, and facilitator burnout, and points to useful resources for specific methods.

Keywords Systems mapping • Workshops • Stakeholders • Facilitation

Mapping workshops are key milestones in any systems mapping project. In participatory projects they are vital spaces for engagement, discussion, and the creation of maps. Workshops will inform and energise the entire project. They are moments around which participatory projects can live or die. Everyone involved, including participants, will want them to be a success. This means they feel like high-pressure moments for researchers. Organising and facilitating workshops is also a skill in its own right; it is difficult to do. It takes thought and practice before you can expect to run workshops well, and to not feel exhausted by the process.

In this chapter, we will try to shed some light on how to plan and run successful workshops. Much of the craft of running workshops relies on tacit knowledge and subtle inter-personal and communication skills, so we

can't cover everything. But we will be doggedly practical and reflect on our own experiences. The style of this chapter is a little different to others; there are so many things to think about that we have used a more bullet-point-heavy structure to help you use this chapter like a checklist in your planning.

It is worth reminding ourselves that individual workshops are always part of a wider project process. You can, and should, take care in designing this process. Your purpose, and the needs of users and stakeholders, will drive the initial process design, and the process may need to change as the project develops. Considerations around process design for each method are discussed in individual method chapters, and we have developed our own practical guide for Participatory Systems Mapping processes in Penn and Barbrook-Johnson (2022).

PLANNING WORKSHOPS

It is possible to over-plan and over-think workshops and to stress yourself and others needlessly. A lot of thinking and adjusting can be done during the workshop (especially as you become more experienced), so try to avoid the urge to plan everything in microscopic detail. That said, it is vital to have a plan for workshops and the wider process they fit into, and to develop this with users and stakeholders. Key things to plan are:

- **Purpose:** you will want to have a clear idea (and written statement) of the purpose of the workshop; what the topics to be covered are, and what any outputs you hope to produce from it are. If you have multiple workshops, it should be clear how these fit together, and why they are needed.
- **Who to invite:** you will need to decide who to invite and how to invite them. Assuming there is not a specific reason to only focus on one group of people, you want to get a good spread of people, representing different views and knowledge of different parts of a system. You also want people to accept your invite, which might demand a lot of their time. So, you need to be compelling in your invite, making clear the value of your work to them.
- **When to hold it:** timing can be key to the success of a workshop when there are other processes and events unfolding relevant to your work. Avoid running your workshops at the same time as important events for your stakeholders, or during times of the year when they

will be busy. If there are other relevant processes, events, or publications being launched, think about how you would like to relate to them; should you go before them and try to inform them, or do you want to go after and use them as inputs?

- **Have a time-plan document:** the key document you will create for planning will be a time-plan of the workshop. We recommend having a detailed but flexible time-plan. If you have a three-hour session, you probably want to know what you are doing in each fifteen-minute section (sections may last longer than fifteen minutes but use it as your ‘unit of time-planning’), if you have a full day, then planning in thirty- or sixty-minute chunks is sufficient. The point is not to have a rigid plan you must stick to but rather to have thought through all the things you want to do and to be realistic about what can fit in your time. A written plan is an invaluable resource during a session, to check progress, adjust thinking, and ensure you get done what you need to. We normally combine this time-plan with all the prompts and questions you plan on using.

VENUE, MATERIALS, AND TECHNOLOGY FOR WORKSHOPS

Having the right venue, materials, and technology can unlock all sorts of potential problems and transform a low-energy workshop into a major success. Things to consider include:

- **The venue:** where is most convenient and familiar for your participants to meet you? Go to them, if possible, rather than asking them to come to you. As long as it does not create a perception of bias in the process for some people, it may be ideal for one of the participants to host you. You should aim for the nicest room you can get hold of, but which is still appropriate for the type and numbers of participants. Windows, good light, and fresh air are a must. Having space to move is also important, but you don’t really want to be in a large hall if there are only ten of you.
- **Tables and chairs:** it is easy to forget about tables and chairs, but you may have some clear constraints on what will work. Do you want ‘lecture style’ (i.e. rows of seating), ‘cabaret style’ (i.e. multiple small tables), or ‘boardroom style’ (i.e. one large table), or something different? If you want groups of people to be huddled around a table drawing and discussing a map, you will need table(s) that are the

right size, and chairs which can be moved aside easily. Beware many modern office tables have holes for cables, or power sockets built in, these can easily get in the way, when all you want is a good-sized flat surface. Discuss these needs with your venue ahead of time and make sure you have time during the day to set up the room if needed.

- **Walls:** using walls to put up notepads and post-it notes is useful. Be clear on what the walls are like in your venue; can they accommodate being used in this way, or are they covered in pictures or noticeboards already, or are they antique wood which you are not allowed to touch? If you can't use walls, you may want to take some flipcharts.
- **Materials:** if you are going to be physically drawing your map with pens and paper, you need to think about these and bring them with you. You will need to have enough pens, in the range of colours you want, and the right size/thickness for the size of group (i.e. large marker pens may be cumbersome for a group of five, but using standard biro pens will mean writing is unreadable if you are in a group of twelve). Post-its are invaluable for brainstorming and for building maps which can be adjusted as you go. So too is using whiteboard paper (i.e. shiny paper which you can draw on with whiteboard pens, and then erase easily when needed with a tissue). If you are writing straight onto large pieces of standard paper, it is difficult to change a map, and people can be hesitant about writing things down which they know cannot be changed easily or erased.
- **Technology:** do you need a projector, or screens during the session? If you are just giving a quick introductory presentation, a simple setup will suffice, but if you are planning on creating your maps directly in digital form, you will need a high-resolution projector, or good Wi-Fi so people can work on their own laptops, on the same map in real time. It can be tempting to use high-tech solutions for drawing your map, but we tend to err on the side of low-tech options. There is less risk of things not working, and it is more inclusive for people who are not confident with computers (in our experience, people routinely underestimate this issue, and exclude important voices by opting for high-tech mapping sessions). It is also easier to create a sense of energy and break down barriers by having people standing together around and interacting with a physical object.
- **Existing versions of maps:** if a workshop is your second or third, and you already have a map started, or you have created a map prior to your first workshop, you will want to bring this with you. We tend

to digitise maps (i.e. enter them into our software of choice for that project) and then bring large printouts of these (A1 or A0 paper size). You can then overlay a large piece of transparent whiteboard paper and continue map building with pens and post-its. Having the actual original paper and post-its to hand can be useful too, to refer to, but we don't tend to use this to continue map development directly as paper gets tatty and things inevitably move and fall off.

FACILITATING DISCUSSION

The actual act of facilitating discussion between people is based on a range of tacit and subtle inter-personal skills. You will have many of these skills already, but they will take time and practice to further develop and refine for the context of mapping workshops. On the upside, these skills are easily transferable; if you have facilitated other types of workshops, or conducted interviews, then these skills will stand you in good stead for systems mapping workshops. Once you have run a few workshops, you will feel more comfortable with other types of facilitation and public speaking. You can improve your facilitation by:

- **Having a clear plan:** as we mentioned above, have a document which outlines the plan for the workshop and includes all the information you want to have to hand. More than this, try to develop a clear plan for your approach to facilitation. Make decisions on key points ahead of time, for example: any red-lines you have on what should be included or not in the map, will you encourage others to draw or do you want to do it; will you try to be a dominant and energetic facilitator or more passive? However, you may have to adjust your approach to this depending on the dynamics of the group.
- **Having clear prompts:** a key part of any plan for facilitation will be to develop your prompts and questions and write these down. You want to have both the initial questions you will ask and the prompts you will use to encourage people to elaborate and prompts to use if discussion is slow. Having a plan for different eventualities, and some notes on these, will help you feel more relaxed; you probably won't even need to use them, but knowing they are there can be reassuring.
- **Knowing the 'rules of the method':** the last thing you want to be doing during a workshop is worrying about what exactly the 'rules of the game' are for the method you are using. You should have

these clear in your mind beforehand so you can answer any questions about the method, but more importantly so you can focus on facilitation rather than technicalities.

- **Practising:** organising mini-workshops with colleagues, friends, or family to practise using the method and facilitating discussion can be a useful way to learn what works and how you react in a workshop setting. We recommend always doing this beforehand if you are using a method for the first time. Make it fun, choose a topic that makes sense for the people you convince to turn up, and ask them for constructive feedback.
- **Managing group dynamics:** You will have to be alert to the way the group dynamics and discussion are unfolding and adapt your facilitation and input to respond to this. Initially, there is often hesitance to overcome, you may have to lead more strongly at this stage. Your aim should be to energise and make participants feel comfortable, so that you are steering rather forcing. There are some key things to be alert to as the process develops: are one or a few people dominating discussion whilst others hang back? Work to moderate this and bring everyone into the discussion. Be alert to how comfortable people seem in the group context and whether they have something to say, but don't feel bold enough. Are people drawing connections without discussing with the rest of the group? Ensure that all proposed links are discussed and agreed. Are people getting over-focused on one specific area of the map to the exclusion of others?
- **Giving away power:** it is easy as a facilitator to feel responsibility for every moment of a workshop, and to try to control things too tightly. We recommended erring on the side of giving away power and responsibility to participants. Ask them to draw instead of you, ask them to ask questions of others, and critique the map as it emerges. Feel free to describe yourself as a non-expert on the system you are mapping; in a participatory process, positioning yourself as the expert will inhibit discussion. In an ideal situation, if participants are clear on the purpose of the session, and understand the method, by the second half of a workshop they could maybe even run the session without you!
- **Taking breaks:** facilitating is an exhausting activity. Between the nervous energy and the need to be focused, you will use a lot of physical and mental energy. Take breaks, both to give yourself a few moments rest, but also to reflect on how the session is going and

adjust if needed. Participants will need breaks too. Have a rough idea of when breaks will be, but allow a little bit of flex so that you don't stop at very productive moments, or feel the need to go on when energy is low or you have reached a natural breakpoint.

- **Working in pairs:** working in pairs can be a useful way to make facilitation easier. For any given section of the workshop, you can assign roles, one person can be in active facilitation mode, and the other can be in a participant observer role, watching and reflecting, but also contributing when needed. You can then switch roles during different sections. Reflecting on how things are going, and managing energy levels, become much easier with someone else too. However, beware of working with too many people. We have found facilitation can get a bit muddled if there are maybe four or five people who participants perceive as facilitators. Side conversations can pop up, which we normally hope to avoid, or people can go 'off-message' if the purpose is not simple and clear.

CAPTURING AND RECORDING WORKSHOPS

It is vital, but difficult, to capture the discussion during a workshop. The map you create itself is not the only output. The discussions are equally valuable, and it can be useful to refer to these later. You have two basic options for capturing a session: you can either take an audio (and maybe even video) recording, and then transcribe or make notes re-watching it; or you can take written notes. We normally opt for the latter and have a dedicated note-taker present for the workshop. We ask them to take as detailed notes as possible, and then we look at these soon after the session and write them up into something more formal, which we can refer to in the future. If you wait more than 24 hours to write up notes, we find it is increasingly difficult to remember the nuances of the discussions. We also take photos of, and keep, all the flipchart notes made, and post-its which don't make it into the final map.

Using an audio recording removes the needs for a note-taker and gives you a more accurate record of the session, but creates two potential issues. First, you may inhibit conversation if people feel they are 'on the record'. Second, you will have a significant task in converting the recording into a transcript or notes. Transcription can easily take five or six times the length of the recording when there are multiple people involved.

Lastly, if you are physically drawing your map, we highly recommend you take photos of the map throughout the process. Photos of the map at the end will be vital to help you digitise (i.e. input into whatever software you want to use), but photos during will also help you reflect on the process, how the map developed, and maybe even jog your memory of the discussion.

POST-WORKSHOP

After a workshop you may just want to collapse in a heap and have a sleep! You should take some time to rest if the process is tiring, which it often is. However, it is also important to take advantage of the energy and raised interest a workshop will often generate. As well as processing notes and photos, and starting the process of digitising maps, you should contact participants to thank them for their time, explain what will happen next, and invite them for bilateral conversations should they want them. We have found that participants are often interested in following up one-to-one, and these can be some of the most useful spaces to develop ideas for analysis and use of maps. A de-brief with your team will also likely be useful; make some dedicated time to reflect on what worked and what didn't, how you might change future workshops, or the project design.

COMMON ISSUES

Workshops are not always all sweetness and light, there can be thorny issues you will need to resolve. The most important we have come across are the following:

- **Difficult power dynamics:** there are all sorts of group dynamics that can emerge during a workshop, or that can exist from previous interactions. You may not be aware of many of these, and they rarely cause serious issues. However, when there are uneven power dynamics in a group, it can undermine a workshop. You may find that the most senior or powerful person in a group dominates, and the mapping just reflects their views; or you may find that even when a powerful person does not want to dominate, others are still hesitant to say much in front of them. In either situation, you need to find ways to ensure the people who are less powerful, or more hesitant, can contribute. You may have to irritate the more powerful people to do

this, but it is likely worth the risk. It can be helpful to position yourself as an outsider, or to justify your request using the method, rather than directly saying someone is dominating too much. If there are foreseeable issues here, with regards to say employees not likely to talk freely in front of a boss, or groups who have conflicted relationships then it can be useful to organise separate workshops for different people or groups.

- **Disagreement between stakeholders:** potentially worse than uneven group dynamics is strong disagreement between stakeholders. We are referring here to disagreement that is severe enough that it could lead to some stakeholders refusing to attend workshops, attending but not contributing or bringing a negative energy, or to heated arguments between individuals. If difference of opinion is very wide, and thus relations between stakeholders are poor, you may want to think about running separate workshops for them. Unless your role is specifically on reconciliation, we would avoid putting the extra burden on your workshop of playing this role as well as mapping. If it feels appropriate to try to get people in the same workshop, you will need to have plans and prompts to help them constructively discuss disagreements, look for possible resolutions, and/or have ways of preserving different views in the map that is created. It can be useful to emphasise the role of mapping in bringing our mental models and assumptions to the surface, and that the whole point is to find out where we agree and disagree, and why exactly this is. Using a map to do this can help to diffuse any anger or emotion in a discussion. Where calm discussion does not lead to agreement, you should be able to preserve two or more views of an issue in one map; this is easier in the more flexible methods. Although in general, coming to a shared understanding captured in a single map is the goal, the aims of your process should dictate your decision around whether to create more than one map version, for example, if explicitly comparing different system understandings will help illuminate what is going on.
- **Confusion about the method:** be prepared to explain how the mapping method you are using works in two or three different ways. Think about how you would describe it to a ten-year-old child. If you can't do this, then you probably can't explain it clearly to diverse sets of stakeholders. People will misunderstand it or won't listen carefully to your first introduction of the method. Sometimes people

will think they can bend the ‘rules’ of the method if they want to. They may view the purpose of the session simply to have a discussion, and not see as much value in the actual map you are producing. Misunderstandings can go unnoticed until quite far into a workshop. You need to be patient with people, avoid positioning yourself as the expert and them as the lay people. It can be useful to use prompts and summaries as people are adding things to the map to ensure understanding is correct, rather than giving long presentations at the start, or giving handouts with the ‘rules’. For example, if someone explains, ‘I think X should be connected to Y with a negative arrow’, you can prompt and summarise as it is drawn down by saying, ‘OK, so that is because as X increases Y tends to go down?’. If that person actually meant ‘X is bad for Y’, this will quickly be realised, and you can explain again without the sense of you being patronising or needlessly concerned with the details.

- **Disengagement of stakeholders:** it is inevitable that some people will be disengaged during a workshop for one reason or another. Typically, it is only one or two people, but you can end up with half the participants not really contributing, simply because they are bored, don’t see the value, or are distracted. You should not be disheartened if this happens. It will happen in the most important of processes and to the most skilled of facilitators. What you need, again, is a plan for how you will deal with it. Setting some gentle ground rules can help. For example, if people have their laptops with them and start to do other work on them, it can save a lot of effort later to ask them politely to not use their laptops during the workshop. Remember, they may have assumed they were attending a presentation, and were planning on sitting at the back, responding to emails. The trick is not to shame people who are disengaged, but to pre-empt potential reasons for them becoming disengaged, or to gently bring them back in. Creating an engaging environment, for example, asking people to stand rather than sit and having the whole table covered with mapping materials without room for laptops is often helpful.
- **Facilitator burnout:** it is likely you will experience some aspect of facilitator burnout during a project with multiple workshops. Sometimes this can come in the form of simple tiredness, but more often we find it manifests itself in more subtle ways. You might start to feel frustrated with a workshop, or set of workshops, or lose con-

confidence in the purpose or quality of the work. You might find you start to develop nerves before and during sessions, when previously you did not, or you may begin to feel unreasonably anxious about workshops. This is totally normal. Sometimes it is a good sign you are being reflexive and thoughtful about your work. The simplest way to deal with this is, of course, to give yourself some time not working on, or thinking about, the project. A little time and reflection can work wonders. You may also want to talk with team members about how you are feeling; they may be feeling the same way, and/or can offer reassurance.

RUNNING ONLINE WORKSHOPS

As we write this, in late 2021 in the UK, we have spent the last year and a half largely unable to run workshops in person due to the pandemic. No one knows with any certainty what will happen in the future, if and when meeting in groups in person for workshops will become the norm again. Though in ‘normal’ circumstances we would almost never want to run a workshop virtually, given the changing norms brought on by the pandemic, it is worth considering how we they can be facilitated online. We have spent the last eighteen months doing this with mixed success, here are some of our reflections and tips:

- **Attendance is easier online:** interest for, and attendance at, events has stayed broadly the same. If anything, it has been easier to get the most ideal participants, as attendance takes less time and effort without travel. You might want to use this to your advantage; now that people are more used to attending events online, and if you want to reach people who are geographically far apart, it may be worth running an event online even if it is not strictly necessary.
- **Interaction and discussion are far harder to generate:** there is no doubt that discussion and interaction is poorer online. Without body language cues, and with the short delay between speaking and hearing, fast-paced discussion between three or more people is almost impossible. You will likely need to have to play a more active role facilitating people to help unlock some of these difficulties. You may want to devise a system for people to make comments, for example, using ‘raise hand’ functions, with you chairing actively. You can make use of a chat function too, but this can be distracting, and create

parallel discussions. It is useful to increase the facilitator to participant ratio here, so that, for example, someone is monitoring the chat, another person leading the discussion, and another keeping an overview of the interface you are using. Group size should also be reduced to help reduce these problems. You may find it useful to make use of breakout rooms for certain discussion-heavy parts of a workshop whilst keeping other parts in the whole group. All of this creates more work, for example, in creating multiple versions of a map which must be discussed and merged.

- **Shorter but more sessions can work well:** because online discussions are more difficult, people will get tired and frustrated more quickly. We have found running shorter sessions, but more of them, or following them up with small groups or one-to-one discussions can work well. For example, you might replace a four-hour in-person session with a two-hour virtual workshop, and then half- or one-hour follow-up calls with key participants. Beware, this may end up taking up more time for you. You can also solicit more information in advance of workshops. For example, using online voting or whiteboard tools to allow participants to suggest and vote on important factors to be included in a map.
- **Software options are important:** you have two key choices here. First, which software to use to handle the actual call; you need to think about which services people can access and what functionality they have you might want to use. It is best to assume people will have serious constraints on what software they can use, and to ask them directly before making your choice. Second, you will need to decide how you are going to build your map and what software to use. The simplest thing to do is to share your screen, and you build the map. However, this might be rather dull for everyone else to watch, and will likely inhibit some of the discussion, giving you too much power as judge, jury, and executioner on all mapping decisions. Alternatively, many mapping software options can be used in web browsers and have multiple people working on them at the same time. This works well when there is little lag in the changes they make. Beware of people just working away in silence though; we have found people will just start mapping on their own in different sections of the ‘virtual table’. Again, assume people will have technical issues, and get these ironed out beforehand—make sure they can access the software and can use it. Some people will not be confident with it, and

you should make every effort to accommodate them, rather than excluding them. Ideally, build in a ‘tech-ice-breaker’ session at the start of a first workshop in which people get to use the software in an introductory activity.

- **Test software properly:** it is vital to have a proper play around with any software you are thinking of using, even software you use for other purposes, or offline. You will only discover and understand the full functionality by spending some time with the software in a non-pressure situation.
- **Physical and online mapping create different experiences and maps:** be aware of how software and hardware can subtly affect processes. For example, a full view of a systems map may not be visible on a computer screen meaning that people naturally zoom in and focus on subsections and miss the bigger picture. You may want to adapt process design to overcome this. For example, setting aside time to ‘journey around’ the whole map.
- **Burnout is more likely, but also more subtle:** if you adjust the structure and length of workshops for the online context, they will not be as generally tiring as an in-person one. However, they do use up a lot of mental and emotional energy, which can creep up on you in unexpected ways. Anyone who regularly holds work video calls knows that they can sometimes be slow, awkward, and even painful to be part of. Virtual workshops can be the same; as the facilitator, you will feel this the most. We have found it is normal to feel more anxious about a workshop and the overall process, when doing them online. You should expect this, build in more breaks that you would for an in-person workshop, and give yourself screen breaks before and after a workshop.

As the world has adapted to working online, there have been several useful discussions and guides developed for running workshops online, you may find the following helpful: Fowler (2020) gives some excellent broad-level suggestions; Khuri and Reed (2020) go into more detail on how to generate more interaction, and consider some of the general-purpose software tools available, some of which include functionalities like qualitative systems mapping; finally, Dialogue Matters (2020) provide more formal and detailed guidance, though technically it is targeted at online meetings rather than workshops, it provides another thorough list of considerations and tips.

GETTING STARTED YOURSELF

Embarking on a workshop or series of workshops can be intimidating the first time you are tasked with it. There are many resources available for general guidance on facilitation and running workshops; numerous books on the subject, and many blogs and web-guides. But to be honest, we have used few of these, and don't have any we would particularly recommend. Have a search yourself and see if there are any produced by organisations or authors working in domains relevant for you. We have learnt the most, and developed the skills to run workshops, from attending workshops ourselves, from discussing with colleagues with more experience, and through practice, both in 'test-workshops' with colleagues, friends, or family, and in the real thing.

We recommend organising a practice workshop(s) with some willing and friendly volunteers. This allows you to build skills and confidence and iron out problems in your approach. Give them a topic which makes sense for them, not necessarily the one you will use in the real thing. Ask them to treat you firmly and offer critique and questions, you want to be pushed a bit, not just have a fun few hours with friends.

There are guides for workshops for individual methods, which tend to focus less on skills of facilitation and communication, and more on the technical details of a project or workshop or reflect on applying a method in a participatory mode. These are outlined in the individual methods chapters.

Now, get out there and start workshoping! We have found it a rewarding and interesting thing to do, you get to meet all sorts of different people, and you get a real feel for the value systems mapping can generate for people. You may be nervous, but you will enjoy it, promise!

REFERENCES

- Dialogue Matters. (2020). Better online meetings (Edition 2). Dialogue Matters Resource. <https://dialoguematters.co.uk/wp-content/uploads/2020/05/Dialogue-Matters-Better-Online-Meetings-Edition-2.pdf>
- Fowler, B. (2020). Ten tips for facilitating online workshops. NPC blog. <https://www.thinknpc.org/blog/ten-tips-for-facilitating-online-workshops/>
- Khuri, S., & Reed, M. (2020). *Tips and tools for making your online meetings and workshops more interactive*. Fast Track Impact Research Impact Guide. <https://>

www.fasttrackimpact.com/post/tips-and-tools-for-making-your-online-meetings-and-workshops-more-interactive

Penn, A. S., & Barbrook-Johnson, P. (2022). How to design a Participatory Systems Mapping process. CECAN toolkit. <https://www.cecan.ac.uk/resources/toolkits/>

Open Access This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

