TECH POLICY LAB | UNIVERSITY of WASHINGTON

DIVERSE VOICES

A HOW-TO GUIDE FOR FACILITATING INCLUSIVENESS IN TECH POLICY

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The Tech Policy Lab at the University of Washington

The Tech Policy Lab, established in 2013, brings together interdisciplinary leaders from the University of Washington's School of Law, Information School, Allen School of Computer Science & Engineering, and other units on campus. The Lab aims to strengthen and inform technology policy through research, education, and thought leadership.

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Overview

The importance of creating inclusive policy cannot be overstated. In response to this challenge, the UW Tech Policy Lab (TPL) developed the Diverse Voices method in 2015. The method uses short, targeted conversations about emerging technology with "experiential experts" from under-represented groups to provide feedback on draft tech policy documents. This process works to increase the likelihood that the language in the finalized tech policy document addresses the perspectives and circumstances of broader groups of people—ideally averting injustice and exclusion.

MAIN STEPS IN THE METHOD

- Select a tech policy document
- Surface relevant under-represented groups
- Assemble a panel of experiential experts who represent those groups to examine and respond to the tech policy document
- Synthesize panel feedback
- Provide panel feedback to tech policy document authors

▶ About this Guide

The TPL seeks to make this process available to any group wanting to improve a draft technology policy document. This Guide provides detailed instructions and materials for using the Diverse Voices method. The Guide is organized as follows: (1) overview of the method, (2) planning for panel discussions, (3) running panels, (4) analyzing panel conversations, and (5) providing feedback to authors. A Frequently Asked Questions section and glossary precede appendices, which include sample letters, forms, materials and checklists useful for implementing the Diverse Voices method.

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▶ Key Terms

Here we provide definitions for key terms. We acknowledge that some of these terms may be contested, in part, due to the way in which language may reflect power relations and implicit assumptions.

Tech Policy Document

An informative, authoritative report designed to familiarize lawmakers with a technology and its policy implications. For example, a white paper or policy strategy.

Mainstream

We use the term *mainstream* to describe the segments of the population represented in conventional approaches to technology policy research, development, and writing.

Under-represented Group

We use the term *under-represented group* to refer to a segment of the population that is often insufficiently consulted in the policymaking process due to factors such as structural inequality across racial, socio-economic, and other lines.

Tech Policy Document Author

A person(s) who writes a tech policy document.

Experiential Expert

People who have either lived experience as a member of a particular group or those closely associated with someone with this experience (such as family members or institutional advocates).

Expert Panel

A group of experiential experts assembled to comment on a tech policy document.

Facilitator

A person who moderates the expert panels, synthesizes the panel discussion, and provides the resulting feedback to the tech policy document author(s).

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1. Introduction

1.1 THE DIVERSE VOICES METHOD

The Diverse Voices method at the University of Washington Tech Policy Lab (TPL)[1] aims to provide policymakers and others with a tool for soliciting feedback on tech policy documents from members of under-represented communities. The Diverse Voices method is distinct from the process of writing a white paper. Rather, once a draft of a tech policy document exists the method can be employed to integrate input from experiential experts into it before a final version of the document reaches policymakers.

Practical by design, the Diverse Voices method seeks to improve the inclusivity of tech policy documents in a manner that is low cost—both to the tech policy document authors and to the experiential experts who provide critical feedback on those documents. Facilitators fill this gap—leading and managing the Diverse Voices process. To be clear: the Diverse Voices method improves inclusivity but it does not claim to be fully representative or comprehensive of diverse perspectives. Rather, the method helps to identify some critical aspects in the tech policy document that could be improved and to provide suggestions for those improvements. In brief, the method offers progress—better tech policy documents—not perfection.[2]

1 http://techpolicylab.uw.edu/diverse-voices

2 For a discussion of value sensitive design and the goal of "progress, not perfection" when addressing these sorts of challenges, see Friedman, B. and Hendry, D. (in preparation). *Value Sensitive Design: Theory, Method and Practice*.

The intended outcomes of this process are:

- A tech policy document that responds directly to the voices of under-represented groups
- A richer understanding of how different segments of the population might be affected by an emerging technology
- The potential to avert injustice and exclusion

Key steps of the process include:

- Selecting a tech policy document
- Surfacing relevant under-represented groups
- Assembling panels of experiential experts who represent those groups to examine and respond to the tech policy document
- Synthesizing panel feedback
- Providing panel feedback to tech policy document authors

1.2 WHY WE DEVELOPED THE METHOD

In the summer of 2015, the TPL had written a tech policy white paper that assessed the policy implications of augmented reality (AR), a technology that overlays digital information onto what a user senses. We were concerned that our white paper did not adequately consider non-mainstream perspectives. To mitigate this concern, we developed the Diverse Voices method. Specifically, TPL facilitators convened three panels to provide input on the AR technology policy document. We focused on groups that typically are not well represented in the tech policy process: *people with disabilities*, based on the potential for AR to help low-vision users navigate their surroundings; *currently or formerly incarcerated people*, based on public stigma attached to people who have a criminal history and might be identified by facial recognition software; and *women*, based on a belief that women may feel monitored by AR in public space. The feedback from the three panels was synthesized and returned to the white paper's author, where it provided content that was incorporated into the final document, *Augmented Reality: A Technology and Policy Primer,*[3] authored and released by the TPL in Fall 2015.

3 http://techpolicylab.uw.edu/wp-content/uploads/2016/02/Augmented_Reality_Primer-TechPolicyLab.pdf

1.3 TIMELINE

As shown in Table 1, the timeline below provides an approximate flow and timeframe for implementing the method. The sections in this guide correspond to each task.

	TASKS AND RELATED SECTIONS IN GUIDE	WEEKS → 1	2	3	4	5	6	7	8	9	10	11
PLAN	Identify tech policy document (2.1)	●	●	●								
	Recruit panelists (2.2)			●	●	●						
	Prepare documents for review (2.3)			●								
	Manage pre-panel administration (2.4)					●	●	●				
RUN	Facilitate panel meetings (3)							●				
ANALYSE	Debrief co-facilitation session (4.1)							●				
	Transcribe and analyze audio (4.2, 4.4)								●	●		
	Reread policy document (4.3)									●		
	Synthesize and document themes (4.5)									●	●	
FEEDBACK	Prepare memo for authors (5.1)											●
	Evaluate efficacy of process with authors (5.2)											●

Table 1: Overview of Diverse Voices Method and Approximate Timeline

2. Planning Panel Discussions

Identify a technology policy document for the Diverse Voices process, prepare the document for panelist review, determine panel groups, recruit experiential experts for panels, and manage administrative details that precede running actual panel sessions.

2.1 IDENTIFYING A TECH POLICY DOCUMENT

Tech policy documents are informative, authoritative reports designed to familiarize lawmakers with a technology and its policy implications. Examples of tech policy documents include white papers or policy strategy.

The Diverse Voices method is intended to be used with a tech policy document that is fairly well-developed, but still in a draft or comment phase. Tech policy documents of the kind we envision tend to:

- Focus on one emerging technology
- Address a primary audience of policymakers/legislators
- Advocate specific policy recommendations
- Synthesize previous research

For the process to be most effective, the document's author should be amenable to making improvements to the document based on outcomes from the Diverse Voices method. Authors should be informed of the expected timeframe for completing the process (see Table 1) and the kind of input they can expect to receive (see Section 5.1).

2.2 IDENTIFYING STAKEHOLDER GROUPS

The Diverse Voices method requires panels of experiential experts. As few as 3–4 panels can produce useful insights toward more inclusive tech policy documents. The specific number of panels will vary depending on topic and available resources (e.g., time, budget). That said, 3–4 panels of experiential experts are considered a minimal number.

2.2.1 Brainstorming Initial Stakeholder Groups

Begin by brainstorming a list of stakeholder groups potentially relevant to the emerging technology addressed in the policy document. To generate this list, facilitators can envision likely scenarios for how the technology could be used over time and its potential societal impacts. We offer the following prompts to help select stakeholder groups of interest:

- Which groups are likely to use the technology of interest?
- Which groups are not likely to use the technology of interest due to factors such as structural inequality in society, disinterest, or self-described technophobia?
- Which groups will be implicated as the technology becomes more pervasive, possibly decades in the future?
- Which groups are likely to be overlooked, based on the groups represented by the facilitators and/or document authors?

The resulting list of stakeholder groups should cast a reasonably wide net with respect to the range of stakeholders considered.

2.2.2 Narrowing Down the Stakeholder Groups

Given resource constraints, narrow the list to a small subset of stakeholder groups by asking the following questions:

- Which of these groups are least represented in the policymaking process?
- How does the combination of groups, as a set, represent a wide range of interactions with the technology of interest (e.g. probable users, probable non-users, those positively/negatively affected by the technology)?

Document the rationale for selecting and narrowing down stakeholder groups. We recommend convening panels from at least three different stakeholder groups to ensure a range of perspectives.

2.3 RECRUITING EXPERIENTIAL EXPERT PANELISTS

2.3.1 Defining Expertise

We define experiential experts as people who speak from any of the following perspectives:

- **Lived experience:** Lived experience experts are individuals who identify as members of a particular stakeholder group. Their expertise is based on their ability to speak from their situated experience.[4]
- **Institutions:** Institutionally affiliated experts are individuals who work in organizations that directly support the stakeholder group and understand the needs and experiences of people in that group. They may serve in roles such as advocates, social workers, teachers, care providers, guidance counselors, nurses, and lawyers.
- **Social support:** Social support experts are individuals who have a personal relationship to a person with lived experience. These include but are not limited to friends, parents, siblings, children, or partners of members of the group of interest.

4 Harding, S. (1992). Rethinking standpoint epistemology: What is "strong objectivity"? *The Centennial Review*, 36(3), 437-470.

These categories are not mutually exclusive. It is valuable to identify individuals with multiple types of expertise. For example, a staff person at an advocacy organization for a particular group could also be a member of that group (e.g., a person with lived experience with low-vision may also work at an organization that support individuals with low-vision in the community). More broadly, all individuals speak from the intersection of their multiple identities and experiences.[5]

2.3.2 Recruiting Experts

Experts can be recruited via email and flyers, through word of mouth, and other related approaches. As appropriate, draw on the following outreach methods to identify panelists:

- **Network:** Use your personal social network to solicit expert panelists.
- **General Internet search:** Use keywords related to the panel you are trying to assemble.
- **Social media:** Use social media platforms (Facebook, Twitter, etc.) to post short messages with a link to a page with more information about the purpose and intent of the Diverse Voices method.
- **Online ad postings:** Use sites like Craigslist to reach some segments of the community.

In some circumstances, it may be challenging for facilitators to recruit experts with lived experience by email, especially from groups with varying levels of Internet access and visibility, (e.g., persons experiencing homelessness). One way to overcome this challenge is to work with institutions serving these individuals. Special sensitivity should be shown with respect to communities that may have stigma attached to their status (e.g., people with HIV, people with Autism, or victims of sexual assault). Facilitators can also recruit panelists in-person, at community centers, or at other locations where members of the group congregate.

5 Recognizing the multiple identities that members bring to the panel is called their *intersectionality*. C.f. McCall, L. (2005). The complexity of intersectionality. Signs, 30(3), 1771-1800.

When soliciting expert panelists, we recommend doing the following:

- Try to create a panel that brings together people from divergent vantage points.
- Consider diversity with respect to age, gender, or other characteristics, even within a group where participants share a particular demographic identity.[6]
- Try to contact individuals who are not usually consulted in policymaking processes.
- Consider creating a spreadsheet to track potential candidates and their response status (this document will also make it easier to find panelists when future needs arise).

Appendix A provides a customizable sample email to reach out to panelists.

At the time of recruitment, inform potential panelists of the time commitment necessary to participate (roughly 10 hours total), and that they will be reimbursed for their time (if applicable). Potential panelists should also be informed that the panels will be audiotaped and transcribed to help provide accurate feedback to document authors.

If potential panelists do not reply within one week, follow up with a short reminder message. Keep track of the questions asked and compile them into a Frequently Asked Questions document, which may be useful for responding to panelists in future emails. Whenever possible, schedule a 10-minute meeting (in person or by phone) to ensure the potential panelists understand what they are being asked to do and to answer any questions they may have about the process.

After recruiting enough panelists for a session, the facilitator should contact panelists to arrange a mutually agreeable date and time. We recommended selecting a date that works for four or more panelists in case a last-minute occurrence prevents a panelist from attending.

6 *Ibid.*

2.4 PREPARING THE POLICY DOCUMENT FOR PANELIST REVIEW

Research suggests that documents with a less-polished, 'drafty' look are more likely to elicit feedback.[7] Therefore, re-formatting the tech policy document to appear drafty can help to encourage panelists to provide critical input. Moreover, policy document elements such as extensive footnotes and reference citations or profuse amounts of technology jargon can make these documents seem unapproachable. Although it is not always necessary, we recommend removing these elements in order to achieve a document with a more accessible presentation.

Facilitators should obtain an editable version of the tech policy document from authors (e.g., a **.doc** version in lieu of a **.pdf**).

Consider removing document elements such as:

- Footnotes
- Endnotes
- Pre-publication templates
- Copyright information

And adding document elements such as:

- Double-spacing
- Single-column formatting
- Sans-serif fonts

After modifying the tech policy document for panelists, facilitators should review the document to ensure that none of the modifications have affected the document's readability or comprehensibility.

7 For more information about the value of seeking feedback on less-finished versions of a document, see Rettig, Marc. "Prototyping for Tiny Fingers." *Communications of the ACM* 37, no. 4 (1994): 21–27.

2.5 PRE-PANEL ADMINISTRATIVE DETAILS

Facilitators must organize many activities ahead of time to ensure successful panels. When possible, we recommend that each panel is planned and moderated by two facilitators.

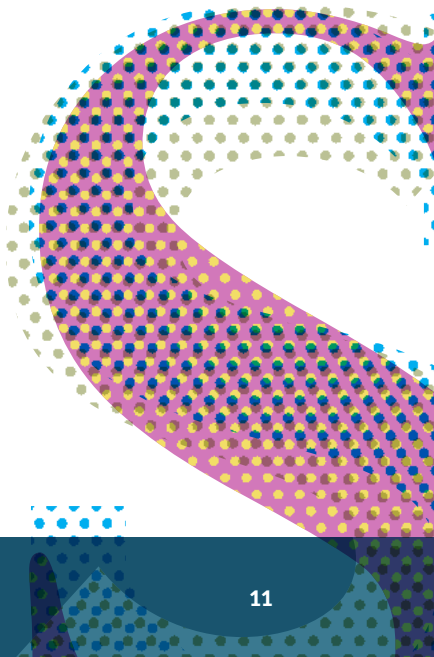
2.5.1 Identifying Co-Facilitators

Facilitators perform many critical functions in ensuring the success of the Diverse Voices method. They participate in selecting the tech policy document for discussion, identifying stakeholder groups, recruiting expert panelists, running panels, and doing post-panel analysis and synthesis. We estimate this work requires about 40-hours per facilitator for each panel discussion. Most of this time is spent on recruitment and synthesis of panel feedback.

We strongly suggest that, when possible, co-facilitators reflect the principles of demographic diversity that underpin the TPL Diverse Voices method and goals. Facilitators play an important role in creating an atmosphere of non-judgment, trust, and affirmation of multiple perspectives. As a division of work, one facilitator could lead discussions while another takes notes or writes ideas on a whiteboard. Co-facilitators also help when transcribing the panel audio recordings and analyzing thematic content.

2.5.2 Selecting Visual Aids to Introduce the Technology

To prepare for the panel, facilitators should identify 2–3 video clips and 2–3 magazine cartoons that demonstrate the technology and provide insight into the technology's integration into society. Facilitators can use these visual aids to help expert panelists consider the downstream implications of the technology and the policies that govern it. This creates an entry point for panelists to participate regardless of their previous familiarity with the technology, sets a relaxed tone, and establishes a shared critical frame of reference for the discussion.



Visual materials relevant to the technology typically can be found via Internet searches.

Visual aids can:

- Highlight the technology's functionality
- Demonstrate the technology's potential use in everyday or near-future scenarios
- Hint at the promise or peril of the technology
- Create a shared frame of reference for panelists

2.5.3 Scheduling a Room

Schedule a room for panel sessions that has the following characteristics:

- Small enough to have good acoustics for audio recording
- Chairs that can be set up in a circle so all participants can face and interact with each other
- A blank wall, bulletin board, or whiteboard for writing or pinning up ideas
- A built-in projector, screen, space for a mobile projector, or other ways to show video clips and cartoons

The ideal room arrangement and facilitation techniques may be culturally bound, and should be adapted to suit a particular context. For example, in some Latin American and African contexts, it is considered impolite to gaze directly into an elder's eyes. In other cultures, it may be more suitable to separate panels by gender.

2.5.4 Providing Panelists with Documents

At least one week before the meeting, facilitators should email the modified version of the tech policy document to all panelists, asking them to review it thoroughly, make notes, and come prepared to participate in the discussion.

Panelists should be reminded to avoid distributing or discussing this modified version of the document given its pre-publication, confidential status. Appendix B provides a sample pre-meeting email to send to panelists.

2.5.5 Preparing Prompts and Questions for Panel Discussion

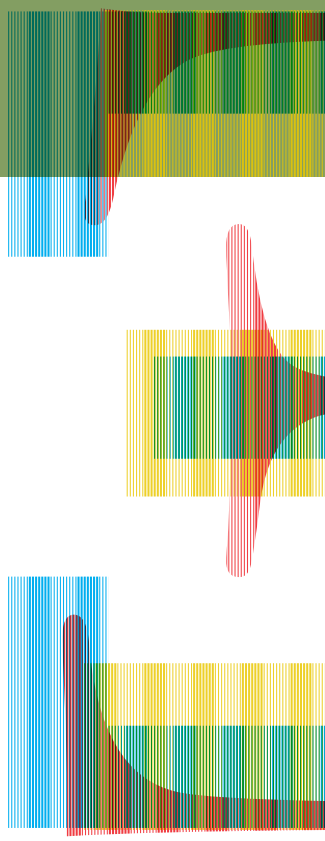
Prior to the panel meeting, facilitators should prepare: (1) a list of open-ended questions about the technology and how it might affect panelists; (2) prompts to elicit specific suggestions for improving the document from the Diverse Voices method; and (3) talking points to elicit feedback about the process itself. See Section 3 for prompts to use during the panels.

2.5.6 Materials Checklist

A checklist of materials that facilitators should bring to panel meetings includes:

- ☐ Sufficient paper copies of the tech policy document, as modified, for each panelist and both facilitators
- ☐ Audio-recorder with a microphone
- ☐ Laptop and projector to display video clips and cartoons
- ☐ Snacks and beverages (sensitive to dietary restrictions and allergies)
- ☐ Reimbursement for panelists' time (e.g., check, gift card)
- ☐ Reimbursement for panelists' parking cost (if applicable)
- ☐ Markers for whiteboards
- ☐ Pads of paper and pens for each panelist
- ☐ Poster-sized paper or sticky notes to post ideas on the whiteboard
- ☐ Digital camera (optional)
- ☐ Labels or name tents on which to write panelist names
- ☐ Agenda and speaking notes

3. Running Panels



Orient panelists to the process, introduce the technology, solicit panelist input on the technology, and seek panelist feedback on how to improve the tech policy document.

3.1 SAMPLE PANEL AGENDA

Here we present a sample panel agenda.

1. INTRODUCE THE FACILITATOR(S) AND PANELISTS

- Introduce facilitator(s) and provide an overview of the panel process.
- Ask the experiential experts to introduce themselves and share their connection to the under-represented group of interest (e.g., youth, seniors, LGBTQ, formerly incarcerated).
- Hand out a hardcopy of the policy document to panelists who request one.

2. INTRODUCE THE TECHNOLOGY

- Solicit panelists' preliminary understanding of the technology.
- Show 2–3 short video clips demonstrating use (or anticipated future use) of the technology.
- Show cartoons that comment on the use (or anticipated future use) of the technology.
- Ask if there are any questions pertaining to the video/cartoons.

3. SOLICIT OPEN-ENDED FEEDBACK ABOUT THE TECHNOLOGY

- Segue to an open discussion of questions about the technology itself (what it is, how it works, what it can do).
- Ask the panelists about how they think the technology might affect them (hopes and benefits, concerns and harms, uses of the technology that could disproportionally affect their specific group).

4. SOLICIT DIRECTED FEEDBACK ON THE TECH POLICY DOCUMENT

- Ask the panel to respond to various aspects of the policy document, probing for ways in which the document could be improved to better respond to the needs of the group of interest.

5. SOLICIT FEEDBACK ON THE PANEL PROCESS

- Encourage panelists to provide feedback on the panel process and format, looking for ways that either could be improved.

3.2 DOCUMENTING INSIGHTS

Facilitators document panelist insights both by taking notes and by recording audio.

3.2.1 Taking Notes

During panel meetings, facilitators use sticky notes and markers to document the panelists' input as those ideas are generated. While one facilitator is leading the discussion, a second facilitator can write panelists' contributions on a sticky note to record each idea and place it on the wall for all panelists to see. Making notes visible helps affirm to panelists that their contributions have been heard and are valued. It also serves as a visual aid for panelists to respond to others' ideas and as a written record of contributions. For low-vision or low-literate panelists, other ways to achieve these goals may be needed, such as using panelists' input as explicit prompts for feedback from the group.

3.2.2 Recording Audio

Many smartphones can record and export audio for transcription. The panel sessions should be recorded in a small- or medium-size conference room with no background noise and minimal airflow. Place the microphone in the center of the table and encourage participants to speak clearly and loudly enough for the microphone to pick up their voices.

3.3 GENERAL GUIDELINES FOR PANEL FACILITATION

Facilitators are encouraged to adopt a minimal moderation approach. That is, facilitators primarily ask questions of the panelists instead of participating in the conversation.

After each question, wait 30 seconds or longer before prompting or restating the question. If you sense panelists are hesitant to respond, prompt by saying:

- *Again, I want to clarify that we are not evaluating you, just the policy document. Any perspective you have is very welcome.*

Tips for encouraging a range of responses:

- *I'd like to hear varied perspectives; please speak up if you have a different take on this.*
- *I'm really interested in your views on this.*

Tips for responding to panelist questions:

- If a panelist asks a clarifying question or point of information, answer directly.
- Clarify any key elements about the technology or how it functions.
- Consider opening the question to the entire panel to avoid creating the impression of being the authority in the room.

3.4 DETAILED GUIDE AND SCRIPT FOR THE PANEL SESSION

We now present a potential script and timeline for facilitating a panel session. The table below defines key words [in brackets] used in the conversations—facilitators should replace these with specifics for each panel.

[FACILITATOR 1]	Name of Facilitator 1
[FACILITATOR 2]	Name of Facilitator 2
[AFFILIATION]	Organization of facilitators
[TECHNOLOGY]	Name of technology featured in the policy document
[AUTHOR]	Name of the author of the tech policy document
[GROUP]	The term for the group represented by the panel

Table 2: Keywords for Panel Conversations

1. INTRODUCE THE FACILITATORS AND PANELISTS (10 minutes)

Introduce facilitators and give an overview of the panel process

Hi, my name is [FACILITATOR 1], I work at [AFFILIATION]. This is my colleague, [FACILITATOR 2]. Thank you so much for joining us for this conversation today.

Before we start, I would like to inform everyone that we will be audio recording and later transcribing this session so that we can focus on our discussion.

At the end of the discussion, we will write down, or transcribe, content from the audiotaped conversations; then, the two of us, along with colleagues at [AFFILIATION], will analyze the transcript to identify themes. We will write a summary of your suggestions and give these to the tech policy document author. The author is interested in your feedback. We cannot guarantee how the author will address your input, but we can guarantee that the author is serious in considering your input. You'll also have a chance to review the revised document to see if the revisions accurately address the concerns you expressed.

Is everyone okay with audio recording the session?

Any questions? Great! Let's get going.

Today, we will discuss the tech policy document that we provided you with ahead of today's meeting. A copy of the document is in front of you in case you need to refer to it.

The purpose of today's discussion is to get your feedback on what could be done to make this a more inclusive document—particularly from the perspective of the group you represent. By doing so, the tech policy document's recommendations, which eventually go before policymakers, have a better chance of addressing the diverse voices of all affected, not just the loudest or most mainstream. This process can help to prevent injustice and exclusion after the laws are enacted.

We are also interested in any feedback you have about how the technology described could change the life experience of people in [GROUP].

During the discussion, my colleague and I will ask you questions about the document and the topic generally. Do not feel like you need to speak directly to or with a facilitator. We encourage you to talk to each other and feel free to ask questions of the group.

At the end of the discussion, we will ask a few questions about how the conversation went and, more broadly, about how the panel process worked.

Are there any questions so far?

Have panelists introduce themselves to each other

Now, I'd like to go around the table, asking you to say your name and share your connection to [GROUP]. We have provided name tags/signs, if you would please write your name on them.

2. INTRODUCE THE TECHNOLOGY (10 minutes)

Solicit panelists' preliminary understanding of the technology

We will focus today on how to improve this particular tech policy document. This document was written by [AUTHOR]. It describes a specific technology, called [TECHNOLOGY], and then talks directly to lawmakers about how this technology should or should not be regulated.

To get started, I want to ask you about the technology we are here to discuss. How would you describe [TECHNOLOGY]? There are no wrong answers.

Show a short video (and/or cartoons) that demonstrates the technology

Here is a short video (and/or cartoons) about what the technology is, how it functions, and what it looks like in use.

- *What did you think of the video/cartoons?*
- *Did the video/cartoons clarify any aspects of the technology for you?*
- *What do you think this technology can do?*
- *In what other settings might this technology be used?*
- *Do you have any other questions about the technology?*

▶ **When to move on to the next step:** Move on from this part of the discussion when the panelists seem to have a firm sense of what the technology is, what it can do, and what it cannot do.

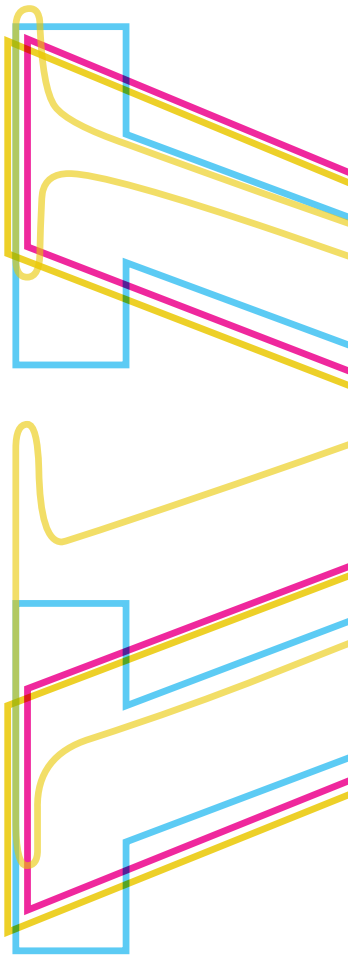
3. SOLICIT OPEN-ENDED FEEDBACK ON THE TECHNOLOGY (15 minutes)

Create an opportunity for initial thoughts on the impact of the [TECHNOLOGY] for the [GROUP]

I want to start with an open-ended conversation about what [TECHOLOGY] could mean for [GROUP].

- *What are some aspects of [TECHNOLOGY] that may help [GROUP]?*
- *What are some aspects of [TECHNOLOGY] that might be concerning to [GROUP]?*
- *How might [GROUP] use this technology in the future?*
- *Do you anticipate that [GROUP] will have access to this technology?*
- *Is there potential value or benefits in [TECHNOLOGY] for [GROUP]?*
- *Are there potential harms in [TECHNOLOGY] for [GROUP]?*

▶ **When to move on to the next step:** Continue this part of the discussion until the allotted time ends or no one contributes additional information.



4. SOLICIT DIRECTED FEEDBACK ON TECH POLICY DOCUMENT (at least 60 minutes)

Prompt the panel to critique the tech policy document

Now we are going to shift our attention to the tech policy document itself. We will ask you several questions. If there are any questions you have for the group, please raise them.

- *What does this tech policy document do well?*
- *Are some parts of the tech policy document better than others? Which parts are better? Why?*
- *What does this tech policy document not do well?*

- *Are some parts of the policy document worse than others? Which parts are lacking? Why?*
- *What doesn't the tech policy document say that you wish it said?*
- *What specific uses of this [TECHNOLOGY] affect [GROUP]?*
- *Is there anything else that you would improve or change in this tech policy document?*

Tips for following up on panelist comments:

- Repeat what a respondent says, then ask, *Is that what you meant?*
- *Can you clarify what you just said? I'm not sure I fully understand.*
- *Could you give another example of the kind of idea you are talking about?*
- *What part of the tech policy document supports what you said?*

Tips for keeping the conversation going:

- *Would you talk more about that?*
- *What mistakes could policymakers make because of how this document currently is worded?*
- *If this document were perfect, what else would it include?*
- *Should there even be policy recommendations about the use of [TECHNOLOGY]?*
- *Is there anything you would remove from this document?*
- *What else would you add to the authors' recommendations?*
- *What are some experiences you'd like to see addressed in this document?*
- *What stories should we be sure are told to authors and policymakers—positive or negative?*
- *What are you excited about?*
- *What are you worried about?*
- *How should legislators regulate [TECHNOLOGY]?*
- *What could be improved or reworded?*
- *How do we balance X and Y values (e.g., privacy and openness)?*
- *Whatever you want to say will be welcome.*
- *Provide additional examples or facts about the technology.*

▶ **When to move on to the next step:** Continue this part of the discussion until the allotted time ends or no one contributes additional information.

5. SOLICIT FEEDBACK ON PANEL PROCESS (less than 10 minutes)

Seek feedback from the panelists about how to improve the panel process (if time is limited, follow up with the panelists by email with these questions)

Thank you for your participation. We are always looking for ways to improve the work that we are doing. So, let's take a few minutes to discuss your thoughts on different parts of the process.

- *What went well?*
- *What do you think we should change for our next expert panel?*
- *Do you all think the panel was the right size? If not, how would you change it?*
- *Is one session enough to discuss the entire document and its implications?*

We are very grateful that you have taken time to discuss this document with us. We are confident that the feedback you provided will help enrich and strengthen the document.

6. **CONCLUDING THE PANEL** (2 minutes)

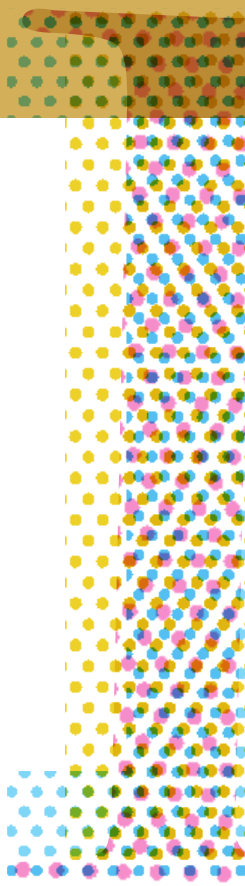
Bring the Diverse Voices panel to a close

Thank you so much for your time. In the coming weeks, we will be meeting with a few other panels and taking them through the same process. When we have finished meeting all panelists, we will synthesize the information and forward it to the tech policy document author(s) to improve their draft. Once the draft has been updated, we will email you a revised version. After you have reviewed the updated draft, please let us know if there are any obvious ideas or changes we omitted.

I will now pass around a form. Please complete it and then I will give your parking reimbursement and honorarium for participating.

Again, thank you all for letting us hear your voices.

4. Analyzing a Panel Conversation



Surface themes and feedback from each panel that will be useful for improving the tech policy document from the perspective of inclusive policy.

4.1 DEBRIEFING PANEL MEETING PROCESS

Immediately after each panel, facilitators can discuss and record their initial impressions from the panel discussions. These impressions, along with notes and audio recordings from the panel, will form the basis for the analysis of the tech policy document. At this time, facilitators can also discuss how to improve future panels, including but not limited to facilitation style, communicating about the technology, inviting conversation from panelists, and easing tensions among panelists should any arise.

4.2 TRANSCRIBING AUDIO RECORDING

At its core, the Diverse Voices method enables experiential experts to speak directly to the text of draft tech policy documents in their own voices. To ensure the integrity of those voices, the audio recording of each panel should be carefully transcribed. In turn, the transcript is used as a primary component of the analyses.

Typically, each hour of audio takes 3–4 hours to transcribe. To economize, it is not necessary to transcribe the facilitators' introduction or feedback for the facilitators about process improvements.

4.3 RE-READING THE POLICY DOCUMENT

Before analyzing a panel conversation, facilitators should re-familiarize themselves with the content of the tech policy document. Doing so will make it easier to understand panelist references to the text and places where the document could be improved.

4.4 ANALYZING TRANSCRIPT THEMES

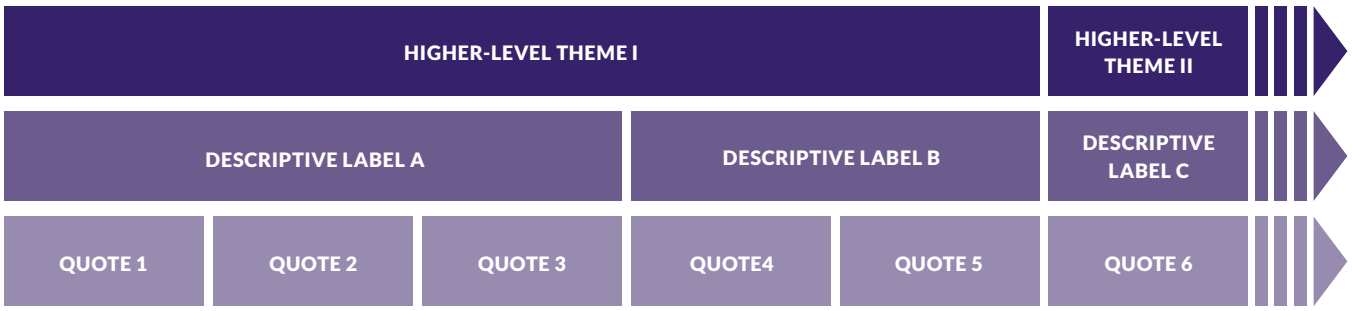
We turn now to the analysis and synthesis of the verbatim transcripts. These analyses are conducted within each panel, but not across panels that represent different groups. We resist analyses across panels as a way to help ensure that each group's distinct voice and concerns are maintained.

The thematic analysis begins with the verbatim panel transcript. Each facilitator reads through the transcript, marking segments where panelists provide input (directly or indirectly) on the tech policy document. For example, "This [policy] was very punitive, and it wasn't incentive based." In the margins, provide the rationale for why the panelist's comment is important.

As you read, consider the following questions:

- What were panelists' impressions of the tech policy recommendations as presented?
- What potential consequences of the technology were not mentioned or fully elaborated?
- Which (if any) tech policy document recommendations could lead to harm for the group?
- What issues did panelists raise that the tech policy document did not consider?
- What else did panelists mention as being important?

Having identified key quotes from the transcripts and the importance of those comments, the next step is to use the quotes to build a high-level thematic analysis from the bottom up. To begin, cluster closely related quotes and label the cluster with a descriptive phrase that summarizes the main idea. For example, for the quote above ("This [policy] was very punitive, and it wasn't incentive based") in combination with other quotes, the descriptive label might be "Punitive Strategies." Next, group related clusters and generate higher-level themes. For example, the group of quotes under "Punitive Strategies" might be placed under a larger category about legal strategies more generally, such as "The legal strategies recommended by the author will have a disparate impact on extremely low-income people." The final result of the thematic analysis summarizes panelist feedback in terms of higher-level themes comprised of descriptive labels and supported by verbatim quotes. See Appendix D for a sample list of themes from a non-drivers automated vehicles expert panel.



4.5 SYNTHESIZING THEMES

The synthesis component entails connecting key insights identified in the thematic analysis to specific text in the tech policy document. Insights may be identified from any level of the analysis. Each insight contains: (1) a heading (e.g., "Impact of author's legal strategies on extremely low-income people"); (2) a summary; (3) supporting panelist quotes; and (4) the page numbers of relevant passages in the tech policy document.

A detailed example of the kind of synthesis we have found to useful and a sample of the format for presenting that synthesis to authors can be found in Appendix E.

5. Providing Feedback

Write a detailed memo that provides feedback tied to the tech policy document for the author(s), follow up with authors to support integration of the feedback, and follow up with panelists when a revised tech policy document is available.

5.1 PREPARING FEEDBACK FOR AUTHORS

The final product of the synthesis process is a concise (1–3 page) memo summarizing each panel's input for the policy document author.

Consider using the following outline for the memo:

- Background of each expert panelist
- Brief description of the scope of the conversation
- Panelist insights grouped by theme and supported by panelist quotes
- Page or section references to relevant areas in the tech policy document

5.2 FOLLOWING UP WITH AUTHORS

After sending the compiled feedback to authors (i.e., a memo for each of the panels), facilitators can follow up with authors to answer questions, elaborate on the memo content and find out what (if any) content the authors have changed in response to panelist feedback. A 20-minute conversation can shed light on what was changed, what was not changed, and the benefits and limitations of the process from the author perspective.

5.3 FOLLOWING UP WITH PANELISTS

Once the tech policy document has been revised and finalized, share the revised document with panelists. If panelists still identify problems or feel their feedback was not adequately accounted for in the document, relay that information to authors. Appendix F provides a sample follow up email to send to panelists.

Facilitators may also find it helpful to maintain relationships with experiential experts who are conscientious, read required materials, and participate fully in discussions for future panels. Below are a few ideas for sustaining engagement with panelists after the panel is completed.

- Periodically send emails to panelists containing links to articles, events, or videos of interest.
- Hold an annual lunch/dinner thanking panelists for their time and contributions.

Frequently Asked Questions

Q1. What kind of tech policy documents does the Diverse Voices method address? Can you give me examples of technology policy documents that would work well with this process?

The Diverse Voices method addresses a broad array of tech policy documents, such as white papers, green papers, issue briefs, and policy strategy. While the documents we used focus on emerging information technologies (e.g., augmented reality and automated driving), nothing about this process precludes its use for a broader array of technologies, such as nuclear power plants, wind turbines, smart grids, or medical and wearable devices.

Q2. Can you cite details about the implementation and effect of the Diverse Voices method?

We found that the Diverse Voices method provided meaningful insights in a resource-efficient manner. In the augmented reality (AR) panels that we ran, panelists identified many ways to improve the existing white paper. For example, a panel of people with disabilities pointed out that the proposed definition of AR as an "additive overlay" did not reflect how people with vision impairments interact with AR where the AR may replace rather than augment the visual sense. Panels also generated original scenarios in which AR would prove useful, such as job training in prisons. In this case, the authors revised the tech policy document to include many panelists insights.

In the second case, on automated driving, panels identified some potential downstream impacts of the policy strategies as written. For example, a panel of youth identified ways that driverless cars could displace youth from delivery and transportation jobs. A panel of extremely low-income people raised concerns about the impact that proposed legal strategies, such as raising fuel taxes, would have on economically disadvantaged drivers. This insight had already been noted in the paper, so while the paper's author appreciated that the panelists highlighted these concerns, he decided not to further augment his recommendations given the proposed scope and aim of the paper.

Overall, we found that the method was successful in eliciting important insights about the downstream impacts of proposed technology policies while minimizing the time cost of participation to authors and panelists.

Q3. How many panels, and what kind of panelists, do you recommend using for each technology policy document?

The number of panels and panelists may vary for any technology policy document, given facilitator resources and time. We recommend running at least three panels per document in order to elicit a range of perspectives. Smaller panels enable in-depth contributions from each panelist, while larger panels could elicit a wider range of perspectives; we recommend 3–6 participants per panel. There is no prototypical panelist. However, when looking for panelists, seek individuals who speak the language of panel participants with at least a moderate level of proficiency. When possible, panelists should represent the intersection of different identities (e.g., young professionals, seniors, Latina, two-parent households). Being intentional about the places from which you decide to recruit can help increase the likelihood your panelists represent diverse viewpoints.

Q4. Not all under-represented population members share the same opinions on issues discussed in the technology policy panels. Is the output from the panelists intended to be representative and generalizable?

The Diverse Voices method is grounded in a design thinking approach and, in particular, is inspired by the method of heuristic evaluation. As with heuristic evaluation generally, the Diverse Voices method aims to surface some but not all problems associated with an artifact (e.g., tech policy document) in order to make improvements. There is no claim to surface all problems from all perspectives, nor to produce generalizable knowledge. Rather, the more modest goal is to leverage the views of a relatively small number of experts to improve the overall quality of a given artifact. We employ a design thinking approach because it is resource-efficient and we believe it can be effective in a wide array of settings.

Q5. Will panelists of different literacy and skill levels be able to understand the content and issues described in tech policy documents well enough to contribute valid and valuable insights?

In our collective experience with the Diverse Voices method, technology's impact on society is a pressing concern for many people, regardless of their educational backgrounds or levels of expertise. We find that despite a lack of formal training in these areas, panelists draw on their lived experiences to raise valid and important concerns authors may not have anticipated. Several features of the Diverse Voices method facilitate lay panelist input: (1) visual aids of the technology in use in near-future scenarios, (2) open-ended inquiry on how the technology may affect the group of interest, and (3) directed inquiry on the wording of the policy document, providing an opportunity for panelists to question facilitators and each other.

Like our panelists, policymakers themselves may not be familiar with the content and issues described in tech policy documents. It may be useful for policy document authors to revise parts panelists find confusing to increase overall comprehensibility and impact.

Q6. How does one assess whether the Diverse Voices method is successful?

The Diverse Voices method succeeds if it positively affects the quality of a technology policy document from the perspective of diverse constituents and does so in a resource-efficient manner. To be impactful, two things must occur. First, the method must help to surface some substantive insights that point to places in the policy document where critical improvements could be made. Second, the technology policy document authors must act on as least some of these insights—that is, the insights must be presented to authors in a compelling, actionable way. With respect to specific criteria to evaluate success, we offer two approaches. The first considers the number and substance of insights on the policy document panelists produce. The second focuses on changes to the precise wording of the technology policy document made by authors in the revision process. In the latter case, changes to the document itself may help to mitigate potential disparate impacts to under-represented groups as the revised document circulates among policymakers.

Q7. Where can I get help if I have questions or concerns about implementing my own Diverse Voices panels?

Please direct any questions to the UW Tech Policy Lab at diversevoices@techpolicylab.org

Glossary

Accessible document A document that people from a range of cultural, educational, literacy, and disciplinary backgrounds can readily comprehend.

Demographic A particular segment of the population to which a person belongs or identifies with, including factors such as age, gender, socioeconomic status, or ethnicity.

Directed feedback Comments from panelists when they are asked to respond to the content of the policy document itself, as opposed to the wider scope of relevant issues.

Diverse Voices method A relatively low-cost method for enhancing inclusive tech policy. The method solicits comments on a tech policy document from a broad array of experiential experts from a particular demographic group, with the aim of surfacing limitations in the document and averting injustice and exclusion from that groups' perspective.

Downstream implications of technology The long-term outcomes of the use or diffusion of a particular technology. Many of these impacts may be unanticipated by the technology's designers or policymakers.

Draft-looking document A document that does not appear to be publication-ready and therefore, is still available for improvements. For instance, to appear "draft-looking" the document could lack specialized formatting, table of contents, footnotes, jargon, or pre-production templates.

Emerging technology Software, hardware, or technical functionality that has recently become available or soon will be available in the marketplace.

Experiential expert People who have either lived experience as a member of a particular group or those closely associated with someone with this experience (such as family members or institutional advocates).

Expert panels A group of experiential experts assembled to comment on a tech policy document.

Facilitator The person who runs the Diverse Voices method. Facilitators do a wide range of tasks including: helping to select the tech policy document; identifying stakeholder groups; recruiting panelists; leading and moderating panel sessions; analyzing and synthesizing panel recommendations; and communicating recommendations to the tech policy document's author. To this end, they may draw on skills such as familiarity with tech policy documents, leading group discussions, and thematic analysis of textual information.

Heuristic evaluation A usability engineering method introduced by Jakob Nielsen in 1993. The Diverse Voices method draws on this approach by asking experts to critique a document in order to improve it. Heuristics are rules of thumb intended to approach a problem without an attempt to find a perfect or optimal solution; similarly, heuristic evaluation attempts to make incremental improvements without intending the end result to be perfect.

Institutional expert A person whose knowledge about a group comes from the work they engage with in a professional capacity (e.g., a substance abuse counselor, a criminal defense attorney, a pre-school teacher).

Intersectionality A theory emphasizing the way that overlapping or intersecting and inseparable social identities (e.g., age, culture, ethnicity, gender, physical/psychological ability, sexual orientation) shape an individual's standing in society and day-to-day experiences.

Open-ended questions Questions intended to elicit from panelists any aspect of a topic that they feel is important. The scope of responses is not pre-determined or bounded by the facilitator.

Semi-structured discussion A discussion that draws on a list of prepared prompts without adhering strictly to them.

Scenarios A factual or fictional situation that describes technology use, often emphasizing the influence or effect on people.

Social support expert Individuals who bring a unique perspective that is not necessarily present in relationships that exist between the individuals and those in institutional advocacy or service roles (e.g., friends, parents, siblings, children, or partners of members of a group of interest).

Stakeholder group Any group that may be affected (directly or indirectly) or can influence a technology-policy-related decision.

Structural inequality Societal bias against minority and marginal groups that is perpetuated through historical tendencies in organizations, institutions, governments, or social phenomena.

Targeted conversation A discussion that is intentionally directed to address a specific topic and refrains from delving into conversations outside of those topics.

Technology (tech) policy Laws, regulations, statutes, and other guidelines that are intended to govern the use or dissemination of a particular technology.

Technology (tech) policy document An informative, authoritative report designed to familiarize lawmakers with a technology and its policy implications (e.g., a white paper or policy strategy).

Technology (tech) policy institution Organizations created for or focusing primarily on supporting efforts to create tech policy.

Under-represented groups, under-represented populations Segments of the population that are often insufficiently consulted in the policymaking process due to factors such as structural inequality across racial, socio-economic, and other lines.

Value sensitive design A theoretically grounded approach to the design of technology that accounts for human values in a principled and systematic manner throughout the design process.

Visual aids Objects (e.g., video, slide decks, cartoons) that are intended to make a concept or written and spoken information easier to understand.

Appendix A: Example Panelist Invitation Letter

Dear [NAME],

I am a member of [INSTITUTION]. We use expert panels to help increase the likelihood that the needs of people who identify with [GROUP] are represented in technology-related policies and designs.

We are inviting you (and/or someone you recommend) to join other expert panelists. Please click here <INSERT LINK TO A SCHEDULING TOOL LIKE DOODLE WITH 2–4 TIMES/DATES> to indicate which dates and times you will be available to participate. As a member of the panel, you will participate in a highly targeted conversation on different topics related to a tech policy document. A tech policy document is an informative report that reviews a cutting edge technology, such as self-driving cars, and may advocate for a set of policy recommendations that eventually become laws. You need not be a technologist or lawyer to participate.

You will be asked to make a 3–6 hour time commitment for a given topic. If you find the experience rewarding and engaging, you may be asked to participate in future panels on different technology topics. In return for your assistance, you will receive [REIMBURSEMENT].

PARTICIPATION INVOLVES THE FOLLOWING STEPS:

Read a document that we will send you (2–3 hours)

- You will be sent a document describing a technology of interest before the meeting

Attend a meeting to discuss and provide feedback on the document (90 minutes)

- We will take notes during a discussion of your thoughts and feelings about the document and its policy implications for you.
- We will audiotape the discussion.

Review a revised version of the document that incorporates your feedback (1 hour)

Please let us know by [DATE] if you would be interested in participating.

Sincerely,

[FIRST AND LAST NAME]
[TITLE/POSITION]
[INSTITUTION NAME]
Email: [EMAIL]
Phone: [PHONE]

Appendix B: Example Pre-Panel Meeting Letter

Dear [NAME],

The [EXPERT PANEL NAME] Expert Panel will be convening at the [LOCATION] on [DATE] at [TIME]. It will last no more than 90 minutes.

The meeting will be held at [LOCATION] in Room [NUMBER].

There will be some light snacks. Please let us know if you have any dietary restrictions.

Before we meet

- If you have not already, please read the attached tech policy document with [GROUP] in mind. Spend up to 2 hours with the document.

A few comments on the document

- This document is intended for specialists in law and policy.
- Please familiarize yourself with the document—skimming is OK.
- Please make a list of questions you have about the document.
- All questions are good questions.
- If you do not understand something in the document, please write down a question about it (include the page number your question refers to).

Some things to keep in mind as you read

- What does this document do well?
- What does the document not do so well?
- What does the document not say that you wish it said?
- What stories could help to drive your points home?

If you have any questions, please let me know.

Respectfully submitted,

[FIRST AND LAST NAME]
[TITLE/POSITION]
[INSTITUTION NAME]
Email: [EMAIL]
Phone: [PHONE]

Appendix C: Materials Checklist

Checklist of materials that facilitators should bring to panel meetings.

- ☐ Sufficient paper copies of the tech policy document, as modified, for each panelist and both facilitators
- ☐ Audio-recorder with a microphone
- ☐ Laptop and projector to display video clips and cartoons
- ☐ Snacks and beverages (sensitive to dietary restrictions and allergies)
- ☐ Reimbursement for panelists' time (e.g., check, gift card)
- ☐ Reimbursement for panelists' parking cost (if applicable)
- ☐ Markers for whiteboards
- ☐ Pads of paper and pens for each panelist
- ☐ Poster-sized paper or sticky notes to post ideas on the whiteboard
- ☐ Digital camera (optional)
- ☐ Labels or name tents on which to write panelist names
- ☐ Agenda and speaking notes

Appendix D: Sample List of Themes

HIGH-LEVEL THEMES RELATED TO NON-CAR DRIVERS

1. Safety

1.1. Autonomous cars seem safer

1.2. Are autonomous cars safer?

"I guess this was one major question, how does it sense pedestrians, how does it sense bikers, how does it sense moving objects, non-moving objects. If there are cracks or anything in the street, how does the technology sense those things and how do we test their safety. Is it just hitting other cars, other vehicles [like bikes]" (p. 6)

"As a non-driver, non-vehicle owner, I don't know. I have concerns about how safe are those vehicles for me, and, I guess, maybe it's my own way of thinking but a lot of it comes to understanding how the technology works. Let's say it has a camera that detects whatever the object is. What if the weather is rainy or cloudy; would I still be perceived by the device? What if it were windy?" (p. 18)

"As a non-vehicle owner, my own safety and I remit to the control, the sense of control" (p. 19)

2. Liability questions for driverless cars

2.1. No reason to have minimum driving age if drivers do not have meaningful control of the car:

"Since there's not going to be much interaction between the rider and the car and the vehicle and the street, then why is it 21? Why it couldn't be 18? Maybe 15." (p. 8)

2.2. How will insurance cover automated driving cars?

"That's one thought that I had, I mean the insurance: what are the risks? Again, it comes back to the question about how the technology works." (p. 16)

HIGH-LEVEL THEMES UNRELATED TO NON-CAR USERS

3. Trust in technology needed as driverless cars become pervasive

3.1. It will require a lot of confidence in the technology for our society to trust trucks to become driverless, because there are so many of them

4. Will aid mobility for non-car drivers

4.1. Helps elderly and/or low-vision users, mobility

4.2. Parents would be concerned to let kids take the cars themselves

5. Cost, access and equity

5.1. This is going to be an expensive technology; only some people will be able to afford it.

"It looked to me like they were trying to say that it's going to be available for everyone, but yeah, I get it. It's not going to be available for everyone yet. This is going to be an expensive technology" (p. 6).

"Again, I guess coming back to the question, to have this whole fancy technology that is portrayed from the videos, I think it's going to be only available in the areas where people can afford it" (p. 6)

Appendix E: Sample Memo to Document Author

Extremely Low-Income Expert Panel Insights

Panel Composition

Lived Experience (Extremely Low-Income People): 2
Associated with Group: 2
Total: 4

1. ISSUES RELATED TO EXTREMELY LOW-INCOME PEOPLE

- **Impact of author's legal strategies on extremely low-income people**
  [Author] ref: see page 32, 'Internalize the Costs of Driving'

  Panel commentary: The white paper suggests raising fuel taxes, reducing parking subsidies, and mandating insurance as strategies to promote driverless car adoption. Panelists felt that these strategies will be too punitive for those with extremely low-income. Calling attention to practical matters such as managing family life, panelists also emphasized the value of personally-owned cars for families as opposed to shared vehicles.

  Panelist quotes:

  "It [the legal strategies section] was very punitive, and it felt like, 'we will make your life miserable until you decide to do this."

  "There is a section about what government should do when it states that the government cannot will fully automated vehicles into existence just because they feel like it. Okay, just because they want to. Then it goes through saying, "What are some of the things that the government can do to make driverless vehicles more appealing?" The two things that they stated were … Well they might have said more, but the two to jump out at me, is making regular cars so unbelievably inconvenient that they would have to go over here, and I found that very offensive. This paper is stating that we should eliminate [parking spaces] so that you don't have anywhere to park your car. Therefore, you'll want a driverless car, which to me says, "Wait, so I'm not owning a vehicle at all. I'm just paying for a taxi then to come pick me up all the time," which does not work for single families who want to be able to go to the grocery store. I don't want to have to call a taxi. I want to keep stuff in my own vehicle, and if I can't own my own vehicle because you've taken away my parking, what am I doing? You're only making it worse. If you're going to try and make it so where we all want driverless vehicles, you have to make us want to maybe trade in our own vehicles for driverless, but we still need parking spaces. I should still be able to own my own vehicle."

  "Because they can't afford it, so what it is, is, I've got two small kids. I used to ride the bus all the time. I cannot take a 2-year-old and an infant on a bus and go grocery shopping. I physically cannot. I can't. So if this was the rule, I'm going to have an unregistered, uninsured vehicle, and I'm going to do it that way."

- **Panelists suggested alternative strategies for the author's consideration**
  [Author] ref: see page 32, 'Internalize the Costs of Driving'

  Panel commentary: The panelists proposed that instead of the aforementioned strategies to promote driverless car adoption, the author should advance other strategies, like giving financial breaks to those who trade in older cars for driverless cars, or mandating that all newly manufactured cars have automated driving features.

  Panelist quotes:

  "I mean I understand the economics, just morally I am against … I believe that there are other things that they could do to manipulate our markets to something that makes more sense such as incentivization for trading in your older, non-compliant vehicle to a newer vehicle."

  "If you want that there are very many good things that we're already doing such as the automatic parking,

  automatic braking, such as even something as a more advanced cruise control—these are things that the general public does want, and if we make [driverless cars] more affordable and we make it something mandated or all new vehicles have to have these, then that means that all the new vehicles in all income ranges in all income budgets are going to have these things."

- **Unclear how this technology will be available to poor communities**
  [Author] ref: see page 16, 'Driverless Systems'

  Panel commentary: The white paper currently mentions driverless car technology being used as part of transit systems, but does not go on to address whether the spending required by governments to create driverless transit systems would lead to raised transit costs. These questions of cost are crucial to extremely low-income panel respondents.

  Panelist quotes:

  "Is *it subsidized, is it part of some government program? It doesn't say anything like that.*"

  "Well, I just see this as benefiting a very select few, and I just see it as more problematic than beneficial."

  "I think this is driven by a for-profit motive that's going to benefit business, is going to benefit commercial—this is a commercial enterprise. This is good for delivery of product, okay?"

- **Consider impact of infrastructure spending on poor communities**
  [Author] ref: see page 19, 'Prepare Infrastructure'

  Panel commentary: The white paper asserts that governments can support automated driving by means of infrastructure spending. Expert panelists ask the paper to anticipate the ways in which this type of expenditure will also have disparate impact for extremely low-income communities.

Panelist quotes:

"I would call that out. I mean, I look at what's happened here even with light rail and what that's brought up for extremely low-income communities, how it's actually led to a lot of the gentrification and other things in the city, so I do think that those broader impacts, you have to include that in sort of the assessment. I think about like the Rainier Valley,[8] and I think about when I was in high school and the Rainier Valley didn't look like it looks today … People moved in and wanted to start buying up houses and renaming, you know, now it's Columbia City. Part of what draws them in is that they can live there because light rail is a direct route into the city, so they can still get in to their jobs easily, use mass transit in a way that makes that area now attractive to them. Well now, all the low-income people who used to live in that area are getting pushed out into the suburbs … Kent particularly has been highlighted nationally as sort of a poster child for suburban poverty. And none of the services have grown up around it, so you're pushing people out, further and further away from the resources that are available to support them."

"I think anytime you start to think about major infrastructure projects, you see some of those dynamics at play, and I think you just have to consider it."

- **Encourage 'point person' to consider disparate impact and access**
  [Author] ref: see page 17 'Prepare Government'—'point person'

  Panel commentary: The white paper currently advocates for a 'point person' in government to prepare government for driverless car technology. Expert panelists suggested that this is the appropriate person to also task with anticipating the disparate impacts of the technology on different segments in the public.

  Panelist quote:

  "I don't think the intent of this paper, though, is to get into the specifics of how much it's going to cost or what's going to be the fuel source … I think that what's missing from the paper *from that perspective, is consider examples from the administrative strategies. All of these look at sort of … They address needs for a certain person or group of people. They don't necessarily take into consideration some of those other needs, and I think specifically building some of those in as areas to consider, not necessarily offering solutions or specific answers on some of those, but the fact that—so, you've got this point person. Well one of the things that they should be looking at, in addition to what are the existing rules, and doing a lit review, shouldn't they also be looking at sort the accessibility and policies and procedures in terms of how it impacts low-income people. I would build that in."*

- **Panelists question the need for autonomous cars**
  [Author] ref: see page 2, 'Introduction'

  Panel commentary: The white paper adopts an explicit framing of how governments can support the adoption and dissemination of driverless cars into society. Panelists noted that the paper should do more to reference the arguments in favor of the widespread adoption of driverless cars for those who might not already be in support of the idea.

8 Rainier Valley is a historically low-income neighborhood in Southeast Seattle. The Sound Transit Central Link light rail system opened a light rail station there in 2009, which connected the neighborhood to downtown Seattle.

Appendix F: Example Panelist Follow Up Letter

Dear [NAME],

The [INSTITUTION] has updated the policy document based on the aggregated feedback from three expert panels. At the end of our expert panel discussion we said we would send you the updated document for final comments. Please take a look at the attached document and let us know if there are any glaring issues.

The final date that we will be able to accept feedback is [DATE].

Thank you in advance,

[FIRST AND LAST NAME]
[TITLE/POSITION]
[INSTITUTION NAME]
Email: [EMAIL]
Phone: [PHONE]

This How-To Guide provides step-by-step guidelines for using the Diverse Voices method to improve the inclusiveness of tech policy documents. Our hope is that you will find that the method produces valuable insights in a resource-efficient way. As you adapt the method to your own projects and within your own institutions, please share your experiences with us.

How to Contact Us

We welcome your questions and comments on the How-To Guide and its underlying process.
Please email us at: **diversevoices@techpolicylab.org**