

FOSTERING

GREATER COLLABORATION

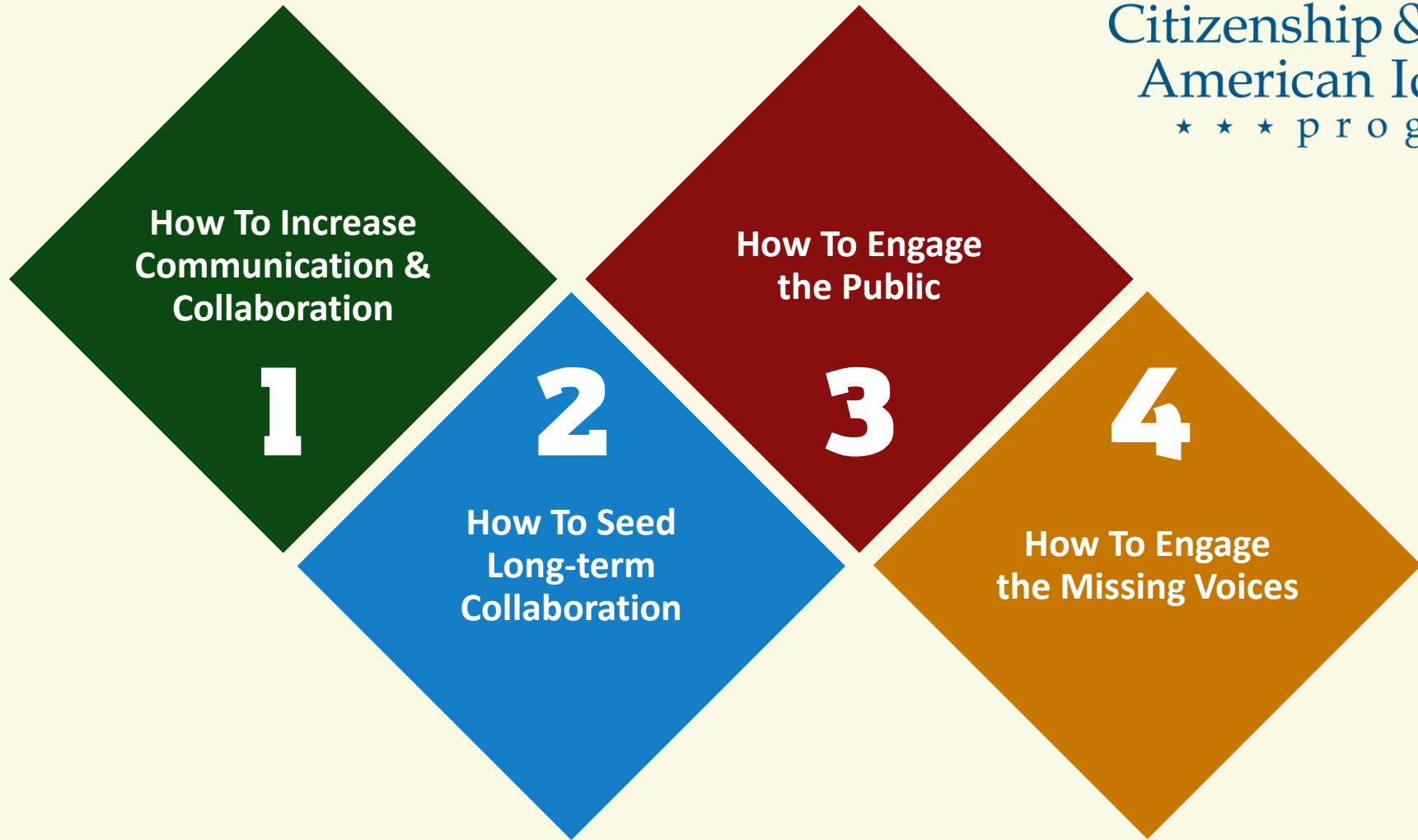
BETWEEN

SCIENCE & CIVICS GROUPS

THE ASPEN INSTITUTE  
Citizenship &   
American Identity  
\*\*\* program

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# INTRODUCTION

## About This Guide

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The public's understanding of science and scientists' understanding of civics matter more today than ever before. Consider the Flint water crisis, the Dakota Access Pipeline debate, and conversations about climate change. Add recent policy debates on topics like Zika intervention strategies, genetic testing, and driverless cars, and the civic dimension of science becomes clear and urgent. Scientific issues already impact contemporary life in meaningful ways, and today's decisions will affect our future dramatically.

Scientists can learn from active citizens, just as citizens can learn from scientists. Citizens can help scientists to understand the needs and fears of communities, how to communicate their practical knowledge as it relates to those lived experiences, and how to do so in a way that can create practical, positive change. Scientists can teach citizens to activate their imagination, to push frontiers, and to co-create in order to problem-solve.

Furthermore, in an increasingly "post-fact" era, science denial and the twisting of scientific norms are becoming all too common. This creates unprecedented challenges for both the public and the scientific community. The challenge is to counter these trends by providing the tools and support for increased communication and collaboration among scientific experts and civic actors.

**This guide is intended to help serve that purpose of increased communication and collaboration.**

The guide is divided into four sections containing recommendations for fostering greater collaboration between science and civics groups. At the end of each section there is a "Checklist for Action" designed to help you check your own work against the best practices recommended in this guide. We hope this guide is helpful to you in your work and we welcome any feedback or additional suggestions for how to strengthen collaborations!

# INTRODUCTION

## About the Aspen Institute's Science & Civics Initiative

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The Aspen Institute's Citizenship and American Identity Program (CAI) begins with the premise that there is a gap in both civic literacy and scientific literacy in the United States. CAI believes that these two trends are connected – and that addressing them together is vital to cultivating a citizenry capable of informed self-government. Through the Science & Civics Initiative, CAI aims to help scientists become more powerful citizens and enable citizens to make sense of the world and its complex problems more like scientists.

The Science & Civics Initiative is part of a larger effort by CAI called What Every American Should Know (WEASK), a project that grew out of an [essay](#) by executive director Eric Liu. WEASK was created to explore how, in an age of increasing diversity and widening inequality, this country can cultivate a sense of shared destiny and common civic purpose.

For the first phase of the Science & Civics Initiative, CAI invited leading practitioners and communicators of civics and science to join a closed-door convening on November 15, 2016. Participants explored best practices and recommendations to cultivate more

citizens-as-scientists and more scientists-as-citizens. From this convening the report, "[Science & Civics: A Guide for Collaborative Action](#)" was created.

In 2017, the Science & Civics Initiative hosted public events in two communities in the United States in order to share ideas from the report and to bring these ideas into local practice. Each event connected experts in science and in civics with members of the general public. One event took place in Salt Lake City, Utah on the topic of clean air. The second event took place in Madison, Wisconsin on the topic of genetically modified organisms (GMOs) and farming.

In 2018, the Science & Civics Initiative contracted with TCC Group to conduct interviews with fourteen leaders within the fields of science, civics, and communications to more deeply explore how science and civics groups could seed longer-term collaborations and ensure that traditionally "missing voices" from science-based conversations would be equitably included.

**This guide is a result of the Science & Civics Initiative's learnings from its 2016-2018 activities.**

# 1

# How To Increase Communication and Collaboration

*How can scientists and civic groups increase communication and collaboration?*

Science and civics practitioners have identified five ways of strengthening their communication and collaboration with each other. These include:

1. Scientists realizing the benefits of public engagement,
2. Civics groups integrating scientists as catalysts,
3. Focusing on real community issues,
4. Articulating your own goals when forming a partnership, and
5. Thinking about how to effectively organize and scale your work.





### Scientists need to understand and capitalize on the multi-faceted benefits that public engagement can bring.

Broad public engagement is required for scientists to figure out what citizens need to know and therefore ensure their research (and the communication of it) is relevant.

Scientists can also learn from citizens about local knowledge and understand changes that are happening within communities. When scientists and communities are connected in this exchange, problems are solved more effectively and progress is made.

The public can also help scientists to navigate power and determine who to talk to about their knowledge. Scientists must learn to share their evidence in the most productive and effective way by being good listeners and adapting their communications as needed.

Scientists also have an opportunity to address inequities, particularly around race and power, within their own scientific institutions and engagement with the broader public can help provide insights on how to do that.



### Civic groups should consider how to integrate scientists in the role of “civic catalyst.”

The skills that most scientists have can be leveraged as tools for stronger citizenship. Scientists are able to activate the imagination around solving problems and can teach citizens how to do this and how to not accept the status quo. These skills

help people know how to ask questions like scientists, engage in problem solving, and co-create solutions with their neighbors.



### Collaborations should be grounded in and focused on a real issue of a real community.

The most effective efforts are place-based and therefore, a target community should be identified for the collaboration.

Productive conversation also depends on the identification of a specific issue rather than keeping the topic broader or more abstract.

For example, the Science and Civics Initiative's two 2017 community events focused on topics that were of particular importance to the communities of Salt Lake City, Utah (clean air) and Madison,

Wisconsin (GMOs and farming). In both cases, local leaders from both science and civics backgrounds were grappling with the complexities of how to address these issues. In both cases, the relevance of the issues led to sold out events and a high participant engagement showcasing a range of perspectives and viewpoints.





### Science and Civics Groups should clearly articulate their own goals and share those with their collaborating partner.

Each collaborating partner needs to be clear on their own goals and objectives in order to assess if collaboration makes sense. Goals will also guide how activities are implemented, help organizations understand how they can play complementary roles, and help form the appropriate messaging and sharing of information.

For example, if the goal is to build consensus around solutions for policy problems then communication efforts for any organized event would likely focus on different evidence than if the goal is to broadly increase understanding of an issue amongst the community.



### Scientists and Civic Practitioners should think about how to organize and scale their efforts.

Civic practitioners should help scientists to understand how to engage with ongoing community organizing efforts around scientific issues, which can help to establish common ground across many separate groups. Additionally, scientists

can work with organizers and key community members to implement “train the trainer” systems that can easily be scaled.

# Your Checklist for Action



In considering a collaboration with another science or civics organization we are making sure that:

- The scientists realize the value of their public engagement and are ready to leverage the benefits of it.
- The civic organizers have a clear vision of how to leverage the value that the scientists bring.
- The collaboration has identified a specific issue to address within a specific community.
- We have articulated our goals and objectives and have shared them with our collaborating partners.
- We have a plan for ongoing engagement between scientists and the community.
- We have a plan for scaling the efforts of the collaboration.

# 2

## How To Seed Long-term Collaboration

*How can science and civic groups successfully seed long-term collaboration?*

Interviewees noted common barriers to more sustainable collaborations between science and civics groups include: finding time and dealing with the busyness of potential participants, finding funding to support ongoing collaborations, and keeping agendas of the different entities aligned.

Four tactics were recommended to address these barriers and help facilitate longer and stronger collaborations between science and civics groups:

1. Have an ongoing engagement strategy.
2. Start engaging early as issues emerge.
3. Identify the common goals and objectives.
4. Ensure that collaboration is beneficial for everyone.





# Have an ongoing engagement strategy.

Keeping people or organizations engaged over the long-term requires a thoughtful, well-planned engagement strategy. If this is not done upfront, meetings or convenings tend to end up being a one-off event. Additionally, when engaging the public, there have to be continual ways for them to be involved.

As one interviewee describes, *“We’re contending every single day for people’s attention with social medial, politics, etc. If there is not an ongoing engagement strategy, you will lose people to other things.”*



# Start engaging early as issues emerge.

Engaging others early on as science-based issues surface is important because as one interviewee describes, *“A lot of modern science doesn’t just have technical answers...We need to have these discussions about the technical aspects but also the moral and other aspects.”*

Another noted that it was important to share and discuss major scientific breakthroughs as soon as they occur.



# Identify the common goals and objectives.

Just as it is important for each partner of a collaboration to identify their own goals (shown in Section 1), it is also critical to know the common goals amongst partners in a collaboration.

Identifying and articulating the specific goals of the collaboration is essential for any type of partnership to succeed. These goals should be written and shared to ensure clarity on the part of all participating.

As one interviewee put it, *“A common cause is what brings organizations together over and over.”*



### Ensure that the collaboration is beneficial for everyone.

Some examples where this has worked well include community education efforts that promote science in fun and interactive ways, and higher education programs that foster professional advancement.

As with any relationship, each side must feel that they are receiving value from the exchange in order to continue participating. This includes science groups,

civic groups, and the public. As one interviewee describes, *“The usual strength of collaboration comes from an understanding by all collaborators that there is benefit for everyone.”*





# Your Checklist for Action

In order to foster long-term collaboration between science and civics groups we are making sure that:

- We have a well-planned, ongoing engagement strategy for both our collaborators and our participants.
- We have established common goals and objectives with our collaborating partners.
- We have identified important science-based issues that are currently emerging and have developed a plan to engage our community in discussing these issues.
- We have articulated the value that we, our collaborating partner, and our community participants will obtain from engaging in these conversations.

# 3

## How To Engage the Public

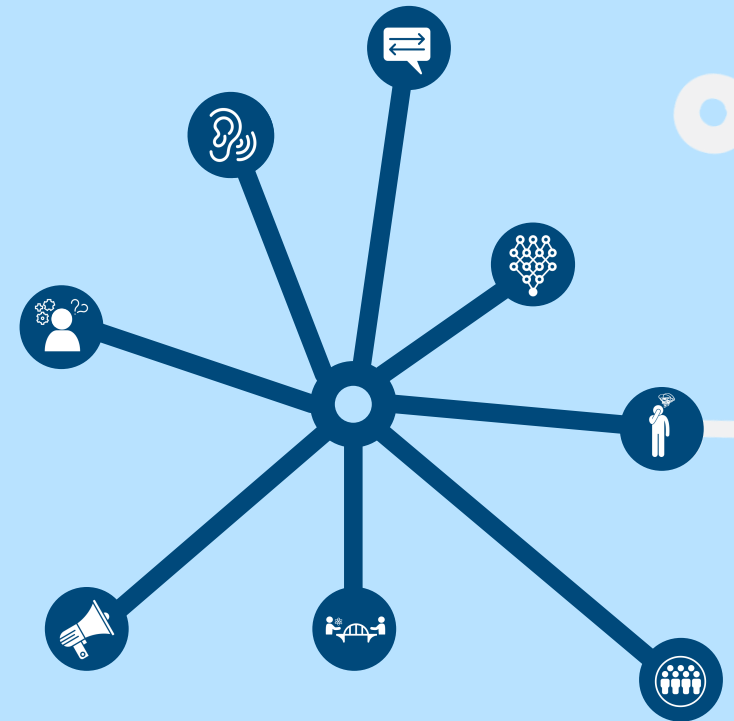
*How can scientists and civic groups better engage the public in science-based discussions?*

Practitioners have learned that there are many ways that scientists and civics groups can better engage the public in science-based conversations. These include:

1. Obtain a deep understanding of community needs and values,
2. Opportunities for engagement need to go beyond traditional formats,
3. Ongoing spaces for dialogue need to exist,
4. Science needs to be presented in ways that are relevant to peoples' lives,
5. Science should be discussed in ways that empower people, and
6. Scientists need to connect with people on a human level.

Additionally, there are systemic changes that often prevent effective public discussions on science-based issues. To address systemic barriers to engagement:

1. Employers need to understand the value of scientists engaging with the public and allow for that time away from the lab, and
2. Public discourse needs to move away from the politicization of science.





### Scientists and civic practitioners need to demonstrate an understanding of community needs and values.

Any outsiders coming into a community, particularly scientists, should conduct deep listening in the community before actively engaging. Civic practitioners should work with scientists to facilitate this learning. As learning occurs, scientists and civic practitioners should appeal directly to these needs and values in order to communicate effectively.

It is also important for both scientists and civic practitioners to first examine existing organizing efforts within the community and determine how science can support them.

Equity in relationships should also be carefully considered. For example, it is well known that health disparities exist within minority groups. Groups such as the CDC have made intentional efforts to include communities of color in decision-making for initiatives to close the disparities, which helps to ensure that efforts are meeting the needs of the community. Evidence shows that communities who are more organized around these initiatives fare better than those who are not.



# Opportunities for citizens to engage with science need to go beyond “citizen science.”

As scientists and civic groups think of how to collaborate and engage the public, they need to expand their thinking beyond the current model of “citizen science.” There need to be opportunities for citizens to engage in all facets of scientific discovery from problem definition and modeling to data collection, analysis, and communication of results.

Additionally, researchers need to be mindful of sharing data back with citizens to model transparency and to further engage citizens in the process.



### Ongoing spaces for dialogue from a wide variety of people should be created.

In-person dialogue is a key factor to achieving greater understanding of both science-based issues and others' viewpoints. When possible, science and civics collaborations should foster convenings that are open to the public and include local actors from a wide range of sectors and viewpoints.

Convenings should also have an action-orientation and clear next steps for continued engagement by the participants.



### Scientists should present their knowledge in ways that are relevant to the community's needs and values.

Scientists should build upon their deep listening to the community and present evidence in terms of its relevance to individual and community welfare rather than just focusing on the existence of scientific evidence. Scientists need to be able to communicate their work outside of their own lab or area of expertise and avoid jargon or highly scientific language which can alienate a community.

It is also important to acknowledge local knowledge and other ways of knowing that exist in a community. Civic practitioners

can play a valuable role in helping scientists effectively develop and listen to community messages. For example, when addressing teen pregnancy prevention, it is essential to not only provide better contraceptives, but to also understand the social context in which teen pregnancy is unfolding. Better contraceptives aren't effective if teens do not have access to them, or if they do not feel comfortable acquiring them. It is essential to look to local guidance to advise on how to integrate the efforts into the local social context.



# Scientists should present their knowledge in ways that are empowering and build skills.

It is important for scientists to present new information in ways that are not unidirectional and that facilitate dialogue. It's also important to incorporate skill-building elements into scientific education. These techniques allow new audience members to better engage with the material and to leave with new skills that they can apply in their life. One

example is that scientists can teach skills to the public such as how to form and test research questions in order to not accept the status quo.



# Scientists can more effectively communicate with the public when they are humanized.

Scientists have traditionally been positioned as the experts in a particular field and the stories that are generally told about their work are success stories. This positioning leaves the general public on uneven footing for engaging in dialogue with these “experts.”

However, when scientists share their struggles, failures, and missteps during the knowledge discovery process, or connect their work to the lives of community members, they offer an opportunity for people to connect with them on a human level.





### Systemic Change: Employers need to recognize the value of scientists' engagement with the community.

Historically, the culture of science has rewarded lab-based work and does not enable scientists' interaction with communities. This creates a dangerous disconnect between scientists studying certain issues and the people living with experiences of those issues.

To bridge this divide, science and community experiences need to be a part of the same conversations and science institutions need to create infrastructure that allow scientists to spend time doing this.



### Systemic Change: Public discourse needs to move away from the politicization of science.

The recent politicization of science has kept citizens from being able to connect the dots between scientific evidence and policy frameworks. By promoting more informed coverage of science-based issues and by securing media coverage of inclusive, community-based conversations

about science-based issues we can do our part to contribute to a changing narrative about science.

# Your Checklist for Action



To ensure we employ best practices for engaging the public in science-based issues:

- Our scientists and civic practitioners have conducted deep listening and understand the needs and values of the community we will be working with including any existing organizing efforts and the presence or lack of equity in relationships.
- We are creating opportunities for citizens to engage in ways that go beyond citizen science.
- We are creating an ongoing space for dialogue with a diverse group of people.
- Our scientists present in ways that are relevant to the community's needs and values and acknowledge local knowledge.
- Our scientists present in ways that are empowering and build community skills.
- Our scientists present in ways that foster a human connection with community members.
- We work with our scientists to find ways to help scientific institutions see the value of community engagement and create infrastructure that allows for that engagement.
- We work to promote more informed coverage of science-based issues in the media that moves away from the politicization of science.

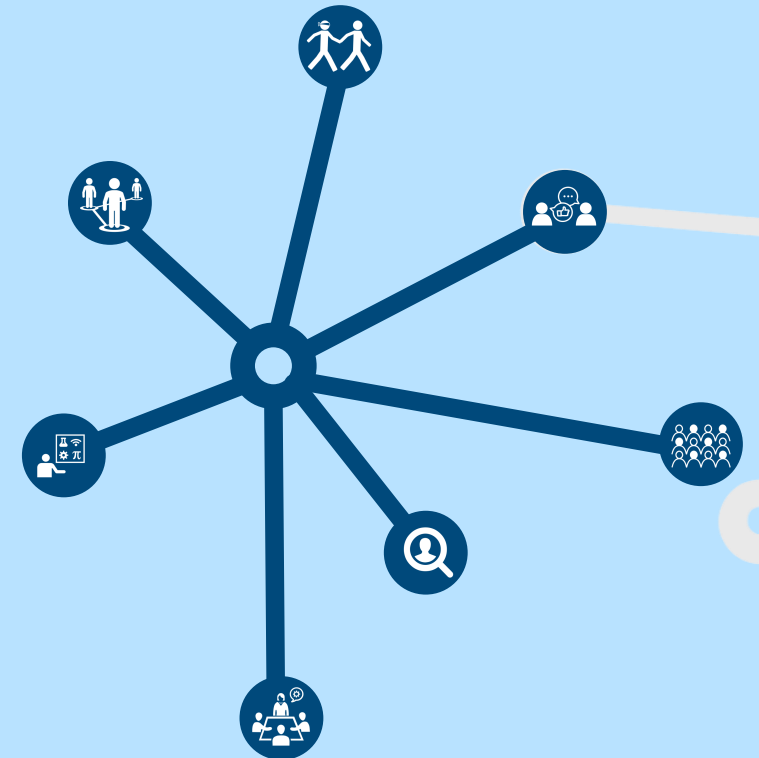
# 4

## How To Engage the Missing Voices

*How can scientists and civic groups equitably engage those most often missing from science-based conversations?*

When asked about how to engage those most often missing from conversations about science-based issues and ensure their equitable participation, seven tactics were recommended:

1. Identify who the missing voices are for your community and issue area,
2. Integrate those missing voices in the planning processes,
3. Work with key connectors to missing audiences,
4. Consider a variety of formats for engagement,
5. Build forums that value viewpoint diversity,
6. Find more effective ways to present data and complex information, and
7. Build trust with communities historically wronged.





# Identify the “missing voices” from your science-based conversations.

When asked about who is most often missing from conversations about science-based issues, three groups were highlighted amongst our interviewees:

- **Youth:** Engaging youth in civic engagement related to science issues can foster an early understanding of science’s connection to these issues and can help form lifelong habits. Youth can help think of new approaches to addressing the issues and can even serve as “disruptors.” As one person states, *“Leaving out young civic leaders is a big mistake.”*
- **Community members most affected by the issues:** Community members that are most affected by the issues may not naturally be a part of discussing science-based issues even though how they experience the issues can be valuable insight for coming up with viable solutions. As one person notes, *“too often the general public (as well as scientists) thinks science is for scientists.”*

- **Community members in information deserts:** There are many communities across the U.S. where science-based information is either not accessible and/or is not valued. This poses a barrier to these community members in being exposed to this information, creating an “information desert.” When information does reach them, it is often not presented in ways that connect with their lives and values.

It was also noted that the “missing voices” must always be contextualized within a specific community and with a specific issue. Reasons why the voices may be missing include: 1) They choose not to participate, 2) They have tried to raise their voices at some point and have been blocked from participation, or 3) They have not yet been invited to participate.

Identifying both the missing voices and the reasons why they have been missing are the first steps in developing appropriate methods for engaging them.



### Integrate people in the planning processes for discussions and activities.

Whether it be discussions on science-based issues or providing input into scientific research, many voices are often left out of the upfront planning processes.

As one person describes, *“There’s a whole part of science happening before people are involved so when you get to the end you may be answering a question that the people who are impacted aren’t even asking.”*



# Work with key connectors to missing audiences.

To ensure that underrepresented people will be at the table, interviewees noted the importance of working with community-based contacts and/or people serving as a bridge or connector between different groups of people. Engaging them is important for building that trust with

the missing voices because as one person describes, *“We have to explain what the purpose is, we have to go out to the community. When we do that, we can bring together people in ways that allow for generative doubt to be expressed.”*



### Consider a variety of formats for engagement.

Some interviewees felt face-to-face forums worked best for bringing together divergent viewpoints while others yearned for strategies on how to establish an inclusive and open-minded forum on social media or through digital forums.

For those that work with youth, it's important to consider that traditional panel sessions may not be the most effective way to engage youth and that engaging them in the planning can help identify youth-friendly formats.





### Thoughtfully build forums where viewpoint diversity is valued.

Many emphasized the importance of an environment that accepts and values diversity in viewpoints. To achieve that environment requires a lot of upfront planning and relationship building to set expectations early on that the forum is open to different life experiences and different narratives and that there is an acceptance that people can hold on to their own values as long as they are open to hearing the viewpoints of others.

According to one interviewee this means *“clearly defining what it means to be open-minded and humble in the face of alternative facts.”*

Citing the importance of starting early this person notes, *“If you start to work on this when people come into the room, it’s too late.”*



### Find more effective ways to present data and complex information.

Interviewees recommended that scientific data and complex topics need to be presented in more accessible ways. This means making sure that people aren't alienated based on the complexity and/or uncertainty of topics. To do this requires "putting a human face" on the information or connecting it to their daily lives.

It also needs to be communicated via someone they trust (i.e., someone they see or interact with). Additionally, the transparency of what data is and is not shared should be considered.



### Build trust with communities that have historically been wronged through scientific and/or research involvement.

Many missing voices, particularly communities of color, recall a history when their participation in science or research was misused or they were mistreated as participants. It is important to ensure that the purpose of scientific inquiry is to do no harm and to help dismantle the historical legacy of mistrust of medical research and experimentation.

To do this requires trust building, creating equity in the relationship, and transparency of the intentions of the conversations or proposed activities.



# Your Checklist for Action

In order to engage missing voices from our science-based conversations:

- We fully understand who is not participating and why they are not participating in our science-based conversations.
- We have a plan for equitably including these missing voices into our next science-based conversations.
- We have involved key missing voices in our planning processes.
- We have worked with key connectors to those missing voices to help build trust with those voices and to sincerely invite their participation.
- We have considered the format that will most effectively reach our intended audience.
- We have proactively set the stage for a forum that fosters viewpoint diversity and listening.
- We have thought about and planned for the most effective ways to present any data or information on complex topics.

# CONCLUSION

As we know, the public's understanding of science and scientists' understanding of civics matter more today than ever before. Technological and environmental issues are a part of our everyday lives and today's decisions will affect our future dramatically.

Over the past three years The Aspen Institute's Science & Civics Initiative has sought ideas and lessons learned from science, civics, and communications practitioners on how these conversations and collaborations can be better facilitated. As this guide shows there are many things that have been learned along the way.

Scientists and civics groups strengthen their collaborations when they clearly understand the value each side of the partnership brings and when they ground their discussions in real community issues. These collaborations become more consistent and longer-term when there is an ongoing engagement strategy, there are common goals for the collaboration, and the collaboration is beneficial for all involved.

When engaging the public in science-based issues practitioners have learned that it is imperative to obtain a deep understanding of community needs and values. It is also important to create ongoing spaces for dialogue and to consider a variety of formats for engaging people. Science-based issues also need to be discussed in a way that connects to peoples' lives and that empower them, and scientists need to work to make a human connection rather than being seen as a detached expert.

There are also big picture, or systemic, issues that work against these types of interactions and should be addressed. These include the difficulty that scientists have in getting time away from their lab to engage with the public, and the ongoing politicization of science that we see in many forms of media.

Finally, of crucial importance to the effectiveness of these conversations is to understand who the "missing voices" are from any particular conversation. While these voices will vary by community and issue area, they should be identified early on, invited into the planning processes, and help to build forums that value viewpoint diversity.

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*Science & Civics is one of several initiatives that we have created in order to build common knowledge across diverse networks in America. This work is part of a larger initiative called What Every American Should Know, created to explore how, in an age of increasing diversity and widening inequality, this country can cultivate a sense of shared destiny and common civic purpose. As our country becomes more diverse and divided, it becomes more important than ever to define some common knowledge — cultural, pop cultural, historical, civic facts, memes, and references that "every American should know." We are crowdsourcing ideas from a wide range of Americans about what we all need to know to be aware, effective, and engaged citizens. We invite you to learn more and get involved at [www.whateveryamericanshouldknow.org](http://www.whateveryamericanshouldknow.org).*

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# LEARN MORE

For additional information on how scientists and civic groups can more effectively collaborate for civic action, see [\*Science & Civics: A Guide for Collaborative Action by Science & Civics Meeting Participants.\*](#)

For additional information on the *What Every American Should Know* initiative, see [www.whateveryamericanshouldknow.org](http://www.whateveryamericanshouldknow.org).

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