

GUIDELINES FOR ART AND SCIENCE PARTNERSHIPS



Authors:

Patrick Chandler
<https://www.colorado.edu/outreach/ooe/patrick-chandler>
University of Colorado, Boulder
patrick.chandler@colorado.edu

Emmanuelle Vital
Pure Inspirations/Vital Resources
<https://www.colorado.edu/outreach/ooe/emmanuelle-vital>
emmanuelle@pureinspirations.com

Acknowledgments:

The design of the art and science partnership wheel was inspired by the work of Franklin Sage and other Indigenous scholars whose writing and work attend to the power and importance of non-linear models.

The approaches, methods, and thoughts in this guide represent the emergent themes from the interviews and literature review conducted to create this work. Quotes from interviewees are offered throughout the guide and a full list of interviewees and their organizations are listed after the concluding thoughts section.

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INTRODUCTION

Deliberately bringing art and science together to catalyze collective community action is becoming a more common practice both in Colorado and the United States. Many of the projects that have the greatest impact involve creating products and designing processes that are co-produced by artists, scientists, educators, community members, and others. These initiatives are vitally important in addressing challenges such as climate change and racial justice because they have the potential to overcome communication barriers and bring communities together to find common ground and take action. Art and science partnerships that break down power asymmetries - by regenerating and repairing relationships to people and places - are a key part of transforming the systems that have created so many of our current societal crises. There remains a need to ensure that project partners will benefit from the lessons of previous work to maximize their impact on attitudes, behaviors, policies, values, and/or other realms. The guidelines focus on projects that address environmental issues and social justice because we see those problems present the most urgent need for collaborative action.

These guidelines seek to address the historical power and financial inequities between the arts and the sciences by considering what equal partnerships look like in practice. In these guidelines, the research of science and the research of art are considered equally rigorous. Both fields offer ways to engage with and to know the world that are equally valuable. With this focus, we ask partners to acknowledge the way in which the arts have been comparatively underfunded and pushed to the side while science in the Western world has been defined as a definitive way to seek the truth. Consequently, partners must continually work to ensure both realms are equally supported and valued throughout the process of partnership.

In addition to attending to the continual work of equal partnership, the guidelines are centered on projects that aim to create change rather than raise awareness. The idea that more information is enough to address the current environmental and social issues we currently face lacks the urgency that is essential to move forward from the systems that have created such devastating impacts on our relationship with ourselves, each other, and the natural world. If we hope to address issues such as climate change and racial injustice, we must act rather than try and convince deniers of the existence of these existential threats. These guidelines focus on action that is collaborative and community-based with the belief that we will move forward together or not at all towards a common well-being.

The creation of the art and science partnership guidelines began with a literature review focused on more than 50 art and science partnership projects and their impact on the communities they took place within. Impact was evaluated through changes in community relationships with space, land, and project participants, anecdotal evidence, and the transformation of community spaces. Based on this literature review, 24 project leaders in North America were asked and agreed to take part in a semi-structured interview process focused on the methods and approaches of their work. In the interviews, key terms and ideas emerged in multiple conversations. These emergent themes were then used to create a set of guiding principles for art and science partnership and a process that honored those principles.

Clarinda Mac Low, in an interview for the art and science partnership guidelines said, “The rigor (of these projects) is in the relationships.” Meaning, in this type of work the value and impact of the project itself and what is produced depends entirely on the integrity of the relationships involved. Projects of this type discuss and address power and status between partners working together, their disciplines, and their communities. Projects described in this research are also action-focused and place-based. They strive not just to present an issue and provide information, but to move the community they are working with to address the issues and power structures presented in the spaces and places they reside within.

Who is this guide for:

This guide was created for the person or people focused on developing and maintaining the relationships between partners, the community, and the natural world as projects move forward. Relationships define the co-production process involved in art and science partnerships. If partners can work together with respect and care for each other and connection to community and land where their project takes place, their work is likely to have a positive and long-lasting impact. Moving forward, we will refer to the person or group in that role as the “facilitator.”

In addition to supporting the relationships necessary in a partnership project, facilitators also help move the process of co-production forward. The four phases we have defined, Exploring, Orienting, Creating, and Reflecting, all have an associated set of actions that will help the facilitator keep projects on track. Facilitators may or may not have other roles in the project,

but when they assume the role of maintaining relationships and attending to process, they should endeavor to drop any other roles to maintain a neutral position in the group. This takes listening and leading from both the head and the heart in order to attend to productive teamwork, conflict resolution, dropping ego, and honoring a wide range of different types of expertise.

Responsibilities of the Facilitator:

To make the role of the facilitator explicit rather than assumed, the facilitator and project partners should begin their work together by defining their responsibilities to each other. While this agreement will likely have some common themes across groups, expectations will vary based on the context of the project, location, and partners. After agreeing on responsibilities to each other and a constructive way to note if those expectations are not met, the group should also consider the responsibilities it has to the community and the natural world where the project takes place.

The process of coming to agreement on these responsibilities should involve true consensus. This means everyone is not just going along with what is suggested, but actively agreeing to it. In order to achieve this level of consensus, it may be necessary to go further than agreement through “yes” and “no” and move to a broader system of options like a 1-10 scale and committing to not move forward until everyone feels they are clear about and support the responsibilities offered at the upper end of the scale*. This level of consensus will take time but will help begin the process of building trust among new partners and maintaining trust among groups who have worked together before. The guiding principles offered in these guidelines may also help groups and facilitators consider their responsibilities within the context of the project.

* The Gradients of Agreement may also help groups move beyond “yes” and “no” versions of consensus.

<https://www.trg-inc.com/resources/team-decision-making-the-gradients-of-agreement/>

GUIDELINES STRUCTURE

The design of the guidelines wheel was inspired by one of the experts interviewed for this project, Dr. Frankin Sage. In his dissertation, Dr. Sage (Sage, F. 2017) created a wheel to symbolize a traditional Native American way of seeing, learning and passing on knowledge through many life processes, a system of relationships, and intertwined temporal and spatial scales. We thank Dr. Sage for inspiring the form of our work and hope that these guidelines offer a process of cyclical knowledge and relationship building, but also acknowledge that these guidelines do not represent the place-based and culturally grounded system that Dr. Sage offers in his work.

The process is divided into four project phases: Exploring, Orienting, Creating, and Reflecting. Each phase is divided into three stages:

Exploring

- Sharing a Point of Wonder
- Assessing Resources & Relationships
- Gathering Partners

Orienting

- Deep Listening
- Developing a Plan
- Holding Relationship

Creating

- Prototyping
- Actualizing
- Presenting

Reflecting

- Evaluating
- Reporting
- Planning for the Future

The circular design of the guidelines, including the four phases, twelve stages, and principles at the core of the guidelines, illustrates the grounded, continuous and wholesome process of art and science partnership for collective community action and intends to avoid the progressional hierarchy of linear systems. While the steps are followed in a clockwise manner, each stage informs the next and contains the learnings of the stage that preceded it. On the larger scale, each partnership informs the next and builds on previous partnerships. It is a continual process. Each stage of the process may take partnership groups different amounts of time depending on their partners, goals, and resources, however, the wheel/process does not function as intended if a portion is omitted. In order to maintain the circular process, we ask that projects do not skip phases or stages within those phases. The goal of these guidelines is to help partners approach projects holistically and systematically in order to maximize their potential to create positive change in their communities.

For each of the 12 project stages, this guide will provide an overview, insights, prompts and resources. The overview is not meant to be an exhaustive explanation of the stage, but rather an introduction to situate readers in the realm the stage focuses upon. The insights come from interviews with the partners involved in creating this guide, and more information about their projects can be found at the back of the guide. Also at the back, there is a more extensive list of resources. Prompts offered in each stage are meant to be questions that project leaders ask themselves and partners in that stage.

GUIDING PRINCIPLES

These are the principles at the core of the guidelines. They are meant to be the foundation that grounds the work in each project stage. Project partners have different strengths and weaknesses and will naturally be more aligned with some guiding principles than others.

Therefore, the goal of project facilitators is to remind partners of these principles throughout the work and do their best to embody the principles in their leadership role. These eight guiding principles are not in ranked order; all are equally important.

- Enable an **organic** process: Be adaptable to partners' and communities' needs and input rather than follow a strict project model. Remember to play and let those things break that need to in order to create space for new approaches, ideas, and processes.
Actions involved: Focus on the experience of working together and let rigid systems of organization go. Don't fixate on rigid expectations and creations; be flexible.
- Prioritize the **relationship**: The quality of the project is dependent on the relationship between partners.
Actions involved: Regularly check in with partners, develop a shared and jargon-free language, create a system of conflict resolution before problems arise. Celebrate each success, regardless of how large or small.
- Have **patience**: Inclusive work takes time. Art and science both have processes of creativity, research, and experimentation. Both realms need to allow time for each other.
Actions involved: Be flexible with timelines and deadlines when possible. Support partners in working at their own pace.
- Work toward **consensus**: Decisions need to include all partners.
Actions involved: Allow time for everyone to express their views. Before moving on, wait until everyone feels good about a decision. This often necessitates more than just yes/no consensus agreements.
- Address **power and status**: In the context of the partnership, everyone has an equal voice. This means that no group or partner has authority over others.
Actions: Discuss preconceptions and expectations for partners. Discuss race, gender, sexual orientation, and other classifications that have involved historical inequity in order to help all partners give voice to their feelings and expectations from their perspective. Ensure that representatives from the sciences, arts, and other realms feel their work and time is equally valued.
- Include the **head and heart**: Cognitive and affective realms are both needed throughout art and science partnerships.
Actions: Validate both thoughts and feelings. Be open to different perspectives. Remember to play.
- Be **authentic**: Bring yourself to the project, but work to leave ego behind. Help others to do the same.
Action: Provide space for all to do their work and honor their expertise. Be present. Break through stiff professional boundaries and engage through playful and open interactions. Honor feelings and emotions as an inseparable part of your and others' knowledge and experience.
- Ensure projects are **place**-based: Art and science partnerships that hope to catalyze community action must focus on the place in which the community is based and the needs of nature/culture intersection of that place.

Actions Involved: Don't reach beyond the place-based community involved with the project when considering the area of direct project impact.*

*Because this guiding principle is often overlooked, we offer the Fargo Project as one of many examples of an excellent place-based partnership (<https://www.thefargoproject.com/>).

Adopting these principles throughout the process means that the project facilitator helps partners focus on relationships with themselves, other partners, the place they are working within, and the time necessary to honor the process. In practice, this means that the facilitator works to help partners celebrate every stage of the work, resolve conflict, address issues of ego when they occur, and work together on a shared point of wonder.

EXPLORING

This first phase involves bringing a possible project into focus by defining a problem that demands attention, the resources and relationships in the community in which the project will take place, and the potential partners who can lend perspective and feel motivated to act. The most important part of this phase is to allow the time needed to explore possibilities while refraining from project planning before understanding context. Exploration necessitates spending the time needed to consider how a problem looks and feels to you and others in the context of place and time. Before projects begin, the problems that partners hope to address must be well defined.

Sharing a Point of Wonder

Overview:

Observing, exploring, sensing, and connecting with both the human and other-than-human world inspires many artistic and scientific explorations. However, it is sometimes difficult for scientists and artists to find common ground that does not prioritize or alienate one field or the other. Marda Kirn, an interviewee for this project and the founder and Director of EcoArts Connections, developed a way to address this issue through working from a shared point of wonder, and we asked her to share the background of this concept in her own words:

Working from “the point of wonder” came about in desperation in 2007, as we were trying to partner artists and climate scientists for the exhibit “Weather Report: Art and Climate Change,” curated by Lucy R. Lippard and co-produced with the Boulder Museum of Contemporary Art and others. With Lucy’s blessing, we put the word out to the artists that, if interested, we could pair them with a climate scientist to create a new work for the exhibit. When the artists responded, I went to Linda Carbone, the Coordinator of Informal Science Education and Exhibits, at the National Center for Atmospheric

Research, and said excitedly, “Linda, Linda, we have artists who are interested in working with climate scientists!!!” “What kind of climate scientists?” asked Linda, dryly. “We have buildings filled with them.”

At that moment we realized, we art folks had no idea what kind of climate scientists we wanted to work with. We didn’t know the difference between a hydrologist, a geomorphologist, or a middle atmospheric dynamicist, and what they studied. Nor did the scientists know the difference between a performing artist, a performance artist, or anything about social practice art.

So, we brought people together on what became known as the point of wonder – that thing that people were wondering about, the question they were researching, the problem they were trying to solve. Once that was identified, we could find other people from different disciplines also interested in that same thing. Then miracles happened organically. Artists became not as worried that they didn’t “know” enough; scientists released being afraid they were not “creative” enough. Everyone was focused on researching, exploring, pursuing that point of wonder. Suddenly people got energized, made time, and offered resources. Disciplinary hierarchies and differences began to dissolve. Collaborators became co-equal travelers along the same path, following their curiosity, together.

Curiosity is at the root of exploration and creation and sparks the discovery of solutions to difficult problems. A shared curiosity brings together partners and helps to create strong bonds. One of the greatest challenges of the Exploring project phase is not to move too quickly from sharing a point of wonder to developing a project plan. The art and science partnership guidelines are also informed by and hope to support projects focused on environmental and social justice issues, which often are deeply entrenched challenges that take time, effort, and multiple perspectives to understand. Consequently, one role of the facilitator is to help partners avoid jumping to a project plan before questions and their contexts have been thoroughly explored. The next few stages described will help to guide that exploration.

Prompts:

- Is your point of wonder addressing an environmental or social justice issue that moves you to action?
- What relationships to people and places in your community does your point of wonder focus on?
- Who does the problem you're highlighting have the most impact upon and why?
- Who do you reach out to in discussions about community issues and which groups are you unlikely to discuss those issues with?

Insights:

- Kim Eisele remarked that a shared point of wonder allows partners “to step out of their roles and keep the mission of the project-centered”, and provides a “strategy to quiet ego”, keeping partners dedicated to “keep the big picture in mind while avoiding too much focus on their part.”
- Chantal Bilodeau created the Arctic Cycle because she “was looking for things that did not exist, and had a new and exciting idea”. She initiated a “process of collaboration and speculation, putting forth an idea uncertain of the outcome”.
- “Ask questions. Shamelessly.” Beth Osnes

Resources:

- Project Drawdown
<https://www.drawdown.org/drawdown-review>
An overview of solutions for climate change that may provide possibilities for finding shared points of wonder.
- Theory U. An operation code in societal systems
<https://www.presencing.org/aboutus/theory-u>
A presentation of the Theory U journey to help create space for what can emerge within the community. The co-sensing and presencing phases can help you, individually or as a group to “Observe, go to the places of most potential and listen with your mind and heart wide open” and “Connect to the source of inspiration and will”.
- Writing the Implosion: Teaching the World One Thing at a Time by Joseph Dumit
<https://journal.culanth.org/index.php/ca/article/view/ca29.2.09/301>
A walk through of Donna Haraway’s Implosion Technique in a way that might uncover knowledge, discourse and gaps within situations, allowing to identify un-noticed connections.

Assessing Resources and Relationships

Overview:

If a point of wonder gathers enough interest that further investigation is merited, then it’s time to move on to consider what support is currently and might potentially be available. Support includes project partners, advisors, community relationships, materials, space to meet, design and present creative work, funding, and time. At this point in the project, a lack of support should provide an invitation to explore options rather than an impediment. Partners will need to be realistic yet innovative, persistent and patient throughout this process of assessment. Relationships to both the human and natural world are essential to consider and may include aspects such as social and political will, supporting organizations, sacred places, and locations that define community identity. An assessment of resources and relationships can take many forms including a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis, mind maps, asset surveys, network maps and others, some of which are described in the resources here.

The goal at this stage is not to establish the needs of a particular project, but rather to explore what support might be possible. This is not a needs assessment because a project has not yet been defined. Project goals and outcomes will be defined in the next phase: Orienting. In the Exploring phase, the goal is to define the topics, resources, places and people who could be involved rather than to plan or to start a project. Assessing resources and relationships also helps to identify who is and is not currently involved and may help spark the next stage of gathering partners. This process is not linear, resources and relationships may be reassessed throughout the project.

Prompts:

- Which project partners, funders, and advisors have you reached out to that are beyond those included in your professional network?
- Which local and regional groups and organizations inform your point of wonder?
- Have you reached out to people of different demographic, age, race, and gender backgrounds?
- Which community leaders, marginalized groups, and power structures have you considered while assessing relationships?
- What locations are important to the community where the project will take place?

Insights:

- With much experience in raising community awareness and organizing fundraising events, Lara Whitley, Creative Strategy Director at the Community Office for Resource Efficiency in Aspen, Colorado, says “the assessment phase often includes 3 phases: 1. We don’t have all the answers 2. We don’t know if this is possible 3. We believe this is possible.”
- “Artists sit in a unique place in our social fabric. As artists we feel that we are the least prepared or informed. Artists are often charged with lacking rigor, and in response, are forced to assume that they are in touch with something non-scientific, non-rigorous and therefore mystical. However, I find artists to be extremely rigorous, effective, and repeatable, but not within the framework of Western knowledge making.” Andrew Freiband
- “Each project has its own process of community participation and key stakeholder groups that come together. Although I share ideas and inspirations, partners have to decide what they want to do. Everyone having ownership in the project is key to effective collaboration.” Amy Kimberly

Resources:

- Community Tool Box: Chapter 3, Assessing Community Needs and Resources. <https://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources>
Section 14 of this chapter provides an overview of SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis, but the chapter also offers many useful assessment tools.
- A blade of Grass- Gauging readiness for partnership. Municipal Artist Partnerships

<https://municipal-artist.org/pdfs/gauging-readiness.pdf>

Questions to help guide the readiness for partnerships and additional “relationship guides” to forging strong and sustainable creative partnerships between local governments and artists.

- Network Mapping

<https://networkweaver.com/product/network-mapping-and-analysis-how-to-guide-social-platform/>

This how-to-guide to network mapping from Network Weaver shows how to create a map of relationships within communities and organizations.

- Opportunities at the intersection of Water, Arts, and Culture, Advancing One Water Through Arts and Cultures, A blueprint for Action US Water Alliance.

http://uswateralliance.org/sites/uswateralliance.org/files/publications/uswa_arts_culture_FINAL_PAGES_RGB_0.PDF

Case studies featuring “hidden connections, interdependencies, and relationships, which can inform thinking and planning with a systems mindset” and the impact of artistic processes in supporting and informing water decision making.

- Virtual mind mapping tools to share and organize connections with partners:

<https://kumu.io/gallery> and www.mindmeister.com

Both of these links offer mind mapping tools. Nicole Crutchfield, Planning Department Director at the City of Fargo and facilitator of the Fargo Project, brought mind maps to our attention as a tool that helps groups understand project resources.

Gathering Partners

Overview:

In the “sharing a point of wonder” stage, a place of curiosity is explored in a community context and among a small group. This stage is focused on expanding the partner group by asking, “Who else cares about, researches, or is excited by that point of wonder?” This is a strategic project phase. Some types of work thrive by bringing opposites together, while others may be challenged by polarization. Some issues are almost universally agreed upon by the community and some are divisive. Bringing in partners who represent views and groups impacted by your particular work is extremely important. It’s also important to seek partners that represent the community as broadly as possible rather than only considering those with influence. This includes representatives from groups that sit on community margins. Each member of the partnership has to be invested, meaning they believe that together they can achieve outcomes that would not be possible through separate work.

In the gathering of partners, identifying and inviting community champions to participate in early stages will increase the likelihood of success. These are members of impacted groups who are respected and valued by their communities. They likely have broad networks of connection and experience with grassroots activism. For projects involving outside individuals and groups, community champions can serve as trust brokers who can help projects gather social and political capital.

Partners need not all be project leaders. A project infrastructure may include advisors, scientists, outside experts, and local and/or outside artists who all work together with the facilitator for success but must have clearly defined roles. Whether the project is large or small, local or remote, establishing expectations early is key. It is one part of building trust. Teams will vary in their multidisciplinary partner needs, but all should have at least one partner focused on leading the art and science aspects of the project in addition to community champions.

As soon as partners begin to work together, it's important to define a common language for communication. By defining a common language to work together, groups can establish equitable access to knowledge. The work of defining a common language should be taken literally. Partners should keep a running list of terms commonly used and define them in a way that everyone understands. When a new word comes up that is confusing to any partner, it should be added and all acronyms should be defined. Creating this list and keeping it updated will address some aspects of power and identity within groups and ensure that partners are never left out of conversation through language they don't understand.

While gathering partners requires careful consideration and clear intent, another essential aspect of this stage is bringing together a group that is willing to play together. While partners should challenge each other, the act of creating together should also be joyful. Be bold, and invite in those who you've always admired and wanted to work with. Celebrate this stage of finding common ground.

Prompts:

- How does each partner approach the point of wonder?
- What skills, resources, experiences, and support does each partner bring?
- Who have you invited in and who have you left out of the partner group and why?
- In what way does your project team address the strengths and weaknesses defined in your resource and relationship assessment?
- Which community champions have you invited?
- How do you plan to celebrate the gathering of partners in this stage?

Insights:

- "Talent is a myth, I don't like public speaking but I want to communicate and work in the world, so I find the tools, and lead through curiosity, not fear; everybody is an expert in something." Clarinda Mac Low
- "If you find a partner that you work well with, that is a sweet time in your life and both your lives will keep changing [through the partnership]." Beth Osnes
- Projects have a lot of components, let people gravitate towards what they are interested in and have talent for. Push gently, and step back." Ron Whyte
- "A community person's experience is just as valuable as science. Climate change is not just a physical issue, it is a socio-economical issue." Hoi Fei Mok
- "Working with an established artist outside of the community can help bring curiosity to the project, build a community of interests, and allow access to different parts of the community." Nichole Crutchfield

Resources:

- Leonard, B. (July/August 1996. Minor Revisions June, 2007). *Building Arts and Community Partnership: A Work Kit*. Retrieved from:
https://issuu.com/alternateroots/docs/partnerships_work_kit
This guide helps establish processes and questions around how to conduct projects in partnership.
- Movement Toolkit: Creating Partnerships with Small and Midsize Business. American For the Arts. Retrieved from:
https://www.americansforthearts.org/sites/default/files/Creating_pARTnerships_small-midsize.pdf
A guide for businesses hoping to partner with the arts. Can be used by artists to consider what business wants and how they think as well.
- WEAD (Women Eco Artists Dialog Magazine & Directory/Exhibits & Events):
<https://www.weadartists.org/directory>
A directory of female artists and environmental projects that may help provide additional project partners and ideas.

ORIENTING

Once a problem is defined and the context of the problem has been explored, it's time to establish a plan to move forward. Orienting involves considering action from each partner's perspective, coming to consensus on a plan, and defining a system to maintain partner relationships throughout the project. This phase is the foundation on which action takes place. Careful attention to this planning phase will help projects to succeed.

Deep Listening

Overview:

This is one of the most difficult stages of the partnership process because it involves setting aside ego and creating a space in which others can also do so. The action of this stage is allowing all partner's thoughts to be heard on the point of wonder in the context of available resources and community needs. This is not a stage of project planning; that comes next. It is deeply important to focus on the guiding principles in this stage. Addressing power and status, first by asking partners to create a space of equality through shared listening and then by facilitating group discussions in which ego can be addressed when it comes up, are crucial to deep listening. This stage is not just about what is said, but also about paying attention to how partners are reacting to each other and how they are showing care and value for each other through body language and subtle reactions. Deep listening requires patience and openness to different perspectives.

This stage is not necessarily one of comfort and ease. It is likely the first time that all partners have come together to share their unique views, and they may not resonate with all other partners. The space of deep listening requires a type of consensus, not on a subject but rather an agreement by each partner that they and all partners have had a chance to speak and be heard. In partnership groups, there will be many who are considered experts in their fields, and we also recognize that everyone has some degree of expertise in at least a few subjects. A challenge is to hold ego in check and recognize that one realm of expertise does not mean expertise in all realms. “One way we fool ourselves is by imagining we know more than we do; we think we are experts” (Grant, A. 2021). With science, art and community experts at the table, the facilitator will have to cultivate a space in which no one, including themselves, is an absolute expert but rather share expertise for the benefit of a greater understanding, and welcome facilitating insights from partners.

After an initial discussion of partners’ views of the point of wonder, it’s important to consider whether there are views the community holds that are not reflected among the partner group. Deep listening is not just about listening to what is said, but also about listening for which voices aren’t present. It may or may not be necessary to invite in contrary individuals and groups to the conversation, but a genuine discussion of who is and is not present is important.

As soon as partners gather, we recommend keeping a record of conversations and activities. This could take many forms. While standard note-taking is an option, representing conversations graphically through processes such as scribing, further described in the resource section of this stage, may help partners see everyone’s ideas and opinions in a new way and give shape to new possibilities. Conversation as a mode of expression may also limit the expression of emotion and partner to partner connection. Emotions are an important part of decision making, so embodied and contemplative practices that invite partners to reflect together and communicate on difficult subjects while maintaining joy and levity can be helpful in this stage.

Prompts:

- What do community members want for the future of their community and has that vision been represented in the listening process?
- Have all partner’s views on the point of wonder and project goals been shared and do all partners feel heard?
- What aspects of the point of wonder is each partner particularly concerned about or focused on?
- How have power and status, both within and outside of the partner group, been discussed and addressed?
- How is each partner’s expertise being honored and is ego interfering with the recognition of other’s expertise?
- Which communication techniques bring the most joy and play when partners share their thoughts, feelings, and ideas?

Insights:

- “We don’t follow goals per se, but make “energetic progress towards the good”, as the I Ching advises, working in unexplored places with equally honored collaborators where there are no guidebooks to follow but deep listening is required.” Marda Kirn
- While working with various communities to write Love Letters to the Sea, Sondra Weiss brings “Humor to open dialogue, without shaming people, articulating individual strength, and thus creating good dynamics”.
- Scientist Erin Leckey, who has led resiliency community projects in Puerto Rico encourages “to learn nuances such as cultural differences within the community”, Erin Leckey
- “A given view of the project can close you off to being flexible on what’s possible.” Robert Davies

Resources:

- A little Book of Practice for Authentic Leadership in Action
https://www.circularresourceslab.ch/wp-content/uploads/2018/09/ALIA_little_book_of_practice.pdf
 A journey through the path of authentic leadership rooted in creating a space for action and joy.
- All we can save Project
<https://www.allwecansave.earth/project>
 A book and project dedicated to women’s perspectives on sustainability.
- Generative Scribing: A Social Art of the 21st Century by Kelvy Bird
<https://kelvybird.com/generative-scribing/>
 A method that informs and cultivates a facilitator/scribe’s inner capacities “to approach the world anew”.
- The Word Cafe methodology and community.
<http://www.theworldcafe.com/key-concepts-resources/world-cafe-method/>
<http://www.theworldcafe.com/wp-content/uploads/2015/07/graphicBenefits.pdf>
 A participatory process used to combine the benefits of small group conversations and cross-pollination of diverse perspectives of the group-at-large.
- Mitchell, S. (2018). Sacred Instructions: The heart of spirit-based change. Berkeley: North Atlantic Books.
<https://sacredinstructions.life/>
 A book by indigenous scholar and leader Sheri Mitchell which offers perspective on deep listening, consensus, and honoring multiple perspectives.
- Moser, S.C. and Berzonsky, C.L. (2015). *There Must Be More: Communication to Close the Cultural Divide*, in O’Brien, K, Silbo, E. (eds.) *The Adaptive Challenge of Climate Change*. Cambridge, UK: Cambridge University Press.
http://susannemoser.com/documents/MoserandBerzonsky_2015_culturaldivides_prepub-final.pdf
 A paper that describes navigating diverse and divergent opinions and attitudes on climate change through dialogue.

- USDN Guide to Equitable Community-Driven Climate Preparedness.
https://www.usdn.org/uploads/cms/documents/usdn_guide_to_equitable_community-driven_climate_preparedness-_high_res.pdf
A guide that considers what equity looks like in terms of climate change from a community point of view. This may be helpful in considering who is and is not at the table.

Developing a Plan

Overview:

This is the first stage oriented toward what project will be created by the group of partners who have come together in the context of a shared point of wonder. After listening to all partners' perspectives in the last stage, it's time to move on to co-creating a project plan. Plans should be grounded by place, community needs, funding, and available resources. All partners' ideas should be heard, and the group should work toward consensus in their selection and the merging of ideas. The gradients of agreement described in the introduction may be a useful resource to ensure true consensus is achieved. If all project needs are not addressed once a plan has been designed, a clear path to expand available resources and relationships should be described.

The process of designing a project plan should be organic, but it also must be carefully orchestrated. The facilitator is responsible for making sure no ideas are left out and consensus is built through compromise, and for documenting decisions and progress. The facilitator also serves as a translator for partners with different jargon and language backgrounds. Sometimes developing a plan can be interrupted by writing proposals for funding, connecting with project supporters, and making time and space for partners to come together. It is the facilitator's responsibility to maintain cohesion despite any disruptions. Finally, the facilitator should attend to the power of co-creation and the unknown, and help the group envision project outcomes more grand than anything project partners could achieve outside of collaboration.

Defining clear project goals that all project partners support is an essential part of project planning that will help guide project work moving forward. All project partners should be able to clearly articulate goals. Catalyzing collective action on the issues that brought partners together needs to remain centered in the formation of goals, but partners also need to discuss more specific elements of the project such as aesthetics, affective and cognitive impacts they hope to support, if and how the work will be written about and who will take credit for the writing, and what the plan will be for any products created. The Aesthetic Perspectives Framework listed in the resources for this stage may help groups move beyond Western Aesthetic ideals when establishing arts-based project goals. Partners may have individual goals in addition to those the group holds. In order to avoid any misunderstandings moving forward, in this stage all partners need to be open and honest about what they hope to accomplish through the project.

After a project plan has been co-developed by partners, it's time for a needs assessment. To do so, map out all the people, places, and resources needed. This can include resources such as funding but may also include more abstract needs such as social capital. The next step is to compare project needs to the resource assessment to see what gaps exist. Partners should decide what they can contribute and whether it will be feasible to find the additional support if needed. If there are too many gaps, it may be necessary to change the design or scale of the project. It could also mean delaying the project until the necessary resources have been found.

At this stage, it's time to develop a project pitch. This pitch can take many different forms, but should describe the project to possible supporters with language and asks that are applicable to specific support. Project partners should also consider which grants, if any, to apply for.* While general resources are listed in the Appendix, local organizations involved in the issue the project is addressing should first be contacted. Among partners, identify who is most experienced with funding and decide who will ask which supporters for assistance, write grants, and what the funding plan will be. Be sure to create a plan that establishes funding for all four phases of the project, including reflection.

*For more information on grants, see the funding section at the bottom of the document.

Prompts:

- When the resource and relationship assessment from stage two is compared to the project plan, what needs must be addressed?
- How does your plan address both the human and natural components of your community?
- How has each project partner confirmed that they clearly understand the project plan and goals?
- What methods have been employed to ensure consensus is reached and all partners feel their voices have been heard?
- What approach, methods, and tools are needed to clearly articulate the project plan to community members and funders?
- How much support is included for assessment in your project plan?

Insights:

- As creative strategist and project organizer, Andrew Frieband emphasizes the value of documenting conversations and holding partners accountable to their commitments and relationships. He suggests that "the facilitator [should] catalyze the relationships, a bit like looking through a sketchbook, taking notes to free up the scientists and artists."
- "Strategy should always be in the service of flow...make sure to include neglected voices." Ellen McMahon
"The process is about stumbling, making mistakes, and keeping going with a full heart."
Marda Kirn
- "One of the issues with the Western paradigm is we like to compartmentalize things and put them in a box. The science box over here and art over there and knowledge up there." Franklin Sage

Resources:

- Aesthetic Perspectives: Attributes of Excellence in Arts for Change. Animating Democracy.
<http://www.animatingdemocracy.org/aesthetic-perspectives>
An overview of valuing the rigor of art within the context of community focusing on 11 attributes.
- Animating Democracy. (2017). How do Arts & Culture Make a Difference? Continuum of Impact. A Guide to defining Social & Civic Outcomes & Indicators.
<http://animatingdemocracy.org/continuum-impact-guide> Animating Democracy. (2017a, May 15).
A guidebook on how to define project goals. In the context of developing a plan, partners can use this guide to consider which realm/s of impact they hope to address.
- NAAEE- Guidelines for Excellence: Community Engagement-
https://cdn.naaee.org/sites/default/files/eepr/resource/files/community_engagement_-_guidelines_for_excellence_0.pdf
A guide for environmental educators working in communities on how to design projects and maximize impact.
- Schupblach, J. and Ball, D. (Eds.). (November 2016). How to do Creative Placemaking. An Action-Oriented Guide to Arts in Community Development. National Endowment for the Arts Office of Public Affairs.
https://www.arts.gov/sites/default/files/How-to-do-Creative-Placemaking_Jan2017.pdf
A guide for artists on how to do creative placemaking through community partnerships
- Pearce B 2020. Design Thinking. td-net toolbox profile (11). Swiss Academies of Arts and Sciences: td-net toolbox for co-producing knowledge.
https://naturalsciences.ch/co-producing-knowledge-explained/methods/td-net_toolbox/design_thinking
An iterative methodology for (re)framing problems and co-creating implementable solutions using visual thinking and prototyping.

Holding Relationship

Overview:

Any ongoing relationship takes work to maintain and cannot be taken for granted. “Neither trust nor solidarity is gained (nor should it be) by the assertion of good intentions, nor is it accomplished merely once and then set aside” (Vakil et al., 2016). Intentional and continuous relationship maintenance is essential in art and science partnership projects. Partners must acknowledge there will be challenges and issues that bring focus and integrity into question. But, with a plan for conflict resolution and attention to building trust, challenges within partnerships can be overcome.

In this process, the first step is to acknowledge that relations are power-laden. So is language. In order to address both of these realms, partners should discuss how they define themselves,

in terms of who they identify with and who they feel supported or persecuted by, and also how they view the world and the world views them in context of their personal and cultural history. This begins an iterative process of checking in with partners at the opening and during gatherings to ensure all partners feel heard and the group is working in the space of consensus.

Even within the most trusting groups dedicated to addressing power dynamics and inequality, over time conflicts will occur. This is because partners care deeply and should not be seen as a negative aspect of holding relationships. “The absence of conflict is not harmony, it is apathy” (Grant, A. 2021). The process of working through conflict should be established when partnerships begin as a way of acknowledging that partners value each other enough to resolve problems when they arise. Optimally, each group should define a system that fits for them, drawing on the experience, knowledge, and background of all partners. Prioritizing conflict resolution is a form of honoring partnership and maintaining trust. It allows for partners to question their beliefs, rethink their views and create something fundamentally new together.

It is important to be transparent about fund allocation. One way to do this is for the facilitator, or the person in charge of the budget, to set up a co-budgeting system with all partners. This allows each group member to be involved in funding allocation, including individual compensation. Budget transparency and participation helps deepen trust and strengthen relationships.

Beyond addressing challenges, holding relationships as essential in project partnerships means creating space for play and celebration. Shared curiosity is the impetus for art and science partnerships and as that curiosity is explored there will be many opportunities to celebrate both large and small successes and discoveries. It’s important to acknowledge not just the challenges of partnership but also the joy of co-produced work for a shared purpose.

Prompts:

- How has a space been created in which all partners feel invited to participate in conversations and decisions?
- What system have partners agreed upon to acknowledge, discuss, and address tensions within the group?
- How are successes and discoveries celebrated?
- What methods are being used to overcome jargon and develop a common language?
- Do partners feel that they belong within the group and that their expertise is being honored?

Insights:

- Alexis Frasz, who has facilitated multiple projects believes that “Humility and vulnerability are important to discovering answers together”
- Ellen McMahon, professor and facilitator cautions that “Dynamics between the community, artists and scientists can be flattened if their roles are too predetermined.”
- “It really matters who has institutional backing and who does not. It shows up at nearly every stage in terms of equity and power and sustainability of partnerships”. Beth Osnes

- "Agree to disagree at the table, let it percolate, put it aside and see if something arises later. Allow for emotional differences on how people relate differently." Sam Randall
- "When there's trust and openness, it makes room for partners to experience what it's like to go through an artistic and creative process." Kim Eisle

Resources:

- CO-budgeting for member engagement
<https://medium.com/greaterthan/cobudgeting-for-member-engagement-bd1c54ed434>.
An article presenting the benefits of co-budgeting at the organizational or project level.
- Cobudget tool and method
<https://cobudget.co/#/>
A digital tool that allows partners to create or undertake tasks, vote and pay partners.
- Arizona State University's Community Engagement Toolkit
<https://career.arizona.edu/community-engagement-toolkit>
Case studies of different community projects that exemplify relationships and relationship building.
- Gather: The Art and Science of Effective Convening
<https://www.a2ru.org/wp-content/uploads/2018/03/Gather-The-Art-and-Science-of-Effective-Conveing.pdf>
A detailed guide on convening groups of many different types.
- Municipal-Artist Partnerships Guide
<https://municipal-artist.org/>
A "relationship guide" for forging strong and sustainable creative partnership between local governments and artists.
- Vakil, S., de Royston, M., Nasir, N., & Kirshner, B. (2016). Rethinking race and power in design-based research: Reflections from the field. *Cognition and Instruction*.
https://www.researchgate.net/publication/303714506_Rethinking_Race_and_Power_in_Design-Based_Research_Reflections_from_the_Field
Community-based research paper focused on what is needed to hold relationships in the context of race, power, and status.

CREATING

With a plan in place, it's time to bring the project into the world. However, this phase can't be rushed. Careful prototyping will help conserve supplies and time while maximizing the impact of project presentation. To overcome the challenges and embrace the opportunities this phase may present, partners will need the foundation provided by the last phase and should continue to attend to relationships between partners, community, and place throughout the work. Documentation is also an important part of this phase. It will help partners remember the project flow if they hope to replicate it in the future and will also help them to share their work with others who may hope to use similar methods. While celebrating the successes of each stage is central to partnerships, it's especially important in this phase in which things don't always go as planned but still reflect the time, energy, and care that partners have given to the

work. In *Playing for Time: Making Art as if the World Mattered*, Neal says, “Art-making brings rigour to which people bring uncertainty, terror, joy, hope, beauty and themselves. The opportunity to imagine a different future will be tangible, as global thinking can be grounded in local realities and inventive ways of seeing and doing are discovered. ‘If we can create this’ people think ‘we can do anything’” (2015).

Prototyping

Overview:

Prototyping is about experimenting. It’s a stage that provides permission to push the limits and break things in order to see what works and create space for new possibilities. Inviting all partners to try out methods, processes, and approaches within the context of the project plan to better understand how to reach goals will lead to more impactful work. Plans and goals themselves may evolve in this stage depending on what is discovered. Testing out ideas without fear of failure requires creativity and courage from both artists and scientists.

Prototyping looks different depending on the project. In the context of a performance piece, it might be a dress rehearsal. For science experiments, it may involve the first test of a hypothesis. There are countless other examples, but what connects them all is the small-scale testing of assumptions in real-world circumstances to see if the processes designed to meet project goals are likely to succeed. One key to successful prototyping is to let things go that aren’t working and have patience to continue playing with ideas and testing concepts until partners agree that work can be scaled up for the final project. As the process of prototyping moves forward, new and previously unimagined possibilities may emerge.

Several steps are likely to be involved in the prototyping process. First, trials may take place in a controlled space with just project partners present. Once project partners are confident in what has been created, it’s helpful to share work with a small outside audience. This allows an opportunity to prototype impact and evaluation tools. Refining what type of feedback is asked for from an audience and how to gather this feedback will allow partners to better understand impact and lessons learned once finalized work is presented. Trying numerous evaluation methods such as pictures of embodied reactions, recordings of audience impressions, social media responses, and written feedback will help partners find the evaluation methods that are likely to provide the most useful insight. Catalysing community action on environmental and social justice issues requires that projects connect to audiences emotionally as well as cognitively in order to move beyond the understanding of an issue to the determination to create change. The interactive process of prototyping allows for project partners to adapt their work to create those necessary connections with an audience.

Prompts:

- How does audience feedback from the prototyping process respond to the point of wonder described in the formation of the project?
- How does the prototyping experience strengthen the relationships of those involved?

- Given the prototype experience, are the resources and relationships needed to support the final project available?
- In what ways have project partners responded to the lessons learned through prototyping.
- Does feedback from the prototype stage show that the project is relevant in local context and provides pathways to action?
- How have project aesthetics been a part of the prototyping process?

Insights:

- “Artists need to see their work as a form of research.” Ellen McMahon
- Prototyping should “Evolve around a question rather than a goal, with no fixed ideas for what the artist can do.” Sam Randall
- Prototyping is a free process during which all partners should be encouraged to “Push the boundaries on how things are believed to be possible.” Clarinda Mac Low
- “The process of making things can be more powerful than the things themselves.” Alexis Frasz

Resources:

- Swiss Academy of Sciences, Design Thinking:
https://naturalsciences.ch/co-producing-knowledge-explained/methods/td-net_toolbox/design_thinking
Methods and Tools for co-producing work with the context of design-based thinking
- Presencing Institute TheoryU-based Prototyping Process
<https://www.presencing.org/resource/tools/prototyping-desc>
A description of prototyping in the context Theory U from the Presencing Institute to move an idea into a concrete first step.
<https://wip.mitpress.mit.edu/>
MIT “Works in Progress” project enables groups and individuals to submit write ups of ongoing projects for feedback.
- Liz Lerman, Critical response process
<https://lizlerman.com/critical-response-process/>
“In Critical Response Process: a method for getting useful feedback on anything you make, from dance to dessert, authors Liz Lerman and John Borstel give a detailed introduction to the Process.” - Description from the website

Actualizing

Overview:

This stage requires a clear plan that is informed by all stages that came before. This may be the first time the project has a specific deadline in order to promote and plan for the presenting stage that comes next. At the same time, it is necessary to honor an organic process as the final version of the project is created. This careful balance of planning and adapting based on the relationships between project partners, community members, and the spaces and places the project will be displayed and impact will help lead to success.

What does success look like? By now, this question should have a clear answer grounded in the exploration and orientation phases of the project and informed by prototyping. In addition to defining what success looks like, it's important to define what measuring success looks like. As the project itself is actualized, any evaluation tools must also be actualized.

Hopefully, the process of project planning enables the actualizing stage of the project to go smoothly. However, this can also be a stressful stage. It is where the large scale project work will be done and therefore will likely take more time and involve more people than any of the previous stages. This is also the time that community members, advisors, and additional artists may be brought in to help create and provide insight. A combination of word of mouth and social media for outreach to promote collective artistic and organizational activities may be helpful.

Because this is the first stage that may include community participation and involvement of those outside the project partner group, sharing project goals including impact, aesthetics, publication, and any others to those joining the project at this point is deeply important. The idea of project rigor in this work is defined by the quality of the relationships and partnerships involved and clearly understood goals are central to building and maintaining new relationships. The work of project facilitators is especially important to make sure that connecting the head and heart, deep listening, communication, and conflict resolution are all attended to as new collaborators are added during this stage.

Prompts:

- How is project actualization based on lessons learned in the prototyping stage?
- Is there a deadline for project presentation, and if so have partners developed an actualization plan to meet that deadline?
- How have you defined what success looks like in terms of project actualization and presentation?
- How have project goals been communicated to all new collaborators and volunteers who have joined in at this stage?

Insights:

- In this stage, "The facilitator should not be afraid to intervene or step back as needed." Ellen McMahon
- In bringing the project to life, both artists and scientists can work creatively together as "Art and Science are two sides of the same coin, the amounts of creative thoughts in both are similar." Sam Randall
- Certain partners may already be inclined to create and produce together based on their training. Dr. Robert Davis, Physicist and Co-creator of the Crossroad Project, remarked that musicians naturally "move, in concert, towards the same goal".

Resources:

- Animating Democracy. (2017b, May). *Educator Companion- Aesthetic Perspectives: Attributes of Excellence in Arts for Change*. Animating Democracy.

https://www.americansforthearts.org/sites/default/files/Aesthetics%20Companion_Educator.pdf

A specific description of how to use the “Attributes of Excellence” described in the Aesthetic Perspectives in an educational context.

- Helicon Collaborative. FARTHER, FASTER, TOGETHER: How Arts and Culture Can Accelerate Environmental Progress. ArtPlace, 2018, www.artplaceamerica.org/view/pdf?f=/sites/default/files/public/pictures/environment.pdf.

A report that establishes the importance, methods, and value of creative placemaking and provides a set of case studies.

- Advancing One Water through Arts and Culture: A Blueprint for Action http://uswateralliance.org/sites/uswateralliance.org/files/publications/uswa_arts_culture_FINAL_PAGES_RGB_0.PDF

A report highlighting Opportunities at the intersection of water, arts, and cultures.

- Springboard For the Arts. (2020). A Handbook for Artists Working in Community. <https://springboardforthearts.org/wp-content/uploads/2020/08/A-Handbook-for-Artists-Working-In-Community-08.2020.pdf>

A guide for artists who hope to develop long-term community relationships in order to create projects for change.

Presenting

Overview:

Presenting the final version of the work produced in any project is both exciting and stressful. Moving through the art and science partnership process should help build confidence through thoughtful design and preparation, but it is still important in this stage to be flexible and honor the organic process of presenting a project to an audience. A part of this stage is engaging the community and marketing projects in order to bring an audience to what has been created. This process takes creativity in itself and several strategies are noted in the resources included here.

Before an audience cares what you know, they need to know that you care. Partners came together to design a project because they felt a need to address a question connected to an issue that matters to them and their community. The connection to the issue and emotion that surrounds it must come through to the audience during the presentation. In this stage, partners should attend to the guiding principles of authenticity, connecting to head and heart, and ensuring that knowledge and action are place-based. This will help engage audiences in the exploration of the point of wonder the project is based on by showing why the question explored is important in the context of place, time, and community. Grounding projects in place-based perspectives will also help those who live, work, worship, and play in those places to connect with both heart and mind.

The next stage is reflection, and in order for it to be successful it is helpful to prepare for and engage in reflection while presenting. This may be as simple as asking audiences if project

partners can contact them later to talk about what they found successful and challenging, or it may mean building evaluation into the presentation. Embodied evaluation techniques such as indicating response through engagement in the presentation, showing response by moving in a set space, or adding to the art itself can all be part of the presentation.

Prompts:

- How have you marketed your project to bring in audiences?
- Which audiences have been invited and why?
- How does your presentation address your point of wonder and the challenges your project is working to solve?
- How have you emotionally engaged your audience?
- In what ways is your presentation place-based and action-focused?
- Which forms of evaluation will be used during the presentation and after and who has expertise in those types of evaluation?
- How will the time and effort needed for evaluation be funded?
- What impacts will your project have that can not be measured?

Insights:

- It is important for artists and scientist to value the collaborative aspect of the project, where the art or the science may not be as rigorous as one would achieve individually, thus “There is also a need for artists to see their work as research” Ellen McMahon
- “Let’s not use art to solve the problem. There are a lot of things it can do but not if it is forced into a very operational role, it can lose its power, which resides in surprise.” Ellen McMahon
- “Part of the art is how it is experienced, the participants are the audience, and everybody is a participant.” Beth Osnes
- “Joy and pride are important.../... “Many people who go to shows but there are only a few they will remember their all life” Beth Osnes

Resources:

- Center for Research on Environmental Decisions and ecoAmerica. (2014). *Connecting on Climate: A Guide to Effective Climate Change Communication*. New York and Washington, D.C.
http://guide.cred.columbia.edu/pdfs/CREDguide_full-res.pdf
A guide on how to reach audiences with climate communication.
- Clarke, M. (2017). *Field Guide for Creative Placemaking in Parks*. The Trust for Public Land and the City Parks Alliance. ISBN 978-0-692917411-00.
https://www.tpl.org/sites/default/files/files_upload/FINAL_FieldGuide_Layout_sm_0.pdf
A guide on how to develop creative placemaking projects in parks.
- Enterprise Community Partners. (2015) *Made with Love, Collaborative Action Recipes for Community Change*.
<https://www.enterprisecommunity.org/resources/made-love-recipes-community-change-5947>

A set of case studies in the form of recipes focused on collaborative action for community change.

- The Road To Results: Effective Practices for Building Arts Audiences
<https://www.wallacefoundation.org/knowledge-center/Documents/The-Road-to-Results-Effective-Practices-for-Building-Arts-Audiences.pdf>
A Guide on gathering and engaging audiences including how to remove barriers in order to make the arts more accessible.
- Osnes, B. (2017). Performance for resilience: Engaging youth on energy and climate through music, movement, and theatre. Cham, Switzerland: Palgrave Macmillan
A book that describes case studies of how to present work in different circumstances and places.

REFLECTING

Once a project has been presented, it may be tempting to consider it complete. But taking the time to reflect is a way to honor partnerships, celebrate successes and learn from challenges. This phase involves considering multiple levels of impact, numerous opportunities for reporting out, and supporting future work and partnerships through planning for the actions needed to continue the system-level work necessary to address both the symptoms and the causes of environmental and social justice issues.

This stage of reflecting has historically been connected to privilege. It takes time and funding to stay with a project after it has been presented. While this has long been recognized as an important part of scientific work so that impact can be measured, artists more often are asked to move on to the next project as soon as they have finished presenting. Art and science partnerships present an opportunity to reimagine reflection as both a creative and analytical exercise that can further catalyze community action and provide support to all partners involved.

Evaluating

Overview:

In our literature review and interviews, we found that this was one of the most neglected project stages. Evaluation is likely to bring up a range of emotions in project groups. Partners may feel very differently about the push to measure impacts. Evaluation and impact assessment have long been tied to science and have helped scientists establish their concept of rigor. Many other fields face challenges in funding and supporting evaluation that would be meaningful to their type of work. One reason for this is that the field of science has dictated what is worth measuring and how to conduct measurements. In art and science partnerships, partners can expand the idea of what shows project impact by creating their own metrics and including both cognitive and affective dimensions while supporting each other throughout the process.

Project partners, communities, and funders can all benefit from understanding how the time, energy, relationships and resources that make projects possible can catalyze community action. Two unique measures of impact include the disruption the project causes in standard systems and practices and the quality of the relationships formed through the partnerships. Disruption in this case speaks to the moving beyond the status quo. It does not represent something negative, rather it provides a necessary shake-up that may help communities evaluate whether attitudes and behaviors address the needs of social justice and environmental issues. The lens of disruption can help to reveal how much the relationships formed during projects have changed the methods and approaches of partners in their individual fields, how projects impact community views of space and systems, and the way projects impact communities' understanding of their relationship to the human and other than human worlds.

Impact should not be evaluated through just one measure or at just one scale. Both quantitative and qualitative measures of impact are useful and important to honor both the cognitive and affective realms of engagement. Depending on the project, anonymous feedback may be important to allow for comments from those who may be less likely to offer critique for a variety of reasons.

Simple impact tools such as tracking the number of people who engage with the work, the questions asked during presentation, and anecdotal reactions are valuable but don't express deeper and long-term effects of the project. In order to better understand the impact of time, a plan is needed to check in with both project partners and audience members to understand if and how the project has created important disruption and the ways in which it changed relationships to people, place, and systems. There are a number of evaluation tools and examples listed in the resources of this section, but projects should also feel free to create their own measures of impact that fit their community.

Prompts:

- In what ways has the privilege inherent in the evaluation stage been discussed and addressed by project partners?
- How are your evaluation methods culturally responsive?
- How have you brought together all notes and documentation from the first three project stages to show progressive impact?
- How have relationships grown and changed over the course of the project?
- In what ways has the project impacted the attitudes and behaviors of project partners?
- What are the short term impacts of the projects and what might the long term impacts be?
- Has your project caused disruption by challenging standard practices within the community that may be causing harm?
- How will your project support other projects and partnerships or further work on the problem addressed?

- Will the methodologies you have chosen for evaluating your project be meaningful and legible to you, your partners, your community, your funders, and/or anyone else you need to communicate with and/or seek future support from?

Insights:

- One long-term measure of impact is whether audience members remember a performance or art piece. Beth Osnes remarks: “Many people go to shows, but they will only remember a few all their life.”
- Eve Mosher notes that in terms of understanding impact: “Process can be as impactful as product.”
- The power of art can be difficult to assess: “Artists sit in a unique place in our social fabric. As artists we feel that we are the least prepared or informed. Artists have highly specialized ways of knowing are not very valuable in our culture, at the same time there is a mystical power around art as well.” Andrew Frieband
- Chantal Bilodeau sees that impact should include how many people and communities have been reached that do not commonly engage with or have access to the arts.

Resources:

- Center for Culturally Responsive Evaluation and Assessment
<https://crea.education.illinois.edu/>
A website focused on moving beyond standard methods of evaluation to design specific metrics and methods that are culturally responsive.
- A guide that considers realms of possible project impact.
<https://www.artplaceamerica.org/questions/measurement-evaluation>
A list of publications providing measurement and evaluation tools and methods compiled between 2010-2020.
- Animating Democracy Continuum of impact-
<https://www.animatingdemocracy.org/continuum-impact-guide>
In the context of reflecting, this guide may help partners describe project impacts in different community realms
- Curating Cities- A database of eco-sustainable public art
<http://eco-publicart.org/>
This project “evaluates the aims and outcomes of each project as well as the external constraints (and subsequent negotiations) that influence the production of public artworks.” Many useful case studies are offered here.
- Measuring Cultural Engagement: A Quest for New Terms, Tools, and Techniques
<https://www.arts.gov/sites/default/files/measuring-cultural-engagement.pdf>
A detailed guide to measuring the cultural engagement of a project.
- Most Significant Change Model
<https://thetoolkit.me/123-method/theory-based-evaluation/theory-step-2/most-significant-change/>
An evaluation tool for considering the systematic impact of projects.
- The Mauri Meter
<http://maurimeter.org/>

A Mauri-created tool for decisions and evaluation that includes qualitative and Indigenous values.

Reporting

Overview:

Sharing project impacts with partners and community members shows that you value their work and support and is a way to celebrate the culmination of a project. To broaden celebration and honor support, reports should be accessible to all who are interested.

Accessibility takes many forms but reports, whether written or in another format, should be at a language and concept level that can be shared and enjoyed by all involved and should be translated into any languages that are widely spoken in the community. Reports also have the potential to reach an additional audience that was not present for the presentation of the project, and might trigger curiosity, interest and support for future projects.

To increase the reach of reports, they should be delivered in more than one format. This may include community gatherings, press releases, online reports, radio broadcasts, and other media types. Another option is to co-design a presentation of the project to share at events and conferences where partners and project leaders can present their work together. Co-presenting and co-authoring also helps ensure that all partners' time and contributions are noted and helps to avoid single-partner reports that may lead to the perception that one person or group should receive credit. All partners should be celebrated and supporters' contributions should be noted as the project reports are shared within the community and beyond.

Regardless of the report format, sharing very detailed descriptions of project methods and findings will help show the nuance and individuality of partners' work. Bringing in all the details partners can remember into final reporting can bring projects to life for those who were not at the presentation and can also provide a reference for project partners as they move forward. This can create opportunities for all partners to include their reflections in a way that feels comfortable and engaging- whether that includes writing, audio recordings of project narratives, video recordings of partner-to-partner interviews, or other methods.

Reporting out allows for long-term relationships with partners, funders, and communities. It allows for the celebration of achievements and the acknowledgement of challenges. Honoring achievements through celebration helps center joy, increase hope, and create energy for future work. While it is important to celebrate each stage of a project as it happens, reporting provides the opportunity to celebrate within the context of the community.

Prompts:

- How have you made the methods and materials involved in your reporting process accessible to all project partners and community members?

- How many formats (writing, meetings, radio, photos, etc.) have been used in your reporting process and why did you choose those formats?
- In what ways have you described the partnership process and acknowledged all partners in your report?
- How have you centered relationships in your reports?
- How have your final project reports been celebrated within the project group and the broader community?
- Have partners contributed to, reviewed, and approved all reports prior to publication?

Insights:

- In measuring impacts, Beth Osnes emphasizes the importance of “Joy and pride” of the participants.
- “Combining art, which is unique and new, with science, which is replicable, creates a new model.” Marda Kirn
- Sharing data can help further and support projects: “Give out data, make sure people can continue their own curiosity and practice.” Clarinda MacLow
- “The importance of thick description of key moments is a form of documentation that often captures the gold of the work very effectively and can be easily conveyed to others.” Beth Osnes

Resources:

- Crossick, G, and Kaszynska, P. Understanding the value of arts & culture <https://ahrc.ukri.org/documents/publications/cultural-value-project-final-report/>
A multi-year report the value of art and culture in the UK- could be used as project justification or as a model for evaluation.
- Faviana Rodriguez (2020). No Going Back. A Covi-19 Cultural Strategy Activation Guide for Artists and ACTivists. The Center for Cultural Power. Retrieved from: https://backend.ccp.colab.coop/media/pdfs/CCP_Covid-19_3SCNaf1.pdf
An excellent example of how to report out on issue-focused projects.
- Whitmarsh, L. and Corner, A., 2017. Tools for a new climate conversation: A mixed-methods study of language for public engagement across the political spectrum. *Global environmental change*, 42, pp. 122-135.
<http://orca.cf.ac.uk/97309/1/Centre%20right%20narratives%20FINAL.pdf>
An article that describes the impact of language to different sectors of society in terms of reporting project findings and messaging.
- Enterprise Community Partners. (2015) Made with Love, Collaborative Action Recipes for Community Change.
<https://www.enterprisecommunity.org/resources/made-love-recipes-community-change-5947>
A set of case studies in the form of recipes focused on collaborative action for community change. Look at “Impact Facts” under each project to consider creative expressions of impact.

Planning for the Future

Overview:

Whether project partners plan to continue working together or not, creating a plan that describes the progress of the project on the problem addressed and what next steps are necessary is essential to the work. If the project goal was to address a specific issue, e.g. accessibility in a particular place, restoration of a natural space, etc., consider what future work the project points toward. What are other examples of the same issue within the community? If the project is an incremental part of addressing a larger systemic issue, how can future work build upon what has been accomplished and the lessons that have been learned? If this final stage is not attended to, the full value and impact of the project may not be actualized.

One element of planning for the future is to establish which partners will act as stewards of what has been created after the project is complete. This should include both the project methods and process and also may include products created. Project stewardship may take place in an online or physical space depending on what was created and how partners agree it will be shared. All partners should have access and share ownership of processes and products they helped design and create. Stewards attend to tasks such as keeping up websites, answering questions, maintenance of any displays or products, and maintaining project visibility and accessibility as long as partners have agreed upon and can support. This role may rotate between partners, but needs to be clearly defined in terms of responsibilities and time commitments.

Planning for the future can take many forms, just as project planning itself. However, it is useful to plan on multiple time scales. Consider mapping future work by asking: “What does the impact of this project look like in 20 years? In 10? 5? 1?” Considering future impact may help to establish what is needed in the present.

Honoring what was created through projects applies to both the processes and artifacts that came out of the work and the relationships that were formed. Whether or not partners plan to engage in future work, how can they support each other? One part of that support is a communication plan. Putting events on the calendar before the project ends and creating a contact list with a plan to keep it updated will help partners stay in touch. Before the project is complete, schedule a time to reflect on the project and celebrate a reunion of partners.

Prompts:

- Do all partners that plan to keep in touch have a contact list and a plan for updating that list?
- Who is the project steward and what is the plan to support stewardship of the process, methods, and products created?
- Which other communities and organizations might benefit from the project in the future?

- What changes did your project inspire or ignite through your products and partnerships?
- If the project were scaled up, could it have a greater impact?

Insights:

- In planning for the future, the strengthening of new and existing relationships can "Help develop relationships between art organizations and government." Hoi-Fei Mok
- "We need to advocate for personal and collective action but ultimately we need to change the system." Robert Davies
- "Ideas that emerge during cross collaboration have a lasting effect." Sondra Weiss
- Libby Barbee raises the question of, "How can we really bring arts and culture into the initiatives that are happening in state government?"

Resources:

- A Blade of Grass and its Fellowship for Socially Engaged Art
<https://abladeofgrass.org/>
A selection of articles, interviews and short films exploring socially engaged art themes and a fellowship program supporting artists enacting social change.
- A research article on collective loneliness
<https://www.ideo.com/journal/todays-leaders-must-learn-to-address-a-new-epidemic-loneliness>
Addressing the strain on our systems caused by COVID-19 reveals an opportunity to take new approaches to our work and our social infrastructure.
- Livelihoods Knowledge Exchange Network:
<https://likenknowledge.org/>
Provides a platform for connecting projects to broader networks.
- Playing for Time
Neal, L. (2015). *Playing for time: making art as if the world mattered*. London: Oberon Books.
A book by Lucy Neal highlighting the importance of the arts in our current moment in history as essential to moving forward.
- Creative Exchange
<https://springboardexchange.org/emergency-relief-funds-toolkit/>
Springboard For the Arts' emergency relief funds toolkit

CONCLUDING THOUGHTS

When partners and community members create art together it has the potential to bring joy, create insight, spark discussion, and encourage engagement in a unique and important way that can catalyze action on issues that demand attention. Working together in the system described in these guidelines, regardless of art form and issue, is a form of activism. This is not because it is always joyful, but because it supports the idea that shared curiosity and intent can move us beyond ego and help partners from diverse backgrounds come together for a shared

purpose. As partners work together, they are implicated not only in each other's work, but in each other's lives through the perspective co-creation provides. When a project is complete, the relationships, lessons, and creations from it persist, as long as attention and support are provided for that persistence. This is another reason why the art and science partnership guidelines are circular.

Art and science partnerships can help partners and communities overcome communication barriers commonly encountered when environmental and social justice issues are the focus. These partnerships and their projects allow for affective rather than just cognitive engagement. This enables partners and audiences to meet in conversation about what is felt in addition to what is known, which is key to addressing entrenched value and belief systems that inhibit communication and action.

The art and science partnership process in a community context is focused on building and maintaining partnerships through relationship development and facilitated dialogue. This enables partners to construct new narratives for what belonging means in their groups and communities. It also provides the opportunity to create new narratives of what it means to be place-based and consider the question of how to reimagine relationships with the natural world. At their best, narratives created through dialogue offer a way for us to connect and see that we are more alike than we are different and may even provide a way to reconcile multiple epistemologies with other ways of knowing.

Art is unique because it provides an opportunity for a subjective encounter. It allows individuals to engage in their own way and from their own point of view. The process of art engagement leaves audiences and project partners with feelings, impressions, and expanded perspectives which lead to questions. Interactions that begin with questions rather than answers to assumed questions and knowledge gaps allow for the inclusion of values and beliefs and the possibility of initiating conversations to develop narratives that will lead to change.

By bringing together scientists, artists, and community representatives together and merging complementary ways of knowing, inquiring and rethinking, partnerships provide new approaches to communities' environmental and social justice issues. The goal of these guidelines is not to come to a finite conclusion on how to solve problems but rather to provide support for better informed and innovative facilitation through each partnership, and to springboard partners to a new point of wonder. The completion of one journey around the art and science partnership wheel marks the beginning of the next.

List of Interviewees:

Alexis Frasz, Co-Director, Helicon Collaborative,
https://heliconcollab.net/who_we_are/alexis-frasz/

Amy Kimberly, Director, Carbondale Creative District,
<http://www.carbondalecreativedistrict.com/amy-kimberly>

Andrew Freiband, Artist, Founder, the [Artists' Literacies Institute](#)

Beth Osnes, Author, Professor, Theatre Department, Environmental Studies faculty associate, University of Colorado, Boulder, <https://insidethegreenhouse.org/>

Chantal Bilodeau, Playwright, Translator, Director, The Arctic Cycle: <https://www.theartcticcycle.org/>, Founder and Editor, Artists and Climate Change, <https://artistsandclimatechange.com/>

Clarinda Mac Low, Artist, Founder, Culture Push, <https://clarindamaclow.com>, <https://www.culturepush.org>

Ellen McMahon, Professor, Associate Dean for Research, School of Art, University of Arizona, Tucson, <https://art.arizona.edu/people/directory/emcmahon/>

Emmanuelle Vital, Land and Water Conservation Consultant, Sustainability Science Educator, Artist, Community Organizer, <https://pureinspirations.com>

Erin Leckey, Education and Outreach Program Manager, Cooperative Institute for Research in Environmental Sciences (CIRES), University of Colorado, Boulder, <https://cires.colorado.edu/outreach/programs>

Eve Mosher, Artist, Creator, High Water Line Project, <https://www.evemoshers.com/>, <https://www.evemoshers.com/highwaterline>

Franklin Sage, Director, Diné Policy Institute, https://www.dinecollege.edu/about_dc/staff/

Hoi Fei Mok, Climate Policymaker, Artist, Organizer, Sustainability Manager, San Leandro, CA, [Hoi-Fei Mok](#)

Jasmine Baetz, Artist and Assistant Professor, Los Seis de Boulder Community Sculpture Project facilitator, <http://jasminebaetz.com>, <http://www.losseisdeboulder.com/>

Kim Abeles, Artist, <https://kimabeles.com/>

Kimi Eisele, Artist, Community Organizer, <https://kimieisele.com/>

Lara Whitley, Director of Brand and Creative Strategy, Community Office Resource Efficiency (CORE), <https://aspencore.org/author/lara-whitley/>

Libby Barbee, Artist, Colorado Creative Industries, <https://libbybarbee.com>, <https://coloradocreativeindustries.org>

Marda Kirn, founder, Director, EcoArts Connections, <https://www.facebook.com/ecoartsconnect/>

Nicole Crutchfield, Director of Planning on Development, City of Fargo, Partner, The Fargo Project, <https://www.thefargoproject.com>

Patrick Chandler, PhD Candidate in Environmental Studies, University of Colorado
https://www.researchgate.net/profile/Patrick_Chandler

Robert Davis, Physics Professor, Founder, The Cross Road Project
<https://www.thecrossroadsproject.org>

Ron Whyte, Community Organizer, Mural Arts Philadelphia <https://www.trashacademy.org/>

Sam Randall, Co-Director, Arbor Institute, <https://arborinstitute.org/>

Sondra Weiss, Art Educator, Founder, Love Letters to the Sea, <http://www.143figureit.com/>

Graphic Designer:

Carl Lindgren, <http://carl-lindgren.com/>

Resources:

A Blade of Grass. (2020, April 2). <https://abladeofgrass.org/> - A "relationship guide" to forging strong and sustainable creative partnership between local governments and artists.

Animating Democracy. (2017a, May 15). *Aesthetic Perspectives: Attributes of Excellence in Arts for Change*. Animating Democracy.

<http://www.animatingdemocracy.org/aesthetic-perspectives> - An overview of valuing the rigor of art within the context of community focusing on 11 attributes.

Animating Democracy. (2017b, May). *Educator Companion- Aesthetic Perspectives: Attributes of Excellence in Arts for Change*. Animating Democracy.

https://www.americansforthearts.org/sites/default/files/Aesthetics%20Companion_Educator.pdf - A specific description of how to use the "Attributes of Excellence" described in the *Aesthetic Perspectives* in an educational context.

Animating Democracy. (2017c). *How do Arts & Culture Make a Difference? Continuum of Impact. A Guide to defining Social & Civic Outcomes & Indicators*. Retrieved from:

<http://animatingdemocracy.org/continuum-impact-guide> - A guidebook on how to define project goals.

Bird, K., & Scharmer, C. O. (2018). *Generative scribing: a social art of the 21st century*. PI Press. - A book that provides the key concepts of the capacities of being, joining, perceiving, knowing and drawing for facilitators wanting to explore scribing.

Boykoff, M. T. (2019). *Creative (Climate) Communications*. Cambridge, UK: Cambridge University Press. - A book focused on the challenges of communicating about climate change.

Chandler, P., Osnes, B., & Boykoff, M. (2020) Creative Climate Communications: Teaching from the heart through the arts. In J. Henderson & A. Drewes (Eds.), *Teaching Climate Change in the United States* (pp. 172-185). Routledge - A book chapter dedicated to exploring art and science partnership case studies.

Center for Research on Environmental Decisions and ecoAmerica. (2014). *Connecting on Climate: A Guide to Effective Climate Change Communication*. New York and Washington, D.C. http://guide.cred.columbia.edu/pdfs/CREDguide_full-res.pdf - A guide on how to reach audiences with climate communication.

Clarke, M. (2017). *Field Guide for Creative Placemaking in Parks*. The Trust for Public Land and the City Parks Alliance. ISBN 978-0-692917411-00. https://www.tpl.org/sites/default/files/files_upl-oad/FINAL_FieldGuide_Layout_sm_0.pdf - A guide on how to develop creative placemaking projects in parks.

Crossick, G, and Kaszynska, P. Understanding the value of arts & culture <https://ahrc.ukri.org/documents/publications/cultural-value-project-final-report> - A multi-year report the value of art and culture in the UK that could be used as project justification or as a model for evaluation.

Dumit, J. (2014). WRITING THE IMPLOSION: Teaching the world one thing at a time. *Cultural Anthropology*, 29(2), 344-362. <https://doi.org/10.14506/ca29.2.09-> - An article describing how to use Donna Haraway's implosion technique

Enterprise Community Partners. (2015) *Made with Love, Collaborative Action Recipes for Community Change*. <https://www.enterprisecommunity.org/resources/made-love-recipes-community-change-5947> - A set of case studies in the form of recipes focused on collaborative action for community change. Look at "Impact Facts" under each project to consider creative expressions of impact.

Grant, A. (2021). *Think Again: The Power of Knowing What You Don't Know*. Viking Publishing. P.320 - Examines the critical art of rethinking: learning to question your opinions and open to other people's minds, without being blind to your own limitations.

Helguera, P. (2011) *Education for Socially Engaged Art: A Materials and Techniques Handbook*. http://www.sholette seminars.com/wp-content/uploads/2018/01/Helguera-Pablo_Socially-Engaged-Art.pdf - A description of materials and techniques used by artists to create socially engaged art.

Helicon Collaborative. *FARTHER, FASTER, TOGETHER: How Arts and Culture Can Accelerate Environmental Progress*. ArtPlace, 2018. www.artplaceamerica.org/view/pdf?f=/sites/default/files/public/pictures/environment.pdf - A report that establishes the importance, methods, and value of creative placemaking and provides a set of case studies.

Ingram, M., Asleson, R., and Cunningham, A. (2015). *Integrating Artists into City Planning: The Fargo Project*. 10.13140/RG.2.1.3018.5361 - A case study of a water-based art and science partnership with the city of Fargo.

Johnson, A. E. (2020). *All we can save: Truth, courage, and solutions for the climate crisis* - A book and project dedicated to women's perspectives on sustainability.

Kimmerer, R.W. (2013). *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants*. Milkweed Editions. <https://www.pdfdrive.com/braiding-sweetgrass-indigenous-wisdom-scientific-knowledge-and-the-teachings-of-plants-e60737077.html> - A book focused on Indigenous wisdom and ways of knowing.

Leonard, B. (July/August 1996. Minor Revisions June, 2007). *Building Arts and Community Partnership: A Work Kit*. Retrieved from: https://issuu.com/alternateroots/docs/partnerships_work_kit - A workbook for artists designing projects with communities.

Lesen, Amy E., Ama Rogan, and Michael J. Blum. *Science Communication through Art: Objectives, Challenges, and Outcomes*. *Trends in Ecology & Evolution*, vol. 31, no. 9, 2016, pp. 657. <https://sites.temple.edu/transdisciplinaryconversations/files/2019/11/Science-Communication-Through-Art.pdf> - An overview of science communication through the arts.

Mendez, M. (2020). *Climate change from the streets: How conflict and collaboration strengthen the environmental justice movement*. New Haven: Yale University Press. - A book that offers an overview of how policy and local attitudes and behaviors must connect through practice and intent.

Mitchell, S. (2018). *Sacred Instructions: The heart of spirit-based change*. Berkeley: North Atlantic Books - A book focused on putting Indigenous wisdom into practice.

Monitor Institute. (2013) *Gather: The Art & Science of Effective Convening*.
<https://www.a2ru.org/wp-content/uploads/2018/03/Gather-The-Art-and-Science-of-Effective-Conveing.pdf> - A guidebook focused on convening groups.

Moser, S.C. and Berzonsky, C.L. (2015). *There Must Be More: Communication to Close the Cultural Divide*, in O'Brien, K, Silbo, E. (eds.) *The Adaptive Challenge of Climate Change*. Cambridge, UK: Cambridge University Press.
http://susannemoser.com/documents/MoserandBerzonsky_2015_culturaldivides_prepub-final.pdf - Article that introduces the discourse continuum.

NAAEE- *Guidelines for Excellence: Community Engagement*-
https://cdn.naaee.org/sites/default/files/eepr/resource/files/community_engagement_-_guidelines_for_excellence_0.pdf - A guide for environmental educators working in communities on how to design projects and maximize impact.

Neal, L. (2015). *Playing for time: making art as if the world mattered*. London: Oberon Books. - A book by Lucy Neal highlighting the importance of the arts in our current moment in history as essential to moving forward.

Osnes, B. (2017). *Performance for resilience: Engaging youth on energy and climate through music, movement, and theatre*. Cham, Switzerland: Palgrave Macmillan - A book that offers a case study of permanence-based art and science partnership for youth.

Pearce B 2020. *Design Thinking. td-net toolbox profile (11)*. Swiss Academies of Arts and Sciences: td-net toolbox for co-producing knowledge.
https://naturalsciences.ch/co-producing-knowledge-explained/methods/td-net_toolbox/design_thinking - A guide focused on the co-production of knowledge.

Project Drawdown. (2020). *The Drawdown Review: Climate Solutions for a New Decade*. A Project Drawdown Publication.

<https://drawdown.org/sites/default/files/pdfs/TheDrawdownReview%E2%80%932020%E2%80%93Download.pdf> - An update to the Drawdown solutions published in 2016. Focuses on the most impactful ways to address climate change.

Rodriguez, F. (2020). No Going Back. A Covi-19 Cultural Strategy Activation Guide for Artists and Activists. The Center for Cultural Power. Retrieved from:

https://backend.ccp.colab.coop/media/pdfs/CCP_Covid-19_3SCNaf1.pdf - "A collection of toolkits for designing creative actions, free art and content you can use, and case studies to help inspire project ideas." - In the context of Covid-19 and in a time of crisis.

Sage, Franklin, "Indigenous Knowledge System And Decolonizing Methodology Interwoven Into Higher Education Experiences: Autoethnography" (2017). *Theses and Dissertations*. 2141.

<https://commons.und.edu/theses/2141> - Dr. Franklin Sage's dissertation.

Scharmer, O. (2018) *The Essentials of Theory U: Core Principles and Applications*. - A guide to applying Theory U to lead change in science, business, and society.

Schupblach, J. and Ball, D. (Eds.). (November 2016). *How to do Creative Placemaking. An Action-Oriented Guide to Arts in Community Development*. National Endowment for the Arts Office of Public Affairs.

https://www.arts.gov/sites/default/files/How-to-do-Creative-Placemaking_Jan2017.pdf - A guide for artists on how to do creative placemaking through community partnerships.

Speicher, S. *Today's Leaders Must Learn to Address a New Epidemic: Loneliness*. IDEO is a global design and innovation company.

<https://www.ideo.com/journal/todays-leaders-must-learn-to-address-a-new-epidemic-loneliness> - An article focused on the impact of loneliness and moving on from the pandemic.

Springboard For the Arts. (2020). *A Handbook for Artist working in Community*.

<https://springboardforthearts.org/wp-content/uploads/2020/08/A-Handbook-for-Artists-Working-In-Community-08.2020.pdf> - A guide for artists who hope to develop long-term community relationships in order to create projects for change.

Szpakowski, S, *Little Book of Practice for Authentic Leadership in Action*.

https://www.circularresourceslab.ch/wp-content/uploads/2018/09/ALIA_little_book_of_practice.pdf - A compilation of practices that sustain authentic leadership.

University of Kansas (2021). *Community Tool Box. Chapter 3. Assessing community needs and resources.*

<https://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources> - A list of resources for communities focused on partnerships.

Whitmarsh, L. and Corner, A., 2017. Tools for a new climate conversation: A mixed-methods study of language for public engagement across the political spectrum. *Global environmental change*, 42, pp. 122-135. - An article focused on climate communication tools.

Yuen, T. Yurkovich, E. Grabowski, L. and Altshuler, B. (May 2017). *Guide to Equitable, Community-Driven Climate Preparedness Planning*. Urban Sustainability Directors Network. https://www.usdn.org/uploads/cms/documents/usdn_guide_to_equitable_community-driven_climate_preparedness-high_res.pdf - Guide for planners on climate preparedness and overcoming specific climate challenges on a community/city scale.

Toolkits:

- A Handbook for Artists Working in Community. Springboard For the Arts <https://springboardforthearts.org/wp-content/uploads/2020/08/A-Handbook-for-Artists-Working-In-Community-08.2020.pdf>
- Advancing One Water through Arts and Culture: A Blueprint for Action http://uswateralliance.org/sites/uswateralliance.org/files/publications/uswa_arts_culture_FINAL_PAGES_RGB_0.PDF
- Animation Democracy Aesthetic Perspectives (A Program of Americans for the arts) Full Framework 55 pages:
EBook: https://issuu.com/americans4arts/docs/aesthetic_perspectives_full_framework
 - Short Take of the 11 attributes (7 pages): <http://www.animatingdemocracy.org/sites/default/files/pictures/AestPersp/pdfs/Aesthetics%20Short%20Take.pdf>
 - A Condensed Attributes (5 pages) : <http://www.animatingdemocracy.org/sites/default/files/pictures/AestPersp/Aesthetics%20Condensed%20Attributes.pdf>
 - Companion guides (6-10 pages) for artists, funders, evaluators/researchers, educators, and curators <http://www.animatingdemocracy.org/companion-guides>
- Arts-Based Methods for Transformative Engagement <https://edepot.wur.nl/441523>
- Community Engaged Learning Toolkit <https://career.arizona.edu/community-engagement-toolkit>
- Connecting on Climate: A Guide to Effective Climate Change Communication. Center for Research on Environmental Decisions and ecoAmerica. http://guide.cred.columbia.edu/pdfs/CREDguide_full-res.pdf

- Creating Partnerships with Small and Midsize Business. Partnership Movement Toolkit. American For the Arts.
https://www.americansforthearts.org/sites/default/files/Creating_pARTnerships_small-midsize.pdf
- Diving into Racial Equity: The MAP Fund’s Exploration
https://www.americansforthearts.org/sites/default/files/MAPFund_R3_Final_hi.pdf
- Emergency Relief Funds Toolkit. Springboard For the Arts.
<https://springboardexchange.org/emergency-relief-funds-toolkit/>
- Equitable, Community-Driven Climate Preparedness Planning. Urban Sustainability Directors Network
https://www.usdn.org/uploads/cms/documents/usdn_guide_to_equitable_community-driven_climate_preparedness-_high_res.pdf
- How to do Creative Placemaking - National Endowment for the Arts
https://www.arts.gov/sites/default/files/How-to-do-Creative-Placemaking_Jan2017.pdf
- Measuring Cultural Engagement: A Quest for New Terms, Tools, and Techniques. National Endowment for the Arts and the Arts & Humanities Research Council’s Cultural Value Project.
<https://www.arts.gov/sites/default/files/measuring-cultural-engagement.pdf>
- Pittsburgh Artists Working in Community: A Case Study of Aesthetic Perspectives in Action
<http://www.animatingdemocracy.org/resource/pittsburgh-artists-working-community-case-study-aesthetic-perspectives-action>
- The Field Guide For Parks and Creative Placemaking. The Trust for Public Land & City Parks Alliance
https://www.tpl.org/sites/default/files/files_upload/FINAL_FieldGuide_Layout_sm_0.pdf
- The Road To Results: Effective Practices for Building Arts Audiences.
<https://www.wallacefoundation.org/knowledge-center/Documents/The-Road-to-Results-Effective-Practices-for-Building-Arts-Audiences.pdf>

Potential Sources of Funding:

- [3Arts](#) advocates for and awards funds to women artists, artists of color, and artists with disabilities working in the performing, teaching, and visual arts.
- [American for the Arts’ funding resources](#) including Federal Guides and AFTA resources such as the [pARTnership Movement](#) that provides [toolkits](#) to reach business leaders with the message that partnering with the arts can build their competitive advantage.
- [The Alexia Foundation](#) supports photographers as agents for change by promoting the power of photojournalism to give voice to social injustice through grants and scholarships.

- [The Alfred P. Sloan Foundation](#) funds a number of initiatives to further understanding of the forces of nature and society with the goal of affecting a better world. It does so by supporting work in Basic Research, education initiatives, digital technologies, economic and quality of life research, and others that cut across a number of fields.
- [The American Council of Learned Societies](#) provides a number of grants and fellowships. Though focused on inquiry primarily through Humanistic and Social Scientific lenses, ACLS is particularly interested in collaborative and innovative approaches that cut across discipline.
- [The Andrew W. Mellon Foundation](#) supports grantees within five defined program areas: Higher Education and Scholarship; Scholarly Communications and Information Technology; Art History, Conservation and Museums; Performing Arts; and Conservation and the Environment.
- [The Center for Craft](#) supports new cross-disciplinary approaches to scholarship in craft research and knowledge.
- Certified State Creative Districts such as [Colorado Creatives Districts](#) are a great for local and [state](#) support.
- [The Emergent Fund](#) focuses on grassroots organizing and power building in Black, Indigenous and people of color communities who are facing injustice based on racial, ethnic, religious and other forms of discrimination.
- [The Green Foundation](#) primarily focuses on the arts, education, medical and scientific research, and human services.
- [The Harpo Foundation](#) supports artists who are under recognized by the field. The foundation seeks to stimulate creative inquiry to encourage new modes of thinking about art.
- [The Henry Luce Foundation](#) seeks to bring important ideas to the center of American life, strengthen international understanding, and foster innovation and leadership in academic, policy, religious, and art communities. This foundation supports a number of programs and offers responsive grants and dissertation awards.
- [The John Templeton Foundation](#) funds several core areas that bring together overlapping tools and approaches from differing disciplines – all aimed at pushing eagerness to learn and creative approaches to knowledge making.
- [The Kresge Foundation](#) supports cities through eight focus areas including art and culture, social investment practice, and environment.
- National Endowment for the Arts [Our Town creative placemaking grants program](#) and [Grants for Arts Projects program](#).
- [The nonprofit Hub](#) provides guidance on how to recruit new donors.
- The [Rita Allen Foundation](#) supports universities and foundations for science and social innovation and civic engagement.
- [The Robert Rauschenberg Foundation](#) actively supports the intersections of the Arts with social justice, philanthropy, and innovation.
- [The Surdna Foundation](#) seeks to foster just and sustainable communities in the United States—communities guided by principles of social justice and distinguished by healthy environments, strong local economies, and thriving cultures. The Thriving Cultures

program is based on a belief that communities with robust arts and culture are more cohesive and prosperous, and benefit from the diversity of their residents.

Virtual Platforms/Networks/Tools:

- The Alliance for the Arts in Research Universities
<https://www.a2ru.org/>
- Artist and Climate Change:
<https://artistsandclimatechange.com>
- Art Place America- Measurements and Evaluation
<https://www.artplaceamerica.org/questions/measurement-evaluation>
- The Benefit of Using Graphic Recording/Graphic illustrations
<http://www.theworldcafe.com/wp-content/uploads/2015/07/graphicBenefits.pdf>
- Center for Culturally Responsive Evaluation and Assessment
<https://crea.education.illinois.edu/>
- The Centre for Sustainable Practices in the Arts
<http://sustainablepractice.org>
- Climate Change Communication, Six Americas Research
<https://climatecommunication.yale.edu/>
- Co-budgeting tools and methods
<https://cobudget.co/#/>
- Critical response process
<https://lizlerman.com/critical-response-process/>
- Curating Cities- A database of eco-sustainable public art
<http://eco-publicart.org/>
- Inside the Greenhouse:
<https://insidethegreenhouse.org/>
- Kumu- A virtual tool for mapping network
<https://kumu.io/>
- Livelihoods Knowledge Exchange Network
<https://likenknowledge.org/>
- Mauri-ometer
<http://mauriometer.org/>
- Mindmeister - Online Mind Mapping
<http://www.mindmeister.com>
- Most Significant Change Model
<https://thetoolkit.me/123-method/theory-based-evaluation/theory-step-2/most-significant-change/>
- Network Weaver - Weaving System shifting Networks
<https://networkweaver.com/>
- The Rising Voices Center for Indigenous and Earth Science
<https://risingvoices.ucar.edu/>

- Team Decision Making: The Gradients of Agreement
<https://www.trg-inc.com/resources/team-decision-making-the-gradients-of-agreement/>
WEAD (Women Eco Artists Dialog Magazine & Directory/Exhibits & Events):
<https://www.weadartists.org/directory>
- Yale Program on Climate Change Communication
<https://climatecommunication.yale.edu/>

Fellowship/workshop opportunities:

<https://www.culturepush.org>

<https://greenartlaballiance.com/about/history/>

<http://uswateralliance.org/content/buildingcommunityworkshop>

<https://www.bcworkshop.org/activating>

<http://eco-publicart.org/the-homes-project/>