



**Collaborative
Leaders
Network**

Tools for
Collaborative Problem Solving

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Collaborative Problem Solving

Stage 5 Tools

Identifying what can/can't be changed

This activity directs a group away from the “givens” (those elements of a problem that realistically can’t be changed) and instead supports participants to focus on the “policy-relevant variables” (those elements that can be manipulated and changed).

Sequence/Steps:

- Explain the distinction between problem “givens” and “policy-relevant variables.”
- Provide an example.
- Ask each person in the group to identify “givens” and “policy-relevant variables” on a card—working alone or with a partner.
- Put two sheets of newsprint in front of the group, one of which is titled “Givens” and the other, “Policy-Relevant Variables.”
- Have the stakeholders record their responses on the relevant sheets.
- Facilitator notes areas of apparent agreement and disagreement.
- Participants discuss implications for designing possible “solutions.”

Where there is disagreement on the “givens,” the facilitator keeps the conversation going about what is meant by “givens” and why certain aspects of the problem are considered “givens” by some. If that doesn’t lead to agreement about “givens,” the facilitator will try to generate strategies using multiple conceptions of “givens” regarding a particular issue or problem.

In Practice

This example illustrates how a group might distinguish between “givens” and “policy-relevant variables.”

Issue: Possible sea level rise in Hawaii

Possible perceived givens

- Global patterns of continued greenhouse gas emissions [GGE] cannot be sufficiently reduced to alter long term patterns of climate change, OR GGE is but one of many factors—and not the most important one—in global climate change.
- Continued sea level rise will contribute to long-term beach retreat, loss of beaches, threats to coastal housing, hotels, and infrastructure such as highways, sewage treatment plants, etc., OR long-term threats of sea level rise are overstated.



Possible policy-relevant variables

- Reduction of GGE to reduce or alter global climate change
- Designation of key beaches/coastal areas for protection
- Protection of selected coastal areas by coastal structures such as dikes
- Regulatory protection of threatened coastal areas via designation of new setbacks and 'no-build' hazard areas
- Relocation over time of threatened public infrastructure
- Relocation/abandonment of some coastal housing, hotels, and infrastructure
- Education and behavioral modification of potential coastal property purchasers

Interviewing stakeholders

Stakeholders have their own perceptions of problem significance, problem causes, symptoms, and impacts. Careful interviews outside the group process can elicit key areas of divergence/convergence.

Sequence/Steps:

- Identify key stakeholders based on their agency responsibilities, other professional roles, engagement with the issue, previous involvement or interest, etc.
- Interview them about their perceptions of problem significance, symptoms, causes, and impacts.
- Prepare charts, matrices, or reports comparing perceptions.
- Deliver feedback to the group.

Refocusing discussion on outcomes

Some individuals/groups are inclined to focus on problem causes. Because a focus on causes can become a discussion of "villains," re-focusing the discussion on impacts clarifies the emphasis.

Sequence/Steps:

- Ask stakeholders who or what is impacted by the problem.
- Ask stakeholders how the problem is manifest and what the symptoms or indicators are.
- Repeat until there is agreement on impacts rather than on causes.
- Once there is agreement about impacts, work with groups to identify single or multiple causes and, if possible, assess the relative influence of each causal factor.

In Practice



A community forum focusing on coastal problems generated thoughts such as “too many tourists.” When pressed about what it was about too many tourists that resulted in adverse impacts, respondents said they couldn’t find parking at their favorite swimming/fishing sites. Subsequent discussion led the group to re-focus on “inadequate coastal access in some coastal areas, including parking.”

Diagramming a problem

Diagramming the multiple causes of the problem—social, economic, environmental—can help to clarify their relative importance.

Sequence/Steps:

- Start by identifying the adverse social, environmental, economic, or organizational impact that the group hopes to change. Put it on the right side of a large piece of newsprint.
- To the left of the “impact” ask the group to list the direct “threats” or causes contributing to the problem/impact; draw arrows to the “impact.”
- Identify and list “indirect” threats or activities that influence the direct threats.
- Identify and diagram other contributing factors.
- Discuss the arrangement of direct, indirect, and contributing factors until the resulting diagram reflects the consensus view of the group.

In Practice

[View problem diagram](#)

Discussing the impact on individuals

Sometimes, groups discuss problems that touch them personally, as when there are changes in their workplaces. Discussions of individual impacts can clarify perceptions, develop shared understandings, and improve assessments of perceived impacts.

Sequence/Steps:

- Name the problem to be discussed.
- Ask members of the group if they agree with the problem.
- Ask group participants to take turns indicating how they think the problem affects them.
- Give people an opportunity to ask clarifying questions.
- Ask people if their perception of the problem has changed based on the discussion and, if so, how.

Stage 6 Tools

Generating options

When the group includes participants who hold different, even competing views of an “ideal” strategy, this practice encourages participants to engage the views of others.

Sequence/Steps:

- Determine whether group is ready to develop strategies to address the problem as defined.
- Before inviting strategies, encourage participants to avoid evaluation of options suggested by others. Suggest separating idea generation from idea evaluation.
- Invite participants to take turns identifying options.
- Record options as they are identified.
- Continue to encourage options until no more are suggested (or allotted time has expired).
- If possible, combine like strategies to create a more manageable list.

Comparing options using different constraints

Constraining choice by focusing on particular management tools or by imposing dollar limits for other constraints may result in a smaller, but more realistic set of options. This is a useful approach when there are known constraints in terms of funds, time, or personnel.

Sequence/Steps:

- Determine whether the group is ready to engage in problem solving.
- Determine the group’s appetite/inclination to work with decision-making constraints.
- Work with group to identify (and delimit) different constraints under which options are being generated. For example, participants may be asked to generate options for regulatory solutions, public outreach solutions, research options, etc. Groups might be asked to think of options under specific financial constraints such “no option should cost more than \$100,000 to implement.”
- Before inviting options for each constraint, encourage participants to avoid evaluation of options suggested by others. Suggest separating idea generation from idea evaluation.
- Once the group understands the constraints, invite participants to take turns identifying options.
- Record options as they are identified.
- Continue to encourage options until no more are suggested (or allotted time has expired).
- Ask people to compare the type of options identified using different constraints

In Practice

In a coastal management workshop, participants were encouraged to generate management options consistent with an emphasis on principles of *ahupua'a* management.

Stage 7 Tools

SWOT analysis

Preliminary group assessment of the Strengths, Weaknesses, Opportunities and Threats [SWOT] associated with each strategy is a useful tool to start the evaluative discussion of strategies.

Sequence/Steps:

- Put each strategy on a separate piece of newsprint.
- Ask participants to identify the strengths of each strategy in turn and list them.
- Ask participants to identify weaknesses and list them under each strategy.
- Continue by asking participants to identify opportunities and then threats associated with each strategy—and record them on the newsprint.

Once the listing is complete, give the group time to comment on the participants' assessment, areas of agreement, etc.

Option/criteria analysis

When the group recognizes that some criteria are more relevant than others, the group works to come up with a list of weighted evaluative criteria.

Sequence/steps:

- Brainstorm criteria.
- Discuss and revise criteria.
- Discuss relative relevance/importance of each criterion.

After discussion, seek consensus on the relative significance of weighting each criterion.

Consider this example. A community wants to create some new active and passive parks. They have identified several new sites and have evaluated the sites based on criteria such as cost, accessibility to nearby county or state roads, benefits to community, and likelihood for success. They have decided on three sites they want to acquire. Where do they start?

Option 1: Large site for an active park—owner unwilling to sell; site will require condemnation; new road will be required.

Option 2: Small site for a passive park—location next to a county road in a populated area; owner willing to sell at a reasonable cost within the next six months.

Option 3: Medium size site for an active park—location on a major road; seller asking more than the appraised value and wants to complete transaction in three years.

For each option, give a score for each criterion from 1 to 5, with 1 being the highest score. Add the total of the scores. The strategies with the lowest scores are the optimal choice. The optimal choice in this example is Option 2.

Option	Cost	Accessibility	Benefits to Community	Likelihood for Success	Total Score
Option 1	5	5	1	4	15
Option 2	1	1	3	1	6
Option 3	4	1	2	3	10

Each criterion can also be weighted to reflect its relative importance. For example, if cost is most important, a weight can be attached to calculate its relative importance.

Paired comparison of options

This tool attempts to compare two options at a time to see which is best until one “best” option emerges.

Sequence/steps:

- Develop a list of strategies.
- Ask the group to compare each strategy to every other strategy in terms of all criteria simultaneously.
- Continue to do this until each strategy has been compared against every other strategy. This will produce a rank ordered list.

Be sure to allow sufficient time in advance for discussion of every strategy before votes are taken. Invite people to speak for or against strategies, or encourage everyone to discuss the pros and cons or advantages and disadvantages of each item.

