The Community Builder’s Approach to

Theory of Change

A PRACTICAL GUIDE TO THEORY DEVELOPMENT

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Section One: Theory Development
A theory of change can be a helpful tool for developing solutions to complex social problems. At its most basic, a theory of change explains how a group of early and intermediate accomplishments sets the stage for producing long-range results. A more complete theory of change articulates the assumptions about the process through which change will occur, and specifies the ways in which all of the required early and intermediate outcomes related to achieving the desired long-term change will be brought about and documented as they occur.

To best realize the value of creating a theory of change as part of planning and evaluating social interventions, the Aspen Institute Roundtable on Community Change (Roundtable) developed an approach to help community builders create the most robust theories of change possible.\(^1\)

**The Community Builder’s Approach to Theory of Change: A Practical Guide to Theory Development** is for planners and evaluators who are going to facilitate a process for creating a theory of change with community-based programs and community change initiatives. It was designed as a “refresher course” for planners, evaluators, and others who have attended one of the Roundtable's Theory of Change Workshops,\(^2\) but we fully expect experienced facilitators will be able to quickly learn and apply the method as described in this guide. Please visit our web site, www.theoryofchange.org, for updated information and additional examples.

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1. This work greatly benefited from the ongoing collaboration with Hélène Clark and her colleagues at ActKnowledge. For more information about ActKnowledge, visit www.actknowledge.org.
2. For information on scheduling a workshop, please contact Andrea Anderson at andreaa@aspenroundtable.org or Hélène Clark at hclark@actknowledge.org.
What Is the Community Builder’s Approach to Theory of Change?

The Community Builder’s Approach to Theory of Change is a method that a community group can use to think critically about what is required to bring about a desired social change. It is a process designed to depict how a complex change initiative will unfold over time. It creates an illustration of all the various moving parts that must operate in concert to bring about a desired outcome.

Our approach to theory of change requires stakeholders to be precise about the type of changes they want to achieve. This often requires participants to adhere to a level of conceptual clarity that they are not accustomed to, which is why we think it is necessary to have a skilled facilitator at the helm, managing the process.

We ask theory of change participants to predict exactly who or what is going to change, over what period of time, and by how much, at every single step in an often complex process. We ask them to specify how and why they expect change to happen in a particular way. We also ask how they are going to bring their resources to bear on creating early and intermediate changes that add up to their ultimate goal. Simple questions, in theory (pardon the pun!), but difficult to answer in practice.

A theory of change is essentially an explanation of how a group of stakeholders expects to reach a commonly understood long-term goal. In creating a process for doing this work, we have coined a few terms that may be unfamiliar, and we use familiar terms in new ways. Terms like pathway of change, precondition, indicator, outcome, intervention, and assumptions are commonly used in our field, but to us they have specific meanings:

PATHWAY OF CHANGE
For us, a pathway of change is a map that illustrates the relationship between actions and outcomes and also shows how outcomes are related to each other over the lifespan of the initiative. (See Figure 1.) It is the most easily recognized component in a theory of change because there are many planning approaches that employ boxes and arrows to depict program elements. Throughout this guide, we use the terms pathway of change and map interchangeably.

WHAT ABOUT PROJECTS WITH MULTIPLE GOALS?

Throughout this guide, we refer to the long-term goal or outcome, but in reality most community initiatives are working toward an interrelated set of long-term goals, each of which would need to be mapped in the way we describe.
We draw a pathway of change in a way that may seem peculiar at first because it looks like an organizational chart. (Believe it or not, this is an artifact of our early attempts to draw these in Microsoft Word.) The long-term goal of the initiative appears at the top of the map, and the outcomes that must be produced in order to get there are arranged in order on the subsequent layers of the map. We then read this map from the bottom to the top, suggesting that the earliest outcomes (at the bottom) are needed to get to the next level, and outcomes at the middle...
level are needed to get to the top. (It might help to think of it in terms of an organizational chart: it's like starting off in a company mailroom, moving up to sales, then management, and then to the CEO's office.)

**OUTCOME AND PRECONDITION**

We use specific language to describe the outcomes on the map. For us, everything in the pathway of change is a precondition to the long-term goal. That is, the outcomes on the path are all required to reach the goal—without each of them in place, we assume the goal cannot be attained. This logic helps us weed out extra outcomes that may be nice but unnecessary to achieve the goal we have in mind. An effective pathway of change reflects only the outcomes, or preconditions, that are at once necessary and, when taken together as a set, sufficient to reach the long-term goal.

Arranging outcomes on the map as the first step in the theory building process has a few advantages over other brainstorming or planning approaches, which often focus on “actions” or programs at the outset. First, we see the big picture quickly. Without having to read through a thick description of a complex plan, we can see how a group expects their early achievements to start a process that eventually leads to the desired long-term results. Second, it allows the group to think about what must change or be produced before thinking about how to actually do it. This is a new way of thinking for most people. When we facilitate theory of change groups, we like to tell people to imagine that they have unlimited power and resources when they draw the pathway of change so that they focus on getting all of the necessary and sufficient preconditions on the map before turning to the task of figuring out exactly how to make these preconditions a reality.

**INDICATOR**

Indicators tell the story of how success will be recognized at each step in the pathway of change. While this term is so often used in planning and evaluation efforts that most people assume that we’re all talking about the same thing, we use the term in a very specific manner when we talk about indicators as part of a theory of change. First, we define an indicator for each outcome (or precondition) on the pathway of change (see Figure 1), not just for the long-term goal. Second, the indicator must be defined in a way that includes a lot of detail. We call this operationalizing the indicator because we take an abstract concept and make it “operational” so that a research plan for gathering useful data can be designed around it. For us, the best way to operationalize each indicator is to ask a few questions:

- **Who or what is the target population of change?**
- **How much change has to occur on this indicator for us to claim to have successfully reached the outcome?**
- **How long will it take to bring about the necessary change in this indicator in the target population?**

Answering each of these questions for each of the indicators that will track progress on outcomes is quite a task, but one that is absolutely essential for making sure that the theory of change truly makes sense in the end.

**INTERVENTION**

While the pathway of change is the centerpiece of a theory of change, and often the most
recognized component, a complete theory of change must also describe the types of interventions that would be required to bring about each of the preconditions on the pathway of change. An intervention might be as simple as a single activity or as complex as an entire program. Instead of planning an omnibus strategy, participants in the theory of change process must match each outcome in the pathway of change to a specific intervention, revealing the often complex web of activity that is required to bring about the desired long-term community change. (See Figure 2.)
ASSUMPTIONS
Finally, a theory of change would not be complete without an articulation of the assumptions that stakeholders use to explain the change process they have envisioned. Assumptions explain both the connections between the preconditions for long-term change that occur in the early and intermediate stages of the change process, and the expectations about how and why proposed interventions will bring them about.

While assumptions are often the set of beliefs that guide a group (and often remain unstated until the theory of change process comes to town!), they may also be supported by research, or “best practices,” which can strengthen the case to be made about the plausibility of theory and the likelihood that stated goals will be accomplished.

Assumptions answer some of the probing questions that come up when a theory of change is being critiqued. For example, one group we worked with developed a theory largely based on the principles of resident control and empowerment. As they reviewed their theory, we pushed them to answer two simple—yet extremely important—questions they hadn’t thought about clearly. We asked, “Why is it important to build resident control of the housing investment decisions made by the local community development corporation?” and “How are we going to build resident control of the housing decisions that are made by the local community development corporation?”

Probing these questions in a group setting revealed that members held a variety of different assumptions about these important how and why issues. It was an important turning point for their work when they began to develop a consensus on the assumptions that they agreed reflected the “group think” about resident control and empowerment.

A REVIEW: THE CORE ELEMENTS OF A THEORY OF CHANGE

1. A pathway of change that illustrates the relationship between a variety of outcomes that are each thought of as preconditions of the long-term goal.
2. Indicators that are defined to be specific enough to measure success.
3. Interventions that are used to bring about each of the preconditions on the pathway, and at each step of the pathway.
4. Assumptions that explain why the whole theory makes sense!
**The Bottom Line: Why Should I Care About Creating a Theory of Change?**

People often ask how having a theory of change will help them plan a new initiative, or how they can use it as a part of their ongoing strategic planning processes. We have many answers to this question.

**A THEORY OF CHANGE HELPS AVOID IMPLEMENTING A MISTAKE**

How long will it take to reach my long-term goal?

Are these really the only required outcomes to reach the long-term goal?

Are there conditions outside our control that will impact our ability to produce these preconditions?

Do we have the resources we need to implement this intervention?

Is the planned intervention enough to achieve the goal?

Can we get real community-level change toward this outcome?

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Figure 3
First, creating a theory of change raises new questions for stakeholders to consider while developing a strategic plan or evaluation. Figure 3 offers some examples of the type of questions that may be raised as the group works through the process. Creating a theory of change allows stakeholders to challenge the underlying logic of the connections between preconditions and planned interventions while everything is still on the drawing board.

Second, the process of creating and critiquing a theory of change forces stakeholders to be explicit about how resources will be used to bring about the preconditions of the long-term goal they are after. It also helps a group develop a realistic picture of the complexity of the change process required to produce their desired long-term results. In this respect, a theory of change can be thought of as an “expectation management tool” because it will clearly illustrate how much work must be done to reach a goal versus how much can realistically be done given the resources and time available.

Theories of change also help a group build consensus on how success will be documented. A great deal of hard thinking is required to clearly define a long-term goal and every precondition on the pathway of change. This work provides natural opportunities for reflection on important questions like “What do we really mean?” Such reflection can help to rid the plan of any fuzzy or vague language that might have otherwise slipped under the radar without this level of scrutiny.

Finally, creating a theory of change helps program stakeholders develop a shared understanding of what they are trying to accomplish, by making everything clear to everyone involved. In other words, after participating in the theory building process, all of the stakeholders should be on the same page about what they are trying to accomplish, the early and intermediate outcomes that must be reached to be successful, how all of the outcomes will be measured, and what actions they are going to have to take to bring all of this change about. They should also be clear about their assumptions—honestly acknowledging where there are gaps in their knowledge and where they are taking leaps of faith in their planning. In an era when organizations are being held accountable for results by funders and constituents, it is critical that the plans for an initiative are sound and that the results to be achieved are defined clearly beforehand so that everyone will know success when they see it.
Before the Meeting: A Step-by-Step Guide for Facilitators

Facilitating a theory of change process is difficult, but immensely rewarding work. This section will give you our “insider’s view” of what you will need to do to prepare for planning sessions. It is designed to help you become comfortable with the five main tasks involved in creating and refining a theory of change:

Task 1: Identify the Long-Term Outcome

The very first task of the process is often the easiest to take for granted. It may seem obvious that everyone in the planning group understands that they are working toward the same long-term outcome but you (and the participants!) will soon see that this is not always the case.

Even within an established program or initiative, folks often hold different ideas about the ultimate purposes of their work. Therefore, it is important to make sure that all participants are on the same page by starting with a session devoted to crafting a clear definition of the long-term outcome they hope to achieve through their program activities.

It is very important for a group to be as specific as possible in the definition of their long-term outcome. Often, participants offer what we call “mega-outcomes,” which are big, complex long-term goals, such as “improved family functioning” or “integrated services for youth.” Outcomes like these sound good in conversation, and they may work in strategic plans or proposals, but they are too vague to serve as a foundation for a theory of change. Here are several reasons why such outcomes need to be “unpacked” into specifically defined components before starting to create a theory of change:

• Vague outcome statements lead to fuzzy thinking about what needs to be done to reach them.
• Vague outcome statements sabotage the ability to build a consensus about what is important in terms of programming and allocating funds.
• Vague outcome statements make it difficult to figure out how to develop a measurement strategy to tell when and if they have been achieved.

The fact that outcomes are often worded with fuzzy or vague language is more than just a semantic problem. Most social change agents actually work to bring about a complex set of changes that are easier to discuss with terms that are multidimensional, but the lack of clarity that arises when multidimensional concepts remain unpacked makes it harder to build a
case for getting the job done and for proving that it was done well. The Community Builder’s Approach to Theory of Change requires a level of specificity that most social planners are unaccustomed to, but eager to embrace because it will help them document their success.

It’s important for facilitators to enter the first step of the theory of change process with the understanding that most social interventions have goals with many components. So they should be ready to show participants how their thinking about how to reach goals will be greatly improved by unpacking large goals into smaller components.

**Task 2: Develop a Pathway of Change**

This is the most time-intensive step of the Community Builder’s Approach to Theory of Change, and the centerpiece of the theory development work. The goal of this task is to identify and sort all of the preconditions related to the ultimate outcome of interest into a pathway of change that moves linearly and chronologically toward the long-term goal.

Several things are important to stress to participants during this step.

First, the pathway of change map depicts the relationship among nouns—only outcomes (results, accomplishments, states, changes, etc.) are shown in the boxes at this point. All of the “stuff” that must exist in order for the long-term outcome to exist is linked together on this map. This is often terribly confusing to participants, and it will be important to refer to examples to get them to understand that the goal here is to depict the complete set of necessary and sufficient preconditions (requirements, ingredients, building blocks, etc.) that must exist prior to the existence of the long-term goal. Often, participants are inclined to focus on what they must do or what must be done to others in the process of creating the change. We can avoid this trap by reminding participants that verbs are not allowed on the pathway of change just yet!

Another thing to keep in mind (and to communicate to participants) is that the pathway of change is an important feature of the theory of change, but it is not the whole thing. The pathway map alone cannot tell the whole story of a program theory, but we use it as a skeleton on which successive waves of detail can be added to create a compelling theory of change. It will be important to stress this so that they do not think—even for a minute—that the map is all there is. There is much, much more detail to add in order to tell the full story, and without being reminded of that (a few times), participants may find it difficult to focus on outcomes at this stage of the process.

The final point to drive home is that the process used to create the map is “backwards mapping.” This means that the group should imagine that they are starting at the end of the initiative and walking backwards in their minds to the beginning by asking themselves over and over “What are the preconditions for the outcomes at this step?” This may be a hard concept to fully grasp at first, so the facilitator should tell the group to be open-minded about the process and willing to critique their early product until they get it right.
Once the pathway of change has been drafted, the group will turn to the task of operationalizing each of the outcomes in the pathway. (We use the term *drafted* deliberately because stakeholders may find that they need to improve, modify, or edit it as they move through the theory of change process.) Participants need to tackle this sometimes daunting task now so that they know exactly what targets they are shooting for as they plan interventions in the next step. Operationalizing outcomes at every step of the pathway of change will also help bring some important assumptions about the change process to the surface. (Assumptions will be more directly dealt with in Task 5.)

So what do we mean by *operationalizing outcomes*? By *operationalize*, we mean that for each precondition in the pathway of change, participants will need to answer the basic question “What evidence will we use to show that this has been achieved?” The answer to this question becomes the indicator that will be used to track progress and document success.

Remember, the indicator is the concept or idea that will be used to determine success—how it is actually measured is another thing entirely. It is very important for folks to clearly think about the best indicator *first* (assuming whatever information they want to use as an indicator can be gathered) and then turn to the task of figuring out how to measure it (or work with an evaluator to help think this through).

Often at this stage, folks will limit their thinking by bringing up only ideas related to the data they have access to, and consequently limit the power of this step in the theory building process by mismatching outcomes to indicators. For example, we have seen folks claim that test scores are a good indicator of youth advancement in a program, not because the program was designed to improve test scores but because these were the only data they had access to. The facilitator should be strict here and not allow the team to force-fit indicators by limiting their imagination here to the data they know they already have. Instead, encourage creative thinking about the best way to document success on each precondition, whether or not the group thinks the best indicator can actually be measured. Let the researchers worry about that!

This process is also iterative: the operationalization of outcomes (which are all preconditions, too) happens one at a time until each has been considered. For each precondition, the group will need to answer a number of questions:

- **What indicator** will we use to measure success on this precondition?

- **Who or what do we expect to change?** (Parents? Children in the community? Teachers? Schools?) This group is the **target population** to be tracked with this indicator.

- **What is the current status of our target population on this indicator?** This is the **baseline** that will be used to measure successful change.

- **How much does our target population have to change in order for us to feel that we have successfully reached this indicator?** (Will a small change on the indicator be good enough?) This is the **threshold** that we need to cross in order to proclaim success on this outcome.
Once the pathway of change has been created and each of the preconditions in the pathway has been operationalized, participants are ready to think about the program activities, policies, and/or other actions that would be required to bring about the outcomes on the map. This is not the time to get into a detailed discussion about the nitty-gritty of the precondition. Here, an example will help explain the distinction you will have to coach the group to make.

Let’s assume that the group working on school readiness has identified “All children are healthy at age five” as a precondition to school readiness in their pathway of change. We have seen folks mistakenly point to concepts like “Children have adequate nutrition” or “Children get all immunizations” as indicators of the child health precondition. In situations like this, it is important to remind the group that a plausible chain of events leading up to “Children are healthy” would include immunizations and good nutrition as preconditions, meaning that these two achievements would have to occur before children can be healthy. Since this is true, these two concepts would not make good indicators of the “All children are healthy at age five” concept. A better indicator of child health might be the percentage of kids who have a healthy height/weight ratio; the average number of days out of school due to illness; or the prevalence of asthma or other preventable childhood illnesses in the group.

Making sure that participants understand the need to choose indicators that match the point in time that the precondition will occur can be confusing, and will require a very hands-on approach by the facilitator to avoid making mistakes when defining appropriate indicators for the preconditions in the pathway of change.
As a group plots out their understanding of a particular change process, it will be based on the group’s shared assumptions—in other words, what group members take for granted. Two main types of assumptions underlie a theory of change:

- Assumptions about why each precondition is necessary to achieve the result in the pathway of change and why the set of preconditions are sufficient to bring about the long-term outcome.

- Assumptions that come from social science theory that connects program activities to specific outcomes for specific populations or communities. This may include findings from “best practice” research as well as evidence from academic (or basic) research.

Both types of assumptions have been silent partners in the theory development process up to this point: they haven’t been voiced, but have been present in the minds of participants as they created the pathway of change, operationalized outcomes, and thought about interventions. It’s important now to encourage participants to articulate these assumptions to their peers and to put them on the table to be examined, critiqued, and agreed on by the group as “givens” they can live with.

In addition, a third type of assumptions about the context/environment in which the theory of change is situated is important to consider at this point. For example, folks developing a theory of change to explain how a job-training program will produce full employment in the neighborhood may hold a number of assumptions about the local economy, race relations between potential employers and potential employees, and transportation access. Any one of these assumptions could prove inaccurate when compared to reality. When a theory of change is built around the wrong assumptions about the local context or environment, even the most elaborate pathway of change can fall apart once they are brought to light (not to mention that an implementation plan based on faulty assumptions is not likely...
to bring about the desired goal). Therefore, it is important to get a group to think critically about what they are holding to be true about their operating environment as well as the other links in the theory of change before they can sign off on their theory.

Even though we think of articulating assumptions as a discreet step in the theory development process, assumptions may surface throughout this process as participants think out loud. It may be important to discuss with the group the need to keep critical assumptions in mind (or to write them down as they come up in conversation), since this step is about checking the assumptions embedded in the theory that has been developed thus far. It may make sense to keep a running list of assumptions on a sheet of poster paper so that when the group gets to this step in the process it can be used as a jumping-off point.
4. In the Meeting: Practical Information for Facilitators

Now that you have a solid understanding of the concepts that underlie the theory of change process, we'd like to share some practical information and advice about how you may guide theory builders through the process in group planning sessions. You may wish to bring this section with you to refer to during meetings.

**Session 1: Identify the Long-Term Outcomes**

The goal of this session is to clearly define the long-term goal of the theory of change. The session will feel like brainstorming to the participants and should be conducted with a democratic and inclusive tone so that everyone participates.

Schedule this first session for at least an hour. Attendees should include key stakeholders in the initiative, with the ideal group being no larger than ten. The meeting room should be equipped for a brainstorming session—for instance, a table that people sit around works better than a lecture format. Plaster the room with white poster paper and make sure you have an ample supply of post-it notes and markers for everyone in attendance.

Many groups find the following process helpful for this session:

- **Brainstorming**
- **Sharing**
- **Refining**
- **Voting on the long-term goal (or goals)**
- **Operationalizing**

**Brainstorming**

We have found that the easiest way to reach a consensus on the various dimensions captured by a long-term goal is to allow the group to brainstorm about it for twenty minutes and then begin the process of constructing the definition of the long-term goal from the results of the brainstorming.

Here are some questions you can pose to get folks thinking about long-term outcomes:

- **What are the ultimate goals of this program or initiative?**
- **How will you define success in this program?**
- **What are your funders or program participants expecting to get from their investment in the program?**
- **Given what you know today, what will be different in your community in the long term as a result of successfully reaching your goal?**

**Note:** It will be helpful to define long term as a group. The time frame covered by the theory of change can be as long or as short as you wish; what’s important is that everyone is on the same page about whether long term means five, ten, twenty, or more years.
Instruct each member of the planning team to write out their ideas about the long-term goals that will be the focus of the theory of change, using post-it notes and sheets of white poster paper. Participants should write one definition per post-it note, so they can be sorted at the end. When everyone has finished, have folks stick their notes on the poster paper at the front of the room.

**SHARING**
The facilitator may choose to invite participants to come to the front of the room to read each of the notes for a few minutes or, alternately, read each note to the group. Often, the major ideas come up over and over again, with slightly different wording, and a few outliers emerge. Now is the time to sort these ideas into general categories. The major ideas that come up over and over should be discussed, and the group should be allowed to vote on the wording that best sums up the concept.

**REFINING**
During the brainstorming process, a number of way-out ideas will emerge, and it is the facilitator's job to figure out what to do with them. The ideas can fall into a number of categories, and you will have to work with the group to figure out where to assign them.

Sometimes a new idea comes up that can be thought of as an additional dimension of the long-term outcome. In this case, most in the group will agree that this is a different twist on the long-term goal that hadn't been officially incorporated into their thinking before, and that this is a valuable new insight that should be incorporated into the work that is being done.

Sometimes one of the new ideas is actually something that would have to occur in order to reach the long-term goal. Often a policy change, programmatic offering, or some other precondition of the long-term goal will be brought up during this type of brainstorming session. When this happens, ask the group whether they agree that the new idea reflects something that would have to occur before the long-term goal could be brought about, and move these items on to a “parking lot” that you can return to when you start the backward mapping in Session 2.

Finally, some way-out ideas are simply not related to the group's work and reflect one member's thoughts (or misunderstandings). Move these types of things to the parking lot as well. This requires diplomacy and tact. The theory of change process should not give all ideas equal value; some things that folks come up with will not belong in the theory and should not be forced in to make everyone feel good. One way to remove things from the parking lot—and out of the discussion altogether—is to review the parking lot after a task has been completed, discarding ideas that the group agrees do not belong in the theory.

**VOTING**
This step is to democratically decide which idea(s) reflects the group’s long-term goal. This process may proceed by voting if there are a few topics, or the facilitator may ask each person in turn to articulate what he or she sees as the “group think” on the long-term goal. This process should continue until the group has landed on a set of ideas that reflects a consensus on the ultimate goal of the initiative.

**OPERATIONALIZING**
The final step in this process is to make the long-term goal operational. This requires answering the following questions:
• What indicator(s) will we use to measure success on this outcome?
• In what population will we look for change in these indicators?
• What is the current status of our target population on the indicator(s)?
• How much does our target population have to change on these indicators in order for us to feel that we have successfully achieved the outcome?
• How long will it take the target population to reach our threshold of change on the indicator(s)?

(You may want to skip ahead to Session 3: Operationalize Outcomes for specific advice on how to move the group through this step.)

Session 2: Create a Pathway of Change

For most community improvement initiatives, creating a pathway of change will take several hours; we usually schedule this step for a half-day session. It will involve some back-and-forth discussion with the group and a great deal of good-natured debate about the extent to which all preconditions are necessary and the group of them are sufficient to bring about the outcome above it on the map.

There really is not much of a script for this task because the key here is getting folks to answer one question, “What are the necessary and sufficient preconditions for (insert outcome here)?” over and over again as they move backwards through the change pathway. Here are the steps we use to do this work:

• Brainstorming the first row of the pathway map
• Sorting and narrowing down the brainstormed list into the four to six most important preconditions
• Backwards mapping to surface the preconditions for each of the elements in the first row (and repeating the process iteratively until all of the preconditions are filled in the map)

BRAINSTORMING

We start off the brainstorming by asking people to define the four to six most important preconditions for reaching the long-term goal. It is important for participants to keep the details about the long-term goal in mind (Who/what will change? Over what time period? By how much? etc.). One way to jump-start brainstorming is to give each person some post-it notes, ask them to write a precondition on each one, and post their work on poster paper at the front of the room.

In this step it is important to get people to focus on preconditions that represent the most immediate outcomes related to the ultimate goal. What often happens is that people come up with preconditions that don’t belong in that first row because they would need to occur very early in the change process. It may be important to get the group thinking about how they are taking “backwards steps.” In other words, the group is moving from the last change that needs to happen before reaching their goal to the penultimate (next-to-last), to the early outcomes, and finally to the first outcome on the pathway of change.
SORTING AND NARROWING DOWN THE LIST
The facilitator should help the group sort its ideas about preconditions, grouping similar ideas together and trying to narrow the pool down to four to six ideas that reflect the group’s best thinking about the necessary and sufficient “last outcomes” to be reached before the long-term outcome can be realized.

Once these four to six ideas have been selected as the most important preconditions for the long-term outcome, the facilitator may choose to draw this first level of the pathway of change on a clean sheet of poster paper.

BACKWARDS MAPPING
Now the fun begins! For each of the preconditions, the group has to take more backwards steps, asking themselves: “What are the necessary and sufficient preconditions for bringing these outcomes into being?” Again, try to get the group to focus on the most important four to six preconditions, or the process will quickly get out of hand.

For backwards mapping, the group should move down one pathway at a time until they have filled in enough outcomes to reach the first row of the map.

The facilitator should ask participants to brainstorm about the necessary and sufficient preconditions, and then, using post-it notes, put them up on the board one at a time, creating a map of the outcomes and how they are related to each other. We find that it is helpful to use masking tape to draw “arrows” between the notes to show how each statement is related to the others. (Remember: preconditions at one stage should be related to outcomes at the stage above them on the map). Using tape at this stage is better than markers, because often the arrows need to be moved around a bit before the group settles on a final representation of how outcomes in the pathway are related to each other.

This backwards mapping process should continue for at least three steps, but not more than five. At each step, the group should stop, process its thinking, narrow down the pool of ideas, and note their choices in the appropriate place on the map.

The group should move backwards, answering the preconditions question, until the participants feel that they have crafted a storyline that makes sense as a way to depict how the change process will unfold.

Creating a pathway of change is more of an art than a science. There is no iron-clad rule about when to stop the backward mapping. The group’s sense of where there is an entry point into the problem they are trying to resolve will
come into play in determining how far back to go. Remind them that the final step on the map (the bottom row, or first outcome) is going to reflect the earliest outcomes of whatever action strategy they plan, so they need to be realistic in thinking about how deeply to draw this pathway map. As a rule of thumb, going three or four steps back usually depicts a reasonable and plausible storyline for a community’s change process.

Once the group has settled on the set of preconditions, take a break and draw the map (with the appropriate arrows required to illustrate the relationship that preconditions have to each other) on a large piece of poster paper (you may need to tape two or three pieces together). This will be the basis of the work you do for the rest of the theory building process, so make it neat and write in large letters with a marker so everyone can see it around the room.

**REALITY CHECK**

In an ideal world, social problems could be solved with neat, simple solutions. Reality, however, is often quite a different story. We recommend that groups build pathways of change with four to six preconditions tied to each long-term outcome, recognizing that this rule of thumb may not always work. Our early theory of change experiences taught us that without discipline, this task can generate an enormous number of preconditions and, ultimately, an overly complex theory of change. So we began encouraging groups to narrow their list of preconditions to a manageable set, as long as they did not make edits that sacrificed the explanatory power of the pathway in order to meet this standard. In some cases, particularly in complex community change initiatives, it will simply not be possible to keep the number of preconditions this low. Even in these cases, the facilitator can work with his or her team to keep them focused on the shortest possible list of preconditions sufficient to bring about the outcome in question.
Operationalizing preconditions is a time-consuming part of the process. If there are a lot of outcomes on the pathway of change map, it may make sense to choose a few to focus on during the group session to get the process started, explaining to the group that this type of work may need to be done during a series of meetings or as homework for a subcommittee of the larger planning group to take on.

We usually use the following process to operationalize preconditions. First, we make sure that a clean, uncluttered version of the pathway of change is posted at the front of the room. In addition, we often copy it on smaller paper as a handout for participants. During this stage of the work, it may be helpful to post the definitions of the key terms (i.e., indicator, target population, threshold, and timeline) at the front of the room. Once the room is set up, we explain the definitions of each element to participants.

With everyone on the same page, we then assign each of the preconditions to a member of the group. (Often, each person has more than one. The facilitator asks participants to answer the following questions on one of their post-it notes. (How would we do theory of change work without post-its?)

- **What indicator(s) will we use to measure success on this outcome?**
- **Who or what do we expect to change?**
- **What is the current status of our target population on the indicator(s)?**
- **How much does our target population have to change in order for us to feel that we have successfully reached the indicator(s)?**
- **How long will it take the target population to reach our threshold of change on the indicator(s)?**

Notice that we did not ask participants to deal with the baseline question. That is a research question that will need to be accurately documented once the actual measurement instruments have been decided on. The participants’ task is not to think at this level of detail. Instead, the group is laying out the blueprint for the researcher/evaluator to use as a starting point for planning the strategy for documenting progress on each precondition in the theory.

We allow participants about fifteen minutes to finish the assignment and then one by one ask each person to share the indicators and all of the details about population, threshold, and so on with the group. Finally, we post them on the appropriate precondition box on the pathway of change.

The facilitator should expect that some folks will not come up with good indicators, or that some will get some other aspect of this a little wrong. Be prepared to put some of the not-so-good ideas aside for the group to work out together. Often the group will catch the mistakes as they happen, and the process will open up a discussion about what a better indicator might look like. This should be encouraged so that the final product reflects the group’s best thinking about how to document success at each step of the pathway of change.
Session 4: Devise Program Interventions

With a foundation of good work behind us, we are now ready to turn our focus to program planning. We use the following process to move a group through this phase:

- **Decide which subset of outcomes the group can and will attempt to produce.**
- **Map an action, strategy, program, or policy for as many of the outcomes as possible.**

**DECIDING ON OUTCOMES**

Deciding which subset of outcomes the group can and/or will attempt to do something about requires a group discussion and, sometimes, a bit of a reality check. We usually ask participants to study the pathway of change map for a few minutes before voting on which elements of the map fall within the control of their initiative by placing round stickers on the boxes that correspond to outcomes on which they think the group should be prepared to act.

This part of the process is one that we call “expectation management” because it is usually when the group has to come to grips with the fact that it may not have the capacity to act on each of the preconditions in the map. If the group is planning a community-wide initiative, it may be helpful for them to consider which of the outcomes may already be taken care of by other groups in the community and ask them to mark them as such on the pathway map.

By the end of this process, the group should have a subset of outcomes to use as the basis for planning actions/programs/policy changes.

**MAPPING ACTION FOR THE OUTCOMES IN PATHWAY OF CHANGE**

Most participants are eager to get to this stage so that they can begin to think about action after so much focus on outcomes. Since most participants are comfortable planning interventions, this part of the process will encourage their creative thinking.

We find that breaking this task into small group or individual assignments works well, so you may want to assign small groups one or two outcomes on the map, and then ask them to take fifteen minutes to think of the interventions that would be required to bring that outcome about. At the end of this time, each group would report back to the group as a whole by posting their intervention on the board (on top of the outcome it corresponds to). When all of the interventions have been mapped, each group would then take turns explaining its rationale for expecting the intervention to bring about the targeted outcome **at the levels identified by the indicators that were chosen earlier.** The process continues until each outcome on the map has been (a) ruled to be outside of the influence of the initiative; (b) ruled to be the result of a domino effect that starts earlier in the change process; or (c) matched to an intervention that can plausibly be expected to produce the desired results.

Here are some questions to help guide the process:

- **For each of the outcomes on our map that we think we may have some influence over, what type of intervention would we need to implement in order to bring it about?** The group should be encouraged to avoid very tactical thinking here. Instead, a general description of the type of strategy or type of program (i.e., parent education classes, home ownership workshops, micro-loans to local
entrepreneurs) should be described in just enough detail to allow the group to determine if it is plausible that the intervention would bring about the outcome being considered. Planning the details of the implementation strategy is a task that they will take up once they have completed the theory of change and know exactly what types of programs they have to implement.

- **Will any specific programs/interventions that we currently offer bring about an outcome on this map?** In existing programs, this step is often helpful in identifying gaps in the current menu of program offerings. Mapping each element of an existing program to the range of outcomes in the pathway allows folks to see where they need to create or implement new activities.

- **Will policy changes or institutional practices be required to bring about this outcome? If so, what type of change is required?** Often when folks are interested in systems change we use this step to get them to be specific about exactly the type of public policy or institutional practice they think must change in order to bring about the required outcome in the pathway of change.

### THREE CORE CONCEPTS TO REMEMBER

1. **Outcomes are made operational by defining indicators that suggest how much, for whom, and when the outcome is to be realized.** It is important to keep this standard of success in mind when the interventions are being planned so that they have a high enough intensity to bring about the desired effect. It may make sense to make a list of the indicators that correspond to each outcome, making it available to people as they sit down to think about interventions.

2. **Some outcomes may come about as part of a domino effect, meaning that achieving an outcome at one stage may lead to the outcome above it on the map without any additional action on the part of the program.** Therefore, the group may be able to complete this task without having mapped an intervention to every outcome on the map, as long as the domino effect is a logical explanation in a particular case.

3. **This is a brainstorming session that should set the stage for more intense work after the meeting.** All planners know that they cannot come up with an actual plan of attack in a single session, so they should not be given the impression that this is all of the action planning they have to do. This step in the process is designed to draw the general outlines around plausible strategies that a work group is going to have to flesh out in subsequent sessions.
**Session 5: Articulate Assumptions**

This step in the process should be conducted like a review session. Perhaps the best way to start is to walk the group through the work they’ve done so far. The facilitator’s aim is to get everyone on the same page about the storyline that is being told by the pathway of change, the indicators that will be used to track success, and the intervention strategies that will be put in place to produce targeting outcomes.

After reviewing the theory of change elements with the group, the facilitator will open up a structured discussion so that the group can move through the theory in a systematic way.

As the facilitator, you may want to pose some questions to the group in a memo before they reconvene to discuss their underlying assumptions. Having thought about these questions before the meeting should improve the quality of the responses tremendously.

Here are some of the questions we frequently use:

- **When you look at the total picture, do you believe that the theory makes sense?**
- **Do the preconditions make sense as the logical steps toward the long-term outcome?**
- **How will we be able to bring about the outcomes at the levels we have predicted?**
- **Is there anything going on in the real world that may make it difficult to get this theory off the ground the way we’ve planned it?**

Expect that this session will raise a lot of questions that the group will have to answer before they can give the theory the final stamp of approval. Even if it seems frustrating, or a bit after the fact, this step in the process is crucial for checking the underlying logic of theory against the standards of quality:

- **Is this theory of change PLAUSIBLE?** Have we created a compelling story about the pathway of change that would lead to the long-term goal in this community?
- **Is this theory of change FEASIBLE?** Do we have the capacities and resources to implement the strategies that would be required to produce the outcomes in the pathway of change?
- **Is this theory TESTABLE?** Have we specified how success will be measured clearly enough that we can recognize progress toward our goal when we see it? Have we defined indicators for each outcome in clear terms that a researcher or evaluator can use to produce a research plan?

Critiquing assumptions from many angles, even if it feels tedious, is a skill that participants should sharpen so that they can take the lessons from participating in the theory of change process and apply them to other planning tasks they may face.
The following example, drawn from a comprehensive community revitalization plan, illustrates the importance of probing assumptions. Here is just one outcome from the group’s theory of change with its related precondition and interventions:

**OUTCOME**

The visual appeal of neighborhoods will improve.

**PRECONDITION**

All properties in identified neighborhoods will be brought up to standard in accordance with city/state rules and regulations.

**INTERVENTIONS**

1. Conduct research and disseminate rules and regulations to landlords, tenants, and property owners.
2. Plan and conduct mandatory educational workshops for property owners and renters based on violations of city and state regulations.
3. Recruit technical assistance from agencies, city, state, and other sources to develop and implement a beautification program for identified neighborhoods.

One assumption implied by the set of action strategies is that owners are simply unaware of the regulations, and that by sharing the regulations with them they will change their behavior. But is this reasonable? It’s probable that landlords in particular may need to be forced by the threat of a fine to cooperate. Another assumption in question is that the homeowners can afford to fix the violations, and that once they’re made aware of them they’ll act accordingly. If this assumption proves false, then the project is unlikely to reach its long-term outcome. These are just a few of the questions that could be posed to this group, illustrating the importance of testing assumptions before programs are implemented. In both of these cases, the planned intervention may make sense at first blush, but with a little probing, we see that it’s quite possible that neither assumption will hold up under scrutiny.
5. Conclusion

W

hew! By now, you’ll probably agree that creating a theory of change is a lot of work. We hope you’ll also agree that the process is well worth the effort. Even if groups don’t get all of it right, the rigorous thinking required can’t help but improve program planning, implementation, and evaluation.

While we have discussed the theory of change process in this guide as taking place in the course of a few meetings, it’s probably realistic to use the time frame that most community groups invest in strategic planning as a guide for how long it will take to do this work. We have found that spending six months in this process is usually what it takes to give everyone the time to first learn and then apply the theory of change approach (as opposed to dumping all of the work on a few worker bees).

We also highly recommend that groups invest in a bit of research about the problem they are planning to resolve before and during the theory of change process. This approach is heavily dependent on the quality of information available. In other words, “garbage in, garbage out.” Using the available literature on the topic as well as conducting local research to test key assumptions can be very useful in developing a plausible theory of change.

We also encourage folks to think of their theory as a living document instead of something that they produce and then file on a shelf. The best way to use a theory is to periodically update it by convening a group to review the pathway of change and assumptions in the theory and compare it to the real-world initiative they have implemented. Using a theory in this way can help an organization structure its learning process, drawing out lessons that can improve its work, and it can also provide useful insights for the field.

We encourage you in your theory of change endeavor and hope that you’ll let us know how the approach works (or doesn’t) for your group. We also welcome examples from your work that we can share with others. Folks are always interested in real examples of how the theory of change has been applied. Please visit www.theoryofchange.org if you would like to submit your theory of change as an example and for other theory of change resource materials.

Good luck!
Section Two: Resource Toolbox
1. Case Study: Project Superwoman

Project Superwoman is a community-based program to assist women who have survived domestic violence and who are unable to find stable employment at livable wages. This case study is based on a real program, but modified to use as an example to show a theory of change in action.

PROJECT BACKGROUND
Project Superwoman was founded as a collaboration of a social service provider, a nonprofit employment training center, and a nonprofit shelter for women experiencing domestic violence. Their goal was to help women obtain the kind of employment that can keep them out of poverty and off public assistance while providing stability and upward mobility. With these criteria in mind, the collaborative identified jobs in electrical, plumbing, carpentry, and building maintenance as viable options providing entry-level positions, possible union membership, and opportunities for advancement at higher than minimum wage scales.

Like any program, Project Superwoman is based on a number of assumptions. One is that women can learn nontraditional skills and that employers can be identified who will hire them. Based on this premise, the project’s strategy was to provide both training and support needed by this population to enter and remain in the workforce. The founders believed that most of the women they could train would be single mothers and that having been in an abusive situation, these women would have low self-esteem and impaired coping skills. They also recognized that even women whose lives were fairly stable may face crises from time to time and need practical help to resolve problems and/or psychological support.

The founders had learned from previous experience that women who had not been in the workforce before—and those who had experiences with the courts, foster care, and the welfare system—had learned adaptive behaviors to dealing with these systems that were counterproductive in the workplace. Therefore, they devised a program that provides training in nontraditional skills, training in expectations in the workplace, and intensive psychological support. Based on their resources, they decided to provide assistance with some crises, such as housing evictions or court appearances, but not take on the larger issue of helping women get their lives in order.

To make this feasible, they identified screening criteria to ensure that the women entering the program had already addressed major issues such as dealing with substance abuse or foster care problems.

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3. This case was created by Heléne Clark, Director of ActKnowledge. She can be reached at hclark@actknowledge.org.
Social service agency, training program, and nonprofit shelter provider for survivors of domestic violence collaborate to develop an employment program geared to the particular issues for survivors of domestic abuse.
### Assumptions

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<tr>
<td><strong>A</strong></td>
<td>There are jobs available in nontraditional fields for women.</td>
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<td><strong>B</strong></td>
<td>Jobs in nontraditional areas of work for women, such as electrical, plumbing, carpentry, and building management, are more likely to pay livable wages and are more likely to be unionized and provide job security. Some for these jobs also provide a ladder for upward mobility, from apprenticeship to master, giving entry-level employees a career future.</td>
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<td><strong>C</strong></td>
<td>Women who have been in abusive relationships need more than just skills; they need to be emotionally ready for work as well.</td>
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<td><strong>D</strong></td>
<td>Women can learn nontraditional skills and compete in the marketplace.</td>
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<td><strong>E</strong></td>
<td>The program cannot help all women, and so entry into the program must include screening so that women who have sufficient literacy and math skills to take the training and have lives stable enough to attend classes are admitted. The program does not have the resources to handle providing basic skills or major social services.</td>
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<td><strong>F</strong></td>
<td>Women who have left abusive situations are often single mothers and therefore cannot work unless they have child care.</td>
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<td><strong>G</strong></td>
<td>Women must be out of the abusive situation. The program assumes that women still in abusive situations will not be able to attend regularly, may pose a danger to others, and will not be emotionally ready to commit.</td>
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### Interventions

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<tr>
<td><strong>1</strong></td>
<td>Implement outreach campaign</td>
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<td><strong>2</strong></td>
<td>Screen participants</td>
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<td><strong>3</strong></td>
<td>Set up counseling sessions</td>
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<td><strong>4</strong></td>
<td>Lead group sessions</td>
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<td><strong>5</strong></td>
<td>Provide help for short-term crises, such as housing evictions or court appearances</td>
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<td><strong>6</strong></td>
<td>Provide one-on-one counseling</td>
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<td><strong>7</strong></td>
<td>Develop curricula in electrical, plumbing, carpentry, and building maintenance</td>
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<td><strong>8</strong></td>
<td>Conduct classes</td>
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<tr>
<td><strong>9</strong></td>
<td>Develop curricula and experiential learning situations</td>
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<tr>
<td><strong>10</strong></td>
<td>Conduct classes</td>
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<td><strong>11</strong></td>
<td>Identify potential employers</td>
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<td><strong>12</strong></td>
<td>Create employer database</td>
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<tr>
<td><strong>13</strong></td>
<td>Match women to internships</td>
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<tr>
<td><strong>14</strong></td>
<td>Help women secure permanent jobs</td>
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### Sample Indicator

**OUTCOME:**
Long-term employment at a livable wage for domestic violence survivors

**INDICATOR:**
Employment rate

**TARGET POPULATION:**
Program graduates

**BASELINE:**
47% of program attendees are unemployed
53% are earning minimum wage

**THRESHOLD:**
90% of the graduates remain in job at least six months and earn at least $12 per hour
2. **Suggested Materials**

- Two or three poster-size pads of post-it notes (to post around the room)
- Markers (enough for participants to each have one in blue, green, or black, as well as a red marker for the facilitator to use as a highlighter)
- Pads and pens for participants
- Packets of post-it notes for each participant (allow at least two packets of 5x7 notes per person)
- Multicolored stickers for voting
- PowerPoint theory of change introduction
- Materials for exercises and examples
- LCD projector and screen
- Masking tape

3. **Suggested Participants List***

In order to create a theory of change that will truly be useful, the folks most responsible for implementing and evaluating programs should be invited to the sessions. Even if the executive director is not going to actively take part in planning the details of the program, he/she should attend the theory of change sessions to gain a clear understanding of how much work is involved in creating a good theory (and become aware of current gaps in clear thinking!).

**WHO SHOULD BE INVITED:**

- Program staff directly responsible for delivering service
- Executive director
- Researchers familiar with the program/subject matter
- Evaluator for program
- Program clients
- Funders

*Limit to eight to ten people
4. **Glossary**

**ASSUMPTIONS:** Statements about how and why we expect a set of outcomes to come about as depicted in the pathway of change. These statements can reflect understandings of the change process taken from research, or they can be taken from practical experience. They should also reflect an understanding of the context within which a program operates. Often assumptions raise questions about the extent to which we can bring about the change we expect, given what we have to work with.

**BACKWARDS MAPPING:** The process of working from the long-term goals backwards toward the early stages of the change process. In many ways, this is the opposite of how most people think about planning. Backwards mapping focuses on the question “What must occur before our outcome can be achieved?” instead of asking “What can we do to bring the outcome about?” It brings to the surface necessary and sufficient preconditions for reaching the outcome of interest.

**INDICATORS:** Concepts that will be used to assess the extent to which outcomes are achieved. Often, indicators are simple ideas that can be counted, but sometimes they reflect more complex ideas that must be observed qualitatively.

**INTERVENTIONS:** The verbs or activities that will be put in place to bring about a particular precondition (or a group of them). Interventions can be programs or community-wide change initiatives that implement several programs. We also use the term to describe changes to public policy or institutional practice that need to be in place for an outcome to occur.

**OUTCOMES:** The building blocks of the change process. These are the conditions, or states of being, that must be in place in the early and intermediate stages of the change process in order for long-term goals to be reached. We use the terms outcome and precondition interchangeably, but find that it is easiest to think about early and intermediate states of being as early and intermediate outcomes.

**PATHWAY OF CHANGE:** The map that explains how long-term outcomes are brought about by depicting the preconditions of change at each task. Long-term changes are brought about by reaching intermediate preconditions; intermediate changes are brought about by reaching early preconditions. The pathway of change is the skeleton on which all of the other details are added. It summarizes the theory but does not (and cannot) tell the whole story.

**PRECONDITIONS:** Everything on a pathway of change can be understood as a precondition (precursor or requirement) for the next outcome above it on the map. Preconditions must be achieved in order for the next logical task in the sequence to be achieved. We identify preconditions by asking “What are the conditions that must exist in order for our outcome to be achieved?” This question is posed for long-term and intermediate outcomes on the map during the process of backwards mapping.
5. **PowerPoint Presentations and Training Materials**

It is a good idea to start the day with a review of the Community Builder’s Approach to Theory of Change. We have made two PowerPoint presentations available online at wwwtheoryofchange.org. These presentations offer two levels of introduction to the concepts for you to choose from:

*The Working Group’s Introduction to Theories of Change for Planning and Evaluation* (Version I) is an appropriate starting point if you are going to be working with a group that identifies itself as the planning team or task force responsible for creating the theory of change and a subsequent strategic plan or evaluation plan. This version includes in-depth review of the concepts, and examples and exercises that you can use as teaching tools. *Allow a whole day to review the slide show and lead a group through the exercises.*

*The Community’s Introduction to Theories of Change as a Participatory Planning Tool* (Version II) introduces the fundamental concepts in plain language that anyone can understand. It does not assume any familiarity with planning or evaluation, and can be used in a community setting to introduce the concepts to a working group. This presentation can be given in a forty-five-minute session.