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The Goldilocks Challenge: Right-Fit Evidence for the Social Sector

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The Theory of Change

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Abstract and Keywords

Before beginning to monitor programs or evaluate their impact, organizations need to ensure that they have a sound theory of change to guide their work. A theory of change is a conceptual map of a program; this chapter explains how articulating a theory of change helps organizations decide what elements of their programs they should monitor and measure. The chapter outlines each step necessary for creating a theory of change, from defining the problem a program seeks to address to identifying possible unintended consequences of program implementation. It then illustrates the process of crafting a theory of change through the example of Nutrition for All, a hypothetical development organization dedicated to reducing child malnutrition.

Keywords: theory of change, logic model, logical framework, LogFrame, program theory, outputs, outcomes, impact, unintended consequences, externalities

Before beginning to monitor or evaluate impact, organizations must first make sure their programs are sitting on solid ground. A *theory of change* explains the “why” of a program by

telling a sequential story: what goes in, what gets done, what comes out, and how the world thus (hopefully) changes for the better. Clearly articulating this theory helps organizations design sound programs and lays the foundation for right-fit data collection.

A strong theory lays the groundwork for the CART principles (*credible, actionable, responsible, transportable* data). As a simple example, we use a hypothetical nutrition program to walk through the process of developing a theory of change.

Our goal in this chapter is not to provide a complete manual on building a theory of change—many resources exist for that—but rather to illustrate how a clear theory, together with the CART principles, provides the foundation for a strong, right-fit system of data collection.

What is in a Theory of Change?

A theory of change is a map of a program or intervention and the changes it seeks to create. It connects the inputs and activities of the program with its intended outputs and shows how those outputs should change outcomes and thus produce the intended impacts. A theory of change represents the vision of how a program will create social change. Mapping the connections between program elements visually can make the logical connections—or “theory”—apparent (although using mere words can work, too). This **(p.31)** conceptual map helps organizations determine if their program addresses problems in a logical and appropriate way, what assumptions the program is making, and what results it hopes to achieve (see Figure 3.2 for an example). Developing a theory of change also provides a way for organizations to create internal agreement on what they are doing and why (see Box 3.1).

Box 3.1 A Theory of Change by Any Other Name . . .

Even if theory of change is new to you, you may already be familiar with the concept of a logic model, logical framework, program theory, or program matrix. These are all different names for a common family of approaches. Each approach intends to help organizations articulate how their programs work to produce the changes they

seek. We use the *theory of change* term, but the ideas in this chapter apply to whichever terminology you prefer to use.

A theory of change underpins right-fit data collection by identifying a program's measurable operating steps and thereby defining what organizations should monitor and measure. A theory of change also helps identify the components of the program that a monitoring system should track (outputs) versus those that should only be measured and analyzed with a counterfactual (outcomes). Without a counterfactual, organizations are often better off not measuring outcomes at all (and instead focusing on outputs).

Organizations typically develop a theory of change in one of two ways. For new programs, an organization begins by identifying the problem it wants to solve or the need it intends to address. Once the problem is well-defined, the organization works backward (often called *backward mapping*) to lay out the actions needed to produce those results. At this point, the organization defines the specific activities it will undertake, the goods and services it will deliver as a result, and the intended social changes it will create. At every step of the way, the assumptions underlying each step are clearly laid out and examined. This is the “theory” part of the theory of change—an organization's set of hypotheses about how specific actions will result in particular changes in the world.

For organizations that already have a program in place, developing a theory of change is more like self-reflection. Reflecting and clarifying their theory of change can help organizations evaluate their assumptions and ask whether sufficient evidence exists to support their current strategy. Such moments can be reassuring, but they can also help to identify crucial gaps in current operations. Either way, the process of developing a theory of change will help strengthen programs.

No matter when an organization starts developing a theory of change, the theory needs to articulate the assumptions that must hold for the program to work. These include the assumptions about the need for the program, assumptions about how the program will work, and assumptions about whether program activities are likely to produce the intended

results. In addition, the organization needs to identify conditions in the larger world that—if altered—would change the program's chances for success. These risks could include things like government policy, weather, and food prices.

(p.32) In an ideal world, organizations would start the theory of change by identifying the challenge they seek to address. Then they would map backward to identify strategies to address that challenge, consult research about the effectiveness of those strategies, and then build out a theory of change before implementing their program. However, in the real world, programs are often developed under tight deadlines or with constraints on their structure. Sometimes donors require organizations to include certain activities in a project. Under such constraints, organizations cannot begin with a problem and map back to activities. We know this is a reality. Thus, while developing a theory of change earlier in a program's life is better, a theory is always useful. A theory of change provides the template for testing assumptions, evaluating data, and improving program performance.

Nutrition for All's Theory of Change

To show how a theory of change forms the backbone of right-fit data collection, we will use the case of Nutrition for All (NFA), a hypothetical development organization. NFA provides food supplement packages to families with children identified as “moderately malnourished” by a government community health worker (CHW). CHWs use a weight-for-age scale to assess the nutritional status of the children, which allows them to identify varying levels of malnutrition. Once CHWs identify moderately malnourished children, an NFA field worker visits the family, explains the program, and encourages them to join. Participating families receive a monthly supplement package of fortified blended foods and micronutrient powder. Families also receive instruction on using the supplements in a follow-up visit from the NFA field worker. Field workers then conduct monthly field visits for a year in which they track the nutritional status of **(p.33)** children, survey families on their use of the supplements, and provide additional training on childhood nutrition.

NFA's program is relatively simple, but developing a concrete theory of change can still help the organization think systematically about right-fit data collection.

Step 1. Define the Problem and Intended Results

The first step in developing a theory of change is to clearly define the problem the organization aims to address and the results it hopes to achieve. This sounds obvious, but often organizations move directly into implementation without full consideration of the problem they seek to address. By specifically articulating its target problem and intended results, an organization can build on available evidence, explore the program's underlying assumptions, and create a program that is more likely to succeed.

Organizations can conduct on-the-ground research in order to define a problem and identify a solution. They may also examine the work other organizations have done in the same field or location. What elements of program design are most promising? What high quality evidence exists on the issue? What role does context play in program effectiveness? In the case of NFA, the extensive literature on treating malnutrition could provide valuable information on program design. For a young organization, examining the context of the problem, consulting with those who have implemented similar programs, and reviewing the literature can help test how sound a program's logic really is.

NFA was created by two doctors to address the problem of childhood malnutrition. The doctors worked in a regional hospital that saw the worst cases of malnutrition from around the region. They were troubled by the number of severely undernourished children they saw. Malnutrition can lead to child mortality, but even if it does not actually kill the child, it harms long-term cognitive and health development. These developmental challenges can lower educational achievement and can reduce adult earnings and quality of life.

The underlying problem was simple, they thought: parents were not giving their children a sufficient amount of high-quality calories. At its root, they believed, was a combination of poverty—simply not enough money available to provide enough calories—and a lack of knowledge about the nutrients children need to thrive.

The doctors founded NFA to address the causes of childhood malnutrition at home, intending to fix the problem before children needed specialized medical care. They conducted an evidence review to identify proven **(p.34)** strategies for

reducing malnutrition, determining that nutritional supplementation was the most effective intervention and that CHWs offered the most effective way to deliver it. Armed with this theory and evidence to support it, they launched the project in 10 villages with high rates of childhood malnutrition in partnership with the regional health authority.

Step 2. Define Program Activities

After identifying what problem to address and what change is needed, the second step in crafting a theory of change is to define program activities—how the program intends to create change. You will notice that many logical frameworks start with inputs—the raw materials that are needed to run the program—first or along with activities. Inputs are undoubtedly important, but implicitly part of what we mean by “activities.” Like many service-delivery programs, NFA’s activities are a series of sequential steps, all of which must be successfully carried out in order to produce the intended results (see Box 3.2).

Box 3.2

Activities: The essential program elements involved in providing a product or service.

NFA delivers food supplements and trainings to families with malnourished children. The program’s key activities include training government CHWs, deploying CHWs to conduct regular household visits, and identifying which children need supplements. Once those children are identified, NFA receives a list of the children from CHWs. It then deploys its own field workers to recruit families into the program and train them how to use the nutritional supplements. Field workers deliver nutritional supplements to families on a monthly basis, and, on each visit, they track children’s nutritional status and gather data on family use of the supplements.

Step 3. Identify the Program Outputs

Each program activity will have at least one output associated with it. Outputs are the products or services produced by program activities; **(p.35)** identifying and measuring them is a key function of an organization's data system. Outputs are the direct deliverables of a program. Typically, activities undertaken and outputs produced are immediately controlled by the organization and reflect the amount and quality of program implementation (see Box 3.3).

Box 3.3

Outputs: The products or services generated by program activities; deliverables.

Although outputs are vitally important to the theory of change, many organizations and donors fail to give them the respect they deserve. Part of the oversight stems from the fact that outputs often sound like a rephrasing of activities: conducting training is an activity, the number of trainings conducted is the output. As a result, organizations face pressure to skip the measurement of outputs and instead measure outcomes. But consider NFA's case. One of the key outputs of NFA's program is that families possess food supplements, a direct result of program activities. So collecting data on whether and when families received the supplements is important operational information. What if the organization discovered a gap in the delivery of the supplements? NFA could use that information to improve the program. Clearly defining activities and outputs is an essential element of actionable data collection as it gives managers clear guidance on which program components are working well and which could be improved. Carol Weiss, a renowned expert on evaluation, organizational decision-making, and research methods, called this the difference between implementation failure and idea failure. In monitoring, organizations are testing for implementation failure, whereas an impact evaluation tests an idea (so a failure to see results indicates an idea failure).¹ If families are not receiving the supplements (or, for example, selling them for needed cash when they receive them), there is no point in looking for changes in nutritional status.

The key activities of NFA's program and the associated outputs appear in Figure 3.1.

Throughout this book, we argue that data on outputs provide critical program information that goes beyond simple accounting. We focus on this argument in Chapter 5. The pressure to measure

"impact" and "results" often leads organizations to undervalue the role of tracking basic activities and outputs. Yet collecting data about these elements of the theory of change **(p.36)** can highlight inconsistencies in implementation and lead to insights on how to improve a program. This actionable information is much more valuable than poor quality impact evaluations that lack credible analysis.

Step 4. Define the Program Outcomes that Determine Impact

Through its program outputs, an organization seeks to achieve its intended outcomes—the reasons it provides the program in the first place. Outcomes are a bit more complicated to identify and measure than outputs, in part because they bring us firmly to the "theory" part of the theory of change (see Box 3.4).

Box 3.4

Outcomes: The intended (and unintended) results of program or policy outputs

| ACTIVITIES | | OUTPUTS |
|---|---|--|
| CHWs trained to identify malnourishment using weight-for-age assessment | à | Trainings conducted CHWs trained |
| CHWs conduct household visits | à | Households visited |
| CHWs assess children for malnourishment | à | Malnourished children identified |
| Field workers recruit families with malnourished children to join the program | à | Families recruited Families enroll in program |
| Field workers train families in use of nutrition supplements | à | Trainings conducted Families attend trainings Families know how to use supplements |
| Nutrition supplements provided to families | à | Families receive supplements Families serve malnourished children supplements |
| Field workers conduct follow up visits | à | Families receive additional advice on childhood nutrition |

Figure 3.1 Nutrition for All's activities and outputs.

Outputs are under the control of an organization to some degree—they are certainly related to the effectiveness of program implementation. But program outputs intend to set in motion a series of changes that rely partly on the quality of program implementation and partly on whether the underlying assumptions of the program hold; outcomes also depend on whether there are unanticipated changes in the program environment. **(p.37)** An important part of any theory of change is to map out this series of hypothesized outcomes—including those outcomes the program intends to create as well as possible unintended consequences. This process is sometimes referred to as “outcome mapping” or “pathway mapping.” We return to this concept later in the chapter.

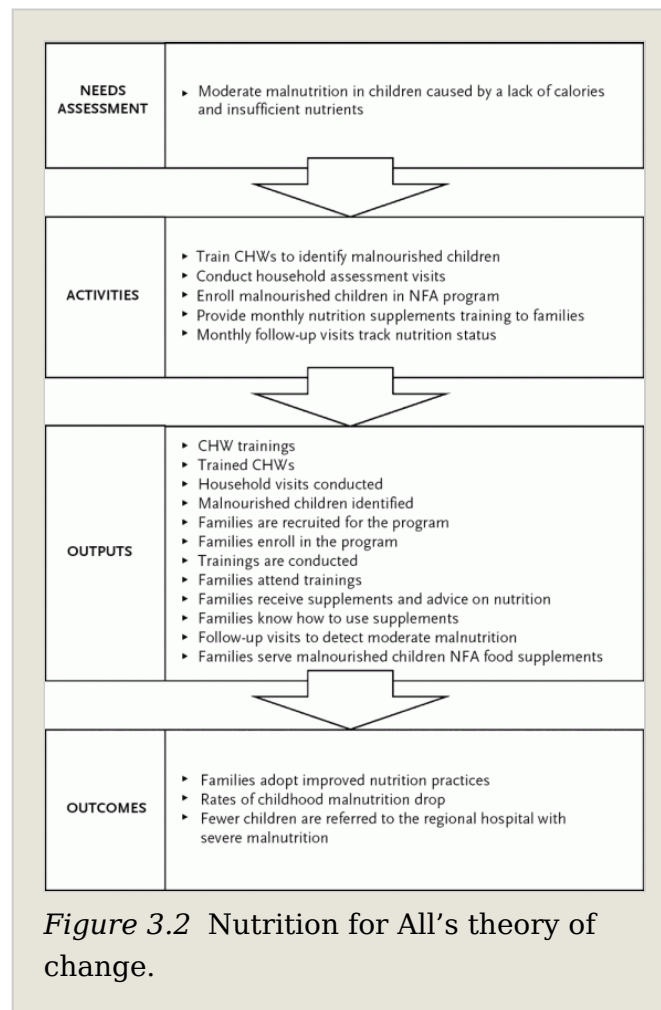
A clear distinction between outputs and outcomes is essential for credible data collection, even if the line between the two can be blurry. (Remember, outputs are the main program deliverables, while outcomes are the results of those outputs.) An organization has control over its outputs, but, ultimately, the outcomes are out of its control. Perhaps the crispest question to ask is whether one needs a counterfactual in order to sensibly use the data. An output should not need a counterfactual, whereas an outcome likely does.

Think back to the example presented in the preceding chapter of the Indian organization that distributed clean cookstoves. It had direct influence over its outputs—the number of cookstoves delivered to households. But the outcomes—the extent of change in health and fuel use in targeted households—were beyond its control. Measuring outcomes like fuel use and health status requires a credible assessment of these outcomes through a counterfactual because many factors aside from program implementation affect those results.

Distinguishing outputs from outcomes is not always easy. Some outputs are partially outside the control of a program. In the cookstove example, once households receive the cookstoves, they need to use them for cooking in order to experience health benefits. Cookstove usage is outside the direct control of the program but still needs to be measured in program monitoring. If cookstoves are not being used, then the program should not expect to see reduced fuel use and improvements in health.

In Figure 3.1, some of NFA's outputs are a bit outside the program's control. Families can be recruited for the program, but may decide not to join. Trainings may be conducted, but families may not understand the information on how to use the supplements. Nonetheless, collecting information on these components of the program will be critical to understanding **(p.38)** whether the program is working as intended. Similarly, NFA needs to know whether families are serving the supplements to malnourished children even though this is also not fully under their control. The key is to use these data for program improvement, not as a measure of impact, as we take up in the next chapter.

Let's consider the relationship between outputs and outcomes in NFA's theory of change. NFA seeks to create three key outcomes for program participants, all of which rest on successful



implementation of program activities and delivery of outputs. Figure 3.2 shows the intended outcomes of the program.

(p.39) Once families enroll, receive supplements, and get nutrition advice, NFA expects that families will adopt better nutrition practices, such as buying and cooking vegetables, but the organization cannot directly control this outcome.

Other factors like weather might affect the availability and price of vegetables and change consumption. And even if nutrition practices are adopted and supplements are given to children, economic shocks could lower household income and food consumption, meaning that rates of malnutrition do not drop.

Imagine for a moment that NFA measured malnutrition in participating children after delivering the program and found that malnutrition was 25% lower than before the program started. Would this be a success? Now imagine malnutrition was 25% higher. Would we call that a failure? Without knowing what the malnutrition rate would have been without the program, neither of those questions is credibly unanswerable.

The only way to understand what role NFA had in affecting these outcomes is through a counterfactual analysis. Some counterfactual analyses are quite strong; others are weaker. But to argue that a program *caused* an impact, implicitly one must be estimating the difference between the outcome observed and the outcome that would have been observed had the program not done what it did (i.e., the counterfactual). We will talk more about this in Chapter 6, when we dig in on impact evaluations.

If confused about whether to consider something an output or an outcome, ask the following question: does collecting the data without a counterfactual provide meaningful program information? In the NFA example, consider the output “families serve malnourished children NFA food supplements.” While this output is somewhat outside NFA’s control, it provides a meaningful measure of whether NFA’s program implementation was successful. If NFA food supplements are not being used, there is no point looking at further outcomes. Instead, NFA is better off considering implementation improvements. If NFA wanted to collect data on “families serve malnourished children *any* food supplement”, then a counterfactual is necessary to decide whether the proportion of families using supplements is an indication of success. A necessary but not sufficient metric for success is whether the children are eating the NFA supplements. While this does not prove impact, if children are *not* eating the supplements it tells the management that something is wrong with the operations. And that is useful.

(p.40) Step 5. Identify Assumptions

Any good theory rests on assumptions, both implicit and explicit, that embody our ideas about how the world works. A theory of change is no different. In every link between activity, output, and outcome, many different assumptions are made that must hold for the program to work as expected. An important part of developing a theory of change is to identify these implicit and explicit assumptions and include them in the theory of change so that data can be collected to verify that the program's key assumptions hold (see Box 3.5).

Box 3.5

Assumptions: The conditions that have to hold for a certain part of a program or policy to work as expected.

Assumptions are the links between the elements in a program theory. They fall into two categories: assumptions about the connections between activities and outputs, and assumptions about the connections between outputs and intended impact.

The connections between activities and outputs assume that a program will be implemented as planned and that each activity will produce the desired output. These connections also assume that demand for the program exists. While such assumptions may seem straightforward, program implementation can suffer if they are wrong. Making these assumptions explicit and identifying the most critical among them helps to figure out what we need to test and monitor to ensure the program works as planned. Organizations can test their assumptions in many ways. For example, they can consult a topic's literature, hold focus groups with intended beneficiaries, or track usage data and investigate anomalies. Identifying and monitoring assumptions is key to ensuring a program is working as intended and allows organizations to change course if needed.

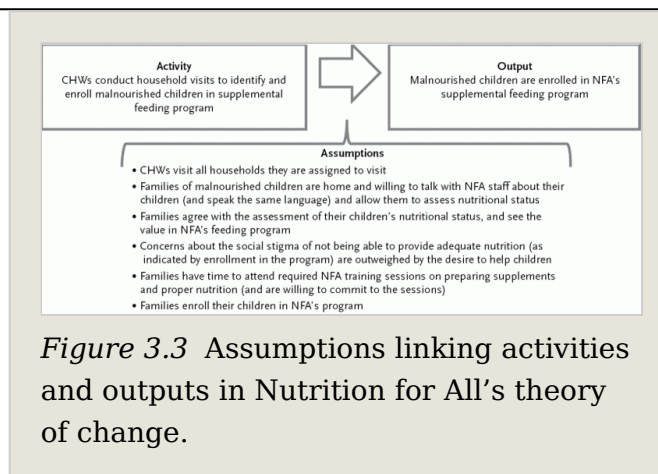
Figure 3.3 examines some of the assumptions NFA makes about a single activity: household visits to enroll malnourished children in NFA's supplemental feeding program.

As this example shows, NFA makes multiple assumptions about how a single activity will produce a single (particularly important)

output! Only one of these—CHWs visiting all the households they are assigned to visit—is fully under control of the program. NFA can also try to address **(p.41)** some of the others. For instance, they can time visits to correspond with when families are likely to be around and make sure that field staff speak the same language as the families. Such important operational decisions may emerge from identifying assumptions.

But some assumptions concern the social context in which the program operates and the demand for NFA's services. For example, is there social stigma attached to not being able to adequately nourish a child, and, if so, will this deter enrollment? Are families too busy to attend the training sessions NFA requires? And finally, given all of these assumptions, will families actually enroll their children in NFA's supplemental feeding program? The answers to the questions may determine whether families enroll in NFA's program or not. But now that NFA is aware of these assumptions, what should it do? In Chapter 5, we discuss how to develop a right-fit monitoring and evaluation system that uses these assumptions and the CART principles to make decisions about what data to collect.

Once we move beyond the realm of outputs to program outcomes, organizations are making an even larger number of predictions about how people will respond to their programs. Predictions about how outputs will lead to desired outcomes and impacts are where the theory of change becomes truly theoretical. We illustrate one such prediction in Figure 3.4: the prediction that, once provided with training and supplements,



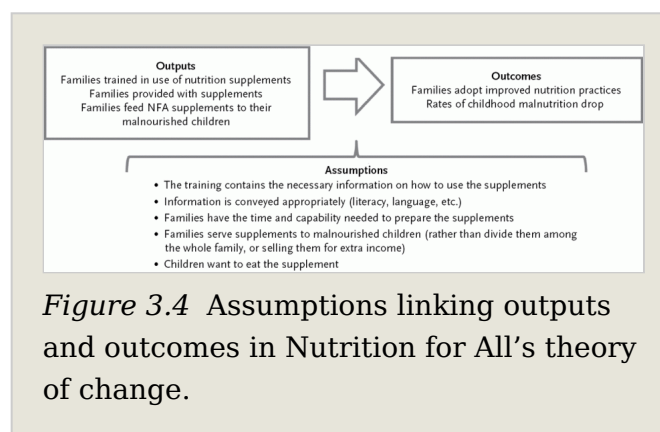
families will give the supplements to their children and stop poor nutrition practices (see Figure 3.4).

This link between outputs and outcomes is a key link in the theory of change: NFA believes that if malnourished children

receive NFA supplements and eat more nutritious foods, rates of malnutrition should (p.42) fall. (Remember that NFA supplements are not the only reason that rates of malnutrition could fall. To know whether NFA's program caused change in malnutrition rates, one needs to measure a counterfactual.)

The relationship between outputs and outcomes relies on a number of predictions about how families and children will respond to training and supplements. One important prediction is that training will result in knowledge transfer and behavior change. But a number of things could mean this prediction does not come true. Information could be presented unclearly. Illiterate families could be unable to read instructions. Families could be unwilling or unable to take required actions. If for any reason NFA's training sessions do not transfer knowledge or change behaviors, then the program will not attain its desired outcome.

Another major prediction underlying this connection is that families will follow NFA instructions to serve supplements only to their malnourished children. But they may prefer to divide the supplements among all their children, not just the malnourished, which would diminish their efficacy for the neediest children. Or they may sell them for extra income, or do something other than feed them to their needy child. If families do not provide supplements as instructed, the crucial outcome of reduced rates of malnutrition may not happen. A theory of change helps shed light on the critical assumptions and predictions that must hold for key outcomes to occur and suggests important areas for data collection.



Step 6. Consider Non-Program Factors that Also Cause Changes

The next important step is to ask what besides the program could cause the intended outcome to change. If malnutrition rates change, what else (apart from NFA activities and outputs) could have caused that change? **(p.43)** Listing the most important alternative causes helps organizations better understand the counterfactual. Knowing alternative causes helps clarify whether one will be able to attribute a change in the outcome to the program or policy. This is part of the credible principle. Some alternative causes are obvious: other programs in the area begin working on malnutrition, good (or bad) rainfall could affect food availability, breakouts of disease could affect health status. Other alternative causes may require more reflection.

One theme of this book is asking organizations to consider: If there is no way to isolate those other factors, is it worth it to collect outcome data? To answer that question, it is critical to think through the likely presence and importance of these other factors.

This step is often *not* included as a component in what other books or guidelines put forward for a theory of change. We include it for a simple reason: thinking through this draws attention to the issue of attribution and facilitates crisp thinking on this critical point.

Step 7. Identify Risks and Unintended Consequences

We demonstrated earlier how assumptions and predictions connect the elements of a theory of change together. One other big assumption that many organizations make: the rest of the world will stay the same. The world around the program is unlikely to remain static, and changes in external conditions pose unavoidable risks to any program.

NFA faces a wide range of risks. Because the program relies on government-employed CHWs to identify malnourished children, if the government withdraws its cooperation, the program's ability to identify malnourished children will be threatened. Implementation depends on a steady supply of nutritional supplements; interruption in the supply chain for any reason (such as washed-out roads in the rainy season or a disruption in production) could leave the program without its

key input. Violence could break out in the program's target area and restrict field worker movements.

Some risks are more probable than others; some would be more devastating than others if they became reality. It is often worthwhile to identify—ahead of time—the most likely and most potentially damaging risks and develop a risk reduction or mitigation plan.

Overconfidence and Unintended Consequences

Two mental challenges confront us in exercises like creating a theory of change. First, thinking about the assumptions we make and the risks to a **(p.44)** program can be difficult because our biases tend to make us overconfident. Countless studies have shown that we tend to overestimate the prospects for success while simultaneously discounting the likelihood of failure.² Starting a new project is no different. Why start a program if an organization is not optimistic that it will make a difference? While this enthusiasm is good, it can get in the way of effective program design if risks are continually ignored or discounted.

One way to combat overconfidence and realistically assess risk is to start not by envisioning success, but by imagining program failure and then thinking through how that failure would happen. This is the flip side of creating a theory of change: one creates a theory of failure as a check on the program's logic. One way to visualize this is through a *fault tree*, a hierarchical diagram that outlines every specific path that can carry a program toward a given failure. Or, by using *scenario thinking*, staff can propose a potential failure, then articulate the possible reasons it would happen.

Research has shown that by simply thinking through alternate explanations, people address a question more rationally and consider both the upsides and downsides of a given choice. For example, Shell Oil once asked its staff to estimate the amount of oil they believed certain oil platforms would produce with a 90% confidence interval. They then told staff to think through two scenarios—successful and failed well construction—and after that revise their production estimate. The range of the estimates increased by 30%, a decrease in confidence that helped the company better assess the relative merits of different projects.³ Similar scenario thinking could

prevent poorly conceived projects from being implemented and help develop more resilient programs that take account of risk factors.

Second, the focus on expected or intended outcomes can make it hard to generate ideas about unexpected or unintended consequences—both positive and negative. When organizations analyze their assumptions, it is important to consider not just the circumstances that would render programs ineffective, but also those that would produce unexpected counterproductive effects. NFA, for example, should consider the possibility that its nutritional supplements unexpectedly disrupt household dynamics. Is there reason to believe that disagreement over how to use the supplements might provoke conflict or that this new food source could trigger resentment from the family members who are typically considered the household's breadwinners? Talking with intended beneficiaries about a program is an important but often neglected element of testing assumptions. Field staff also have important information about how things work "on the ground."

(p.45) Unintended consequences are not limited to a program's immediate beneficiaries, either. The concept of *externalities* from economics is helpful here. An externality is a transaction's positive or negative impact on people who are not involved in that transaction. For instance, a coal power plant produces a net negative externality if it harms the environment through its pollution or carbon footprint. And using an insecticide-treated bed net produces a positive externality, as it protects the person who sleeps underneath it, but it also kills mosquitos and thus protects neighbors, too.

Could NFA's provision of food supplements result in positive or negative externalities? If the program succeeded in reducing hospital admissions for malnutrition, then perhaps it could reduce the operating cost of public hospitals. This might then allow local governments to lower taxes for all households, not just those receiving the supplements. Or perhaps families receiving the supplements decide that they can now get away with purchasing fewer vegetables at local markets, reducing local farmers' incomes and damaging the economy.

Since this can be a difficult conceptual exercise, it is important to dedicate some time and energy to specifically brainstorm unintended effects that a program may cause. Thinking through possible unintended consequences up front can help program staff plan to measure them. By examining key assumptions and considering how outputs might lead to counterintuitive outcomes, programs can identify likely unintended consequences ahead of time. And by tracking those critical assumptions, programs will know whether they should prepare to evaluate unintended outcomes.

Putting It All Together: Mapping the Pathways

Once all the elements are in place, the next step is to visually map how the activities, outputs, and outcomes connect to each other. Many activities will map to multiple outputs, and some outputs will map to multiple outcomes. Multiple connecting arrows indicate a particularly important component of the theory that must hold for the program to work. These points should likely become focus areas for data collection.

Although mapping every possible connection between activities, outputs, and outcomes is important for internal data collection, the complexity of some programs leads to an extremely elaborate diagram. When this is the case, many organizations find it helpful to develop a simplified theory of change that clearly represents the most important elements of the program to stakeholders and to reserve more complicated schematics for internal use.⁴

For an example of how this can look on paper, see the simplified mapping of NFA's activities, outputs, and impact in Figure 3.5. **(p.46)**

(p.47)

Looking at this map for NFA, several important areas become apparent. First, a critical step in the program is the CHW household visits that identify families with malnourished children. Family enrollment in the program is another critical output. Following the program logic shows that family identification and enrollment are necessary steps for all other outputs and outcomes. Similarly, for children to consume nutritious food (a necessary output for the desired outcome), families must receive supplements, know how to use them, and receive nutrition advice. Data collection should focus on these key areas. This program theory also demonstrates how important monitoring

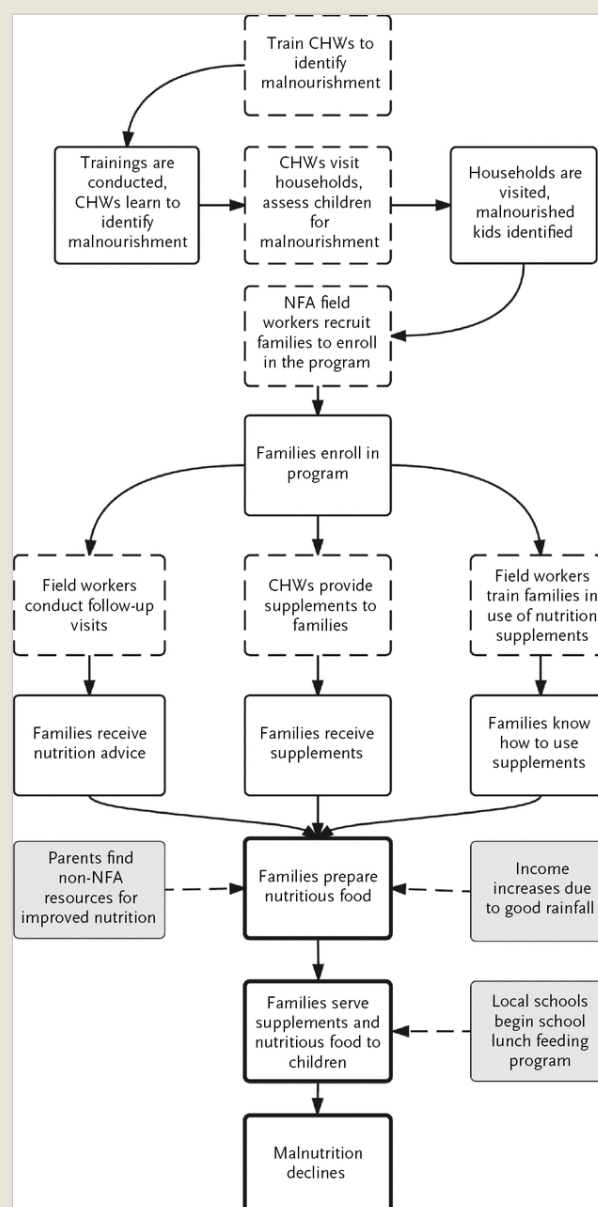


Figure 3.5 Nutrition for All outcome mapping. Dashed outlines represent activities, thin solid outlines are outputs, and bold solid outlines are outcomes/impact. Shaded boxes refer to external factors that could influence outcomes, thus making the counterfactual more challenging to identify

information can be. Imagine NFA spends a lot of money and effort to find out that malnutrition among program participants does not decline. Without monitoring data on receipt and use of supplements, they cannot be sure whether the supplements work as expected or whether the supplements were even used. More importantly, monitoring data on enrollment could support critical program improvements, such as improved training of the CHWs on how to target the right families for the program. Once NFA is sure that children are receiving the supplements, they can consider the need for an impact evaluation.

It Is Never Too Late for a Theory

Organizations often develop a formal theory of change long after a program has already started. Even at this late stage, the process of articulating a theory of change brings a number of benefits. It creates a clear understanding of the program and provides a conceptual map of a program that helps others understand it. This framework also gives organizations a better idea of how they can measure progress. However, the process can also be uncomfortable, exposing disagreement within the organization about how the program works or the problem it aims to address. Or it can reveal that the theory itself is not well formulated or makes problematic assumptions. Many programs, like many human actions, are undertaken based on implicit theories that can look a little fuzzy when exposed to the light of day.

To genuinely support learning and improvement, developing a theory of change should not be a compliance exercise undertaken to rationalize past programmatic decisions, but rather an opportunity to question, debate, and learn. Developing and validating a theory of change works best with broad organizational buy-in. The perspectives both of leadership and of staff working on the ground are needed to develop a theory of change that accurately captures the program's activities, logic, and aspirations. Otherwise, the exercise risks merely validating existing assumptions **(p.48)** or satisfying the demands of donors or other external stakeholders such as boards or host governments. This also means that to properly develop a theory of change, program leadership needs to remain open to negative feedback. Program staff who raise concerns about program assumptions

should be listened to and not punished. For a theory of change to be a living document, internal and external stakeholders need to remain open to learning and improvement.

Taking a learning stance toward program development can be challenging. In developing a theory of change, an organization may discover that certain activities are poorly suited to addressing the intended challenge or even actually address a different challenge. Cutting or drastically modifying the program may not be possible—imagine an organization telling a donor that it is ending a project they funded because, upon further reflection, it was not such a great idea! Nonetheless, when organizations take a step back to rearticulate their theory of change, they get information they need to build stronger programs. Developing a theory of change can help organizations identify unnecessary activities and make more space for the important ones. This is the case with the Invisible Children program highlighted in Box 4.2 in the next chapter. By using a theory of change to identify unnecessary data and adjust programs, organizations can save critical resources.

The theory of change is the foundation of a right-fit data system for both monitoring and evaluation. It helps organizations identify which activities and outputs to monitor and when to consider measuring outcomes and impact with a counterfactual. But a theory of change alone is not enough. Organizations also need a framework to guide them through tough decisions about what data to collect and when to collect it—and, just as importantly—what data *not* to collect. The CART principles provide this framework.

Notes:

- (1.) Weiss (1998).
- (2.) Van den Steen (2004).
- (3.) Russo and Schoemaker (1992).
- (4.) A number of resources exist for outcome mapping, such as Backwards Mapping and Connecting Outcomes, <http://www.theoryofchange.org/what-is-theory-of-change/how-does-theory-of-change-work/example/backwards-mapping/>. Links to

additional resources can also be found the Goldilocks Toolkit
at <http://www.poverty-action.org/goldilocks/toolkit>.



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