Chapter 1

Introduction to Logic Models

Chapter One defines logic models and explains their usefulness to program stakeholders. You will learn the relevance of this state-of-the-art tool to program planning, evaluation, and improvement.

Effective program evaluation does more than collect, analyze, and provide data. It makes it possible for you – program stakeholders – to gather and use information, to learn continually about and improve programs that you operate in or fund. The W.K. Kellogg Foundation believes evaluation – especially program logic model approaches – is a learning and management tool that can be used throughout a program's life – no matter what your stake in the program. Using evaluation and the logic model results in effective programming and offers greater learning opportunities, better documentation of outcomes, and shared knowledge about *what works* and *why*. The logic model is a beneficial evaluation tool that facilitates effective program planning, implementation, and evaluation.

> *A program logic model is a picture of how your program works – the theory and assumptions underlying the program. ...This model provides a road map of your program, highlighting how it is expected to work, what activities need to come before others, and how desired outcomes are achieved (p. 35).*
>
> W.K. Kellogg Foundation Evaluation Handbook (1998)

The *What* and *Why* of the Logic Model

The *WHAT*: Logic Model Definition

Basically, a logic model is a systematic and visual way to present and share your understanding of the relationships among the resources you have to operate your program, the activities you plan, and the changes or results you hope to achieve.

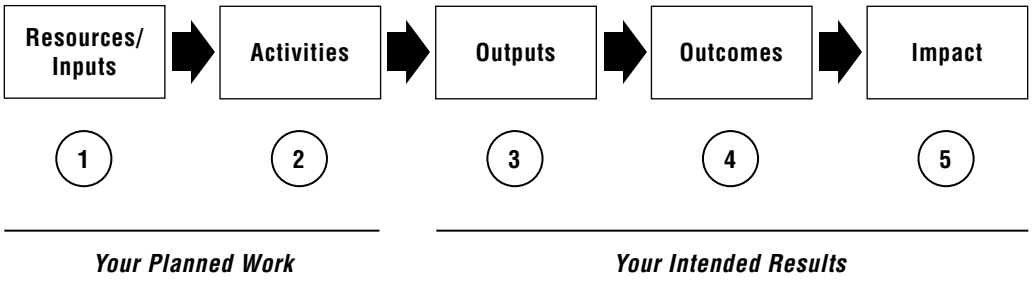

Figure 1. The Basic Logic Model.

The most basic logic model is a picture of how you believe your program will work. It uses words and/or pictures to describe the sequence of activities thought to bring about change and how these activities are linked to the results the program is expected to achieve.

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The Basic Logic Model components shown in Figure 1 above are defined below. These components illustrate the connection between *your planned work* and *your intended results*. They are depicted numerically by steps 1 through 5.

YOUR PLANNED WORK describes what resources you think you need to implement your program and what you intend to do.

Most of the value in a logic model is in the process of creating, validating, and modifying the model … The clarity of thinking that occurs from building the model is critical to the overall success of the program (p. 43).

W.K. Kellogg Foundation Handbook (1998)

1. Resources include the human, financial, organizational, and community resources a program has available to direct toward doing the work. Sometimes this component is referred to as ***Inputs***.

2. Program Activities are what the program does with the resources. **Activities** are the processes, tools, events, technology, and actions that are an intentional part of the program implementation. These interventions are used to bring about the intended program changes or results.

YOUR INTENDED RESULTS include all of the program's desired results (outputs, outcomes, and impact).

3. Outputs are the direct products of program activities and may include types, levels and targets of services to be delivered by the program.

4. Outcomes are the specific changes in program participants' behavior, knowledge, skills, status and level of functioning. Short-term outcomes should be attainable within 1 to 3 years, while longer-term outcomes should be achievable within a 4 to 6 year timeframe. The logical progression from short-term to long-term outcomes should be reflected in impact occurring within about 7 to 10 years.

5. Impact is the fundamental intended or unintended change occurring in organizations, communities or systems as a result of program activities within 7 to 10 years. In the current model of WKKF grantmaking and evaluation, impact often occurs after the conclusion of project funding.

The term *logic model* is frequently used interchangeably with the term *program theory* in the evaluation field. Logic models can alternatively be referred to as *theory* because they describe how a program works and to what end (definitions for each employed by leading evaluation experts are included in the Resources Appendix).

The *What*: How to "Read" a Logic Model

When "read" from left to right, logic models describe program basics over time from planning through results. Reading a logic model means following the chain of reasoning or "***If...then...***" statements which connect the program's parts. The figure below shows how the basic logic model is read.

Sample Factors influencing the trip:

- *Family members' school and work schedules*
- *The holidays*
- *Winter weather*
- *Frequent Flier availability*

Sample Activities:

- *Creating/checking family schedules*
- *Gathering holiday flight and FF information*
- *Getting airport transportation*
- *Notifying Iowa relatives*

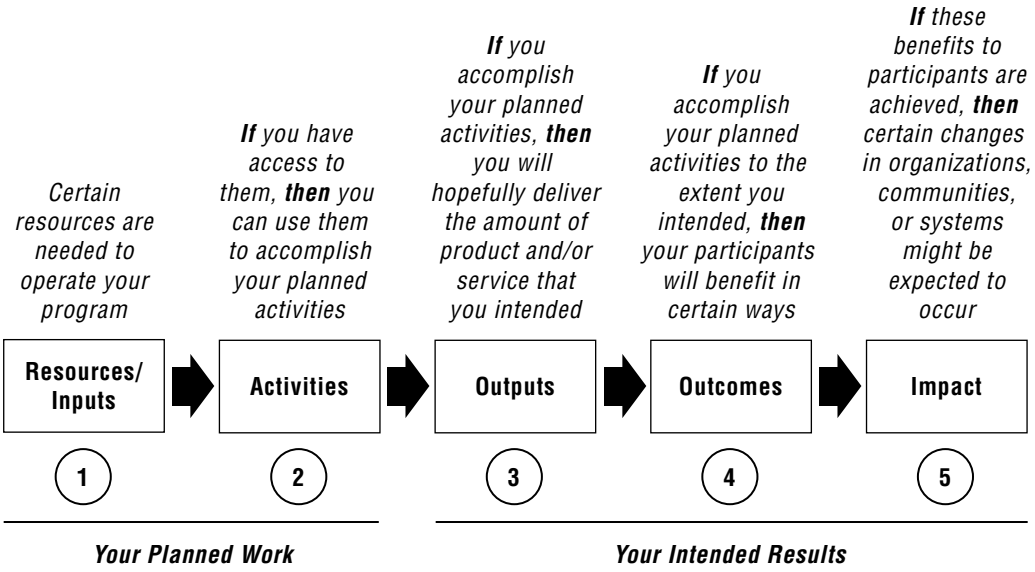


Figure 2. How to Read a Logic Model.

The *WHY*: Logic Model Purpose and Practical Application

The purpose of a logic model is to provide stakeholders with a road map describing the sequence of related events connecting the need for the planned program with the program's desired results. Mapping a proposed program helps you visualize and understand how human and financial investments can contribute to achieving your intended program goals and can lead to program improvements.

A logic model brings program concepts and dreams to life. It lets stakeholders try an idea on for size and apply theories to a model or picture of how the program would function. The following example shows how the logic model approach works. (If you are familiar with logic models, you may wish to skip ahead to the section entitled "Why Use A Logic Model?")

An Example:

We are proposing an inexpensive family trip from Charleston, South Carolina, to Des Moines, Iowa, to visit relatives during December school holidays. The seasonal trip we dream of taking from Charleston to Des Moines is the "program." Basic assumptions about our trip "program" are:

- We want to visit relatives between 12/10/00 and 1/5/01 while the children are out of school.
- We will fly from South Carolina to Iowa because it takes less time than driving and because frequent flier (FF) miles are available.
- Using frequent flier miles will reduce travel costs.

We have to determine the factors influencing our trip, including necessary resources, such as, the number of family members, scheduled vacation time, the number of frequent flier miles we have, round trip air reservations for each family member, and transportation to and from our home to the airport. The activities necessary to make this happen are the creation of our own family holiday schedule, securing our Iowa relative's schedule, garnering air line information and reservations and planning for transportation to and from the airport.

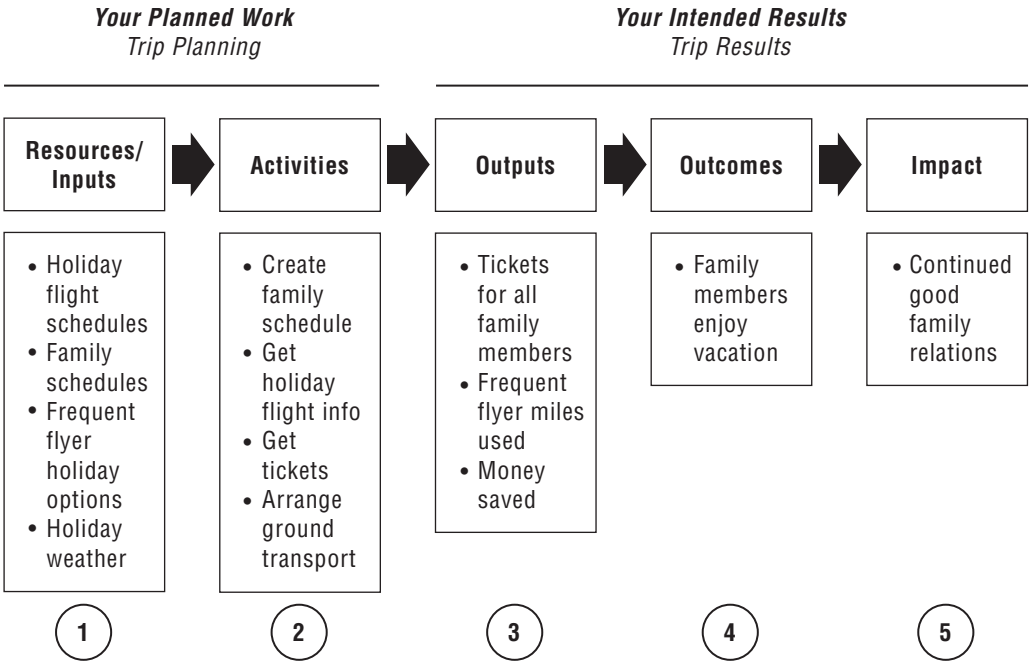
In this example, the results of our activities – or outputs – are mostly information, such as family schedules, flight schedules, and cost information based on the time frame of the trip. This information helps identify outcomes or immediate goals. For instance, if we make reservations as soon as possible, we are able to find flights with available frequent flier slots and probably have more options for flights that fit within the time frame. Knowing this, our outcomes improve – reservations made well in advance result in flight schedules and airline costs that suit our timeline and travel budget. Longer-term impact of our trip is not an issue here, but might be projected as continued good family relationships in 2010.

You can't do "good" evaluation if you have a poorly planned program.

Beverly Anderson Parsons (1999)

Using a simple logic model as a trip-planning tool produced tangible benefits. It helped us gather information to influence our decisions about resources and allowed us to meet our stated goals. Applying this process consistently throughout our trip planning positions us for success by laying out the best course of action and giving us benchmarks for measuring progress – when we touch down in Charlotte and change planes for Cincinnati, we know we're on course for Des Moines.

Typical logic models use table and flow chart formats like those presented here to catalogue program factors, activities, and results and to illustrate a program's dimensions. Most use text and arrows or a graphic representation of program ideas. This is what our trip planning "program" could look like in logic model format.



It was easy to organize travel plans in a flow chart, but we could also choose to organize and display our thinking in other ways. A logic model does not have to be linear. It may appear as a simple image or concept map to describe more complex program concepts. Settling on a single image of a program is sometimes the most difficult step for program stakeholders.

Why Use a Logic Model?

If program planners don't have any hypotheses guiding them, their potential for learning from the initiative is low, and the program is probably in trouble (p. 1).

Everything You Wanted to Know About Logic Models but Were Afraid to Ask,

Connie Schmitz and Beverly Anderson Parsons (1999)

As you can see from the travel plan example, logic models are useful tools in many ways. Because they are pictorial in nature, they require systematic thinking and planning to better describe programs. The visual representation of the master plan in a logic model is flexible, points out areas of strength and/or weakness, and allows stakeholders to run through many possible scenarios to find the best. In a logic model, you can adjust approaches and change courses as program plans are developed. Ongoing assessment, review, and corrections can produce better program design and a system to strategically monitor, manage, and report program outcomes throughout development and implementation.

Effective evaluation and program success rely on the fundamentals of clear stakeholder assumptions and expectations about how and why a program will solve a particular problem, generate new possibilities, and make the most of valuable assets. The logic model approach helps create shared understanding of and focus on program goals and methodology, relating activities to projected outcomes.

Logic Models Better Position Programs For Success

Many evaluation experts agree that use of the logic model is an effective way to ensure program success. Using a logic model throughout your program helps organize and systematize program planning, management, and evaluation functions.

1. In ***Program Design and Planning,*** a logic model serves as a planning tool to develop program strategy and enhance your ability to clearly explain and illustrate program concepts and approach for key stakeholders, including funders.

The bane of evaluation is a poorly designed program.

Ricardo Millett, Director, WKKF Evaluation Unit

Logic models can help craft structure and organization for program design and build in self-evaluation based on shared understanding of what is to take place. During the planning phase, developing a logic model requires stakeholders to examine best practice research and practitioner experience in light of the strategies and activities selected to achieve results.

2. In ***Program Implementation,*** a logic model forms the core for a focused management plan that helps you identify and collect the data needed to monitor and improve programming.

Using the logic model during program implementation and management requires you to focus energies on achieving and documenting results. Logic models help you to consider and prioritize the program aspects most critical for tracking and reporting and make adjustments as necessary.

3. For ***Program Evaluation and Strategic Reporting,*** a logic model presents program information and progress toward goals in ways that inform, advocate for a particular program approach, and teach program stakeholders.

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We all know the importance of reporting results to funders and to community stakeholders alike. Communication is a key component of a program's success and sustainability. Logic models can help strategic marketing efforts in three primary ways:

- ***Describing programs*** in language clear and specific enough to be understood and evaluated.
- ***Focusing attention and resources*** on priority program operations and key results for the purposes of learning and program improvement.
- ***Developing targeted communication*** and marketing strategies.

There are many ways to conduct evaluations, and professional evaluators tend to agree that there is no "one best way" to do any evaluation. Instead, good evaluation requires carefully thinking through the questions that need to be answered, the type of program being evaluated, and the ways in which the information generated will be used. Good evaluation, in our view, should provide useful information about program functioning that can contribute to program improvement.

W.K. Kellogg Foundation Evaluation Unit

The Table below describes the relationship between a successful program and the benefits derived from the use of logic models.

Program Elements	Criteria for Program Success[1]	Benefits of Program Logic Models[2]
Planning and Design	Program goals and objectives, and important side effects are well defined ahead of time.	Finds "gaps" in the theory or logic of a program and work to resolve them.
	Program goals and objectives are both plausible and possible.	Builds a shared understanding of what the program is all about and how the parts work together.
Program Implementation and Management	Relevant, credible, and useful performance data can be obtained.	Focuses attention of management on the most important connections between action and results.
Evaluation, Communication, and Marketing	The intended users of the evaluation results have agreed on how they will use the information.	Provides a way to involve and engage stakeholders in the design, processes, and use of evaluation.

How Logic Models Better Position Programs Toward Success.

Logic Models Strengthen the Case for Program Investment

Clear ideas about what you plan to do and why – as well as an organized approach to capturing, documenting, and disseminating program results – enhance the case for investment in your program.

[1] Wholey, J. S., Hatry, H. P., & Newcomer, K. E. (Eds.). (1994). *Handbook of Practical Program Evaluation.* San Francisco: Jossey-Bass Publishers.

[2] Barley, Z., Phillips, C., & Jenness, M. (1998). *Decoding Program Logic Models.* Workshop presented at the Annual Meeting of the American Evaluation Association, Chicago, IL, November, 1998.

Developing a Program Logic Model Requires a Simple Image and a Straightforward Approach

A picture IS worth a thousand words. The point of developing a logic model is to come up with a relatively simple image that reflects how and why your program will work. Doing this as a group brings the power of consensus and group examination of values and beliefs about change processes and program results.

LOGIC MODEL
IF…THEN
Assumptions:

- Certain resources are needed to operate your program.
- ***If*** you have access to them, ***then*** you can use them to accomplish your planned activities.
- ***If*** you accomplish your planned activities, ***then,*** you will, it is hoped, deliver the amount of product and/or service that you intended.
- ***If*** you accomplish your planned activities to the extent intended, ***then*** your participants will benefit in specific ways.
- ***If*** these benefits to participants are achieved, ***then*** certain changes in organizations, communities, or systems might occur under specified conditions.

Logic Models Reflect Group Process and Shared Understanding

Frequently, a professional evaluator is charged with developing a logic model for program practitioners. But a logic model developed by all stakeholders – program staff, participants, and evaluators – produces a more useful tool and refines program concepts and plans in the process. We recommend that a logic model be developed collaboratively in an inclusive, collegial process that engages as many key stakeholders as possible. This guide provides a step-by-step process to assist program planners.

Like Programs, Logic Models Can Change Over Time

As a program grows and develops, so does its logic model. A program logic model is merely a snapshot of a program at one point in time; it is not the program with its actual flow of events and outcomes. A logic model is a work in progress, a working draft that can be refined as the program develops.

Simple Logic Model Basics

Creating a logic model: What they look like and what needs to be included

Logic models come in as many sizes and shapes as the programs they represent. A simple model focuses on project-level results and explains five basic program components. The elements outlined below are typical of the model promoted by United Way of America to support an outcomes-based approach to program planning and evaluation.

Developing and Reading a Basic Logic Model

Read from left to right, logic models describe program basics over time, beginning with best practice information or knowledge about "what works" from successful program practitioners and other trusted authorities. Reading a logic model means following the chain of reasoning or "***If...then...***" statements which connect the program's parts. The gray box in the left column defines the assumptions stated in "***If...then...***" terms.

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Building a Logic Model by Basic Program Components

As you conceptualize your program, begin by describing your basic assumptions and then add the following program components in the order that they should occur.

1. ***Factors*** are resources and/or barriers, which potentially enable or limit program effectiveness. Enabling *protective factors* or *resources* may include funding, existing organizations, potential collaborating partners, existing organizational or interpersonal networks, staff and volunteers, time, facilities, equipment, and supplies. Limiting *risk factors* or *barriers* might include such things as attitudes, lack of resources, policies, laws, regulations, and geography.

2. ***Activities*** are the processes, techniques, tools, events, technology, and actions of the planned program. These may include *products* – promotional materials and educational curricula; *services* – education and training, counseling, or health screening; and *infrastructure* – structure, relationships, and capacity used to bring about the desired results.

3. ***Outputs*** are the *direct results* of program activities. They are usually described in terms of the *size and/or scope of the services and products delivered or produced* by the program. They indicate if a program was delivered to the intended audiences at the intended "dose." A program output, for example, might be the *number* of classes taught, meetings held, or materials produced and distributed; program *participation rates* and demography; or *hours of each type of service* provided.

4. ***Outcomes*** are specific *changes in attitudes, behaviors, knowledge, skills, status, or level of functioning* expected to result from program activities and which are most often expressed *at an individual level*.

5. ***Impacts*** are *organizational, community, and/or system level changes* expected to result from program activities, which might include improved conditions, increased capacity, and/or changes in the policy arena.

Thinking about a program in logic model terms prompts the clarity and specificity required for success, and often demanded by funders and your community. Using a simple logic model produces (1) an inventory of what you have and what you need to operate your program; (2) a strong case for how and why your program will produce your desired results; and (3) a method for program management and assessment.

Other Logic Model Examples

In practice, most logic models are more complex and fall into one of three categories: the theory approach model (conceptual), outcome approach model, or activities approach model (applied) – or a blend of several types. It is not unusual for a program to use all three types of logic models for different purposes. No one model fits all needs, so you will