



Logic Models

Logic Models are a way to help plan, implement and communicate an intervention. They can be used with Theory of Change. Logic Models make explicit the various stages of an intervention and so can help us to evaluate. Evaluators have made heavy use of logic models and this came about from early problems in the evaluation field in the 1970s where evaluators found that goal and objective setting was often vague and that programs were not operating in a way that would delivered what was intended.

Logic Models are a graphic representation of the work of an intervention from problem to outcomes and impacts. It is often a linear model. It is a representation and not a reality. So can be changed as the intervention proceeds. Logic Models help bring clarity to the planning process and to communications about an intervention. Logic Models help create better understandings and focus.

Logic Models help shape where an evaluation is going to look but evaluation strategies and tools for measurement are not mapped into the Logic Model.

Creating the Model takes us through the various stages of what inputs are needed. Inputs are investments: time, resources, staffing and volunteers, various forms of expertise, animals who may be involved, nature and the natural environment, any equipment and other forms of technology, and possibly partners and partner agencies.

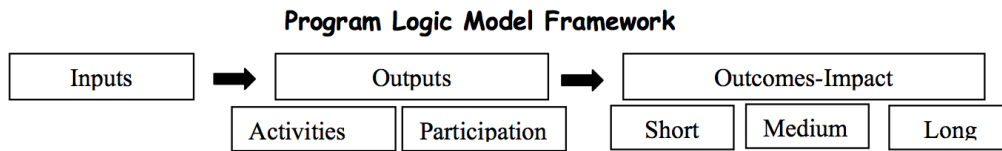
Outputs are both activities and participation the intervention is intended to reach. Participation can includes clients or participants and beneficiaries, agencies, decision-makers etc. so a variety of stakeholders.

Outcomes can be considered in the short, medium and longer-term and considered in terms of the immediate participants or beneficiaries and more generalized impacts which could be community or societal.

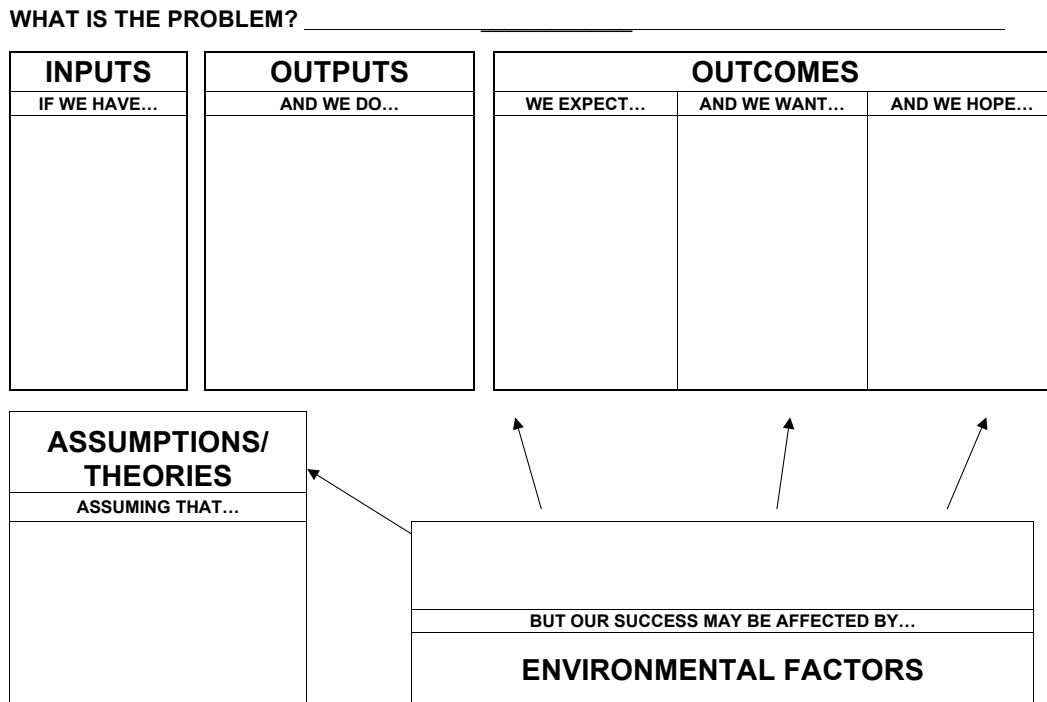
Logic Models focus on positive changes and changes will not always be positive. Also outcomes from an intervention will not be anticipated and so will not have been captured on the logic model. These need to be captured and understood in terms of their effect on the intended outcomes, how they came about and if they are outcomes which now warrant formal inclusion in the intervention plan.

Simple Logic Model

This is a simple inputs outputs and outcomes model.



You may wish to add a couple more elements into the framework. This enables allocation of various elements to boxes of input, output, outcome, assumption, or external factor.



Logic Models and Funders

Logic Models can be required by funders and if not required can be useful in making funding applications. They are a clear representation of what it is that is intended from problem to outcomes and the resources and activities that will be taken to get there.

This table from the Kellogg Guide to Logic Model Development rehearses the various program elements and stages and where Logic Models can assist.

Program Elements	Criteria for Program Success¹	Benefits of Program Logic Models²
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.

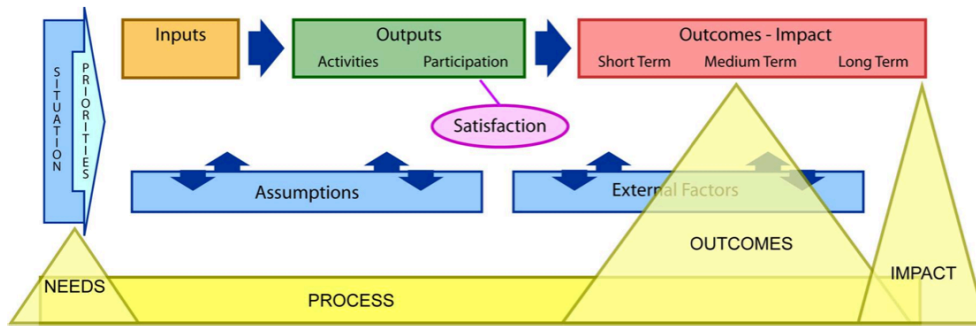
Evaluation

Program evaluation is the systematic collection of information about the activities, characteristics and outcomes of programs in order to make judgments about the program, improve program effectiveness, and/or inform decisions about future programming. Patton, M. (1997)

We can add to this that:

A program or intervention is a theory and an evaluation its test. In order to organize the evaluation to provide a responsible test the evaluator needs to understand the premise on which the theory was based. Weiss, 1998

It is important to think about development of an intervention and the evaluation of that intervention as going hand in glove. If they can be co-created then this supports the development of both, it becomes clear the theories driving the intervention, the types of outcomes, how each precondition to the outcome is to be satisfied and to what degree before individuals can move on to fresh activities. This process roots out lots of assumptions and basically at least virtually ‘tests the system’. The co-creative process helps in thinking about the evaluation what data can be sought, how it informs that stage of the evaluative process, what data may serve as proxies etc.



Types of evaluation

Needs/asset assessment:

What are the characteristics, needs, priorities of target population?
 What are potential barriers/facilitators?
 What is most appropriate to do?

Process evaluation:

How is program implemented?
 Are activities delivered as intended? Fidelity of implementation?
 Are participants being reached as intended?
 What are participant reactions?

Outcome evaluation:

To what extent are desired changes occurring? Goals met?
 Who is benefiting/not benefiting? How?
 What seems to work? Not work?
 What are unintended outcomes?

Impact evaluation:

To what extent can changes be attributed to the program?
 What are the net effects?
 What are final consequences?
 Is program worth resources it costs?

Diagram copyright Board of Regents of the University of Wisconsin System

If it is not possible to co-create intervention and process then both the logic model and theory of change creation process (see other pdf) can be retrofitted to the intervention. In working through the TOC process and diagramming using a Logic Model format it is possible to see how the program as currently runs matches intentions, matches the desired outcomes and the initial understanding of the problem.

Retrospective Logic Model diagramming can be a useful way to move into the evaluation process, it highlights the clarity of statement of problem and outcome, ie. the basis for what is being evaluated and the pathway to get to that point. Where there is no or poor clarity this is in itself useful data for the program staff and evaluation team.

A clear description of the program is the beginning-point for evaluation. A logic model helps us match evaluation to the actual program so that we measure what is appropriate and relevant.

Causal Relationships

Logic Models help underscore what is expected to be a causal relationship. It is a simplification of what may be a way more complex nature of causal attribution but it is a

starting point for understanding better the nature of the causal attributions. It is possible to look to factors outside the intervention and consider how they may be making a contribution to the outcomes. For example, what is to be found in the broader environment of the beneficiaries? Care staff, exposure to the natural environment etc. This is a simplification but may well be a useful activity in helping to surface assumptions and working theories.

Creating a Logic Model and thinking about relationships. Logic models show the assumed causal connections that link what we do with desired results. This is a theory of action that underlies our programs. These connections can be expressed as 'if-then' relationships.

Reading from left to right, a logic model portrays a series of if-then relationships.

Starting at the left, let's see how this works:

If you have certain resources, **then** you will be able to provide activities, produce services or products for targeted individuals or groups. **If** you reach those individuals or groups, **then** they will benefit in certain specific ways in the short term.

If the short-term benefits are achieved to the extent expected, **then** the medium-term benefits can be accomplished.

If the medium-term benefits for participants/organizations/decision-makers are achieved to the extent expected, **then** you would expect the longer-term improvements and final impact in terms of social, economic, environmental, or civic changes to occur.

This is the foundation of logic models and the theory of causal association.

Such "if-then" relationships may seem too simple and linear for the complex programs and environments in which we work. However, in working out these sequences, we uncover gaps in logic, clarify assumptions, and more clearly understand how investments are likely to lead to results.

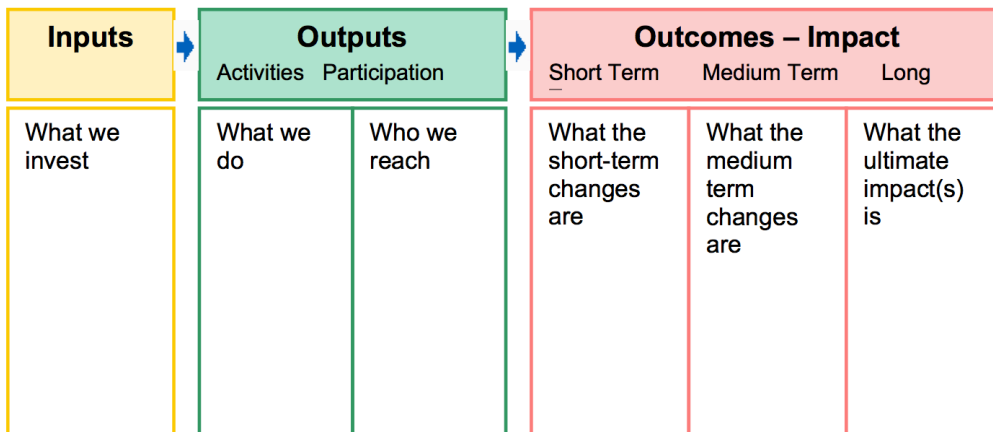
Where we have sound research, the if-then relationships are clear and strong. Often, however, we work in situations, and with issues and audiences, where the research base is not well developed. It is your "theory" or "theories" – the explanation that links program inputs with activities to outcomes: the chain of response – that leads to ultimate, end results.

When developing a logic model, think about the underlying assumptions. Are they realistic and sound? What evidence or research supports your assumptions? It may be that in doing this activity that you need to return to the drawing board and invest more time in researching or finding more resources.

Forms of Logic Models

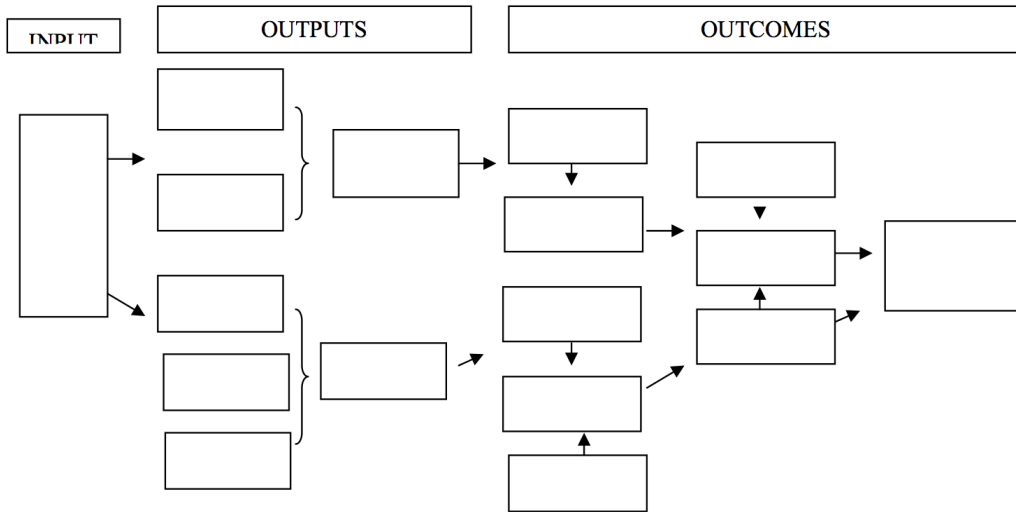
Table format build as a table with lists of items in the input, output, and outcome columns. The model may include limited directional arrows to illustrate connections and relationships. It may include numbered lists to show order within a column or to indicate rows of connections across the columns. You may use numbers to prioritize elements within the column.

LOGIC MODEL – TABLE FORMAT



The Logic model as a flow-chart with boxes with lines and arrows connecting the boxes to illustrate the causal linkages. The exploration of causality or at least assumptions of causality by working through the if... and then statements which link each of the variables in each of the boxes together.

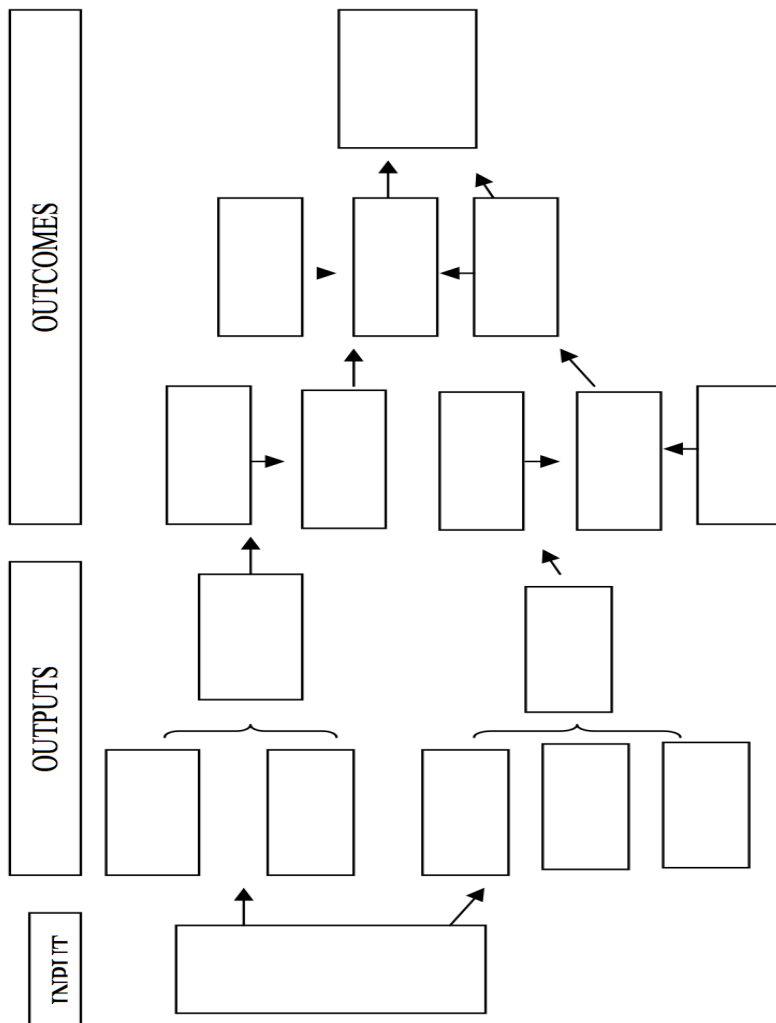
LOGIC MODEL - FLOWCHART FORMAT



You can have your Logic Model running horizontally or vertically depending on what you think best illustrates the flow of events.

You can use shapes other than squares and boxes and there is no reason to use a rectangular shape to hold all the logic box elements if another type of shape better suits your program.

LOGIC MODEL – FLOWCHART FORMAT

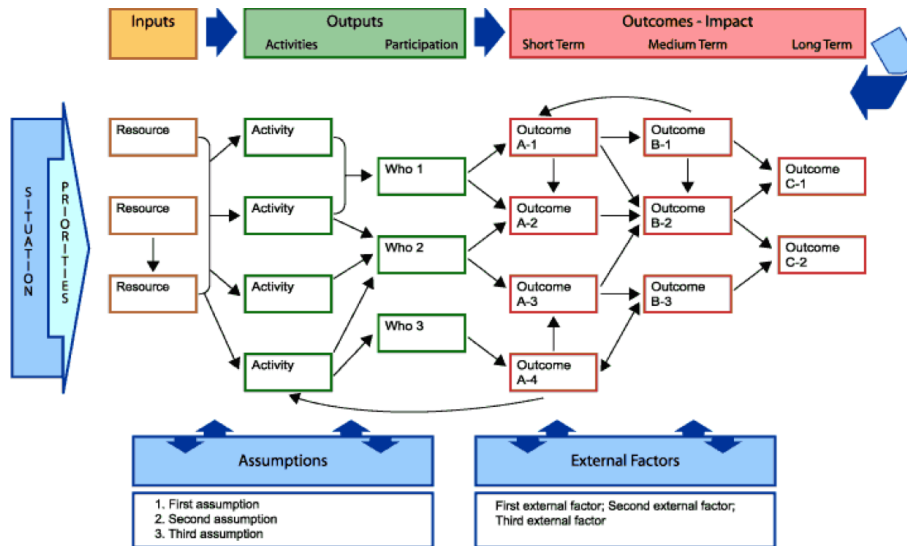


Logic Models to offer more insight

Logic Models as they have so far been described have been rather linear and simple chains of if and then events. The Logic Model can become more 'life like' given life rarely proceeds in a simple 'if and then' consequences way by adding in all the anticipated elements as before but using the arrows to trace potential greater complexity in the relationships between the various elements.

The Model can carry various feedback loops and re-routing if needed. The model can carry various possible pathways through the change process. If various pathways are

added to a logic model then use color to better enable the tracing of different routes through the model.



The last addition to the Logic Model discussion is that of having a set of inter-layered or inter-linked Logic Models each logic model representing the processes that occur at different levels or parts of an organization. The separate models will themselves have to be linked. This requires a diagramming of the links between process and outputs or outcomes that may be related between the various parts of an organization or organizations.

Remember: Is it the Right Thing ?

The Logic Model is a description of what it is that is intended to be done. It does not tell us if we are doing the right thing and perspective needs to be retained to focus on this larger question as to whether the program is the right thing. As well as if the program is being done right.

You may wish to have a slightly more complex model

Resources on Logic Models

W. K. Kellogg Foundation (1998). W. K. Kellogg Foundation Logic Model Development Guide. available at

<http://www.wkkf.org/default.aspx?tabid=101&CID=281&CatID=281&ItemID=2813669&NID=20&LanguageID=0>

Wauchope, B. (2001). Using logic models in a multi-site, multi-level evaluation. PowerPoint presentation at the annual meeting of the American Evaluation Association, St. Louis, MO.