Use of Logic Models and Theory of Change Models for Planning and Evaluation

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USING A LOGIC MODEL TO BRING TOGETHER PLANNING AND EVALUATION

What is evaluation

Use the program theory or logic model to come up with evaluation questions

- Does the program have a positive outcome?
- Are people satisfied?
- How could the program be improved?
- How well is the program working?
- Is the program working the way it was intended to work?

Program Development and Evaluation Should Be Built Together

Evaluation planning helps to ensure that the data collected throughout the lifecycle of a program are meaningful to stakeholders and can be used for ongoing program improvement purposes. A focused evaluation is designed to reflect the specific information needs of various users, and functions to:

- Demonstrate accountability to diverse stakeholders
- Generate a shared understanding of the program and the intended outcomes
- Document program processes
- Determine progress toward short, mid-term, and long-term outcomes.

One tool that combines both the planning and evaluation purposes is the logic model.

For planning purposes, the logic model structure details the:

- Parameters and expectations of a/the program
- Changes among participants, systems, or organizations that are expected to result from program activities.

As an evaluation tool, the logic model:

- Allows for evaluation findings that are powerful decision-making tools when used to identify gaps and make necessary changes to activities, strategies, and budgets.
- Allows planners to make program design decisions that will influence the trajectory of the evaluation.
- Allows for continuous improvement efforts. Evaluation is ongoing—it is not an end product of a program.
- Allows for findings that can help determine the necessity of midcourse corrections.

The Planning Process

Once the activities and processes to be evaluated have been identified, planners can determine:

1. The types of data that will be available (or can be generated),
2. How data will be collected, and when, and by whom.
3. How data will be analyzed, and when and by whom.

This process is iterative and it is most useful when stakeholders revisit and revise their logic models as often as necessary.

The six steps shown on the next page can be used to build a program logic model for planning and evaluation (see figure 1 for an overview).

Figure 1: Overview of the six-step process for developing a logic model

Step 1: Describe the program.

Generally, it's a good idea for planners to begin by sketching a broad overview of the program. Following are some questions that will help things get started:

Step 1: Describe your program

- What changes (outcomes) does the program want to accomplish?
- What needs to be in place for change to occur?
- What strategies or broad approaches will be used?
- Who are the target audiences for the planned activities?
- What does "success" look like?
- How will information gleaned from activities be disseminated and used for improvement purposes?
- How will gaps in the program be identified?

WHY IT IS IMPORTANT TO UTILIZE STAKEHOLDERS IN THE PLANNING PROCESS

- Stakeholders often have very different perspectives about the purposes of a program, and the strategies to be used to foster the desired outcomes. Differences often surface during the planning or expansion phase of a program.
- A program is more likely to succeed when there is consensus among stakeholders about the strategies and chain of events that need to occur in order to realistically accomplish these goals and objectives.
- Involving key stakeholders in the logic model development process helps to build capacity and ensure that stakeholders share a common understanding of the program. The logic model process is used to clarify:

During program planning

- What the program will do; what the program aims to address (the need)?
- Who will participate in and benefit from the program activities (target groups)?
- How the program will address unmet needs or existing gaps
- How the program components (activities, outputs, and outcomes) logically fit together. What activities are needed to meet those outcomes.
- When specific activities will unfold and for which target audiences. If there is a "causal" relationship between activities and outcomes.

During evaluation planning

- How progress and success will be defined and measured.
- What will be evaluated; when the evaluation activities will take place; and who will be responsible for gathering, analyzing, and disseminating the findings.
- How lessons learned will be shared and used for ongoing improvement.

Step 2: Layout & sequence activities, outputs, outcomes

Step 2: LOGIC MODEL DEFINED

A logic model is a visual "snapshot" of a program (or project) that communicates the intended relationship between program goals, activities, outputs, and intended outcomes. Logic models are an iterative tool useful for planning and evaluation purposes. Simply put, logic models graphically describe the theory—or logic—of how a program is supposed to work.

The term *logic model* often is used interchangeably with other names -similar in concept - Blueprint, Causal chain, Conceptual map, Model of change, Roadmap, Theory of action, and Theory of change.

- Six columns should be drawn on a sheet of paper and the activities, outputs. and outcomes identified. The program description should be used to help fill in each column. Keep it Simple
- Next, some sequencing should be done. Program components should be linked by drawing arrows or other visual methods that depict sequence, interactions, or relationships between activities and outcomes.
- The layout should be revised until the model communicates a fairly accurate description of how the program is intended to work. Work in Progress.

Step 3: Focus the evaluation.

What will be evaluated? To help determine the evaluation focus, planners should:

Step 3: Focus the evaluation

- Identify the information needs stakeholders have.
- Identify how the information produced by the evaluation could be used.
- Identify the evaluation questions for the program.

Determine what will be measured, the level of data needed, when data will be collected and by whom, and how the findings will be disseminated. *Tip: Planners should use the evaluation template, located in the appendices, to assist in designing an evaluation plan.*

Step 4: Select indicators of progress toward activities and outcomes.

Step 4: Select indicators

- For each activity component identified on the logic model, indicators should be selected that measure progress toward implementation and outcomes.
- Objectives, indicators, and data sources should be linked to each other across time.
- Data sources should be identified—What data will be available for evaluation? Issues of timing should be considered—Throughout the program lifecycle, when are the data available?

Step 5: Gather and analyze evaluation data.

Step 5: Gather & analyze data

- Process and outcome data should be collected.
- The data gathered should be useful in answering the evaluation questions.
- The data should be analyzed using appropriate methods.

Step 6: Communicate and use the findings for program improvement.

Step 6: Communicate & utilize findings

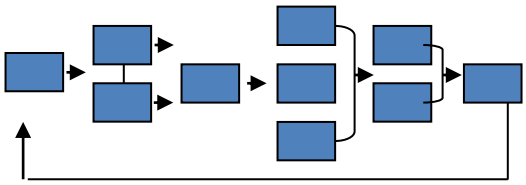
- Evaluation findings should be prepared for a variety of audiences. Planners should know who their audience is and should tailor reports to provide useable information.
- Findings should be reviewed with internal partners. The discussion should include how to best incorporate findings for continuous program improvement purposes.
- Finding information should be disseminated via multiple venues.

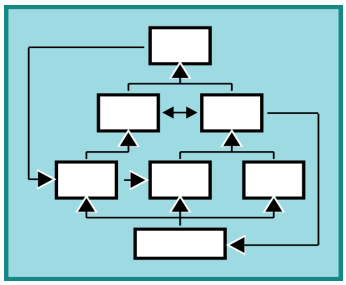
CONSTRUCTING A LOGIC MODEL

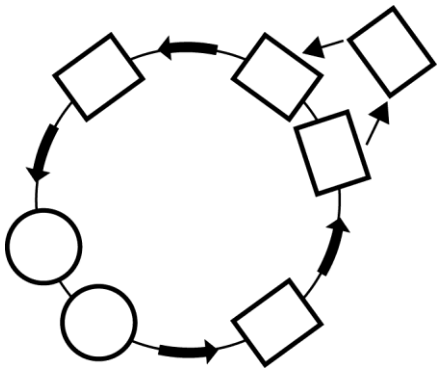
ELEMENTS THAT AFFECT THE LOOK OF A LOGIC MODEL

The layout and level of detail for a logic model vary depending on the purpose of the logical model. There is no one correct way to create a logic model.

- Any shape possible
  - Circular, dynamic
  - Cultural adaptations; storyboards
- Level of detail
  - Simple
  - Complex
- Multiple models
  - Multi-level programs
  - Multi-component programs





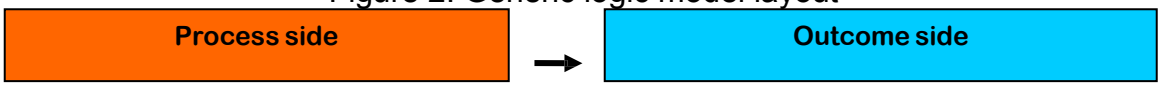


- These aren't different logic models; just different levels of elaboration.
- A good rule of thumb is to remember who the intended user of the logic model is. Programs often create multiple logic models to use with different audiences.

Two Major Approaches to Logic Model Development

Forward logic—Uses "if . . . then" statements. *(Figure 2 illustrates a generic logic model)* Used most often when there is a clear picture of what the inputs and activities will be (already established program).

Figure 2. Generic logic model layout



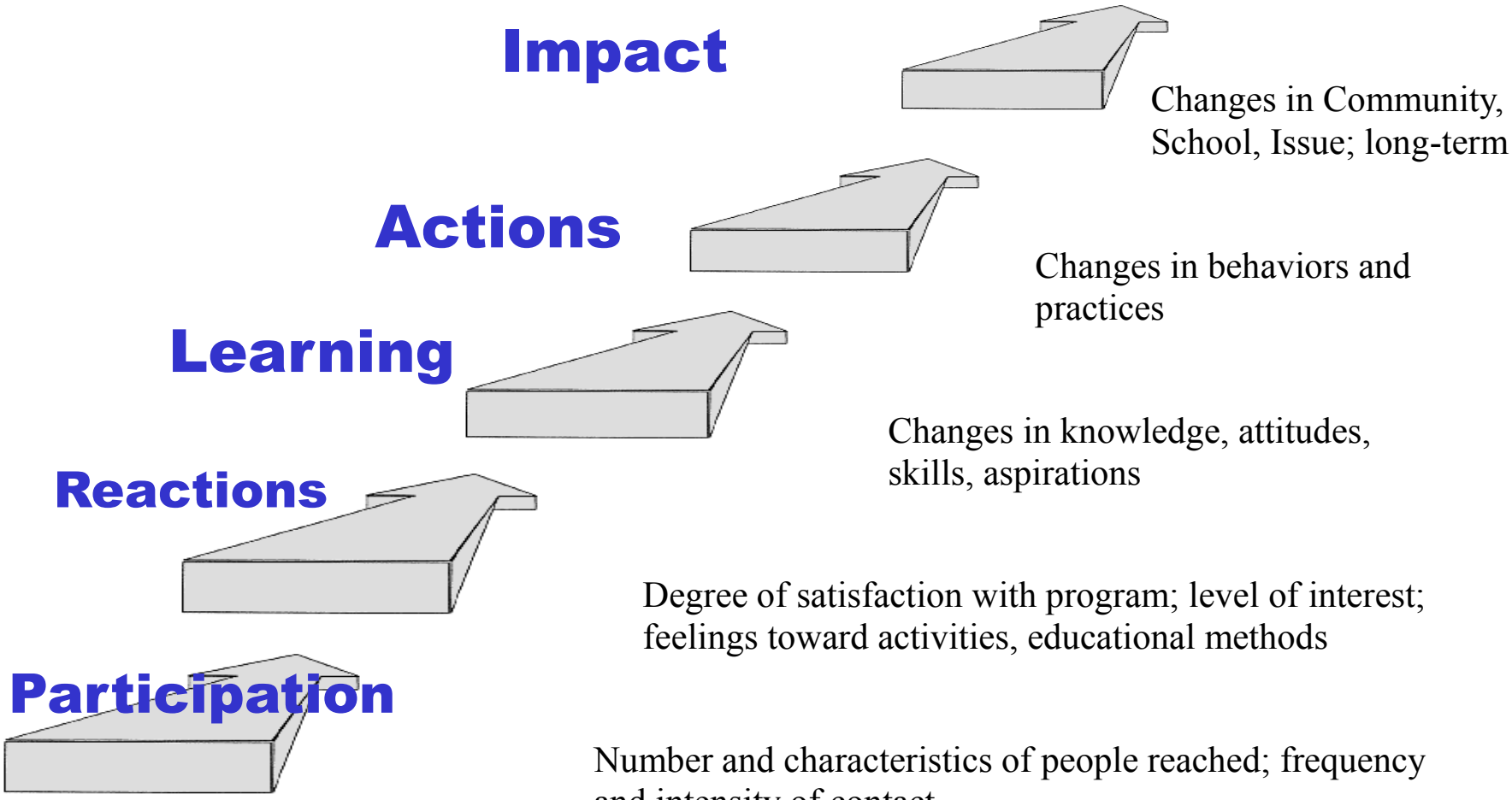
Inputs *These are resources for your program:*	**Activities** *What you do with the resources:*	**Outputs** *These are direct products of activities*	**Short term** *These are changes in learning:*	**Intermediate** *These are changes in action:*	**Long term** *These are changes in conditions as a result of actions:*
Funding Staff Partnerships Models of change Infrastructure Support			Knowledge Attitude Awareness Opinions Motivations Aspirations Skills	Behavior Procedures Practice policies Decisions Social action	Social Economic Civic Health Environmental

Two "sides"—a process side and an outcome side.

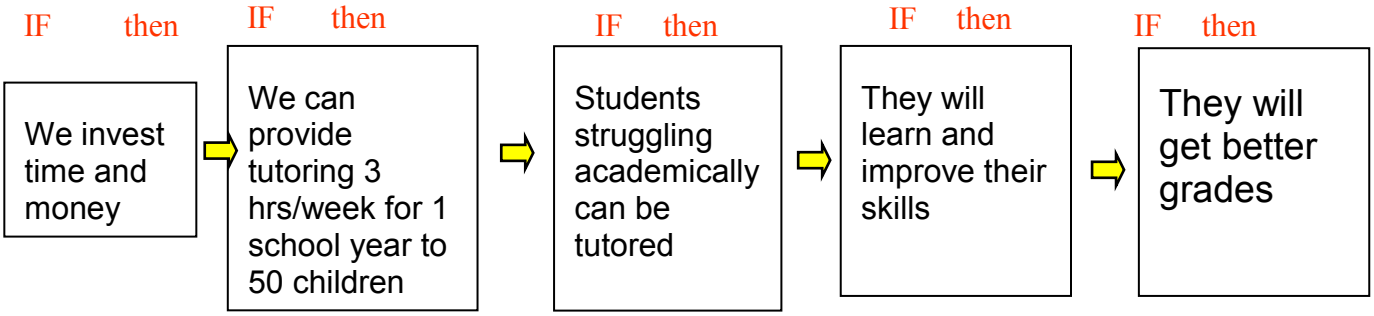
The process side identifies:

Inputs—Resources available/needed for a program, such as funding, staff, volunteers/time, facilities, equipment and supplies, expertise, scientific knowledge and evidence-based strategies, and partnerships.
Activities—What a program actually does to bring about the intended change. What the program does to fulfill its mission. Ex. Feed homeless families, provide prevention programming, counsel pregnant teens, etc.
Outputs—The products or direct services resulting from the program activities. The direct evidence of implemented activities. Ex. Number of classes taught, number of counseling sessions conducted; number of participants served.

The outcomes side of a logic model identifies the sequence of changes, that is, the results expected to be achieved by the program (Session #2: Developing Measurable Outcomes and Indicators).
Short-term outcomes represent the most immediate effects attributable to a program, such as changes in learning, knowledge, and attitudes.
Midterm (intermediate) outcomes reflect the changes in actions, such as in behaviors and practices that are a result of increased knowledge and awareness.
Long-term outcomes are the conditions that change as a result of actions. Long-term outcomes are what the program is expected to affect. These outcomes are more distant in time, less attributable to the program, and harder to measure. Impact: change in condition based on previous outcomes.


Impact
Changes in Community, School, Issue; long-term
Actions
Changes in behaviors and practices
Learning
Changes in knowledge, attitudes, skills, aspirations
Reactions
Degree of satisfaction with program; level of interest; feelings toward activities, educational methods
Participation
Number and characteristics of people reached; frequency and intensity of contact

Tutoring Program Example



What is an output?

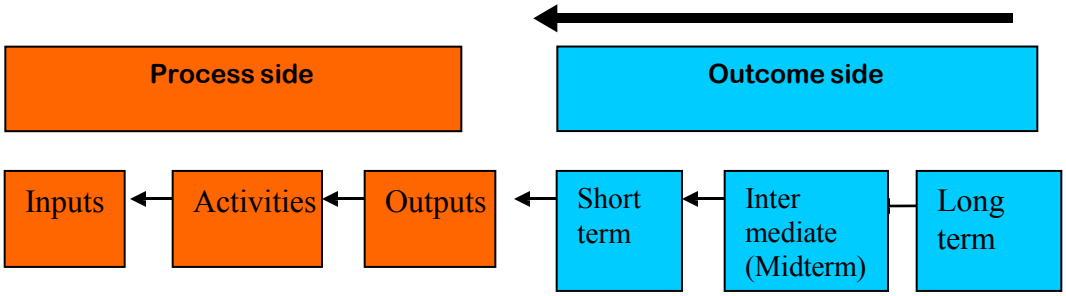
What is an outcome?

What about a food sustenance program?

Reverse logic—Asks "but how" questions. (see Figure 3)

- **Start with the end in mind.** This right-to-left approach starts by identifying the desired outcomes and working backwards to develop activities and inputs. By focusing on the intended outcomes, it helps to ensure that the conducted activities logically link to the intended outcomes (if the relationships are well founded).
- To use this approach, the long-term outcome should be identified and the question "**How (can this be achieved)"?** should be asked. Or "But how"?
- To avoid the pitfalls of developing a logic model that describes only the status quo, stakeholders should remember that the purpose of creating the logic model is to **describe how the program will create change.**

Figure 3. Program planning using the reverse logic approach



What about one of your programs? Let's develop a logic model

- Identify desired results or impact (long-term outcome).
- Describe series of outcomes (changes) that will show progress toward impact (short and intermediate outcomes).
- Describe all activities necessary to produce series of outcomes (outputs: activities).
- Describe what is needed for the program to work (inputs/resources)?
- Identify the outputs that reflect the accomplishments of activities (outputs: participants/others)?

What is Theory of Change (TOC)?

Theory of Change is:

- A planning process created specifically for community change efforts.
- Not a general theory of how change happens; rather, the theory is specific to your effort.
- Useful for setting goals, strategic planning, and program evaluation.

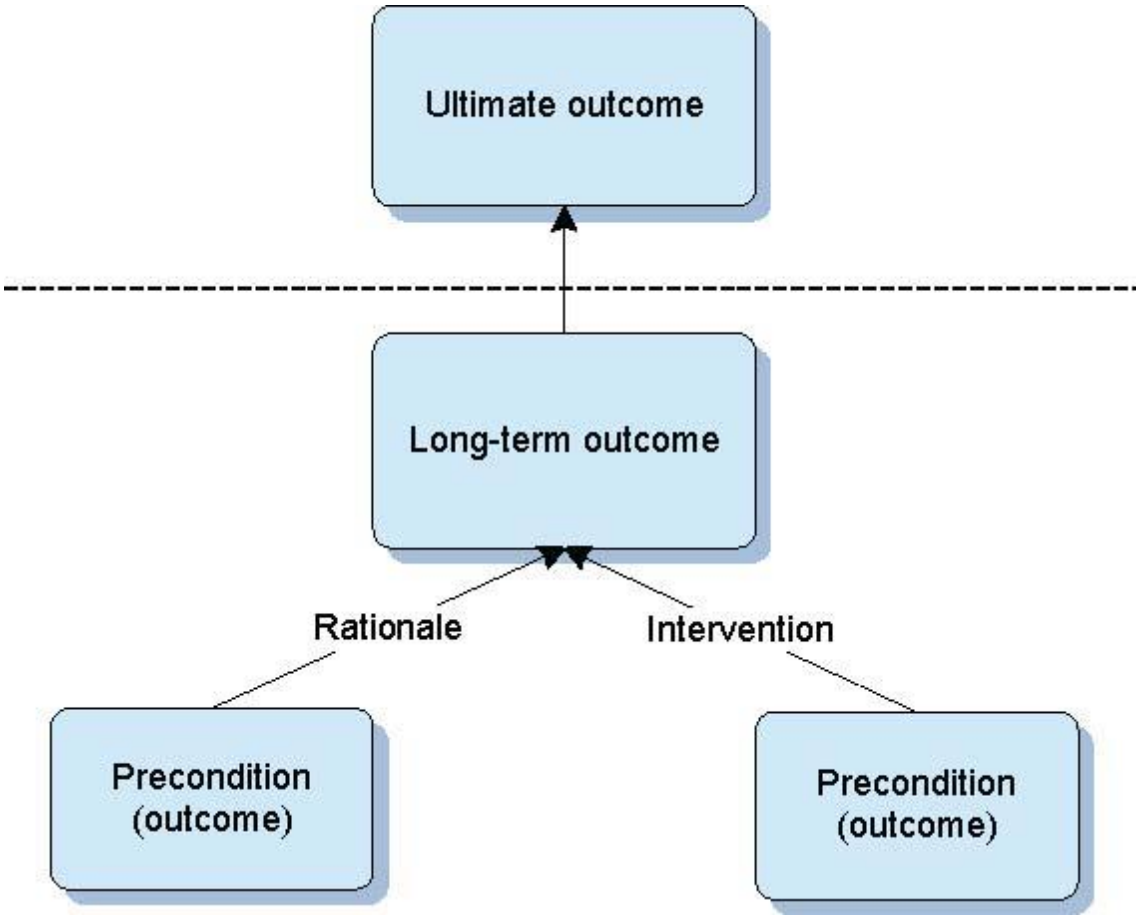
TOC is a "Process" and a "Product"

- Process – a structured thinking process that allows groups to turn their theories about what needs to change and why into a "causal pathway".
- Product – A product that illustrates the results of the TOC process.

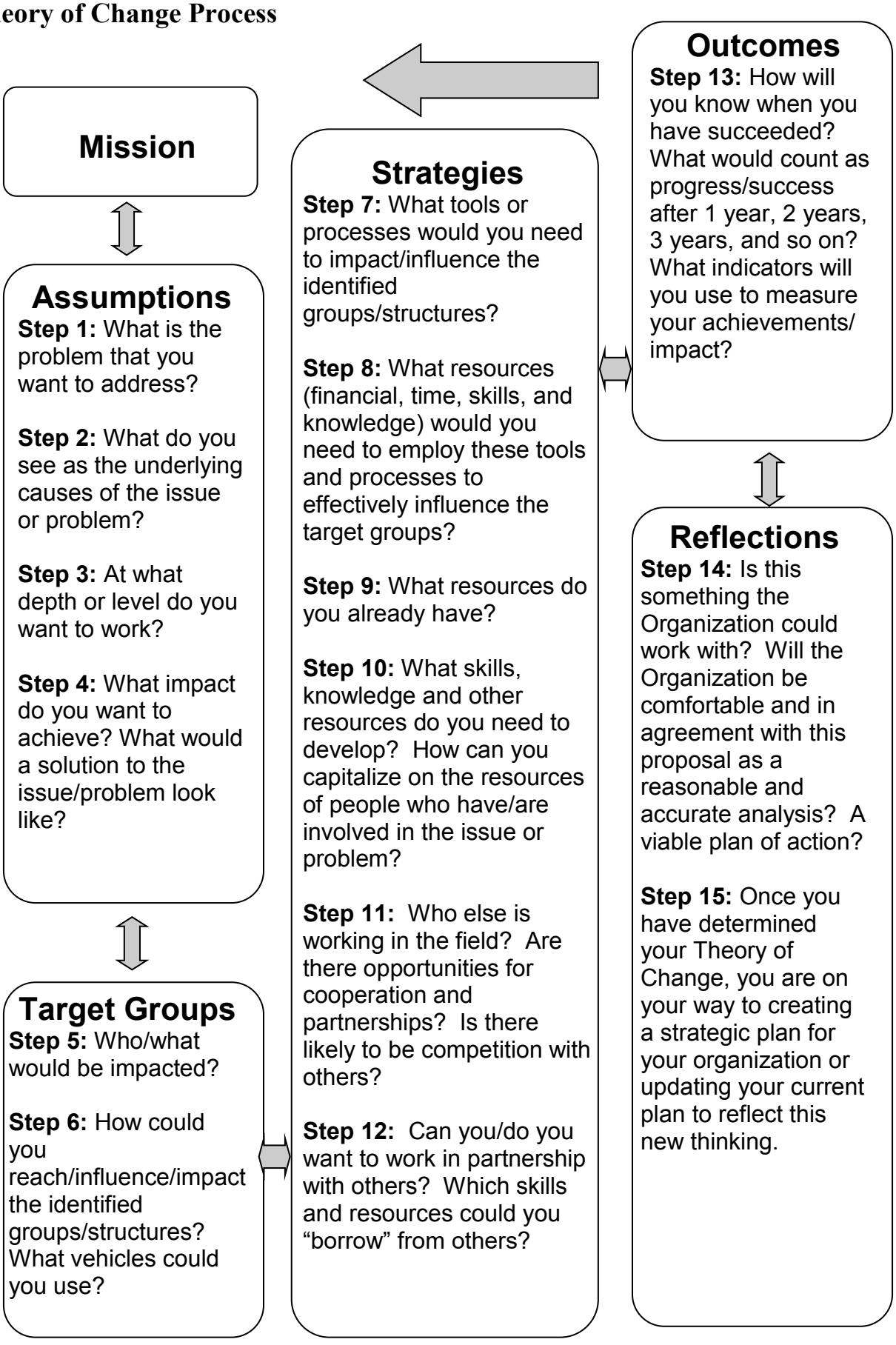
What is a "Causal Pathway"? – a step-by-step, backwards mapping process through which a group determines all of the preconditions necessary to reach an ultimate vision.

Theory of Change "Steps" (in short-format)

1. Determine the Vision – The Ultimate Outcome (where you want to go)
2. Build the outcomes map (the route you will take to get you there) – Identify preconditions, rationales, and interventions that will lead you to your long-term outcome
3. Identify which of the outcomes your group will choose to address (long-term outcome) (and identify why certain milestones are necessary steps in the path you travel).



Theory of Change Process



Understanding the Difference Between Logic Models and TOC Models

1. **How are they different?**

   Logic models graphically illustrate program components, and creating one helps stakeholders clearly identify outcomes, inputs and activities. Usually start with a program and illustrate its components

   Theories of Change link outcomes and activities to explain HOW and WHY the desired change is expected to come about. May start with a program, but are best when starting with a goal, before deciding what programmatic approaches are needed

2. **Different Requirements**

   Logic Models require identifying program components, so you can see at a glance if outcomes are out of sync with inputs and activities, but they don't show WHY activities are expected to produce outcomes

   Theories of Change also require justifications at each step – you have to articulate the hypothesis about why something will cause something else (it's a causal model, remember!)

3. **Indicators**

   Logic Models don't always identify indicators (evidence to measure whether outcomes are met or not)

   Theories of Change require identifying indicators.

4. **What they Tell You**

   A Logic Model would tell you that the after school program is an activity and improved reading scores is an outcome. It might tell you that attendance at the after school program is an intermediate outcome.

   But it wouldn't tell you what a TOC model would tell you, that:
   "students need to attend after-school programs at least 3 days per week for a minimum of 60 days, and the curricula must focus on love of reading and literacy, IN ORDER FOR test scores to rise"

5. **When to Use?**

   Logic Models are great when you need to:

- Show someone something they can understand at a glance
- Demonstrate you have identified the basic inputs, outputs and outcomes for your work
- Summarize a complex theory into basic categories

Theories of Change are best when you need to:

- Design a complex initiative and want to have a rigorous plan for success
- Evaluate appropriate outcomes at the right time and the right sequence
- Explain why an initiative worked or did not work, and what exactly went wrong
- Theories of Change are a lot of work and take time.

"Logic models connect programmatic activities to client or consumer outcomes. But a theory of change also specifies how to create the right kinds of partnerships, hold the right forums, do the right kinds of technical assistance, and help people operate more collaboratively and be more results focused."

Summary

Logic Models	Theories of Change
Representation	Critical Thinking
List of Components	Pathway of Change
Descriptive	Explanatory

So, can we have the best of both worlds?

Suggestion:
Undertake a TOC process that is a manageable scope for your organization. Make sure you get stakeholders to articulate what has to happen IN ORDER for goals to be met and their assumptions about why….
Then,
Summarize your theory in ways that serve the purposes of your different constituents, such as residents, funders, Boards, etc. Use the Theory of Change steps document and blank form template provided to research/gain information with stakeholders.

For Next Time:
Meet with other program staff to work on a logic model for the current FCCRB-funded program(s).
We will work on how to measure outcomes in greater detail during Session #2, so come with as much information as you can for the short-term, intermediate, and long-term outcomes section of the logic model.

Measuring Success - Steps

1. Identify Indicators for each outcome you want to address

   Outcome: Students will graduate from grade school academically ready for middle school.
   Indicator – 6th grade reading scores

2. What must be determined for each indicator?
   a. Who will be impacted? (six graders in X County)
   b. How many will change? (the lowest quartile)
   c. How much will it change? (improve reading scores by 20%)
   d. When will it change by? (December 2016)

3. How will you "measure" the indicators?

   a. Determine: What measurement tool to use; when to measure; and who will do the measuring.
   b. Choose Indicator First – because is the measurement is readily available is not always the best solution.
   c. Often more than one indicator will be needed to fully understand whether an outcome has been fulfilled.

4. Design (modify) Interventions
   a. Determine the interventions (action, strategy, etc.) to be used to achieve identified outcomes. What will be done, by who, how, and when.
   b. Test your assumptions (will these actions really work; always call the first time a pilot or implementation period to allow for the modifications to these things).

5. Communicate TOC to all stakeholders – Should include a brief explanation of mapping process; summarize results (focusing on selected outcomes).

6. TOC Implementation
   a. Monitor progress and make adjustments as appropriate
   b. Measure and communicate progress to stakeholders regularly (at least semi-annually)
   c. Use and update TOC map

Things to Remember

- For a logic model to be useful it must be designed with stakeholder input and be robust enough to enable use for a variety of purposes.
- Program activities should be planned with the end goal in mind.
- Data should be used to identify where efforts should be focused.
- Planning should be practical.
- A target audience should be identified for each activity—will this activity and this strategy help achieve objectives?
- Logic models should be created with the user in mind—how much information do they need?
- The logic model should be revised as needed—if the activity plans have significantly changed, then corresponding changes should be made to the evaluation plans.
- Documenting activities and their outputs tells planners what was done, but doesn't tell how well it was done. It's easy to get caught up with counting everything and assume this is a sufficient evaluation. Planners should remember that not everything that gets counted counts, and not everything that counts get counted.
- Evaluation activities should be planned with the end user in mind. Planners should determine WHO needs the information and HOW the information gathered will be used.

REFERENCE

Berra, Y. (1998). The Yogi book: "I really didn't say everything I said." New York: Workman.

ADDITIONAL RESOURCES

The following links can be explored for further information about logic model development for planning and evaluation purposes.

Logic models—The following sites provide links to an extensive variety of planning and evaluation resources available on the Web:

Centers for Disease Control and Prevention http://www.cdc.gov/eval/resources.htm#logic%20model

Program Development and Evaluation University of Wisconsin-Extension
http://www.uwex.edu/ces/lmcourse/interface/coop_M1_Overview.htm http://www.uwex.edu/ces/lmcourse/#

W.K. Kellogg Foundation
Logic Model Development Guide
http://www.wkkf.org/Pubs/Tools/Evaluation/Pub3669.pdf

EVALUATION RESOURCES

Centers for Disease Control and Prevention Evaluation Working Group http://www.cdc.gov/eval/

Framework for Program Evaluation in Public Health. MMWR [online], 48(No. RR-11). Available from URL: http://www.cdc.gov/eval/framework.htm

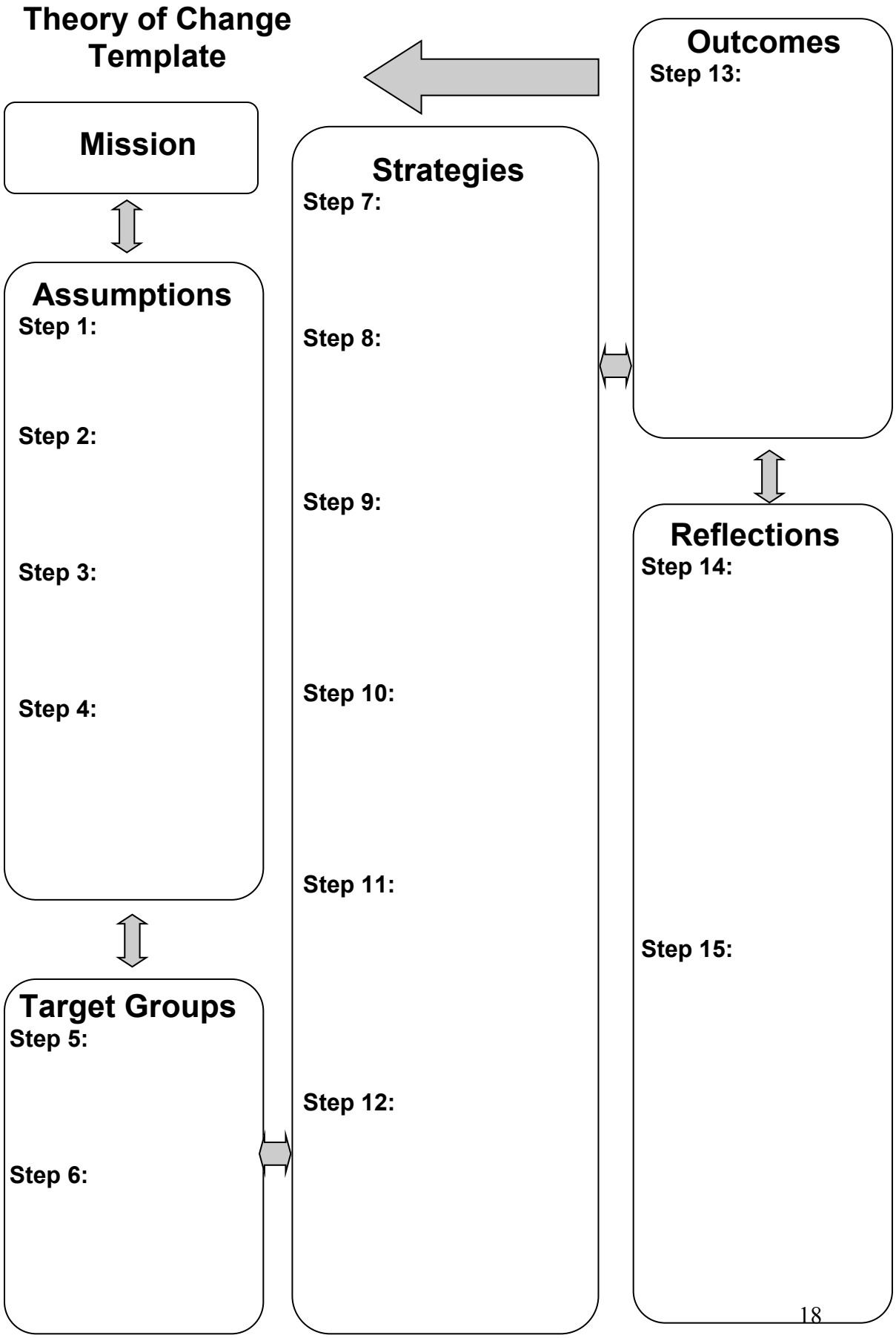
Community Tool Box The University of Kansas http://ctb.ku.edu/en/

How to Plan Your Evaluation
U.S Department of Health & Human Services, substance Abuse and Mental Health Services (SAMHSA)
http://www.captus.org/Western/resources/bp/step7/eval4.cfm

Program Development and Evaluation
University of Wisconsin-Extension http://www.uwex.edu/ces/pdande/evaluation/index.html

Theory of Change
www.theoryofchange.org

W.K. Kellogg Foundation
Evaluation Handbook
http://www.wkkf.org/Pubs/Tools/Evaluation/Pub770.pdf


Theory of Change Template
Mission
Assumptions
Step 1:
Step 2:
Step 3:
Step 4:
Target Groups
Step 5:
Step 6:
Strategies
Step 7:
Step 8:
Step 9:
Step 10:
Step 11:
Step 12:
Outcomes
Step 13:
Reflections
Step 14:
Step 15:

Program: _____(name)_____ Logic Model – Forward Model Template
Situation:

Inputs	**Outputs**		Outcomes -- Impact		
	Activities	*Participation/Other*	Short	Intermediate	Long

Assumptions	**External Factors**

1. SITUATION: circumstances that led to program implementation a. Examples – Increased number of homeless children, lack of affordable housing, large number of families in a short term financial crisis, or need of transitional housing program

2. PRIORITIES: aspects of the program that merit more attention before competing alternatives a. Examples – rules of grant, safety of clients, or mission of the program

3. INPUTS: resources, contributions, investments that go into the program a. Examples – staff, time, money, expertise

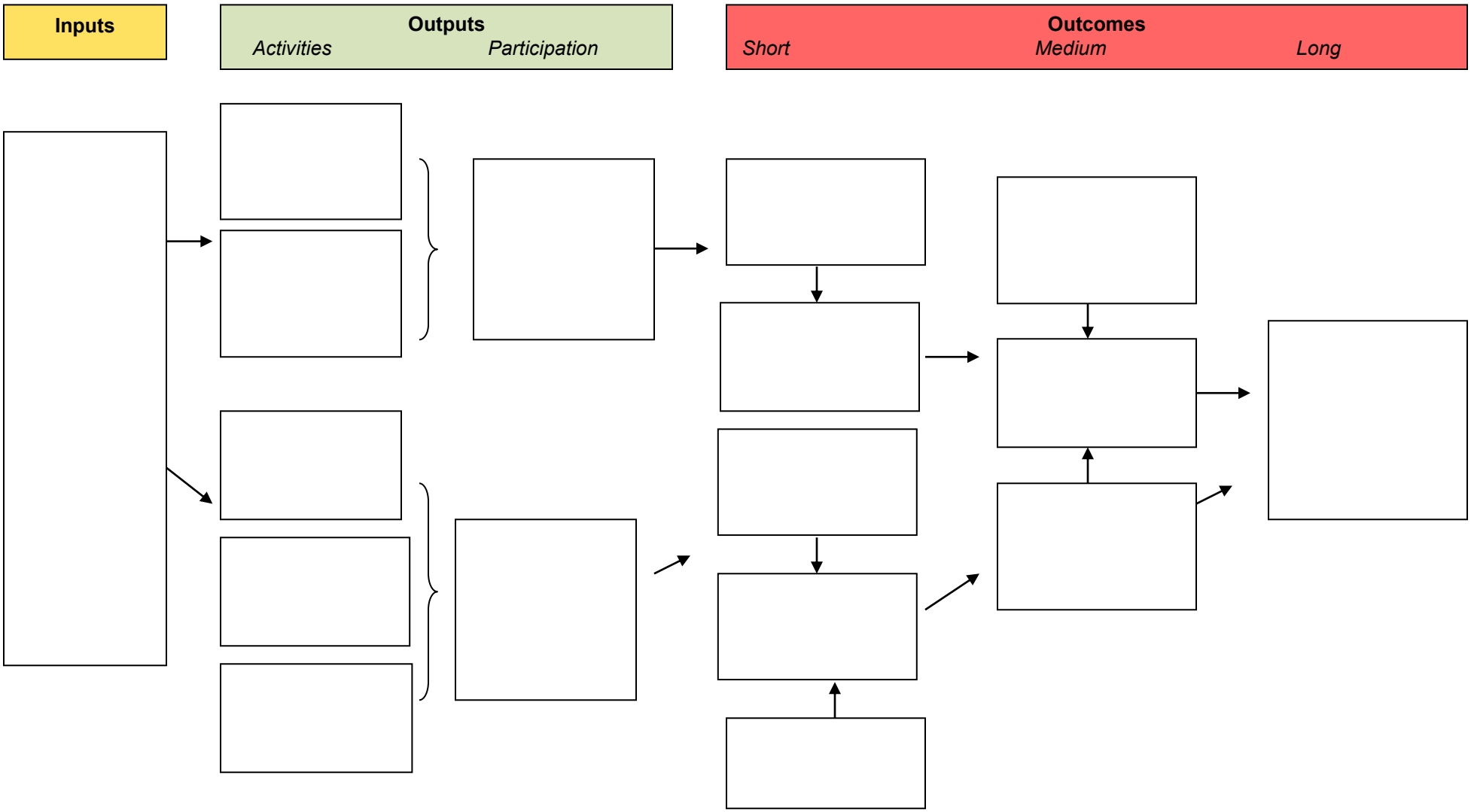
4. OUTPUTS: activities, services, events, and products that reach people who participate or are targeted a. Examples of "What we do" – different programs, volunteer hours, hours programs are available, or advocacy efforts
b. Examples of "Who we reach" – number of men, women, veterans served, education level of clients, ages of clients, or family size

5. OUTCOMES: results or changes for individuals, groups, communities, organizations or systems a. Examples of Short Term – pre/post test results, program attendance, client surveys
b. Examples of Medium Term – program completion rates, employment rates, percent staying in their home for a certain amount of time
c. Examples of Long Term – return rate or clients, percent staying in home for long period of time, comparisons to "best-practices" model

6. ASSUMPTIONS: the beliefs you have about the program, the people involved, and the context and the way we think the program will work a. Examples – a level of honesty from clients, assistance will keep clients in home, program model is the best model

7. EXTERNAL FACTORS: the environment in which the program exists includes a variety of external factors that interact with and influence the program action a. Examples – lack of public transportation, lack of staff or funds, or quality of jobs

Program: _____(name)_____ Logic Model – Flow Chart Template (uses text boxes: add/change boxes and arrows as needed)
Situation:



Assumptions

External Factors

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