

Logic Model Toolkit

Quick Reference Guide & Annotated Logic Model Template

JANUARY 2016



Logic Model Quick Reference Guide

The AEM Logic Model Quick Reference Guide offers a step-by-step approach to creating logic models. Based on a review and synthesis of the logic model literature and AEM's extensive experience using logic models to manage large-scale projects effectively, this guide is intended to provide you with the essential information and guidance needed to create a logic model from scratch.

ALL ABOUT LOGIC MODELS

WHAT A LOGIC MODEL IS & IS NOT

A logic model is a planning tool to clarify and graphically display what a project intends to do and what it hopes to accomplish and impact. A logic model describes basic program components and shows the logic underlying the relationships among resources, planned activities, and desired outcomes over time from planning to results.¹ Simply, a logic model is an *if-then* chain connecting planned activities to intended results.

A logic model is not the same as a *theory of change* or *theory of action*. A theory of change explains the causal relationship between program activities and intended results through a "so that" chain, answering the question, "Why?" A theory of action describes a specific pathway or flow of action for achieving intended results. A theory of action operationalizes a theory of change.

PURPOSES OF LOGIC MODELS

1. **Planning:** A logic model can serve as a planning tool to map out basic program components that bridges the gap between a project in its initial stages and the intended outcomes.
2. **Management:** Because a logic model connects resources, strategies, and outcomes, it can be the basis of a work plan. A logic model can also help monitor and track projects.
3. **Evaluation:** A logic model describes what and when to evaluate; the outcomes can be used as metrics for an evaluation.
4. **Communication:** A logic model is a simple and clear graphical representation of a project that can help communicate what a project is and what it intends to achieve.

Like a roadmap, a **logic model** provides you with the "major highways" to reach your ultimate destination. A work plan that is aligned to your logic model can help you zoom in to a "street-level" view to navigate successfully to your destination on time.

ESSENTIAL ELEMENTS FOR LOGIC MODELS

While logic models may vary by project based on project parameters, there are essential elements common across all logic models. The *AEM Annotated ED Services Logic Model Template* illustrates how these essential elements can be incorporated into a logic model.

1. Key logic model components:
 - a. Inputs (i.e., resources)
 - b. Strategies / Activities clustered into categories
 - c. Outputs
 - d. Outcomes that are *meaningful and measureable*
 - e. Assumptions
 - f. External Factors *with identified risks*
2. Consistent use of key terms, as defined in *Key Terms*
3. Explicit logical connections from *each* strategy through outputs to long-term outcomes, using arrows

ADVANTAGES OF LOGIC MODELS

Logic models offer a multitude advantages, including:

- Increase the consistency in the delivery of technical assistance
- Maintain a common focus for customers and partners
- Provide an implementation plan

- Prioritize what matters most to achieving results
- Offer an easy way to monitor a project
- Serve as a roadmap for effective implementation
- Guide evaluation
- Create and maintain clear parameters for project work plans
- Provide a synthesized high-level description of a complex project that can be communicated succinctly
- Help keep partners on track
- Build consensus about what matters most among a variety of stakeholders
- Help new employees or partners quickly understand a project in its entirety

STEP-BY-STEP PROCESS FOR CREATING A LOGIC MODEL

The steps in this section offer a structured process for creating logic models aligned with the essential elements. This section is organized by five key steps: *Prepare, Map, Cluster, Link, and Verify*.

The *Annotated Logic Model Template*, included on page 6, offers a sample logic model that includes all key components and essential elements along with detailed guidance and tips. View [here](#).

Step 1: Prepare

Start by thinking about your project goals. Backwards mapping from these big ideas to the logic model will ensure alignment.

Step 2: Map

There is no one way to create logic models. This section describes the key components of logic models and the essential elements. Examples are provided for each key component.

- **Inputs:** List and document tangible and intangible resources available for your project.
- **Assumptions:** Generate a list of underlying reasons describing why the Strategies are believed to achieve the Outcomes. Common sources of assumptions are research and collective wisdom. This step is often recursive and happens throughout the development process.

The important thing is to depict all of the logical connections in the context of an originating situation and make the implicit explicit.²

- **External Factors:** List any real or anticipated political, social, or economic conditions that may affect your project. Include any risks. External factors are dynamic: Be sure to review and update them regularly.
- **Strategies:** Identify strategies (or activities) you are implementing in your project. If you also choose to include Activities, add them directly under the respective Strategies. List each strategy separately.
- **Outputs:** For each Strategy, define the Output (or direct product) of what you are planning to do. For example, if the Strategy is “building the capacity of grantees,” an Output could be “training sessions.”
- **Short-Term Outcomes:** Define the changes that are most closely associated with the Outputs.
- **Intermediate Outcomes:** Define the changes that are most closely associated with Short-Term Outcomes.
- **Long-Term Outcomes:** Define the changes that are most closely associated with Long-Term Outcomes. These provide the data needed to measure a project’s goals.

Step 3: Cluster

Putting together common Strategies helps to create coherence in a logic model. Look across the Strategies to see how they are connected: What categories emerge? Cluster Strategies that hang together and label them by category. Then cluster Outputs and Outcomes, respectively, using the same categories.

Step 4: Link

Use arrows to show logical linkages between logic model components. Every Strategy should be linked to at least one Output, and every Output to at least one Outcome. These connections show a logical if-then sequence. If you have clustered the components, you can show linkages between the clusters (versus individual Strategies, Outputs, and Outcomes). Inputs can be linked to strategies as a whole (versus one-to-one basis). Use arrows to reflect any other important connections exist between, for example, different Outputs, or any other logic model components.

Step 5: Verify

Make sure that every Strategy is linked to an Output, and every Output leads to an Outcome. There should be a logical progression from the left to the right that is easily understood by any stakeholder. Key questions to consider in the verification process are:

- Are all essential elements included?
- Is the level of detail specific enough to describe the relationship between logic model components?

- Is there a sound logical progression from Strategies, through Outputs, to Outcomes? Is the logic sound both ways: from left to right and from right to left?
- Is the Logic Model aligned to the “big ideas” for your project?
- Do the outcomes reflect meaningful and attainable changes?

Key Logic Model Components Defined

Activities: Actions needed to implement a project (e.g., “Provide training”); or “What do we do?”

Assumptions: Underlying reasons or beliefs describing why the Strategies are believed to achieve the Outcomes

External Factors: Environmental changes that can affect program implementation and success (e.g., political, social, economic)

Inputs: Human, financial, and material resources; both tangible (e.g., equipment) and intangible (e.g., partners)

Intermediate Outcomes: Changes in behavior or environmental conditions, typically attainable in 3-4 years

Long-Term Outcomes: Changes in the overall conditions in a population or environment, typically attainable in 5 or more years

Outcomes: Changes or benefits expected to result from Strategies or Activities and Outputs (e.g., knowledge, skills, status, levels of functioning); or “So what?”

Outputs: Observable products, services, events, participation that results from Strategies and Activities; or “How many?”

Short-Term Outcomes: Changes in knowledge or awareness, typically attainable in 1-2 years

Strategies: Broad concepts, approaches, or sets of actions to achieve a project’s outcomes (e.g., “Build the capacity”); or “What do we do?”

TECHNOLOGY SOLUTIONS

There are two technology enabled logic model options that stand out for your consideration:

GRADS360° Logic Model Portal: Created by AEM for the U.S. Department of Education’s Race to the Top-District (RTT-D) program, this tool enables uploaded logic models to link to work plans in GRADS360°, where it can be viewed by multiple stakeholders. Contact AEM for a demo. See how in the Contact Us section on p. 4.

The Education Logic Model (ELM) application:

Created by the Regional Education Lab (REL) for the Pacific region, ELM is an interactive tool that guides users through the development of a logic model. View [here](#).

KEY RESOURCES

Using Logic Models to Bring Together Planning, Evaluation, & Action: A Logic Model Development Guide

Author: WK Kellogg Foundation

Year: 2004

Source: View [here](#).

Logic Models: A Tool for Effective Program Planning, Collaboration, and Monitoring

Authors: Kekahio, L., Cicchinelli, L., Lawnton, B., & Brandon, P. R.

Year: 2014

Source: View [here](#).

Learning From Logic Models: An Example of a Family/School Partnership Program

Authors: Coffman, J.

Year: 1999

Source: View [here](#).

How to Build a Logic Model: Tips for Conducting Program Evaluation

Authors: Holm-Hanson, C.

Year: 2006

Source: View [here](#).

Logic Model Workbook

Authors: Innovation Network, Inc.

Year: 2010

Source: View [here](#).

Tips for Creating Logic Models

- ✓ Engage others in the process of developing a logic model. The process offers an opportunity for a group to achieve consensus on program components and results, gain a renewed sense of appreciation for program, and reflect on a program's direction and assumptions.
- ✓ Include what is important. If a project cannot move forward without it, it's important.
- ✓ Pay close attention to level of detail of the components. Make sure that you focus on the most important strategies and outcomes.
- ✓ Use plain language that can be easily understood.
- ✓ Use clear, specific, and concise language that describes your logic model components. Avoid details. They can distract from communicating a project's scope and intent.

END NOTES

¹ WK Kellogg Foundation (2004). *Logic Model Development Guide*. Battle Creek, MI: WK Kellogg Foundation, p. 5. Retrieved from, <http://www.smartgivers.org/uploads/logicmodelguidepdf.pdf>.

² McLaughlin, J. (1999). Logic Models: A Tool for Telling Your Program's Performance Story. *Evaluating and Program Planning*, 22, pp. 65-72. Retrieved from, <http://www.smartgivers.org/uploads/logicmodelguidepdf.pdf>.

CONTACT US

For questions about this guide, requests for support to develop logic models, or feedback on this guide, please contact AEMEDServices@aemcorp.com.

ABOUT AEM

Applied Engineering Management (AEM) provides extensive program and project management experience, technical skills, and subject matter expertise to support federal, state, and local initiatives to improve education for students across the country. Learn more at <http://www.aemcorp.com/>.

Annotated Logic Model Template

TIP (STRATEGIES):

- Organization:** Put 1 strategy in each box.
- Activities:** Adding Activities under Strategies helps make the logic model more specific and can aid implementation.

TIP (OUTPUTS):

Outputs are different than Outcomes, and distinguishing between the two is important. Outputs are products or services that result from what you do; whereas, Outcomes are changes that happen as a result of what you do.

TIP (S-T OUTCOMES):

These are typically changes in awareness and knowledge.

TIP (I OUTCOMES):

These are typically behavioral and environmental changes.

TIP (L-T OUTCOMES):

These can also be considered as "impact" and can be synonymous with project "goals."

TIP (ASSUMPTIONS):

Continue to check and clarify assumptions as you develop your logic models.

ASSUMPTIONS	What are the principles, beliefs, or ideas about the project or the people involved in the project? What research or experience is driving the way you think about how the project will work?				
INPUTS	STRATEGIES / ACTIVITIES	OUTPUTS	SHORT-TERM OUTCOMES (1-2 Years)	INTERMEDIARY OUTCOMES (3-4 years)	LONG-TERM OUTCOMES (5+ years)
<p>What are <u>tangible</u> resources that exist to support the project?</p> <ul style="list-style-type: none"> Funding Personnel Materials Technology <p>What are <u>intangible</u> resources that exist to support the project?</p> <ul style="list-style-type: none"> Partnerships Time Research Regulations Leadership Expertise 	<p>What are the broad approaches or sets of actions you are employing in this project?</p>	<p>What are the observable products or services of your strategies and activities? Who will have participated? What will be produced?</p>	<p>What are the changes expected directly resulting from your strategies and activities?</p>	<p>What are the changes expected directly resulting from your strategies and activities?</p>	<p>What are the ultimate desired results your project is trying to achieve? What are the overall changes you want to make in a population or system level?</p>

EXTERNAL FACTORS

What are the current or anticipated dynamics in the external environment that can affect the success of your project? What is happening politically? Socially? Economically? What are real or potential risks?

INSTRUCTIONS: Use the companion Quick Reference Guide to Logic Models to create your logic model.

TIPS (GENERAL):

- Clustering:** For Strategies, Outputs, and Outcomes, consider grouping similar elements together. This provides a higher-level view of a project and can make the logic model significantly easier to read.
- Showing Logical Linkages:** Making and showing clear logical connections between project components is the crux of what a logic model is designed to do. Examine the logical relationships by asking "If we do this, then is it more likely that that will happen?"