

Defining and Measuring Progress: Aligning Data and Measures to Outputs and Outcomes of Logic Models

November 17, 2022

Regional Educational Laboratory West

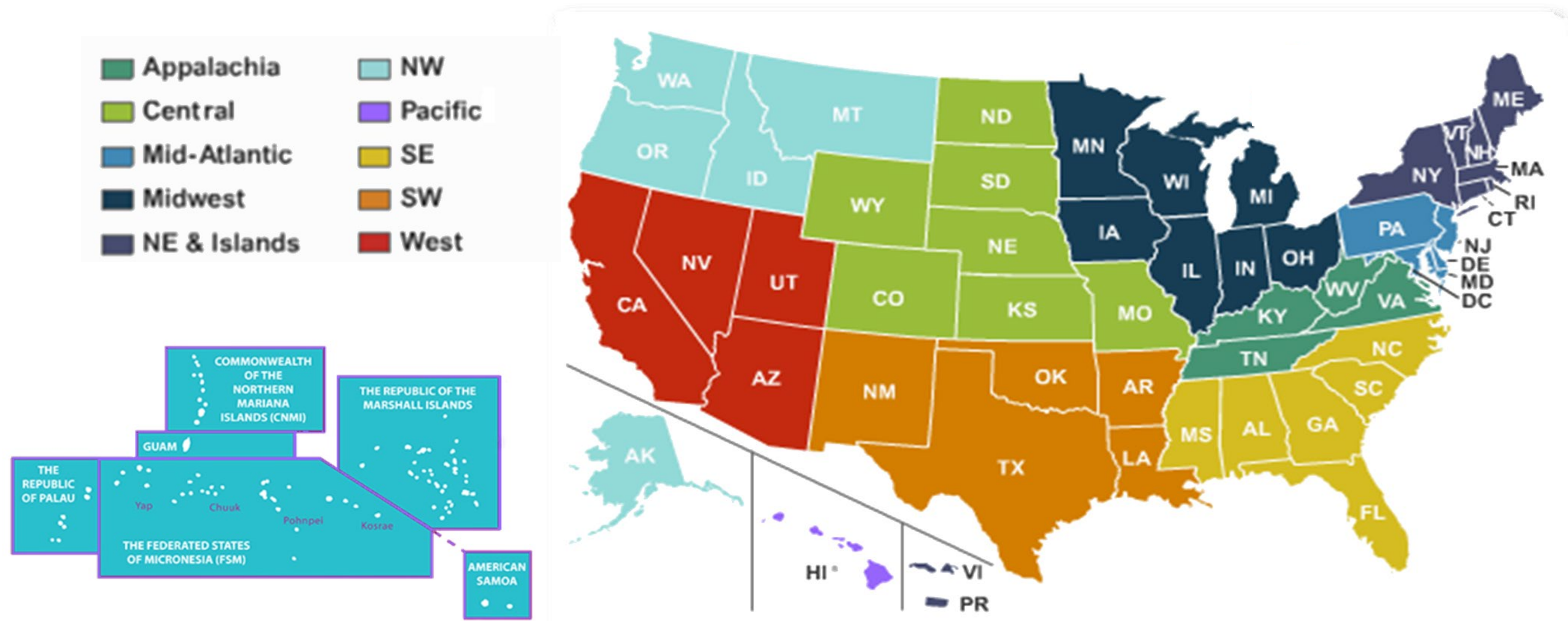
Lenay Dunn, PhD
Deputy Director

Tran Keys, PhD
Senior Research Associate

Jennifer Brown
Director of Head Start Programs, Northern Arizona Council of Governments (NACOG)

Welcome, Objectives, and Agenda

Ten RELs work in partnership with LEAs, SEAs, and others to use data and research to improve academic outcomes for students



RELs: Three Main Activities

- ✓ Conduct applied research
- ✓ Facilitate the flow of actionable, credible, up-to-date research evidence
- ✓ Provide technical support around data collection, evidence use, and research

Today's Presenters

Lenay Dunn, PhD | Deputy Director and Senior Researcher, REL West



Tran Keys, PhD | Senior Research Associate, REL West



Jennifer Brown | Director of Head Start Programs,
Northern Arizona Council of Governments (NACOG)



Webinar Objectives

Participants will:

1. Have a greater understanding of the purpose of logic models and how they can be used to define and measure progress toward identified outcomes.
2. Understand how to link data and measurement to logic model components.

Agenda

1. Welcome, Objectives, and Agenda
2. What Is a Logic Model and Why Should You Create One?
3. Data and Measures
4. Aligning Data and Measures to Logic Model Components
5. Application of Logic Models and Measurement Plans
6. Q&A, Additional Resources, Brief Feedback Survey

Partner highlight throughout...

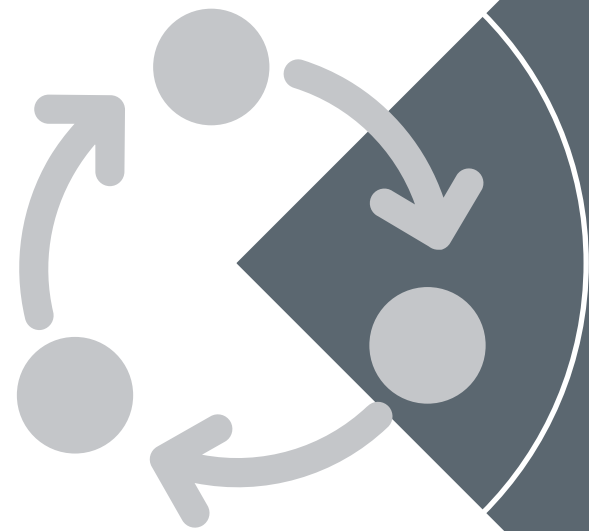


What Is a Logic Model and Why Should You Create One?

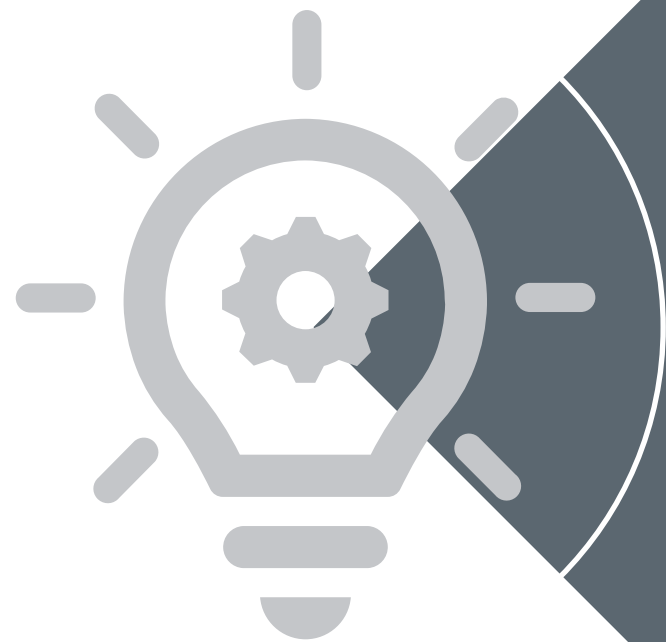
Poll:

On a scale of 1–5, where 1 is *not at all familiar* and 5 is *extremely familiar*, how familiar are you with logic models?

What Is a Logic Model?



A graphical representation of the relationships between the parts of a program and its expected outcomes.



A framework for program planning, implementation, and evaluation.

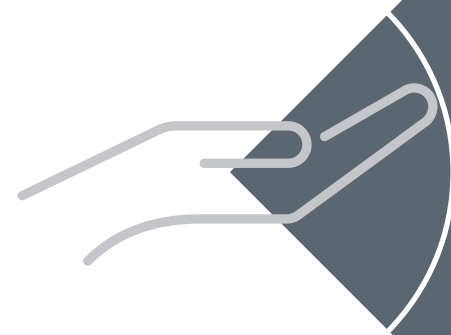
Why Create a Logic Model?



To create a common language among team members.

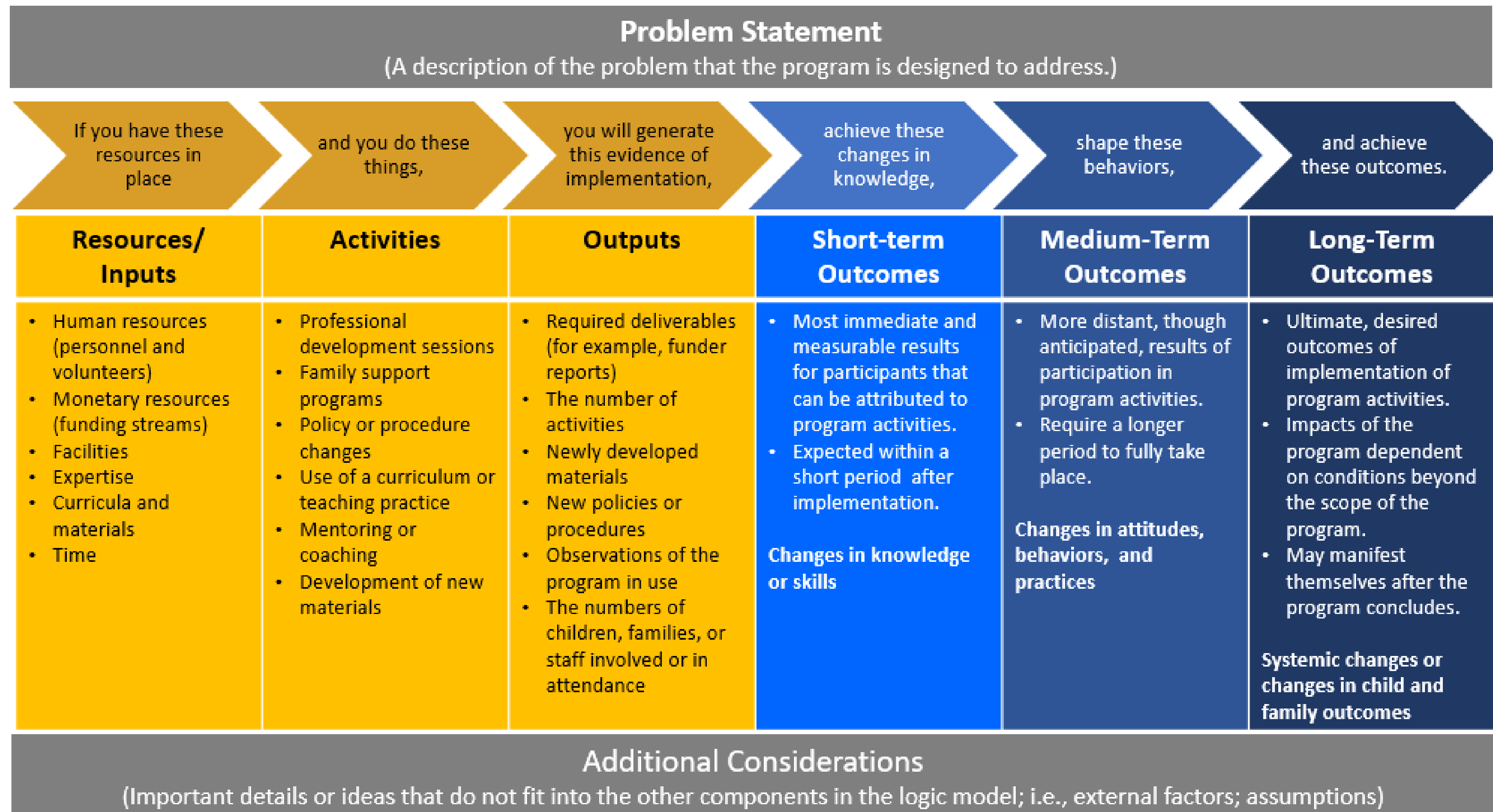


To showcase connections between program components.



To support every activity of a program evaluation.

Annotated Logic Model



Considerations for the Development of a Logic Model

Logic model development team

- Representatives from all stakeholder groups.
- Representatives from program leadership, staff, and consultants if possible.

Data

- Collect existing data and materials to help inform the logic model.

Direction

- Logic models can be developed both forward and backward.

Logic Model Reflection

Are our target audiences clear? Are we targeting who we want to target?

Do stakeholders have a shared definition of the desired results?

Did we examine our assumptions about what it takes to achieve those results?

Did we examine research and practice to choose our strategies?

Did we consider capacity when determining our strategies?

Does the logic model clearly show the relationship of strategies to results? Are these connections valid?

How does the logic model reflect our priorities?

To what extent can these strategies be sustained?

Partner Highlight



NACOG's reasons for developing a logic model and measurement plan

- Data-driven decisionmaking
- Common understanding of programmatic activities and desired outcomes
- Engage broader leadership team to support their work with programmatic aspects
- Bring in outside expertise to increase team capacity to develop logic models

Data and Measures

Measuring Outputs

Output measures focus on what was produced, not the value or effectiveness of the program

Outputs can be easily quantified and counted

Output Examples



- Number of funded and licensed spots
- Number of families served
- Number of children served
- Number of home visits
- Number of meals served
- Number of families who participate in support/education programs
- Kindergarten registration information shared with families

Measuring Outcomes

Outcomes focus on the value or effectiveness of the program

Outcomes can be measured quantitatively and qualitatively

Outcome Examples



Example of Outcomes from the Family Engagement and Community Services Strand:

Short-Term Outcome:

- Families increase their awareness of available services and supports

Medium-Term Outcome:

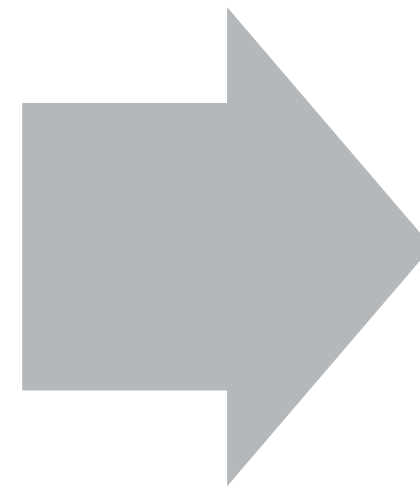
- Families have medical and dental homes

Long-Term Outcome (shared across all strands):

- All children and families are ready for Kindergarten

Data Collection Plans

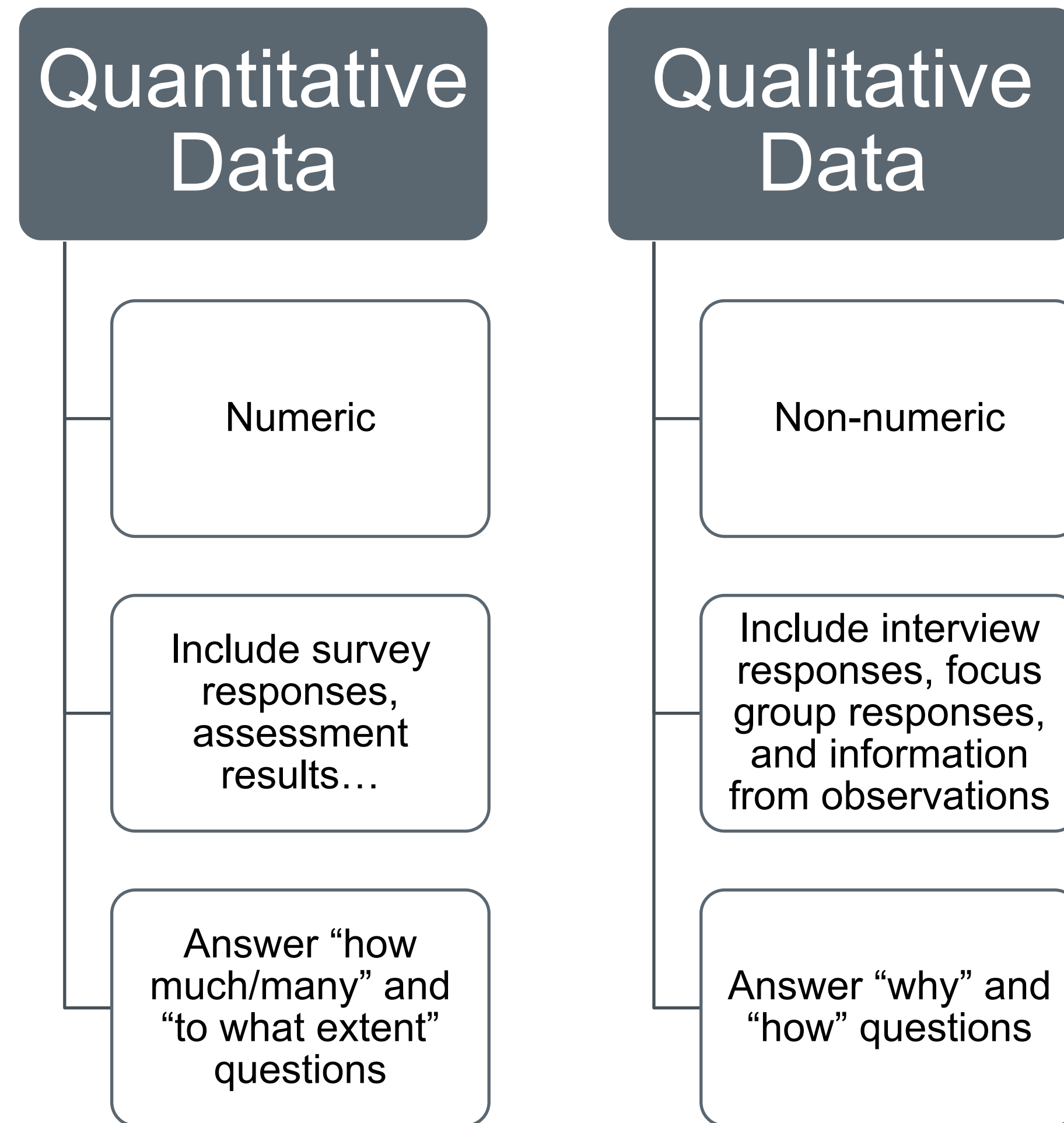
What data do you
already collect?



What data do you
need to start
collecting? How will
you collect those
data?

Data Types: Quantitative and Qualitative

You will likely need both quantitative and qualitative data to measure your outputs and outcomes.



Data Sources and Collection Methods

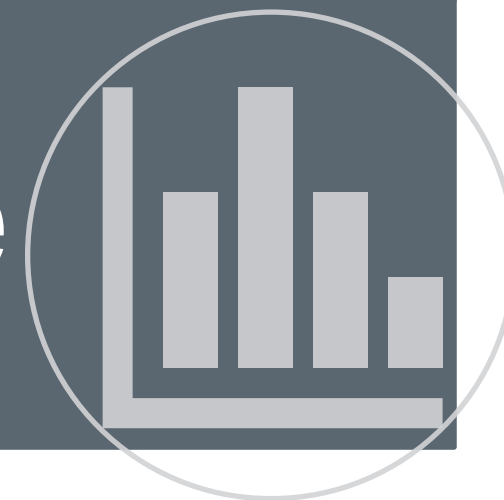
- Interviews
- Observations
- Focus Groups
- Open-ended surveys
- Documents
- Artifacts

Qualitative



- Structured surveys
- Extant data (e.g., district database)
- Student outcome assessments

Quantitative



Choosing Data Sources and Collection Methods

What data do you need to measure your outputs and outcomes?

How will data be collected? Who will collect it? When?

What data sources do you have access to? How can you leverage existing data?

What time and resources can you devote to data collection?

What capacity is there to collect, analyze, and interpret the data?

Tips to Improve Data Collection

Collect data from multiple sources

Collect data from comparison groups not receiving the program when possible

Collect baseline data (i.e., data from before the program was implemented)

Only collect data you will use to inform decisions

Take steps throughout the process to ensure data quality

Use culturally relevant evaluation approaches

Involve diverse education partners in data collection plans

Aligning Data and Measures to Logic Model Components

Targets and Data Sources for Logic Model Components

Logic Model Component	Target	Data Source
Outputs		
Short-Term Outcomes		
Medium-Term Outcomes		
Long-Term Outcomes		

Targets and Data Sources for **Outputs**

Output	Target	Data Source
# of students served	At least 50 students are served	Attendance records
# of teacher professional learning sessions delivered	Two teacher professional learning sessions delivered a month	Program records
Program participation rate	90% of students eligible for services participate in the program	Program records

Measuring Output Example



Output:

- Number of families served

Target:

- Serve 500 families annually

Data Source:

- Program enrollment records

Targets and Data Sources for Short-Term Outcomes

Short-Term Outcome	Target	Data Source
Students increase their understanding of strategies to improve their math confidence	90% of students participating in the program increase their understanding of strategies they can use to improve their math confidence	Student survey (end of first semester, end of second semester)
Teachers increase their math instructional skills	100% of participating teachers report an increase in their math instructional skills over the course of the school year	Teacher survey twice a year (beginning and end of school year)

Measuring Outcome Example



Short-Term Outcome for Family Engagement and Community Services Strand:

- Families increase their awareness of available services and supports

Target:

- 90% of families indicate they are aware of available services and supports

Data Source:

- Bi-annual parent survey

Targets and Data Sources for Medium-Term Outcomes

Medium-Term Outcome	Target	Data Source
Students increase positive attitudes towards math	80% of students participating in the program demonstrate an increase in positive attitudes towards math	Student survey (end of first semester, end of second semester)
Students improve their performance on math course assignments	Student grades on math course assignments indicate an improvement from the beginning of the school year	Grades on math course assignments (beginning and end of the year)

Measuring Outcome Example



Medium-Term Outcome for Family Engagement and Community Services Strand:

- Families have medical and dental homes

Target:

- By the end of their time participating in Head Start, 100% of families have a primary medical and dental provider

Data Source:

- Bi-annual parent survey

Targets and Data Sources for Long-Term Outcomes

Long-Term Outcome	Target	Data Source
Students' math achievement increases	80% of students participating in the program show an improvement in interim assessment scores by the third interim assessment	District interim assessment
	More than half of the students participating in the program demonstrate grade-level math proficiency on the state assessment	End of Year state assessment

Measuring Outcome Example



Long-Term Outcome for Family Engagement and Community Services Strand:

- All children and families are ready for Kindergarten

Target:

- 90–100% of children transitioning into kindergarten will meet kindergarten readiness indicators

Data Source:

- Student assessment for kindergarten readiness

Partner Highlight

How NACOG Head Start Programs aligned data and measures, pitfalls and challenges they experienced, and suggestions to overcome them.



Application of Logic Models and Measurement Plans

Next Step Questions: *Sharing the Logic Model*

How will the logic model be shared with other team members? What information will need to be communicated?

How will the logic model be shared with program staff? What information will need to be communicated?

Next Step Questions: *Using the Logic Model and Measures*

How and when will you revisit the logic model and the data collected to support continuous improvement?

Partner Highlight

How NACOG Head Start is using the logic model and aligned measures in their work.



Q&A, Additional Resources, Brief Feedback Survey

Resources

- [Logic models: A tool for designing and monitoring program evaluations](#)
This introduction to logic models defines the major components of education programs—resources, activities, outputs, and short-, mid-, and long-term outcomes—and uses an example to demonstrate the relationships among them.
- [Logic models for program design, implementation, and evaluation: Workshop toolkit](#)
This toolkit is designed to help practitioners learn the overall purpose of a logic model, the different elements of a logic model, and the appropriate steps for developing and using a logic model for program evaluation. This toolkit includes a facilitator workbook, a participant workbook, and a slide deck.
- [Program evaluation toolkit: Quick start guide](#) (Module 1: Logic Models)
This toolkit provides resources to support individuals responsible for evaluating and monitoring local, state, or federal programs. The toolkit comprises eight modules that cover critical steps in program evaluation, beginning at the planning stages and progressing to the presentation of findings. Model 1 is on logic models.

Stay tuned, infographic coming soon!

*Aligning Data and Measures to Outputs and Outcomes of
the Logic Model*

Let's Hear From You...



*Type into the chat box
OR
Unmute yourself and share verbally*

Questions? Reflections? Insights?

Stakeholder Feedback Survey

Brief Feedback Survey

https://www.surveymonkey.com/r/Webinar_LogicModels

Closing

Type in the chat:
One takeaway from the webinar

Thank you!

This presentation was prepared for the Institute of Education Sciences (IES) under Contract 91990022C0003 by Regional Educational Laboratory (REL) West at WestEd. The content of the presentation does not necessarily reflect the views or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.