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Logic Models: How this tool can help you make the case for your DEI programs

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Logic Models: How this tool can help you make the case for your DEI programs

CoNECD 2024

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CENTER FOR EVALUATION & RESEARCH FOR STEM EQUITY
UNIVERSITY of WASHINGTON

Hello, we are happy to be sharing with you about how logic models may be helpful for you. We are from the University of Washington Center for Evaluation & Research for STEM Equity (CERSE, pronounced like the words “SIR”-”see”). We are here with CERSE Director Dr. Liz Litzler, Associate Director Dr. Erin Carll, and thank our collaborator Senior Research Scientist Dr. Emily Knaphus-Soran who is not able to be here today.

40 minutes total

Slide 1-5: 4 minutes
Slide 6: (Audience Engagement) 5 minutes
Slides 7-11: 4 minutes
Slide 12: (Audience Engagement) 5 minutes
Slide 13-14: (Audience Engagement) 10 minutes DIY
Slide 15: Takeaways – 1-2 minutes
Slide 16: 10 minutes final Q&A

Topics for Today

Why use logic models?
What are the components of a logic model?
Make your own logic model!
Lessons Learned and Final Takeaways

***Attendee engagement welcomed throughout.**

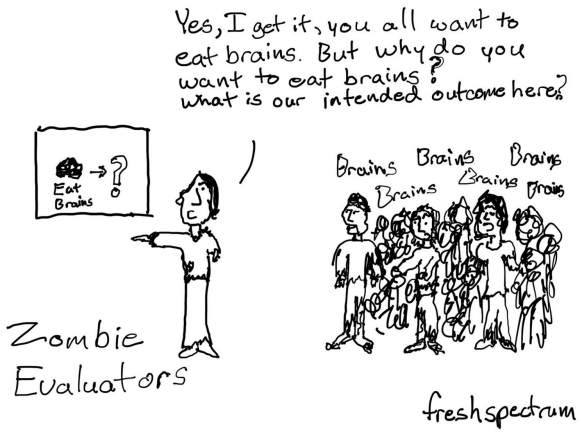
During this workshop, we talk about how logic models can be useful and what components make up a logic model. Your engagement is welcome throughout – please feel free to share comments or ask questions as we go. We'll do our best to leave as much time as possible for activities and discussion and we've built in time for you to make your own logic model and to discuss lessons learned.

Feedback

How familiar are you with logic models?

First, let's get a sense of who is in the room today. Please…
-raise your hand if you have seen a logic model before.
-raise your hand if you have seen a logic model before and understood anything about it.
-raise your hand if you've made a logic model before.

Why use Logic Models?



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What are logic models? They are frameworks that help us organize our thinking and planning for projects.

You use Logic to make connections between what you are doing and what you want to achieve.

Logic Models are one term/tool. Theories of change can also be helpful – these are generally less detailed than logic models and are meant to show a conceptual understanding of how the program will succeed. They are complementary tools.

Logic models are also beneficial because they help you:

-make strategic decisions, plan programming, and identify gaps in the programming,

-clarify and quickly communicate your plan,

-demonstrate to stakeholders you have thought things through, and

-make the case for funding.

When working in the area of DEI in particular, developing a clear plan for your initiative and identifying intended outcomes can hold you accountable to your vision for change and help you demonstrate that you're doing what you hoped. For example, say you have a Bridge program for first generation students in engineering. Hopefully you have an intention behind this program, likely to improve students self-efficacy and/or preparation for engineering coursework and help them to develop a community of peers that can support each other both socially and academically in their transition to college. You might also have a further layer of DEI-focused intention built into your program. Because there's frequently a strong correlation between race and first gen status, it could be that you're also intending to improve diversity in engineering by providing a strong start for students from racially/ethnically minoritized groups. If that's the case, racial equity in the effect of the program might also be identified as an important outcome. A logic model provides a quick reference for charting these connections between a program's activities and its intended outcomes.

What is your program trying to do?

Create a Basic Logic Model Activity Book by Chris Lysy

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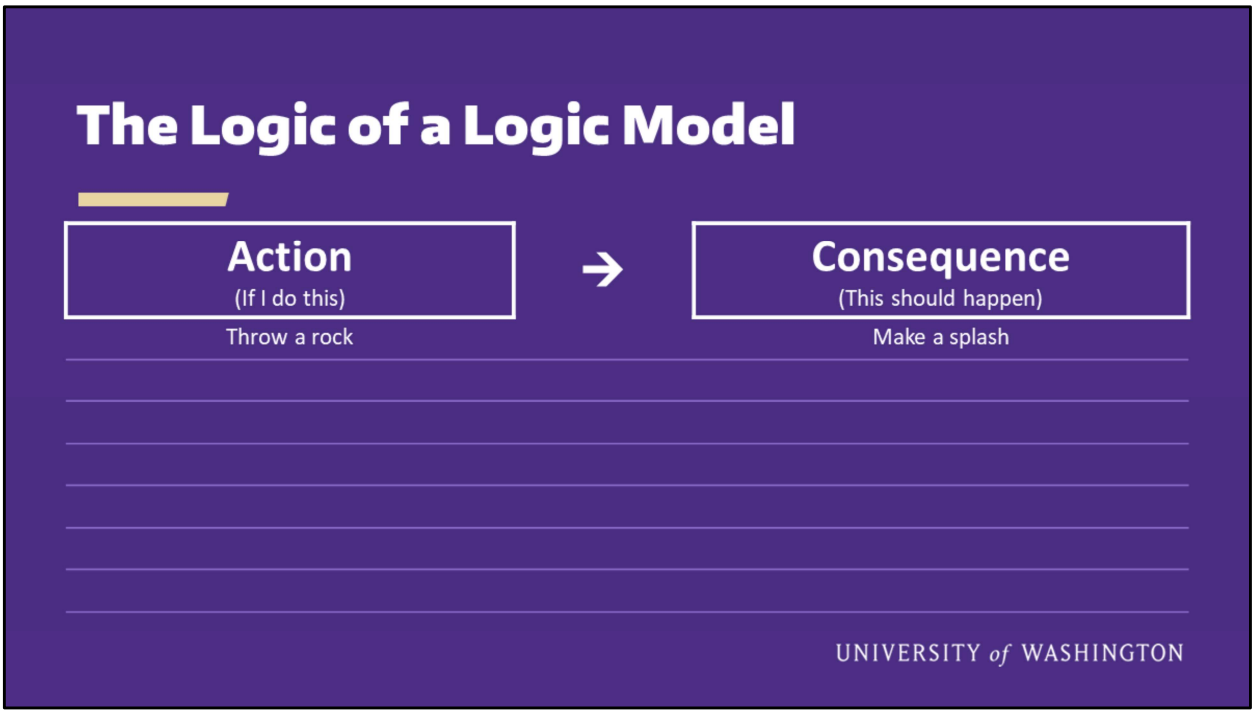
Understanding what you are trying to do in your program is the key to your logic model and there are tools you can use to flesh that out. The QR code on this slide will bring you to a logic model workbook by Chris Lysy. We think this is a helpful tool for doing this kind of reflection and drives some of the work we'll be doing together today. This workbook recommends that, before you start developing your logic model, you should consider your answer to this question and think about how other partners in your work might also answer this question.

Take about 30 seconds now to jot down your answer to this question.

Keep the answer to that question in the back of your mind as we work together through the logic model basics.



At its core, a logic model is intended to illustrate the connection between the work you do and the impact you're trying to make – it makes explicit the link between actions and consequences.

Let's make this notion concrete by starting to think about the actions you take in your day-to-day work and their expected consequences.

A very simple example is that if you throw a rock in a pond, you expect that it will make a splash.

I'd like you to think of one specific thing your program does (or, if not a program, the work you do) and its expected consequence.

It might be helpful to phrase these as "if-then" or "so that" statements

- **If** I throw a rock, **then** it'll make a splash.
- We match incoming students with peer mentors **so that** students will feel a stronger sense of community.

Please feel free share ideas as they come to you.

(Take power point out of slideshow mode, spend 5 minutes taking brainstorms from folks

and list their responses in the table on the slide)

We're starting simple here – but you could continue to string together "so that" statements and come up with short, medium, and longer term consequences.
- We match incoming students with peer mentors **so that** students will feel a stronger sense of community **so that** they will have an increased sense of belonging in engineering **so that** they will persist in engineering despite setbacks **so that** they will graduate with an engineering degree **so that** the field of engineering will become more diverse

What are the components of a Logic Model?

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Now we'll walk you through how to build these fundamental logic chains out into a full logic model, starting with an overview of the main components of a logic model and introduction to logic model lingo.

The Basics

Inputs	Activities	Outputs	Outcomes & Impact		
			Short	*Mid*	*Long*
What is invested and who is responsible?	What do we do?	Evidence that we did the activity: Who did we reach?	What will we achieve in the **short term**?	What might be achieved **mid-term**?	What are our goals for **long-term** impact?
		Products/ Deliverables	Lasting impacts; what difference does the project make?		

Context, Rationales, Assumptions

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These are some of the most common categories included in logic models.

Let's talk through each of these categories. We've included common language and definitions to help you understand the differences.

- Inputs are the resources (people, information, groups) that will be used to help the project be successful. Resources are typically included in a logic model to give an idea of what you have to work with.
- Actions like the ones you identified a few minutes ago are referred to as "activities".
- Outputs are evidence that you did the thing you said you were going to do. These are metrics used to indicate that actions have taken place. This could be the number of people served, the amount of scholarships distributed, the number of activities conducted, etc.
- Outcomes answer the questions what does success look like? What difference does the program make? It's helpful for these to be phrased in terms of change and measurable. They should also be within the program's sphere of influence.
- Extra info: Impact is sometimes differentiated from outcomes; it is described as the impact of a program on a larger scale- what is different for people/the community because the program exists?

Output vs. Outcome

Outputs	Outcomes
# of student workshops held, # of participants	Students feel a greater sense of belonging in the department
# of presentations given	90% of presentation attendees report learning new strategies for retention
New strategic retention plan created	Department faculty understand shared goals and are working toward same outcomes

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It's sometimes tricky to differentiate outputs from outcomes - we hope these examples offer some additional insight into the differences. Outputs generally are "counts" of things or documentation that an activity occurred. Outcomes are the results of that activity.

The Basics: Example

Inputs	Activities	Outputs	Outcomes & Impact		
			Short	Mid	Long
$100,000 grant	Provide Scholarships to students from diverse backgrounds	20 students receive scholarships	Students devote more time to school	Students graduate	Field is diversified

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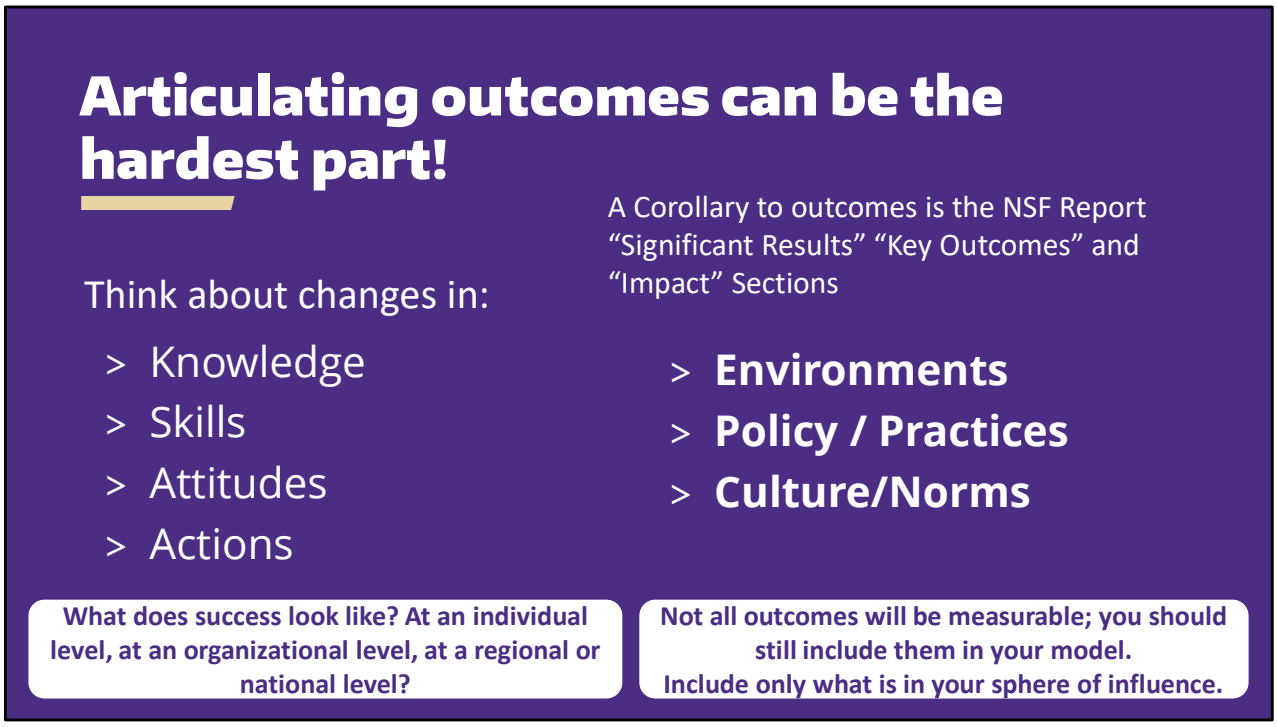
Let's walk through what a very simple fleshed-out logic model might look like.
Notice the overarching categories that we talked about before.
In this case, we provide examples of these overarching categories to show what a logic model for a scholarship program might look like.

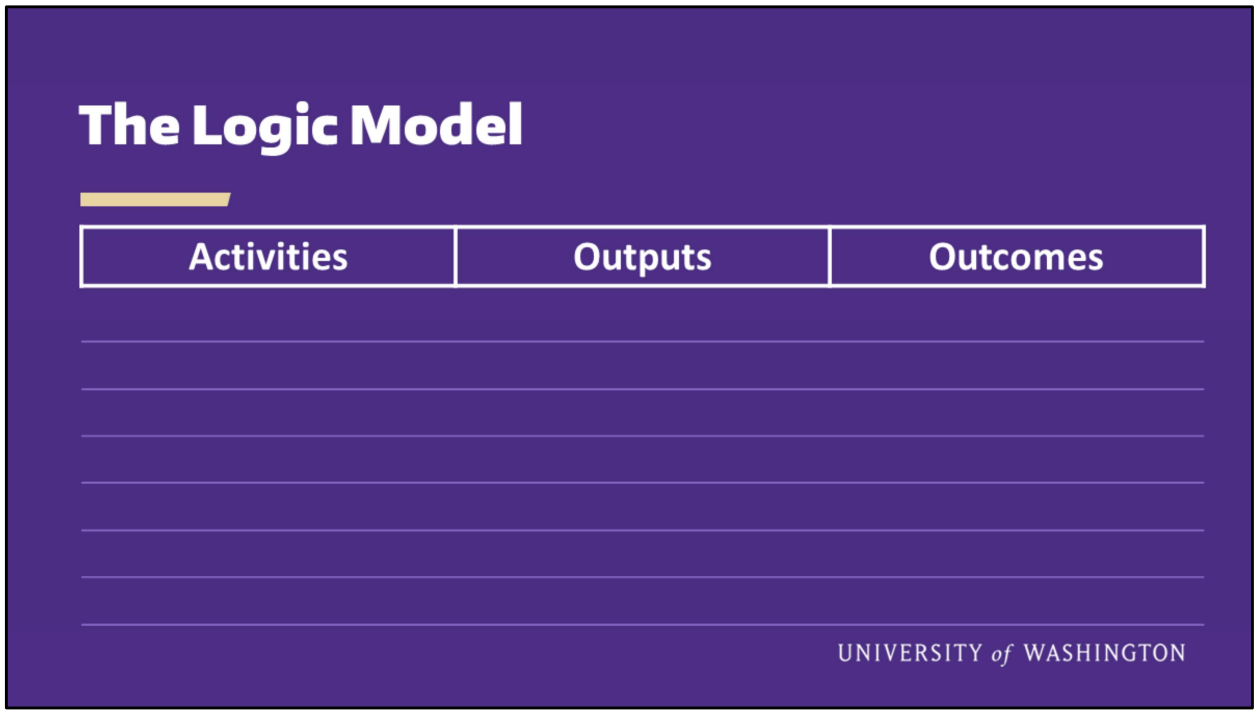
Of course, many scholarship programs (like s-STEMs or NRTs) also have other program components that we would need to include, probably as new rows in this table.

[walk through example]



In logic models, we refer to the expected consequences as "outcomes."
We expect some of these outcomes to normally be shorter term than others. Some outcomes can be measured right away (did the rock you threw make a splash in the water?).
Knowledge, skills, attitudes, and actions are usually all things that can be measured in a short term grant period.
But culture/norms/environments, are longer term work. Sometimes we can measure these longer-term outcomes in 5 year grants, but you certainly can't expect to see big changes in these longer-term areas in a 2-year grant.

One way to think about outcomes is to ask yourself what success of your program/activity would look like- and to think about success at different levels of measurement (individual/organizational/systems, etc).
Usually, you have a big broad vision that is not measurable and not really what can happen within a grant period. It is still important to articulate outcomes even if they aren't measurable. But make sure your outcomes are actually within the sphere of influence of your program.



We will copy and paste the info from slide 6 into this slide, and then we will take audience suggestions for outputs

Looking at the activities you just brainstormed, what are some ways you can measure those actions? How can you show evidence that those actions actually took place?

(5 minutes to take brainstorms from folks)

Make Your Own Logic Model!

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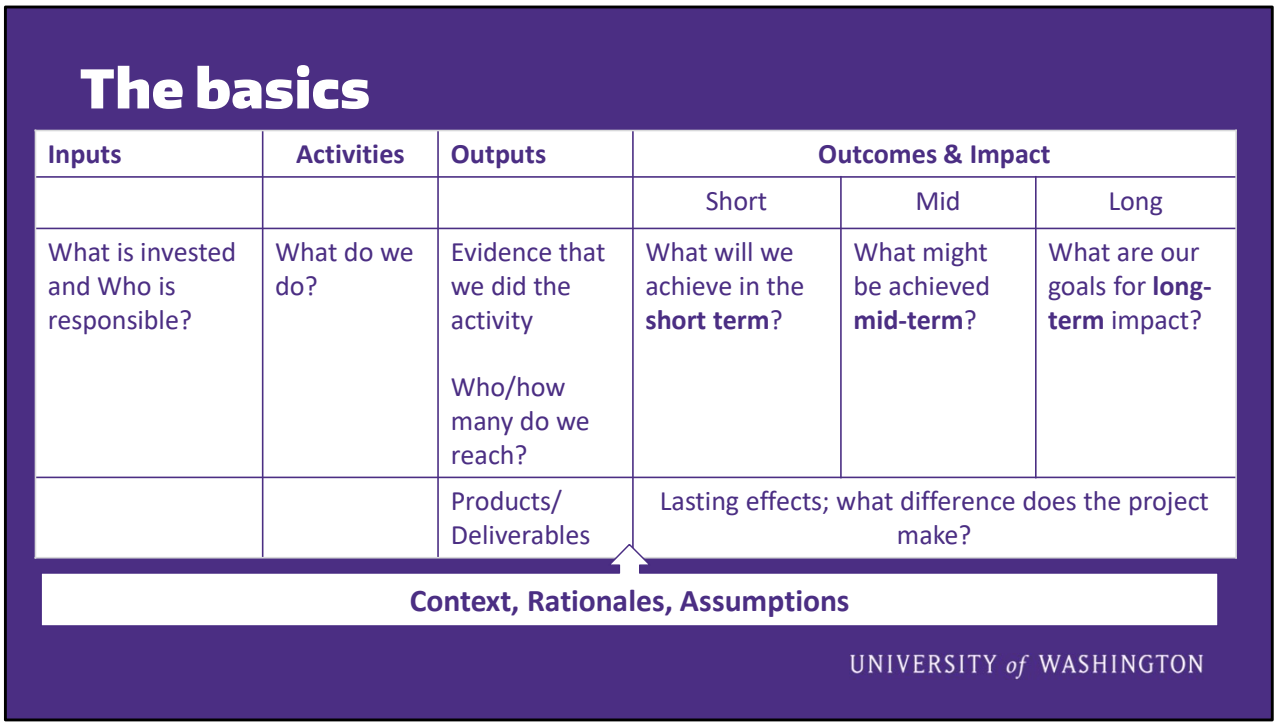
Audience participation.
We will pass out paper templates to the audience



This slide is a reminder of the categories and what you should put in the boxes in the template.

1. What activities will you do in your grant?
2. Who & how many will be reached by those activities? Try to come up with a few outputs.
3. What will be your products or deliverables?
4. What are the expected consequences of your actions? Try to write down 3 outcomes (they could all be in short-term outcomes). It is okay if they aren't measurable within the timeline of your grant, but they should be within your project's locus of control (sphere of influence).
    1. For example, you wouldn't expect that your s-STEM scholarship program with 10 students led by 1 faculty member is going to be able to change the culture of the whole department or the whole university. The one faculty member and 10 students don't have control over the culture of the university or even the department. That's not in your sphere of influence. BUT, if you are part of a RED grant with leadership involved and your goal is to change your department culture, that is technically in your sphere of influence and could be a relevant outcome.

Once you've written down some ideas, consider which of these outputs or outcomes you

can actually measure and report to your funder/leaders/collaborators about.

Remember that you can use “if-then” or “so that” statements to help you come up with the outcomes.
Consider if you want to connect your activities to these outcomes more directly by adding arrows or other way-finding mechanisms.

Final Takeaways

- Logic Models can guide the planning and implementation stages of a grant.
- They aren't just for the proposal.
- An evaluator can help you.
- It is okay if everything isn't measurable.
- Revisit your Logic Model regularly

Articulating your outcomes as you start to ideate on a project idea can be hugely beneficial and help you write the proposal.
Activities are fun and easy to think about; push yourself to figure out if those activities will reach the outcomes you really want.
Consider starting with the end in mind (at outcomes, rather than activities).

We believe it can be useful to revisit your logic model- you might realize you've been missing an important part of your project or that you need to focus more on a certain area.
You can do this review (and revision) of logic models with engaged community members.
Use the logic model to create talking points, program descriptions
Share it with advisory boards & other relevant community It will show folks you've thought deeply about your program.

Final Discussion & Questions?

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What is clear or unclear about what we've talked about?
What questions do you have?

Appendix with Additional Information

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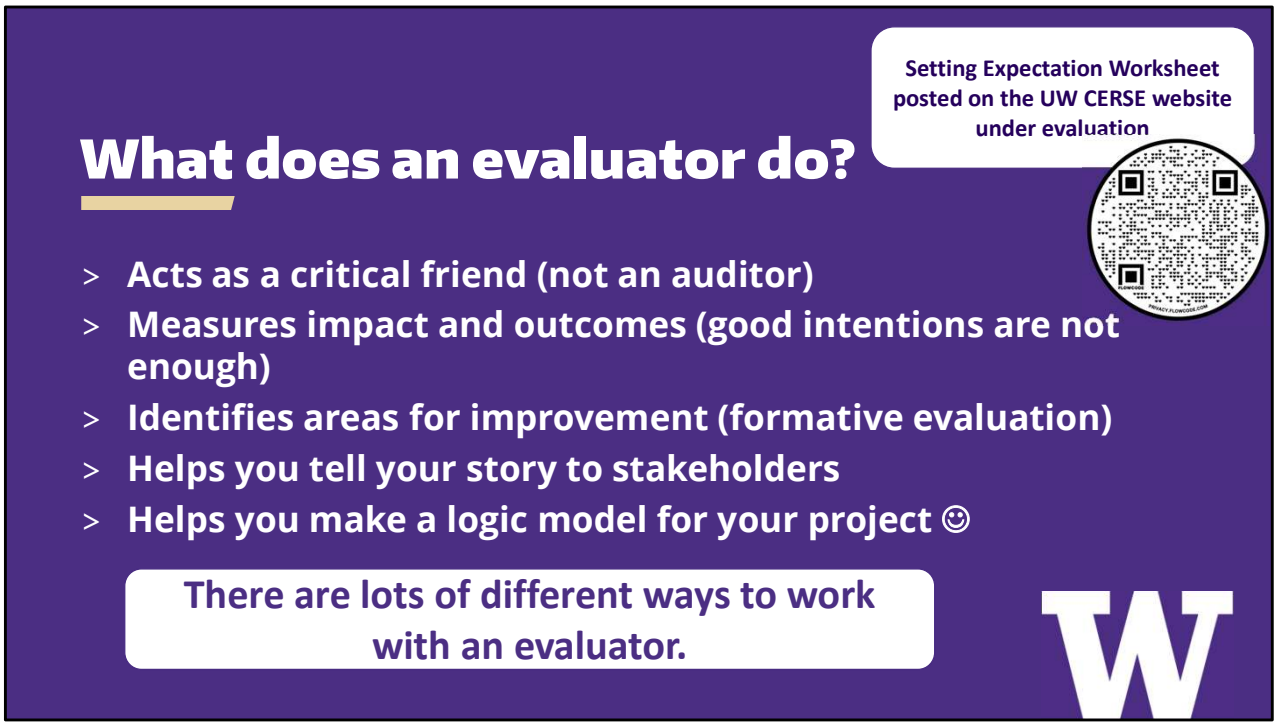
This section below shows a wide variety of examples of other logic models and shows you that there is no one perfect way to design a logic model. It also talks about the role of professional evaluators who have experience and training in program evaluation.



Evaluators are not really meant to grade you or to fill out a checklist. An evaluator's role is to holistically measure your impact, identify areas of improvement, and gather data to help you tell your story.

Examples of Various Logic Models

The best ones are somewhere between very simple to very complex

There is no one right way to create them, but the two most important categories are:

- **Activities/Outputs**
- **Outcomes**

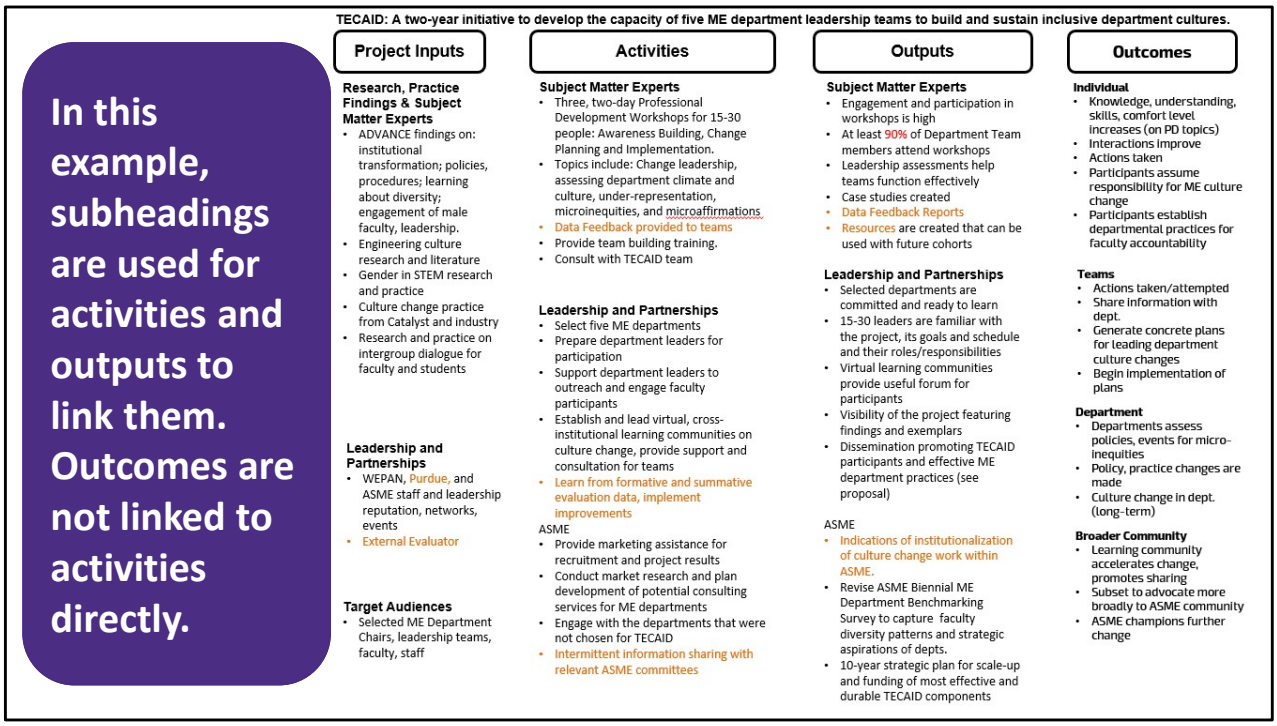
The key points of this slide are included in the slide text.

In this example, primary objectives are linked directly to outputs and outcomes

Primary Objectives	Related Activities & Outputs	Short Term Outcomes	Long Term Outcomes
Enhance curricular and co-curricular student support services and activities for program students	• Create a dedicated network of faculty mentors. • Participate in the activities of Cyber. • Encourage students to engage in undergraduate research activities. • Organize social events	• Mentors have knowledge and skills to be good mentors • Students get hands-on experience through Cyber & research • Students build community and expand networks.	• Students are supported academically and socially, and develop the skills to compete in cybersecurity workforce
Objective 2, etc.	• Content	• Content	• Content

The key points of this slide are included in the slide text.

In this example, subheadings are used for activities and outputs to link them. Outcomes are not linked to activities directly.



This one is more detailed than is probably necessary- the activities section starts to look more like a workplan than a logic model.

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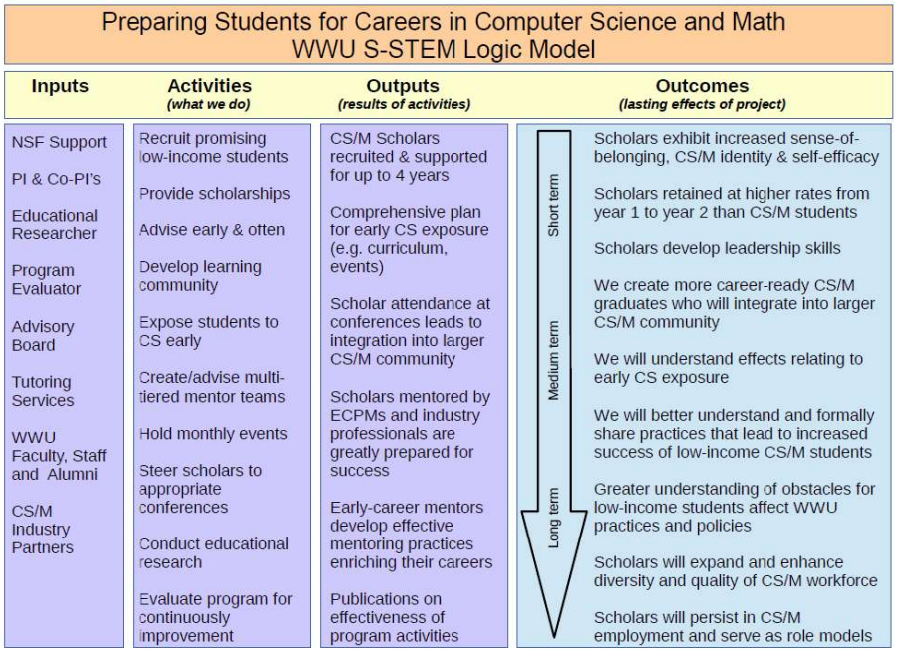
This example uses a creative way to show short, mid, and long-term outcomes (so it fits on a page).

There is overlap between some outputs and outcomes

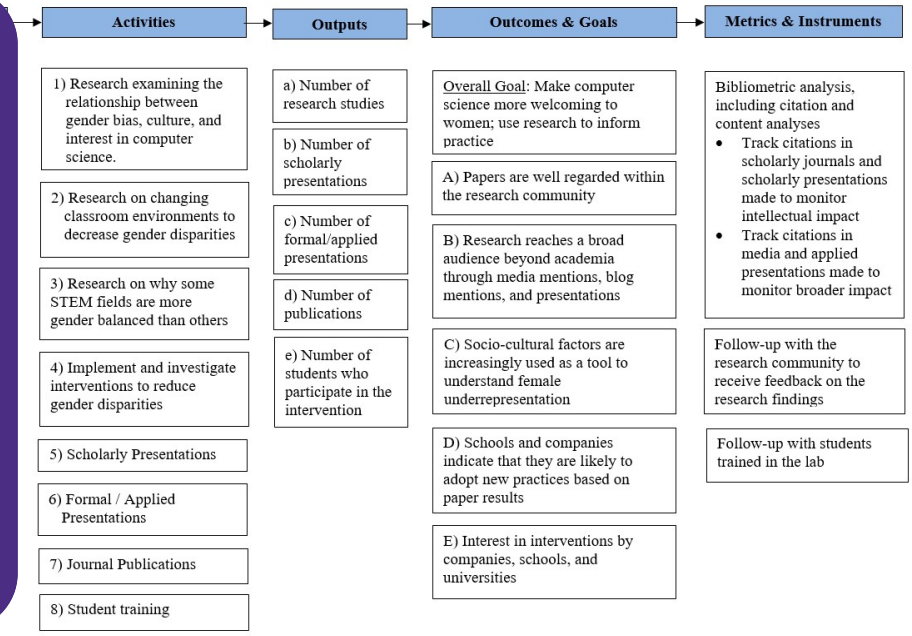


Some of the items here under outputs might be things I would normally put under outcomes, Like “integration into the larger community” or “mentoring greatly prepares them for success.”

The key points of this slide are included in the slide text.

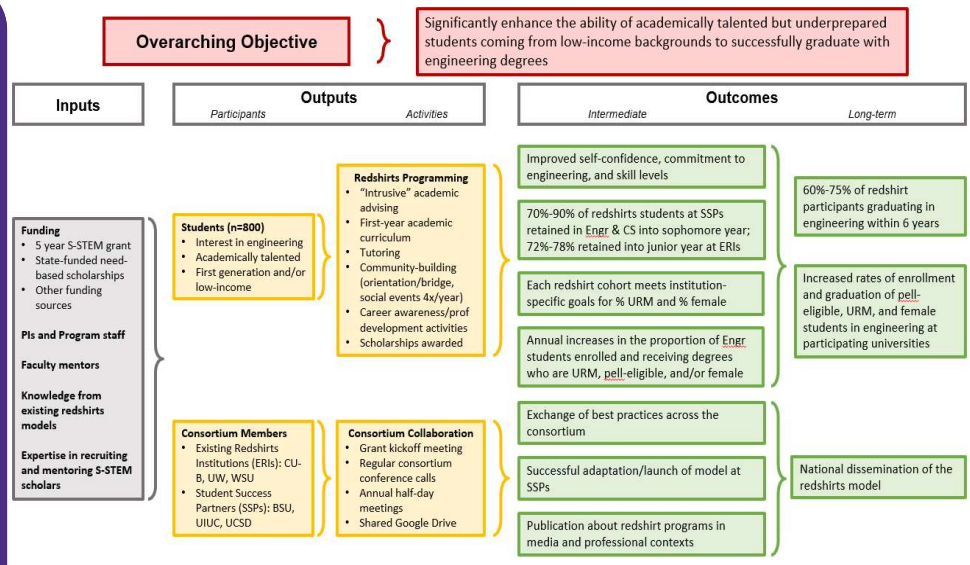
Outcomes are not differentiated by time-scale, and metrics are included.

1), a) and A) are referenced in the text.



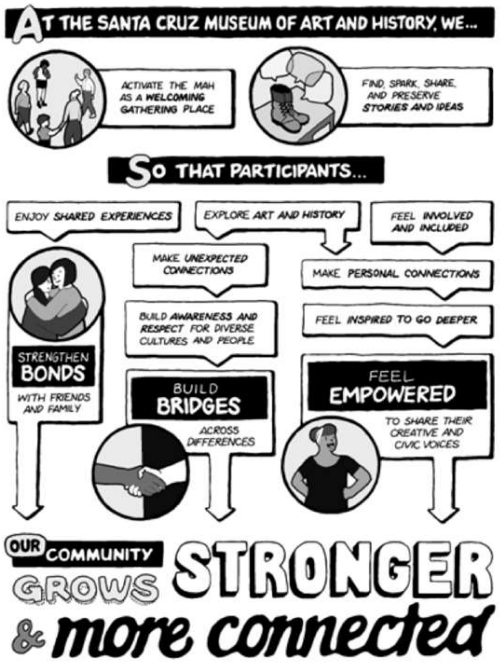
The key points of this slide are included in the slide text.

Two levels of outcomes; activities linked to specific outcomes. Also note the objective at the top.



The key points of this slide are included in the slide text

These folks hired a graphic artist, and didn't include typical LM category headings, but you can see the connections without headings



The key points of this slide are included in the slide text

Logic Model Corollary for Scientific/Engineering Research

Inputs	Outputs	Short Term Outcomes	Long Term Outcomes
• Research Team • Institutional resources • Network resources • Funding • Other leveraged resources	Experiment 1 Experiment 2 Etc. Educational Outreach project (describe activities and how many reached)	New learning from Experiment1 New learning from Experiment2 KSA changes (outreach)	My field will be different in this way… We can answer this bigger question… We can create therapeutic protocols… More students interested in X