

Please stand by for realtime captions.

>> Welcome to the training webinar, I want to give a few more minutes for people to enter the room. As people are entering please make sure to mute your audio section, which is the microphone to the right of your name, you want to make sure that is read -- that is the color red. There is no need to share video at this time for participants. If you have questions during the webinar, you can enter those for the chat, and I will field those. Most likely we will have a small left group we will be able to take audio questions at the end of this session. Just to let you know there is also live transcription or captioning services available, and the URL is listed in the slide as well as within the chat module and you can link to it right there. This session is being recorded, to make everyone aware, this will be posted on the Association website. So welcome. In a couple of minutes we will get started.

>> Looks we have a few more people enter the room. That is great. So we are going to begin. Welcome to the ERC logic model training webinar, this session we have put together in order to help the new ERC meet the logic model requirements with the startup strategic planning guidelines.

>> So I am going to turn this over at this point to Cynthia Phillips who is an evaluator with the assessment capability, she is going to share some thoughts on logic modeling, related to strategic planning. I hope you find this useful. Like I mentioned earlier we will take questions at the end, but if you have any questions during the presentation, you can send those through the chat box and I will respond to you.

>> Thank you very much.

>> We will just start, as was announced if you have questions during the presentation, use the chat function. If we would like to pause the webinar and address the question in real time we can certainly do that. I just want to start by calling to your attention the story of the Cheshire cat, it is often something that people think about when engaging in logic modeling, we want to think about a logic model as a roadmap if you will of how you get from where you are, to where you want to go. In that sense it is similar to the strategic planning process -- process. So what will we do in the next 30 minutes or so? I just want to share a few thoughts on how NSF thinks about the connection between strategic planning, evaluation planning, and your annual reports. The role of any kind of conceptual modeling and strategic path -- modeling, there are two types especially the theory of change, and the logic model, I want you to be aware of those two types, and I will give you simple steps to get started in creating the models, and give you some closing stops and how to align your models with your strategic plan. Something that I do not know from the get-go, is whether or not you have already started to build on your proposals to create the strategic plan? Or if you intend to develop a logic model first? Before you deliver -- develop the strategic plan. In my way of thinking, having a logic model the start, as a skeleton or outline of what you need your strategic plan to explicate, can be a good idea. It is also fine if your strategic plan is already underway and you want to work on the logic model in parallel.

>> This is Chris, this is probably true for everyone else, initially our strategic plans are due December 31, and they are now pushed back, I think we have gone quite a bit on the strategic plan bits, and we are now on the logic models.

>> So that is good to know. So I will adjust my remarks accordingly. I appreciate knowing that.

>> When we think about the evaluate of inquiry process, where we might begin is the strategic plan as the number one, and what the strategic plan is doing is defining the criteria for what constitutes evidence of your progress toward your goal. This is your roadmap as we said in the first webinar. Moving through this process we get to the evaluation plan, where you develop the prophecies -- processes and methods that will tell you the benchmarks and milestones and outcomes and impacts the result from your strategic plan. All of that then feeds in finally to your annual reports. Where you are analyzing and synthesizing evidence about your progress toward your goal, reporting to your stakeholders and to NSF.

>> When we think about strategic planning, we are basically mapping from your current states, to your comprehensive vision, I want to clarify that although your evaluation obligation is primarily for your workforce development strategy, we were thinking about the logic model and strategic plans looking at all of your foundational elements. The research and other activities.

>> The strategic plan lays out how you're going to do your work. But it also is an outline for how you will monitor progress and define success. In that sense it is essential for the strategic plan to inform your evaluation plan. It is a template for the evidence that we need to manage and improve the project. The theory of change and logic models are one way to identify and communicate your key program components, as with the photo here, it allows you to make the needle in your haystack much larger by emphasizing.

>> What we are doing in developing a theory of change, it is a simple model that illustrates the major strands of your foundational element, the research and other activities, the things that you do over the course of your award, and connect to those conceptually to the outcomes that impact for your comprehensive vision. We can refer that as -- refer to that as your debt. -- get When you are trying to develop your model or model, you start from the basic details, often times when folks get into the details of modeling it is hard to have a conversation about what level of do to deal with, and it often spirals into level of detail that are not really required. To get agreement on the simple do and get elements in your strategic plan is the best place to start for doing any kind of modeling. This cartoon is a very simple example of a do get. Give us support, we all win. Very simple statements. Very simple statements of your desire and your impact.

>> We might think about developing a theory of change for an ERC in a way similar to this. These are examples, these would not necessarily be the same for your individual centers. If you think about the research strands, I left you a number of postage their most centers have more than one strand in their research elements. The simplest get that we might talk about from investments and resorts -- in research, is increased research Coppel -- capabilities in your knowledge. Then your engineering workforce development, your innovation ecosystem, and your culture of inclusion. And infrastructure and management because in terms of leveraging your investments and activities and evaluations, being able to have feedback loops to also improve your management infrastructure and implementation can be very help along the way. I encourage you to take that extra step and also model your operations. Your infrastructure, and management. This is something that you can do off-line using the large sites. And then five by seven posted cards, to be able to manipulate and talk about your ideas on a large wall where everyone has a chance to participate if we had a little bit longer time in the webinar we could actually do this live but not today.

>> Identify your foundation components and write them on the post it since many of you are well on the way to develop that strategic plan that should be pretty easy for you to model.

>> Once you have articulated your do on the left, and your get on the right, the rest of the modeling process is basically done. What are the things that you need to do and monitor in order to chart your progress from your activities to your get?

>> What we can do is unpack the basic area of change, on the top row there, with the strategies of the do, and how they connect to the results. We can take the strategy and unpack it into inputs, activities and outputs. There are the definitions in the handouts that were sent to you, the inputs are those resources that you need to have on hand in order for your project to be successful. The activities are the things that you actually do, and the outputs are those things that can be counted as the quantities or qualities of the early work that you are doing. Why is this called the logic model? It is a series of if then statements. For example if I have these resources, for example let's say that we are doing some type of educational intervention, if I have these features, and -- these teachers and these teachers develop quality curriculum, and let say they have four modules delivered over a course of a week with 12 hours of instruction. Then it we know that certain results will happen first. It may be that the students are participants are aware of the content, of the curriculum. Moving farther along they may develop some skills, in the use of the information. Longer-term outcomes may be that they end up changing some behaviors based on the use of the curriculum. It is a series of if then statements. If I do A and then I do B, for a certain volume and quality, then a B and C are likely to occur.

>> So recapping on the definition, inputs can be financial, human organizational, community or systems resources and those are the big ticket items essential to implement your project. Activities are the strategies that are listed underneath your big foundational elements, they are the things that need to happen in order to implement all of your center plans.

>> The outputs, what is important to note here, there is a description with the types level and audience who are targets for your projects. The attributes of your activities if you accomplish, there is an acronym called FIT they can help you specify those outfits, you want to have statements that allow you to know the frequency, the intensity, or the duration, of these activities and who are the targets. So when you are mapping backwards to be able to say did we do enough of X with population Y? The outcomes tend to be behavioral, changes in behavioral -- in behavior, knowledge, skills, we want them specific measurable, accurate, measurable -- and timely. They can refer to groups, they can also refer to changes in organizations and cultures. The impact are those things that are the ultimate changes in an organization, community or other systems. And they often occur after the grant cycle has ended.

>> So I'm going to show a couple of examples of program level logic models, many of these examples are engineering programs. What I am wanting to illustrate in showing you these examples are the kinds of statements that would be illustrative of the kinds of things that would go in a logic model for a center. The fact that you are doing a project level logic model for your center, there is no difference between a project level and a program level logic model, the program level often reflects aggregating up of many project level models. We are using these for illustration, and also to show the different ways that a model can be drawn.

>> This first example, for the [Indiscernible] program, this follows a standard format, it has the inputs, activities, and you can basically read from left to right activities flow from the implementation to achieving an outcome. So, you might say that if we were to read the first line, the activity is the grantees engaging in cutting edge research, what you would count are the developments of new methodology,

building of a knowledge-based assignment, this might be an up -- a publication. The research might increase and result in higher risk projects over time.

>> A different view of a logic model might be to look at this long-term logic model. It is just in Collins, it is a little harder to follow the storyline from left to right, but this format is often used when all of the activities contribute to all of the outcomes. You are engineers, so this is the many to many relationship. It would be a mess of boxes and arrows if you tried to draw it, we assume that everything relates to everything else by drying it this way. On the bottom, it is delineated that the activities and the outputs are within the life of the award, and it is really the outcome that is unlikely to occur until after the award has concluded. And that is the case with many scientific enterprises, for example, NSF investment in [Indiscernible] it was 20 or 30 years before we were seeing the kind of outcomes or impact that we had hoped for.

>> This particular example is for an NIH program, I wanted to share it to you -- with you because it calls out a couple of levels that may be useful in a center logic model. There are individual level activities outputs and income so that you are -- inputs and outcomes that you are working on, so if you put it in this type of format it makes it easy for you to tease out what you are looking to do and get relative to the different levels that are relevant in a center context.

>> The goalie long-term logic model, is similar to the one for BIC, but it does not have a timeframe on the bottom although it looks that there might be an arrow -- looks like there might be an arrow and it might not be showing up in the slide.

>> This is also a handout that you have, goals characterized by measurable outputs and outcomes, I want to show a couple of examples. Whether or not something is labeled output or outcome can be [Indiscernible]. In -- on occasion they can be interchangeable and how you know which one it is depends on the train of logic that you are tracing from left to right. For example, if you are creating a new product, for the purpose of an outcome of having a behavioral change further down the line. Having a new product would be in outputs, something that needs to be in place before the outcome can occur. However if you are writing logic to be an activity as a development of the product, and the product itself is an outcome of value then then you would listed probably as a short term outcome.

>> Things like papers, leverage funding, student projects, keeping track of those sorts of things are more likely to be outputs than outcomes, but it depends on the flow from activity to result that you are charting.

>> What we want to keep in mind, is that your vision and your vision statement for your strategic plan are the reality. They are the vision of the future you want to create and they are very specific and very clear. The strategic plan is how you go about writing the vision that is in your head. Notice that there is a move from reality to representation we lost some of the detail, but that is important otherwise our strategic plans would be 8000 pages long. When we moved from the strategic plan to a logic model or theories of change notice that we go to another level of impression or abstraction. We are teasing out those key details that are most important to explaining our do and get they are not intended to provide a photograph of reality that an impression or abstraction for the purpose of knowing where to best monitor our progress.

>> So in moving from a proposal to a logic model to a strategic plan, the first thing that you will do is to create the raw theory of change. For each of the foundational components and strategies in your strategic plan, you will make a box or a five by seven notecard, in the activities and list in parallel for each one the expected results or goals and show any interrelationship amongst the goals and strategies as needed.

>> One of the comments that Doctor Jackson made, on the webinar yesterday, was that part of the reason why NSF wants the ERC to develop the logic model is it is easier to see in an illustration how you envision interrelationships between the components of your program than to read about them. A picture is worth 1000 words in this case.

>> In being able to manipulate the core components with the theory of change, you are able to test your logic, and make sure that you have all of your bases covered in your plan. Once you have a theory of change, that everyone agrees on then fill in the gaps between the do and get with your inputs and outputs and outcomes. It is a quality check for the outputs, you want to make sure that they fit, that they are written in a way that you know what you're looking for in terms of a measurement, the frequency, the [Indiscernible] and the targets. You want to make sure that the outcomes are smart, specific measurable actionable realistic and timely. And you want to make sure the linkages from left to right are logical sequences. Inshore that the model represents the projects without unnecessary detail, folks often ask if I can put it as a posterior side, -- poster side, if you are asking questions like that you are thinking more details and what the model's purposes. It is a general roadmap or illustration for your project not the action plan for each specific detail.

>> And then you want to revise and update the model periodically to reflect any changes in the project. Because the things that you are doing are innovative, it is more than likely that as you receive feedback on your progress towards your goals that some activities and strategies may shift along the way.

>> When we look at a single strand, of a logic model, and keep in mind from the examples that I showed, you may have a minimum of five strands, one for each of the major components, but there is a correlation or a linkage to the components of the strategic plan on the second line. If your long-term outcomes are similar to your strategic goals, and you would chart them that way. If the intermediate goals in your strategic plan would be your short and intermediate outcomes, and your annual or day-to-day goals would be your outputs, and your management activities would be the procurement of inputs and implementation of your activities. In the third line, you would see where evaluation, or internal monitoring, that you would want to have measures for each of these boxes. And they may be a measure where you are measuring the height and the width and weight or the number of something or you may have an indicator, something that is pointing to a measure but it is not something that you can readily measure such as an attitude, or a cultural sensitivity. Where it is not a fixed measure, but something that indicates success instead of being an exact measure of it.

>> And then you have your evidence file which you can use to loop back to the logic model and say based on what we have learned, what do we need to change about our program? To continue moving forward toward the results that we would like to achieve?

>> As you are reviewing your strategic plan and your logic model, in parallel, you want to check and make sure that all of the major components are present and that they are consistent and sufficient to achieve your desired outcome. An example that I often like to use, is the Department of Education 21st

century technology grants back in the early 1990s. The logic model for the challenge grant did not have professional development. As a key component, and what the initiative quickly found is that without professional development the boxes and wires in the classroom were insufficient in that back in the 1990s the majority of classroom teachers were not prepared to use technology in a manner in which it was intended to improve and augment instruction. You want to make sure that your strategic goal our outcome focused. What will be different? What will the impact be should this goal be achieved. How will we recognize it? As you start to map out the interrelationships between the components of your program, you may find that there is culture of inclusion elements that are absolutely needed in order to achieve your workforce development goals, or cultural inclusion goals that are essential if you are to achieve some of your research goals.

>> Finally, what I want to recommend that you do, is that you develop your models in a group, and you expose your draft models to the scrutiny of your colleagues who are not as intimately familiar with the program as you are. Often what we see as in the Department of Education, many years ago, was that when you are in the throes of planning, there are many of the white spaces that are not there on paper. These are important to recognize having colleagues to look at your model and read it back and ask if this make sense? Is there anything missing? Where do we need to be more clear in order for this model to communicate the flow of our projects? And how we will know we have been successful? That is probably the most important thing that you can do.

>> Just to give a minutes on evaluation, to show at a glance the connection between having a single strand of logic model, built out from your strategic plan, how it might be overlaid with evaluation, when you are on the do side of the logic model, you are looking at evaluation questions, content and process, and when you move to the right, as you are working on the outcomes portion of the logic model you are asking questions that are related to effectiveness, and to the kind of different -- differences that has been made -- have been made.

>> I want to provide you with a number of resources should you want to follow up and have additional information on logic models. For strategic planning, and development of logic models, I want to thank you and turn this back to Tran one and open this up to questions. -- To Dana, and open this back to questions.

>> I think our group is small enough if you have a question, we might be able to chime in and so I will open up the line for questions now.

>> I did get one question through the chat box, downloading the slides, the recordings of these webinars all of the slides, additional resources, and transcripts of the webinar will be uploaded to the ERC Association website. I will send out an email notifying you when that has been posted. So that all of these materials will be available for you there. Just to bring up one question that came up in yesterday's session, that might have some relevance for you, we previously had someone mention that in their strategic planning, they had tables of goals, actions, measures, and a timeline for reaching those goals. So the question is, how do we translate strategic planning items, that we have like that into something that would be relevant for a logic model?

>> I will toss that back to you Cynthia.

>> I have a slide from yesterday, I think that would be helpful in explaining that. If we were thinking about a generic strategic plan templates, this one is available from [Indiscernible]. For each of your projects foundational components, you would give a description, in the header. And for each of the foundational components let's say for example this is a research component, you might have goal one, with the addressing or answering of a specific research question. You may have some objectives in logic model speak, and objective is activities. -- And objective is activities. For your listing -- where you are listing what is needed to achieve a specific goal. And you are listing how you would monitor over the course of the award those accomplishments. Those accomplishments near terms might be short-term outcomes, as we get closer to the five-year they may be intermediate or long-term outcomes. That depends on the nature of the work that you are doing. And the listing of the responsible parties, this may or may not look like the types of tables you are using, but I have seen similar tables as an effective way to reduce the detail. They are often supplemented by narratives. To show how this turns out to be Locke -- like a logic model, you may take the foundational model, let's pretend that this is a foundational model, you have the strategic of actives, -- objectives, and there might be two large ones for your first thrust, and they may have two components. Each component having an activity apiece. You would map it like this, from the activity from the left of the activity you would put the input and resources required to achieve that, and then you would map moving from the activity to the outputs, the intermediate and the long-term outcome. So you are taking the outline of your strategic plan, and creating a graphic to go with it. Does that help?

>> So I hope that that was helpful. Also just to note I had one question from the chat box as well. If there are any follow-up questions please feel free to chime in or send them through chat. The question is should we be preparing just one logic model for the full ERC or should we have individual logic model for each pillar which is the research, diversity, course development innovation, from the ERC side I can say we are only asking for one center level logic model.

>> However we recognize that because of the detail of activities that you may want to monitor, it may be helpful for each of the centers to also have a logic model within the pillar. But that is certainly up to you. One question that I'm going to send back to you Cynthia, because we have the poor integrated aspects of the ERC, -- 4 integrated aspects of the ERC, do you have insight on how to integrate into the logic model?

>> Can I navigate in the presentation without being the presenter? Yes, so I'm going to go back to one of the examples, and I want to ask can you see my cursor when I am moving it? I am sharing my screen can you see the cursor? - No.

>> Let's say for example, when we are looking at this model, if we were to say between the first and the second box, between grantees engaging in cutting-edge and frontier research, and collaborating, let's say between the third one the grantees [Indiscernible] from underrepresented groups. Let's say you want to show the relationship between the research, collaboration and inclusion, you might use arrows to connect those boxes together. And you might have them together leading to outcomes, that are framed in a way that show elements of all three activities. There is the statements of the cutting edge research, with the high level of collaboration amongst researchers, from a broad spectrum of demographic groups. So you can show which things you intend to relate.

>> I think it would be easiest to show the interrelationships of a theory of change model before you get to the level of detail in a logic model. If you have for example, let's go back even further, if you wanted

to show the relationship between innovation ecosystem, and the research. You could use different colored arrows to show those connections, and show how they are contributing to outcomes together.

>> It would be more like a flowcharts, then a single lane. I have seen this done very well.

>> Okay thank you very much. We have a couple of ERC PD as well, I was wondering if you would like to respond to the question of the call for one logic model for the entire center? Or individual logic models for each of the systems?

>> We are going [Indiscernible]. What my question is going to be, we want to see if you [Indiscernible]. For internal purposes, we need to do one for each pillar.

>> Let me rephrase this, it was hard to hear you, I believe that you said internally you are making logic models for all four, as well as for the center level? Is that correct? Yes that is correct. We find it very difficult to do one big comprehensive just for the center model. Without the smaller models as well.

>> Certainly, I can imagine that it helps you have the lower levels that feed into the larger levels. Are there any other questions or comments?

>> This is Deborah, I think that the idea of starting from a one-page logic model, is that you hopefully are looking at the logic model and seeing how you can drive down from that to the different films or pillars, -- bans or pillars. If you start from the higher level you should be able to better link in the pillars. So we are trying to do this exercise of the front end, in order that you would have the recognition we are planting the seed of how things should be related.

>> Thank you Deborah for that. I think we have gone back and forth, on how to do this. Taken an example from what you presented at the meeting. I think we start off [Indiscernible], otherwise it is difficult, without having a framework of each of the four pillars, and constructing the top one, that experience has been very difficult.

>> So, we are very cognizant about the fact that we need to have that in a relation cup of the different pillars. -- Relation of the different pillars come through in the model. And make sure that that will happen, starting from the top has been difficult for us.

>> Thank you very much, for that feedback.

>> This is Eduardo, what I want to add is I think I can understand the difficulty, I just want to clarify do we want to see one logic model for the whole center showing integration. For many people that ask, that is what we are requiring, but since you have a logic model for the different parts of the ERC, it is not Ing -- it is not wrong. Include those also so we can see the process and how everything is coming together. Go ahead and submit them if you have those extra models.

>> We certainly will do that. There are certainly more details above those logic models, and internally we can evaluate those things. And make sure that we are seeing progress. Our goals right now, as we go through this process is to have one for each pillar, and bidirectionally feeding into the bigger picture.

>> Okay great you so much for those comments and questions. I want to open up the room again to any additional questions or if you would like to submit one through the chat box I can ask it on your behalf?



>> Are there any additional questions? Okay. Well, thank you very much for attending this ERC logic model training webinar, as I stated earlier the materials will be posted on the Association website, and the -- we will let you know when they are available. If you have feedback on this session these email me, or if there any questions that you have regarding the resources after they have been posted. Thank you again for attending.

>> [Event Concluded]