

HHS/ASPE Developing and Using Evidence-Building and Evaluation Plans for Improved Decision-Making: National Science Foundation

Chris Talbot:

Good morning and welcome to the HHS ASPE Webinar Series on Developing and Using a Learning Approach to Evidence-building. I'll turn things over at this point to our facilitator for today, Dan Finkelstein. Dan, please go right ahead.

Dan Finkelstein:

Great. Thank you Chris. Welcome and thank you for attending today's HHS ASPE Webinar Series showcasing different federal agencies and their approach for developing and using a learning agenda for evidence-building. My name is Dan Finkelstein and I'm a senior researcher for Mathematica supporting this project. I'll facilitate today's webinar with help from our government team lead or detail, Dr. Amanda Cash, and my colleagues handling logistics, Derek Mitchell and Chris Talbot.

Today, Cynthia Phillips and Rebecca Kruse from the National Science Foundation have joined us to share their evaluation plan and learning agenda approach. This is the fourth webinar in a seven-part webinar series. The series does not build from one agency story to the next, but rather showcases each agency's approach. As a reminder, we will continue to share registration information for new and rescheduled events on the Federal Evaluators' Listserv. So, let's get started with a few housekeeping details.

In terms of the logistics for today's webinar, if you've called into the session, please mute your phone to prevent background noise from impacting others on the call. Please place your phone on mute unless speaking. The right-hand side of your audience console includes multiple features, including features related to Q & A, hand raising, and closed captioning.

If you have questions during the webcast, you can click on the Q & A pod and submit your question in the text box provided. We do our best to answer your questions during the webinar, but we may defer some questions till after the webinar, if there are questions we can't answer today or if we run out of time. If you've dialed in by phone and prefer to ask a question verbally, please use the small hand icon to alert us that you would like to contribute. We will call on you to share, and you'll need to unmute your own phone line at that time.

Finally, if you'd like to access real-time closed captioning, you will find it on the multimedia viewer pod by clicking on the caret mark to the left of the multimedia label. You'll also have the ability to move and reshape the pod on your screen for easier use.

Now let's go over today's agenda. Each webinar in the series will have a similar agenda but showcase different agencies. This afternoon I'm getting us started with a brief welcome, and then Amanda will speak to the impetus for the project, including providing a recap of the webinar series and other events to date. As noted, Cynthia Phillips and Rebecca Kruse from the National Science Foundation have joined us to share their approach to develop and use a learning agenda, and then we'll save some time for question and answers at the end.

And finally, we'll wrap up with a few details. So, let me now introduce the speakers that you'll be hearing from during today's webinar. As noted, I'm Dan Finkelstein, I'm a senior researcher at Mathematica policy research, and I lead a variety of mixed-method evaluation studies, and provide evaluation technical assistance to government agencies, foundations, and community-based nonprofits with designing and implementing evaluation studies and plans. I'm joined by Dr. Amanda Cash, who is the acting director for the division of data policy in ASPE. Dr. Cash is an epidemiologist by training but has focused much of her portfolio on research and evaluation methodologies appropriate for

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complex federal programs. However, she also co-leads a federal taskforce combating antibiotic resistant bacteria. Dr. Cash's office is leading the implementation for Title One of the Evidence Act, which is why we're all here today.

Now I'll introduce today's speakers from the National Science Foundation. Rebecca Kruse leads the design, management, and use of analytic and evaluative studies to inform agency-wide programs, initiatives, and policies. As a visual practitioner, she deploys human-centered design, strategic facilitation, and other co creation approaches to support interdisciplinary and cross-functional teams in translating evidence into actionable insights and ultimately into decisions. Rebecca is the principle design thinker driving the learning agenda work at NSF. Cynthia Phillips is the acting director for data policy. Cynthia strengthens the bridge that unites the evaluation, statistical, performance, and programs arms of NSF. She is the author of the Kellogg Foundation's Logic Model Development Guide and coauthor of the Logic Model Guidebook: Better Strategies for Great Results.

So now I'll turn it over to Amanda to provide an overview of the webinar series and its objective. Amanda.

Amanda Cash:

Thanks, Dan. For those of you who haven't sat in on one of our webinars, I just wanted to give you a brief overview of who we are in ASPE. The office of the assistant secretary within HHS is the policy advisor to the secretary for the department, and we're leading the implementation of the Evidence Act. We're conducting these webinars so federal staff at HHS and other agencies can learn more about evidence-building plans or learning agendas. We welcome your questions and participation throughout the series, and just a quick overview of what the series objectives are, is to have speakers discuss their organization's stage of implementation of evidence-building approaches, the processes developed to build evidence-building approaches and how these processes were implemented, and barriers faced when developing and implementing evidence-based plans, and strategies to address them. The impact of evidence-based planning on evaluation, organizational decision-making and program effectiveness, and lastly, any lessons learned. Thank you again to our colleagues from the National Science Foundation for letting us learn from them today on this webinar. And I'm going to turn it back over to you, Dan.

Oh, actually, I think I'm next with the series recap, and so apologies for that. So I think, if any of you, again, have signed on before, you know our first webinar was with NIH, our second was with USDA, the Foreign Agricultural Service, and then our third was with Mary Hyde from the Corporation for National and Community Service, all of whom have given us really great nuggets of information about their approaches to evaluation, planning, and evidence building. Now I'm going to turn it over to you, Dan. Thank you.

Dan Finkelstein:

Great, thanks Amanda. Well, similar to previous events, we'd like to gather some information from participants, which will help us understand who joined us today. Derek, if you could please push pole number one.

Has that come through?

Great. Poll number one asks, "What are you most interested in learning about during the webinar series?" And our response categories are: Which agencies have fully implemented learning agendas; How agencies have structured their approach and processes to implement learning strategies; The barriers agencies have experienced

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when implementing their learning agendas, as well as the strategies agencies have implemented to overcome these barriers; How and what agencies have learned when implementing their learning agendas; or some other response which you can fill in. So why don't you please take a moment to complete your response.

Chris Talbot:

Dan, it does look like we're having some great results coming in. We have answers covering all of the responses available, but 87% of our group today is indicating that they are interested in how agencies have structured their approach to process, to implement learning strategies. And we also have about 60% of our audience that is really interested in the barriers that have been experienced and how they get past them.

Dan Finkelstein:

Okay, great. Thanks for sharing that, Chris. We have one more question that we'd like to ask. If we could please push poll number two. And with poll number two, we ask you, "At what stage is your agency in implementing a learning agenda to evidence-building?" And for this, the response categories are: Fully implemented and operational; Fully implemented; In the process of implementing; Planning to implement; or some other response which you can provide. So if you could please take a moment to complete this response, as well.

Chris Talbot:

And Dan it, it looks like we have the majority, or I should say almost 50% of our audience that's indicating that they're planning to implement. Well about a third of our audiences also indicating that they're in the process of implementing their plans. We haven't had many respond that they are fully implemented or operational yet, but we do have a number of people that are really interested in how this process is going to be working.

Dan Finkelstein:

Okay, that's great. Chris, thank you so much for sharing that and helping us understand who is on the call today and thank you to all of you for submitting your answers. This will really help us steer today's conversation and future webinars. So great. Now let's turn to the featured presentation of today's webinar. It's my pleasure to welcome Cynthia and Rebecca from the National Science Foundation. Cynthia, Rebecca, the floor is all yours.

Cynthia Phillips:

Thank you. Thank you. Dan. If we could advance to the National Science Foundation history wall, and before I share a little bit about the National Science Foundation, I'd like to have just one more poll. We do know then from the first two polls that folks are interested in structures and processes as well as barriers and solutions and Rebecca and I will be covering both of those. And also we know that about half of you are still in the planning stages and the third are more than likely early in implementation. So our journey really will fit the needs of the community that's here. Phew. But before we dive in, there's a little bit more that we would like to know about you as an audience so that we can tailor our remarks. Derek, could you push the next poll?

So one of the things that we really would like to better understand is your primary role in implementing the evidence act and your role in the generation or youth of evidence. Are you A, an evidence consumer where you use the evidence to make decisions; evidence producer, where you build evidence for decision makers, or are you an evidenced broker where you facilitate flow of evidence between consumers and producers? Please, please only choose one. The one that best fits your primary role. Thank you. And I will rely on Dan to let us know when the poll is complete.

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Chris Talbot:

And Cynthia, it does look like we've got a little over half of our audience that have been able to complete the poll so far. But the majority of the focus is that they are evidence producers.

Cynthia Phillips:

Okay. Okay.

Chris Talbot:

We also have about, we have a number of people as well that are in the evidence broker role, but not many that are listed as evidence consumers.

Cynthia Phillips:

Okay. Okay. That really helps. Thank you so much. Next slide please. So the National Science Foundation, I'm going to refer to it as NSF from here on out, is an independent federal agency created by Congress in 1950 to promote the progress of science to advance national health, prosperity, and welfare to secure the national defense. It's a big job. NSF is the only federal agency whose mission includes support for all fields of fundamental science and engineering, except for medical sciences. NSF supports basic research and people to create knowledge that transforms the future. This type of support does three things. It is a primary driver of the U.S. Economy. It enhances the nation's security and it advances knowledge to sustain global leadership. NSF's task of identifying and funding work at the frontiers of science and engineering is not a top down process. NSF operates with a curiosity driven, bottom up approach.

We keep close track of research around the United States and the world and maintain constant contact with the research community to identify the ever moving horizons of inquiry and we monitor which areas are most likely to result in the spectacular progress, choosing the most promising people to conduct the research. These are not easy things to evaluate and this bottom up approach frames how Rebecca and I have approached leading the agency's journey towards developing learning agendas and complementary evidence plans. Next slide, please. In terms of our agency profile, our leadership has two major components. A director who oversees NSF staff and management responsible for program creation and administration, merit review, planning, budget and day to day operation. And we have a 24 member national science board of eminent individuals that meets six times a year to establish the overall policies for the foundation. At present, we have a total workforce of about 2100 at our Alexandria, Virginia headquarters.

We're organized, as you can see from the slide in seven directorates that mirror the major disciplines of science. The location of the performance, evaluation, and statistical functions are distributed across the agency as are illustrated in slide. Currently we are engaged in conversations to see how these three functional areas can work better together to implement the full totality of the evidence act.

The evaluation and assessment capabilities section, which is where Rebecca and I are housed is located in the Office of Integrative Activities which we lovingly refer to as the skunkworks of NSF, different for most evaluation units. We report to the director, which gives us more leverage in influencing policy. Next slide please.

We posit that most agencies, including ours, are facing a similar challenge. The evidence act, we can generate evidence and do everything the unfunded mandate requires of us, but it just might not automatically lead to the better decisions and better government programs that is intended. This is where evaluation, performance, statistical, analytic and information technology functions can add tremendous value to the implementation of the

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Evidence Act. In thinking about our agency navigating the Evidence Act, we've been relying on the metaphor of an iceberg. Our principles are based on we need to know what's under the water, all those things which we cannot readily see. Next slide please.

So the Evidence Act itself, lets that refer to it as a hurdle per se, but it is metaphorically the tip of the iceberg. The Evidence Act was very explicit and creates urgency to improve the inputs of data quality, access, privacy, confidentiality and the others. But it seems that many of us are totally geeked out and hyper focused on the data. The statistical agencies are drooling and the chief evaluation officers among us had better get cracking because we know as evaluators that it is more than the data. The plan collection and analysis of data may not be sufficient to get the informed decisions and actions that we desire. The next slide please.

What we realized early on is that there needs to also be, in addition to high quality data and action oriented analysis and reporting, is that there needs to be time and process devoted to reflection and the development of insight among the decision makers, and there also needs to be the willingness and ability to change.

We knew that we had to tackle these two elements of culture first in order to benefit from the recommendations in the Evidence Act. Next slide, please. Okay. Our third principle is that it's important for the learning agendas at NSF to support high visibility, high priority work. The National Science Foundation's EAC. We exist to strengthen agency-wide evidence use for policy and program improvement, so we wanted to start work on our learning agendas where it would have the best traction.

It made sense for us to strategically align with NSF first to align and the first learning agenda activities with highly visible agency-wide priorities such as the NSF big ideas that are displayed on the slide. Our 10 big ideas for future investment are emerging long-term receipts, research agendas that require multidisciplinary or multi-sector collaboration. We're currently working with four of these 10 big ideas that we're ready to benefit, and for which a learning agenda could add value by supporting their strategic design, development and implementation early on. In addition, programs in their infancy, strategies being developed and tweaked in real time. It's here that we found the rich learning environment and learners with an appetite for real time data to inform their decisions with immediate feedback. If you could see me, I would be winking. Wink, wink. It has to be safe to learn for all of this to work. Next slide, please.

We also learned that we have to know where we are and start there. Envision the triangle in the center of this cartoon. We have the EAC, the National Center for Science and Engineering Statistics, and our performance offices, all of which to date have mostly carried out their contribution to the mission in relative isolation.

Rebecca's and my, "Aha," was that, to achieve the promise of learning agendas, we needed to connect the dots and unite these three distinct functions to surveil and navigate around our virtual iceberg. We're doing that under the banner of evidence generation and use. We think learning agendas have great promise in supporting knowledge building and mobilization that advances our core mission of funding scientific research and human capital development.

So, while we situate our work in the context of an R&D agency, we've aimed to draw out some of our own learning that is more broadly applicable to others regardless of context. Next slide, please.

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Our final principle that sets the stage for the work that we've actually done is recognizing that organizational learning is inherently a human endeavor. We've been making new contributions to the learning agenda concept by incorporating human-centered design in design thinking. We've explicitly deployed processes and used activities to build capacity for organizational learning and improvement through evidence use.

Unlike other agencies that have focused primarily on evidence building, we have tackled topics like knowledge brokering in a practical learning agenda decision roadmap tool for assisting our knowledge brokers with aligning anticipated decision moments with the evidence needs, those evidence users, the plans for building evidence, and the plans for using evidence.

We've also incorporated philosophy of evidence use and influence, and have some practical tools to help support us in scoping, commissioning, managing, and being more effective in our follow-up to the studies to ensure that they're not just relevant and potentially useful, but actually used and maximally influential.

Using visual theory to present data effectively, we can create more effective evidence products with high visual impact, and to focus on the action orientation, that our reporting focuses on, "So what? Now that you know, what are you going to do?" Designing and facilitating participatory decision-making, envisioning, and strategy co-creation processes, help us bring in evidence from evaluation, from external reviews, landscape analyses, and other credible evidence.

Now, at this point, I have introduced the principles and the thinking that's behind how we have designed our approach. Rebecca has another poll, and then she will begin. I'll toss it over to Dan and Derek for the poll.

Rebecca Kruse:

Hi, everybody. This is Rebecca. So, we're curious to hear from you all which of our four principles most resonates with you. The four principles that Cynthia presented were: Focus on building and use, select high visibility, high priority, start where you are, and put people at the center. Go ahead and take the time now to enter your choice.

Chris Talbot:

And, Rebecca, it does look like we have about 40% of our audience that is looking at the, "Focus on building and use," where the other answers are pretty even.

Rebecca Kruse:

Okay. And, of course, by focus on building and use, you necessarily have to put people at the center. So, these aren't exactly mutually exclusive choices, but thank you very much. That helps a lot as we move forward. Next slide, please.

So, as part of building culture steeped in evidence and used for organizational learning, we're piloting learning agendas with our large initiatives and learning how to navigate this proverbial iceberg better together. It's important to note here that adding the relatively silent component of culture to the data part of the Evidence Act mandate, we're really leveraging the discipline of designed thinking to illuminate and address our agencies unmet needs. We're striving to mitigate their points of pain, hopefully ahead of collision with this iceberg.

In this next section, we'll highlight a glimpse of our way around, or perhaps over, the iceberg that sits before us. Our options at the outset were really two. We could dig right in and begin work on an agency-wide learning agenda, which would be a radically different

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way of working for our agency, or we could start small with several experiments, or learning launches, as they're often referred to in the world of human-centered design. We chose the latter. Next slide, please.

So, as Cynthia mentioned just a few moments ago, in the last year we've begun working in earnest on learning agendas with four of NSF's 10 Big Ideas. We've only really just begun planning for our agency-wide learning agenda, but because the Evidence Act ties the agency-wide learning agenda to the agency's strategic plan, we're making sure that for all four of our pilot learning agendas, we're closely tying them to initiative strategic plans as well. We're developing and adapting and piloting tools with these 10 Big Ideas, learning agendas, that we believe can scale as we embark upon an agency-wide learning agenda.

So, with the Big Ideas, learning agendas, we're positioning learning agendas to serve the mission of these initiatives, to serve their needs in supporting their design, their implementation, and their refinement, from a position of evidence. By doing so, we hope that this, in turn, serve the agency's broader mission.

But, ultimately, our goal for all of our future learning agenda activities, whether for other Big Ideas or for our agency-wide effort, is to develop flexible and forward-looking learning agendas that provide our strategic initiatives and policies with the evidence that they need at the right times to help them inform, explore, and refine their strategies.

We want them to be able to operate efficiently and effectively, and we want to assist them in achieving the transformative results that they seek. If anything, we feel like the Evidence Act has just lended some external confirmation, credibility and support to doing more of what we've already been doing. Next slide, please.

While our work with the Big Ideas, learning agendas, began this fiscal year, we actually undertook a multi-year process of socializing learning agendas to get our sea legs, if you will. In 2016 and 17, we convened some evaluation-friendly groups to study other agencies' enactments of learning agendas from their publicly available documents, websites and even some podcasts.

In February of 2018, we invited those same evaluation-friendly groups together, as well as some other folks around NSF, to gather at a workshop during which we brought in learning agenda champions from OMB, from HUD, from Labor, USAID, Health and Human Services, and Millennium Challenge Corporation. Some of those people are on the phone today, and we brought them in to learn first-hand from them about their successes, their challenges, their lessons learned, and any advice that they had for us about enacting learning agendas at NSF.

We took their advice, and in April to June of 2018, we leveraged the agency strategic review process under GPRA Modernization Act to retrospectively examine some of our successes and struggles for organizational learning in the context of one of our 10 Big Ideas NSF includes.

We used that strategic review as an opportunity to kick the tire on some new processes and tools that we could use in our future enactments of learning agendas, and many of these processes and tools came specifically from the human-centered design and strategic facilitation domains.

In June of 2018, we presented some recommendations to agency senior management and NSF's director for supporting organizational learning through the learning agenda

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approach. He invited us, and we accepted and presented in July, 2018 to the National Science Board about NSF's future enactment of learning agendas. This is a bit of an aside, but some of you on the call may also have participated in a workshop that we hosted for the scientific research and development agency evaluators, performance officers and analytics officials to explore learning agendas in the space of science R&D. And I should also say, if you attended that and you're still waiting on the workshop report, I apologize, it's my tardiness that's holding it up. I'll get it out as soon as I can. But all of this learning agenda activity to date has been driven by a ground flow of desire across the NSF workforce to make better informed decisions and actions, not by a top down edict. And we think that that's really important. As Cynthia mentioned earlier, the bottom up approach to our agency's mission work is mirrored in our bottom up approach to learning agendas. Next slide, please.

So while the content of our four big ideas, learning agendas will vary, we are using similar processes and tools for developing their learning agendas. And notice I say developing their learning agendas. We don't have our first learning agenda yet put to pen and paper. We are still in progress, but I think this will give you a better sense of where we're at. So first we've been supporting teams and their strategy development and refinement as needed. Some need more support than others. For the support we draw, we draw very heavily from strategic facilitation disciplines. We support participatory and co-creation strategy development processes. We have them consider where they've been, where they are now, where they want to go, how will they get there, and drawing in evidence at each point of those process, so that even the process of strategy development and refinement is driven by evidence.

Once teams have their high level vision and a strong set of steps for achieving it, we then engage teams in interactive sessions to articulate more detailed theories of change and also to map out what we call a decision roadmap. Typically, the decision roadmap has a one year perspective in mind or prospectus in mind and it connects anticipated milestones over the next fiscal year to decision moments where evidence would be most useful. And then, once we have those decision moments, we have them consider specifically the evidence needs or questions, the evidence users that need those questions answered, evidence building plans for how they're going to collect that evidence, and then evidence use plans for how the evidence will be disseminated, distributed and ultimately used. And we align all of those back to the decision moments. We then engaged groups in multiple forms of question storming. We press initiative staff, and their leaders in particular, to interrogate their initiatives theories of change, and we draw in the questions that emerged from their short term decision roadmaps.

Thus far, we've also used a combination of different question storming techniques and templates, coming from gain storming and the facilitation discipline. We have used ground rules, we have used things called pollination walls. We've had them apply priority criteria, and more recently we've started using feedback forums for supporting question identification and prioritization. So we use a lot of different tools and strategies for understanding what their priority evidence needs are. And we're now beginning to assist teams in also considering what they know and what are the gaps in what they know, especially in relation to the underpinnings of their articulated theories of change. These landscape analyses as we call them can be helpful for several reasons. They can help us to prioritize or deprioritize possible learning agenda questions. But these landscape analyses can also help us ask some of our more important learning agenda questions, especially in relation to strategy development.

Our next steps that are on the horizon are to create a study option menu, one that is particularly right sized for our staffing and our resource constraints, in our office, as well as considering the other evaluative capacity across the agency. And to improve our own

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efficiency and effectiveness as an office, we're thinking about using key question typologies to drive a feasible set of study designs and method menu options. And we really hope to have our first learning agendas drafted either late in FY 19 or in the first quarter of FY 20. Next slide, please.

So throughout the talk, we may have alluded to some of our barriers, but we'd like to be explicit about what some of the more severe barriers have been or the more challenging barriers and some of the strategies that we've used to mitigate or overcome them. We are, as many agencies are, an agency of silos. And that's not all different from how the scientific enterprise is organized. So in many cases, in most cases, we're working with multidisciplinary and cross-functional teams, often that have never worked before together. So they approach it from very different perspectives related not just to their scientific discipline, but also to their functional role in the agency. And we must create and support infrastructure for collaboration to make those working groups and teams successful. So we're using things like learning agenda technical teams and learning agenda governance teams, MOAs with leadership, to help articulate some roles and to ensure that everyone who needs to have voice in the learning agenda has that voice.

And where possible, we also are leveraging external contractors and contract vehicles that can provide support in a variety of aspects, including analytical and evaluative functions, facilitation, design thinking, and even technical assistance, both to NSF and its communities. Stakeholder engagement and evaluation at NSF has historically been fairly limited and opportunistic, so engaging a broader set of stakeholders and identifying and prioritizing questions of interest is definitely a new behavior for us, as is engaging stakeholders, really, across the evaluative study cycle or the learning agenda cycle. So there are culture and policy issues that we have to navigate related to getting feedback from and disseminating our learning agenda products to both internal and external stakeholders. And even within the agency, we've found that we need to deploy new strategies and tools for optimizing stakeholder engagement across the learning agenda steps to ensure that evidence will ultimately be used and maximally influential.

Finally, we surmise that learning agendas and support of basic science research is not a straight forward translation of the learning agenda work that has happened thus far in some of the more human and social service domains. We've experienced that there's some confusion about how learning agendas relate to research agendas. Are they a replacement or not? We've also entertained questions about, are learning agendas the same as individual development plans and folks not seeing the difference between individual learning and organizational learning.

Going back to the scientific R&D aspect though, there's really no collective understanding or adopted set of best practices across the federal scientific agencies for evaluation, nor is there really this collective sense of how we could, or whether we could use evidence more effectively to alter our strategic foci or our funding requirements, our investments themselves, or our management of those investments, to encourage either more rapid or less expensive or more impactful scientific research. We've noted that many of the other agencies in the human and social services side do include a lot of questions in their learning agendas that are answered by policy analyses and cost effectiveness studies and rigorous impact studies. And a challenging aspect of scientific R&D is that our impacts have such long event horizons that doing those kinds of studies alone really don't help us understand how we can do our work better and how we can make it more impactful and effective.

So we've had to necessarily focus on asking questions about the things that we can control as an agency, and thankfully, this has created a more hospitable learning environment. Next slide, please. And so continuing this notion of hospitable learning

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environments, we do think that one of the greatest impacts that learning agendas will have on the agency is in the realm of organizational learning. We do think that they have the potential to change, not just our approach to evidence building and use, but also changing the focus of that evidence building and use. A key impact that we expect, and that we're already starting to realize is that by asking and answering more and different questions, we're supporting organizational double loop learning. In our work, we've already witnessed firsthand that learning agenda activities are changing the questions that we're asking as well as people's attitudes towards the questions that they're asking. The learning agendas themselves are encouraging us to ask a broader spectrum of questions that move us beyond single loop learning, testing the relationships between strategy and results, and moving into double loop learning that really looks at questioning the strategies themselves that we're deploying.

And the learning agendas are not forcing us to be more cognizant of who needs answers to these questions, but in the way that we have structured our work with teens, it's certainly coming out that we want to be very clear, not just about what the questions are that we need answered, but for what purposes, on what timelines, and what we intend to do with those answers. In our early question storming with our big ideas stakeholders, we are finding that they are asking questions they have never asked before in regard to evaluative inquiry. So they're asking questions about relevance and about risk, they're asking questions about design and implementation, about what we're learning and the value of our investments as well as the costliness and sustainability.

These questions certainly provide more forward thinking and actionable insights than our typical questions that we hear from our stakeholders in years gone by, which is, did it work? And so these new kinds of questions also mean that we're able to deploy a broader range of data and methods and evaluative inquiry designs than what we've done in the past, which is a predominance of retrospective summative evaluations, whether they were warranted or not. And so we anticipate more evaluability assessments, feasibility studies, systematic reviews, exploratory analytic studies, developmental evaluations, and in some cases where strategy transcends some of our programmatic investment boundaries, also using cluster semantic evaluations. So just as Cynthia pointed out with the iceberg metaphor, it's not the data, per se, that adds value, but their ability to tighten the feedback loop that allows problem solving to broadcast, receive, refine and adapt solutions on an ongoing basis. Next slide, please.

And so in closing, I think we want to offer up these four lessons of lessons learned, sorry, to all of the agency participants out there who are novice or experienced evidence navigators. We have gleaned from other agency's learning agendas, and we've experienced firsthand in our prior evaluation work over the years that delivering the right evidence to the right people in the right form at the right time does not necessarily guarantee evidence use, much less create the kind of learning organizations that the evidence act envisions. And so, even when you have really wicked smart people in your agency, it shouldn't be taken as a given that if you build it, that it being the data, that they will come. We want to remind you that actionable questions yield action only if will and capacity exist for change. So circling back to our iceberg metaphor, while much of the evidence act that we can see, the tip of that iceberg focuses on the data, agencies really need to seriously consider how they'll support culture and capacity for evidence use.

We encourage that you think about how to effectively engage stakeholders, not just in asking high value questions, but also in supporting the process of articulating how and by whom the answers will be used. And doing that on the front end of the learning agenda development, not waiting until the back end. But we do surmise also many agencies will need to build new culture and capacity to facilitate and document evidence use on the back end of the learning agenda.

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Point number two, we're also finding that it's not as easy as it looks to do effective stakeholder engagement. It really does take a repertoire of tools, techniques, and a specific skillset to engage stakeholders effectively across the learning agenda staff, especially to facilitate teams and effectively translating evidence into insights and ultimately into decision and action. We have been drawing so heavily from the disciplines of design thinking and organizational learning and team and strategic process facilitation to support all of our learning agenda activities, and these are not in every evaluator's toolkit. We're finding that they should be.

So this is really a new landscape for many evaluators out there. Point three, we've also learned that when stakeholders don't buy in, initiatives fizzle. So at a scientific agency like NSF, stakeholder engagement is definitely one way of getting buy-in, and providing compelling evidence and value is another important way of getting that buy-in. The combination of two, of course, is just magic special sauce. But strategically coupling our learning agendas with initiatives that people care about and then demonstrating the value of evidence and supporting strategy development and refinement has really helped us to chart a course that ensures learning agendas can become a part of the fabric of NSF culture and practice. And then our final lesson, or cautionary tale, I guess, is just be prepared. We did not anticipate that learning agendas would catalyze appetite for more intentional use of evidence in the way that it has. So we have had teams and working groups literally knocking down our door. We have demands that we cannot fill with our very small staff. And so, be ready. Be ready with a team of facilitators, be ready with evaluators, with analysts, with contractors if you're able to, and any anyone else who can serve in the role of evidence producer, evidence broker, and can support this very, very important work. Thank you. And with that, I'm going to turn it back over to Chris. Or Dan.

Dan Finkelstein:

That's right. Great. That was an excellent presentation. Cynthia, Rebecca, thank you so much for pulling this webinar together and for contributing to the webinar series and providing such a great overview of NSF's approach. At this time, we'd like to open the lines to see if folks in the audience have any questions or comments for Cynthia and Rebecca. Just a quick reminder about the Q and A period. If you can please keep your phone muted unless you have a question, we'd appreciate that. If you have a question, please feel free to use the hand-raising icon and we'll call on you, but you'll need to unmute your phone at that time as well. Or you can also chat your question in the Q and A pod and we'll read your question for Cynthia and Rebecca.

And I believe we've already received at least one question, but please take this time to submit any other questions that you might have. And with that, Chris, can you please tell us or read forth the set of questions that we've received so far?

Chris Talbot:

Sure, I'd be happy to help out with that. We've actually received a couple of questions in so far. The first one is from Clint, and he was talking about the way that you had mentioned before, needing to bridge across different offices and orientations, to analysis and learning, performance measurement, impact evaluators, process, qualitative evaluators, statistical analytics, and so on. Terms like evidence may be loaded in each of those contexts. And he was wondering if you might be able to talk a little bit about the language and culture working across these different communities of practice, either within NSF and outside of the NSF stakeholders.

Cynthia Phillips:

Well, Rebecca, how about if I started, and then feel free to add?

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Rebecca Kruse:
Sounds great.

Cynthia Phillips:
Clint, that's a great question, Clint, because I think it's something that every agency is going to face. One of the really unique things about our unit is how interdisciplinary we are by our very design. We have evaluators. We have seasoned design thinkers, instructional designers, and facilitators. We have computer scientists. We have two mathematical and survey development statisticians, and we're closely integrated through many of our processes with folks who are in the performance unit, and through our participation in the strategic reviews over the years, so we have a strong functional relationship with the currently siloed areas within the agency, and we've begun the conversations across our CXOs to figure out how will we roll in this boat together. What would you add Rebecca?

Rebecca Kruse:
I would just acknowledge that, yes, you are right, Clint. Evidence is a very loaded term, and when we speak to our statistical colleagues, for example, their perspectives on evidence are very different from when we speak to our performance colleagues, when we speak to our program colleagues. And so, we really want to make sure that we're providing the most robust evidence that we can provide, but allowing the questions to drive the decisions about what evidence is going to be most credible, and we're working with groups to think more broadly about evidence than many of them already are. Thankfully, the memo that was provided most recently by OMB, has a really nice little illustration that broadens the idea of evidence beyond statistical data for statistical purposes, that has been quite helpful in communicating about evidence in particular.

Chris Talbot:
Thank you so much for that. We've actually got another question as well, that talks to the lessons learned that you shared, Rebecca, when you talked about whetting your appetite, and having your teams ready available. Can you talk about how building analytical capacity within program organizations and staff are being done at NSF. [crosstalk].

Rebecca Kruse:
We are just beginning that process, and we've used a series of workshops over the last year to do some of that. So, we have convened a number of workshops, internal to NSF, that first and foremost were intended to build the capacity of our own unit. Selfish, it may seem, but in addition to our own members, we reached out to members of other groups with which we were working at the time, and for whom we envisioned we would be working on their future learning agenda. So, we invited working group members, for example, from the big ideas, or we invited individuals who were working on a complimentary effort to the big ideas called for renewing NSF, which is all about how do we renew NSF, its workforce, and its work, to better support these big ideas. And so, we brought them together to think about different things than what they typically think about in their everyday processes.

So, things like the knowledge brokering, and how do we provide the right information to the right people at the right time? From that work emerged this decision roadmap tool that we have, that we've been using in our learning agenda work, and we're actually working with another vendor to sort of gamify that particular tool. But, this idea of knowledge brokering was really a profoundly different idea than anything individuals at NSF had experienced and learned about before.

In addition to that particular workshop, we also convened another workshop, both with our EAC staff and with our learning agenda collaborators, around evaluation use and

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influence, and thinking about how we could build some of these principles that are in the literature around evaluation use and influence, into our learning agenda work. And so, with that, we've been working with another vendor, who had developed a tool previously for the UK's Department for International Development, I believe, DFID. And she has been working with us and coaching us to think about how we design our learning agendas and evaluative studies therein, to be maximally influential, and useful to stakeholders.

More recently we convened a workshop, and have had some follow up around presenting data effectively. Not just quant data but qual data, not just presenting data, but also reporting, effective reporting, and understanding how the brain learns, how the mind processes information, and supporting people from our bottom level analysts, all the way up to our section heads and division directors, and really understanding new ways of thinking around visualization and reporting. So, we're tackling capacity in small bits and pieces, in ways that feel particularly relevant or salient to where people are at, right now. I think we have a really long way to go, and Cynthia, I'm going to turn it over to you to see if you have any additional questions to add, or comments add.

Cynthia Phillips:

That was a really comprehensive answer, Rebecca, and I thank you for that. The only thing that I would add is that we have the benefit of an EAC working group that has analysts and evaluators from across all of our offices and directorates who meet with us approximately monthly, and we're in the process of revising the charter for this working group to really re-energize and revitalize it to use these islands of excellence in a more networked way to help implement the evidence act. We're trying to leverage the skills and abilities that we have distributed across the foundation, in addition to our centralized small core staff.

Chris Talbot:

Thank you very much for those responses. We do have one more question that came in as we're getting towards the very end of our hour. The question from Angela is, if you are at the beginning of the process of developing a learning agenda, what should be your first step?

Cynthia Phillips:

Oh, I got to jump all over this one. Thank you, Angela. And I swear, folks, we did not pay her to ask that question. I have a really strong answer to that, Angela, and that is for whatever is going to be the eval. end for the learning agenda, that you start with the theory of change, that you help your stakeholders to understand what is the connection between the do and get of your agency's enterprise mission that you most need to learn about. If you have a theory of change that helps people see where do and get are connected, you're much more able to brainstorm and develop more strategic questions. And I know Rebecca probably is salivating on what to add for that.

Rebecca Kruse:

Well, and what I will add is the value of that theory of change in relationship building, and in helping teams to come to a collective vision about what they're doing, where they want to go, and how they intend to get there, I think that we often take it as given that when people are working on initiatives, that they have this shared vision and understanding of what they're doing and what they're trying to achieve, and in many cases we have found that is not the case, that there are as many different visions and strategies as there are people in the room and plus some, and so it goes a long way to bring people together to get buy-in and ultimately to commit to a shared vision and strategy.

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Dan Finkelstein:

Okay, great. Cynthia and Rebecca, thank you so much for taking the time to present today's webinar and to answer those questions. We're just going to wrap it up very quickly because it's at the top of the hour. We just wanted to let you know that today's materials will soon be posted on the Mathematica website and shared through other internal communication channels. You'll find registration links in the flyer that was circulated through the federal evaluation evaluators list serve and other internal communication channels, and Chris is also pushing those registration links through the chat.

Just to let you know about upcoming webinars, on August 13th Brittany Borg with the Small Business Administration will be presenting, and on August 28th Emily Schmitt with the HHS's Administration for Children and Families will be presenting, and our final webinar is with Tammy Tippie from the Department of the Defense Navy, and that is still being scheduled. So please stay tuned. Finally, we want to let you know that there's an evaluation for today's webinar. We'd love to gather your feedback about the webinar, and it'll help us understand what could be improved for the future. So once the webinar ends, a popup window will appear with only four questions regarding feedback and the quality of the event. So if you could please answer those questions, we would really appreciate it. And with that, I just want to thank you again for joining this afternoon's webinar. A special thanks again to our presenters for today's great presentation, and we will see you again next week. And if you have any questions in the interim, please don't hesitate to reach out to us at the email on the screen, which Chris has also pushed through the chat. So with that, thank you again for joining us and have a great afternoon. Take care.