

Overview

According to an April 2022 survey conducted by the [NSF INCLUDES Coordination Hub](#), NSF INCLUDES Planning Grants have made significant progress in operationalizing critical aspects of the National Science Foundation’s (NSF) design elements of collaborative infrastructure. This issue brief outlines key survey findings and provides background information about NSF INCLUDES, Planning Grants, and the survey used to collect process data from projects funded or co-funded by NSF INCLUDES. The tables provide results for each survey item, sorted from highest to lowest for respondents’ assessment of their Planning Grants’ progress in addressing specific components of the design elements.

NSF INCLUDES and the Design Elements of Collaborative Infrastructure

[NSF INCLUDES \(Inclusion Across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science\)](#) is a comprehensive national initiative designed to enhance U.S. leadership in discoveries and innovations by focusing on diversity, inclusion and broadening participation in Science, Technology, Engineering and Mathematics (STEM) at scale. A distinguishing feature of NSF INCLUDES is the use of *the five design elements of collaborative infrastructure*, a process by which partner organizations (1) engage their community to formulate a shared vision of what can be accomplished collaboratively; (2) provide a platform for collaborative action; (3) develop common goals, objectives, metrics, and data collection procedures to measure shared progress and inform decision making; (4) develop structures across partner organizations to enhance coordination, communication, and visibility; and (5) establish the capacity for the expansion, sustainability, and scaling of their shared efforts. Each project funded by NSF INCLUDES uses this framework to accelerate its efforts to address systemic barriers to diversity, equity, and inclusion in STEM.



Source: <https://www.includesnetwork.org/about-us/what-we-do>

NSF INCLUDES Planning Grants

Planning Grants differ from Alliances and other projects co-funded by NSF INCLUDES in terms of purpose, scope, and duration. Specifically, Planning Grants are designed to *“build capacity in the community to undertake the activities necessary to establish future centers, alliances, or other large-scale networks to address a broadening participation challenge at scale.”*¹ As such, we conducted a separate analysis of Planning Grants responses (as opposed to integrating responses from Planning Grants and Alliances). This approach allows us to provide more accurate information about the experiences and accomplishments of each type of project funded by NSF INCLUDES.

Collaborative Infrastructure Survey

The Hub’s Collaborative Infrastructure Survey is designed to collect information about the progress that NSF INCLUDES-funded projects are making to address specific features of the design elements of collaborative infrastructure. The survey also serves as a resource for partnership projects seeking to define and measure their efforts to establish a cohesive infrastructure. In addition, the individual projects that participated in the survey can use their own data to assess their progress and inform their decision making.

In April 2022, 42 stakeholders across six Planning Grants that were in their second year of NSF INCLUDES funding completed this survey.² Respondents included key stakeholders (e.g., PIs, Co-PIs, staff, partners, researchers, and evaluators) who were in a position to assess their initiative’s progress regarding the design elements. The key findings reported below, as well as the frequencies in Tables 1 and 2, use respondents as the unit of analysis.

¹ Source: <https://www.nsf.gov/pubs/2019/nsf19600/nsf19600.htm>

² The response rate among Planning Grant respondents was 60.9 percent (representing 42 of the 69 individuals who were asked to complete the survey).

Key Findings

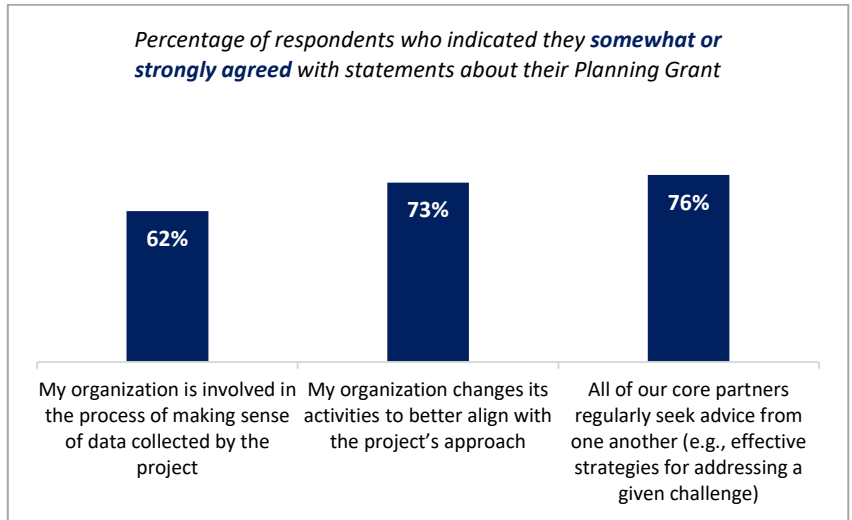
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Responses were generally **highest** for those features of the design elements associated with **Leadership and Communication**. This likely reflects Planning Grants' focus on establishing the infrastructure required to establish a partnership project.



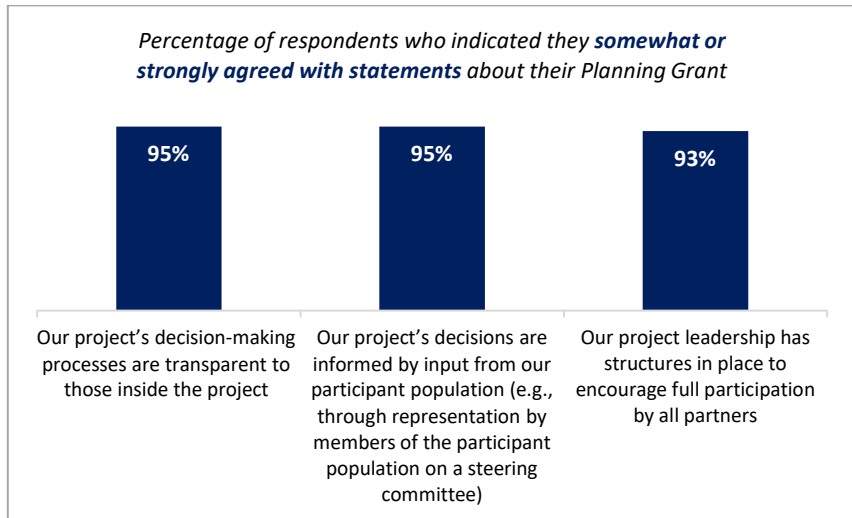
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Responses were **lowest** for features commonly associated with **mature partnership projects** that have established structures across partners. This likely reflects the condensed timeframe and focused mission (i.e., *establishing networks to address a BP challenge*) under which Planning Grants operate.



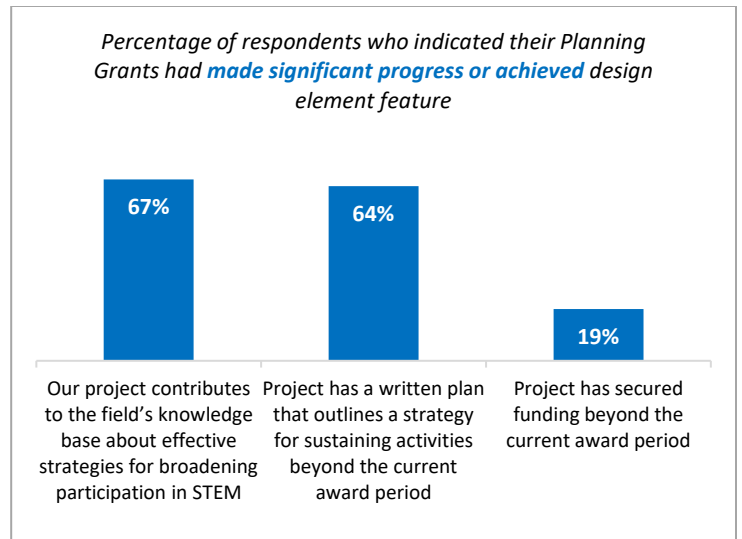
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Responses were relatively **high** for features focused on **decision-making and participation** by partners and members of the participation population.



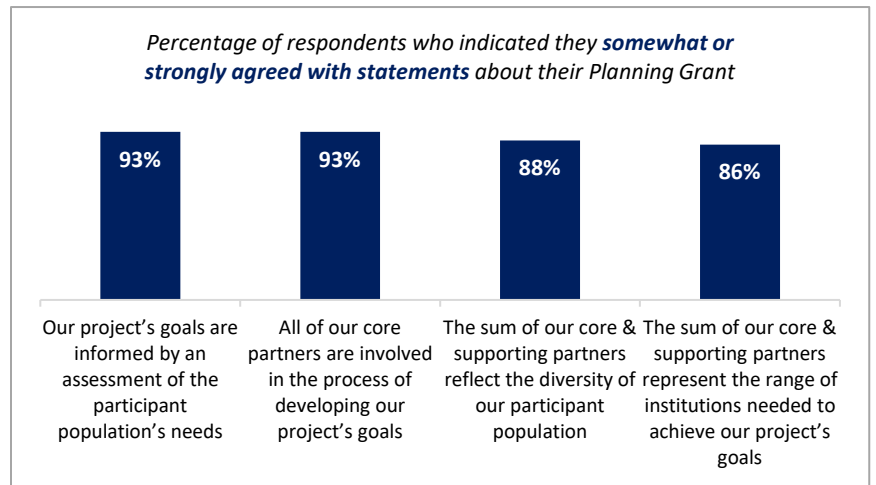
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Approximately two-thirds of respondents indicated that their Planning Grants had made significant progress or achieved two of the features associated **Expansion, Sustainability & Scale**—i.e., contributing knowledge to field and having a written sustainability plan (67 percent and 64 percent, respectively). The finding on the written plan likely reflects progress that Planning Grants have made preparing a proposal to extend the scope and scale of their work. In addition, the 19 percent of respondents who indicated they had secured funding beyond the current award is actually higher than would be expected given where Planning Grants were in their life-cycle (completing their second year of funding) when they completed the survey.



5

More than 85 percent of respondents reported strong agreement with statements that focused on the **status and views of program partners and participants**.



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Planning Grants scored high in areas that focused on the status of **formal planning documents** (which aligns with the underlying purpose of these projects).

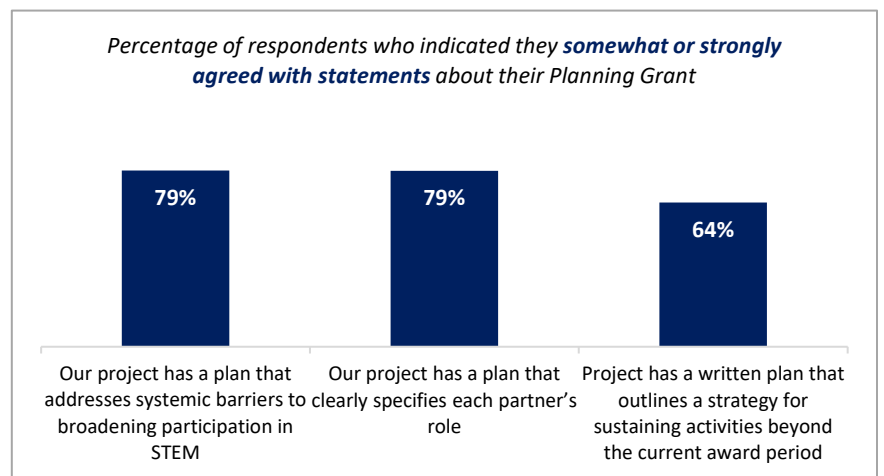


Table 1. Please indicate whether your NSF INCLUDES Planning Grant has done or plans to do each of the following activities (n=42)

Domain	Statement	Results							
		Not started	Made some progress	Made significant progress	Has been achieved	No plans to do this	Not applicable	Don't know	No response
Shared Vision	Our project has a plan that addresses systemic barriers to broadening participation in STEM	2.4%	14.3%	54.8%	23.8%	0.0%	0.0%	2.4%	2.4%
Partnerships	Our project has a plan that clearly specifies each partner's role	4.8%	11.9%	45.2%	33.3%	0.0%	2.4%	0.0%	2.4%
Expansion, Sustainability, & Scale	Our project contributes to the field's knowledge base about effective strategies for broadening participation in STEM	7.1%	21.4%	38.1%	28.6%	0.0%	0.0%	2.4%	2.4%
Expansion, Sustainability, & Scale	Project has a written plan that outlines a strategy for sustaining activities beyond the current award period	2.4%	23.8%	35.7%	28.6%	0.0%	2.4%	4.8%	2.4%
Partnerships	Our project adds new partners to address a given need (e.g., to access crucial expertise &/or additional participants)	0.0%	23.8%	42.9%	19.0%	0.0%	7.1%	4.8%	2.4%
Goals & Metrics	Our project has participatory processes to refine its measures, indicators, metrics, &/or data collection methods	4.8%	19.0%	35.7%	23.8%	0.0%	9.5%	4.8%	2.4%
Goals & Metrics	Our project uses data to make regular improvements	11.9%	14.3%	33.3%	19.0%	0.0%	11.9%	2.4%	7.1%
Goals & Metrics	Our project has the capacity to track progress across all partners (e.g., protocols, common metrics)	4.8%	28.6%	33.3%	9.5%	2.4%	9.5%	9.5%	2.4%
Expansion, Sustainability, & Scale	Project has secured funding beyond the current award period	14.3%	35.7%	14.3%	4.8%	0.0%	4.8%	23.8%	2.4%

NOTE: The *no response* column indicates the percentage of respondents who did not answer a given item. Items are sorted from highest to lowest for the sum of responses to “we have made significant progress” and “this has been achieved.”

Table 2. Please indicate the extent to which you agree with the following statements about your *NSF INCLUDES Planning Grant* (n=42)

Domain	Statement	Results						
		Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Activity not applicable	Don't know	No response
Leadership & Communication	Our project leadership provides opportunities for building relationships across partners	0.0%	0.0%	19.0%	78.6%	2.4%	0.0%	0.0%
Leadership & Communication	Our project's leadership structure leverages the collective knowledge of partners & other stakeholders	0.0%	2.4%	16.7%	78.6%	2.4%	0.0%	0.0%
Leadership & Communication	Our project leadership is willing to engage in frank & open discussions when areas of disagreement exist	0.0%	0.0%	7.1%	88.1%	4.8%	0.0%	0.0%
Leadership & Communication	Our project's decision-making processes are transparent to those inside the project	0.0%	0.0%	19.0%	76.2%	4.8%	0.0%	0.0%
Leadership & Communication	Our project's decisions are informed by input from our participant population (e.g., through representation by members of the participant population on a steering committee)	0.0%	2.4%	21.4%	73.8%	2.4%	0.0%	0.0%
Leadership & Communication	Our project leadership has structures in place to encourage full participation by all partners	0.0%	2.4%	26.2%	66.7%	4.8%	0.0%	0.0%
Shared Vision	Our project's goals are informed by an assessment of the participant population's needs	0.0%	2.4%	19.0%	73.8%	0.0%	4.8%	0.0%
Shared Vision	All of our core partners are involved in the process of developing our project's goals	0.0%	4.8%	19.0%	73.8%	2.4%	0.0%	0.0%

Table 2. Please indicate the extent to which you agree with the following statements about your *NSF INCLUDES Planning Grant (n=42)*—continued

Domain	Statement	Results						
		Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Activity not applicable	Don't know	No response
Leadership & Communication	My organization shares its challenges, setbacks, & lessons learned with other partners on the project ¹	0.0%	0.0%	30.8%	61.5%	3.8%	3.8%	0.0%
Partnerships	My organization has clear goals for its contribution on the project ¹	0.0%	3.8%	42.3%	50.0%	0.0%	3.8%	0.0%
Partnerships	My organization is committed to implementing the project's approach ¹	0.0%	0.0%	15.4%	73.1%	3.8%	3.8%	3.8%
Leadership & Communication	All of our core partners collaborate with each other to align their actions	0.0%	4.8%	33.3%	54.8%	7.1%	0.0%	0.0%
Partnerships	The sum of our core & supporting partners reflect the diversity of our participant population	0.0%	7.1%	38.1%	50.0%	2.4%	2.4%	0.0%
Partnerships	The sum of our core & supporting partners represent the range of institutions needed to achieve our project's goals	0.0%	7.1%	31.0%	54.8%	4.8%	2.4%	0.0%
Leadership & Communication	My organization seeks advice from other partners on the project (e.g., effective strategies for addressing a given challenge) ¹	0.0%	0.0%	30.8%	53.8%	3.8%	11.5%	0.0%
Expansion, Sustainability, & Scale	Our project has a strategic vision of what activities will be sustained beyond the current award period	2.4%	0.0%	33.3%	50.0%	2.4%	11.9%	0.0%
Leadership & Communication	Our project has internal procedures that minimize power imbalances among partners	0.0%	2.4%	35.7%	47.6%	7.1%	7.1%	0.0%

Table 2. Please indicate the extent to which you agree with the following statements about your *NSF INCLUDES Planning Grant (n=42)*—continued

Domain	Statement	Results						
		Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Activity not applicable	Don't know	No response
Goals & Metrics	All of our core partners are involved in the process of making sense of findings that emerge from the project's analysis of shared measurement data	0.0%	7.1%	21.4%	54.8%	14.3%	2.4%	0.0%
Leadership & Communication	All of our core partners regularly seek advice from one another (e.g., effective strategies for addressing a given challenge)	2.4%	4.8%	26.2%	50.0%	4.8%	9.5%	2.4%
Partnerships	My organization changes its activities to better align with the project's approach ¹	0.0%	11.5%	30.8%	42.3%	7.7%	7.7%	0.0%
Goals & Metrics	My organization is involved in the process of making sense of data collected by the project ¹	3.8%	19.2%	26.9%	34.6%	7.7%	7.7%	0.0%

¹This item was only asked of the 26 respondents who were associated with a partner organization.

NOTE: The *no response* column indicates the percentage of respondents who did not answer a given item. Items are sorted from highest to lowest for the sum of responses to "somewhat agree" and "strongly agree."