

User Satisfaction Survey Results

2018

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NHERI User Satisfaction Research

The NSF requires NHERI to conduct user satisfaction research yearly for the first five years of the NHERI program. This survey was conducted by the User Forum committee fulfill this requirement for the second year of the program.

Year Two User Satisfaction Survey

The 2018 survey was substantially revised from the 2017 version. Revisions were based on feedback from the User Forum committee. Building on the 2017 survey, the committee expanded and refined the questions to obtain more details. Questions featured mixed response options which yielded both qualitative and quantitative data. Using the online survey software, Qualtrics, the committee collected data from April 4, 2018 until April 30, 2018. Three messages were sent by the NHERI leadership to NHERI users inviting participation and as reminders to complete the survey. Invitations were sent to 1,958 NHERI users who opted-in to contact; 125 users began the survey, but eight declined to participate. Of those 117 who agreed to participate, between 39 and 69 went on to answer questions, yielding a response rate of approximately 2% - 4% individuals. This response rate is similar to that of the 2017 user satisfaction survey.

Overall Findings Summary

The 2018 survey was constructed to yield both quantitative and qualitative data. Quantitative data suggest positive experiences and feedback for NHERI facilities and resources. Regarding interaction with and utilization of NHERI facilities and resources, about half of respondents were not planning to submit a proposal utilizing NHERI, while the other half were at various points in proposal and research processes. Additionally, over half of users reported intentions of using pre-existing data, as well as producing and uploading new data, and only a quarter of users only intended to utilize pre-existing data.

In the areas of information about NHERI facilities and resources, NHERI staff, scheduling, equipment, support resources, data utilization and interface, and online resources and tools, respondent feedback was generally more positive than negative. Additionally, a number of questions from the 2017 user satisfaction survey were repeated in 2018; at basic levels, respondent feedback in 2018 on those questions was more positive than in 2017.

Qualitative data paint a more negative picture, with some respondents using open-ended questions as opportunities to air grievances. The majority of these were directed toward website speed, access, organization, and general usability. Negativity in qualitative responses should be interpreted with caution, however, as a very small sample of an already small population provided responses to these questions, and they are in contradiction to the much more positive responses demonstrated by quantitative data.

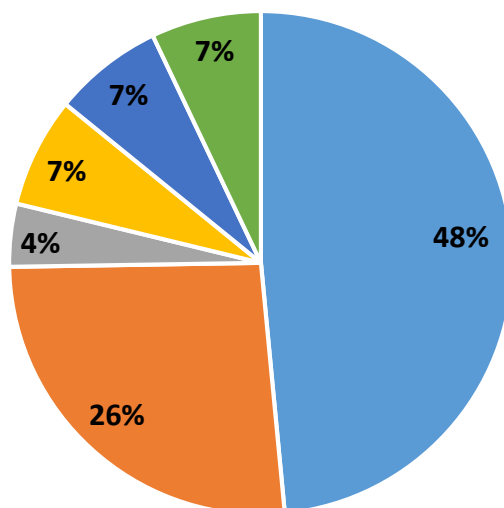
Given the low survey response rate and the limited number of respondents, care should be given to putting too much emphasis on the findings presented here. Rather, these results should be used as and part of considering ways to improve NHERI's offerings.

These findings will be discussed in more depth in the following section, which provides detailed item-level data. Additionally, the survey instrument and comprehensive qualitative data is attached to this report as appendices A and B.

Item-Level Data

This section provides detailed, question-level data. Questions one and two in the survey dealt with informed consent and agreement to participate, and have been excluded from this section.

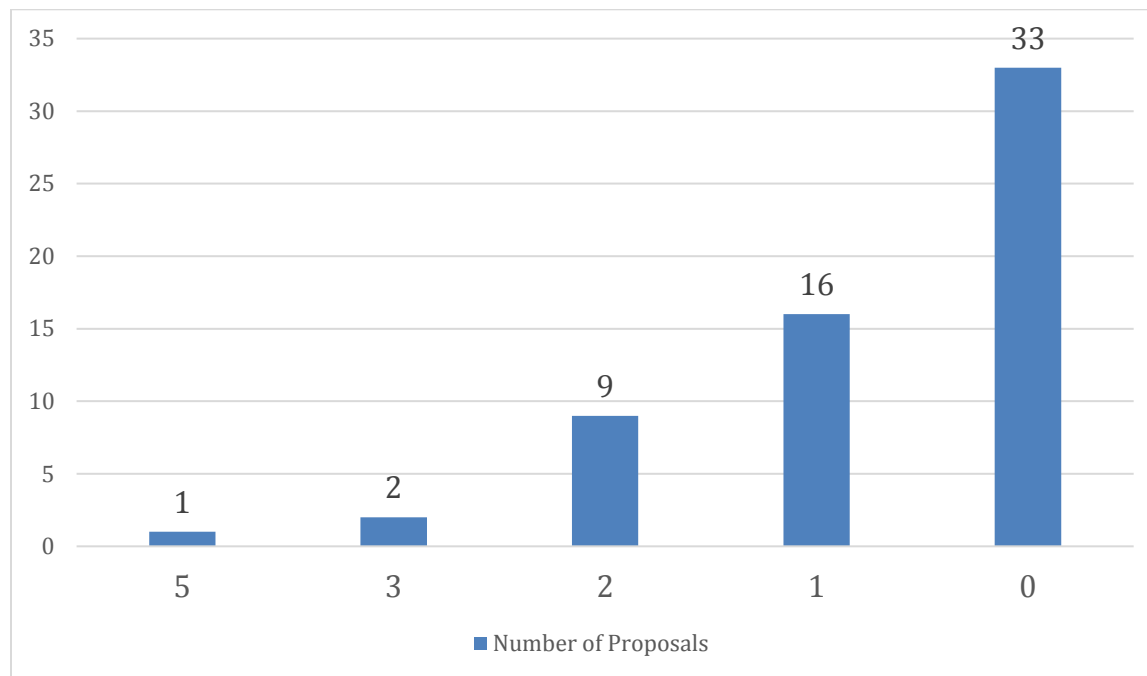
Q3 - Which of the following best describes your current position in the proposal process for NHERI Facilities and Resources (N = 69)?



- I do not plan to submit any proposals.
- I'm writing my first proposal.
- My proposal has been accepted, but I have not begun utilizing facilities.
- I am currently performing experiments/using the SimCenter.
- I have completed experiments.
- I have completed an experiment(s) and am working on the next proposal.

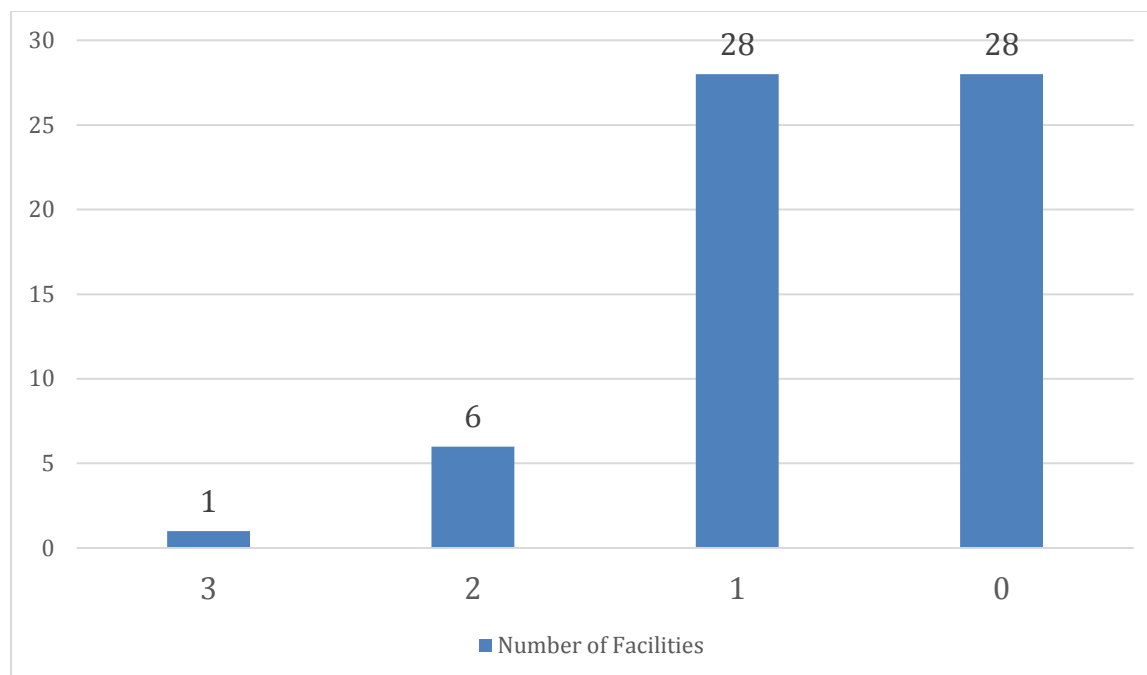
This is a new question for the 2018 survey which aimed to provide more details about the NHERI user group's interaction with NHERI. Approximately 48% of respondents did not plan to submit a proposal through NHERI, 26% of respondents were writing their first proposal, with the remainder of respondents being at various positions in experiment processes.

Q4 - How many proposals have you prepared that used NHERI Facilities and Resources (numeric response; N = 61)?

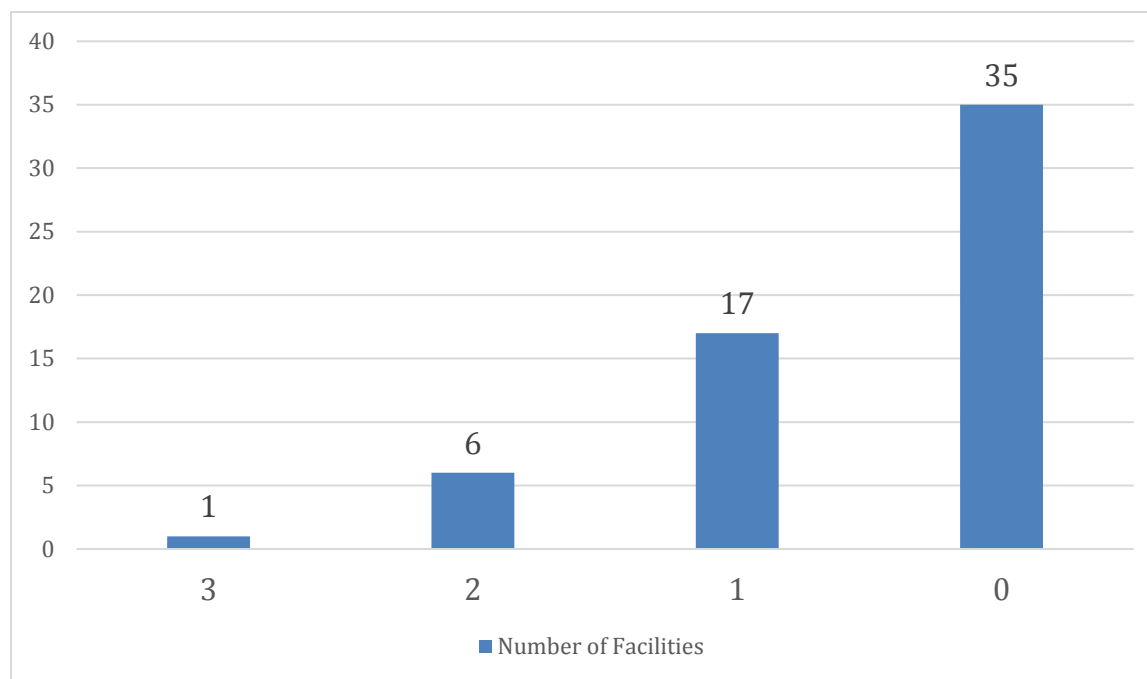


This question (along with questions five and six) explore more nuanced dimensions of a question from the 2017 survey (i.e., question one, which asked “In the past year, how many projects did you have that used either the NHERI Experimental Facilities and/or the SimCenter”). In 2018, approximately half of respondents had not prepared a proposal using NHERI facilities and resources, 16 had prepared a single proposal, nine had prepared two proposals, two had prepared three proposals, and one user had prepared five proposals.

Q5 - How many facilities are you using/have you used (numeric response; N = 63)?

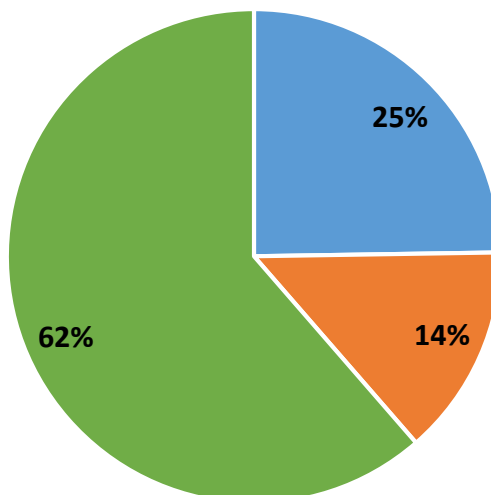


This question (along with questions four and six) explore more nuanced dimensions of a question from the 2017 survey (i.e., question one, which asked “In the past year, how many projects did you have that used either the NHERI Experimental Facilities and/or the SimCenter”). Twenty-eight respondents reported using no facilities, 28 respondents reported using one facility, and six reported using two facilities, with the remaining respondent using three facilities.

Q6 - How many facilities are you writing proposals for (numeric response; $N = 59$)?

This question (along with questions four and five) explore more nuanced dimensions of a question from the 2017 survey (i.e., question one, which asked “In the past year, how many projects did you have that used either the NHERI Experimental Facilities and/or the SimCenter?”). Thirty-five respondents reported writing proposals for none of the facilities, 17 respondents reported writing proposals for one facility, six respondents reported writing proposals for two facilities, and one respondent preparing proposals for three facilities. Moving into the third year of NHERI, this question could be expanded to provide a proxy for gauging multi-hazard users.

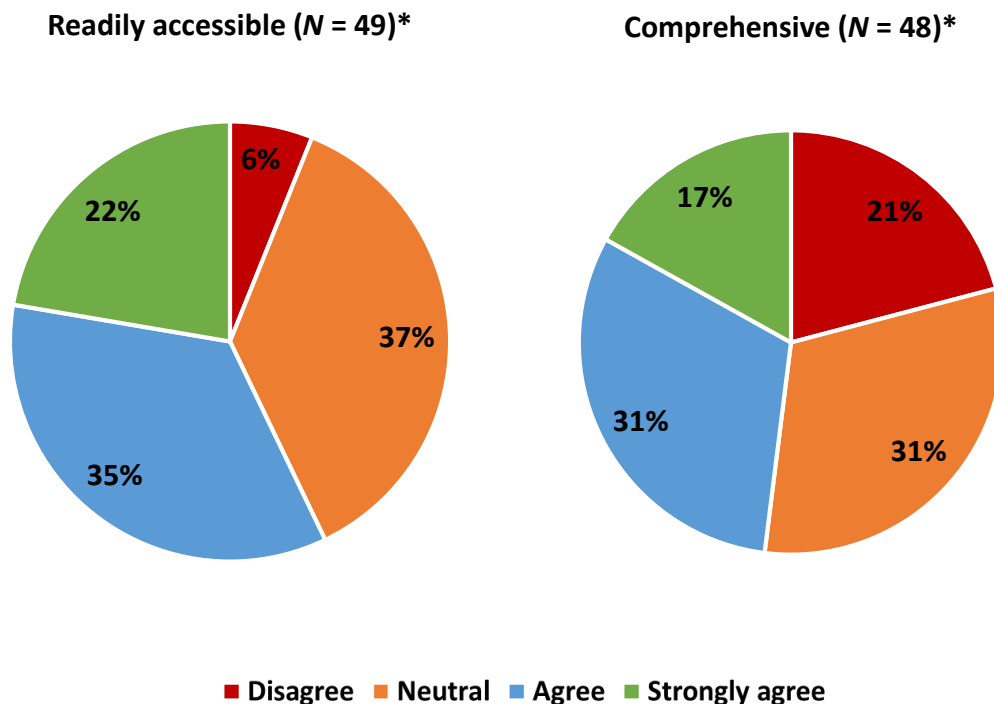
Q7 – Which of the following best describes how you intend to utilize NHERI Facilities and Resources ($N = 65$)?



- I only want to access and use data that has already been uploaded.
- I intend to produce and upload original data.
- I want to both access and use data, and produce and upload original data.

This question was newly added to the 2018 survey in order to more fully understand the intended usage of NHERI facilities and resources by the NHERI user group. A majority of respondents (62%) intended to both access and use data and produce and upload original data, while a quarter of respondents only intended to access and use data that had already been uploaded. The remaining 14% of respondents intended only to produce and upload original data.

Q8 – Information about NHERI Facilities and Resources is:



***Strongly disagree categories not shown**

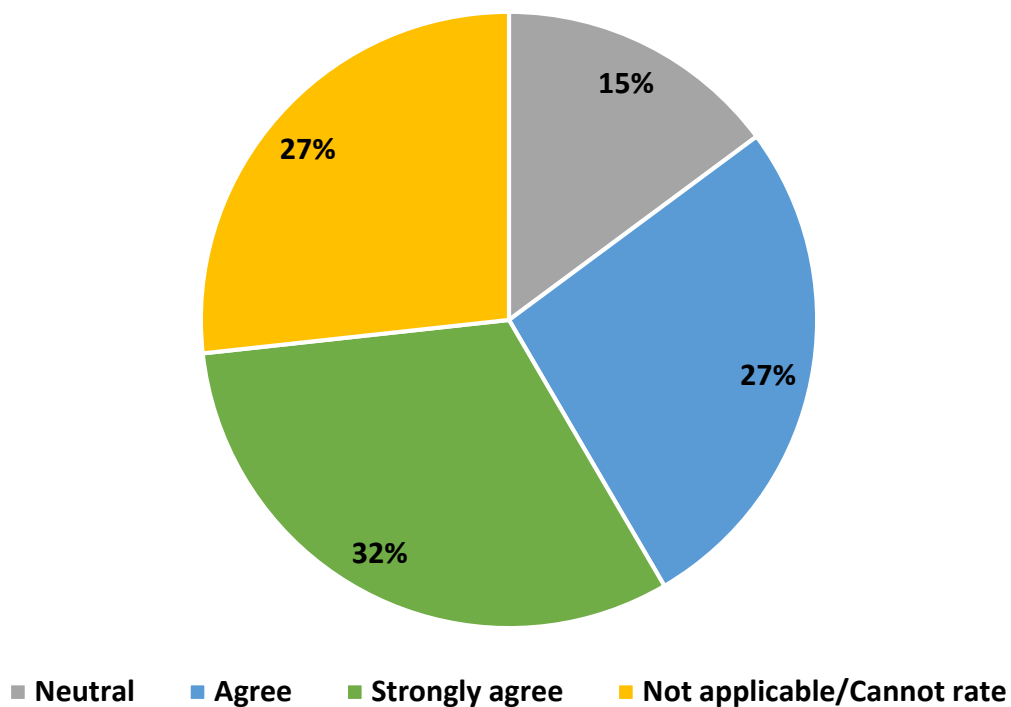
This question captures questions two and three from 2017’s survey, which asked about similar topics. Roughly half of respondents found information about NHERI facilities and resources to be both readily accessible and comprehensive, though 21% of respondents did not agree that information is comprehensive compared to only 6% that disagreed information is readily accessible. No respondents indicated strong disagreement with either statement.

Q9 – Do you have any additional comments regarding information about NHERI Facilities and Resources (*N* = 13)?

Respondents were asked to share any additional feedback regarding information about NHERI facilities and resources in an open-ended manner. Responses to this question generally expressed concern for organization, comprehensiveness, and clarity of information about NHERI.

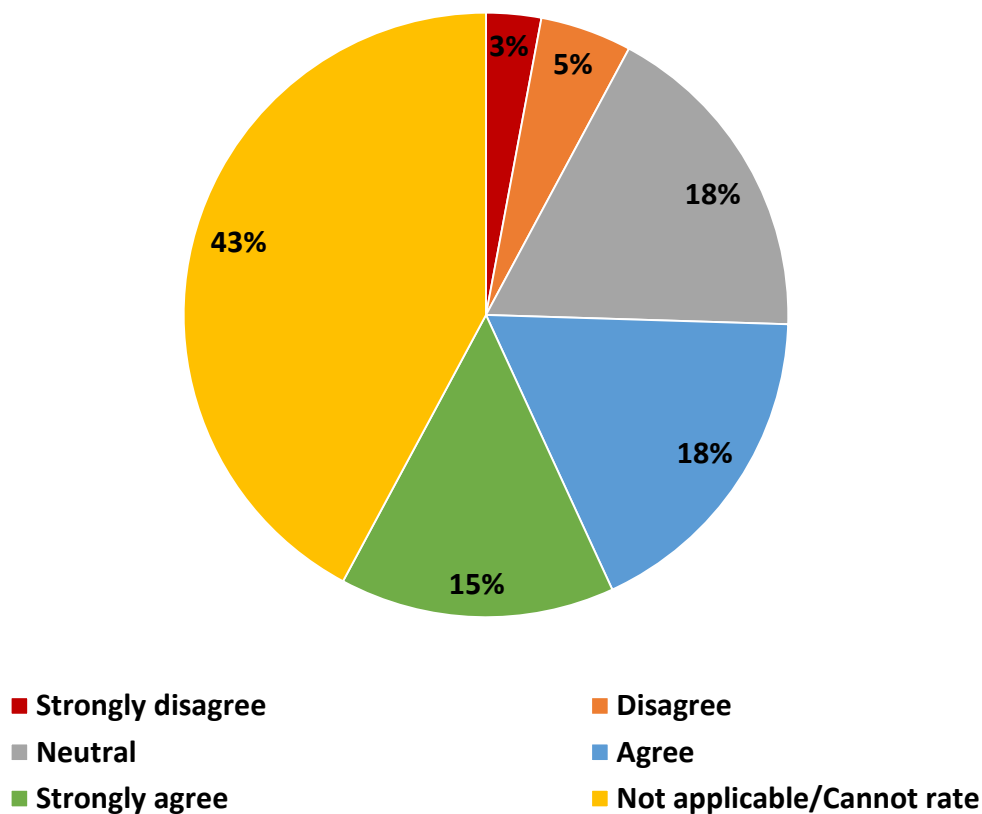
Respondents were concerned with the organization of information about NHERI facilities and resources, stating “there is not a clear, transparent system for scheduling,” for example, or that “...information about the facilities needs to be more uniform and complete...” Several respondents expressed a perceived lack of clarity regarding costs associated with using NHERI facilities and resources. For instance, one respondent noted “...NHERI facilities through funded NSF proposals has been consistently advertised as 'free.' In fact, use of facilities is far from free, and information on pricing is not readily available for all (or most) facilities.”

Q11 - NHERI experimental facility staff has provided useful feedback on proposed/ongoing/completed tests (N = 41).



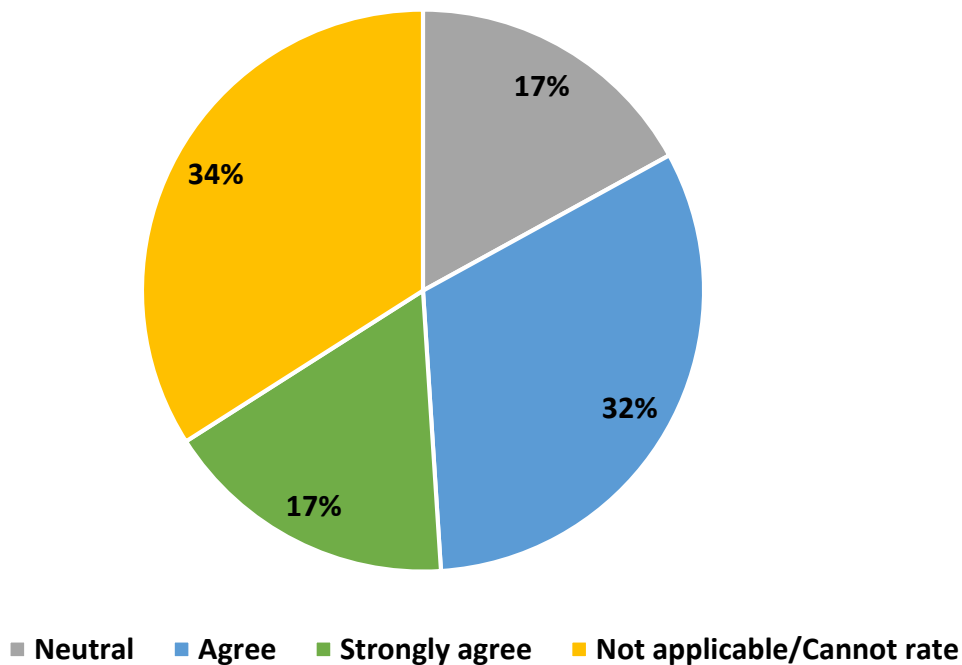
This question updated phrasing from 2017’s survey to include ongoing and completed tests. Over half of respondents agreed or strongly agreed that facility staff had provided useful feedback, while slightly more than a quarter of respondents could not rate. No respondents disagreed or strongly disagreed with this statement.

Q12 - The process for scheduling facilities matches my expectations (N = 40).

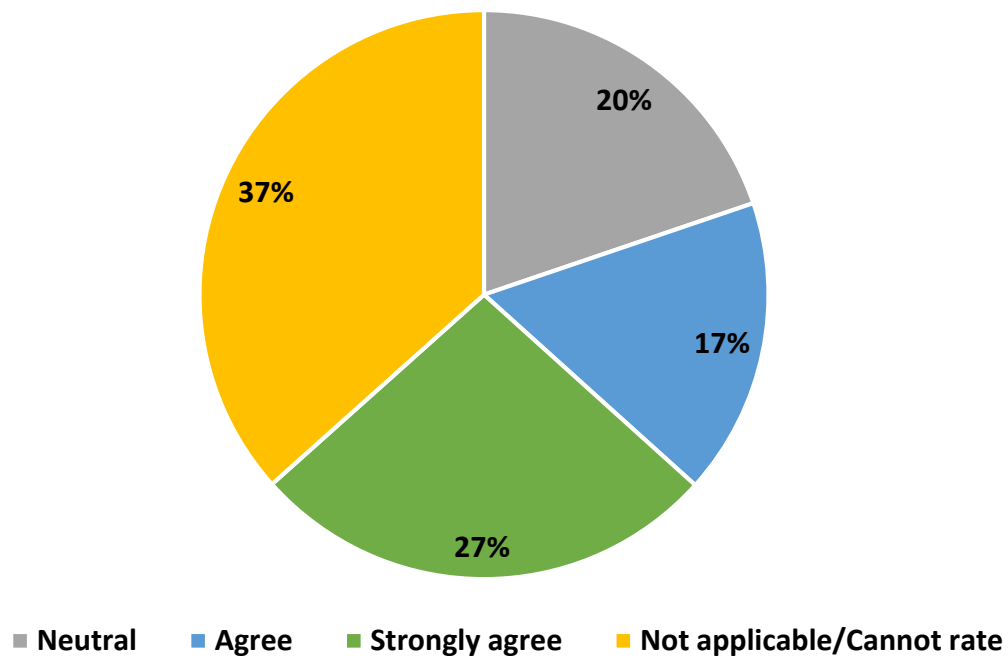


This question was also featured on the 2017 survey with generally similar results. 43% of respondents could not rate scheduling processes for facilities, while 33% agreed or strongly agreed that scheduling processes matched their expectations. Only 8% of respondents disagreed or strongly disagreed with this statement.

Q13 - The available training for the facility’s equipment meets my needs (N = 41).



This question was also featured on the 2017 survey. 34% of respondents could not rate this question, while 49% agreed or strongly agreed that training for facilities’ equipment met their needs (compared to approximately 33% who agreed or strongly agreed from 2017). No respondents disagreed or strongly disagreed with this statement.

Q14 - Technical support for the facility's equipment meets my needs ($N = 41$).

This question was also featured on the 2017 survey. 37% could not rate technical support for a facility's equipment, while 44% agreed or strongly agreed that technical support met their needs (compared to approximately 33% that agreed or strongly agreed from the 2017 survey). No respondents disagreed or strongly disagreed with this statement.

Q15 – Do you have any additional comments about NHERI Facilities’ and Resources’ staff, scheduling, and equipment (N = 9)?

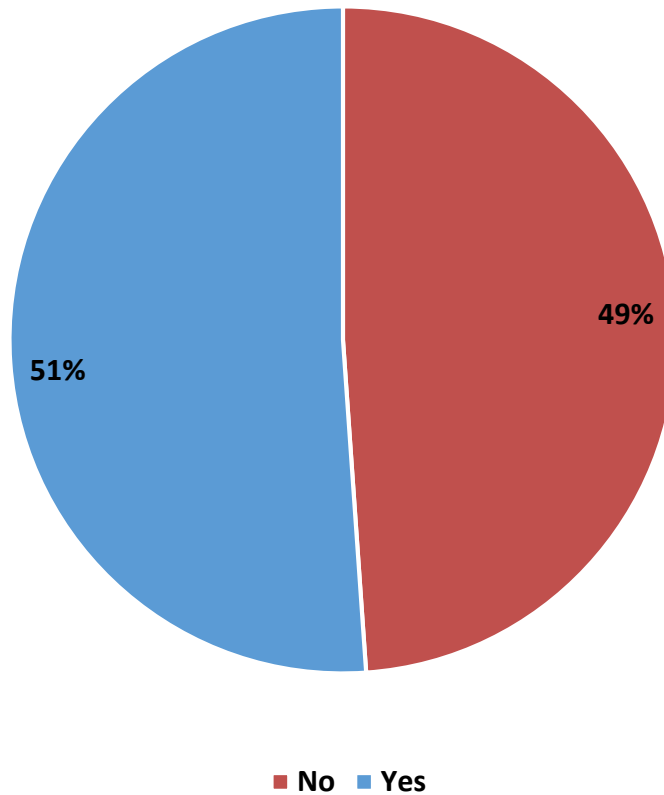
Respondents were again asked to provide additional feedback – this time regarding staff, scheduling, and equipment in an open-ended manner. Those who provided feedback described inconsistency amongst facilities and perceived informal barriers to navigating facilities. One respondent spoke to the uniqueness of each facility by stating:

“I think each site is very unique – some sites do it better than others. Some sites are extremely understaffed – and this needs to be made WELL known prior to having a PI come to site. In fact, if I didn't have my own general contractors on site, there is no way we would have finished the test with the site only having one full time staff.”

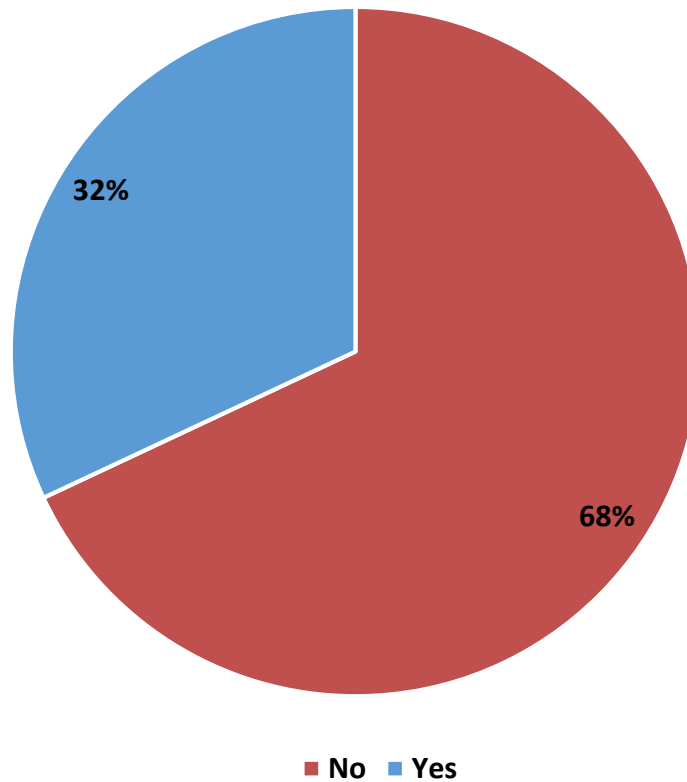
Other respondents described what they considered to be informal barriers regarding information and knowledge. For instance, one respondent noted that NHERI facilities and resources “seems like a small fraternity, with limited access,” while another explained that “there are not clear guidelines for whether scheduled time is guaranteed.” These concerns should be contextualized with those concerning inconsistency from one facility to another.

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Q17 - Have you participated in any of the proposal writing workshops and/or seminars, or utilized NHERI support resources ($N = 41$)?

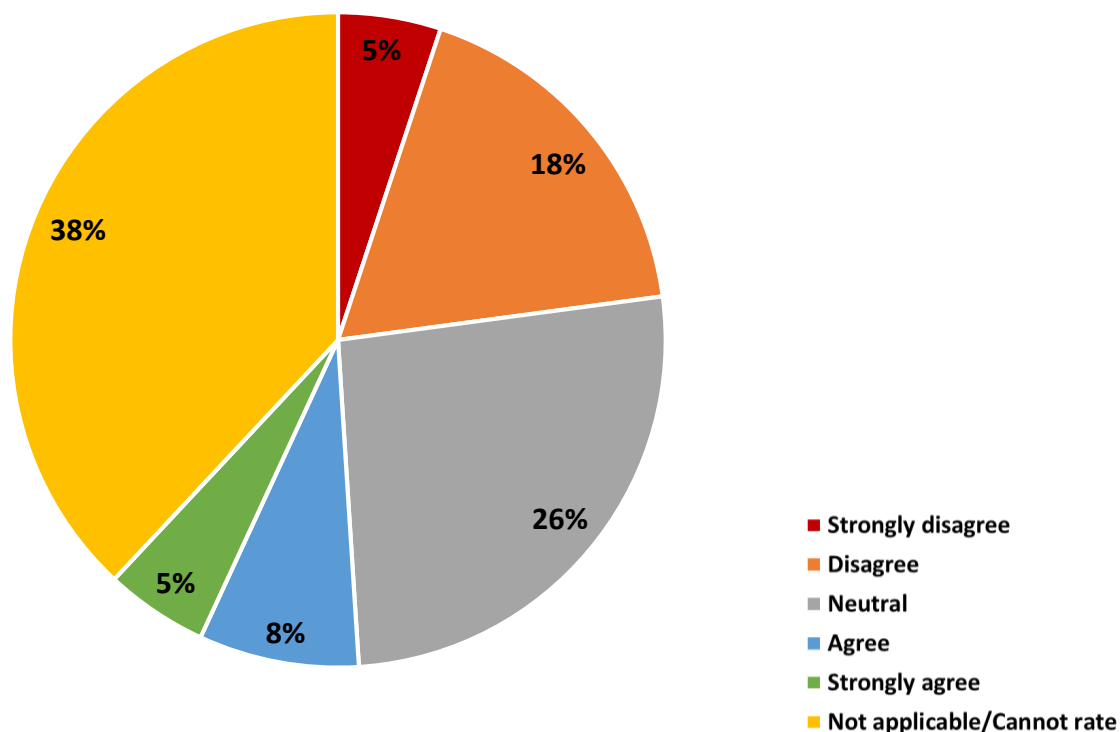


About half of respondents reported participating in writing workshops, seminars, or utilizing NHERI support resources.

Q18 - Have you requested assistance from NHERI as you write your proposal (N = 41)?

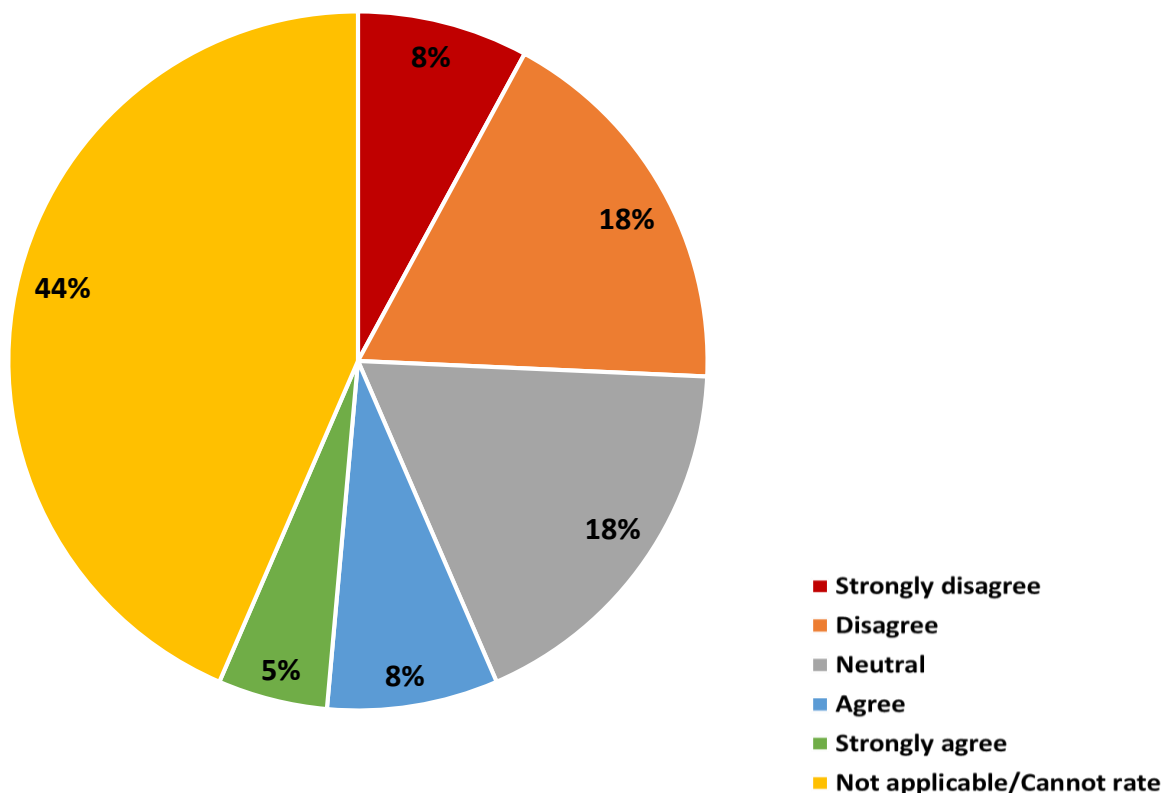
32% of respondents reported requesting assistance from NHERI during the proposal writing process. Respondents who indicated they requested assistance were asked a follow-up regarding the helpfulness of the assistance they received (see follow-up in Appendix A following Q18; “Has the assistance you received been helpful?”); of those 12 respondents who requested assistance, 100% of them found the assistance they received helpful.

Q22 - The process of uploading my data is easy to complete (N = 39).



This question was also featured on the 2017 survey. 38% of respondents could not rate their data uploading experience, while 13% agreed or strongly agreed the process was easy (compared to 22% from 2017). 26% of respondents felt neutral about this statement (compared to 13% from 2017), while 23% of respondents disagreed or strongly disagreed that the data uploading process was easy (compared to 11% from 2017).

Q22 - The process of adding metadata matches my expectations (N = 39).



This question was also featured on the 2017 survey. 44% of respondents could not rate the process of adding metadata, while 13% agreed or strongly agreed the process met their expectations, similar to responses in 2017 (14%). 18% of respondents were neutral regarding this statement (compared to 14% from 2017), while 26% of respondents disagreed or strongly disagreed that the process of adding metadata met their expectations (compared to 8% from 2017).

Q23 - Regarding NHERI data (N = 52):

| Response | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Not applicable/ Cannot rate |
|--|-------------------|----------|---------|-------|----------------|--------------------------------|
| It's easy to locate the data I want from my previous tests. | 4% | 10% | 19% | 19% | 10% | 38% |
| It's easy to locate the data that I want from others' tests. | 6% | 15% | 19% | 21% | 8% | 30% |
| The required format of the archived data is reasonable/logical. | 8% | 6% | 31% | 19% | 10% | 27% |
| The metadata quality for the archived experimental data is sufficient/logical. | 6% | 13% | 21% | 21% | 10% | 29% |
| The metadata comprehensiveness of the experimental data is sufficient. | 6% | 12% | 29% | 17% | 10% | 27% |
| Data is available for download in useful formats. | 4% | 4% | 29% | 25% | 13% | 25% |

Many of these statements were also featured on 2017's survey. Response option, "the metadata quality for the archived experimental data is sufficient/logical" was newly added in 2018. Additional specificity was added into locating previous test data by adding response options "...from my previous tests" and "...from others' tests" rather than simply "it's easy to locate the data that I want." Findings are generally consistent from 2017 to 2018. In each category respondents were generally more agreeable with each statement than disagreeable.

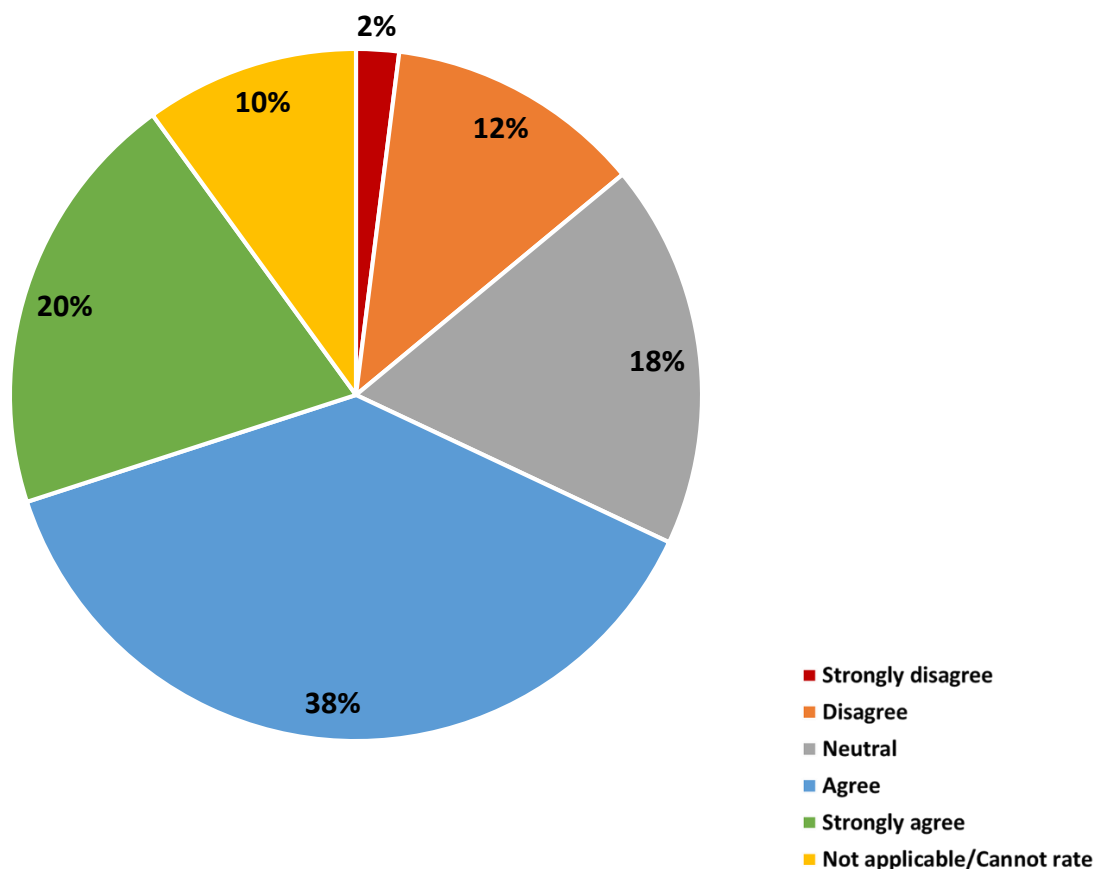
Q24 – Do you have any additional comments regarding NHERI data ($N = 8$)?

Participants were also asked to provide comments regarding data. Respondents described grievances with website navigation and usability. One respondent noted that, “the searching capability to find data sets should be improved. There should be more variables one can search on, such as the hazard class or keywords or the NHERI Experimental Facilities.” Another echoed these sentiments, by stating, “it would be helpful if the information on datasets was in the forefront and not after clicking on the data link for each project. DesignSafe could prepare brief summaries to inform the user about the general content of each dataset.”

Other respondents spoke to usability issues with the website interface. One said simply that, “publishing and providing access is difficult.” Another respondent noted website speed as a critical gate to user experience by stating, “...spooling times are excruciatingly slow...” and that the website interface is “...clunky and buggy.”

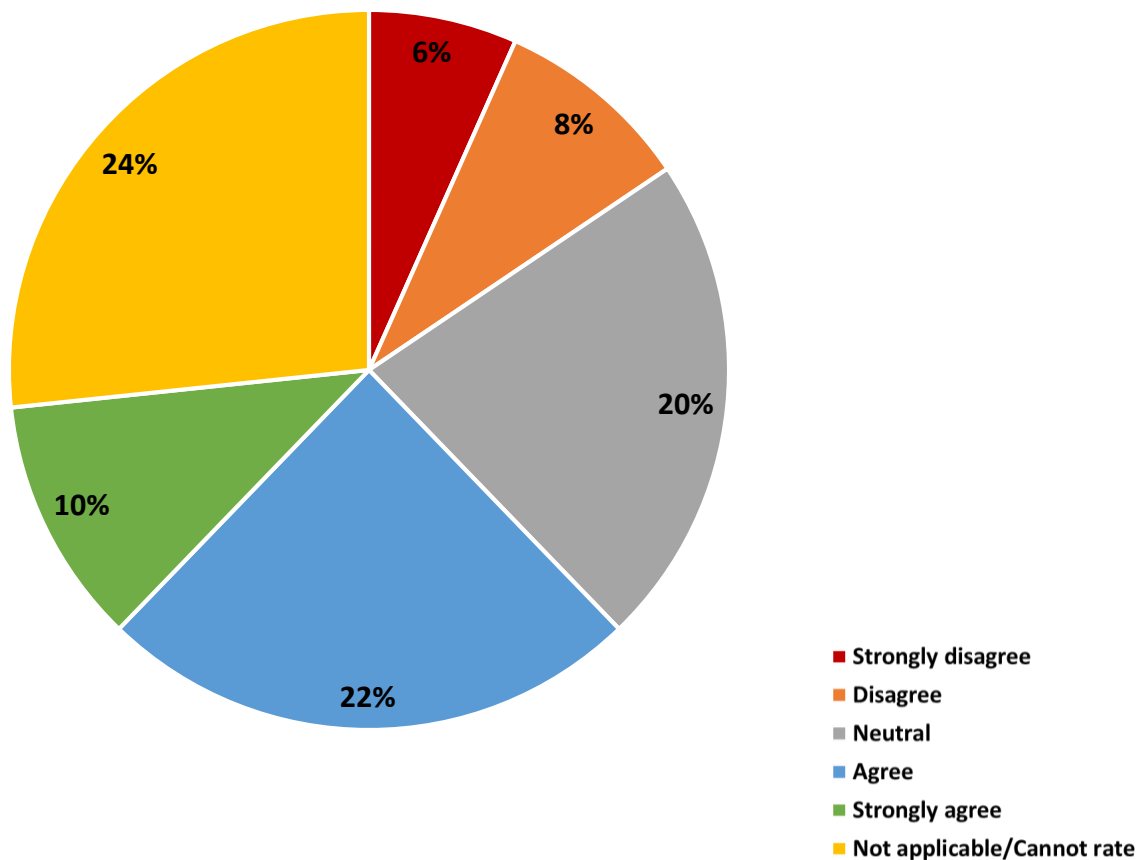
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Q26 - The training available for online resources and tools meets my needs (N = 50).



This question was also featured in the 2017 survey. 58% respondents agreed or strongly agreed with this statement, which is a considerable increase from respondents from 2017’s survey of whom 30% agreed or strongly agreed with this statement. 14% of respondents disagreed or strongly disagreed with this statement, compared to 10% in 2017. 18% of respondents were neutral regarding this statement, compared to 12% in 2017. Finally, only 10% of respondents in 2018 could not rate this statement, compared to 50% of respondents in 2017. These findings suggest that respondents may be more familiar with these resources after an additional year utilizing such programs.

Q26 - The technical support for online resources and tools meets my needs (N = 50).



This question was also featured in the 2017 survey. 32% of respondents agreed or strongly agreed that NHERI’s online resources and tools met their needs, compared to 30% in 2017. Conversely, 14% disagreed or strongly disagreed with this statement compared to 7% in 2017. 20% of respondents were neutral regarding this statement (compared to 7% in 2017), and 24% could not rate this statement (compared to 57% in 2017).

Q27 – What is the most important change to NHERI’s services, tools, and resources that would improve your experience with them (N = 17)?

Respondents spoke primarily to the perceived need for improvements to access, speed, organization, and navigation. Two respondents requested improvements to “user access and login,” as well as “open access...” to information. Others described processes slowed by website usability by noting, “the website is very, very slow,” and “speed of uploading and downloading data, [is] not really [an] intuitive process yet.” Another described speed and navigation together by noting, “speed and reduce the number of clicks to get to information.” Additionally, one user again described informal barriers to access by suggesting to, “make tools and information known outside of the small user club.”

Others echoed requests for improvements to organization and navigation. One respondent requested “an easier to navigate website.” Others expressed concerns with the media through which information is conveyed by asking for “more written documentation” rather than information via videos. Regarding videos, another respondent suggested that “‘how-to’ videos should be organized in a more logical order.”

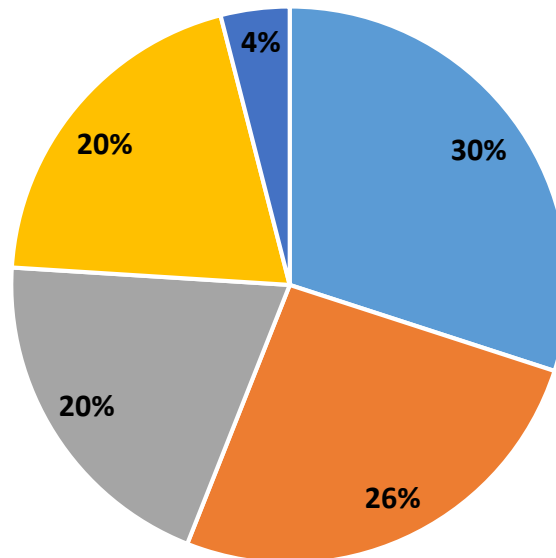
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Q28 – What service, tool, or resource not currently in NHERI should be added (*N* = 9)?

When asked about adding resources not currently offered by NHERI respondents had various suggestions. One respondent requested “a calendar of events,” while another requested “workshops with one or more facilities to describe opportunities.” One user specifically suggested “VisualSFM and Pix4D” software for NHERI users. Additionally, a respondent requested data generated during NEES be made more accessible, describing it as “hard to find.”

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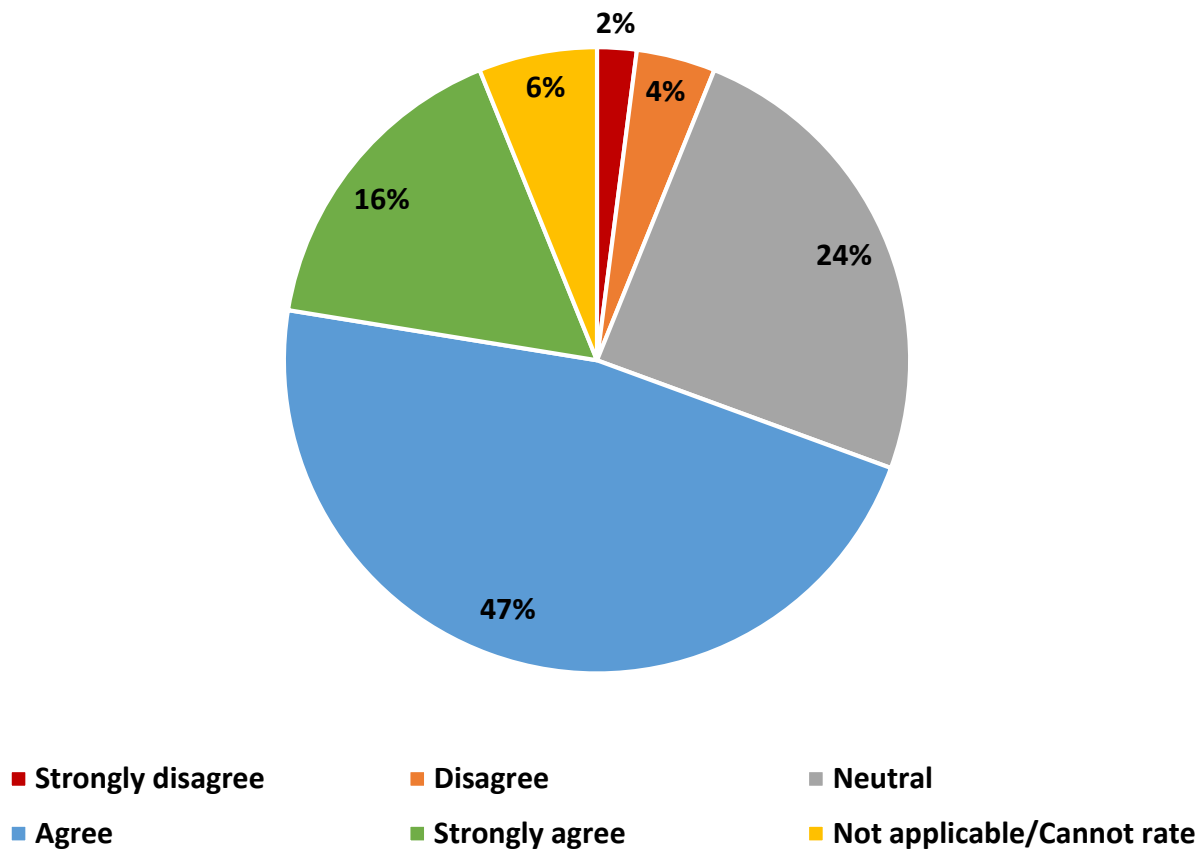
Q30 - Of the following which would you be most interested in participating in or using (N = 42)?



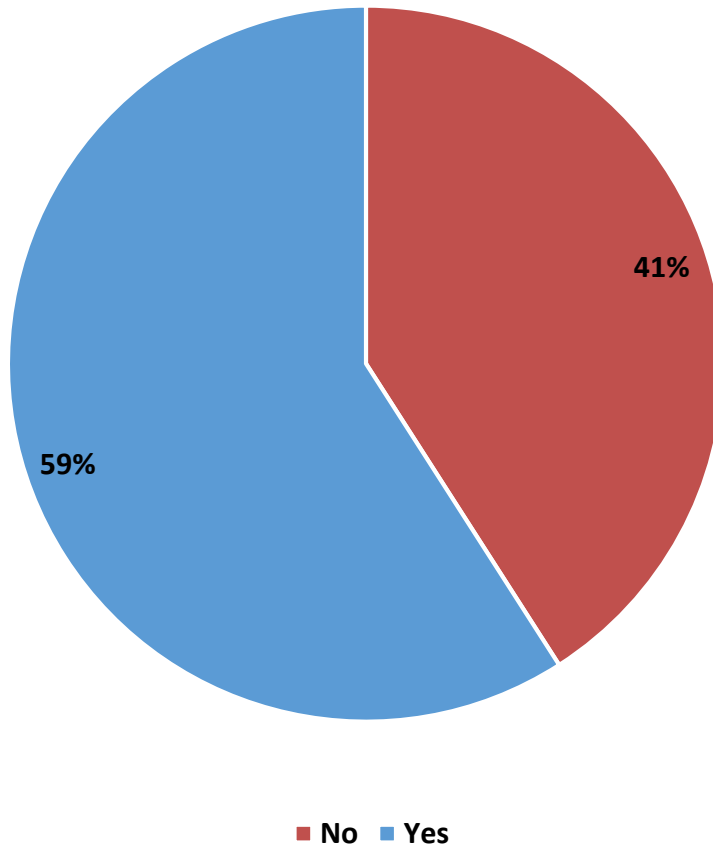
- A calendar of events and/or training.
- A newsletter summarizing NHERI related information (e.g., calls for proposals, tests, seminars, training, etc.).
- An annual workshop meeting for NHERI researchers.
- Video footage of experiments.
- A social media group featuring NHERI related information and news.

Respondents were asked to rank each of these from most interested [1] to least interested [5]; responses shown are proportions of sums of respondent rankings of one and two (i.e., reported the most interest in). Respondents were most interested in a calendar of events, followed closely by a newsletter summarizing NHERI related information, an annual workshop meeting for NHERI researchers, and video footage of experiments. Only 4% of responses favored a social media group featuring NHERI related information and news.

Q31 - Information regarding NHERI is distributed at a useful rate and quantity (N = 49).

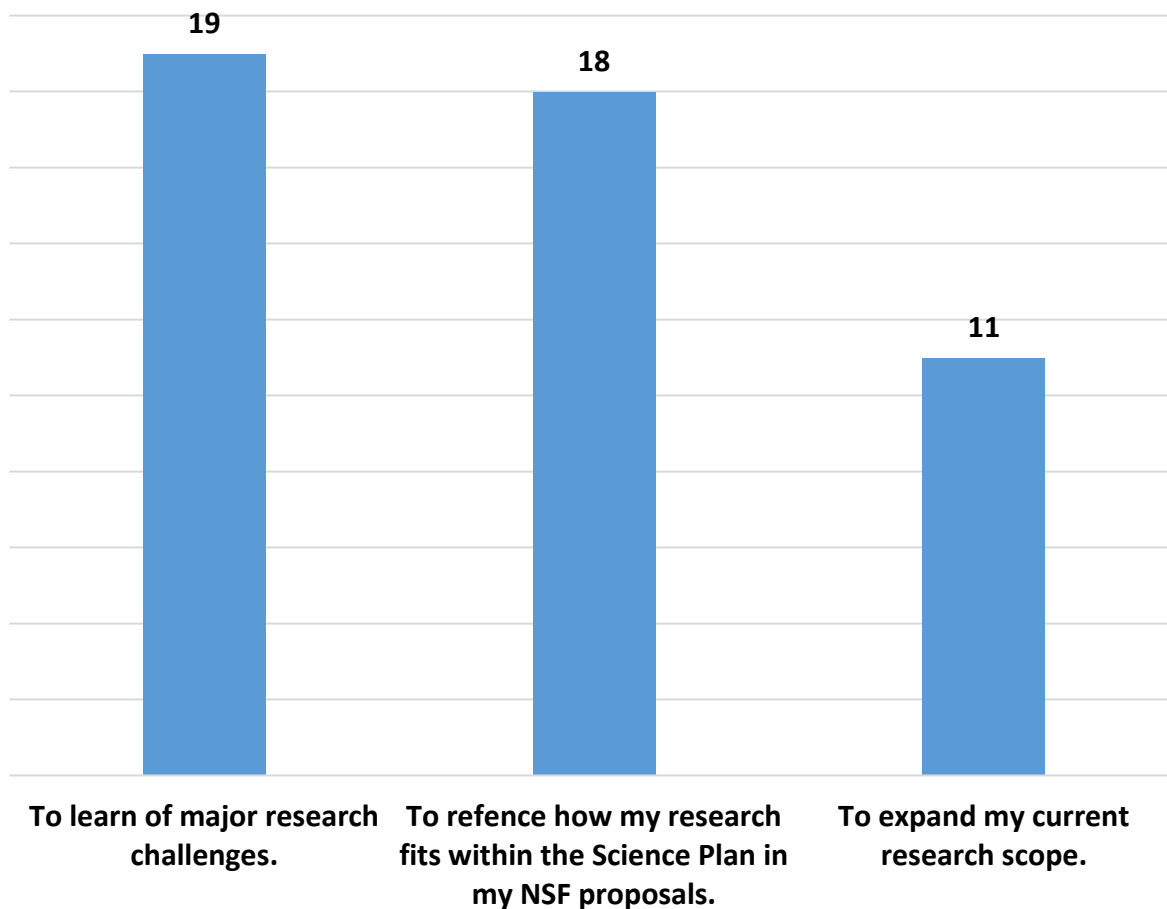


63% of respondents agreed or strongly agreed that information about NHERI is distributed at a useful rate and quantity. 24% of respondents were neutral, leaving 6% unable to rate and a combined 6% in disagreement with that statement.

Q33 - Have you been made aware of the NHERI Science Plan (N = 49)?

59% of respondents reported being made aware of the NHERI Science Plan. This was a new question for the 2018 survey.

Q34 - Please indicate all of the ways in which you have used the NHERI Science Plan (select all that apply).



This question was asked of those who reported being made aware of the NHERI Science Plan (see Q33). Non-exclusive counts indicate that respondents use the NHERI Science Plan to primarily learn of major research challenges, followed closely by referencing how their research fits within the Science Plan in NSF proposals. Slightly fewer respondents indicated they used the NHERI Science Plan to expand their current research scope.

Q35 – Do you have any addition comments regarding NHERI services and information (*N* = 7)?

Respondents who opted to respond to this question were generally satisfied with their experiences. One respondent suggested that specificity be added to the Science Plan by stating “the science plan remains fairly general in how it can be applied in the context of NHERI activities.”

Q36 – Do you have any final comments regarding NHERI Facilities and Resources (*N* = 9)?

Respondents provided diverse feedback to this open-ended question. One user noted that “the system is still not operating like a multidisciplinary network,” but did not suggest a solution. Another echoed previous sentiments regarding website interface by stating “the server needs to be faster so that users actively upload/download data...” Another user recommended “a scheduling system...where researchers can see their time slots on [a shared schedule],” presumably so users can schedule their time with facilities more efficiently.

APPENDIX A – Survey Instrument

Q1. Greetings! You have been invited to participate in a user satisfaction survey for the Natural Hazards Engineering Research Infrastructure (NHERI). We greatly appreciate any feedback or comments you may have so that services and user experiences with NHERI may be improved.

You will be asked about your experiences using NHERI and related programs, and asked to provide additional feedback should you deem it necessary. Completion of the survey should take approximately 10-15 minutes.

No personal information will be associated with your responses. Your participation is voluntary, and you may withdraw consent and/or discontinue participation at any time. You may skip questions you prefer not to answer.

Would you like to participate?

- a. Yes, I would like to participate in the survey.
- b. No, I would not like to participate in the survey.

Q2. Thank you for your participation. First, we would like to ask you questions regarding how **you intend to utilize** NHERI Facilities and Resources (i.e., experimental facilities, DesignSafe, and SimCenter; referred to as "Facilities and Resources" for the remainder of the survey).

Q3. Which of the following best describes your current position in the proposal process for NHERI Facilities and Resources?

- a. I'm writing my first proposal.
- b. My proposal has been accepted, but I have not begun utilizing the facilities.
- c. I am currently performing experiments/using the SimCenter.
- d. I have completed experiments.
- e. I have completed an experiment(s) and am working on the next proposal.

Q4. How many proposals have you prepared that used NHERI Facilities and Resources?

- Numeric response

Q5. (IF Q2 = b, c, d, e) How many facilities are you using/have you used?

- Numeric response

Q6. (IF Q2 = a) How many facilities are you writing proposals for?

- Numeric response

Q7. Which of the following best describes how you intend to utilize NHERI Experimental Facilities and/or the SimCenter?

- a. I want to access and use data that has already been uploaded.
- b. I intend to produce and upload original data.
- c. I want to access and use data and produce and upload original data (a and b).

Please respond to the following statements about NHERI experimental facilities.

Q8a. Information about NHERI experimental facilities is readily accessible:

- 1. Strongly Disagree
- 2. Disagree
- 3. Neutral
- 4. Agree
- 5. Strongly Agree
- 6. Not Applicable/ Cannot Rate

Q8b. Information about NHERI experimental facilities is comprehensive:

- 1. Strongly Disagree
- 2. Disagree

3. Neutral
4. Agree
5. Strongly Agree
6. Not Applicable/ Cannot Rate

Q9. Do you have any additional comments regarding information about NHERI Facilities and Resources?

- Open ended

Q10. (Statement) We would like to ask you questions about NHERI Facilities' and Resources' staff, scheduling, and equipment.

Q11. NHERI experimental facility staff has provided useful feedback on proposed/ongoing/completed tests:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree
6. Not Applicable/ Cannot Rate

Q12. The process for scheduling facilities matches my expectations (hide if 1):

1. Strongly Disagree
2. Disagree
3. Neutral

4. Agree
5. Strongly Agree
6. Not Applicable/ Cannot Rate

Q13. The available training for the facility's equipment meets my needs:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree
6. Not Applicable/ Cannot Rate

Q14. Technical support for the facility's equipment meets my needs:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree
6. Not Applicable/ Cannot Rate

Q15. Do you have any additional comments about NHERI Facilities' and Resources' staff, scheduling, and equipment?

- Open ended

Q16. (Statement) We have some questions regarding NHERI Facilities' and Resources' support resources.

Q17. Have you participated in any of the proposal writing workshops and/or seminars, or utilized NHERI support resources?

1. No
2. Yes

Q18. Have you requested assistance from NHERI as you write your proposal?

1. No
2. Yes

- (IF Q18 = 2) Has the assistance you received been helpful?

1. No
2. Yes
3. Did not receive assistance

Q20. How many times a month, on average, do you use DesignSafe and other NHERI online resources and tools?

- Numeric response

Q21. (Statement) Next, we would like to ask a few questions about data and data management with NHERI Facilities and Resources.

Q22a. The process of uploading my data is easy to complete:

1. Strongly Disagree
2. Disagree

3. Neutral
4. Agree
5. Strongly Agree
6. Not Applicable/ Cannot Rate

Q22b. The process of adding metadata matches my expectations:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree
6. Not Applicable/ Cannot Rate

Please respond to the following statements related to data.

Q23a. It's easy to locate the data that I want from my previous tests:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree
6. Not Applicable/ Cannot Rate

Q23b. It's easy to locate the data that I want from others' tests:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree
6. Not Applicable/ Cannot Rate

Q23c. The required format of the archived data is reasonable/logical:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree
6. Not Applicable/ Cannot Rate

Q23d. The metadata quality for the archived experimental data is sufficient/logical:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

6. Not Applicable/ Cannot Rate

Q23e. The metadata comprehensiveness of the experimental data is sufficient:

1. Strongly agree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree
6. Not Applicable/ Cannot Rate

Q23f. Data is available for download in useful formats:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree
6. Not Applicable/ Cannot Rate

Q24. Do you have any additional comments regarding NHERI data?

- Open ended

Q25. (Statement) Now we have a few questions regarding NHERI online resources and tools.

Q26a. The training available for NHERI's online resources and tools meets my needs:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree
6. Not Applicable/ Cannot Rate

Q26b. The technical support for NHERI's online resources and tools meets my needs:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree
6. Not Applicable/ Cannot Rate

Q27. What is the most important change to NHERI's services, tools, and resources that would improve your experience with them?

- Open ended

Q28. What service, tool, or resource not currently in NHERI should be added? What need is this going to meet?

- Open ended

Q29. (Statement) Almost done! We have just a few more questions for you about NHERI services and information.

Q30. Of the following which would you be most interested in participating in or using (please rank from most interested [1] to least interested [5]):

- a. A calendar of events and/or training.
- b. An annual workshop meeting for NHERI researchers.
- c. Video footage of experiments.
- d. A newsletter summarizing NHERI related information (e.g., calls for proposals, tests, seminars, training, etc.).
- e. A social media group featuring NHERI related information and news.
- f. Comments/Other suggestions:

Please respond to the following statements:

Q31. Information regarding NHERI is distributed at a useful rate and quantity:

1. Strongly disagree
2. Disagree
3. Neutral`
4. Agree
5. Strongly agree
6. Not Applicable/ Cannot Rate

Q32. The information regarding NHERI in DesignSafe is useful:

1. Strongly Disagree
2. Disagree

3. Neutral
4. Agree
5. Strongly Agree
6. Not Applicable/Cannot Rate

Q33. Have you been made aware of the NHERI Science Plan?

1. No
 2. Yes
- (If Q33 = 2) Please indicate all of the ways in which you have used the NHERI Science Plan (select all that apply).
- a. To learn of major research challenges
 - b. To expand my current research scope
 - c. To reference how my research fits within the Science Plan in my NSF proposals

Q35. Do you have any final comments regarding NHERI services and information?

- Open ended

Q36. Do you have any final comments regarding NHERI Facilities and Resources?

- Open ended

APPENDIX B – Comprehensive Qualitative Response Data by Question

Q9 – Do you have any additional comments regarding information about NHERI Facilities and Resources?

Organization of information about NHERI Facilities and Resources:

- There is not a clear, transparent system for scheduling.
- There is accessible information. But according to colleagues, it is not comprehensive, and insider knowledge is critical.
- The information about the facilities needs to be more uniform and complete. For instance, some post information on user fees while others invite the researcher to contact the facility. Also, the contact information should be upfront and on the first page of the DesignSafe facilities pages. Not buried in each individual facility.
- The DesignSafe web site which is supposed to provide information is very opaque.
- [Information is] scarce. Need a better web presence.
- Information on how to use the HP computing resources and the Sim Center products is hard to find.

Cost-related comments:

- The use of NHERI facilities through funded NSF proposals has been consistently advertised as 'free.' In fact, use of facilities is far from free, and information on pricing is not readily available for all (or most) facilities.
- Cost and scheduling is difficult to understand without direct dialogue with the facilities, and even with communication, it is still not 100% clear.
- More information needs to be available about how the site charges PI's through grants. This is not clear.

Other:

- NHERI should allow foreign (non-US) members to use facilities and resources.

Q15 – Do you have any additional comments about NHERI Facilities’ and Resources’ staff, scheduling, and equipment?

- I think each site is very unique – some sites do it better than others. Some sites are extremely understaffed – and this needs to be made WELL known prior to having a PI come to site. In fact, if I didn't have my own general contractors on site, there is no way we would have finished the test with the site only having one full time staff.
- I have had both good and poor experiences, with sometimes rapid, informative responses, and sometimes abrupt and unhelpful replies.
- Lehigh and Sim Center made me feel like I was burdening them by wanting to use their facility for NSF research.
- Seems like a small fraternity, with limited access.
- There are not clear guidelines for whether scheduled time is guaranteed.
- My experience has been quite positive.
- [Are] NHERI grants, facilities, and equipment only for the US members? I am a foreign member. I can not use anything of the NHERI facilities.

Q24 – Do you have any additional comments regarding NHERI data?

- The searching capability to find data sets should be improved. There should be more variables one can search on, such as the hazard class or keywords or the NHERI Experimental Facilities.
- Publishing and providing access is difficult.
- I am trying to put my data up, but it is not too easy to do it right and it is just not done yet.
- It would be helpful if the information on datasets was in the forefront and not after clicking on the data link for each project. DesignSafe could prepare brief summaries to inform the user about the general content of each dataset.
- DesignSafe is a disaster. The spooling times are excruciatingly slow. The upload speeds are slow. The site is clunky and buggy.

- All of the data that I put into the repository under NEES is now mixed up and impossible to understand. It was very well organized before. But even I cannot understand or find the data using this new format. Please make all of the well organized NEES data available in the previous format so that it can be used and found. Regarding the new approach, I was told that using the data structure is not required.

Q27 – What is the most important change to NHERI’s services, tools, and resources that would improve your experience with them?

Access and speed:

- User access / login.
- The website is very, very slow. And matlab cannot be used easily.
- The server needs to be faster than now. The website DesignSafe-Ci is very slow in usual. For a specific tool, when I tried to use MATLAB, the processing was slower than my local computer.
- Speed of uploading and downloading data, not really intuitive process yet.
- Speed and reduce the number of clicks to get to information.
- Overall the site needs to function faster. It's difficult to assess the services of the various Experimental Facilities through the DesignSafe portal.
- Open access and sharing of info with more details/background info.

Organization and navigation:

- More written documentation. I do not want to sit through 10 minutes of a video to find the answer to a simple question.
- It is Webinar (Zoom). I am currently living in South Korea. I could not join any Webinar until now.
- Improve DesignSafe.
- Creating a high quality dashboard for uploading data on DesignSafe.
- An easier to navigate web site would be helpful. Access to SimCenter resources should be made more clear and easier. The workbench launching of applications is clunky.

- The helpful "how-to" videos should be organized in a more logical order. The videos are helpful, but it seems that they are not listed in logical sequence.

Other:

- More webinars about what is being done, plans for the future.
- Make tools and information known outside of the small user club.
- Cloud computation.

Q28 – What service, tool, or resource not currently in NHERI should be added?

- A calendar of events, examples of tool or data usage.
- A walkthrough with bubbles.
- DesignSafe groups for sharing pre-publication data.
- Workshops with one or more facilities to describe opportunities.
- I recommend VisualSFM and Pix4D software. It requires supercomputing performance when we deal with large image data. These tools will be very useful especially those who work on photogrammetry.
- Matlab.
- Data and resources generated during the NEES at a great cost is hard to find, with the exception of the experimental data. For instance educational, simulation and outreach resources.

Q35 – Do you have any addition comments regarding NHERI services and information?

- My expectation, in the future, NHERI services and information can do the best.
- The science plan remains fairly general in how it can be applied in the context of NHERI activities. It's hard to make it relevant.
- I am satisfied with NHERI newsletters and webinars offered so far.

Q36 – Do you have any final comments regarding NHERI Facilities and Resources?

- The system is still not operating like a multidisciplinary network. Not much cross activity between Experimental Facilities.
- The server needs to be faster so that users actively upload/download data, and use tools.
- NHERI is a great idea but the web site and communications system need people that are forward thinking to work on it.
- A scheduling system should be developed where researchers can see their time slots on the schedule, and where any conflicts are dealt with professionally.
- I suppose NHERI Facilities and Resources can be used by all of NHERI members, US and Non-US members.