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## Instructions to Reviewers

1. Please make sure you have read, signed, and returned the *Conflicts-of-Interest and Confidentiality Statement for Proposal Reviewers for ORSP[[1]](#footnote-1)*. Then, read the latest NSF EPSCoR Track 2 solicitation[[2]](#footnote-2), and finally the internal UM review criteria on this sheet.
2. You may find it helpful to complete this review worksheet for each proposal before entering any reviews in the InfoReady Review portal.
3. For each internal pre-proposal assigned, read, score, and provide comments according the **specific criteria below**.
4. Once you have determined all of the specific criterion scores and any specific comments for each pre-proposal, assign an **Overall Competitiveness** score and provide **Overall Comments** for each.
5. Then, enter all your scores and comments in the InfoReady Review portal and submit the reviews. ***The more detailed and more constructive the comments, the more helpful they will be***.

## Overall Score and Comments

Overall Competitiveness Score**:** Overall, on a scale of 1 (least) to 10 (most), how competitive does the final proposal for this applicant have the likelihood to be at NSF, based on the content in this pre-proposal, considering all pre-proposals reviewed, the abbreviated format of the pre-proposal, and the responsiveness to the review criteria.

*Rating Choices (circle one*): *<- least* (1 2 3 4 5 6 7 8 9 10) *most ->*

Viability for 2021 or 2022: If selected, do you think this team can develop a competitive proposal for submission in the competition year indicated below, based on the concept and approach presented in the pre-proposal, and without a major rethink or overhaul?

*For Submission in Jan 2021 (circle one)*: 1=*No 2= Maybe 3=Probably 4=Yes*

*For submission in Jan 2022 (circle one)*: 1=*No 2= Maybe 3=Probably 4=Yes*

Overall Comments to Applicant**:** Please provide constructive comments on the overall quality of the pre-proposal and the potential competitiveness of the final proposal, in terms of perceived strengths, weaknesses, and opportunities for improvement. The more detailed and constructive feedback you can provide in these comments, as well as in the comment sections for the specific criteria below, the better your review will help the PI develop a competitive full proposal to NSF, or if not internally selected this year, put forward a more competitive internal pre-proposal in any subsequent internal competition.

*General*



*Strengths*



*Opportunities for Improvement*

**Comments to Administrator:** If you have any comments for the administrator of the limited submission process, but not for the applicant, please share them here.

## Specific Scores and Comments

### Intellectual Merit (IM)

How well does the pre-proposal communicate (or inspire confidence that the final proposal will communicate):

* The long-term research & educational goals and intellectual focus of the project
* Planned activities in sufficient detail to enable assessment of scientific merit
* The research in context of other efforts in the field (with appropriate references), and the current major challenges and how they will be addressed
* The novelty and/or originality of the proposed approach
* The scientific hypotheses, goals, and research and training methods in sufficient detail for experts in closely related fields can judge their intellectual merit
* The available & planned resources to accomplish the research & education goals

*Rating Choices (circle one):* (1: poor; 2: fair; 3: good; 4: very good; 5: excellent)

*Please Provide Constructive Comments or Suggestions for Improvement:*

*General*

*Strengths*

*Opportunities for Improvement*

### Broader Impacts

How explicitly and convincingly does the pre-proposal communicate (or inspire confidence that the final proposal will communicate):

* How the project will contribute to the benefit of society or to the advancement of desired societal outcomes? Outcomes may include, but are not limited to:
  + full participation of women, persons with disabilities, and underrepresented minorities in STEM (African Americans, American Indians including Native Alaskans, Hispanics and Native Pacific Islanders)
  + improved STEM education and educator development at any level
  + increased public scientific literacy & engagement w/ science/ technology
  + improved well-being of individuals in society
  + development of a diverse, globally competitive STEM workforce
  + increased partnerships between academia, industry, and others
  + improved national security
  + increased economic competitiveness of the United States
  + enhanced infrastructure for research and education
* How the project will build on/leverage an existing record of Broader Impacts results from prior support towards the chosen industry or industries
* A plan for recruitment or development of diverse early-career faculty
* Strategies for recruiting and retraining faculty from underrepresented populations, and preparing them for future leadership roles
* How the workforce development plan will leverage contributions from diverse institution types and future workers (including through K-12 schools, two- year and four-year colleges, and/or minority serving institutions) to develop an inclusive workforce appropriate to populate the chosen Industry of the Future
* An eval plan that includes goals, metrics, & milestones for diversity in submission of collaborative proposals & associated awards, collaborative publications, progression of early-career faculty, innovations, research results, longitudinal tracking of undergraduates, graduate students, & post docs.

*General*



*Strengths*



*Opportunities for Improvement*

### Industries of the Future Responsiveness

* How clearly does the pre-proposal lay out a research infrastructure improvement program that will advance one or more of the following industries of the future listed in the solicitation: **Advanced Manufacturing; Advanced Wireless; Artificial Intelligence; Biotechnology; Quantum Information Science; or Spectrum Innovation Science—**or, in rare cases, an extremely-well-justified industry from[**Mississippi’s Science and Technology Plan**](http://www.mississippiresearch.org/static/ST-Plan.pdf)**?**

How well does the pre-proposal convey:

* That the project will bring together several researchers and jurisdictions that have documented outcomes in the identified Industry of the Future, and will move them towards being able to leverage their industry to contribute to the economic growth of the jurisdictions
* How the project will advance understanding the societal implications of expanding this industry
* What the expected impacts will be on the industry and jurisdiction(s)

*Rating Choices (circle one):* (1: poor; 2: fair; 3: good; 4: very good; 5: excellent)

*Please Provide Constructive Comments or Suggestions for Improvement:*

*General*

*Strengths*

*Opportunities for Improvement*

### Research Capacity

How well does the pre-proposal communicate (or inspire confidence that the final proposal will communicate):

* Activities and a pathway to advance the relevant fields of science and engineering while simultaneously enhancing research competitiveness and developing research capacity and infrastructure in the jurisdictions (including physical, cyber, and human resources)
* Activities that will contribute to the national and international reputations of the project participants and participating institutions
* The potential of the project to improve the ability of the participating institutions and participants to compete for innovative research projects in the future
* An evaluation plan that includes strategies goals, metrics, and milestones, including for the strength of the collaboration, submission of collaborative proposals and associated awards, and collaborative publications

*Rating Choices (circle one):* (1: poor; 2: fair; 3: good; 4: very good; 5: excellent)

*Please Provide Constructive Comments or Suggestions for Improvement:*

*General*

*Strengths*

*Opportunities for Improvement*

### Interjurisdictional Collaboration

How well does the pre-proposal communicate (or inspire confidence that the final proposal will communicate):

* The rationale for composition of the team; the leadership structure; and the context for establishing the collaboration
* The research expertise of the investigative team, and that the PI and co-PIs are already active researchers in the focus areas being proposed, with recent publications or extramural awards in the focus area indicating that they can form the intellectual nucleus for a sustained collaboration
* The role of each faculty-level investigator (including senior personnel)
* How the research activities in different jurisdictions will support and foster a sustained collaborative effort
* How the scope of work is such that no single jurisdiction could accomplish the goals individually.
* How the collaboration is balanced, among jurisdictions and institutions, such that each participant, institution, and jurisdiction is contributing to and benefitting from the project in a meaningful and distinct way.
* A comprehensive management plan, including:
  + Roles and responsibilities of key personnel
  + Communication, coordination, and synergy plans
  + How project output data will be collected & integrated into evaluation
  + How administrative requirements will be managed across all areas
* A clear implementation plan and timeline
* A plan for a qualified independent evaluator to provide effective feedback (formative and summative assessments) to the management team
* How the project will positively impact each jurisdiction and its respective economy by leveraging the chosen industry or industries of the future.
* How the institutions and any partners will be able sustain the industry in the jurisdiction(s) beyond the scope of the award

*Rating Choices (circle one):* (1: poor; 2: fair; 3: good; 4: very good; 5: excellent)

*Please Provide Constructive Comments or Suggestions for Improvement:*

*General*

*Strengths*

*Opportunities for Improvement*

### Workforce Development

How convincingly does the pre-proposal sufficiently communicate (or inspire confidence that the full proposal will sufficiently communicate):

* How the project will develop a well-trained workforce that can contribute to the chosen industry(ies) within the participating jurisdictions
* An explicit plan for recruiting and/or developing early-career faculty[[3]](#footnote-3)
* Proposed mechanisms to attract and/or mentor early career faculty, and enable their development and success as educators and researchers
* The expected specific contributions of early career faculty in the focus area(s)
* A plan to educate/train postdoctoral, graduate and undergraduate trainees as future workforce members who can integrate within the chosen industry
* The estimated number of postdoctoral, graduate, and undergraduate participants at each collaborating institution
* A plan to impart explicitly identified skills to enable future workers to easily navigate disciplinary and other perceived boundaries, and to interface with stakeholders such as academe, industry, government, and the general public
* An implementation strategy that is informed by national best practices for building research competencies and conducting research mentoring
* A baseline assessment and clear workforce dev. goals, milestones, and timelines
* The potential for the proposed activities to recruit and/or develop early-career faculty in the focus area and prepare them for sustained productivity
* The potential to sustain a pipeline of highly skilled students and postdocs that can excel in this focus area and succeed in careers in academia and/or industry
* How diverse populations (e.g., of women and underrepresented groups in STEM, persons with disabilities, economically disadvantaged, rural, and/or first-generation college students) and institutions (e.g., minority serving institutions and 2- and 4-year institutions) will be engaged in the research & ed. activities
* Novel ways through which the workforce development goals will be achieved
* An evaluation plan that includes goals, metrics, and milestones for workforce development, progression of early-career faculty, and longitudinal tracking of undergraduates, graduate students, and post docs.
* How new faculty hires, if any, will be supported beyond the award period

*Rating Choices (circle one):* (1: poor; 2: fair; 3: good; 4: very good; 5: excellent)

*General*

*Strengths*

*Opportunities for Improvement*

### Jurisdictional Impacts

How convincingly does the pre-proposal sufficiently communicate (or inspire confidence that the full proposal will sufficiently communicate):

* The projects’ potential to achieve meaningful and sustained impacts within the jurisdictions with respect to their education capacity, economic development, and quality of life
* How the plans and activities will lead to sustainable improvements in workforce preparation and research competitiveness of the jurisdictions?
* How the proposed activities will promote organizational connections and linkages within the jurisdictions, and between private and public sectors
* How the project will advance innovation, technology transfer, and potential commercialization
* An evaluation plan that includes goals, metrics, and milestones for innovations
* A plan to create a pathway(s) for long-term sustainability of the proposed activities and impacts beyond the award period
* Realistic, annual metrics to assess the long-term economic impacts of this project in the participating jurisdictions
* How the expected impacts will holistically tie into the economic development of the jurisdiction(s) involved

*Rating Choices (circle one):* (1: poor; 2: fair; 3: good; 4: very good; 5: excellent)

*Please Provide Constructive Comments or Suggestions for Improvement:*

*General*

*Strengths*

*Opportunities for Improvement*

### Integration of Project Elements

How well does the pre-proposal communicate (or inspire confidence that the full proposal will effectively communicate):

* How the different aspects - research, education, innovation, workforce development, sustainability, project coordination, and evaluation – will be integrated in the project
* The innovative ways in which the project addresses these components in tandem
* What benefits or added value will be realized as a result of integrating the project elements
* The potential of the project to reach its education and workforce development goals and objectives as a result of the proposed research
* The potential of the project to reach its research goals as a result of the proposed and education and workforce development activities
* The level and means of integration among shared facilities and research partners

*Rating Choices (circle one):* (1: poor; 2: fair; 3: good; 4: very good; 5: excellent)

*Please Provide Constructive Comments or Suggestions for Improvement:*

*General*

*Strengths*

*Opportunities for Improvement*

### Clarity of Writing

* Is the pre-proposal easy to read?
* How easy is it to find the key information needed to complete this review?
* Does the pre-proposal ignite your enthusiasm as a reader?
* Are whitespace, images, charts, pictures, emphasis, punctuation, sentence breaks, paragraph brakes, or other methods used effectively to break of the monotony of the text and create an easy reading experience?
* Is the pre-proposal generally free from grammatical errors, misspellings, and typographically errors?
* Does the pre-proposal use internally consistent language and terminology without being repetitive?
* Does it make the most effective use of the space available?
* Is the pre-proposal a pleasure to read, a chore to read, or something in between?

*Rating Choices (circle one):* (1: poor; 2: fair; 3: good; 4: very good; 5: excellent)

*Please Provide Constructive Comments or Suggestions for Improvement:*

*General*

*Strengths*

*Opportunities for Improvement*

1. Confidentiality & COI: <http://research.olemiss.edu/sites/default/files/ORSP-Reviewers-COI-Statement.pdf> For eternal reviewers, alternative arrangements may be made to ensure confidentiality and manage COIs. [↑](#footnote-ref-1)
2. Solicitation: https://www.nsf.gov/publications/pub\_summ.jsp?WT.z\_pims\_id=505263&ods\_key=nsf21518 [↑](#footnote-ref-2)
3. Early-career faculty are defined here as “those who are employed as assistant professors in tenure track (or equivalent) positions, or research assistant professors at the time of submission of the proposal, or who are hired in to such a position during the award period.” [↑](#footnote-ref-3)