

**U.S. Department of Education - EDCAPS  
G5-Technical Review Form (New)**

Status: Submitted

Last Updated: 06/17/2019 05:47 PM

## Technical Review Coversheet

**Applicant:** Center for the Future of Arizona (U411C190109)

**Reader #1:** \*\*\*\*\*

	Points Possible	Points Scored
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Significance</b>		
1. Significance	25	25
<b>Quality of Project Design</b>		
1. Project Design	35	33
<b>Adequacy of Resources/Quality of Management Plan</b>		
1. Resources/Management Plan	20	15
<b>Sub Total</b>	80	73
<b>Priority Questions</b>		
<b>Competitive Preference Priority</b>		
<b>Competitive Preference Priority</b>		
1. Absolute Priority 3	5	5
<b>Sub Total</b>	5	5
<b>Total</b>	85	78

# Technical Review Form

Panel #25 - EIR Early Phase Tier 1 - 24 - 1: 84.411C

Reader #1: \*\*\*\*\*

Applicant: Center for the Future of Arizona (U411C190109)

## Questions

### Selection Criteria - Significance

1. The Secretary considers the significance of the proposed project. In determining the significance of the proposed project, the Secretary considers the following factors:

(1) The potential contribution of the proposed project to increased knowledge or understanding of educational problems, issues, or effective strategies.

(2) The extent to which the proposed project involves the development or demonstration of promising new strategies that build on, or are alternatives to, existing strategies.

#### Strengths:

The applicant provides adequate details to show the understanding of the problem by discussing that the CCP project will create an effective strategy to address the problem of weak or nonexistent college and career advising structures and strategies in K12 schools that lead to under-enrollment in the STEM and Computer Science/Cybersecurity pathways. (pp. 2)

The applicant also provided clear details to show the potential contribution of the proposed project to increase understanding of issues by discussing that the Arizona cybersecurity industry is facing an acute need, with over 800 unfilled openings in entry-level cybersecurity roles, and projections show that the demand for entry-level talent will continue to increase. (pp. 3)

The application provided strong details to show further contribution of the proposed project to increase knowledge by writing that girls and students of color are persistently underrepresented in Arizona's STEM and CS/Cy classes and pathways and schools do not have relevant, timely career resources readily available, and most counselors and teachers do not have the capacity to develop materials or spend time learning about labor market data, availability of jobs, and aligned credentials to effectively guide students. (pp. 3, 4)

The applicant provides compelling details to show their project involves the development of promising new strategies by writing that the Career Connected Pathways (CCP) project will develop a new strategy for college and career advising that increases student enrollment in pathways, thereby preparing more students for success in postsecondary education and in careers in the STEM fields vital to the economy. (pp. 6)

Strong details are discussed by the applicant to show that their project involves the development of promising new strategies by discussing that the project will develop strategies to ensure that high-need students, have access to high-quality, relevant, and timely career information in order to make sound educational decisions during high school that will push them to through postsecondary education, leading to a good job. (pp. 7, 8)

The applicant provides compelling details to show their project involves the development of promising new strategies by writing that research on the effectiveness of near peer mentoring models will also shape the CCP project's strategy, and high-need students who may not see themselves in STEM fields, need support to achieve and persist in CS/Cy pathways. To further support this model the applicant also wrote that near peer mentor models in which college students serve as mentors to high school students in a structured experience show promise as a strategy to increase interest and motivation within STEM fields. (pp. 7)

**Weaknesses:**

None noted.

**Reader's Score:** 25

**Selection Criteria - Quality of Project Design**

**1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the design of the proposed project, the Secretary considers the following factors:**

**(1) The extent to which the goals, objectives, and outcomes to be achieved by the proposed project are clearly specified and measurable.**

**(2) The extent to which there is a conceptual framework underlying the proposed research or demonstration activities and the quality of that framework.**

**(3) The adequacy of procedures for ensuring feedback and continuous improvement in the operation of the proposed project.**

**Strengths:**

The applicant provided very clear objectives and performance measures. For example, the applicant discussed their objective of increasing the number of computer science, math, and writing DE courses offered in schools with the measure of having 25% increase in the number of high need students enrolled in Dual Enrollment computer science courses. (pp. 10)

There is clear evidence provided to show the underlying conceptual framework of the project by the applicant presenting two important implementation levers which are the Career Connected Toolkit consisting of resources for educators, students and parents, and a Co-Advising Framework to include a Near Peer Mentoring Model which facilitates better collaboration between K12 schools and community colleges and to increase enrollment and improve persistence in DE courses. (pp. 11, 12)

Clear details are provided to support the conceptual frame work of the project through a logic model which shows key components such as resource tool development and activities that include creating outreach strategies that target high needs students with outputs leading to an increase in the number of high needs students taking computer science and cybersecurity leading to dual credits. The logic model shows how the project plans to provide schools, students, and families the information and resources they need to make sound decisions about the opportunities in CS/Cy and the educational pathways necessary to obtain jobs in the field. (pp. 12, e99)

The conceptual framework of the project is compelling because the applicant provides details to show that the first step of the project is to design, develop and implement a quality Career Connected Toolkit, which will consist of classroom lessons connecting high school coursework to career and postsecondary pathways and to relevant, timely information on industry demands. (pp. 12)

The applicant provided adequate details to show continuous improvement by discussing that the Center for the Future of Arizona will conduct monthly calls with the Grant Management Team to monitor progress, evaluate data collected, determine course corrections needed and troubleshoot issues. (pp. 12, 13)

The applicant also discussed that to ensure timely feedback and course correction mechanisms are in place they will use a Plan-Do-Study-Act (PDSA) model of continuous improvement during the development and iteration phase in years 1 and 2. (pp. 14)

The applicant provided strong evidence to show that real time platform analytics from the Communities of Practice annual evaluation forms and surveys, critical incident essays, and content analysis of discussions and teacher learning products will be used to assess the immediate value of program activities, the potential value for practice, applied value to the

classroom, and actual evidence of change in teachers' practices and student learning. (pp. 13, 14)

To show strong evidence of providing feedback the applicant also wrote that a key component of equity audits and the evaluation feedback loop will be the incorporation of student data and student voice participation in focusing both program designers, teachers and administrators on increased recruitment. (pp.14)

To show adequate evidence of providing feedback the applicant also wrote that formal feedback will be gathered at regular intervals and will include survey data from all stakeholders, including teachers, counselors, students, parents, and others who interact with the project along with observations and focus groups will be conducted at key intervals to inform the design and iteration phase of the project. (pp.14)

**Weaknesses:**

The applicant did not provide details to show how they plan to support the Near Peer mentors. (11, 12)

The applicant discussed as one of their measures that there will be a 50% increase in the number of students accessing high quality career guidance materials, however there are no materials currently in existence to support the 50% increase in student accessibility. (pp. 10)

**Reader's Score: 33**

**Selection Criteria - Adequacy of Resources/Quality of Management Plan**

**1. The Secretary considers the adequacy of resources and the quality of the management plan for the proposed project. In determining the adequacy of resources and quality of the management plan for the proposed project, the Secretary considers the following factors:**

- (1) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks.**
- (2) The qualifications, including relevant training and experience, of key project personnel.**
- (3) The potential for continued support of the project after Federal funding ends, including, as appropriate, the demonstrated commitment of appropriate entities to such support.**

**Strengths:**

The applicant provides a strong management plan that includes milestones and timelines related to identifying existing and targeted Dual Enrollment courses, inventory courses in partner schools, and developing plans to address gaps during Years 1 and 2. (pp. 16)

Adequate evidence is provided by the applicant to show persons responsible and activities to be accomplished. For example, the applicant wrote that the managing director will provide strategic leadership in bringing education and public policy systems together to increase opportunity for students, support execution of large-scale innovative efforts; advance statewide policy supports. (pp. 19)

Clear details are providing to show experiences of key project personnel. For example, the applicant wrote that the Managing Director addressed major issues in policy and practice concerning education in Arizona. In addition, the applicant wrote that the Managing Director also developed and executed strategies and projects for the purpose of catalyzing, incubating, and implementing new thinking and scalable designs for education in collaboration with partners. (pp. e58)

The applicant also provides strong details to show experience of another key staff member by describing that the Director has collaborated with K12 and Community College partners to design a system for connected communication ensuring programs of study are aligned, and also provided technical assistance to schools to implement pathways, which included design and implementation of programs of study, work-based learning and career literacy and guidance. (pp. e63)

To show adequate details for sustainability the applicant also discussed that the Career Connected Toolkit, the CoAdvising Framework and the Near Peer Mentorship Model are all resources that can be maintained by the partners with little additional cost, and that the practices and processes developed during the project will be operationalized within the community colleges and high school schools. (pp. 20)

Clear details are provided by the applicant to show sustainability of the program beyond the life of the grant by discussing that through the support of the Arizona Department of Education, resources and learning will be shared and available across the state. In addition, all strategies and resources developed for the project will be made available and disseminated through Pathways to Prosperity Network, allowing for national replication and scale of the CCP project. (pp. 20)

**Weaknesses:**

The applicant provides abbreviations that are not clearly defined. For example, they use DE, CRM without providing any details. (pp. 16)

There are no mileage or stipends mentioned for professional development and compensation for mentors. (pp. 13)

**Reader's Score: 15**

**Priority Questions**

**Competitive Preference Priority - Competitive Preference Priority**

- 1. Within Absolute Priority 3, we give competitive preference to applications that address the following priority:**

**Projects designed to improve student achievement or other educational outcomes in computer science (as defined in the notice). These projects must address the following priority area:**

**Expanding access to and participation in rigorous computer science (as defined in the notice) coursework for traditionally underrepresented students such as racial or ethnic minorities, women, students in communities served by rural local educational agencies (as defined in the notice), children or students with disabilities (as defined in the notice), or low-income individuals (as defined under section 312(g) of the Higher Education Act of 1965, as amended).**

**Note: Projects addressing this priority must be administered in a manner consistent with nondiscrimination requirements contained in the U.S. Constitution and Federal civil rights laws.**

**Strengths:**

The applicant provided adequate details to show that one of their objectives is that the project addresses the urgent need to increase enrollment for high-need students in pathways focused on preparing students for careers in STEM fields, including Computer Science and Cybersecurity (CS/Cy). (pp. 1)

Over the past half decade, the national college and career pathways movement has gained significant momentum as a successful strategy for increasing college and career readiness and increasing the number of Americans with the knowledge and skills needed for careers in STEM fields, particularly CS/Cy—fields that are vital to the U.S. economy and to our nation’s global economic competitiveness. (pp. e18)

The applicant provided adequate details to show their expanding access to and participation in rigorous computer science coursework. For example, the applicant wrote that the project will develop a new approach to college and career advising that builds on evidence-based strategies, including dual enrollment and near peer mentoring, in order to increase enrollment, persistence, and educational attainment of high-need students in STEM and Computer Science/Cybersecurity pathways. (pp. 1)

**Weaknesses:**

None noted.

**Reader's Score:** 5

---

**Status:** Submitted

**Last Updated:** 06/17/2019 05:47 PM

Status: Submitted

Last Updated: 06/13/2019 08:21 PM

## Technical Review Coversheet

Applicant: Center for the Future of Arizona (U411C190109)

Reader #2: \*\*\*\*\*

	Points Possible	Points Scored
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Significance</b>		
1. Significance	25	23
<b>Quality of Project Design</b>		
1. Project Design	35	33
<b>Adequacy of Resources/Quality of Management Plan</b>		
1. Resources/Management Plan	20	14
<b>Sub Total</b>	<b>80</b>	<b>70</b>
<b>Priority Questions</b>		
<b>Competitive Preference Priority</b>		
<b>Competitive Preference Priority</b>		
1. Absolute Priority 3	5	3
<b>Sub Total</b>	<b>5</b>	<b>3</b>
<b>Total</b>	<b>85</b>	<b>73</b>

# Technical Review Form

Panel #25 - EIR Early Phase Tier 1 - 24 - 1: 84.411C

Reader #2: \*\*\*\*\*

Applicant: Center for the Future of Arizona (U411C190109)

## Questions

### Selection Criteria - Significance

1. The Secretary considers the significance of the proposed project. In determining the significance of the proposed project, the Secretary considers the following factors:

(1) The potential contribution of the proposed project to increased knowledge or understanding of educational problems, issues, or effective strategies.

(2) The extent to which the proposed project involves the development or demonstration of promising new strategies that build on, or are alternatives to, existing strategies.

#### Strengths:

(1) This project, if successful, would increase enrollment of high-need students in Computer Science/Cybersecurity fields by providing counselors and teachers with a toolkit and training to provide students with quality advising regarding career opportunities in this field. (page 8)

(2) This project also provides high school students with student mentors from community colleges. This near peer mentoring model is innovative and will add to students' confidence and knowledge. (page 6)

(3) This proposal focuses on increasing numbers of high-need students enrolled in dual enrollment courses by providing timely career advising that currently is not possible due to lack of resources at the high school level. (page 8)

#### Weaknesses:

(1) This project proposes to work with students beginning in 10th grade. That is late to begin looking at a STEM pathway.

(2) This proposal states that the "strategies and resources will be designed to fit the needs of students and families, particularly high-need students/families" (page 8) yet there are no family activities included.

Reader's Score: 23

### Selection Criteria - Quality of Project Design

1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the design of the proposed project, the Secretary considers the following factors:

(1) The extent to which the goals, objectives, and outcomes to be achieved by the proposed project are clearly specified and measurable.

(2) The extent to which there is a conceptual framework underlying the proposed research or demonstration activities and the quality of that framework.

(3) The adequacy of procedures for ensuring feedback and continuous improvement in the operation of the proposed project.

**Strengths:**

- (1) Table 1 (pages 10-11) clearly specifies the objectives, measures and outcomes for the two goals of this project: To increase the number of high-need students enrolling in and completing foundational dual enrollment classes in math, writing and computer science and persisting in dual enrollment pathways.
- (2) A logic model is included in Appendix G (page e99), connecting resources, activities, outputs and outcomes and demonstrating the rationale for the project. This logic model provides a framework and path to successfully accomplish the goals of the project.
- (3) The proposal includes detailed procedures to ensure feedback and continuous improvement (pages 13-14). First, CFA will conduct monthly calls with the grant management team to monitor progress, evaluate data, determine course corrections as needed and troubleshoot issues. The proposal also details the plan to use a Plan-Do-Study-Act model of continuous improvement in years 1 and 2 with a formal evaluation to be conducted by an outside agency in year 5.

**Weaknesses:**

One of the measures listed in Table 1 for Objective 1.3 (page 10) reads "50% increase in the number of students accessing high-quality career guidance materials and activities." This project proposes to create high-quality career guidance materials because counselors, teachers and students do not currently have access to such materials (page 5). In this case, a 50% increase is neither measurable nor appropriate.

**Reader's Score: 33**

**Selection Criteria - Adequacy of Resources/Quality of Management Plan**

- 1. The Secretary considers the adequacy of resources and the quality of the management plan for the proposed project. In determining the adequacy of resources and quality of the management plan for the proposed project, the Secretary considers the following factors:**
  - (1) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks.**
  - (2) The qualifications, including relevant training and experience, of key project personnel.**
  - (3) The potential for continued support of the project after Federal funding ends, including, as appropriate, the demonstrated commitment of appropriate entities to such support.**

**Strengths:**

- (1) This proposal includes a detailed management plan (Table 3, pages 16 – 19). This includes appropriate timelines to ensure on time completion of project activities. Responsible entities are identified for each activity. Activities are tied to both goals and objectives.
- (2) Key personnel are well-qualified with appropriate experience. They have experience in implementing and managing grants as well as national experience with dual enrollment pathways. (page 19)
- (3) This proposal includes plans for disseminating the resources developed throughout Arizona. These resources will be available at little or no cost and should contribute to replication of the project throughout the state. The possibility of replication on a national scale is addressed. (page 20)

**Weaknesses:**

- (1) No training stipends are provided for any of the teachers undergoing professional development. (pages e108 – e114)
- (2) Mileage reimbursement is not provided for any of the teachers traveling for training/professional development. (pages e108 – e114)

**Reader's Score: 14**

**Priority Questions**

**Competitive Preference Priority - Competitive Preference Priority**

1. Within Absolute Priority 3, we give competitive preference to applications that address the following priority:

**Projects designed to improve student achievement or other educational outcomes in computer science (as defined in the notice). These projects must address the following priority area:**

**Expanding access to and participation in rigorous computer science (as defined in the notice) coursework for traditionally underrepresented students such as racial or ethnic minorities, women, students in communities served by rural local educational agencies (as defined in the notice), children or students with disabilities (as defined in the notice), or low-income individuals (as defined under section 312(g) of the Higher Education Act of 1965, as amended).**

**Note: Projects addressing this priority must be administered in a manner consistent with nondiscrimination requirements contained in the U.S. Constitution and Federal civil rights laws.**

**Strengths:**

This proposal supports increasing enrollment and completion of dual enrollment courses by high-need students. This project provides career counseling to high-need students, concentrating on Computer Science and Cybersecurity programs. Near peer mentoring will also be provided to participating students.

**Weaknesses:**

This project focuses on advising and career counseling rather than computer science courses.

**Reader's Score: 3**

---

**Status:** Submitted  
**Last Updated:** 06/13/2019 08:21 PM

Status: Submitted

Last Updated: 06/13/2019 08:55 PM

## Technical Review Coversheet

Applicant: Center for the Future of Arizona (U411C190109)

Reader #3: \*\*\*\*\*

	Points Possible	Points Scored
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Significance</b>		
1. Significance	25	23
<b>Quality of Project Design</b>		
1. Project Design	35	31
<b>Adequacy of Resources/Quality of Management Plan</b>		
1. Resources/Management Plan	20	17
<b>Sub Total</b>	80	71
<b>Priority Questions</b>		
<b>Competitive Preference Priority</b>		
<b>Competitive Preference Priority</b>		
1. Absolute Priority 3	5	5
<b>Sub Total</b>	5	5
<b>Total</b>	85	76

# Technical Review Form

Panel #25 - EIR Early Phase Tier 1 - 24 - 1: 84.411C

Reader #3: \*\*\*\*\*

Applicant: Center for the Future of Arizona (U411C190109)

## Questions

### Selection Criteria - Significance

1. The Secretary considers the significance of the proposed project. In determining the significance of the proposed project, the Secretary considers the following factors:

(1) The potential contribution of the proposed project to increased knowledge or understanding of educational problems, issues, or effective strategies.

(2) The extent to which the proposed project involves the development or demonstration of promising new strategies that build on, or are alternatives to, existing strategies.

### Strengths:

1) The applicant proposes to improve the enrollment of Arizona students, especially students from traditionally underrepresented backgrounds with need, in computer science/cybersecurity college programs and ultimately becoming part of the computer science/cybersecurity workforce. The applicant correctly identifies need for the proposed program, citing the low numbers of Hispanic and female student enrollment and persistence in computer science programs and the availability of jobs in computer science and cybersecurity in Arizona and nationally (pages e23-e25). The emphasis of the program will be on improved recruiting, career counseling, and support programs to improve persistence using a strategy of co-advising with near peer mentoring. Both strategies are needed. Although there has been evidence that these strategies are successful in other STEM educational and career pathways and a history of success using the strategies regionally (page e27), the applicant will further develop these recruitment and counseling programs and co-advising frameworks for enrolled students to suit the needs of this specific student population and collect data to support research into the applicability of these techniques in improving outcomes in recruiting, enrollment and persistence. The early success of similar strategies employed by the applicant organizations in Arizona and institutions in other settings indicates a high likelihood of future success and sustainability.

2) The Career Connected Pathways project involves the development of a career counseling and recruitment toolkit that will be employed by participants to stimulate enrollment of underrepresented students with financial need in computer science and cybersecurity college programs and ultimately take jobs in those fields. The developmental approach to career advising should allow students to make more informed career choices, something first generation college students struggle with. The applicant provides data from previous work the participating agencies and other institutions with similar goals (page e28-e30). Similarly, the applicant also proposes to improve recruiting and persistence of those students in enrolling and completing their studies by developing and supporting a co-advising framework for participating students that utilizes professional development training for participating teachers and counselors and also employs a near peer mentoring program with community college students serving as mentors. Again, there is evidence that similar strategies have been successful, including at some of the participating school district and other sites nationally (pages e28-e30).

### Weaknesses:

1) The applicant believes that they currently have the needed computer science and cybersecurity curricular infrastructure in place as well as a strong job market for graduates with skills in those two disciplines. They believe the best strategy for improving enrollment and persistence of the targeted student populations are better career counseling and security and enhanced support and mentoring of students in the pipeline. These programs will begin in grade 10. However, no data is provided that this is the best age of student to target, and that students at that point in their education can be on an academic trajectory where a career pathway to Computer Science is still an option. Grade 10 seems like a

late start for such a career path and assumes they have all of the math and science content and skills necessary for that career goal.

2) The applicant has correctly identified that past research has indicated that first generation college students struggle with informed career and education choices because of lack of family experience or support. However, it is not clear how they have incorporated that information into their proposed career advising strategies in this proposal. There is no significant activity in the proposal targeted at family involvement in the process, even though the applicant has proposed the use of a survey of parental satisfaction (page e35) .

**Reader's Score: 23**

### **Selection Criteria - Quality of Project Design**

**1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the design of the proposed project, the Secretary considers the following factors:**

**(1) The extent to which the goals, objectives, and outcomes to be achieved by the proposed project are clearly specified and measurable.**

**(2) The extent to which there is a conceptual framework underlying the proposed research or demonstration activities and the quality of that framework.**

**(3) The adequacy of procedures for ensuring feedback and continuous improvement in the operation of the proposed project.**

#### **Strengths:**

1) The applicant has clearly stated the program goals and objectives in Table 1 beginning on page e31, each with quantitative measures and expected outcomes provided. The objectives are appropriate given the priorities of the EIR program and the identified goals of the proposal. The quantitative measures of success in enrollment, persistence and participant satisfaction outlined in Table 1 on pages e31-32 are reasonable and achievable.

2) The applicant has provided a strong conceptual framework for the proposed program activities and research. A logic model accurately depicting the proposed program is included in the Appendix on page e99. The use of JFF personnel to help design the career advising toolkit is a good idea (page e36). The plan to involve stakeholders and industry leaders in the development of program materials is also an excellent idea (pages e33-e34). Plans for a 2 day professional development workshop for teachers and counselors using the toolkit is appropriate (pages e33-e34). The planned design of the co-advising framework and near peer mentoring program also displays a lot of thought. The planned training workshops for near peer mentors will be essential (page e34). The plan to utilize a pilot developmental phase with fewer participating schools and students for the first two years of the project is appropriate (pages e34-e35).

3) The applicant has developed a strong process for ensuring formative evaluation of the program is conducted and feedback is used to make continuous quality improvement in a timely manner. A Grant Management Team will be assembled with representation from each of the participating administrative organizations to receive performance data to support actions at their monthly meetings (pages e34-e35). The plan to employ a PDSA model of continuous program improvement is appropriate. Formative evaluation data will include observations and focus groups of all stakeholders including teachers, counselors, students, and parents. The plan to have a developmental pilot phase for the first 2 years of the program will also support more meaningful continuous improvement of the program (pages e34-e35). The decision to have the external evaluator provide both formative and summative data for the evaluation process is appropriate.

#### **Weaknesses:**

1) Although there is a plan to develop and pilot the program with fewer schools in year 1 and 2 and increase the number of participants in years 3 through 5, the goals, objectives and measures treat the program as a single process. It may have been advantageous to set up separate objectives for the two phases of the project, recognizing the need to reassess

program processes after evaluating outcomes following the pilot phase before beginning the second phase of the program.

2) The conceptual framework underlying the proposed program is very strong, but still leaves some concerns. The plan to feature a near peer mentoring program is admirable (page e34). However, it is difficult to understand the motivation for the community college student mentors to participate. There was no mention of compensation to the mentors for training or mentoring. If these are truly near peer mentors, they may have their own financial or time pressures that would make it difficult for them to participate. It might be important to financially compensate those mentors for participation.

3) There are no identified weaknesses in the described plan to provide formative evaluation and feedback in order to allow continuous improvement in the operation of the proposed project.

**Reader's Score: 31**

### **Selection Criteria - Adequacy of Resources/Quality of Management Plan**

**1. The Secretary considers the adequacy of resources and the quality of the management plan for the proposed project. In determining the adequacy of resources and quality of the management plan for the proposed project, the Secretary considers the following factors:**

**(1) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks.**

**(2) The qualifications, including relevant training and experience, of key project personnel.**

**(3) The potential for continued support of the project after Federal funding ends, including, as appropriate, the demonstrated commitment of appropriate entities to such support.**

#### **Strengths:**

in order to allow continuous improvement in the operation of the proposed project.

#### **C. Adequacy of Resources and Quality of the Management Plan (up to 20 points).**

The Secretary considers the adequacy of resources and the quality of the management plan for the proposed project. In determining the adequacy of resources and quality of the management plan for the proposed project, the Secretary considers the following factors:

(1) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks.

(2) The qualifications, including relevant training and experience, of key project personnel.

(3) The potential for continued support of the project after Federal funding ends, including, as appropriate, the demonstrated commitment of appropriate entities to such support.

(Maximum Points 20)

Reviewer's Score:  18

#### **Strengths:**

1) The applicant has submitted a very clear management plan in Table 3 beginning on page e37 of the proposal. Program goals and milestones are detailed in the table and include dates, responsibilities, and alignment to objectives

and measures in Table 1 of the proposal. Milestones are included for the production and training for the Career Connected toolkit and the co-advising framework. Individual responsibilities for the key personnel and organizations are clearly identified. The milestones seem appropriate given the scope of the program and incorporate both the pilot and phase 2 portions of the project. This a very well-designed and detailed management plan.

2) The key personnel identified by the applicant have the necessary educational training and relevant educational program experience. Dr. Burke (CV on pages e58-e61), the leader from Center for the Future of Arizona, has a history of leading similar STEM efforts for the targeted student populations and successfully administering governmentally funding programs. The leadership from the other participating partners are similarly qualified. Ms. Cahill (CV on pages e66-e67), the has directed the Pathways to Prosperity Network in 15 states for the Jobs for the Future organization. Dr. Caspary (CV on pages 68-71) from SRI International is a qualified external evaluator with outstanding experience and an extensive publication list. This team is fully capable of directing this effort.

3) The applicant has documented support from participant with letters from school districts included in the Appendix (pages e87-e90). The narrative states the Computer Science Cybersecurity curriculum is in place (page e28) and the opportunity for dual enrollment credits are available with the participating community colleges (pages e33-e34). The recruiting and career advising toolkit that will be developed for the program will continue to be available after the federal funding expires, so that should be sustainable. Although funding for professional development of the counselors and teachers will end, the knowledge and expertise of those trained individuals will continue. Consequently, there is a high likelihood the high schools and community colleges that participated in the program will continue these efforts after the EIR funding expires. Furthermore, the Arizona Department of Education and Jobs for the Future have stated that they will likely support the dissemination of the program materials to other schools around the state of Arizona and the nation, enhancing the impact and continuity of this effort (page e41).

#### **Weaknesses:**

1) The program's organizational chart depicted in Chart 2 on page e36 is very confusing. One major issue with the chart is the interface of the partnering schools with the leadership team and the technical assistance. It is unclear how the team will interface with the participants. It is not clear whether the chart refers to the schools as the participating students vs. the teachers, counselors and administrators. It is also not clear whether the students and teachers/counselors will have different contacts with the program staff or leadership team. The lack of compensation for the near peer mentors is also problematic. These mentors are community college students and should be financially supported in these efforts, as they are likely to require a significant commitment on time and effort.

2) There is no identified weakness in the qualifications of the team serving as key administrative personnel for this proposal.

3) Although the applicant has suggested that material developed for this Center for the Future of Arizona program may be disseminated nationally, dual enrollment opportunities are for selected participating Arizona high schools and community colleges, and career toolkits will likely be designed to feature Arizona schools and employers. It is unclear how useful they would be for students in other states.

**Reader's Score: 17**

#### **Priority Questions**

##### **Competitive Preference Priority - Competitive Preference Priority**

**1. Within Absolute Priority 3, we give competitive preference to applications that address the following priority:**

**Projects designed to improve student achievement or other educational outcomes in computer science (as defined in the notice). These projects must address the following priority area:**

**Expanding access to and participation in rigorous computer science (as defined in the notice) coursework for traditionally underrepresented students such as racial or ethnic minorities,**

women, students in communities served by rural local educational agencies (as defined in the notice), children or students with disabilities (as defined in the notice), or low-income individuals (as defined under section 312(g) of the Higher Education Act of 1965, as amended).

**Note:** Projects addressing this priority must be administered in a manner consistent with nondiscrimination requirements contained in the U.S. Constitution and Federal civil rights laws.

**Strengths:**

The applicant meets the priority by establishing a program which will specifically encourage traditionally underrepresented students from ethnic minorities and students with demonstrated financial need to consider Computer Science Cybersecurity careers and to enroll in dual enrollment computer science/cybersecurity courses allowing them to receive community college credit in high school. The use of an enhanced career counseling/recruiting program beginning in grade 10 and near peer mentoring from college students enrolled in computer science/cybersecurity programs should be successful in enhancing recruitment and persistence in this computer science education and career pathway.

**Weaknesses:**

There are no weaknesses in addressing this priority of improving student outcomes in computer science.

**Reader's Score:** 5

---

**Status:** Submitted  
**Last Updated:** 06/13/2019 08:55 PM