Application Score Sheet

Proposed Project: Florida State University Panama City, Advancing Science and Career Education in New Technologies (# 246)
Proposed Project/Program County: Panama City
Board of County Commission Support: Yes

Total Projected Project Cost: $23,001,404
Match Provided: $11,500,702
Triumph Funds Requested: $11,500,702 (50%)
Triumph Funds Recommended by Staff: $11,500,702

Score: A
ROI: $23.8 per dollar of Triumph cost

Economic Impact and Analysis

The Florida State University Panama City is requesting $11,500,702 in Triumph funding to be used to deliver 3,280 CAPE list certifications (see proposal p36) over a six-year project, for a cost to Triumph of $3,506.31 per certification. The match committed by FSU and its partner schools is for FSU cash funding ($1.5 million), future grants and gifts to FSU to support the program ($5,367,609), in-kind staffing and school district CAPE revenue and instructional staff ($4,632,993). These dollar values mean that the proposed match is exactly equal to the proposed Triumph grant amount, so that Triumph provides exactly 50 percent of the value of the project.

The complete and well-articulated proposal describes a set of academic programs that incorporate important partnerships with other educational resources in the Triumph service area, particularly in the high schools. The train the teacher programs seem particularly useful. Dr. Fuller notes that the alignment for workforce training, appropriate for employment in the career field (diverse and evolving) meets entry level through mid-level skills with a pathway to long term skills/applications. He notes further that the project is designed to be transformational in the Triumph service region, and that the project certification outcomes and the personnel and external partner plans are well-defined and sequenced appropriately. Dr. Fuller finds that the proposed certifications provide a blend between skill training for existing needs and training for new skills, particularly in cybersecurity, with room to include responses to rapidly evolving business skill needs.

This project will ensure long-term sustainability through hiring of a development officer who will be charged with soliciting gifts to an endowment that support IT educational activities such as, financial support for middle and high school students attending summer camps, financial support for FSU students assisting teachers with IT instruction, and funding to help instructors keep their IT skills current. The university will hire additional faculty members at Panama City and in Tallahassee as part of the match for this effort. These faculty will be charged with providing IT instruction to FSU students on both campuses, with only the FSU PC instructional cost allocated to the project. FSU commits to continue to sponsor summer camps and bootcamps

for FSU students and professionals, employing qualified middle and high school teachers as instructors to provide them with additional income. FSU, via its undergraduate and graduate programs in Information Technology, will provide teachers with additional professional development opportunities.

At a reimbursement rate of $3,506.31 per certification, the discounted total increase in household incomes expected from the program will be $23.8 per dollar of Triumph cost. For these reasons, staff rate this program "A" in terms of economic impact.

Project Summary (based on information provided by the applicant)

Florida State University Panama City (FSU PC) is requesting $11,500,702 to establish the Advancing Science and Career Education in New Technologies (ASCENT) project. FSU PC aims to develop and integrate education and training resources to produce industry-specific certifications for students and citizens of the Northwest Florida region to position them well for job attainment and advancement. This project will focus on education and training in new technologies, with an emphasis in cybersecurity, to support multiple industry sectors in the Northwest Florida region resulting in at least 3,280 industry certifications earned over six years.

Information Technology (IT) involves the use of computers, storage and networking devices to create, process, store, share and secure electronic data. It is a fast-growing field because virtually all professions (e.g., agriculture, advanced manufacturing, communications, astronomy, etc.) need systems analysts, network architects, web developers, technical writers, database administrators, cyber security specialists, etc to support and enhance public or private organizations. Students who learn these skills are able to infuse or diversify their local economies through their IT skills. According to the Bureau of Labor Statistics (2021), employment in computer and information technology will grow 11 percent through 2029, much faster than the average for all occupations.

Bay and surrounding counties are ripe for expanding into the cybersecurity sector, due to its availability of 1) an international airport to connect to cyber related companies around the country, 2) local industries with demand for cybersecurity jobs, 3) a university with numerous academic programs to support the workforce, and 4) a favorable business and financial climate to attract new industries and businesses to the region. The ASCENT project will leverage educational institutions (secondary and post-secondary) and its military bases.

The main goals of the ASCENT project are to: 1) expand and enhance cyber- and technology-focused programs at FSU PC through an Interdisciplinary Cybersecurity Hub, 2) establish an Office of Professional Engagement and Learning (OPEL) to support local industry training needs and attract new jobs to the area, and 3) expand technology-related youth programs to include: summer camps, career courses, career academies, and other industry certification opportunities for middle- and high- school students and teachers.

The *Northwest Florida Forward Report* finds that Cybersecurity employment spans multiple industry sectors. FSU currently offers cybersecurity coursework in multiple degree programs

across the University. As a part of the ASCENT program, FSU faculty will audit existing programs and courses to identify opportunities to either embed industry certifications directly into existing courses or develop supplementary test-prep curriculum (non-credit) to compliment courses (credit).

For example, FSU PC is home to the University's Public Safety Department which offers both bachelors and master's degree programs. After an initial audit, multiple courses have been identified as candidates in which to embed industry certifications and new certificates could be offered including Introduction to Cyber Investigation and Law Enforcement Intelligence, and Advanced Cyber Investigations for Law Enforcement Intelligence.

In addition to reviewing existing programs and courses to increase the number of students who graduate with an industry certification, through the project FSU PC will add the Bachelor of Science in Information Technology, with a track in Cybersecurity, to its program offerings in Panama City, pending all internal approvals. After discussions with leadership at the Naval Surface Warfare Center, this degree option will be a welcomed addition to the portfolio of offerings in Panama City and will provide a workforce pipeline for the Naval Surface Warfare Center.

The new IT degree, alongside FSU PC's existing engineering and computer science program offerings, will round out programs needed locally to support the cybersecurity sector. After completing aligned career courses and academies, high school graduates may opt to attend FSU PC immediately or take advantage of FSU PCs Connect Program – a program that guarantees admission to FSU PC for students who earn an Associate of Arts degree at a partnering college. Under the ASCENT project, FSU PC will seek to expand these agreements with state and military colleges to include cyber- and technology- related programs.

As part of this project, FSU PC will establish an Interdisciplinary Cybersecurity Hub to support the new Bachelor of Science in Information Technology program and other trainings. This Hub will include a computing lab, server room, and access to nearby classrooms, meeting rooms, and offices. More important than the physical space, the Hub will serve as a central point of collaboration among interdisciplinary faculty as they engage with cyber, military, and technology industries for course and program development; alignment of academic courses with related industry certifications; and utilization of the computing laboratory and server room to serve student and community training needs for simulating and defending cyber-attacks.

The ASCENT program will establish an Office of Professional Engagement and Learning at FSU PC where individuals can complete non-academic, professional training courses and sit for industry certification exams. In fields where content is constantly evolving, such as cybersecurity, there is a pressing need for FSU PC to expand its portfolio of offerings to non-credit courses to keep pace with the training needs of technology-based industries.

Through this new institute, FSU PC will offer open-enrollment trainings in-person and online, and engage with CareerSource Gulf Coast, Bay Economic Development Alliance, local military officials, and industry leaders to provide customized trainings to meet the region's needs. To round out services offered through OPEL, FSU PC will add a testing center to its campus to

provide a seamless experience for individuals who participate in trainings and need to sit for an industry certification exam.

Most trainings are anticipated to come from come from custom negotiated contracts. Under ASCENT, FSU PC will tailor industry certificate training programs specific to the needs of its partners in cybersecurity and new technologies. These partners include industry, our local military installations, and any other government and state agencies (e.g., law enforcement agencies, local economic development alliance, etc.) with training needs.

In addition to offering new and enhanced post-secondary programs for FSU PC students and professional engagement and learning opportunities for the community, the ASCENT project is dedicated to developing a younger pipeline of students who will become the region's workforce of tomorrow. The ASCENT program will partner with K-12 school districts to recruit, hire, and train career teachers to teach 1) sequenced career courses (career academies) within the districts, 2) summer camps for students, 3) and summer workshops for other K-12 perspective career teachers (train-the-trainer model).

Partnering school districts will contract with FSU PC for career courses / academy instruction in the areas of cybersecurity, computer science, engineering, and other related fields. FSU PC will hire and provide training for teachers to teach career courses / academies in the school districts. These FSU PC teachers, with middle and/or high school teaching assignments during the academic year, will be assigned to multiple or single schools within a district and will be deployed as needed to teach during the day, all while maintaining a home base at FSU PCs Interdisciplinary Cybersecurity Hub. This hub will enable the faculty to interact with other FSU PC faculty and industry leaders to ensure curriculum and certifications are current and aligned with industry needs. CAPE funding associated with the certifications earned would reside with the school districts for investment back into the programs.

Currently, FSU PC STEM and FSU iCamp programs offer a variety of educational camps for middle- and high- school children. The ASCENT project will add technology-related programs offered for middle- and high- school students, expand the reach of youth programs outside of Leon and Bay counties, and embed industry certifications in these new youth programs.

The camps may be taught directly at secondary schools, on the FSU PC campus, or even online to provide multiple venues for students. Based on district need, the camps may stand alone as opportunities to seed interest in new technology fields, extend learning from career academies, or provide a REFRESH opportunity for students who were unsuccessful in their initial attempt to pass the certification exam. The Academy model above assumes a passing rate of 65% for students who attempt an industry certification exam in a career course during the school year. While FSU PC hopes to exceed this assumed rate, the REFRESH camps will provide another opportunity to improve the rate, if needed.

Recent discussions with county superintendents have resulted in one common challenge: trained CTE teachers in the 8-county region are difficult to locate, employ, and retain. As of 2019-20, technical teachers ranked 7th out of Florida's 26 identified certification areas as an area of critical shortage according to the Florida Department of Education (FLDOE).

FSU PC will partner with school districts to recruit, hire, and retain qualified technical teachers, thus increasing the districts' capacities to offer career courses leading to CAPE industry certifications. Further ensuring the viability of the project, FSU PC will enhance existing pathways (stackable certification opportunities) and bring new pathways (IT Program) for these students to continue their post-secondary studies in the region – increasing the likelihood that they will choose to remain in the region to seek employment upon graduation. Once employed, the project will provide upskill and re-certification trainings through OPEL to sustain employment and support advancement opportunities.

The plan for sustaining this effort involves providing ongoing professional development and support for teachers, engaging FSU students and faculty to assist teachers with classes leading to CAPE certifications, as well as summer camps and workshops that help students obtain CAPE certifications.

As FSU PC hires teachers to teach career courses / academies in the district, candidates who hold degrees in computer science, information technology, engineering, cybersecurity, and other related fields will be sought. These candidates, depending on their background, may need to become certified to teach in the district.

Many avenues exist for individuals to become certified to teach in the state of Florida, as a part of the ASCENT project, FSU will work to enhance, expand, and add to these pathways. For example, the FSU-Teach program utilizes creative curriculum design to enable undergraduate students in fields such as Biology, Mathematics, and Computer Science an opportunity to earn a dual major in field and in secondary teaching and graduate both certified and highly-qualified to teach upon graduation.

FSU's Bachelor of Science in Information Technology, planned as a new program in Panama City, is currently not a member of the FSU-Teach program. Likewise, FSU currently does not offer an Educator Preparation Institute (EPI) program - a state-approved alternative certification program for individuals who have a bachelor's degree, in a field other than education, and desire to transition into teaching. These pathways to teacher certification, in addition to others, will be explored as curriculum enhancements/program additions that could help combat the technical teacher shortage in Northwest Florida.

Through summer camps, career academies, and teacher workshops, the ASCENT project aims to increase the supply of qualified career teachers and build a robust pipeline of interest in new technologies among the region's youth. Other opportunities to increase the number of teachers are currently being discussed with the FLDOE to develop technology teachers and be able to embed them in CTE positions needed by the school districts that can promote STEM engagement and certification completion.

According to the applicant, perhaps the most important action they can take to ensure sustainability is to provide a reliable supply of qualified middle and high school faculty.

ASCENT's goal to provide education, training, and testing to support the completion of 3,280 industry certifications by participants of the project, will significantly help the region expand into cybersecurity and other related technology industries. While offerings would be available to all 8 counties, the applicant believes there is sufficient need alone within Bay County, surrounding counties, and local military, to support the goal of 3,280 certifications in 6 years.

Yearly certification goals for the program are:

Year 1 certifications passed = 450
Year 2 certifications passed = 512
Year 3 certifications passed = 542
Year 4 certifications passed = 588
Year 5 certifications passed = 594
Year 6 certifications passed = 594

There are currently 6,625 middle school and 8,266 high school students within FSU PCs immediate 3-county area (Bay, Gulf, Franklin) who have minimal career academy opportunities. As Tyndall AFB finishes their rebuild, the US Air Force is predicting an influx of 4,100 military personnel to Bay County, accompanied by their spouses and an estimated 2,049 school-aged, military dependent children. Moreover, FSUs university student populations will further contribute to interest in ASCENT activities, including 1,000 on-campus FSU PC students, and 1,500 additional students served by FSU PC in online courses.

In addition to available interest from the populations described above, workforce data from February 2020 to January 2021 for the same 3-county region (Bay, Gulf, Franklin) showed that 1489 cyber-related jobs, as defined by Northwest Florida Forward, were posted this past year exhibiting a 9% growth since 2017 (EMSI Q1, 2021). Thus, there appears to be increased demand in Bay and surrounding areas, supporting the timeliness of the ASCENT project and the need for further investment in the expansion of the cybersecurity sector in the region.

The 2019 US median income was $65,712 as reported by the United State Census Bureau, with Florida's reported at $59,227 in the same year. The average income across twelve occupations in the cybersecurity sector, as identified by Northwest Florida FORWARD's report, is $82,805,15 (EMSI Q1 2021 Data Set). Additionally, ASCENT participants will experience savings through waived fees (camps, workshops, OPEL trainings, etc.) and Secondary students who complete a career academy can earn industry certifications that articulate to college credit, thus saving families thousands of dollars in college tuition.

FSU PC has Memorandums of Agreement (MOAs) in progress with Bay County and Franklin County schools and has set up meetings with Gulf and Wakulla schools to identify needs for partnerships.

Budget & Finance

A.   Project/Program Costs:

Equipment $1,788,462
Supplies $6,882,716
Personnel $14,330,226

Total Project Costs: $23,001,404

B.   Other Project Funding Sources:
        Example Funding Sources (Note: Sources.)
Florida State University Cash $1,500,000
In-Kind $2,557,775
 School Districts $2,075,318
Future Grant and Gifts $5,367,609

Total Other Funding $11,500,702

Total Amount Requested: $11,500,702

The budget includes three primary expense types: personnel, equipment, and materials and supplies broken out across four ASCENT sub-categories: Grant Oversight, Interdisciplinary Cybersecurity Hub, Office of Professional Engagement and Learning, and Youth Programs. Florida State University has committed $1.5M in cash and $2,557,775 in in-kind funding to cover initial expenses in the project.

Shown as match, school district partners will provide $716,400 for contracted instruction and another $1,358,918 in net new state CAPE funds that will be invested back into the program. FSU is committed to raising the additional $5,446,507 needed to represent 50% of the project's total cost. FSU will seek match funding through state, local, and federal grant opportunities in addition to industry partnerships and donor gifts.

Letters of Support

Bay County BOCC
Bay District Schools