Application Score Sheet

Proposed Project: Tallahassee Community College, Unmanned Vehicle Systems: Marine Technologies Certification Training Program (#167)
Proposed Project/Program County: Wakulla
Board of County Commission Support: Yes

Total Projected Project Cost: $2,322,382
Match Provided: $339,000 (15.6%)
Triumph Funds Requested: $1,959,382
Triumph Funds Recommended by Staff: $1,959,382

Score: B
ROI: $33.0 per dollar of Triumph cost

Economic Analysis and Score

The Tallahassee Community College Unmanned Vehicle Systems requests $1,959,382 in Triumph funding to implement a program that would generate industry certs in unmanned systems, with a focus on marine applications of those systems. It describes a set of CTE initiatives and expansions for TCC in these subject areas to be provided at its Wakulla campus location.

Pages 46 and 47 of the revised application dated 7-22-2020 show attainment of 775 certs in particular occupational skills over six years.

The revised budget documents provided on 8-21-2020 using our Triumph budget format show match provided by TCC and by its Foundation in the amount of $363,000. This means that the applicants match is 15.6 percent of project cost, with Triumph funds proposed for the other 84.4 percent.

At a reimbursement rate of $2,528.23 per certification, the discounted total increase in household incomes expected from the program will be $33.0 per dollar of Triumph cost. This is an attractive return per dollar of Triumph expenditure. However, given the low match, staff rate this program “B” in terms of economic impact.

Project Summary (based on information provided by the applicant)

Tallahassee Community College (TCC) is requesting $1,959,382 in Triumph funds for an Unmanned Vehicle Systems: Marine Technologies Certification Training Program to be offered in Wakulla County. The program proposes to create multiple job training programs in the field of unmanned vehicles that operate in the water, the air, and on land. The project will build upon the existing unmanned system training program with a goal to develop an Associate of Science degree in Unmanned Systems, as well as additional certificate programs.

Unmanned Systems (US) have been established as being the future for growth in the S.T.E.M areas of industry. In addition to the military, drones are now used by first responders, law enforcement for public safety, real estate investors, farmers, power and utility companies, and have applications in agriculture, environmental, and marketing industries. Wakulla Environmental Institute (WEI) will focus primarily on marine and underwater drones to grow the economy in the rural counties in the gulf region.

The proposed project will focus on:

1. Technical Training
2. Human Performance, where safety guidelines will be developed and implemented and
3. Unmanned Marine Vehicle Systems, where the implementation of safety measures with the aid of technology will be developed and deployed.

These programs will offer multiple certifications by CAPE, FAA, and Unmanned Safety Institute (USI) USI, all under the auspices of students earning an Associate of Science in S.T.E.M. related fields where drones are at the forefront of their technological training. Safety is paramount in the development of the TCC US curriculum . The Safety Certification curriculum provided by USI will be incorporated in the course work.

The Human Performance and Technical Training Marine Technologies Training Center's program focus will be to develop training in conjunction with federal guidelines that will ensure a safe experience for everyone. As drones become more prevalent in everyday lives, there is an increasing need to ensure operations in the safest manner with the proper training. The program will study human performance operating and participating in drone operations industry wide and utilize innovative technological advancements for the purpose of increasingly operating in a safe environment.

The program's Marine Technologies Certification Training Center (MTCTC) will create a CAPE Certification program to train participants in unmanned marine technologies using Autonomous Underwater Vehicle (AUV) and Remotely Operated Vehicle (ROV). Unmanned marine systems can be used for aquaculture, habitat restoration, area inspections, defense, boat inspections, underwater pipe inspections, search and rescue, seafloor mapping, retrieving items, underwater clean up, and more. The WEI MTCTC will also offer an A.S. degree program for Unmanned Systems Programs. The education programs proposed are approved by the Florida Department of Education.

The FAA has been tasked with creating Centers of Excellence for Unmanned Aerial Systems across the U.S. with Community Colleges. As part of TCC's efforts to provide the complete experience necessary for students to obtain their certifications and become a Center of Aviation, TCC has become a Testing Center for the FAA in Wakulla County.

According to the MarketsandMarkets.com 2020 report *Autonomous Underwater Vehicle (AUV) Market by Type, Application, Shape, Technology, Payload Type, Region – Global Forecast to 2025*, the underwater vehicle market is projected to grow from $638 million in 2020 to $1.6

billion by 2025; it is expected to grow at a compound annual growth rate of 20.8% from 2020 to 2025.

Projected growth of this segment can be attributed to the increased use of underwater vehicles (UV) in military and defense and offshore industries. Imaging systems used in UVs are capable of capturing pictures of the seabed and surrounding areas. The use of imaging systems in UVs makes them suitable for habitat research, fishery study, oceanography, and archeology & exploration applications. The focus of the project will include building a training program with industry experts who will shape the training and certification protocol for the industry.

A 2018 Commercial Drone Industry Trends report by Drone Deploy finds that "the fastest growing commercial adopters of aerial data come from the construction, agriculture, and mining industries" – all important sectors of the Northwest Florida economy. Furthermore, the real estate industry has witnessed a 118% rise in the use of drone technology. Drones can be utilized for job site risk mitigation, the bid process, quality control & assurance, site planning, and progress tracking.

TCC's Office of Institutional Effectiveness (OIE), which is responsible for the systematic and comprehensive analysis of college planning and operations including strategic planning, assessment of institutional effectiveness and accreditation, will track student enrollment, graduations rates and job placements from this project.

The Apalachee Regional Planning Council will aid the College in monitoring the economic data of the region including GDP, median household income, average salary and other economic and demographic data that are pertinent to the long-term impact of this project.

The project will be sustained through a combination of tuition, student fees, activity fees; support from the TCC Foundation, contracts and grants, state funding, corporate partnerships and CAPE Funding.

As part of this proposal, TCC will continue its longstanding partnerships with FSU, FAMU and Wakulla County Schools existing underwater done research and UAV programs. The WEI Training Marine Technologies Certification Training Center, Unmanned Systems Program will create high skill individuals who will be able to segue into and augment local employment. The proposed program will lead to a higher annual average wage than current levels in Wakulla County. As graduates from the Center secure employment in Wakulla County, they will raise the per capita income of the County and support local housing, retail and public services.

To support the College's efforts to implement the WEI Unmanned Vehicle Systems Marine Technologies Certification Training Center, the TCC Foundation has established a local committee with the singular goal of identifying $2 million in private funding that will provide additional resources for the Triumph Applications. The funds will be placed in an endowment, to be held in perpetuity, which will provide critical dollars annually that support the Unmanned Vehicle Systems Marine Technologies Certification Training Center, scholarships to students from Wakulla County and facility enhancements as programs and enrollment grow at the campus.

5. Budget and Funding (as provided by the applicant)

Exhibit A					
167: Unmanned Vehicle Systems: Marine Technologies Certification Training Program					
Budget					
Estimated construction start date if applicable	N/A				
Estimated education component start date if applicable	9/1/20				
	Recruitment, Supplies & Cert Fees	**Certs Completed**	**Personel**	**Category #4**	**Total**
Project Total	2,322,382.00				
2020	390,000.00		24,000.00	-	414,000.00
2021	328,876.00		48,000.00	-	376,876.00
2022	328,876.00		48,000.00	-	376,876.00
2023	328,876.00		48,000.00	-	376,876.00
2024	328,876.00		48,000.00	-	376,876.00
2025	328,878.00		48,000.00	-	376,878.00
2026			24,000.00	-	24,000.00
Calendar Year 8	-	-	-	-	-
Calendar Year 9	-	-	-	-	-
Calendar Year 10	-	-	-	-	-
Calendar Year 11	-	-	-	-	-
Project Total	2,034,382.00	-	288,000.00	-	2,322,382.00
Triumph					
2020	315,000.00				315,000.00
2021		328,876.00			328,876.00
2022		328,876.00			328,876.00
2023		328,876.00			328,876.00
2024		328,876.00			328,876.00
2025		328,878.00			328,878.00
2026					-
Calendar Year 8					-
Calendar Year 9					-
Calendar Year 10					-
Calendar Year 11					-
Triumph Total	315,000.00	1,644,382.00	-	-	1,959,382.00
Grantee					
2020	-		24,000.00		24,000.00
2021		-	48,000.00		48,000.00
2022		-	48,000.00		48,000.00
2023		-	48,000.00		48,000.00
2024		-	48,000.00		48,000.00
2025		-	48,000.00		48,000.00
2026			24,000.00		24,000.00
Calendar Year 8					-
Calendar Year 9					-
Calendar Year 10					-
Calendar Year 11					-
Grantee Total	-	-	288,000.00	-	288,000.00
Match Source 1: TCC Foundation					
2020	75,000.00		-		75,000.00
2021			-		-
2022			-		-
2023			-		-
2024			-		-
2025			-		-
2026			-		-
Calendar Year 8					-
Calendar Year 9					-
Calendar Year 10					-
Calendar Year 11					-
Match Source 1 Total	75,000.00	-	-	-	75,000.00