The University of West Florida

Project 10[x]

SUMMATIVE DOCUMENT

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Prior Submissions and Updates

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UWF Project 10[X]

This document provides a summative view and update to the University of West Florida's (UWF) Project 10[X] proposal. UWF submitted an earlier version of the Project[X] proposal, dated September 23, 2019, to the Triumph Gulf Coast Board of Directors on October 4, 2019 which was tentatively approved by the Board, subject to requests for further information and updates. This updated Summative Document describes UWF's revised Triumph proposal and includes: (1) strategies to support industry certifications; (2) the CAPE and industry certifications to be offered; and (3) updates to UWF's six-year budget request from Triumph and UWF's match.

Strategies to Support Industry Certifications

The UWF is requesting $14,500,000 in Triumph funding to educate, train and prepare workforce-ready college graduates and working professionals to obtain recognized industry certifications in cybersecurity, advanced manufacturing and engineering. Through this grant UWF will expand Northwest Florida's talent pool in these high-tech, targeted industries.

UWF's proposal addresses the critical gaps in the region's workforce. Industry certifications in cybersecurity, advanced manufacturing and engineering represent transferable skills that will enhance the economic development and diversification of Northwest Florida for many years to come. The education, training and support provided to program participants will produce some of the nation's most talented and elite professionals that are highly skilled, credentialed and ready to work.

Through the Center for Cybersecurity, the Sea3D Additive Manufacturing Laboratory, and the Hal Marcus College of Science and Engineering, UWF will leverage Triumph funding and university resources to offer 3,220 industry certifications through an array of initiatives. These initiatives include:

- Providing industry instruction, training and support to program participants throughout the region seeking industry certifications to enhance their workforce qualifications for high-tech jobs in Northwest Florida's businesses, government and military organizations and agencies;
- Incorporating industry recognized certificates into Engineering, Computer Science, Cybersecurity, and Information Technology degree programs by embedding certificate and training curricula into relevant courses; and
- Offering other instruction and training experiences which enhance the professional development and qualification of participants for high-tech jobs and careers.

The program will target university, college and other students; retired and retiring military personnel; working and unemployed individuals in technical or non-technical fields seeking to upgrade their job prospects and careers by obtaining industry recognized certifications in cybersecurity, advanced manufacturing, engineering and related fields. These industry certifications will enhance program participants' qualifications and skills for high paying jobs in new and emerging high-tech professions. The instruction, training, support, vouchers, and testing for the industry certifications will be provided to at no out-of-pocket costs to program participants.

Triumph funding for UWF's revised proposal will be a catalyst for the transformation of the region's economic development and diversification. By leveraging the programs and resources of the UWF Center for Cybersecurity, Sea3D Lab, and the HMCSE, Triumph will accelerate the development of a high-tech talent pipeline that will address the unmet hiring needs of business, industry, government and military organizations in the region. The proposed certification training will attract emerging high-tech business to our region and create high paying jobs that enhance the prosperity of Northwest Florida citizens.

Creating Cybersecurity, Advanced Manufacturing and Engineering Talent in Northwest Florida

The UWF Center for Cybersecurity

Cybersecurity is critical to our regional and national economic prosperity and security. The UWF Center for Cybersecurity has been designated as the NSA/DHS Cybersecurity Regional Hub for cybersecurity education, research and partnerships for the southeast U.S. Through its investment in education, training and research programs, the Center propels innovative cybersecurity solutions and builds a talent workforce pipeline to fill cyber jobs regionally and nationally. The threats to the cybersecurity of businesses, governments and individuals persist while the number of professionals qualified to deal with cyberattacks is not keeping pace with accelerating demand.

Globally, Cybersecurity Ventures estimates over 3.5 million unfilled cybersecurity positions by 2021. According to CyberSeek, there are over 504,000 unfilled cybersecurity jobs across the U.S. and over 24,000 in Florida. The Cybersecurity job demand across the eight Northwest Florida counties targeted by Triumph exceeds the national average yet there is a critical shortage of qualified cybersecurity professionals. CyberSeek data indicates approximately 4340 employed in cybersecurity roles and over 2000 unfilled cybersecurity jobs across the eight-county region.

As the NSA/DHS Cybersecurity Regional Hub for the southeast U.S., the UWF Center for Cybersecurity has created strong synergy with key cyber partners in our region. With few exceptions, all have growing employment opportunities for well-trained cyber and high-tech talent. The U.S. Navy Center for Information Warfare Training; the Department of Homeland Security's National Cybersecurity and Communications Integration Center; and private sector companies such as Raytheon, Northrop Grumman, Booz Allen Hamilton, General Dynamics Information Technology, IBM, Navy Federal Credit Union, AppRiver, Global Business Solutions, Hixardt Technologies; and other private and government organizations are recruiting for qualified cyber and high-tech talent to fill existing jobs in our region. Cybersecurity jobs pay well and annual earnings are above the average for our region. The median pay for information security analysts is $92,000.

The UWF Center for Cybersecurity will leverage its capabilities and recognition as a national leader in cybersecurity education and workforce development to prepare residents of the eight counties for growing cybersecurity work opportunities across the region via industry-recognized certifications. The program will focus on core industry certifications required for cybersecurity jobs across the region, including CompTIA Network+, Security+ and Cybersecurity Analyst (CySA+), and will include instruction, hands-on skills development and certification testing. Participants will be connected with employers and career opportunities across the region to help them successfully transition to the workforce, thereby contributing to the region's economic diversification and enhancement.

The UWF Sea3D Additive Manufacturing Laboratory

The Sea3D Additive Manufacturing Laboratory serves as a hub for multidisciplinary instruction, training, research, and discovery in the high demand field of advanced manufacturing, providing a space for real-world problems to be transformed into creative solutions. The Sea3D Lab is a dynamic platform for area students, working professionals, and public and private organizations to interact in the design, build and invention process. This interaction enhances the development of high-tech skills which are required to meet the needs of the advanced manufacturing workforce of the future.

Nationally over 3.5 million professionals are needed to fill vacancies in manufacturing. The number of unfilled manufacturing jobs is predicted to increase to 4.6 million by 2048. This growth will probably accelerate given recent requirements to onshore manufacturing and supply chain capabilities and jobs. According to Florida's Department of Economic Opportunity, in 2019 manufacturing employed 381,800 individuals in Florida, an increase of 11,500 over the previous year (Florida DEO). According to Northwest Florida Forward: A Regional Strategy for Economic Transformation (2016), manufacturing is a key target industry for our region due to the large number of direct and indirect jobs. Advanced manufacturing is also a target industry for regional economic development organizations in Escambia, Santa Rosa, Okaloosa, Walton, Bay, Gulf, Franklin and Wakulla. From January 2019 to March 2019, there were 1,901 unique job postings in manufacturing in Northwest Florida,

Manufacturing in our region continues to grow. Recent data show increasing needs for additional manufacturing designers, engineers, assemblers, planners, analysts' supervisors, maintenance technicians, manufacturing operators, managers, and technicians. Professionals employed in advanced manufacturing earn above average salaries. Mechanical engineers earn $95,270; scientific research and development $99,180; aerospace product and parts manufacturing $98,230 (HIS Economics). With manufacturing becoming increasingly high-tech, additional workforce training is needed. The projected growth in the sector's workforce and the increases in manufacturing technology and automation create a critical need for current and future workers to upskill their qualifications via training and hands-on experiences documented by industry certifications in advanced manufacturing.

The UWF Sea3D Additive Manufacturing Laboratory is focused on developing talent to support advanced manufacturing. Triumph funding of this grant will enable working manufacturing professionals and students in engineering, computer science, and information technology to enhance their qualifications for high paying jobs by obtaining industry certifications. Professional and student participants will be connected to employers and career opportunities to assist them in successfully upskill their qualifications for jobs in advanced manufacturing in the eight Northwest Florida counties disproportionately affected by the BP oil spill. Sea3D's team will expand its location in the UWF owned Museum of Commerce; provide additional staff for industry certification and testing; and work with manufacturing partners in Pensacola, Ft. Walton Beach, Crestview and other locations throughout the eight Northwest Florida counties.

The Hal Marcus College of Science and Engineering

UWF offers ABET accredited BS degree programs in Electrical Engineering, Computer Engineering, Mechanical Engineering, and Computer Science, all of which are offered at both Pensacola and Fort Walton Beach campuses to accommodate students across Northwest Florida. UWF also offers BS degrees in Cybersecurity and Information Security and we are currently pursuing ABET accreditation for both degrees. UWF was the first university in the Florida State University System to offer a BS in Cybersecurity with the National Center of Academic Excellence in Cyber Defense Education designation. Mechanical Engineering and Cybersecurity are popular degree programs among UWF students, each growing to over 200 students in just two years (Mechanical Engineering has now grown to over 350 students in four years). Mechanical Engineering has a unique design program called Enterprise which gives students three years of hands-on design experience in a team environment. Enterprise was inspired by the recommendations made in the American Society of Mechanical Engineering (ASME) Vision 2030 report. Cybersecurity students have access to the department's high-tech Cybersecurity Battle Lab for hands-on learning experiences in network and system security in controlled, virtualized computing environments. Finally, the Information Technology program is set apart by being members of the Red Hat and CISCO Networking academies. The added value of these memberships is that students are provided up-to-date, hands-on learning opportunities.

There is a great demand for engineers, computer scientists, and IT and cybersecurity specialists in Northwest Florida where there is a concentration of military bases, contractors, government agencies, and a variety of tech companies. Florida Department of Economic Opportunity projects engineering job growth of about 11% in the state of Florida between 2019 and 2027 with a median hourly rate of about $40-$46. Engineers find career opportunities in a wide area of settings such as aerospace, manufacturing, energy, environment, transportation, and public-sector positions with federal, state, and local governments. Additionally, employment opportunities are very good for graduates of the IT, Computer Science, and Cybersecurity degree programs. The State of Florida is projecting a growth rate of 22% from 2014 to 2024 in career opportunities for Cybersecurity professionals and 19% for Computer Science professionals. Mean salaries in Florida for cyber professionals with a Bachelor's degree in a computing discipline are around $84,000.00 annually and $99,000.00 for software system developers. Shortages in both Computer Science and Cybersecurity graduate supply have been identified as significant issues both at the state and national level. (Source: http://lmsresources.labormarketinfo.com/projections/index.html).

Northwest Florida has many engineering firms, businesses, government organizations and agencies, military command, DOD firms, and consulting organizations that employ engineers. A partial list includes: Gulf Power and Florida Power and Light, Escambia River Electric Coop, Webb Electric, Wintec, Schmidt Consulting, Mott McDonald, Jacobs Engineering, Baskerville-Donovan, Ascend Performance Materials, Avalex Technologies, Booz Allen Hamilton, BAE Systems, Actigraph, GE Wind, Automation Control Services Applied Systems Engineering, Navy Federal Credit Union, Raytheon, Northrop Grumman, Lockheed Martin, General Dynamics Information Technology, IBM, Global Business Solutions, Hixardt Technologies, other DOD firms, county/regional/state government agencies, local health care organizations, and numerous military commands in our region. Average earnings for skilled advanced manufacturing and engineering workers in Pensacola, Panama City, and Crestview/Ft. Walton Beach range from $80,559 to $96,058 and average $86,000.

Technology and innovation are disrupting industries and communities across the globe creating national and global competition for talent at an accelerated pace. In Northwest Florida we have an opportunity to be competitive and create a talented high-tech workforce that could transform the Gulf coast region.

UWF is the only public university in our region and UWF plays a key role in building an educated and highly trained talent pipeline to advance the economic development and diversification of our region. Through this Triumph grant proposal, UWF aspires to do more to transform the future for our region.

In the southeast, the state of Georgia made a $50M investment to establish a Cyber Innovation and Training Center adjacent to the Augusta University Riverfront Campus with connections to the education programs of Augusta University. After Georgia's initial investment, project funding increased to over $100M based on partnerships with the private sector and the military. Triumph's investment in UWF's Project 10 [X] proposal could be a catalyst for the creation of a similar high-tech innovation and training assets for our region.

Given the extensive presence of military commands and DOD firms in Northwest Florida and the large numbers of skilled military personnel (many with security clearances) seeking new career opportunities along the Gulf Coast, presents us an opportunity to harness these strengths and improve the labor force. Triumph funding for the UWF's Project [X] proposal could be a major step for the acceleration of high-tech training and innovation in Northwest Florida and the fulfilment of our Cyber Gulf Coast vision as outlined by the Northwest Florida Economic Development Alliance's *Live Coastal, Work Cyber. Cybersecurity Strategic Plan Report*.

UWF CAPE Postsecondary Industry Certification Funding List

http://www.fldoe.org/academics/career-adult-edu/cape-postsecondary/cape-post-industry-cert-funding-list-current.stml

	Agency Website
Six Sigma Green Belt (CSSGB)	www.asq.org
Lean Bronze Certification (LBC)	www.sme.org
Certified Solidworks Professional-Academic (CSWP-Academic)	www.solidworks.com
Autodesk Certified Professional - Inventor	www.autodesk.com
Cisco Certified Network Associate Security (CCNA Security)	www.cisco.com
Cisco Certified Network Associate Cyber Ops (CCNA Cyber Ops)	www.cisco.com
Certified Ethical Hacker (CEH)	www.eccouncil.org/
Cisco Certified Network Associate (CCNA)	www.cisco.com
Cisco Certified Network Associate Wireless (CCNA Wireless)	www.cisco.com
Cisco Certified Network Associate Routing and Switching (CCNA Routing and Switching)	www.cisco.com
CompTIA Network+	www.comptia.org
CompTIA Security+	www.comptia.org
Cybersecurity Analyst (CySA+)	www.comptia.org
Additional Certification Programs Offered by UWF:	
Redhat Systems Administration	
Engineering in Training Exam (FE)	ncees.org/engineering/fe/
Six Sigma Yellow Belt	www.sme.org
Certified Additive Manufacturing Fundamentals	
Certified Manufacturing Production Technician (CPT)	www.msscusa.org
Kuka Robotics Arm	www.kuka.com

Note: Based on interest, we will expand offerings to accommodate needs in the region aligned to CAPE. We will also continue to monitor modifications to the CAPE industry certifications list on an annual basis due to the ongoing changes for cybersecurity and other information-technology focused industry certifications.

Update to UWF's Budget Request and UWF Match

The University of West Florida is active in the pursuit of external funding to support the University's mission in the realms of teaching, research, and service. As such, the UWF units working to support this proposal will commit to pursuing external funds aligned with the project's goals over the next nine years, including those years following the expiration of Triumph funding. Specifically, the Hal Marcus College of Science and Engineering, the Sea3D Additive Manufacturing Lab, and the Center for Cybersecurity commit to pursuing at least $4M in external funding via grants and contracts in the nine years following the initiation of the Triumph Board beginning its funding of this project. This external funding will be pursued in areas aligned with professional development of a technical workforce in northwest Florida, to include the awarding of the certificates noted above and others aligned with the same project outcomes.

UWF has an active recent history of successfully securing external funding to support STEM student engagement and professional development. Over the past three years, the UWF Center for Cybersecurity secured a National Science Foundation (NSF) CyberCorps® Scholarship for Service award, while faculty in the Hal Marcus College of Science and Engineering have secured funding from student engagement programs, such as the NSF Improving Undergraduate STEM Education, the National Institutes of Health (NIH) Maximizing Access to Research Careers (MARC) Scholars, and the NSF Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM) Program. UWF is committed to building off of these institutional successes to continue and expand the impact of the TRIUMPH Gulf Coast investment in UWF.

As indicated in the Revised Triumph Budget and Match, the $4.0M of UWF related grants plus UWF's pledge to submit and receive $6.0M in external funding over the next six years, together with $4.8M of direct UWF match, yield a total UWF match of $14.8M or 1.02 times the $14.5M Triump Grant.

Exhibit A
UWF Project 10[x]
Budget
Estimated construction start date if applicable
Estimated education component start date if applicable

	Personnel and Program Support	Equipment and Supplies	Lease Payments	Program Coordination /Recruitment	Certification Vouchers and Materials	Renovations	Current and Pledged Grants and Contracts	Total
Project Total								
Calendar Year 2021	1,508,822.52	2,291,801.00	60,800.00	106,400.00	307,605.00	1,409,592.00	4,000,000.00	9,685,020.52
Calendar Year 2002	1,632,572.52	360,570.00	33,800.00	90,000.00	335,400.00	-	-	2,452,342.52
Calendar Year 2023	1,817,192.52	489,470.00	33,800.00	80,000.00	367,770.00	-	-	2,788,232.52
Calendar Year 2024	1,817,192.52	489,470.00	33,800.00	80,000.00	367,770.00	-	-	2,788,232.52
Calendar Year 2025	1,817,192.52	489,470.00	33,800.00	80,000.00	367,770.00	-	-	2,788,232.52
Calendar Year 2026	1,817,192.52	489,470.00	33,800.00	80,000.00	367,770.00	-	6,000,000.00	8,788,232.52
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
Project Total	10,410,165.11	4,610,251.00	229,800.00	516,400.00	2,114,085.00	1,409,592.00	10,000,000.00	29,290,293.11
Triumph								
Calendar Year 2021	1,348,316.00	293,570.00	33,800.00	106,400.00	307,605.00	-	-	2,089,691.00
Calendar Year 2002	1,447,066.00	306,570.00	33,800.00	90,000.00	335,400.00	-	-	2,212,836.00
Calendar Year 2023	1,631,686.00	435,470.00	33,800.00	80,000.00	367,770.00	-	-	2,548,726.00
Calendar Year 2024	1,631,686.00	435,470.00	33,800.00	80,000.00	367,770.00	-	-	2,548,726.00
Calendar Year 2025	1,631,686.00	435,470.00	33,800.00	80,000.00	367,770.00	-	-	2,548,726.00
Calendar Year 2026	1,631,686.00	435,470.00	33,800.00	80,000.00	367,770.00	-	-	2,548,726.00
	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	
Triumph Total	9,322,126.00	2,342,020.00	202,800.00	516,400.00	2,114,085.00	-	-	14,497,431.00

Grantee								
Calendar Year 2021	160,506.52	1,998,231.00	27,000.00	-	-	1,409,592.00	4,000,000.00	7,595,329.52
Calendar Year 2002	185,506.52	54,000.00	-	-	-	-	-	239,506.52
Calendar Year 2023	185,506.52	54,000.00	-	-	-	-	-	239,506.52
Calendar Year 2024	185,506.52	54,000.00	-	-	-	-	-	239,506.52
Calendar Year 2025	185,506.52	54,000.00	-	-	-	-	-	239,506.52
Calendar Year 2026	185,506.52	54,000.00	-	-	-	-	-	239,506.52
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
Grantee Total	1,088,039.11	2,268,231.00	27,000.00	-		1,409,592.00	4,000,000.00	8,792,862.11
Match Source 1								
Calendar Year 2021	-	-	-	-	-	-	-	-
Calendar Year 2002	-	-	-	-	-	-	-	-
Calendar Year 2023	-	-	-	-	-	-	-	-
Calendar Year 2024	-	-	-	-	-	-	-	-
Calendar Year 2025	-	-	-	-	-	-		-
Calendar Year 2026	-	-	-	-	-	-	6,000,000.00	6,000,000.00
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
Match Source 1 Total	-	-	-	-	-	-	6,000,000.00	6,000,000.00
Total Match								14,792,862.11
Match Source 2								
								-
								-
								-
								-
								-
								-
								-
								-
								-
								-
Match Source 2 Total	-	-	-	-				-

Center for Cyber Security	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Personnel and Program Support	765,244	765,244	949,864	949,864	949,864	949,864	5,329,944
Equipment and Supplies	138,100	138,100	240,000	240,000	240,000	240,000	1,236,200
Lease Payments	33,800	33,800	33,800	33,800	33,800	33,800	202,800
Program Coodination/Recruitment	60,000	40,000	60,000	60,000	60,000	60,000	340,000
Certification Vouchers and Materials	118,680	118,680	151,050	151,050	151,050	151,050	841,560
Total	1,115,824	1,095,824	1,434,714	1,434,714	1,434,714	1,434,714	7,950,504
Haas/Sea3D							
Personnel and Program Support	190,600	345,000	345,000	345,000	345,000	345,000	1,915,600
Equipment and Supplies	36,000	40,000	40,000	40,000	40,000	40,000	236,000
Lease Payments							
Program Coodination/Recruitment	16,400	20,000	20,000	20,000	20,000	20,000	116,400
Certification Vouchers and Materials	26,955	45,000	45,000	45,000	45,000	45,000	251,955
Total	269,955	450,000	450,000	450,000	450,000	450,000	2,519,955
Hal Marcus							
Personnel and Program Support	284,472	228,822	228,822	228,822	228,822	228,822	1,428,582
Equipment and Supplies	119,470	128,470	155,470	155,470	155,470	155,470	869,820
Lease Payments							-
Program Coodination/Recruitment							-
Certification Vouchers and Materials	161,970	171,720	171,720	171,720	171,720	171,720	1,020,570
Total	565,912	529,012	556,012	556,012	556,012	556,012	3,318,972
Central Budget							
Personnel and Program Support	108,000	108,000	108,000	108,000	108,000	108,000	648,000
Program Coodination/Recruitment	30,000	30,000	-	-	-	-	60,000
	138,000	138,000	108,000	108,000	108,000	108,000	708,000
Grand Total							
Personnel and Program Support	1,348,316	1,447,066	1,631,686	1,631,686	1,631,686	1,631,686	9,322,126
Equipment and Supplies	293,570	306,570	435,470	435,470	435,470	435,470	2,342,020
Lease Payments	33,800	33,800	33,800	33,800	33,800	33,800	202,800
Program Coodination/Recruitment	106,400	90,000	80,000	80,000	80,000	80,000	516,400
Certification Vouchers and Materials	307,605	335,400	367,770	367,770	367,770	367,770	2,114,085
Total	2,089,691	2,212,836	2,548,726	2,548,726	2,548,726	2,548,726	14,497,431

To balance 14497431

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