

Application Score Sheet

Proposed Project: University of West Florida, Innovation Network (#70)

Proposed Project/Program County:

Board of County Commission Support:

Total Projected Project Cost: \$37,400,000.00

Match Provided: \$22,950,000

Triumph Funds Requested: \$14,500,000.00 (39%)

Triumph Funds Recommended by Staff: \$14,500,000.00

Score: A

ROI: \$15 dollars in additional personal income relative to each Triumph dollar expended

Economic Score (based on information provided by the applicant)

UWF requests \$14,500,000 to address the challenge of employers' inability to find and fill critical gaps in the high tech workforce. Industry certifications are recognizable, transferable skills that will continue to benefit the prosperity pipeline for many years to come. This project 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 its resources to offer industry certifications through an array of strategies. UWF commits \$22,950,000 in match, so that the Triumph award represents 38.7 percent of total project cost.

The September 23rd Summative Document identifies 26 CAPE certifications proposed to be offered at UWF over 6 years, with the commitment to a seventh year if needed to meet the targeted total of 3,220 certs in these high value areas. Some 450 certs would be attained by students in Year 1, with an additional 450 in Year 2, and 580 per year in subsequent years until attaining the 3,220 commitment. No more than 50 percent of the 450 initial year attainment shall be in any one certification, with subsequent year numbers determined by mutual agreement based on market needs.

The cost of \$4,503 per cert is attractive given the high level of sophistication of the training to be offered. The presence of NSA and DOD cybersecurity training at Corry Station in Pensacola suggests the possibility of developing a substantial cluster of high-tech firms meeting national defense cyber training needs and other business needs. The advanced manufacturing certs will help prepare Northwest Florida students for the future skill needs of the modern manufacturing sector, and Supply Chain and Logistics certs are targeted at a high-wage high-demand sector as well.

Using standard Triumph methods of assessing likely increases to personal income due to additional training, the project is projected to provide \$15 dollars in additional personal income

relative to each Triumph dollar expended.

For these reasons, staff score the project as an “A.”

Project Summary (based on information provided by the applicant)

The University of West Florida (UWF) is requesting \$14,500,000 in Triumph funding to establish the UWF Innovation Network. Through the Innovation Network, UWF proposes to educate workforce-ready college graduates and industry trained professionals creating a next generation cyber workforce and highly skilled mechanical engineers, electrical engineers, supply chain logistics experts, computer scientists and information technologists.

UWF Innovation Network will focus on key initiatives for college students (freshmen, transfer students, adult learners and graduate students) and industry training by transforming the curriculum and student experience in the areas of cybersecurity, advanced manufacturing, intelligent systems and robotics.

Classes will take place in downtown Pensacola, at a networked location in Fort Walton Beach and through world-class synchronous online learning. Funds will be used for new workforce training programs, minor renovations of the Intelligent Systems and Robotics teaching/research space in downtown Pensacola, the launch of the downtown Center for Cybersecurity and renovations on the joint campus of NWFSC-UWF creating a Sea3D Lab in Fort Walton Beach.

Graduates of the UWF Innovation Network are expected to fill documented workforce needs aligned with the Northwest Florida Economic Development Alliance’s “Live Coastal. Work Cyber.” Cybersecurity Strategic Plan Report (2017) and the Northwest Florida Forward: A Regional Strategy for Economic Transformation (2016).

The Innovation Network would enable UWF to add instructional personnel dedicated specifically to educating and training, bring in world-class innovators in residence, add industry certified staff, expand laboratories and support students through mentoring, living-learning opportunities, undergraduate and graduate research and scholarships to support degree attainment. Students participating in this initiative will have access to scholarship and industry certification test funding.

Graduates of Innovation Network degree programs are expected to make salaries above the average wage based on salaries graduates will make in the cybersecurity and advanced manufacturing areas. In addition to graduates, many employees already in the workforce will also receive industry certifications, additional add-on certificates and extensive training to build workforce readiness for the future.

UWF’s initiative proposes to accelerate students to employment. Work experiences may be in the form of industry sponsored laboratories, internships, cooperative programming agreements and will be documented through experiential transcripts and industry certifications.

In areas such as cybersecurity, having a security clearance in process will accelerate opportunities for graduates to move into available positions. Through partnerships, UWF will provide the accelerated pathway to begin the clearance process for eligible students.

UWF's designation as the NSA/DHS Cybersecurity Regional Hub for the Southeast through the Center for Cybersecurity has created strong synergy with key partners including federal assets like the U.S. Navy Center for Information Warfare Training and the Department of Homeland Security's National Cybersecurity and Communications Integration Center and private-sector companies such as Raytheon, Northrop Grumman and Navy Federal Credit Union.

UWF is a new partner with the National Security Agency's National Cryptologic School on their Joint Cyber Analysis Course (JCAC). This partnership will accelerate completion of the undergraduate cybersecurity degree program for Joint Cyber Analysis Course graduates. Last year, more than 4,000 military students completed this complex cyber course.

Navy Federal Credit Union is a major employer providing internships, cooperative education programs, and full-time positions. Employment opportunities target students with a Bachelor's degree in Computer Science, Cybersecurity, Information Technology, Management Information Systems, Business Administration, and more. In the past year, Navy Federal Credit Union offered internships and cooperative education programs to UWF students. Several of UWF's interns have been hired into full-time positions upon graduation. The Department of Homeland Security at Corry Station continues to hire UWF students to lead some of the nation's most pressing cybersecurity challenges.

Northwest Florida is home to numerous military bases and contractors as well as a variety of companies and government agencies with high-tech needs. The Department of Homeland Security and large defense contractors including Northrop Grumman, Raytheon and Lockheed Martin have recently expanded their cybersecurity operations in the Northwest Florida region. Short-term and long-term employment opportunities are offered to students with a Bachelor's of Science degree in Cybersecurity, Computer Engineering, Electrical Engineering, and Information Technology.

Northwest Florida manufacturers face significant out-of-state competition for skilled professionals. Nationally, over 3.5 million professionals are needed to fill vacancies in manufacturing by 2020. As manufacturing floors are increasingly operated with more emerging technologies, tools and processes, requirements for ongoing training continue to rise.

Qualified professionals in artificial intelligence, robotics, autonomy and intelligent systems will be key elements of the global and local economies in the future. Nearly every facet of the economy is being transformed by these technologies and the pace is expected to accelerate. As manufacturing becomes more high tech, additional workforce training will be needed as well as more college graduates in the areas of engineering, supply chain logistics, robotics and intelligent systems.

At the Intelligent Systems and Robotics Warehouse, a UWF-owned property housing Intelligent Systems and Robotics situated adjacent to IHMC property in downtown Pensacola, the UWF-

IHMC joint PhD program in Intelligent Systems and Robotics will be a centerpiece of research for students, faculty researchers, scientists and entrepreneurs.

The UWF Sea3D Additive Manufacturing Laboratories, located in the Museum of Commerce in Pensacola and on the NWFSC-UWF Joint Campus in Fort Walton Beach, will feature tools for rapid prototyping and innovation. A regional synchronous network of advanced manufacturing resources and laboratories will link existing key partners and stakeholders through the Northwest Florida Manufacturers Council, TecMEN and FloridaMakes to UWF.

Currently serving as a hub for multidisciplinary research, invention and discovery in the high-demand field of additive manufacturing, with this funding, the Sea3D Lab will expand as much as possible in its existing location with additional staffing and will renovate a space on the Joint Campus of NWFSC-UWF creating an addition Sea3D Lab for the program.

Key partners and stakeholders will further support Manufacturing Career Academies across the region, engage regional manufacturers and provide significant research opportunities for students and researchers.

With the increased demand for high tech jobs in cybersecurity, advanced manufacturing and intelligent systems/robotics, UWF proposes to expand initiatives focused on attracting and retaining students in these specific areas in order to increase the number of graduates ready to work.

UWF proposes to launch a Ready to Lead - Ready to Innovate Freshman Initiative around two primary strategies. First, through the development of a freshman immersion experience provided for all UWF freshmen participating in a course on innovation and career opportunity in cybersecurity, advanced manufacturing and intelligent systems/robotics as part of the overall Freshman Experience. All freshmen will have experiential learning opportunities in the UWF Innovation Network facilities and laboratories in downtown Pensacola (CyberRange, Advanced Manufacturing Laboratories and Robotics Laboratories), and through the development of an Innovation Living Learning Community focused on Cybersecurity, Advanced Manufacturing and Intelligent Systems/Robotics. Students enrolled in this initiative will accelerate credit where possible, complete an industry certification, participate in a career mentoring program with industry partners in the UWF Innovation Network, participate in industry problem solving in an industry/government program called "Hacking for Defense" (<https://www.h4di.org/about.html>), and participate in activities in the Center for Cybersecurity's CyberRange and in Advanced Manufacturing laboratories in Pensacola and Fort Walton Beach.

The UWF Innovation Network is expected to contribute directly to the supply of qualified potential employees to meet existing and prospective future employer demands. At the same time, UWF will provide support to workforce growth and demand both through direct engagement with private-sector entities in the areas of applied research and product/service development and through the commercialization of research through technology transfer, entrepreneurship and small business development.

In addition to the Cybersecurity and Advanced Manufacturing initiatives, the partnership with IHMC for Intelligent Systems and Robotics establishes robust opportunities for research. IHMC, a not-for-profit research institute of the State University System (SUS), is a pioneer of technologies aimed at leveraging and extending human capabilities through a unique interdisciplinary approach combining computer science, cognitive psychology, neuroscience, engineering, medical science, and other related science disciplines.

Producing graduates with doctoral degrees in these fields will ensure that Northwest Florida trains and retains a workforce ideally suited to today's many challenges, and the graduates will provide leadership, expertise, and innovation to keep Florida at the forefront of these advances. The first research project in the UWF lab will focus on efficient interfaces for human-robot teams performing surveillance and maintenance tasks from the ground, air, or under water. For example: monitoring fertilizer run-off and algae bloom, finding infestations of cogon grass in cattle grazing lands and treating them with minimal targeted herbicides, monitoring public utility construction sites to ensure compliance with construction plans, and monitoring bridge vibrations to understand their structural integrity. Also, there are many NASA and DoD applications of this work. The second project will focus on understanding how humans grasp objects and dexterously manipulate them.

An aspirant model for the Innovation Network, in January 2017 Georgia Governor Nathan Deal invested \$50M to create a "Georgia Cyber Innovation and Training Center" adjacent to the Augusta University Riverfront Campus. Once announcing the state investment, project funding increased to over \$100M based on partnerships with the private sector and the military.

UWF is proposing to create a similar unique asset in our region similar to the Augusta University's Riverfront Campus. Investment in the Innovation Network is intended to create a world-class cyber range and training facility focused on developing the next generation cyber workforce through training, real-world practice, education, public-private collaboration and interdisciplinary research in the fields of healthcare, computer science, electrical engineering, mathematics and robotics.

UWF's Innovation Network has great parallels to the Georgia Project. From federal assets like the U.S. Navy's Center for Information Warfare Training and the Department of Homeland Security's National Cybersecurity and Communications Integration Training Center to many private-sector partners such as Raytheon, Northrop Grumman and Navy Federal Credit Union, provides an opportunity for the Northwest Florida's economy similar to the investment the Augusta model will provide for the community in Georgia.

Funding and Budget (as provided by the applicant)

5. Please provide a Project/Program Budget. Include all applicable costs and other funding sources available to support the proposal.

A. Project/Program Costs:

Example Costs (Note: Not exhaustive list of possible Cost categories.)

Triumph Total Project Budget	Project Total	Project Match	Triumph Grant
Equipment	\$ 9,500,000.00	\$ 5,000,000.00	\$ 4,500,000.00
Program Supplies	\$ 450,000.00		\$ 450,000.00
University Programming & Salaries	\$ 27,450,000.00	\$ 17,950,000.00	\$ 9,550,000.00
	\$ 37,400,000.00	\$ 22,950,000.00	\$ 14,500,000.00

Total Project Costs: \$37,400,000.00

B. Other Project Funding Sources:

Example Funding Sources (Note: Not an exhaustive list of possible Funding Sources.)

Private Sources	\$ 3,000,000
University Programming	\$ 16,950,000
University Salaries	\$ 3,000,000
Total Other Funding	\$ 22,950,000
Total Amount Requested:	\$14,500,000.

Throughout the duration of the project, funds will be spent on instructional personnel, staff, 3 innovators in residence, student scholarships, equipment and supplies. UWF is funding rent for these facilities. Equipment and staffing will be funded through the Triumph Gulf Coast proposal to support degree programs, industry certifications, certificates, industry training and events.

University Programming and Salaries will be used to fund the operation/administration of the Innovation Network, new world-class innovators-in-residence and staff to support all of the initiatives of the Innovation Network. Funding will also be used for student scholarships to support industry certifications, industry internships and opportunities for students to participate in highly engaging industry partnership experiences.