

Application Score Sheet

Proposed Project: Gulf Coast State College, Gulf Regional Training Center for
Emergency Satellite Communications, Geospatial Intelligence, & Unmanned Vehicles in
Emergency Response (202)

Proposed Project/Program County: Gulf

Board of County Commission Support: Yes

Total Projected Project Cost: \$9,972,035

Match Provided: \$4,878,335

Triumph Funds Requested: \$5,094,750 (51%)

Triumph Funds Recommended by Staff: \$5,094,700

Score: B

ROI: \$11.50 per dollar of Triumph award

Economic Analysis and Score

The GCSC proposal seeks \$5,094,750 in TGC funding over a six-year period to deliver at least 763 industry certifications. This represents a cost of \$6,677 per cert awarded. This award represents 51 percent of total project costs of \$9,972,035.

The project will also update and keep current the emergency response teams across the eight disproportionately affected counties by: 1) acquiring a satellite mobile unit with all the support equipment (to serve as a communications source for present and future emergency needs of the region), and 2) to train and/or certify first responders, EOC personnel, public safety students from GCSC, as well as, volunteers on the use of this equipment, 3) ensure 723 participants take the applicable CAPE and/or Community Emergency Response Teams (CERT) courses and are employable, 4) maximize the potential of local drone companies that could provide coastal surveillance and minor rescue operations to individuals in risk of drowning throughout the panhandle (e.g. Life Guard), 5) continue to collaborate with FEMA and other regional partners in the development of the UVS DRT Pilot Program, and 6) to continue supporting research and development ventures such as Threat Trackers (a joint venture between the Naval Surface Warfare Center Panama City, GCSC, and military contractors using drone technology to support maritime and border security missions) 7) support and provide training to citizens in the community in the use of HAM Radio, FECD, and Pre/Post disaster safety training 8) continue to provide and sustain the FEMA Business Continuity training to the community.

The cost of \$6,677 per cert awarded is high by Triumph standards. However, the Triumph statute clearly envisioned the possibility of funding “grants to local governments in the disproportionately affected counties to establish and maintain equipment and trained personnel for local action plans of response to respond to disasters, such as plans created for the Coastal Impacts Assistance Program.” While GCSC is not a local government, the potential availability of the proposed equipment to be purchased by GCSC to support the program may have value for delivering the envisioned emergency services as well as the training that is described. Further, the Skyborne Technology match contribution of the SA-70 airship and equipment, listed in

budget documents at \$2,375,00 may represent a conservative estimate of the value of this match given current market pricing (Skyborne owns some of the technology outright).

A 2019 study by the MITRE Corporation uses several alternative methods to assess the value of equipment delivered using FEMA funding. The present project shares some of those characteristics. Subject matter experts assessed the monetary value of these investments when measured against standards of reduced risk of lives lost, of injuries, of time without necessities, or property damages, and of business losses, as well as quality of life. After weighting these categories, the study found an overall relative change in benefits of 5.4 percent from the model baseline in an application to 16 Florida counties, but that variance in the valuation of components driving this change was large and meant that a positive ROI could not be definitively associated with the FEMA spending. MITRE found similarly inconclusive results in applying revealed preference techniques and in applying breakeven analysis to examine the benefits to emergency preparedness spending.

The high cost per cert drives a relatively modest estimated increment to regional family incomes of \$11.50 per dollar of Triumph award. For these reasons, staff score the project as a “B.” However the Board might wish to place a high value on the presence of this equipment in the community, and to recognize the conservative values used in evaluating Skyborne match, yielding a benefit to the project above and beyond the value conveyed by the industry certifications.

Project Summary (based on information provided by the applicant)

Gulf Coast State College, Gulf/Franklin Campus is requesting a Triumph Gulf Coast grant of \$5,094,750 for the expansion of the Gulf Regional Training Center for Emergency Satellite Communications, Geospatial Intelligence, & Unmanned Vehicles in Emergency Response. The project will enhance the ability for the eight county region to respond to natural disasters and emergencies. Program participants will gain a minimum of 763 industry certifications allowing them to assist search and rescue, first responders and residents impacted by a disaster including utilizing a mobile emergency satellite communications center and UAV technology.

Following Hurricane Michael in October 2018, the region’s emergency operations were confronted with: 1) inadequate and/or offline satellite communications to allow first responders to respond to the immediate needs and problems of the community, 2) limited geographic information systems mapping and modeling using aerial assets to support the search and rescue efforts by ascertaining the terrain, 3) lack of trained officials with certification and skills to perform land, air and water recognizance missions using drones, 4) lack of data collection, mapping and 3D modeling of essential sites, 5) loss of valuable time to serve the immediate needs of those residents in critical conditions, and 6) lack of underwater searching and mapping equipment and trained personnel to aid in the search for casualties.

The GCSC Unmanned Vehicle Systems (UVS) program emergency response team, formed by program faculty and students, was able to organize an Unmanned Aerial Systems (UAS) drone section within the aviation branch of the Bay County Emergency Operations Center (EOC) to begin recognizance flight missions to collect data, mapping, and 3D modeling of essential sites

identified by the Bay and surrounding counties' EOCs. Unfortunately, the UVS program has no side sonar imaging capabilities and was unable to identify the location of casualties trapped in the debris of the channels surrounding Mexico Beach. Other concerns were the need to support drone missions to ascertain the terrain by performing flights beyond the visual line of sight (BVLOS) and the need to have a mobile communications center with radar technology to monitor the critical airspace during the crisis. Ensuring drones are connected, identified, and managed makes the airspace safer for drones, aircraft, and the people below them.

This proposal seeks to address obstacles faced after Hurricane Michael. The project will support the emergency response needs for EOCs, first responders, and volunteers in the eight disproportionately affected counties. Based on the identified need for individuals with enhanced Communication and UVS skills, Gulf Coast State College and educational, economic, and military partners determined that it was essential to train professionals in the region to become the next generation of certified professionals capable of responding effectively, efficiently, and promptly to any man-made or natural emergency before, during, and after a disaster.

The program will achieve the following identified goals: 1) acquire a satellite mobile unit with all the support equipment to serve as a communications center for present and future emergency needs of the region, and 2) train and/or certify first responders, EOC personnel, public safety students from GCSC, as well as, volunteers on the use of this equipment, 3) ensure 763 participants take the CAPE CERT courses and are certified, 4) maximize the potential of local drone companies that could provide coastal surveillance and minor rescue operations to individuals in risk of drowning throughout the panhandle (e.g. Life Guard Mas), 5) continue to collaborate with FEMA and other regional partners in the development of the UVS DRT Pilot Program, and 6) continue supporting research and development ventures such as Threat Trackers (a joint venture between the Naval Surface Warfare Center Panama City, GCSC, and military contractors using drone technology to provide maritime and border security missions.) Additionally, the program will support and provide training to citizens in the community in the use of HAM Radio, FECD, and Pre/Post disaster safety training and continue to provide FEMA Business Continuity training to the community.

Program participants will be trained in the use of emergency geospatial equipment to form teams to support future search, rescue, and recovery efforts. The emergency geospatial response teams (EGRTs) will be developed as a way of providing geographical information services (GIS) and remotely sensed data to any mutual response for large scale events, as well as, back-up satellite communication solutions. The EGRTs will be trained to work as a unit using the mobile satellite communications center for regional responses during different case scenarios. The EGRTs could be deployed during and natural or man-made disaster that would create an emergency.

During the implementation of the six year project, key staff will: 1) acquire and make available one mobile satellite communications unit with all the support equipment and resources to serve as a communication, and logistical mobile center for future air, land, and water emergency missions during or after manmade or natural disasters, 2) provide updated and ongoing basic, intermediate, and advanced emergency communication, UVS, FAA training, and CAPE Industry Certifications to emergency personnel from the eight Triumph counties and 3) encourage high school students to enroll and complete a high demanding Science, Technology, Engineering and

Mathematics (STEM) education program that is career essential to meeting state and national professional development and public safety workforce needs by pursuing an AS degree 4) encourage/recruit middle school students in participating in the FEMA Student Tools for Emergency Planning (STEP) summer camps and high school students to participate in the FEMA Teen CERT program complementing their education with additional emergency certificates 5) continue to provide and sustain the FEMA training programs for Business Continuity, Student Tools for Emergency Planning (STEP), and Teen CERT (Community Emergency Response Teams).

The proposal will promote transformational economic opportunities by continuing to develop a professional workforce with emergency/disaster skills using satellite communications systems and unmanned vehicle systems (UVS) to save lives. During emergencies, disasters, accidents or possible terrorist acts, the college would assist local first responders by providing the mobile satellite communications center and trained staff. For those first responders, as well as mutual aid volunteers coming from other areas of the country to assist in the recovery efforts, the project would provide updated information and procedures so they can properly assist in the recovery efforts.

The Gulf Regional Training Center for Emergency Satellite Communications, Geospatial Intelligence, & Unmanned Vehicles in Emergency Response will also become an asset that can serve local military partners in emergency and non-emergency situations, as requested, for live video and communications support.

The project aspires to support the region's economic development by identifying and recruiting the best industry talent essential to drive innovation and the creation of industry niches with high paying jobs to ensure the continuity of the project after year six. Other potential applications of drone technology (such as modifying land, air and water drones by integrating infrared technology and payload capabilities) can support future economic development niches as a result of the implementation of this grant.

Insurance companies relied heavily on UVS technology to assess Hurricane Michael damages and insurance losses estimated at \$6.65 billion. Rebuilding the infrastructure and ensuring the security of the region will require highly skilled professionals in UVS and UAS to support careers available in agriculture, environmental safety, public safety, airport and port authority security and maintenance, Information Technology, Project Management, Insurance Adjusters, Autonomous Vehicles maintenance and repair. Drones are especially popular for dangerous or tedious tasks, such as monitoring fires, tracking spills or inspecting runways. According to the 2017 Northwest Florida Forward Strategy Report, these aerospace and defense clusters employ 1,865 and robotic and unmanned vehicles are expected to experience a significant growth in the upcoming years.

The program will be sustainable through training fees, deployment reimbursement, and research grants and after the first six years, through fee/registrations for the training, workshops and conferences provided. The project can invoice services rendered to FEMA and other organizations in need of these services in case of an emergency or for drone detection security coverage for large scale public events. Finally, the project will encourage individuals and other

industries to develop other applications and commercial niches to support the economic development of the region.

Project staff will continually collaborate with the Boards of County Commissioners of the eight counties and their staff to assess county vulnerabilities and needs so proactive measures can be taken to resolve these issues prior to their occurrence. These ongoing initiatives will strive to avoid or minimize the vulnerabilities identified and contribute to the safety of its residents.

As new technology is acquired, additional workshops, training, drills, conferences, and certifications will be provided. The College will update its continuing education program to revise existing courses and include additional topics as innovative procedures are developed. Special fees will be developed for such trainings, thus ensuring the continuity of the project after the funding period.

The project will support the existing Comprehensive Plan and Local Mitigation and Emergency Management Plans in the designated eight counties, by providing data and project support to assist each county in its economic development, life safety and security plans to improve residents' quality of life.

Funding and Budget (as provided by the applicant)

	Equipment	Salaries & Benefits	Materials & Supplies	Contractual, & GCSC Match	Total
Project Total					
2020-2021	7,215,765.00	201,400.00	2,500.00	140,000.00	7,559,665.00
2021-2022	150,000.00	201,400.00	15,250.00	140,000.00	506,650.00
2022-2023	125,000.00	212,920.00	15,250.00	160,000.00	513,170.00
2023-2024	100,000.00	212,920.00	15,250.00	160,000.00	488,170.00
2024-2025	75,000.00	224,440.00	15,250.00	160,000.00	474,690.00
2025-2026	50,000.00	224,440.00	15,250.00	140,000.00	429,690.00
	-	-	-	-	-
	-	-	-	-	-
Project Total	7,715,765.00	1,277,520.00	78,750.00	900,000.00	9,972,035.00
Triumph					
2020-2021	4,668,000.00	96,000.00	2,500.00	-	4,766,500.00
2021-2022	-	96,000.00	15,250.00	-	111,250.00
2022-2023	-	48,000.00	15,250.00	20,000.00	83,250.00
2023-2024	-	48,000.00	15,250.00	20,000.00	83,250.00
2024-2025	-	-	15,250.00	20,000.00	35,250.00
2025-2026	-	-	15,250.00	-	15,250.00
	-	-	-	-	-
	-	-	-	-	-
Triumph Total	4,668,000.00	288,000.00	78,750.00	60,000.00	5,094,750.00
Grantee					
2020-2021	-	105,400.00	-	140,000.00	245,400.00
2021-2022	-	105,400.00	-	140,000.00	245,400.00
2022-2023	-	164,920.00	-	140,000.00	304,920.00
2023-2024	-	164,920.00	-	140,000.00	304,920.00
2024-2025	-	224,440.00	-	140,000.00	364,440.00
2025-2026	-	224,440.00	-	140,000.00	364,440.00
	-	-	-	-	-
	-	-	-	-	-
Grantee Total	-	989,520.00	-	840,000.00	1,829,520.00
GCSC UVS Program Match					
2020-2021	172,765.00	-	-	-	172,765.00
2021-2022	150,000.00	-	-	-	150,000.00
2022-2023	125,000.00	-	-	-	125,000.00
2023-2024	100,000.00	-	-	-	100,000.00
2024-2025	75,000.00	-	-	-	75,000.00
2025-2026	50,000.00	-	-	-	50,000.00
	-	-	-	-	-
	-	-	-	-	-
Match Source 1 Total	672,765.00	-	-	-	672,765.00
SKYBORNE Technology					
2020-2021	2,375,000.00	-	-	-	2,375,000.00
2021-2022	-	-	-	-	-
2022-2023	-	-	-	-	-
2023-2024	-	-	-	-	-
2024-2025	-	-	-	-	-
2025-2026	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Match Source 2 Total	2,375,000.00	-	-	-	2,375,000.00