

STEMWERX Mobile STEM Lab

TRIUMPH GULF COAST, INC. PRE-APPLICATION FORM

Triumph Gulf Coast, Inc. (“Triumph Gulf Coast”) has created a pre-application process to provide initial consideration of eligibility for potential ideas of projects or programs that may seek an award of funding. Applicants are required to participate in the pre-application process. Notwithstanding the response from Triumph Gulf Coast on the pre-application form, an Applicant may still elect to submit an Application.

APPLICANT INFORMATION

Name of Individual/Entity/Organization: **Hanning LLC DBA STEMWERX**

Proposal Title: **STEMWERX Mobile STEM Lab**

Amount of Triumph Funds Requested: **\$1,342,867.00**

Total Estimated Project Cost: **\$1,657,867.00**

Brief Description of Individual/Entity/Organization:

Primary Contact: **Beth Hanning**

Title: Technology & Education Director

Mailing Address: **323 Sharon Drive** City: **Niceville** State: **FL** Zip Code: **32578**

Telephone Number: **850-502-9837**

Email Address: partners@stemwerx.org | Website: <https://stemwerx.org>

Names of co-applicants, partners or other entities, organizations that will have a role in the proposed project or program:

Partners: University of West Florida, University of Florida, Northwest Florida State College, Air Force Research Lab Munitions Group, Eglin AFB, Okaloosa County School District, Hsu Education Foundation, Northwest Florida Manufacturing Council, Naneon LLC, JAM Marketing Partners (Jeff Andretti)

REQUIRED EXECUTIVE SUMMARY

In a maximum of two (2) pages, please describe the proposed project or program and anticipated outcomes including (i) the amount of funds being sought from Triumph Gulf Coast; (ii) the amount and identity of other sources of funds for the proposed project or program; (iii) the location of the project or program; (iv) summary description of the proposed program, including how the program will be transformational and promote economic recovery, diversification, and enhancement of the disproportionately affected counties, and (v) a summary timeline for the proposed project or program.

IMPORTANT NOTICE

This pre-application process will not result in an award of funding by Triumph Gulf Coast. Rather, this process is designed to facilitate submission of ideas for potential projects or programs before the Applicant expends time and/or resources to complete a full Application. All Applicants for funding are required to complete an Application, which will be reviewed and then considered for award at the discretion of Triumph Gulf Coast Board.

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Please Select the Proposal's Eligibility Category(s)

Pursuant to Section 288.8017, Triumph Gulf Coast, Inc. was created to make awards from available funds to projects or programs that meet the priorities for economic recovery, diversification, and enhancement of the disproportionately affected counties. The disproportionately affected counties are: Bay County, Escambia County, Franklin County, Gulf County, Okaloosa County, Santa Rosa County, Walton County, or Wakulla County. See, Section 288.08012.

1. From the choices below, please check the box that describes the purpose of the proposed project or program (check all that apply):

- ☐ Ad valorem tax rate reduction within disproportionately affected counties;
- ☐ Local match requirements of s. 288.0655 for projects in the disproportionately affected counties;
- ☐ Public infrastructure projects for construction, expansion, or maintenance which are shown to enhance economic recovery, diversification, and enhancement of the disproportionately affected counties;
- ☐ 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;
- ☒ Grants to support programs that prepare students for future occupations and careers at K-20 institutions that have campuses in the disproportionately affected counties. Eligible programs include those that increase students' technology skills and knowledge; encourage industry certifications; provide rigorous, alternative pathways for students to meet high school graduation requirements; strengthen career readiness initiatives; fund high-demand programs of emphasis at the bachelor's and master's level designated by the Board of Governors; and, similar to or the same as talent retention programs created by the Chancellor of the State University System and the Commission of Education, encourage students with interest or aptitude for science, technology, engineering, mathematics, and medical disciplines to pursue postsecondary education at a state university or a Florida College System institution within the disproportionately affected counties;
- ☒ Grants to support programs that provide participants in the disproportionately affected counties with transferable, sustainable workforce skills that are not confined to a single employer; and
- ☐ Grants to the tourism entity created under s. 288.1226 for the purpose of advertising and promoting tourism and Fresh From Florida, and grants to promote workforce and infrastructure, on behalf of all of the disproportionately affected counties.

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Please Select the Priorities this Proposal's Outcomes will Achieve

1. Please check the box if the proposed project or program will meet any of the following priorities (check all that apply):

- ☐ Generate maximum estimated economic benefits, based on tools and models not generally employed by economic input-output analyses, including cost-benefit, return-on-investment, or dynamic scoring techniques to determine how the long-term economic growth potential of the disproportionately affected counties may be enhanced by the investment.
- ☐ Increase household income in the disproportionately affected counties above national average household income.
- ☒ Leverage or further enhance key regional assets, including educational institutions, research facilities, and military bases.
- ☒ Partner with local governments to provide funds, infrastructure, land, or other assistance for the project.
- ☐ Benefit the environment, in addition to the economy.
- ☒ Provide outcome measures.
- ☒ Partner with K-20 educational institutions or school districts located within the disproportionately affected counties as of January 1, 2017.
- ☒ Are recommended by the board of county commissioners of the county in which the project or program will be located.
- ☒ Partner with convention and visitor bureaus, tourist development councils, or chambers of commerce located within the disproportionately affected counties.

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EXECUTIVE SUMMARY

- I. Overview
 - a. **Project Description:** Establish a mobile advanced and traditional manufacturing education program.
 - b. **Goal:** Provide inspiring Science, Technology, Engineering and Mathematics (STEM) educational opportunities with an auto racing theme nationwide, while promoting Northwest Florida educational opportunities and business opportunities.
 - c. **Strategic Initiatives**
 - i. 1.5.2 Create a directory of companies and volunteers who are willing to provide these opportunities to students to help career counselors, instructors, and students identify the opportunities more easily. Promote the database.
 1. Leverage the directory of companies and volunteers and promote the database at all STEMWERX events.
 - ii. 1.5.5 Work collaboratively with employers to target traditionally hard-to-reach populations such as minority youth and students in rural communities.
 1. STEMWERX mobile STEM Lab will travel to rural communities in Northwest Florida seeking out minority youth and students in rural communities and collaborating with participating companies to provide opportunities for placement in work-based learning and career exploration.
 - iii. 1.5.7 Recognize, celebrate, and reward businesses that are engaged in talent development/offering work-based learning opportunities.
 1. STEMWERX will publish and highlight businesses offering work-based learning opportunities and promote successes to parents and students through social media and STEMWERX events.
 - iv. 1.6.1 Work with education, workforce development, private sector, nonprofit, and economic development partners to expand STEM education and technical skills development program throughout the region.
 1. STEMWERX will use the mobile STEM lab to promote partners and pathways that expand Northwest Florida STEM education and technical skills development programs for K12s, college and technical program students throughout Northwest Florida by bringing hands-on labs in advanced and traditional manufacturing skills training to the students.
 - d. **Possible lead entities:** Northwest Florida Manufacturing Council, state colleges in Northwest Florida and/or technical colleges in Northwest Florida
 - e. **Benefits to the region:** Steering students toward education and careers in advanced and traditional manufacturing in Northwest Florida increases participation in current and future manufacturing skills training programs in the region. Students who learn advanced and traditional manufacturing in Northwest Florida will be inclined to stay in Northwest Florida increasing Northwest Florida's manufacturing capability, resulting in a stronger economy.
 - f. **Benefits to lead entities:** National recruitment of students for manufacturing education programs in Northwest Florida leads to increased enrollment in technology educational programs and strengthen the manufacturing workforce in the region.
- II. **Other sources of funding**
 - a. STEMWERX is pursuing at least \$315,000 from other sources over 3 years. In-kind participation and volunteer activity will contribute greatly to the success of the program. STEMWERX personnel are connected to several expansive networks of volunteers who are continuously pursuing volunteer opportunities.

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Entity	Purpose	2018	2019	2020
University of West Florida, University of Florida, Northwest Florida State College Regional technical colleges	Pursue and provide grant funding to create pilot curriculum for advanced manufacturing, and supply training equipment and materials for Career Technology Education teachers in Okaloosa County to be used in other counties in the region.	\$60,000	\$60,000	\$60,000
Air Force Research Lab Munitions Group, Eglin AFB	Provide funding to purchase transport trailer, equipment and branding.	\$15,000	\$25,000	\$25,000
Naneon, LLC	Provide funding for travel and advertising for national events.	\$25,000	\$25,000	\$20,000
Hsu Education Foundation	Non-profit partner to provide administrative support and program guidance along with industry introductions.	In-kind	In-kind	In-kind
Okaloosa County School District	Work with STEMWERX to create framework for pilot curriculum.	In-kind	In-kind	In-kind
Northwest Florida Manufacturing Council	Provide guidance and industry introductions.	In-kind	In-kind	In-kind
Florida Panhandle Technical College	Guidance on programs to deliver to rural school. Host workshops.	In-kind	In-kind	In-kind
Emerald Coast Technical College	Guidance on programs to deliver to rural school. Host workshops.	In-kind	In-kind	In-kind
JAM Marketing Partners (Jeff Andretti!!)	Provide program promotion and assistance with curriculum creation. Networking in auto racing industry for speakers and industry partners.	In-kind	In-kind	In-kind

III. Program location

- a. This national program promotes Northwest Florida educational opportunities and business opportunities to residents and non-residents of Florida. Local teacher workshops and student camps will occur in counties in the Northwest Florida Region. National mobile STEM events will take place at or in the vicinity of auto races such as Indy 500, Road Atlanta and Daytona 24.

IV. Regional Transformation

- b. STEMWERX personnel have been working with government, industry and academia for over 13 years to provide STEM education workshops, camps and innovative curriculum for teachers, K-12 students and college students. Northwest Florida's STEM educational programs have gained much momentum in the past 5 years, but we still have much to accomplish, especially in the rural areas. Teachers in rural areas want to provide hands-on projects for students that are inspiring and promote problem solving and critical thinking. STEMWERX is uniquely positioned to work with industry to provide state-of-the-art, educational standards-based curriculum and learning opportunities, while providing assistance to teachers to get their initial equipment running and ready for the classroom with online guides, lesson plans and student assessments. Additionally, our personnel have been working with paid high school and college interns for over four years. Internships are a valuable path to mentorships, skills training and responsibility not learned in a formal technical or college education. STEMWERX will work with industry and education entities to implement a national social media campaign to recruit students for manufacturing education programs in Northwest Florida, which will lead to increased enrollment in technology educational programs in our region and strengthen the manufacturing workforce in the region.

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Timeline and Financial Overview

I. Proposed Timeline

Month	Event	Purpose
June 2018	Robotics Student Camp (Pilot event)	Trial run of mobile robotic curriculum.
July 2018	3D Printing Student Camp (Pilot event)	Trial run of mobile 3D printing curriculum.
August 2018	CNC Student Camp (Pilot event)	Trial run of mobile CNC curriculum.
August 2018	Advanced Manufacturing Teachers Workshop (Pilot event)	Support Okaloosa County CTE teachers
September 2018	Teacher workshop at technical college	Bring STEM opportunities to rural counties
October 2018	Road Atlanta: Motul Petit Le Mans auto race	Mobile Lab pilot event, STEM workshops and come & go activities
November 2018	Advanced Manufacturing Teacher workshop at technical college	Bring STEM opportunities to rural counties
December 2018	Advanced Manufacturing Teachers Workshop	Support Okaloosa County CTE teachers
Proceeding months	National workshops, regional teacher workshops and student camp events	3 - 4 events per month starting in 2019

II. Triumph Gulf Coast Funding (3 years program)

Much of the funding in calendar year 2019 & 2020 will be granted to teachers who have attended STEMWERX workshops, gained permission from principals for incorporation into their classroom, successfully completed online training and passed initial knowledge, skills and safety assessments. Teachers will be used to purchase equipment such as 3D printers, robots and CNC machines.

- a. Total project cost: \$1,657,867
- b. Other funding: \$ 315,000
- c. Triumph funds requested: \$1,342,867

	CY 2018	CY 2019	CY 2020
Personnel	\$ 100,000	\$ 120,000	\$ 191,835
Travel	\$ 60,000	\$ 64,444	\$ 66,644
Equipment	\$ 48,702	\$ 211,200	\$ 209,200
Supplies & software	\$ 52,000	\$ 56,160	\$ 60,653
Contract Support	\$ 14,400	\$ 18,000	\$ 19,800
Other	\$ 15,000	\$ 16,200	\$ 18,630
	\$ 290,102	\$ 486,004	\$ 566,761
Triumph Request			\$ 1,342,867
Total Program			\$ 1,657,867