

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: DEFENSEWERX (DWX)

Proposal Title: Digital Engineering Center of Excellence

Amount of Triumph Funds Requested: \$20,000,000.00

Total Estimated Project Cost: \$20,000,000.00 + DWX In-Kind Donations & Funds Obtained from Additional Sources

Brief Description of Individual/Entity/Organization:

DEFENSEWERX (DWX) is a 501(c)(3) non-profit headquartered in Niceville, FL, that utilizes multiple Partnership Intermediary Agreements (PIAs) and other non-FAR based mechanisms to support innovation for our government partners. DWX is a leader of innovation in support of national security. DWX constructs and cultivates ecosystems that enable the agile discovery, development, and accelerated delivery of novel solutions to benefit our nation's objectives.

Contact Information

Primary Contact: Brian Liesveld

Title: Chief Executive Officer

Mailing Address: 1140 E. John Sims Pkwy. #1

City: Niceville

State: FL

Zip Code: 32578

Telephone Number: 850-226-4383

Email Address: bliesveld@defensewerx.org

Website: <https://defensewerx.org/>

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

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.

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.

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.

Triumph Grant Pre-Application:

DEFENSEWERX (DWX) requests \$20,000,000 in funding to create a Digital Engineering Center of Excellence (DigEn COE), whose goal is to establish a technically skilled workforce pipeline that will fuel Northwest Florida's heavily dependent military economy. A current and future DigEn workforce is needed not only support the local DoD installations but to also support private industry and local academia. Digital Engineering is a broad, multi-faceted endeavor currently in high demand with future growth certain to outpace other local industry sectors. For defense businesses to start, grow, and relocate in Northwest Florida competent talent pools and pipelines must exist. Currently, approximately \$19-24B DoD dollars are lost annually because this region cannot meet the digital engineering and manufacturing demands generated by its many military installations¹. A transformational shift is needed to meet the current digital engineering workforce demands and keep pace with projected growth in order to retain federal defense spending. DWX recognizes that DoD dependents, military spouses, and transitioning service members from Eglin Air Force Base, Hurlburt Field, and Tyndall Air Force Base are critical to overcoming this shortfall, and we need to provide opportunities for these individuals that reduce educational entry barriers.

The DigEn COE will provide supplemental educational opportunities in the field of digital engineering (including modeling and simulation, prototyping, and advanced manufacturing) and serve as an arbiter of relevant industry skillsets. These opportunities will enhance and influence the current academic offerings provided by local public/private/charter schools to ensure the growth of the region's key industry clusters, such as Aerospace, Defense, and Advanced Manufacturing. The associated programs will be available to grades 3 -12 beginning initially in Okaloosa and Bay Counties as early as 2023, and they will be expanded to surrounding disproportionately affected counties (Walton, Santa Rosa, and Escambia) in a phased manner over the next 12 years to attain sustainability. Starting in elementary schools and throughout middle school, DigEn COE will provide summer camps that add value to the current academic offerings within the region. These students will be partnered with high school and college students, affording them mentorship and guidance that imparts insight into the various curriculum and certification offerings available at the post-secondary and career levels. DigEn COE will be available to serve as a diversified career training/on-the-job training (DCT/OJT) program option for high school students looking to earn industry certifications and will provide academic dual-enrollment resources and assistance. In addition to earning industry-relevant certifications and college credits, high school students can earn community service hours as mentors and summer camp volunteers for the elementary and middle school population. Additionally, certification and training opportunities will be made available to post-secondary students, K-20 teachers, and other adults, with an emphasis on military spouses, transitioning service members, and veterans, in Okaloosa and Bay counties in 2023. Internship programs geared toward colleges and universities will position students to collectively engage in critical thinking and problem-solving relevant to the current defense industry priorities. Persistent outreach to military installations, including aggressive campaigns targeting military spouses and transitioning service members, will leverage DoD SkillBridge programs and VRRAP- Veteran Rapid Retraining Assistance Program. DWX will also sponsor security clearances to students directly contributing to real-world digital engineering, prototyping, and advanced manufacturing careers and facilitate connections with local companies paying high salaries. This dynamic environment will establish the next generation of independent critical thinkers with the ability to solve problems collaboratively and effectively communicate possible solutions.

The DigEn COE is at its core a workforce development program driven by DWX and focused on mentoring K-20 students and adults in industry-relevant pathways. DWX will provide opportunities to obtain high-value certifications and training in an effort to retain, attract, and grow defense professionals and meet the needs of employers currently located in or relocating/expanding in Northwest Florida. The effort will drive an increase in the median household income and strengthen the local tax base. In addition to enhancing educational opportunities in the Northwest Florida area, this one-of-a-kind center will provide the opportunity to:

1. Engage students in experiential learning with subject matter experts in the field and expose students to high-wage/high-demand careers through coursework and applied research projects.

¹ "Special Announcement! First TeCMEN Industry Day Panelists Revealed!" (One Okaloosa EDC, personal communication, 2022, March 10).

2. Develop autonomous learners who take ownership of their future educational and career paths.
3. Train students to enter their preferred workforce or continue college with highly sought-after analytical, soft, and technical skills.
4. Engage students in advanced coursework in the fields of engineering that would allow them to earn industry certifications and college credit aligned with local workforce demand.
5. Expand capacity for existing schools to immerse students in learning opportunities that would lead to successful employment and higher education opportunities.
6. Serve the areas growing military population with innovative curriculum choices while lowering education opportunity entry barriers.
7. Serve unemployed or underemployed military spouses and dependents, transitioning service members, and veterans by providing skill sets and connections to in-demand, high-salary careers.
8. Leverage existing networks (DoD, industry, and academic) across the state for curriculum and best practices.
9. Provide professional development and training opportunities for K-20 teachers relevant to in-demand careers.

To accomplish this end, DWX will partner with various stakeholders within Northwest Florida with a goal to focus on emerging workforce needs; this will allow the DigEn COE to be dynamic and address the changing workforce environment (see Appendix A for potential partners and their proposed roles, as well as DWX's efforts that correspond to these partners). The funding sought for this center will be used to renovate existing building infrastructure; purchase furniture, equipment, supplies, and instructional materials (such as curriculum, pre/practice tests, and study guides) necessary for educational programs and events; hire additional personnel; pay for certification administration. Additional funding sources/matching funds include \$462,574 in-kind matching from DWX in staffing to support IOC financial, operational, marketing, and strategy efforts. A National Defense Authorization Act funding request submitted through Rep. Matt Gaetz's office is under review for a full-matching, equitable amount to support parallel initiatives. DWX is in preliminary discussion with organizations such as Bank of America about foundational grants and is doing initial due diligence to identify other match funding pathways such as the Industry Resilience and Diversification Fund. DWX has also entered into a consultation agreement with the Northwest Florida Small Business Development Center and will consult with both the local Economic Development Offices and the Department of Economic Opportunity.

A total of 12,000 certifications will be earned over the 12-year implementation period. In Appendix B, 22 CAPE Digital Tool certifications relevant to digital engineering, prototyping, and advanced manufacturing have been identified as possible options for elementary and middle school students. Also, 69 relevant high school and post-secondary/adult CAPE Industry certification options have been identified. Many of these certifications provide basic demonstrations of digital competency (IC3 Digital Literacy and TOSA CyberCitizen) and produce a more employable person in any career field, while some certifications, like CompTIA, are foundational for IT professionals. Some of these certifications like Python and AWS Developer Associate boast starting salaries of \$81,000² to \$160,000³ respectively, or nearly three times the per capita income for Okaloosa County according to the US Census. Regardless of the career choice, certain certifications coupled with technical degrees increase technical competency and enhance the value of our workforce.

This center will serve as a nexus for DoD, industry, and academia collaboration that will facilitate critical thinking and problem-solving relevant to the current challenges faced by the defense industry. It will also offer an environment where industry-relevant digital engineering activities and events can take place. The DigEn COE will expose students to DoD and industry real-world applications of the high-demand digital engineering career pathways. By creating a technically skilled talent pipeline and a facility that is a beacon for collaboratively solving DoD technical challenges in state-of-the-art workspaces, businesses will be incentivized to relocate to Northwest Florida. The economic impact of the influx of new businesses will result in the creation of additional high-paying jobs in engineering and the retention and recruitment of the technically skilled workforce.

² ZipRecruiter. Entry Level Python Developer Salary. <https://www.ziprecruiter.com/Salaries/Entry-Level-Python-Developer-Salary>

³ Global Knowledge. 2021. How To Earn a Top-Paying AWS Certification & Salary. <https://www.globalknowledge.com/us-en/resources/resource-library/articles/how-to-earn-a-top-paying-aws-certification-salary/#gref>

Appendix A:

<i>Potential Partners</i>	<i>Proposed Roles</i>
Okaloosa and Bay County School Districts, Charter Schools, and Private Schools	<p>Provide curriculum offerings that align to digital engineering, prototyping, and advanced manufacturing with certification pathways; market DigEn COE programs to relevant audiences; offer opportunities for high school students to complete on-the-job training, internships, and community service at DWX DigEn COE.</p> <p>DWX- Extend best practices to schools; provide educational opportunities (such as summer camps, work-based learning programs, career exploration programs) to the students; provide professional development opportunities for teachers to acquire new skill sets through certification (to include funding for substitute teachers).</p>
Local Post-Secondary Educational Institutions (e.g. UF REEF, UWF, NWFSC, FSU-PC, GCSC)	<p>Addition of digital engineering courses/specializations to current curriculum pathways; certification development; provide dual-enrollment coursework offerings for high school students.</p> <p>DWX- Provide opportunities for in-demand internships and job placement; facilitate collaborative problem-solving activities with DoD and industry professionals; increase opportunities for research funding; offer high-value certification pathways.</p>
NWFL Military Installations (Eglin Air Force Base including AFRL, Hurlburt Field, Tyndall Air Force Base)	<p>Serve as mentors; host interns; provide problem-sets; provide scientist and engineer points of contact; drive curriculum/certification pathway decisions.</p> <p>DWX- Program outreach and admission preference given to military dependents and spouses, transitioning service members, and veterans; coordinate intern placement and mentor-mentee matching.</p>
NWFL Industry	<p>Serve as mentors; host interns; provide problem-sets; provide subject matter expert points of contact; drive curriculum/certification pathway decisions.</p> <p>DWX- Provide current workforce professional development and certification pathway offerings; coordinate intern placement and mentor-mentee matching; provide the opportunity for industry to shape the talent pool from which they will draw hires.</p>
Non-profits (e.g. National Center for Simulation, Florida's Great Northwest, TeCMEN, ONE Okaloosa EDC, Enterprise Florida, Veterans Florida)	<p>For example, a partnership with the National Center for Simulation will provide a modeling and simulation certification curriculum and create exposure for the program into the established Orlando network facilitating a crossflow of resources and talent across the state.</p> <p>For example, the Veterans Florida Workforce Training Grant reimburses qualified employers 50% of industry skills-based training costs for new or current employees. This grant helps your business keep up with industry trends and reach your goals faster.</p>

Appendix B:

<i>Elementary & Middle School Certifications</i>	<i>High School & Post-Secondary/Adult Certifications</i>
<p>CAPE Digital Tool Certifications</p> <ul style="list-style-type: none"> • IC3 Digital Literacy (L1-L3) • IC3- Spark, Computing Fundamentals, Key Applications, and Living Online • Rapid Prototyping & 3D Design Beginner • Python Coding Apprentice • TOSA DigComp and CyberCitizen • Coding in Minecraft • ICT- Database Essentials, Gaming Essentials, Programming & Logic Essentials, WebDesign Essentials, Communications Essentials, Computing Essentials, Cybersecurity Essentials, Fundamentals, and Digital Citizenship & Ethics 	<p>CAPE Industry Certifications</p> <ul style="list-style-type: none"> • Autodesk- AutoCAD, Inventor, Maya, 3dsMax, Fusion 360, CAD for Mechanical Design, and CAM 2.5 Axis Milling for Machinists • Mechanical Drafter • Apple App Development with Swift • CompTIA- A+, Linux+, Network+, Security+, Server+, Cybersecurity Analyst, IT Fundamentals+, and Cloud Essentials+ • Engineering Core • EC-Council- Cyber Forensics and Ethical Hacker • Linux Essentials 010 • Microsoft Technology Associate- Database Administration Fundamentals, Software Development Fundamentals, Windows OS Fundamentals, Security Fundamentals, Networking Fundamentals, HTML5 Application Developer Fundamentals, Mobility & Devices Fundamentals, Introduction to Programming Using JavaScript, Introduction to Programming Using HTML & CSS, Introduction to Programming Using Python, Introduction to Programming Using Java, and Windows Server Administration Fundamentals • Microsoft Certified- 365 Fundamentals, Azure AI Fundamentals, Azure Data Fundamentals, Azure Fundamentals, and Power Platform Fundamentals • NIMS Machining Level I- CNC Turning and Milling (Programming Setup and Operations), CNC Turning (Turning Between Centers and Turning Chucking Skills), Drill Press Skills, Grinding Skills, and Manual Milling • PCAP Certified Associate in Python Programmer • PMI Project Management Ready • Oracle Certified Associate/Professional Java Programmer • Certified Internet Web- Database Design Specialist, JavaScript Specialist, Web Security Associate, Advanced HTML5 & CSS3 Specialist, and Data Analyst Specialist • RECR- Pre-Engineering and Robotics • SolidWorks- Associate and Professional • Unity- Certified Associate, Certified User: Programmer, Certified User: Artist, and Certified User: VR Developer <p>Additional Certification Options (Non-CAPE)</p> <ul style="list-style-type: none"> • AWS Certified Developer Associate Certification • AWS Certified Solutions Architect Certification • Cameo Enterprise Architecture/Simulation Certification • Google Certified Professional Cloud Architect Certification • MagicDraw MBSE Certification • MATLAB Certification • National Center for Simulation- Modeling and Simulation Certification • Project Management Professional (PMP) Certification • ScrumMaster Certification • Simulink MBSE Certification • Tableau Data Analytics Certification

Highest Paying IT Certifications: highlighted in yellow. ⁴

FLDOE CAPE Industry Certifications Pass Rates by Certification – 2020-21: statewide pass rates greater than 70% are highlighted in green. ⁵

⁴ Highest Paying IT Certifications

<https://www.indeed.com/career-advice/finding-a-job/highest-paying-it-certifications>

⁵ Industry Certifications Pass Rates by Certification – 2020-21

<https://www.fldoe.org/academics/career-adult-edu/research-evaluation/cape-industry-certification.stml>