

Triumph Gulf Coast, Inc. Application for Funds

University of West Florida
Watercraft and Vessel Engineering (WAVE)

8/8/24

Applicant Information

Name of Entity/Organization: University of West Florida

Background of Applicant Individual/Entity/Organization: The University of West Florida is a member of the State University System of Florida with over 13,000 students and 110 degree programs. The University of West Florida has 1,600 acres of campus headquartered in Pensacola, with campuses in Fort Walton Beach and downtown Pensacola. The University is ranked #15 in "Best Regional Universities in the South" by U.S. News and World Report.

Federal Employer Identification Number: 59-1151736

Contact Information:

Primary Contact Information: Dr. Michael Reynolds

Title: Associate Professor and Chair, Mechanical Engineering

Mailing Address: 11000 University Parkway
Pensacola, FL 32514

Phone: (850) 474-2977

Email: mreynolds2@uwf.edu

Website: www.uwf.edu

Identify any co-applicants, partners, or other entities or organizations that will have a role in the proposed project or program and such partners proposed roles.

New York Yacht Club (American Magic) – WAVE will partner with American Magic in research, development, and educational outreach. WAVE will support American Magic’s continued research and development in the high-performance watercraft space while also pursuing external research funding. More details are provided in the project description.

The University of West Florida has several entities that will partner together to support this program. These include Mechanical Engineering, Electrical and Computer Engineering, the Center for Environmental Diagnostics and Bioremediation, Movement Sciences and Health, and the Haas Center’s SEA 3D Lab. The departments and interdisciplinary centers listed will partner for research and grant activities as well as support student learning in science and technology related to watercraft and water resources.

Total amount of funding requested from Triumph GulfCoast: \$3,320,000

Has the applicant in the past requested or applied for funds for all or part of the proposed project/program?

Yes No

In a separate attachment, please provide financial statements or information that details the financial status of the applicant and any co-applicants or partners.

The University of West Florida maintains financial statements on this public website:
<https://uwf.edu/finance-and-administration/departments/controllers-office/financial-statements/>

Has the applicant or any co-applicants, partners or any associated or affiliated entities or individuals filed for bankruptcy in the last ten (10) years?

Yes No

Eligibility

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.

2. Provide the title and a detailed description of the proposed project or program, including the location of the proposed project or program, a detailed description of, and quantitative evidence demonstrating how the proposed project or program will promote economic recovery, diversification, and enhancement of the disproportionately affected counties, a proposed timeline for the proposed project or program, and the disproportionately affected counties that will be impacted by the proposed project or program.

Title: UWF Water and Vessel Engineering (WAVE)

The University of West Florida (UWF) proposes to establish a new center for Water and Vessel Engineering located primarily at the Port of Pensacola, but with additional space on the UWF Pensacola campus. WAVE will enhance the economic value of Pensacola as a magnet for new industries related to watercraft. It will serve as a research and development center for vessel engineering and related fields by connecting UWF faculty with organizations such as the American Magic. WAVE will leverage existing UWF expertise in material science, computational fluid dynamics, human performance, non-destructive material evaluation, design for manufacturability, control systems, data science, as well as other related fields. WAVE will also serve to connect UWF engineering and technology students to watercraft industries in Escambia County as well as other coastal counties in Northwest Florida. UWF has an existing project-based mechanical engineering curriculum that enables UWF students to learn practical skills. The proposed effort with American Magic will provide a new focus area, that is R&D for watercraft and vessel manufacturing.

Enhancing the Value of Pensacola

The University of West Florida has an existing space at the Port of Pensacola where students and faculty work on engineering projects, many of which have local industry support. One objective of this proposal is to greatly enhance this space to better serve students, faculty and local companies and organizations. UWF funds will be used to triple the size of this space from approximately 5,000 square feet to 15,000 square feet. The additional space will be utilized to add the requested equipment and office space that supports research and development in WAVE. Some equipment that will be added includes added computational power for things such as computational fluid dynamics and dynamic system modeling, metrology equipment to ensure that items design and manufactured meet dimensional tolerances, equipment for composite material manufacturing and testing, a five-axis CNC to enhance the part making capabilities, and equipment related to structural and hydroacoustic measurement. The space at the Port of Pensacola will also assist American Magic and other Northwest Florida companies in testing, prototype development, small volume part production, and other contract work. UWF already assists the Institute for Human and Machine Cognition (IHMC) in Pensacola as well as other small companies in prototype development and materials testing. The added space, personnel and equipment will assist many other industries, particularly watercraft industries, in needed research and development.

The permanent arrival of American Magic to Pensacola has the potential to be transformative to regional economic development. American Magic's arrival has attracted many WAVE related industries to look at Pensacola. One hydrofoiling industry leader, Foiling Week, chose Pensacola to be the next location of its annual global conference in February 2025. Several watercraft companies have recently considered establishing a presence in Pensacola. The WAVE center would be highly attractive to potential companies who wish to synergize with industry leaders such as American Magic, recruit a skilled workforce, and access R&D equipment and knowledge in a convenient location on Pensacola Bay. WAVE will include a facility to support the production of custom

assemblies and unique hull designs required for the development of technologically advanced sailing vessels and high-speed watercraft. The WAVE team will support the design of new sail configurations, foils, and hulls made from sustainably sourced materials. This proposal will also provide leasable office space within WAVE to attract area industries. The office space will enable start-up and existing companies to work directly with UWF students and faculty on projects, prototype development, material testing, computational analysis, and other related tasks.

A catalyst for research at the University of West Florida

The requested funds will support one coordinator who will connect existing UWF faculty and students to WAVE industries while also seeking external funding. The Mechanical Engineering faculty at UWF currently have experts in computational fluid dynamics, composite materials, non-destructive material evaluation, and design for manufacturing. The added space, equipment, collaboration with American Magic, and personnel will greatly enhance the prospects for external funding. The Mechanical Engineering Department has secured over one million dollars in external funding over the past six years. This proposal would more than double the research space for the Mechanical Engineering department while also including other departments such as Electrical and Computer Engineering. The WAVE facility will combine the current research and development support structure at UWF (e.g. computational software, machining centers, nondestructive testing equipment) with new equipment that will support composite material research, the development of efficient and low-emission foiling boats, reduced corrosion in metal hull material, as well as other research and development projects related to WAVE. It is expected that WAVE will be a catalyst for grant activity with agencies such as National Science Foundation, Office of Naval Research, Air Force Research Labs, and Small Business Technology Transfer. The UWF Mechanical Engineering Department has received several contracts for applied research from Florida companies in the past five years. It is expected that we will leverage the equipment and knowledge of UWF faculty and staff in applied industry sponsored research as well. The requested support for graduate students will be critical in enhancing opportunities for our current students to pursue research at the graduate level. We expect that the added research, personnel and equipment will greatly increase research expenditures in the next ten years.

Preparing UWF students for careers in WAVE

The University of West Florida has over 700 students in engineering majors (Computer, Electrical and Mechanical Engineering as well as Engineering Technology) as of fall 2023. More than 56 percent of UWF students come from Northwest Florida, and UWF students reflect the region's socioeconomic characteristics. In 2017, 35 percent of incoming students qualified for Pell grants (compared with 32 percent nationally) and over 30 percent of UWF students come from traditionally underrepresented race and ethnicities. Engineering students at UWF are often more engaged in hands-on projects than students in most other universities. The Enterprise Program at UWF is a unique interdisciplinary program that facilitates project-based learning for sophomores, juniors and seniors in engineering. Students work in teams to design and build projects that are often industry sponsored. The proposed WAVE initiative will enhance the engineering student experience in several ways. One, it will be a point where more students can engage in industry sponsored projects related to WAVE. The UWF Mechanical Engineering Department already has space for student projects at the Port of Pensacola. This WAVE proposal would allow our students to work alongside partner companies which include American Magic. Second, WAVE will facilitate opportunities for UWF students to work as interns and in full time positions in related industries. Third, it will allow UWF undergraduate and graduate students to work in research positions that

emerge from WAVE. All of these opportunities will enhance the skills and experience of UWF engineering students as well as provide needed talent to new and existing companies in Northwest Florida. Forth, UWF will offer students the opportunity to earn the Marine Composites Certification by The American Boat & Yacht Council. This certification will help UWF students secure employment with watercraft industries and add additional knowledge and economic value to student interns.

Contributing to the Success of American Magic

Securing Pensacola as the home for American Magic was a big accomplishment for Northwest Florida. It is critical that a research and development infrastructure is established to support American Magic. Terry Hutchinson, President of Sailing Operations for American Magic, has written a letter of support for this proposal that is attached to this document. In the letter Terry has established key areas of needed support. This WAVE proposal can support all the areas cited: structural engineering, mechatronics, hydraulics, aerodynamics, and hydrodynamics. UWF engineering faculty have expertise in each of those areas and the coordinator and students will work with our faculty on applied research and development. This collaboration is a win for all participants and is a key part of the future success of American Magic.

3. Explain how the proposed project or program is considered transformational and how it will effect the disproportionately affected counties in the next ten (10) years.

The arrival of American Magic in 2025 will be transformational to Northwest Florida and specifically Escambia County. American Magic is a world leader in watercraft innovation and will serve as a magnet to other similar companies. As mentioned earlier, the selection of Pensacola as the location for the international Foiling Week exposition is another big win for the region. Several companies have already looked at Pensacola for future expansion and collaboration. It is critical that Northwest Florida have a support structure that encourages businesses to move here. Startups and existing companies frequently cite the need for strong university level engineering programs to provide technical support as well as future employees. WAVE will be both an innovation hub as well as a place that develops future experts in watercraft and vessel engineering. Without WAVE we risk not being able leverage the incredible opportunity that the arrival of American Magic brings to the region. UWF engineering has experienced incredible growth in the past ten years and stands ready to support all areas of research and development.

4. Describe data or information available to demonstrate the viability of the proposed project or program.

UWF has a strong track record of obtaining federal and state funding. The Mechanical Engineering (ME) department received over one million in external funding in the first seven years of its existence. Both engineering departments at UWF (ECE and ME) have frequently partnered with companies and start ups in Northwest Florida. UWF Engineering has over 700 students and 18 full-time faculty. The UWF Mechanical Engineering department already has 4,500 square feet of space at the Port of Pensacola which would be expanded under this proposal. UWF already performs contract work in 3D printing, machine design and CNC prototype development for various companies in Northwest Florida.

5. Describe how the impacts to the disproportionately affected counties will be measured long term.

WAVE related industries will span the 8 disproportionately affected counties in Northwest Florida. The program manager and the UWF Office of Research will track research spending metrics and measure student participation by county as well as industrial participation by county. The specific deliverables on pages 11 and 14. The UWF Haas Center will provide an annual summary of the economic impact of WAVE expenditures to UWF Research.

6. Describe how the proposed project or program is sustainable. (Note: Sustainable means how the proposed project or program will remain financially viable and continue to perform in the long-term after Triumph Gulf Coast, Inc. funding.)

Triumph funds will be used to support the program for five years. UWF will support the endeavor starting in year six with funds generated from other sources, including contract work as well as external funding that may come from the EDA or NSF.

7. Describe how the deliverables for the proposed project or program will be measured.

The UWF Office of Research Administration and Engagement will track and report to Triumph Gulf Coast on the following metrics:

Performance Metric #1

\$10,043,000 in total project revenue is derived from numerous sources:

- State and national funding obtained by agencies such as the Office of Naval Research, Air Force Research Lab, National Science Foundation, and other external funding sources expands and diversifies R&D expenditures in the disproportionately affected counties
- Rental income will be derived from WAVE Accelerator tenants that include companies and startups in our facility at the Port of Pensacola. WAVE Accelerator companies access computational tools, machine tools, and work alongside UWF faculty and students on projects.
- Contracts completed from related industries for prototype production, small-volume parts manufacture, material testing, design simulation, experimental design, and testing supports local small businesses and furthers the development of a specialized cluster of

Performance Metric #2

175 individual students complete composite certificates across the 10-year period of performance. Once students earn certification, they become eligible to work in boat manufacturing or other related jobs at aerospace firms

Performance Metric #3

490 net new engineering and technology students earn degrees and enter engineering, technology and manufacturing jobs in Northwest Florida. Graduates with degree in engineering are among the most sought-after employees in the disproportionately affected counties. Our students will graduate with hands-on skills in manufacturing, non-destructive testing, and composites. These are transferable skills that will serve them in the targeted industry sectors identified for the project.

Performance Metric #4

At least three new watercraft and vessel manufacturing and/or engineering companies will be established and/or recruited to the disproportionately affected counties in Northwest Florida. Such companies will contribute 30 new jobs to the region's economy.

Performance Metric #5

In addition to the 10 new UWF jobs in R&D, the total research expenditures of \$14,295,000 may add 32 indirect (B2B) jobs across the 10-year period of performance. The direct and indirect employment has the potential to support another 44 jobs in the community as spending on the project stimulates unrelated expenditures around the region.

Examples of these jobs include nurses and teachers added to the payroll of a local hospital and school district. Altogether, UWF expects the new research project to add 86 jobs that are part of the modest economic impact of \$27,628,961.

Priorities

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.

2. Please explain how the proposed project meets the priorities identified above.

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.

Beyond the immediate economic implications, WAVE's scope of work spans unique business sectors ranging from scientific research to materials science in composites. Investments towards technological innovation in watercraft and vessel engineering extends to the next generation, potentially leading to career pathways that might otherwise remain inaccessible to residents of the 8 disproportionately affected counties of Triumph Gulf Coast (TGC). While traditional economic assessment quantifies significant impacts, it is not designed to capture the societal influence of research endeavors such as WAVE. The project will generate tangible economic benefits by attracting new dollars and new researchers that will leverage and enhance unique regional assets, like Pensacola Bay, to ensure the success and sustainability of the program. Other key project assets include the university's scientific and student resources, as well as operational infrastructure. We propose new research, but we are not a startup organization. Moreover, this project directly benefits maritime

industries but also enhances research in lightweight composites that will benefit Northwest Florida's large regional military aviation footprint and DOD contractors. Existing momentum from American Magic will amplify the success of partner organizations that include American Magic, Port of Pensacola, FP&L, Mercury Marine, Oceana, Fabro Marine (Cape Horn Boats), National Energy, the IHMC, and the City of Pensacola.

An Implan economic impact model run by UWF researchers predicts that personal income (aka labor income) will increase by \$13,170,512 over a 10-year period of performance. A Triumph Gulf Coast investment of \$3,320,000 may provide a gain of \$9,850,512. More broadly, the total cost of the project, \$14,295,000, will elevate expenditures in technology and talent. Such expenditures will likely result in a total economic output of \$27,628,961.

Increase household income in the disproportionately affected counties above national average household income

For those earning an engineering degree, and for those individuals working on the WAVE project, household incomes will outperform the average household income. The payroll spending over the 10-year period of performance equals \$6,847,000. The average salary and fringe ranges between \$105,000 and \$112,000. The advertised salary of an Engineering Technician is about \$74,000 per year according to the 'Job Posting Analytics' report in *Lightcast* (Aug 24 -June 24). The median income of a Marine Engineer is \$109,813 per year as published by the Quarterly Census of Employed Workers (Q3 2024 Dataset).

Leverage or further enhance key regional assets, including educational institutions, research facilities, and military bases.

The University of West Florida faculty, students, and staff will play a major role in developing a cluster of experts who are working with the public and private sector. This will enable partners like FP&L to recruit new businesses in the targeted industries: Transportation Equipment Manufacturing (NAICS 336) and Professional, Scientific and Technical Services (NAICS 54)

Partner with local governments to provide funds, infrastructure, land, or other assistance for the project.

This proposal partners with the City of Pensacola and the Port of Pensacola. UWF will have a long-term rental agreement with the City of Pensacola to secure the needed space for the project. However, no local government assistance is anticipated at the onset of the project.

Provide outcome measures.

Performance Metric #1

\$10,043,000 in total project revenue is derived from numerous sources:

- State and national funding obtained by agencies such as the Office of Naval Research, Air Force Research Lab, National Science Foundation, and other

external funding sources expands and diversifies R&D expenditures in the disproportionately affected counties

- Rental income will be derived from WAVE Accelerator tenants that include companies and startups in our facility at the Port of Pensacola. WAVE Accelerator companies access computational tools, machine tools, and work alongside UWF faculty and students on projects.
- Contracts completed from related industries for prototype production, small-volume parts manufacture, material testing, design simulation, experimental design, and testing supports local small businesses and furthers the development of a specialized cluster of

Performance Metric #2

175 individual students complete composite certificates across the 10-year period of performance. Once students earn certification, they become eligible to work in boat manufacturing or other related jobs at aerospace firms

Performance Metric #3

490 net new engineering and technology students earn degrees and enter engineering, technology and manufacturing jobs in Northwest Florida. Graduates with degree in engineering are among the most sought-after employees in the disproportionately affected counties. Our students will graduate with hands-on skills in manufacturing, non-destructive testing, and composites. These are transferable skills that will serve them in the targeted industry sectors identified for the project.

Performance Metric #4

At least three new watercraft and vessel manufacturing and/or engineering companies will be established and/or recruited to the disproportionately affected counties in Northwest Florida. Such companies will contribute approximately 30 new (direct) jobs to the region's economy. We can imagine a scenario where manufacturing companies assemble large composite vessels anywhere in the 8 -counties, with some portion of the R&D performed by UWF at the Port.

Performance Metric #5

In addition to the 10 new UWF jobs in R&D, the total investment of \$14,295,000 is projected to add 32 indirect (aka B2B) jobs across the 10-year period of performance. The direct and indirect employment has the potential to support additional jobs in the community as spending on the project stimulates new and unrelated spending in the local economy. Examples of these jobs include new nurses and teachers added to the payroll of a local hospital and school district. Altogether, UWF expects the new research endeavor to add 86 jobs that are part of the modest economic impact of \$27,628,961.

3. Please explain how the proposed project or program meets the discretionary priorities identified by the Board.

As shown on the previous page, this proposal aligns with five of the discretional

priorities identified by the Board. The arrival of American Magic to Pensacola has brought great interest in economic development around foil technology, yacht racing and composite manufacturing. This proposal would create a bridge to leverage the high-value cutting-edge research and development that will occur at the Port of Pensacola. WAVE's bridge connects companies in research and development as well as pursuing external grants and contracts. The creation of such a space will be highly attractive to both new and existing companies in the broad watercraft sphere. The University assets (faculty, undergraduate students, graduate students, specialized equipment, R&D, and recruitment) will be harnessed to produce both economic impact and student/workforce development.

4. In which of the eight disproportionately affected county/counties is the proposed project or program located? (Circle all that apply)

Escambia Santa Rosa Okaloosa Walton Bay Gulf Franklin Wakulla

5. Was this proposed project or program on a list of proposed projects and programs submitted to Triumph Gulf Coast, Inc., by one (or more) of the eight disproportionately affected Counties as a project and program located within its county?

Yes No

If yes, list all Counties that apply: _____

6. Does the Board of County Commissioners for each County listed in response to question 5, above, recommend this project or program to Triumph?

Yes No

**Please attach proof of recommendation(s) from each County identified.

Approvals and Authority

1. If the Applicant is awarded grant funds based on this proposal, what approvals must be obtained before Applicant can execute an agreement with Triumph Gulf Coast, Inc.?

None needed.

2. If approval of a board, commission, council or other group is needed prior to execution of an agreement between the entity and Triumph Gulf Coast:

- A. Provide the schedule of upcoming meetings for the group for a period of at least six months.
B. State whether that group can hold special meetings, and if so, upon how many days' notice.

None needed.

3. Describe the timeline for the proposed project or program if an award of funding is approved, including milestones that will be achieved following an award through completion of the proposed project or program.

Year 1

- Setup expansion space at Port of Pensacola
- Purchase and install equipment
- Search for project manager and hire research technician

Year 2

- Space ready for research
- American Magic returns from Barcelona and occupies space next to UWF at Port
- Identify grant opportunities and apply for funding
- Begin student projects with American Magic and related business partners

- Hire graduate students
- Begin leasing space to WAVE Accelerator tenants
- Modest amount of contract and grants earned, totaling \$20,000
- 20 net new engineering and engineering technology graduates enter job market
- 10 students earn certification in composites and become eligible to work in boat manufacturing or other related jobs at aerospace firms

Year 3

- \$140,000 of contract and grants awarded
- 10 -15 students earn certification in composites and become eligible to work in boat manufacturing or other related jobs at aerospace firms
- 20 net new engineering and engineering technology graduates enter job market

Year 4

- WAVE team adds a business development leader to manage customer outreach
- Team earns approximately \$300,000 contracts and grants
- 15 students earn certification in composites and become eligible to work in boat manufacturing or other related jobs at aerospace firms
- 40 net new engineering and engineering technology graduates enter job market

Year 5

- Represents final year of Triumph Gulf Coast funding
- UWF WAVE Accelerator tenants support additional research
- team increases grants and contracts to \$570,000
- 15 students earn certification in composites and become eligible to work in boat manufacturing or other related jobs at aerospace firms
- 40 net new engineering and engineering technology graduates enter job market
- Start planning to expand research and certification space

Year 6

- UWF WAVE Accelerator tenants support applied research projects with engineering and certification students
- Team increases grants and contracts to \$1,725,000
- 20 students earn certification in composites and become eligible to work in boat manufacturing or other related jobs at aerospace firms
- 60 net new engineering and engineering technology graduates enter job market
- Expand research and certification space

Years 7

- Expansion space ready for research and cert students
- UWF WAVE Accelerator tenants support applied research projects with engineering and certification students
- Team increases grants and contracts to \$1,780,000

- 20 students earn certification in composites and become eligible to work in boat manufacturing or other related jobs at aerospace firms
- 65 net new engineering and engineering technology graduates enter job market

Year 8

- UWF WAVE Accelerator tenants support applied research projects with engineering and certification students
- team increases revenue from tenants, grants and contracts to \$1,863,000
- 25 students earn certification in composites and become eligible to work in boat manufacturing or other related jobs at aerospace firms
- 70 net new engineering and engineering technology graduates enter job market

Year 9

- UWF WAVE Accelerator tenants support applied research projects with engineering and certification students
- team increases revenue from tenants, grants and contracts to \$1,895,000
- 25 students earn certification in composites and become eligible to work in boat manufacturing or other related jobs at aerospace firms
- 75 net new engineering and engineering technology graduates enter job market

Year 10

- UWF WAVE Accelerator tenants support applied research projects with engineering and certification students
- team revenue from tenants, grants and contracts predicted to be at approximately \$1,750,000
- 30 students earn certification in composites and become eligible to work in boat manufacturing or other related jobs at aerospace firms
- 100 net new engineering and engineering technology graduates enter job market

4. Attach evidence that the undersigned has all necessary authority to execute this proposal on behalf of the entity applying for funding. This evidence may take a variety of forms, including but not limited to: a delegation of authority, citation to relevant laws or codes, policy documents, etc. In addition, please attach any support letters from partners.

This proposal has the full support of the UWF administration as well as support from American Magic and the Port of Pensacola. Letters attached attest to the support from prominent area businesses as well.

Funding and Budget:

Pursuant to Section 288.8017, awards may not be used to finance 100 percent of any project or program. An awardee may not receive all of the funds available in any given year.

1. Identify the amount of funding sought from Triumph Gulf Coast, Inc. and the time period over which funding is requested.

UWF seeks funding in the amount of \$3,320,000 from October 2024 to October 2029.

(If additional space is needed, please attach a Word document with your entire answer.)

2. What percentage of total program or project costs does the requested award from Triumph Gulf Coast, Inc. represent? (Please note that an award of funding will be for a defined monetary amount and will not be based on percentage of projected project costs.)

Triumph Gulf Coast's contribution to WAVE represents 23.22 percent of the total anticipated project costs.

(If additional space is needed, please attach a Word document with your entire answer.)

3. Please describe the types and number of jobs expected from the proposed project or program and the expected average wage.

See Appendix labeled 14.3

(If additional space is needed, please attach a Word document with your entire answer.)

4. Does the potential award supplement but not supplant existing funding sources? If yes, describe how the potential award supplements existing funding sources.

Yes No

UWF's scientific and student resources and operational infrastructure supplement the success of this endeavor.

(If additional space is needed, please attach a Word document with your entire answer.)

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

A. Project/Program Costs:

RESEARCHERS, STUDENTS, & STAFF	\$ 9,060,000
EQUIPMENT, COMPUTERS & MODULAR BLDGS	\$ 2,385,000
FACILITY LEASE	\$ 1,400,000
CONSTRUCTION & RENOVATION	\$ 1,270,000
CERTIFICATE COSTS	\$ 180,000
TOTAL PROJECT COSTS	\$ 14,295,000

B. Other Project Funding Sources:

UWF	\$ 750,000
Grants/Contracts/Fees for Svc	\$ 5,398,000
Accelerator contracts	\$ 902,000
TOTAL OTHER FUNDING	\$ 10,975,000

Total Amount Requested: \$ 3,320,000

Note: The total amount requested must equal the difference between the costs in 3A. and the other project funding sources in 3.B.

C. Provide a detailed budget narrative, including the timing and steps necessary to obtain the funding and any other pertinent budget-related information.

Please see appendix labeled Budget Narrative.

(If additional space is needed, please attach a Word document with your entire answer.)

Applicant understands that the Triumph Gulf Coast, Inc. statute requires that the award contract must include provisions requiring a performance report on the contracted activities, must account for the proper use of funds provided under the contract, and must include provisions for recovery of awards in the event the award was based upon fraudulent information or the awardee is not meeting the performance requirements of the award.

Yes No

Applicant understands that awardees must regularly report to Triumph Gulf Coast, Inc. the expenditure of funds and the status of the project or program on a schedule determined by Triumph Gulf Coast, Inc.

Yes No

Applicant acknowledges that Applicant and any co-Applicants will make books and records and other financial data available to Triumph Gulf Coast, Inc. as necessary to measure and confirm performance metrics and deliverables.

Yes No

Applicant acknowledges that Triumph Gulf Coast, Inc. reserves the right to request additional information from Applicant concerning the proposed project or program.

Yes No

ADDENDUM FOR WORKFORCE TRAINING PROPOSALS

1. Program Requirements

- A. Will this proposal support programs that prepare students for future occupations and careers at K-20 institutions that have campuses in the disproportionately affected counties? If yes, please identify where the campuses are located and provide details on how the proposed programs will prepare students for future occupations and at which K-20 institutions that programs will be provided.

Yes No

This proposal will enable students at the University of West Florida to obtain the American Boat & Yacht Council Marine Composites Certification. The certification course will be open to all UWF majors but targeted at STEM students. UWF has campuses in Escambia and Okaloosa counties.

- B. Will the proposed program (check all that apply):

- 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
- 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 (similar to or the same as talent retention programs created by the Chancellor of the State University System and the Commission on Education)

For each item checked above, describe how the proposed program will achieve these goals

This proposal will enable students to earn a unique certification that will be marketable for careers in the watercraft industry. The proposal will also allow some UWF students to work with and alongside American Magic either formally as an employee or informally through projects hosted at the Port of Pensacola. As other external partners arrive at the port, students will also have additional chances for work education as well as applied collaborative projects. UWF currently works with industry partners on applied projects and this proposal will open many more opportunities.

It is also expected that the new American Magic partnership will be a draw for new students to be brought into STEM and watercraft careers. UWF is in a unique position to recruit and develop traditionally underrepresented students in Escambia County. The program will make outreach efforts to

underrepresented students in area high schools, encouraging visits to the Port of Pensacola to learn more about careers in the watercraft industry.

- C. Will this proposal provide participants in the disproportionately affected counties with transferable, sustainable workforce skills but not confined to a single employer? If yes, please provide details.
 Yes No

The Marine Composites Certification is transferable to many employers, not just in watercraft but in many other industries. Composite manufacturing has been a federal priority for the past 9 years since the establishment of the Clean Energy Smart Manufacturing Innovation Institute. This certification would enable UWF students to have an advantage in securing high-paying jobs in advanced manufacturing.

- D. Identify the disproportionately affected counties where the proposed programs will operate or provide participants with workforce skills.

Primarily at the Port of Pensacola in Escambia county.

- E. Provide a detailed description of, and quantitative evidence demonstrating how the proposed project or program will promote:
- Economic recovery,
 - Economic Diversification,
 - Enhancement of the disproportionately affected counties,
 - Enhancement of a Targeted Industry.

Economic Recovery. Over a 10-year period of performance, WAVE will graduate approximately 490 new engineers and technology. These graduates will be both experienced and credentialed in watercraft manufacturing. Non-destructive testing (NDT) is among the highly sought after skills our graduates will learn as a result of their education and research experience with WAVE. They will support the targeted industries like Transportation Equipment Manufacturing (NAICS 336) and Professional, Scientific and Technical Services (NAICS 54). The university research working alongside the world's fastest sailing yacht will draw students and scientists to the disproportionately affected counties and enhance economic recovery in the region.

Economic Diversification. At present, the top three industries in Northwest Florida by employment are (1) Government, (2) Accommodation and Food Services, (3) Retail Trade. The disproportionately affected counties have an abundance of military jobs – these pay well but our communities rely heavily on the spending that stems from federal payroll at local bases. Such facilities are susceptible to extreme weather and policy changes at the federal level. Accommodation and Food Services as well as Retail Trade provide excellent first but employment in these industries does not pay well. WAVE will diversify our economy by providing jobs and graduates in targeted industries

such as Transportation Equipment Manufacturing (NAICS 336) and Professional, Scientific and Technical Services (NAICS 54).¹

Enhancement of the disproportionately affected counties. The experience and training provided will also boost the personal income of UWF graduates. For example, the advertised salary of an Engineering Technician is about \$74,000 per year according to the ‘Job Posting Analytics’ report in *Lightcast* (Aug 24 -June 24). The median income of a Marine Engineer is \$109,813 per year as published by the Quarterly Census of Employed Workers (Q3 2024 Dataset). The combination of training and experience will enable technology students to be more marketable.

Enhancement of a Targeted Industry. The funded research projects and 490 new graduates will enable the region to develop core competencies and grow a specialized cluster that includes R&D for boat and composite manufacturing.

2. Additional Information

- A. Is this an expansion of an existing training program? Is yes, describe how the proposed program will enhance or improve the existing program and how the proposal program will supplements but not supplant existing funding sources.
- Yes No

This is a new program.

- B. Indicate how the training will be delivered (e.g., classroom-based, computer based, other).
- If in-person, identify the location(s) (e.g., city, campus, etc.) where the training will be available.
- If computer-based, identify the targeted location(s) (e.g., city, county) where the training will be available.

The certification course would be offered in-person and available to individuals (non-degree and degree-seeking students) throughout Northwest Florida. The program will offer in-person project opportunities to students attending class at the Port of Pensacola.

- C. Identify the number of anticipated enrolled students and completers.

Out of 30 enrolled per year, 175 individual students complete composite certificates across the 10-year period of performance. Once students earn certification, they become eligible to work in boat manufacturing or other related jobs at aerospace firms.

¹ https://www.floridajobs.org/docs/default-source/florida-job-growth-grants-proposals/target-industry-update.pdf?sfvrsn=e14a4fb0_4

Currently there are about 700 students in UWF Engineering and Technology programs. It is expected that WAVE will contribute to growth in this area of at least 5 percent per year over the 10-year period, producing 490 net new engineering and technology students who earn degrees and enter engineering, technology and manufacturing jobs in Northwest Florida.

- D. Indicate the length of the program (e.g, quarters, semesters, weeks, months, etc.) including anticipated beginning and ending dates.

The certification would be offered as a class at UWF. The class spans 15 weeks or one semester. The program will also offer work and project experiences to UWF students at the Port of Pensacola.

These research experiences span multiple semesters.

- E. Describe the plan to support the sustainability of the proposed program.

The program enhances the current activities of UWF towards at the Port of Pensacola. As such, the program is expected to generate external support that will sustain and grow the R&D program. This is similar to many university programs that rely on grants and contracts for sustainability. The budget proposed is conservative and achievable under modest expectations.

Triumph funds will be used to support the program for five years. UWF will support the endeavor starting in year six with funds generated from other sources, including contract work as well as external funding that may come from the EDA or NSF.

- F. Identify any certifications, degrees, etc. that will result from the completion of the program.

American Boat & Yacht Council Marine Composites Certification.

- G. Does this project have a local match amount? If yes, please describe the entity providing the match and the amount.

YES

Matching funds will come from UWF, as well as public and private WAVE tenants and research.

(If additional space is needed, please attach a Word document with your entire answer.)

- H. Provide any additional information or attachments to be considered for this proposal.

N/A

Appendix 14.3

- Please describe the types and number of jobs expected from the proposed project or program and the expected average wage (p 14).

Initial new hires will include a research technician and a project manager to track research success. They will oversee equipment purchases and installation. The crew will also plan for new student research projects, like electric powered foils and composite testing.

In subsequent years, UWF will add research positions as well as one business development leader who will work with the engineers and scientists to compete for applied research projects from public and private funding sources. The team will harness the time and talent of the undergrad, and graduate students connected to WAVE. Under the direction of the Chair of Mechanical Engineering, these individuals will focus on research only, and will not assume teaching responsibilities for degree-earning students at UWF. We expect to hire a mix of technical experts and tenured as well as non-tenured researchers. The program will rely on administrative support from the UWF Department of Engineering, including oversight, purchasing, and business management from the UWF Hal Marcus College of Science and Engineering. Administrative support is not identified as match but remains an essential part of WAVE's success.

Breakdown of jobs and salaries by calendar year:

Position	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Research Founder	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000
Research PhD (50%)	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000
Technician	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Manager		\$ 130,000	\$ 130,000	\$ 130,000	\$ 130,000	\$ 130,000	\$ 130,000	\$ 130,000	\$ 130,000	\$ 130,000
Post Doc			\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000
Post Doc				\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000
Business Manager				\$ 130,000	\$ 130,000	\$ 130,000	\$ 130,000	\$ 130,000	\$ 130,000	\$ 130,000
Research Professor					\$ 180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 180,000
Technician						\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Post Doc							\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000
Post Doc								\$ 75,000	\$ 75,000	\$ 75,000
	\$ 375,000	\$ 505,000	\$ 580,000	\$ 785,000	\$ 965,000	\$ 1,065,000	\$ 1,140,000	\$ 1,215,000	\$ 1,215,000	\$ 1,215,000

Appendix: Budget

Exhibit A						
Watercraft and Vessel Engineering						
Budget						
Estimated construction start date if applicable	Sep-24					
Estimated education component start date if applicable	Nov-24					
	RESEARCHERS, STUDENTS, & STAFF	EQUIPMENT, COMPUTERS & MODULAR BLDGS	FACILITY LEASE	CONSTRUCTION & RENOVATION	CERTIFICATE COSTS	Total
Please change year # to actual year						
Project Total						
Calendar Year 1 (2024)	\$ 375,000.00	\$ 725,000.00	\$ 1,400,000.00	\$ 320,000.00	\$ -	\$ 2,820,000.00
Calendar Year 2 (2025)	\$ 505,000.00	\$ 185,000.00	\$ -	\$ -	\$ 15,000.00	\$ 705,000.00
Calendar Year 3 (2026)	\$ 580,000.00	\$ 135,000.00	\$ -	\$ -	\$ 15,000.00	\$ 730,000.00
Calendar Year 4 (2027)	\$ 785,000.00	\$ 95,000.00	\$ -	\$ -	\$ 15,000.00	\$ 895,000.00
Calendar Year 5 (2028)	\$ 965,000.00	\$ -	\$ -	\$ -	\$ 15,000.00	\$ 980,000.00
Calendar Year 6 (2029)	\$ 1,065,000.00	\$ 120,000.00	\$ -	\$ 500,000.00	\$ 20,000.00	\$ 1,705,000.00
Calendar Year 7 (2030)	\$ 1,140,000.00	\$ 200,000.00	\$ -	\$ 450,000.00	\$ 20,000.00	\$ 1,810,000.00
Calendar Year 8 (2031)	\$ 1,215,000.00	\$ 225,000.00	\$ -	\$ -	\$ 25,000.00	\$ 1,465,000.00
Calendar Year 9 (2032)	\$ 1,215,000.00	\$ 300,000.00	\$ -	\$ -	\$ 25,000.00	\$ 1,540,000.00
Calendar Year 10 (2033)	\$ 1,215,000.00	\$ 400,000.00	\$ -	\$ -	\$ 30,000.00	\$ 1,645,000.00
Project Total	\$ 9,060,000.00	\$ 2,385,000.00	\$ 1,400,000.00	\$ 1,270,000.00	\$ 180,000.00	\$ 14,295,000.00
Triumph						
Calendar Year 1 (2024)	\$ 300,000.00	\$ 675,000.00	\$ -	\$ 220,000.00	\$ -	\$ 1,195,000.00
Calendar Year 2 (2025)	\$ 430,000.00	\$ 185,000.00	\$ -	\$ -	\$ -	\$ 615,000.00
Calendar Year 3 (2026)	\$ 405,000.00	\$ 135,000.00	\$ -	\$ -	\$ -	\$ 540,000.00
Calendar Year 4 (2027)	\$ 525,000.00	\$ 95,000.00	\$ -	\$ -	\$ -	\$ 620,000.00
Calendar Year 5 (2028)	\$ 350,000.00	\$ -	\$ -	\$ -	\$ -	\$ 350,000.00
Calendar Year 6 (2029)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Calendar Year 7 (2030)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Calendar Year 8 (2031)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Calendar Year 9 (2032)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Calendar Year 10 (2033)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Triumph Total	\$ 2,010,000.00	\$ 1,090,000.00	\$ -	\$ 220,000.00	\$ -	\$ 3,320,000.00
Grantee						
Calendar Year 1 (2024)	\$ 75,000	\$ 50,000.00	\$ 1,400,000.00	\$ 100,000.00	\$ -	\$ 1,625,000.00
Calendar Year 2 (2025)	\$ 75,000		\$ -		\$ 15,000.00	\$ 90,000.00
Calendar Year 3 (2026)	\$ 75,000		\$ -		\$ 15,000.00	\$ 90,000.00
Calendar Year 4 (2027)	\$ 75,000		\$ -		\$ -	\$ 75,000.00
Calendar Year 5 (2028)	\$ 75,000		\$ -		\$ -	\$ 75,000.00
Calendar Year 6 (2029)	\$ 75,000		\$ -		\$ -	\$ 75,000.00
Calendar Year 7 (2030)	\$ 75,000		\$ -		\$ -	\$ 75,000.00
Calendar Year 8 (2031)	\$ 75,000		\$ -		\$ -	\$ 75,000.00
Calendar Year 9 (2032)	\$ 75,000		\$ -		\$ -	\$ 75,000.00
Calendar Year 10 (2033)	\$ 75,000		\$ -		\$ -	\$ 75,000.00
Grantee Total	\$ 750,000.00	\$ 50,000.00	\$ 1,400,000.00	\$ 100,000.00	\$ 30,000.00	\$ 2,330,000.00
Grants/Contracts/Fees for Svc						
Calendar Year 1 (2024)	\$ -	\$ -	\$ -		\$ -	\$ -
Calendar Year 2 (2025)	\$ -	\$ -	\$ -		\$ -	\$ -
Calendar Year 3 (2026)	\$ 100,000.00	\$ -	\$ -		\$ -	\$ 100,000.00
Calendar Year 4 (2027)	\$ 185,000.00	\$ -	\$ -		\$ 15,000.00	\$ 200,000.00
Calendar Year 5 (2028)	\$ 455,000.00	\$ -	\$ -		\$ 15,000.00	\$ 470,000.00
Calendar Year 6 (2029)	\$ 873,000.00	\$ 120,000.00	\$ -	\$ 500,000.00	\$ 20,000.00	\$ 1,513,000.00
Calendar Year 7 (2030)	\$ 915,000.00	\$ 200,000.00	\$ -	\$ 450,000.00	\$ 20,000.00	\$ 1,585,000.00
Calendar Year 8 (2031)	\$ 980,000.00	\$ 225,000.00	\$ -		\$ 25,000.00	\$ 1,230,000.00
Calendar Year 9 (2032)	\$ 950,000.00	\$ 300,000.00	\$ -		\$ 25,000.00	\$ 1,275,000.00
Calendar Year 10 (2033)	\$ 940,000.00	\$ 400,000.00	\$ -		\$ 30,000.00	\$ 1,370,000.00
Match Source 1 Total	\$ 5,398,000.00	\$ 1,245,000.00	\$ -	\$ 950,000.00	\$ 150,000.00	\$ 7,743,000.00
Accelerator contracts						
Calendar Year 1 (2024)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Calendar Year 2 (2025)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Calendar Year 3 (2026)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Calendar Year 4 (2027)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Calendar Year 5 (2028)	\$ 85,000.00	\$ -	\$ -	\$ -	\$ -	\$ 85,000.00
Calendar Year 6 (2029)	\$ 117,000.00	\$ -	\$ -	\$ -	\$ -	\$ 117,000.00
Calendar Year 7 (2030)	\$ 150,000.00	\$ -	\$ -	\$ -	\$ -	\$ 150,000.00
Calendar Year 8 (2031)	\$ 160,000.00	\$ -	\$ -	\$ -	\$ -	\$ 160,000.00
Calendar Year 9 (2032)	\$ 190,000.00	\$ -	\$ -	\$ -	\$ -	\$ 190,000.00
Calendar Year 10 (2033)	\$ 200,000.00	\$ -	\$ -	\$ -	\$ -	\$ 200,000.00
Match Source 2 Total	\$ 902,000.00	\$ -	\$ -	\$ -	\$ -	\$ 902,000.00

Appendix: Budget Narrative

YEAR 1

During the first year of operation, UWF will lease 15,000 SF of warehouse space at the Port of Pensacola. This lease payment will cover 10-years of operations at the port. Utilizing Triumph grant dollars, WAVE will recruit a research technician and a project manager to track research success. The technician and the project manager will oversee year one of equipment purchases and installation as well as support new student research projects, like electric powered foils and composite testing. These positions will grow along with the WAVE project. A public ribbon cutting will be hosted at the facility, or at the administrative offices at the Port.

Research staff includes 2.5 FTEs.

Calendar Year 1 Expenditures	\$	2,820,000
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YEAR 2

UWF will hire two researchers will join the project manager and technician. As a team of 4, they will apply for federal and private research grants. We anticipate a quarter of their time will support applied research projects with startups and existing businesses. Such projects will rely on expertise and labor from undergrad and graduate students connected to WAVE. Under the direction of the Chair of Mechanical Engineering and the project manager, these individuals will focus exclusively on R&D, and will not assume teaching responsibilities for degree-seeking students at UWF.

New equipment and modular buildings purchased will be installed at the Port of Pensacola. Research revenues and fees for service during the second year of operation may be modest as the new research team gains the trust and respect of new and existing businesses in sectors that support maritime activities.

Year two coincides with American Magic's return to Pensacola and the grand opening of their new facility inside WH10 at the Port. This will provide an excellent platform for the WAVE research team to share their expertise with firms eager to support Magic's success. UWF will commence a Composite Certification for 15 students (including traditional and non-traditional students and adult learners). We may contract with a training provider to ensure success for this important part of the project. The team anticipates that the total cost of instruction, materials, and curriculum will not exceed \$15,000. UWF plans to cover the cost of the certification from E&G and auxiliary business funding (not Triumph dollars).

Research staff total: 3.5 FTEs.

Calendar Year 2 Expenditures	\$	705,000
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YEARS 3 and 4

At this point, the WAVE team will add a business development leader to manage customer outreach and student engagement. This period will include research revenues and UWF will begin to recruit and select *WAVE Accelerator tenants* to work alongside WAVE researchers. The tenants' fees will align with the services and scope of the work anticipated by each group. The next cohort of composite certification students will commence

By the end of year 3, the unique location of the research will attract top talent, both in terms of researchers and new engineering students. UWF will likely gain new engineering students as a result of this novel endeavor.

Research staff employed by WAVE includes 6.5 FTEs by the end of year 4.

Calendar Year 3 Expenditures	\$	730,000
Calendar Year 4 Expenditures	\$	895,000

YEAR 5

Year five represents the final year of Triumph funding as the research team acquires new business partners, *WAVE Accelerator* tenants, and earns new research dollars. These research dollars will enable UWF’s WAVE team to add another FTE.

Composite Certification continues at the same pace with growth planned for the following year. To accommodate growth, the team plans to renovate and/or build out classroom space within the downtown UWF footprint. This will enable larger cohorts in years 6 through 10.

Research staff incorporates 7.5 FTEs.

Calendar Year 5 Expenditures	\$	980,000
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YEAR 6

WAVE team will add/replace aging equipment and pay for expanded class space for Composite Certifications. UWF anticipates modest growth in certification students as the course and demand for its graduates grows.

Research staff includes 8.5 FTEs.

Calendar Year Expenditures 6	\$	1,705,000
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YEAR 7

The team will add and replace equipment to keep the pace of technological advances and customer demands. Certification students will grow to 25.

Research staff includes 9.5 FTEs.

Calendar Year 7 Expenditures	\$	1,810,000
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YEAR 8

UWF expects research funding and expenditures to continue to grow.

Research staff includes 10.5 FTEs.

Calendar Year 8 Expenditures	\$	1,465,000
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YEAR 9

UWF expects research funding, tenant revenues, and expenditures will continuously expand.

Research staff incorporates 10.5 FTEs.

Calendar Year 9 Expenditures	\$	1,540,000
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YEAR 10

Year 10 represents the final year of the WAVE project; however, this milestone does not signify the project's conclusion. One can imagine a rising demand for housing facilities as additional researchers and students populate the area.

Research staff includes 10.5 FTEs.

Calendar Year 10 Expenditures	\$	1,645,000
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BELLA MENTE QUANTUM RACING
ASSOCIATION, dba AMERICAN MAGIC

Marina Barcelona
Psg De Joan de Borbo, 92
08039, Barcelona ESP

May 10, 2024

Michael Reynolds, PhD
Associate Professor and Chair
Mechanical Engineering
University of West Florida

Dear Michael,
Thank you very much for your time and conversation regarding a partnership with the University of West Florida and American Magic.

American Magic is very excited about the opportunity to blend the talents of UWF with our America's Cup team. In particular, but not limited too we should continue to explore the following area of developments:

- Structural engineering and manufacturing with composite materials.
- Mechatronics and the development of hydraulic function. Building a framework of logic to improve valve actuation and efficiency.
- Aerodynamic development.
- Hydrodynamic development.
- VPP development for both aerodynamic and hydrodynamic

As a team we are continually grateful of the support provided by the City of Pensacola. Our development of a high-performance training center works in parallel with the UWF's appeal to expand its engineering talent. I do look forward to perpetuating this partnership.

Sincerely,

Terry Hutchinson
President of Sailing Operations, Skipper
NYYC American Magic



June 13, 2024

Michael Reynolds, PhD
Associate Professor and Chair
Mechanical Engineering
University of West Florida

Dear Michael,

Florida Power & Light Company endorses and support the University of West Florida's effort to establish a new university research and business accelerator known as **UWF Watercraft and Vessel Engineering (WAVE)**.

Located at the Port of Pensacola next to the future American Magic facility, UWF's WAVE will attract high tech watercraft and foil sailing entrepreneurs in maritime design and serve as a hub for research and workforce training in composite materials, advanced machining, high-efficiency propulsion, and computational fluid dynamics. WAVE includes a facility that will support the production of custom assemblies and unique hull designs required for the development of technologically advanced sailing vessels and high-speed watercraft. The WAVE team will support the design of new sail configurations, foils, and hulls made from a variety of composites including sustainably sourced materials. UWF faculty, students and staff will add value to this endeavor, accelerating startup companies in design, prototyping, testing, and analysis while pursuing external grant funding.

WAVE's innovation space will feature 6-10 leased office spaces for private and public sector funding partners that include access to computational tools, equipment, advanced design software, and highly skilled technical support. Such an innovation space will serve as a business accelerator, providing support to businesses and organizations that align with WAVE's mission, which is to accelerate applied research and business success in watercraft and vessel engineering.

UWF WAVE takes advantage of Pensacola's unique location on Pensacola Bay as well as the proximity to the American Magic. WAVE will serve as a magnet for startup and existing personal watercraft companies, transport vessels both commercial and military. Researchers and sailing experts have identified a need for this type of space to take full advantage of the economic growth potential of watercraft and vessel engineering and sailing.

WAVE will also support student learning and the development of a workforce to support composite manufacturing. This complete and all-encompassing composites course is designed for boat builders and manufacturers. The curriculum includes marine composite construction, production and advanced manufacturing processes, structural details and hardware installation, quality assurance, and safety and environmental compliance. Courses will be taught at the Port of Pensacola and at SEA3D inside the UWF Historic Trust. This type of workforce training is

complimentary to Florida Power & Light Company's WonderFL workforce talent attraction program.

Again, we support and endorse UWF's effort to establish a new applied research and business accelerator known as **UWF Watercraft and Vessel Engineering (WAVE)**. Please contact me with any questions you may have.

Sincerely,

Rick Byars

Rick Byars
Senior External Affairs Manager



1085 West Gimble Street | Pensacola, FL 32502

Dear Michael,

Mercury Machining endorses and supports the University of West Florida's effort to establish a new research and business accelerator known as UWF Watercraft and Vessel Engineering (WAVE).

Mercury is a Precision Machining, Welding and Fabrication facility located in Downtown Pensacola. We have developed a diverse range of customers that have come to know our company as more than just a vendor. They consider us to be an extension of their own manufacturing capabilities. We not only assist local companies like American Magic, Ascend Performance Material, and Blazer Boats but we also cater to a variety of industries on National and International levels.

We would like to see the University take skilled individuals and develop them into working members of our local society. Our hope is that this program will support student learning and development of a workforce that supports machining and manufacturing. We believe this program will do that and we would greatly appreciate the opportunity to work alongside you in the WAVE programs future endeavors.

Again, we support and endorse UWF's effort to establish a new applied research and business accelerator known as UWF Watercraft and Vessel Engineering (WAVE). Please contact me with any questions that you may have.

Sincerely,

President
Mercury Machining Company



850.433.5017



Dnorwood@mercurymachining.com



www.mercurymachining.com



May 30, 2024

Michael Reynolds, PhD
Associate Professor and Chair
Mechanical Engineering
University of West Florida

Dear Michael,

We endorse and support the University of West Florida's effort to establish a new university research and business accelerator known as UWF Watercraft and Vessel Engineering (WAVE). Currently, we are working with the UWF Haas Center and SEA3D to refine the design concept for a system to reduce waste and produce sustainable fuel. Their mechanical engineer and UWF students made multiple design adjustments to meet our rigorous specifications and helped us move the product from prototype to production. In addition to the iterative design process, the team 3D printed a final prototype, which showcased our technology to potential clients. This ongoing partnership highlights our commitment to working with UWF to help us achieve our goals.

We expect to expand our work with UWF as they grow their footprint in downtown Pensacola. UWF's WAVE will attract high tech watercraft and foil sailing entrepreneurs in maritime design and serve as a hub for research and workforce training in composite materials, advanced machining, high-efficiency propulsion, and computational fluid dynamics. WAVE includes a facility that will support the production of custom assemblies and unique designs required for the development of technologically advanced products. The WAVE team will also support the design of new sail configurations, foils, and hulls made from a variety of composites including sustainably sourced materials. UWF faculty, students and staff will add value to this endeavor, accelerating startup companies in design, prototyping, testing, and analysis while pursuing external grant funding.

WAVE's innovation space will feature 6-10 leased office spaces for private and public sector funding partners that include access to computational tools, equipment, advanced design software, and highly skilled technical support. Such an innovation space will serve as a business accelerator, providing support to businesses and organizations that align with WAVE's mission, which is to accelerate applied research and business success in engineering.

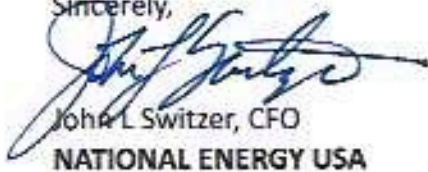
Such a concept builds upon existing strengths at UWF. The Mechanical Engineering Department has faculty with expertise in composite materials, computational fluid dynamics, and non-

destructive material evaluation. The WAVE facility will combine the current research and development support structure at UWF (e.g. computational software, machining centers, non-destructive testing equipment) with new equipment that will support composite material research, the development of efficient and low-emission foiling boats, reduced corrosion in metal hull material, as well as other research and development projects related to WAVE. It is expected that WAVE will be a catalyst for grant and commercial activity with agencies such as NSF, ONR, SBIR and STTR. This expansion would greatly increase the capacity of the facility to serve the emerging foil sailing and watercraft industry in Pensacola and Northwest Florida. The facility will feature technicians and researchers including mechanical engineers. Funded grants and part production will support the WAVE operations. Such projects will also provide UWF students with valuable experience.

UWF WAVE takes advantage of Pensacola's unique location on Pensacola Bay as well as the proximity to the American Magic. WAVE will serve as a magnet for startup and existing personal watercraft companies, transport vessels both commercial and military. Researchers and sailing experts have identified a need for this type of space in order to take full advantage of the economic growth potential of watercraft and vessel engineering and sailing.

Again, we support and endorse UWF's effort to establish a new applied research and business accelerator known as UWF Watercraft and Vessel Engineering (WAVE). Please contact me with any questions you may have.

Sincerely,



John L Switzer, CFO
NATIONAL ENERGY USA

A minority-owned, veteran-owned small business

cape horn

Fabbro Marine Group, Inc. 5905 Jeff Ates Rd Milton, FL 32583
850-626-2211 850-626-2981 fax

June 18, 2024

Michael Reynolds, PhD
Associate Professor and Chair
Mechanical Engineering
University of West Florida

Dear Michael,

Fabbro Marine Group, Inc. builder of Cape Horn Boats endorses and supports the University of West Florida's effort to establish a new university research & business accelerator known as UWF Watercraft and Vessel Engineering (WAVE).

Fabbro Marine Group, Inc. has been manufacturing Cape Horn Boats for over 37 years and are one of the premier offshore center console boat builders in the country. Our president, Chris Fabbro has been designing, testing and building an array of boats both offshore and racing models for over 50 years. The WAVE program would certainly benefit by having Chris as a mentor in some capacity once the program is off the ground.

We utilize traditional fiberglass lamination processes in many of our boat builds. We use the vacuum bag and resin transfer methods when manufacturing our hardtops which control the weight and strength of the fiberglass hardtop.

We have tested and used carbon fiber along with Kevlar in some of our small racing boats and parts manufacturing. We can offer experience and knowledge of marine composite construction, production and hardware installation that can help benefit the growth of the UWF WAVE program in the future.

Sincerely,



Scott Davis
Fabbro Marine Group, Inc.



Dear Mike,

I am writing to endorse and support the University of West Florida's effort to establish a new university research and business accelerator known as **UWF Watercraft and Vessel Engineering (WAVE)**.

Oceana provides global infrastructure for adaptable, scalable, efficient, and environment friendly energy solutions. We developed our unique marine turbine architecture during three, three-year (for a total of nine years of R&D) of Cooperative Research and Development Agreements (CRADAs) with the United States Naval Surface Warfare Center's Carderock Division.

This year, we signed a CRADA with the Oak Ridge National Laboratory (ORNL) to determine the least expensive way to manufacture our turbines. In addition, we have plans to sign our fourth CRADA with Carderock, this time to build and launch our HydroLoop Green Hydrogen Deployment System which is an autonomous platform that when deployed, will generate electricity at sea and convert that electricity in situ into hydrogen.

During the design process, Oceana monitored developments in adjacent industries. This resulted in product architectures that are uniquely well suited to take advantage of recent breakthroughs in additive manufacturing and in material science.

In order to capitalize on those breakthroughs and others, Oceana partnered with UWF's Haas Center. The SEA3D Lab effectively serves as our lab and supports our efforts with our other two partners, ORNL and Carderock.

We expect to continue this partnership and expand our work with UWF as they grow their footprint in downtown Pensacola. UWF's WAVE will attract high tech watercraft and foil sailing entrepreneurs in maritime design and serve as a hub for research and workforce training in composite materials, advanced machining, high-efficiency propulsion, and computational fluid dynamics. WAVE includes a facility that will support the production of custom assemblies and unique designs required for the development of technologically advanced products. The WAVE team will also support the design of hulls made from a variety of composites including sustainably sourced materials. UWF faculty, students and staff will add value to this endeavor, accelerating startup companies in design, prototyping, testing, and analysis while pursuing external grant funding.

WAVE's innovation space will feature 6-10 leased office spaces for private and public sector funding partners that include access to computational tools, equipment, advanced design software, and highly skilled technical support. Such an innovation space will serve as a business accelerator, providing support to businesses and organizations that align with WAVE's mission, which is to accelerate applied research and business success in engineering.

Such a concept builds upon existing strengths at UWF. The Mechanical Engineering Department has faculty with expertise in composite materials, computational fluid dynamics, and non-destructive

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material evaluation. The WAVE facility will combine the current research and development support structure at UWF (e.g. computational software, machining centers, non-destructive testing equipment) with new equipment that will support composite material research, the development of efficient boats.

Oceana expects that WAVE will be a catalyst for grant and commercial activity with agencies such as NSF, ONR, SBIR, DOD, DOE and STTR. This expansion would greatly increase the capacity of the facility to serve the emerging watercraft industry in Pensacola and Northwest Florida. The facility will feature technicians and researchers including mechanical engineers. Funded grants and part production will support the WAVE operations. Such projects will also provide UWF students with valuable experience.

UWF WAVE takes advantage of Pensacola's unique location on Pensacola Bay as well as the proximity to the American Magic. WAVE will serve as a magnet for startup and existing personal watercraft companies, transport vessels both commercial and military. Researchers and sailing experts have identified a need for this type of space in order to take full advantage of the economic growth potential of watercraft and vessel engineering and sailing.

Again, we support and endorse UWF's effort to establish a new applied research and business accelerator known as UWF Watercraft and Vessel Engineering (WAVE). Please contact me with any questions you may have.

Warm regards,



Dan Power

CEO

Oceana energy company

816 Connecticut Ave., NW

Suite 200

Washington DC 20006

202-465-6405

<https://www.oceanaenergy.com/>

July 24, 2024

Michael Reynolds, PhD
Associate Professor and Chair
Mechanical Engineering
University of West Florida

Dear Michael,

We endorse and support the University of West Florida's effort to establish a new university research and business accelerator known as **UWF Watercraft and Vessel Engineering (WAVE)**.

Located at the Port of Pensacola next to the future American Magic facility, UWF's WAVE will attract high tech watercraft and foil sailing entrepreneurs in maritime design and serve as a hub for research and workforce training in composite materials, advanced machining, high-efficiency propulsion, and computational fluid dynamics. WAVE includes a facility that will support the production of custom assemblies and unique hull designs required for the development of technologically advanced sailing vessels and high-speed watercraft. The WAVE team will support the design of new sail configurations, foils, and hulls made from a variety of composites including sustainably sourced materials. UWF faculty, students and staff will add value to this endeavor, accelerating startup companies in design, prototyping, testing, and analysis while pursuing external grant funding.

WAVE's innovation space will feature 6-10 leased office spaces for private and public sector funding partners that include access to computational tools, equipment, advanced design software, and highly skilled technical support. Such an innovation space will serve as a business accelerator, providing support to businesses and organizations that align with WAVE's mission, which is to accelerate applied research and business success in watercraft and vessel engineering.

Such a concept builds upon existing strengths at UWF. The Mechanical Engineering Department has faculty with expertise in composite materials, computational fluid dynamics, and non-destructive material evaluation. The WAVE facility will combine the current research and development support structure at UWF (e.g. computational software, machining centers, non-destructive testing equipment) with new equipment that will support composite

material research, the development of efficient and low-emission foiling boats, reduced corrosion in metal hull material, as well as other research and development projects related to WAVE. It is expected that WAVE will be a catalyst for grant and commercial activity with agencies such as NSF, ONR, SBIR and STTR. This expansion would greatly increase the capacity of the facility to serve the emerging foil sailing and watercraft industry in Pensacola and Northwest Florida. The facility will feature technicians and researchers including mechanical engineers. Funded grants and part production will support the WAVE operations. Such projects will also provide UWF students with valuable experience.

FLORIDA INSTITUTE FOR HUMAN & MACHINE COGNITION

PENSACOLA

40 South Alcaniz St. • Pensacola, FL 32502
850.202.4462

OCALA

15 SE Osceola Ave • Ocala, FL 34471
352.387.3050

www.ihmc.us

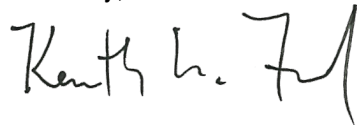


UWF WAVE takes advantage of Pensacola's unique location on Pensacola Bay as well as the proximity to the American Magic. WAVE will serve as a magnet for startup and existing personal watercraft companies, transport vessels both commercial and military. Researchers and sailing experts have identified a need for this type of space in order to take full advantage of the economic growth potential of watercraft and vessel engineering and sailing.

WAVE will also support student learning and the development of a workforce to support composite manufacturing. This complete and all-encompassing composites course is designed for boat builders and manufacturers. The curriculum includes marine composite construction, production and advanced manufacturing processes, structural details and hardware installation, quality assurance, and safety and environmental compliance. Courses will be taught at the Port of Pensacola and at SEA3D inside the UWF Historic Trust.

Again, we support and endorse UWF's effort to establish a new applied research and business accelerator known as **UWF Watercraft and Vessel Engineering (WAVE)**. Please contact me with any questions you may have.

Sincerely,



Kenneth Ford
CEO



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OCALA

15 SE Osceola Ave • Ocala, FL 34471
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