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: The University of West Florida
Proposal Title: UWF Computational Research and Development
Amount of Triumph Funds Requested: $10,000,000
Total Estimated Project Cost: $36,000,000

Brief Description of Individual/Entity/Organization: The University of West Florida is a regional comprehensive public university with its main campus located in Pensacola, FL. The University is a member of the State University System of Florida with an enrollment of over 14,000 students.

Contact Information
      Primary Contact: Jaromy Kuhl
      Title: Dean and Professor
      Mailing Address: 11000 University Parkway
      City: Pensacola   State: FL   Zip Code: 32514
      Telephone Number: (859) 473-7702
       Email Address: jkuhl@uwf.edu
      Website: www.uwf.edu/hmcse

Names of co-applicants, partners or other entities, organizations that will have a role in the proposed project or program: None at this time.

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.

Proposed Project
UWF Computational Research and Development

The University of West Florida (UWF) Institute for Analytics and Industry Advancement $(IA)^2$ is building a next generation workforce and research center to expand the boundaries and applications of Predictive Analytics, Big Data Analytics, Artificial Intelligence, Machine Learning, Deep Learning, Automation, and Computing. This will be accomplished through cutting-edge computational research, commercialization of applied analytics, industry and research partnerships, certificate degree programs, and industry certifications. $(IA)^2$ has three distinct components; 1) the Industry-Skills Workforce Development Program, 2) the Predictive Analytics and Modeling Lab, and 3) the Center for Computational Intelligence. UWF proposes to use Triumph funds to expand on and enhance the two areas of commercial and research engagement: the Predictive Analytics and Modeling Lab and the Center for Computational Intelligence.

The Predictive Analytics and Modeling Lab (PAM) Lab specializes in developing easy-to-understand analytics for decision-making and data prediction purposes. The PAM Lab is currently working in the education sector, transitioning university data to easy-to-use dashboards to improve retention, enrollment, and overall student success. The PAM Lab is the primary commercialization arm of $(IA)^2$, and is sustained on a software-for-commercial-service model. This model includes developing customized, in-demand analytics tools, as well as the necessary visualization, and monetizing the software. As a result, we are building a workforce in high demand, skilled in providing advanced data analytics to businesses. We propose using Triumph funds to expand the PAM Lab capabilities to accelerate business opportunities and, ultimately, move into industry sectors such as healthcare and energy.

The purpose of the Center for Computational Intelligence (Center) is to enable interaction and collaboration between university faculty whose research (basic, applied, or interdisciplinary) is computational in nature. The Center's cutting-edge research will focus on the creation of computational models and systems capable of performing complex tasks. The computational technology developed through the Center will be investigated for commercial opportunities by the PAM Lab. Our proposal is to use Triumph funds to develop the Center into a world-class research center of excellence sustained through grants and contacts, bringing millions of dollars to the regional economy. Research grant funds are well-recognized as having a substantial economic multiplier impact as the grant dollars are spent locally. There are numerous avenues for high-impact research collaboration, grant funding, commercial application, and more, that can come from the Center. These avenues include the National Institutes of Health, ARPA-H, National Science Foundation, Department of Energy, Air Force Research Labs, Army Research Labs, Office of Naval Research, Defense Advanced Research Projects Agency, Howard Hughes Medical Institute, and Boeing.

Supporting the PAM Lab and the Center are UWF's Intelligent Systems and Robotics PhD program and other relevant masters level programs such as Data Science, Computer Science, Information Technology, etc. Students within these programs have opportunities to work in the PAM Lab as interns or with the Center's research scientists as graduate assistants. The PAM Lab and the Center currently employ Data Analysts, Software Engineers, and research faculty in various computational areas. Using Triumph funds, both units will identify and hire additional high-level talent to ensure success. Both units will collaborate closely with regional entities that a share a particular focus on data analytics.

Commercial and research opportunities through $(IA)^2$ are expected to bolster the regional economy with important innovations and research outcomes. $(IA)^2$ will provide many benefits to the region to include, but are not limited to, the following:
- o Significant new economic impact to the region through revenue generated via the sale of innovative data analytics technologies

- o Significant new economic impact to the region through revenue generated via federal, state, industry, and foundation grants and contracts
- o High wage job creation; new professionals to the local area
- o Substantive collaborative analytics assistance and mentoring in local entrepreneurial outreach and support to regional businesses

i.   Amount of funds being sought from Triumph Gulf Coast

We are requesting a total amount of $10 million from Triumph Gulf Coast to enhance and expand the Institute for Analytics and Industry Advancement, specifically, the Predictive Analytics and Modeling Lab and the Center for Computational Intelligence.

ii.   Amount and identity of other sources of funds for the proposed project or program

The University of West Florida will commit funds acquired from a recent state allocation to build a new research wing with a focus on computational research. We anticipate the state allocation to be about $47M for an additional 40,000 square feet of space dedicated to research, which will house the Center and the PAM Lab -- we estimate that $12M will be dedicated to the Center and PAM Lab. We are also in the process of searching for 5-6 computational research scientists, which is estimated at $750,000 per year. UWF has committed $1M for startup costs. The PAM Lab is currently funded at $500,000 per year which will be committed to this project. In total, UWF commitments are estimated at $25.5M. We anticipate that the PAM Lab and Center will drive new research and development funding of at least $30M during the 10-year period.

iii.   Location of the project or program

Escambia County. $(IA)^2$ will be primarily located in two buildings on the University of West Florida's main Pensacola campus, buildings 04 and 58C.

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.

See above for a summary description. $(IA)^2$ will drive transformational change via the seeding of a strong Computation Intelligence cluster of research and the development of technology for industry use through the PAM Lab. The activities of the PAM Lab and the Center will drive economic recovery through new federal and state investments via grants and contracts, new job creation, the commercialization of new technology, and data services to local businesses. The impacted counties will be significantly enhanced and recognized with the establishment of $(IA)^2$ by creating new collaborations with local businesses, which will allow an increased expansion of data services offered by the PAM Lab to those in the disproportionately affected counties.

v.   Summary timeline for the proposed project or program

We envision a 10-year timeline summarized by (1), (2), and (3). (1) In the first six years, we propose to use $6M of Triumph Gulf Coast funds to establish programming and to hire personnel. (2) In the first year, we propose to use $2M to build out computational research space in building 58C. (3) During the entire 10-year period, we propose to use $2M to purchase the required research equipment. All research and PAM Lab activities will be conducted as soon as personnel are hired, and equipment is purchased. After year 10, $(IA)^2$ will be self-sustaining.