



Florida Institute for Human & Machine Cognition

Center for Human Healthspan, Resilience and Performance (the Center)

Applicant Information

Name of Entity/Organization: Florida Institute for Human & Machine Cognition, Inc. (IHMC)

Background of Applicant Individual/Entity/Organization: Not-for-profit Research Institute of State University System of Florida

Federal Employer Identification Number: 20-0760849

Contact Information:

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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.

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

Total amount of funding requested from Triumph Gulf Coast: \$6,078,795

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

☐ Yes. ☒ No

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

Describe the financial status of the applicant and any co-applicants or partners:

IHMC is a not for profit research institute of the State University System of Florida and has been in existence since 2004. Currently with 120 employees, IHMC has strong federal, state, and industry contract and grant funding in force and numerous proposals either pending or in contract negotiations. Financials provided in Appendix 2.

In a separate attachment, please provide financial statements or information that details the financial status of the applicant and any co-applicants or partners: Most recent financials from IHMC are provided in Appendix 2. Additional financials are available upon request.

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: IHMC Center for Human Healthspan, Resilience and Performance (the Center)

Location: Gulf Breeze and Pensacola Florida

Description: IHMC proposes to establish a Center of Excellence focused on expanding work into the cutting-edge field of Human Healthspan, Resilience and Performance. In the context of this proposal, Human Performance is the ability to complete a task which is critically dependent on the interplay of personal and environmental factors. IHMC intently focuses on its goal to significantly advance its understanding of human performance, and develop evidence-based interventions that maximize the abilities of individuals and teams.

IHMC has invested significant time and resources to begin and grow a human performance and resilience research capability in Northwest Florida. IHMC has leveraged a \$1M gift to recruit and hire leading researchers with specialized skills and experience in human performance. This new Human Performance Team has already shown great success in winning competitive government research grant and contracts. As an example, IHMC was recently awarded a large DARPA (Defense Advanced Research Projects Agency) funded project known as Peerless. Although the Peerless award is approximately \$35M, due to the fact that IHMC does not have the specialized equipment and facilities necessary to execute all of the required research, more than $\frac{3}{4}$ of the Peerless funding will be sent to subcontractors who are outside of Florida. With this new proposed Center, IHMC will retain significantly more funding on future human performance awards. IHMC proposes leveraging the current momentum and collective resources in conjunction with grant funding from Triumph Gulf Coast, to catalyze the existing program and seed the explosive growth of a human performance and resilience cluster in Northwest Florida.

IHMC will collaborate with JAG Consulting (a previous IHMC employee founded human performance consulting firm), TechFarms Capital (a Panama City entrepreneurial ecosystem start up fund), Oxefit (a former group of IHMC employees local startup in exercise performance) and other local entrepreneurial/technology transfer entities to catalyze entrepreneurial spin-off opportunities. IHMC and these entrepreneurial/technology transfer organizations will assist with due diligence, funding, and growth of human performance technology and intellectual property to help facilitate the growth of the human performance cluster. The ability to create a human performance Center that partners with local and regional private commercialization companies such as JAG Consulting, TechFarms Capital, and others in a common goal of creating products/services, jobs and opportunities for growth of a new economic industry ecosystem is transformational. Royalty income may also flow to IHMC and other local partners from these commercialization efforts and will be used to sustain and grow the Center. Increases in human performance research funding and partnering with local entities will attract other organizations to establish businesses and/or satellite offices in the area to further support

and leverage the efforts of the Center. In an effort to catalyze commercial spin off opportunities and associated job creation, IHMC will host recurring meetings for its human performance research team to present the current state of research and technology that may be ready for commercial efforts as well as allow for other regional human performance collaborators to present their own technology. These meetings will contain numerous collaborators to include researchers, technology transfer experts, venture capital, and growth consultants.

IHMC is well-known for two distinct fields of research prominence that are known throughout the national and international research communities; Humanoid Robotics and Artificial Intelligence. The envisioned new Center focused on human healthspan, resilience and performance will establish a powerful, one-of-a-kind capstone for research and development in Northwest Florida – thus having a transformational regional impact.

Over the past several years, IHMC has effectively expanded and diversified its research in human performance, healthspan, and resilience by attracting highly talented research scientists in this burgeoning field with support primarily from NASA and DoD. This cutting-edge research will also have civilian applications, especially for the aging population.

IHMC and its partners are convinced that their collaborations will prove synergistic, and will assist in attracting more renowned scientists, researchers; and, in turn, more federal and industry research funding to Northwest Florida. Complementing its current research talent already leading cutting-edge human performance work, IHMC has identified an additional cadre of renowned scientists it will aggressively recruit to ensure the Center's long-term success and impact.

IHMC will also collaborate closely with those regional entities that share a particular focus on human healthspan, resilience, and performance within relevant segments of military research (Special Operations, Wounded Warrior Programs, NASA) and elite athlete programming. Its fully expected that these collaborations, and the subsequent innovation, will create spin-off opportunities for IHMC and its partners that will further drive the success of the human performance cluster and create new submarkets that will mature to have sustained impact.

Researchers and staff at the Center will work at IHMC to utilize the most modern equipment, technology and tools to conduct state of the art research in the field of human performance optimization. The Center's mission will be to lead high-impact scientific advances that improve human performance, health, and resilience. This mission will be achieved with a carefully planned infrastructure for interdisciplinary team science – spanning from *molecule to man* – as Center scientists leverage molecular and genomic science, biochemistry, cellular and tissue biology, physiology, biomechanics, biomedical engineering, regenerative medicine, neuroscience, rehabilitation, clinical trials, computational biology, and AI. IHMC is uniquely positioned to partner with collaborators on establishing this comprehensive cluster focused on human performance and resilience – a unique Center poised to be a national capstone of research innovation in Northwest Florida.

To enable multiple levels of scientific inquiry toward the mission, the Center will establish and support key Research Cores. Each Core will be state-of-the-art, will generate exciting new career opportunities, and bring significant new research funding to Northwest Florida.

To this end, primary **Research Areas** will include: *(i) Clinical and Applied Research Focus Area* (Recruitment/Coordination activity, Clinical Research Unit, Cardiorespiratory Function Laboratory, Neuromuscular Function Laboratory, Body Composition assessment, Metabolism Laboratory, Neurocognitive Function assessment, Neurovestibular Function laboratory, Shoot Simulator, Intervention/Rehabilitation Clinical Trials Facility, Environmental Physiology Laboratory, Aquatic Research capability, Flight Simulator, Artificial Intelligence, Machine Learning, and Human/Machine Teaming Laboratory); and *(ii) Biological Research Focus Area* (Biospecimen Processing Laboratory, Biorepository, Computational Biology Core, Biochemistry & Molecular Biology Core, Microscopy / High-Resolution Imaging Core, Image Analysis Core, Mitochondrial Energetics Core, Tissue Histology & Cytology Core, Cell & Tissue Culture Core).

The Center's research will be complemented by training programs to foster the next generation of scientists, along with unique and value-added community outreach programs. With this infrastructure, the Center is fully expected to bolster the regional economy and undergird ground-breaking federal and industry-sponsored research in human performance and resilience that spans and embraces multiple cutting-edge scientific disciplines.

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 Center is a unique approach to establishing a cluster aimed at leveraging physical proximity to synergize the specialized expertise and diverse resources of Northwest Florida's research, defense, and private sectors. This cluster seeding will provide the proximity, facilities, location and technology necessary for an unprecedented team approach to human performance and resilience research.

Santa Rosa and Escambia County, and the entire Northwest Florida community, are perfectly positioned to incorporate existing military, Department of Defense, and other federal assets to expand, diversify, and transform the region by attracting new federal spending to the region.

Human performance, healthspan and resilience science and technology development are currently not present in any consolidated manner in the greater Northwest Florida area; yet assets like IHMC, Andrews Research and Education Foundation (AREF), and JAG Consulting exist and are primed for collaboration thus benefiting both Santa Rosa and Escambia Count. The Center will establish the cluster that will cross-thread these existing assets, maximizing their potential by drawing on their combined advantages while creating new opportunities and new potential spin off entities focusing on human performance, healthspan and resilience.

IHMC has a significant stake in the Center and is incentivized by its achievement. The Center will capitalize on the relationship between IHMC, their collaborators, as well as the partners' respective assets and resources, and ultimately grow new technology-based human performance, healthspan and resilience industries and submarkets. Creating a Center that

establishes an industry cluster for partners, and new entrants to the space, with a common goal of conducting leading-edge research and creating jobs and opportunities for growth of a new economic industry ecosystem will be truly transformational.

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

Since its inception, IHMC has enjoyed a phenomenal record of successful government grant/contracting and is now expanding those successes from artificial intelligence, computer science, robotics, and exoskeletons (amongst others) to the area of human performance, healthspan and resilience. IHMC has already been successful in attracting global talent in the human performance space as well as substantial new government funded research. Establishment of the Center will allow IHMC to expand its human performance portfolio and target significant grants and contracts requiring the type of equipment and facilities the Center will contain.

IHMC has already begun targeting, pursuing, and winning new research programs that will benefit from the creation of the Center. In addition, with the Triumph Gulf Coast grant funds, IHMC will be able to target and win contracts/grants that it currently cannot target without partnering with geographically dispersed sub-contractors who have the equipment and facilities necessary to conduct the research. Having the Center will allow IHMC to bring significantly more new federal spending to the region rather than subcontracting that work out to non-regional partners. This strategy will lay the foundation for the Center and catalyze growth of the human performance cluster being established.

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

This IHMC Center of excellence and cluster development will generate new federal and industry research funding related to human performance, healthspan, and resilience including research with special operations clients, wounded warriors and elite athletes. The Center will encompass a wide array of research and education areas relating to human performance, to encourage divergent thinking in an effort to push human performance research to the next level. This approach represents a modern multi-factorial and integrated model for optimizing human function and performance. One of the staples of the Center program will be establishing a bedrock for human performance education and outreach to students and professionals. IHMC currently conducts significant educationally focused community outreach to include Robotics Camps, Science Saturdays, Evening Lectures, STEM-Talk podcast, and newsletters. In addition, IHMC provides meaningful and impactful training and education to its scientist, interns, and postdoctoral researchers. The new Center will fuel expansion of high-quality training programs focused on the next generation of human performance subject matter experts.

The aim of this effort is to develop a Human Performance and Resilience cluster in North West Florida resulting in the significant infusion of new federal spending and the resulting economic impact to the region impacted by the BP Oil Spill. The economic benefit of this effort include:

- NEW external dollars coming into our region that would not otherwise exist; not supplanting other state or regional funds.
- The amplification of both Triumph Gulf Coast funding and federal investment occurring when federal investment serves as a complement to the Triumph investment. That is, Triumph investment in the Center will enable scientists at the Center to propose on and win additional new federal programs thus increasing federal spending for R&D in our region.
- Increases to federal investment to our area will improve productivity/output in the longer term. Spending on physical capital and equipment facilitates commerce; spending on education helps develop a skilled workforce; and spending on R&D promotes innovation.
- High wage job creation: New professionals to the area. Examples: Research Scientists, Research Physicians, Computer Scientists, Physical Therapists, Athletic Trainers, Performance Specialists, Program/Project managers, Certified Nurse Practitioners, Clinical Research Technicians, and Certification Instructors.
- New intellectual property and technology transfer opportunities as well as the potential for associated spin-off companies. The Center will serve as a hub for new business development in a growth industry that includes personalized medical care including metabolic and nutritional support, anti-aging and regenerative medicine as well as supplementation for injuries and athletic and military programs.

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 Gulf Coast funding will be utilized within the first thirty-six (36) months, split between **equipment** needed to conduct specialized human performance and resilience research and the initial seed money for additional researchers and staff. After year 3, funding required to support the Center research and additional support staff (18 FTE) will be assumed by IHMC.

The Center will sustain itself primarily through federal grant and contract funding. Future job creation sustainability will develop as significant new federal funding flows into the area via research at the Center. The creation of the Center with its state-of-the-art facilities and equipment, will enable IHMC to allocate more contract/grant funding to its local researchers rather than to partners outside of the region who are currently necessary in order to access their facilities and equipment. Additional job creation is expected to occur in the local private sector community via the growth of existing research partners as well as the possible creation of spin-off companies. As an example, the aforementioned Peerless program has already created protectable intellectual property in its first year of effort.

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

Primary measurement will be NEW federal funding (grants and contracts) proposed and

awarded to IHMC associated with the Center. Specific metrics are:

IHMC SPECIFIC PERFORMANCE METRICS:

Performance Metric #1: The addition of eight (7) net new FTE positions within the first-year post award of Triumph funds.

Performance Metric #2: The addition of four (5) additional net new FTE positions within the first two years (year 2) post award of Triumph funds.

Performance Metric #3: The addition of six (6) additional net new FTE positions within the first three years (year 3) post award of Triumph funds

Performance Metric #4: Submission of a minimum of Twenty Million Dollars (\$20,000,000) in competitively awarded research grant proposals focused on the broader objectives of the Center within 3 years of the first disbursement of Triumph funds.

Performance Metric #5: Successful award of a minimum of three Million Dollars (\$3,000,000) in competitively awarded research grant proposals focused on the broader objectives of the Center within 4 years of the first disbursement of grant funds.

Performance Metric #6: Successful award of a minimum of fifteen Million Dollars (\$15,000,000) in competitively awarded research grant proposals focused on the broader objectives of the Center within 10 years of the first disbursement of grant funds.

Performance Metric #7: Providing substantive collaborative assistance and mentoring in local entrepreneurial outreach and support to at least 45 different businesses in the impacted counties (10 in year 1, 15 in year 2, and 20 in year 3). This outreach support will be executed via collaboration with Andrews Research and Educational Foundation (AREF), JAG Consulting, Oxefit, TechFarm Capital, other venture capital and incubation organizations, and personalized medicine organizations with technology transfer capabilities. During the first 3 years of the effort, IHMC will hold quarterly commercialization meetings with AREF, Oxefit, JAG Consulting and other local technology transfer organizations to investigate the current state of IHMC's human performance research commercialization opportunities, other human performance organization opportunities, and further human performance cluster spin-off establishment and growth in the Northwest Florida region.

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.

The Center will generate maximum estimated economic benefit via the infusion of NEW federal funding to the Northwest Florida region. The Center will enable IHMC to recruit new research and support staff bringing new subject matter expertise to our region and enhancing our region's ability to attract new talent and further new federal funding successes.

The Center will leverage and enhance current key regional assets to ensure the success and sustainability of the program. These assets include:

- IHMC's experience, resources, and operational infrastructure
- Northwest Florida's large regional military footprint and associated government contracting industry
- Existing momentum in human performance, healthspan, and resilience research

As described in Section 7 above, IHMC has considerable target metrics providing very specific outcome measure for the Triumph Gulf Coast to track and measure.

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

Considered Transformational for the future of the Northwest Florida region - The Center will utilize Triumph Gulf Coast funds to expand a human performance cluster via the establishment of programming (and the associated job creation) for research and education, as well as the purchase of human performance research laboratory equipment. The Center will drive transformational change via the seeding of a strong human performance cluster. This cluster will drive economic recovery through new federal investment via grants and contracts (and the associated ripple effect), new job creation, spin off opportunities, and improved productivity. The impacted counties (Santa Rosa and Escambia) will be significantly enhanced and recognized with the establishment of the Center, creating new synergies and collaborations with other entities and commercial companies to allow increased expansion of efforts within this cluster.

May be consummated quickly and efficiently - IHMC has already identified internationally recognized senior researchers, research associates, nurse practitioners, and clinical research technicians to help manage and execute the mission of the Center.

Promote net-new jobs in the private sector with an income above regional average household income – The establishment of the Center will provide growth opportunities for existing IHMC private sector partners and it is highly expected that technology developed at the Center will provide significant potential for private sector spin-off entities to be formed.

Align with Northwest Florida FORWARD, the regional strategic initiative for Northwest Florida economic transformation – Northwest Florida FORWARD's five aspirational goals that serve as the key focus areas for future economic vitality and growth for the region – Talent, Business Vitality, Infrastructure, Entrepreneurship & Innovation, and Quality of Place – are all met by creation of the Center, the partnership between IHMC and technology transfer organizations, and the associated establishment of a human performance cluster.

Create net-new jobs in targeted industries to include: aerospace and defense... - Establishment of the Center will immediately create net-new jobs in a high wage industry and drive future job creation via growth and associated economic impact to the region. Additional growth will occur with the creation and growth of new start up organizations focused on human performance and resilience.

Promote industry cluster impact for unique targeted industries – One of the primary goals for the creation of the Center is to seed the establishment of a human performance cluster in a unique industry that has massive potential and is not easily replicated. Collaborating with entrepreneurial/technology transfer organizations will help ensure all opportunities to increase the speed, scope, and impact of the cluster are achieved.

Create net-new jobs with wages above national average wage – The vast majority (if not all) of net-new jobs created by the Center and the associated cluster will surpass the current national average wage.

Provide a wider regional impact versus solely local impact – The Center will have an immediate impact on both Santa Rosa and Escambia counties. In addition, due to the large number of military installations in the impacted region, the Center plans to collaborate across the region as these military installations request support and research from the Center. For example, the creation of the Center will allow for new and advanced research working with the US Navy Experimental Diving Unit (NEDU) based out of Bay County, SOCOM, NAS Pensacola, and IWTC Cory Station.

Enhance research and innovative technologies in the region – The Center will be the anchor that research and innovation are built upon within the region. This anchor will provide the foundation for the human performance cluster and the affiliated growth in both identified and to-be identified research and innovation.

Enhance a targeted industry cluster or create a Center of Excellence unique to Northwest Florida – Expanding a human performance cluster is one of the primary goals for establishing the Center. This cluster will no doubt become the human performance Center of Excellence driving substantial growth and success in our region.

Create a unique asset in the region that can be leveraged for regional growth of targeted industries – The Center and the associated cluster will quickly become recognized as the go-to asset for human performance research – regionally, state-wide, and nationally. IHMC has already attracted world renowned researchers and we have targeted the best and brightest to recruit once established.

Demonstrate long-term financial sustainability following Triumph Gulf Coast, Inc. funding – The Triumph Gulf Coast funds will act as seed funding for the Center and the associated cluster. IHMC and its entrepreneurial/technology transfer collaborators will be able to leverage the Center, its cutting-edge equipment, and its world-renowned talent to drive and grow federal funding and start-up entities long into the future.

Provide clear performance metrics over duration of project or program – As identified in Section 7 above, IHMC has utilized previously successful Triumph grant proposals as precedent for how to measure performance metrics and used these proven mechanisms to establish substantial targets of success for our program to achieve.

Include Applicant and selected partners/vendors located in Northwest Florida – IHMC is located in Northwest Florida and in counties significantly impacted by the BP Oil Spill.

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?**

No

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

The Escambia Board of County Commissioners has supported IHMC submitting a Triumph proposal.

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.?**

IHMC has no additional approval requirements to execute an agreement with Triumph Gulf Coast Inc.

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:**

N/A

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.**

We have strategically planned the Center's growth trajectory to: first establish immediate impact (year 1), followed by sustained expansion of both capabilities and expert personnel over time in years 2, 3 and beyond. With this feed-forward model, each subsequent year the Center will build on prior accomplishments to open more innovative research cores that attract new talent (research scientists and staff) and drive novel scientific advances. The result will be a capstone, interdisciplinary research Center in Northwest Florida with both the intellectual and physical capital to remain on the leading edge of human healthspan, resilience, and performance research. The table below defines the cores that need to be equipped and the personnel planned in each year.

	Year 1 Milestones	Year 2 Milestones	Year 3 Milestones
Clinical and Applied Research Focus Area	<ul style="list-style-type: none"> Recruitment/Coordination Clinical Research Unit Cardiorespiratory Function Laboratory Neuromuscular Function Lab Body Composition Lab Metabolism Laboratory 	<ul style="list-style-type: none"> Neurocognitive Function Shoot Simulator AI, Machine Learning, Human/Machine Teaming Research and Laboratory 	<ul style="list-style-type: none"> Intervention/Rehabilitation Clinical Trials Facility Flight Simulator
Biological Research Focus Area	<ul style="list-style-type: none"> Biospecimen Processing Laboratory Biorepository 	<ul style="list-style-type: none"> Biochemistry & Molecular Biology Laboratory 	<ul style="list-style-type: none"> Mitochondrial Energetics Tissue Histology & Cytology Facility
Key Personnel:			
Clinical Research Technician	1	1	1
Certified Registered Nurse Practitioner	1	1	
Senior Research Scientist			1
Research Scientist	1	1	1
Research Associate	4	2	3

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.**

IHMC and its authority are established by Florida Statute 1004.447 FS.

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 timeperiod over which funding is requested.

To support this project and seed the development of a health and human performance cluster in Northwest Florida, the Center program is requesting Triumph Gulf Coast, Inc. funding in the amount of \$6,078,765 (\$3.1M – equipment, \$3.0M – programming/personnel) distributed over the period of 3 years of the 10-year effort; year 1 (\$1.9 million, year 2 (\$1.6 million), year 3 (\$2.5 million). These funds will be used to purchase human performance research equipment, hire scientific technical and administrative staff, conduct extensive human performance research operations, and to establish and support human performance focused educational outreach programs. Please see Appendix 1 for a break-down of costs.

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.)

The IHMC contribution to this \$31,039,813 program will be \$24,961,018 (80%) with Triumph Gulf Coast making up the remaining \$6,078,795 (20%) of the project costs for years 1-3.

IHMC contribution will include the following:

- \$1,000,000 donation to establish the human performance research program
- Future match funding of \$18MM – see section 7
- Research salaries required to establish the existing Human Performance Program: \$1,937,445
- Future Salaries covered by IHMC (Year 1-3): \$3,268,271
 - \$1,887,094: IHMC provided HP research team 100% (Yr 1-3 and in perpetuity)
 - \$1,381,177: IHMC cost-share of Triumph Funded research team
 - Year 1: Seed Hires 100% Triumph
 - Year 2: 50% Triumph / 50% IHMC
 - Year 3: 25% Triumph / 75% IHMC
 - Note: IHMC cover 100% in year 4 and in perpetuity

Personnel Cost Share Example:

		Year 1		Year 2		Year 3		Year 4	
	Hire Date	Triumph	IHMC	Triumph	IHMC	Triumph	IHMC	Triumph	IHMC
Team Member 1	Year 1	100%	0%	50%	50%	25%	75%	0%	100%
Team Member 2	Year 2			100%	0%	50%	50%	0%	100%
Team Member 3	Year 3					100%	0%	0%	100%

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

Year 1

Clinical Research Technician (1). The two Clinical Research Technicians will be trained in human research coordination and regulatory policies. They will be responsible for participant recruitment and for managing day-to-day coordination of the growing clinical and translational research portfolio. The two will lead and co-lead the Recruitment/Coordination activities.

Certified Registered Nurse Practitioner (1). The CRNP will be skilled in clinical research and clinical practice, and will be responsible for all medical/clinical research activities and oversight of the Clinical Research Unit.

Research Scientist (1). A doctoral-level Research Scientist will be recruited who has distinct yet complementary skills that will integrate with and enhance the current research team. This junior investigator will foster ongoing research projects and serve as a burgeoning leader of planned, future research. We will recruit a junior scientist skilled in

clinical and applied human performance research to help establish and manage day-to-day operations of the new Clinical and Applied Research Focus Areas (Cardiorespiratory Function Laboratory, Neuromuscular Function Laboratory, Body Composition Assessment, and Metabolism Laboratory). This Research Scientist will be mentored by current senior investigators and leaders to catalyze their scientific advancement as both an independent principal investigator and team scientist.

Research Associate (4). Two talented masters-level or early postdoctoral-level junior scientists will be recruited to support ongoing research and bolster new studies. One will have experience and expertise in mechanistic, biological human research and will help manage the priorities and daily functions in the Biospecimen Processing Laboratory, Biorepository, and Computational Biology Core. The other Research Associate will be needed to help the Research Scientist manage complex operations across the Clinical and Applied Research Focus Area. In addition, Two bachelors or masters-level Research Associates will be recruited. One will perform key, day-to-day functions in the Clinical and Applied Research Focus Area, and the other will perform day-to-day functions in the Biological Research Focus Area.

Year 2

Clinical Research Technician (1). The two Clinical Research Technicians will be trained in human research coordination and regulatory policies. They will be responsible for participant recruitment and for managing day-to-day coordination of the growing clinical and translational research portfolio. The two will lead and co-lead the Recruitment/Coordination activities.

Certified Registered Nurse Practitioner (1). With the full expectation of growth in federally-funded research consequent to establishing the Center and recruiting new, talented scientists, we anticipate a second CRNP will be required to meet the clinical research demands. The CRNP will be responsible for sharing duties with the first CRNP on medical/clinical research activities and oversight of the Clinical Research Unit. One of the two CRNPs will direct the Unit.

Research Scientist (1). To support the expected growth in new federal funding for innovative research, new capabilities will need to be established. A doctoral-level Research Scientist will be recruited who is highly skilled in biological human research, with particular expertise to help manage and oversee the new Biological Research Focus Area being added in Year 2 (Biochemistry & Molecular Biology, Microscopy / High-Resolution Imaging Core, Image Analysis). This junior investigator will foster ongoing research projects and serve as a leader of planned, future research.

Research Associate (2). This masters-level or early postdoctoral-level junior scientist will have experience and expertise in clinical and applied human research, and will help run day-to-day operations in the new Clinical and Applied Research Focus Area. Expansion of the infrastructure will be driven by a strong expectation for successful research funding, for which execution will be dependent on these new capabilities (Neurocognitive Function, Neurovestibular Function, Shoot Simulator). It is anticipated that another talented

bachelors or masters-level Research Associate will be needed in Year 2 to support the expanding research portfolio and capabilities in the newly added facilities.

Year 3

Clinical Research Technician (1). By year 3, the expected growth of the research portfolio will necessitate the need for another Clinical Research Technician. The Technician will be trained in human research coordination and regulatory policies, and will join the current team in the Recruitment/Coordination activity to perform participant recruitment and manage day-to-day coordination of the growing clinical and translational research portfolio.

Senior Research Scientist (1). By year 3, under the Director's leadership we fully anticipate the Center will be poised to recruit another prominent scientific leader who will catalyze further growth in scientific depth and breadth of the Center. This recruitment will be timed with significant expansion of the Center's research activities as driven by both need and vision. For example, the Clinical and Applied Research Focus Areas will expand to include an Intervention/Rehabilitation Clinical Trials Facility, Environmental Physiology Core, Aquatic Research Core, Flight Simulator, and Human/Machine Teaming Laboratory. The Biological Research Focus Area will add research capabilities in Mitochondrial Energetics, Tissue Histology & Cytology, and Cell & Tissue Culture. We will prioritize recruitment of another translational scientist who will leverage the clinical/applied and biological infrastructure established.

Research Scientist (1). A talented doctoral-level Research Scientist will be recruited to support and be mentored by the new Senior Research Scientist as well as the overall senior investigative team. This junior investigator will foster ongoing research projects and serve as a burgeoning leader of planned, future research.

Research Associate (3). This masters-level or early postdoctoral-level junior scientist will bring complementary skills and expertise to help manage the newly expanded Clinical and Applied Research Focus Area. In addition, two bachelors or masters-level Research Associates will be recruited. One will perform key, day-to-day functions in the newly expanded Clinical and Applied Research Focus Area, and the other will perform key day-to-day functions in the newly added Biological Research Focus Areas.

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

The award will supplement existing resources provided by IHMC as well as external contracts and grants. Triumph funding will enable IHMC to begin the Center project which otherwise would not be feasible with existing resources.

5. Please provide a Project/Program Budget. Include all applicable costs and other funding sources available to support the proposal. See Appendix 1 for additional details.

A. Project Costs	
Permanent Staff (Includes Fringe Benefits)	\$ 8,183,606
Equipment (Clinical Core)	\$ 1,640,366
Equipment (Biological Core)	\$ 1,460,540
Space (~6,000 square feet)	\$ 22,680
Funding to support (contracts, grants, donations)	\$ 19,732,622
Total Project Cost	\$ 31,039,813
B. Other Project Funding Sources	
Private Sources	\$ 1,000,000
Other (IHMC)	\$ 23,961,018
Total Other Funding	\$ 24,961,018
Total Amount Requested	\$ 6,078,795

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

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

For the timing of the expenditures, please refer to Appendix 1. Further Justification is below.

Permanent Staff: As part of this effort, IHMC has expended significant resources to ensure the foundation of a Human Performance and Resilience program is established to ensure this next step has the strong basis for success. IHMC has already hired a world-renowned researcher who will direct the Center and drive new funding opportunities with its establishment. Note: IHMC has built in a 3% cost of living adjustment each year in its budget. As noted in section 3 above and depicted in Appendix 1, IHMC will be hiring the following once Triumph funds are received.

Key Personnel:	Year 1	Year 2	Year 3
Clinical Research Technician	1	1	1
Certified Registered Nurse Practitioner	1	1	
Senior Research Scientist			1
Research Scientist	1	1	1
Research Associate	4	2	3
Total	7	5	6

Equipment: To ensure continued proposal award success, much of the Core equipment will be purchased soon after the award of Triumph Gulf Coast grant funds. This equipment will allow IHMC to target new awards that it currently must subcontract out support to as it does not have the requisite space and equipment to conduct the research.

Permanent Staff will be onboarded as depicted in the table above and as described in further detail in section 3 of this Funding and Budget proposal section.

Funding to support: IHMC is using its Human Performance research funding awarded to date as the foundation of the Center efforts. This will seed the Center with its cutting-edge facilities, equipment, and technology.

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

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

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

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

Yes

ADDENDUM FOR INFRASTRUCTURE PROPOSALS:

1. Program Requirements

- A. Is the infrastructure owned by the public?
☐ Yes ☐ No
- B. Is the infrastructure for public use or does it predominately benefit the public?
☐ Yes ☐ No
- C. Will the public infrastructure improvements be for the exclusive benefit of any single company, corporation or business entity?
☐ Yes ☐ No
- D. Provide a detailed explanation of how the public infrastructure improvements will connect to a broader economic development vision for the community and benefit additional current and future businesses.

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

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

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

2. Additional Information

- A. Is this project an expansion of existing infrastructure project?
☐ Yes ☐ No
- B. Provide the proposed beginning commencement date and number of days required to complete construction of the infrastructure project.

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

- C. What is the location of the public infrastructure? (Provide the road number, if applicable.)

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

- D. Who is responsible for maintenance and upkeep? (Indicate if more than one are applicable.)

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

- E. What permits are necessary for the infrastructure project?

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

Detail whether required permits have been secured, and if not, detail the timeline for securing these permits. Additionally, if any required permits are local permits, will these permits be prioritized?

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

- F. What is the future land use and zoning designation on the proposed site of the Infrastructure improvement, and will the improvements conform to those uses?

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

- G. Will an amendment to the local comprehensive plan or a development order be required on the site of the proposed project or on adjacent property to accommodate the infrastructure and potential current or future job creation opportunities? If yes, please detail the timeline
☐ Yes ☐ No
-

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

- H. Does this project have a local match amount? If yes, please describe the entity providing the match and the amount.
☐ Yes ☐ No
-

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

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

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

ADDENDUM FOR WORKFORCE TRAINING PROPOSALS

1. Program Requirements

- A. Will this proposal supports 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

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

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

- ☐ Increase students' technology skills and knowledge
- ☐ Encourage industry certifications
- ☐ Provide rigorous, alterative 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

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

- 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

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

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

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

- 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.

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

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

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

- 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.

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

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

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

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

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

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

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

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

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

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

☐ Yes

☐ No

(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.
-

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

ADDENDUM FOR AD VALOREM TAX RATE REDUCTION:

1. Program Requirements

- A. Describe the property or transaction that will be supported by the ad valorem tax rate reduction.

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

- B. Provide a detailed explanation of how the ad valorem tax rate reduction will connect to a broader economic recovery, diversification, enhancement of the disproportionately affected counties and/or enhancement of a targeted industry.

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

- C. Provide a detailed description of the quantitative evidence demonstrating how the proposed ad valorem tax reduction will promote:
- Economic recovery,
 - Economic Diversification,
 - Enhancement of the disproportionately affected counties,
 - Enhancement of a Targeted Industry.

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

2. Additional Information

- A. What is the location of the property or transaction that will be supported by the ad valorem tax rate reduction?

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

- B. Detail the current status of the property or transaction that will be supported by the ad valorem tax rate reduction and provide a detailed description of when and how the ad valorem tax rate reduction will be implemented.

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

- C. Does this proposed project have a local match amount? If yes, please describe the entity providing the match and the amount.
☐ Yes ☐ No

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

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

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

**ADDENDUM FOR LOCAL MATCH REQUIREMENTS OF SECTION 288.0655,
FLORIDA STATUTES**

1. Program Requirements

- A. Describe the local match requirements of Section 288.0655 and the underlying project, program or transaction that will be funded by the proposed award.

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

- B. Provide a detailed explanation of how the local match requirements and the underlying project or program will connect to a broader economic recovery, diversification, enhancement of the disproportionately affected counties and/or enhancement of a targeted industry.

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

- C. Provide a detailed description of, and quantitative evidence demonstrating how the proposed local match requirements will promote:
- Economic recovery,
 - Economic Diversification,
 - Enhancement of the disproportionately affected counties,
 - Enhancement of a Targeted Industry.

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

2. Additional Information

- A. What is the location of the property or transaction that will be supported by the local match requirements?

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

- B. Detail the current status of the property or transaction that will be supported by the local match requirement and provide a detailed description of when and how the local match requirement will be implemented.

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

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

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

ADDENDUM FOR LOCAL ACTION PLAN

1. Program Requirements

- A. Describe how the proposed award will establish and maintain equipment and trained personnel for local action plans of response to respond to disasters.
- B. Describe the type and amount of equipment and trained personnel that will be established or maintained by the proposed award.
- C. Identify the specific local action plans (*e.g.*, Coastal Impacts Assistance Program) that will benefit from the proposed award.
- D. Provide a detailed explanation of how the proposed award will connect to a broader economic recovery, diversification, enhancement of the disproportionately affected counties and/or enhancement of a targeted industry.

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

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

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

2. Additional Information

- A. What is the location of the local action program that will be supported by the proposed award?

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

- B. Detail the current status of the local action plans (*e.g.*, new plans, existing plans, etc.) that will be supported by the proposed award and provide a detailed description of when and how the proposed award will be implemented.

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

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

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

ADDENDUM FOR ADVERTISING/PROMOTION

1. Program Requirements

- A. Is the applicant a tourism entity created under s. 288.1226, Florida Statutes?
☐ Yes ☐ No
- B. Does the applicant advertise and promote tourism and Fresh From Florida? If yes, provide details on how it advertises and promotes tourism and Fresh From Florida.
☐ Yes ☐ No

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

- C. Does the proposed award promote workforce and infrastructure on behalf of the disproportionately affected counties? If yes, describe how workforce and infrastructure is promoted on behalf of the disproportionately affected counties.
☐ Yes ☐ No

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

- D. Provide a detailed explanation of how the proposed award will connect to a broader economic recovery, diversification, enhancement of the disproportionately affected counties and/or enhancement of a targeted industry.

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

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

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

2. Additional Information

- A. Describe the advertising and promotion mediums and locations where the advertising and promotion will occur.

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

- B. Detail the current status of the advertising and promotion (*e.g.*, new plans, existing plans, etc.) that will be supported by the proposed award and provide a detailed description of when and how the proposed award will be implemented.

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

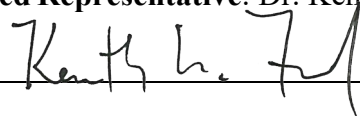
- C. Provide any additional information or attachments to be considered for this proposal.

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

I, the undersigned, do hereby certify that I have express authority to sign this proposal on my behalf or on behalf of the above-described entity, organization, or governmental entity:

Name of Applicant: Florida Institute for Human & Machine Cognition

Name and Title of Authorized Representative: Dr. Kenneth Ford; Director and CEO

Representative Signature:  _____

Signature Date: December 04, 2020

Appendix 1: Cost Detail

Budget	Year 1	Year 2	Year 3	Total
Salary Expense: Hiring Team to Establish Human Performance Program	\$ 1,937,445			\$ 1,937,445
Human Performance Program Funding Required to Support Cluster Development	\$18,732,622			\$ 18,732,622
Private Donation for Human Performance Program	\$ 1,000,000			\$ 1,000,000
Key Personnel				
Senior Research Scientist	\$ 156,087	\$ 160,769	\$ 165,592	\$ 482,449
Research Scientist	\$ 133,896	\$ 137,913	\$ 142,050	\$ 413,859
Research Scientist	\$ 143,000	\$ 147,290	\$ 151,709	\$ 441,999
Research Associate	\$ 83,815	\$ 86,330	\$ 88,920	\$ 259,064
Research Associate	\$ 93,734	\$ 96,546	\$ 99,443	\$ 289,723
IHMC Portion of Triumph Funded Research Team	\$ 610,532	\$ 628,848	\$ 647,714	\$ 1,887,094
Clinical Research Technician		\$ 48,307	\$ 74,634	\$ 122,941
Clinical Research Technician			\$ 48,307	\$ 48,307
Clinical Research Technician				\$ -
Senior Research Scientist				\$ -
Research Scientist		\$ 73,645	\$ 113,782	\$ 187,427
Research Scientist			\$ 73,645	\$ 73,645
Research Scientist				\$ -
Research Associate		\$ 54,384	\$ 84,023	\$ 138,407
Research Associate		\$ 54,384	\$ 84,023	\$ 138,407
Research Associate			\$ 54,384	\$ 54,384
Research Associate				\$ -
Research Associate		\$ 41,715	\$ 64,450	\$ 106,165
Research Associate		\$ 41,715	\$ 64,450	\$ 106,165
Research Associate			\$ 41,715	\$ 41,715
Research Associate			\$ 81,000	\$ 81,000
Research Associate			\$ -	\$ -
Certified Registered Nurse Practitioner		\$ 79,722	\$ 123,170	\$ 202,892
Certified Registered Nurse Practitioner			\$ 79,722	\$ 79,722
Subtotal: IHMC Cost-Share - Programming/Personnel	\$ -	\$ 393,872	\$ 987,305	\$ 1,381,177

Budget	Year 1	Year 2	Year 3	Total
Clinical Research Technician	\$ 93,800	\$ 48,307	\$ 24,878	\$ 166,985
Clinical Research Technician		\$ 93,800	\$ 48,307	\$ 142,107
Clinical Research Technician			\$ 93,800	\$ 93,800
Senior Research Scientist			\$ 236,000	\$ 236,000
Research Scientist	\$ 143,000	\$ 73,645	\$ 37,927	\$ 254,572
Research Scientist		\$ 143,000	\$ 73,645	\$ 216,645
Research Scientist			\$ 143,000	\$ 143,000
Research Associate	\$ 105,600	\$ 54,384	\$ 28,008	\$ 187,992
Research Associate	\$ 105,600	\$ 54,384	\$ 28,008	\$ 187,992
Research Associate		\$ 105,600	\$ 54,384	\$ 159,984
Research Associate			\$ 105,600	\$ 105,600
Research Associate	\$ 81,000	\$ 41,715	\$ 21,483	\$ 144,198
Research Associate	\$ 81,000	\$ 41,715	\$ 21,483	\$ 144,198
Research Associate		\$ 81,000	\$ 41,715	\$ 122,715
Research Associate			\$ 81,000	\$ 81,000
Research Associate			\$ 81,000	\$ 81,000
Certified Registered Nurse Practitioner	\$ 154,800	\$ 79,722	\$ 41,057	\$ 275,579
Certified Registered Nurse Practitioner		\$ 154,800	\$ 79,722	\$ 234,522
Subtotal: Triumph Seed Funding - Programming/Personnel	\$ 764,800	\$ 972,072	\$ 1,241,017	\$ 2,977,889
Core Equipment				
Clinical Research Cores				
Clinical Research Unit	\$ 24,560			\$ 24,560
Cardiorespiratory Function Laboratory	\$ 231,610			\$ 231,610
Neuromuscular Function Laboratory	\$ 218,050			\$ 218,050
Body Composition Core	\$ 115,000			\$ 115,000
Mobile Technology Core	\$ 74,500			\$ 74,500
Metabolism Laboratory	\$ 58,610			\$ 58,610
Neurocognitive Function Core		\$ 5,200		\$ 5,200
Intervention/Rehabilitation Clinical Trials Facility			\$ 645,636	\$ 645,636
Flight Simulator			\$ 150,000	\$ 150,000
Artificial Intelligence, Machine Learning, Teaming Laboratory			\$ 117,200	\$ 117,200
Subtotal	\$ 722,330	\$ 5,200	\$ 912,836	\$ 1,640,366
Biological Research Cores				
Biospecimen Processing Laboratory	\$ 82,230			\$ 82,230
Biorepository	\$ 242,500			\$ 242,500
Computational Biology Core	\$ 108,000			\$ 108,000
Biochemistry & Molecular Biology Core		\$ 347,810		\$ 347,810
Microscopy / High-Resolution Imaging Core		\$ 151,000		\$ 151,000
Image Analysis Core		\$ 172,400		\$ 172,400
Mitochondrial Energetics Core			\$ 150,000	\$ 150,000
Tissue Histology & Cytology Core			\$ 55,600	\$ 55,600
Cell & Tissue Culture Core			\$ 151,000	\$ 151,000
Subtotal	\$ 432,730	\$ 671,210	\$ 356,600	\$ 1,460,540
Total Equipment	\$ 1,155,060	\$ 676,410	\$ 1,269,436	\$ 3,100,906
Facilities				
Research Space 6,000 sq feet (Value)	\$ 100,000	\$ 100,000	\$ 100,000	\$ 300,000
TOTAL	\$24,300,459	\$2,771,202	\$ 4,245,472	\$ 31,317,133
IHMC Cost-Share	\$22,380,599	\$1,122,720	\$ 1,735,019	\$ 25,238,338
Triumph Gulf Coast Request	\$ 1,919,860	\$1,648,482	\$ 2,510,453	\$ 6,078,795

Appendix 2: IHMC 2019 Financials

FLORIDA INSTITUTE FOR HUMAN AND MACHINE COGNITION, INC.

PENSACOLA, FLORIDA

FINANCIAL STATEMENTS

JUNE 30, 2019 AND 2018

FLORIDA INSTITUTE FOR HUMAN AND MACHINE COGNITION, INC.
STATEMENTS OF FINANCIAL POSITION
JUNE 30, 2019 AND 2018

ASSETS

	<u>2019</u>	<u>2018</u>
Current Assets:		
Cash	\$ 3,885,570	\$ 5,115,590
Restricted cash held by trustee	650,973	688,624
Grants and contracts receivables	3,358,058	2,984,530
Other receivables	-	17,703
Pledge receivable	47,794	97,794
Prepaid expenses	121,411	89,771
Total current assets	<u>8,063,806</u>	<u>8,994,012</u>
 Property and Equipment, net	 18,487,437	 18,481,425
 Other Assets:		
Deposits	<u>12,522</u>	<u>12,522</u>
 Total Assets	 <u><u>\$ 26,563,765</u></u>	 <u><u>\$ 27,487,959</u></u>

LIABILITIES AND NET ASSETS

Current Liabilities:		
Current maturities of long-term debt	\$ 701,328	\$ 698,000
Accounts payable	1,077,486	1,007,973
Accrued payroll and related liabilities	548,935	485,820
Accrued interest	96,250	88,624
Refundable advances	219,179	43,802
Total current liabilities	<u>2,643,178</u>	<u>2,324,219</u>
 Long-Term Debt, less current maturities	 <u>8,854,610</u>	 <u>10,490,792</u>
 Total liabilities	 <u>11,497,788</u>	 <u>12,815,011</u>
 Net Assets:		
Without donor restrictions	14,955,631	14,337,171
With donor restrictions	110,346	335,777
Total net assets	<u>15,065,977</u>	<u>14,672,948</u>
 Total Liabilities and Net Assets	 <u><u>\$ 26,563,765</u></u>	 <u><u>\$ 27,487,959</u></u>

FLORIDA INSTITUTE FOR HUMAN AND MACHINE COGNITION, INC.
STATEMENTS OF ACTIVITIES
YEARS ENDED JUNE 30, 2019 AND 2018

	2019	2018
Change in Net Assets Without Donor Restrictions:		
Support, Revenue and Reclassifications:		
Grants and contracts	\$14,492,738	\$ 13,939,369
Legislative appropriation	3,239,184	3,739,184
Contributions	432,549	1,420,708
Other revenue	57,666	237,354
Net assets released from restrictions	231,931	153,468
	<hr/>	<hr/>
Total support, revenue and reclassifications	18,454,068	19,490,083
	<hr/>	<hr/>
Expenses:		
Program services -		
Research and development grants and contracts	15,577,359	14,968,177
Other program services	112,003	304,750
Total program services	<hr/> 15,689,362	<hr/> 15,272,927
Supporting services -		
Fundraising services -		
Salaries and employee benefits	65,006	58,436
Other fundraising expenses	-	8,441
	<hr/> 65,006	<hr/> 66,877
General and administrative	2,991,298	2,963,717
Total supporting services	<hr/> 3,056,304	<hr/> 3,030,594
	<hr/>	<hr/>
Total expenses	18,745,666	18,303,521
	<hr/>	<hr/>
Change in net assets without donor restrictions from operating activities	(291,598)	1,186,562
	<hr/>	<hr/>
Nonoperating Activities:		
Insurance proceeds	41,058	-
Gain on bond refund	869,000	-
Total nonoperating activities	<hr/> 910,058	<hr/> -
	<hr/>	<hr/>
Change in net assets without donor restrictions	618,460	1,186,562
	<hr/>	<hr/>

FLORIDA INSTITUTE FOR HUMAN AND MACHINE COGNITION, INC.
STATEMENTS OF ACTIVITIES
YEARS ENDED JUNE 30, 2019 AND 2018
(Continued)

	<u>2019</u>	<u>2018</u>
Change in Net Assets With Donor Restrictions:		
Contributions	6,500	243,798
Net assets released from restrictions	<u>(231,931)</u>	<u>(153,468)</u>
Change in net assets with donor restrictions	<u>(225,431)</u>	<u>90,330</u>
Change in Net Assets	393,029	1,276,892
Net Assets, Beginning of Year	<u>14,672,948</u>	<u>13,396,056</u>
Net Assets, End of Year	<u><u>\$ 15,065,977</u></u>	<u><u>\$ 14,672,948</u></u>

FLORIDA INSTITUTE FOR HUMAN AND MACHINE COGNITION, INC.
STATEMENTS OF FUNCTIONAL EXPENSES
YEAR ENDED JUNE 30, 2019

	Program					
	Research and development grants and contract	Other program services	Total program services	General and Administrative	Fundraising	2019 Total
Salaries	\$ 6,900,399	\$ -	\$ 6,900,399	\$ 3,086,735	\$ 50,224	\$ 10,037,358
Payroll taxes	454,706	-	454,706	195,048	3,879	653,633
Employee benefit programs	1,220,705	-	1,220,705	552,677	10,903	1,784,285
Subcontract	1,540,048	-	1,540,048	-	-	1,540,048
Travel	516,233	6,726	522,959	135,220	-	658,179
Meals and entertainment	25,818	28,729	54,547	15,674	-	70,221
Insurance	-	-	-	228,137	-	228,137
Legal and professional	158,764	61,890	220,654	395,229	-	615,883
Occupancy, including in-kind	-	-	-	483,618	-	483,618
Interest expense	-	-	-	458,568	-	458,568
Repairs and maintenance	-	-	-	6,728	-	6,728
Office expenses	469,294	-	469,294	212,976	-	682,270
Bad debt	-	-	-	171,520	-	171,520
Telephone	-	-	-	63,571	-	63,571
Lobbying costs	-	-	-	149,550	-	149,550
Licenses and fees	41,973	-	41,973	79,500	-	121,473
Memberships and continuing education	710	-	710	33,014	-	33,724
Employee morale and welfare	1,521	-	1,521	39,011	-	40,532
Other	9,936	14,658	24,594	28,766	-	53,360
Depreciation	-	-	-	893,008	-	893,008
Indirect applied overhead, payroll taxes and employee benefits	4,237,252	-	4,237,252	(4,237,252)	-	-
Total	\$ 15,577,359	\$ 112,003	\$ 15,689,362	\$ 2,991,298	\$ 65,006	\$ 18,745,666

FLORIDA INSTITUTE FOR HUMAN AND MACHINE COGNITION, INC.
STATEMENTS OF FUNCTIONAL EXPENSES
YEAR ENDED JUNE 30, 2018
(Continued)

	Program					
	Research and development grants and contract	Other program services	Total program services	General and Administrative	Fundraising	2018 Total
Salaries	\$ 6,900,518	\$ -	\$ 6,900,518	\$ 2,950,634	\$ 44,806	\$ 9,895,958
Payroll taxes	461,960	-	461,960	186,220	3,507	651,687
Employee benefit programs	1,256,632	-	1,256,632	491,826	10,123	1,758,581
Subcontract	1,496,080	-	1,496,080	-	-	1,496,080
Travel	516,694	8,746	525,440	133,965	-	659,405
Meals and entertainment	38,531	27,816	66,347	19,756	2,370	88,473
Insurance	-	-	-	208,503	-	208,503
Legal and professional	69,502	62,597	132,099	410,804	-	542,903
Occupancy, including in-kind	-	-	-	505,929	-	505,929
Interest expense	-	-	-	396,963	-	396,963
Repairs and maintenance	-	-	-	7,577	-	7,577
Office expenses	276,034	-	276,034	235,044	6,071	517,149
Bad debt	-	-	-	35,674	-	35,674
Telephone	-	-	-	68,856	-	68,856
Lobbying costs	-	-	-	153,913	-	153,913
Licenses and fees	27,626	-	27,626	44,379	-	72,005
Memberships and continuing education	6,571	-	6,571	40,225	-	46,796
Employee morale and welfare	1,328	-	1,328	22,033	-	23,361
Other	42,058	205,591	247,649	62,638	-	310,287
Depreciation	-	-	-	863,421	-	863,421
Indirect applied overhead, payroll taxes and employee benefits	3,874,643	-	3,874,643	(3,874,643)	-	-
Total	\$ 14,968,177	\$ 304,750	\$ 15,272,927	\$ 2,963,717	\$ 66,877	\$ 18,303,521

FLORIDA INSTITUTE FOR HUMAN AND MACHINE COGNITION, INC.
STATEMENTS OF CASH FLOWS
YEARS ENDED JUNE 30, 2019 AND 2018

	2019	2018
Cash Flows From Operating Activities:		
Change in net assets	\$ 393,029	\$ 1,276,892
Adjustments to reconcile change in net assets to net cash provided by operating activities -		
Depreciation	893,008	863,421
Amortization of debt issuance costs	5,465	5,465
Bad debt expense	171,520	35,674
Donated stock	-	(1,117,535)
Gain on refund of long-term debt	(869,000)	-
Gain on sale of donated stock	-	(206)
Loss on disposition of property and equipment	125	-
Changes in operating assets and liabilities -		
Grants and contracts receivables	(545,048)	245,874
Pledge receivable	50,000	-
Other receivables	17,703	(17,703)
Prepaid expenses	(31,640)	1,415
Other assets	-	6,674
Accounts payable	69,513	617,233
Accrued payroll and related liabilities	63,115	24,183
Accrued interest	7,626	10,226
Refundable advances	175,377	1,519
Net cash provided by operating activities	<u>400,793</u>	<u>1,953,132</u>
Cash Flows From Investing Activities:		
Proceeds from sale of investments	-	1,117,741
Purchases of property and equipment	(899,145)	(442,676)
Net cash provided by (used in) investing activities	<u>(899,145)</u>	<u>675,065</u>
Cash Flows From Financing Activities:		
Proceeds from note issuance	-	223,351
Principal payments of long-term debt	(769,319)	(741,511)
Decrease (Increase) in restricted cash for debt service	37,651	(28,559)
Net cash used in financing activities	<u>(731,668)</u>	<u>(546,719)</u>
Net Increase (Decrease) in Cash	(1,230,020)	2,081,478
Cash at Beginning of Year	<u>5,115,590</u>	<u>3,034,112</u>
Cash at End of Year	<u><u>\$ 3,885,570</u></u>	<u><u>\$ 5,115,590</u></u>
Supplemental Disclosure of Cash Flow Information:		
Interest paid	<u><u>\$ 368,116</u></u>	<u><u>\$ 308,659</u></u>
Supplemental Disclosure of Non-Cash Investing Activities and Financing Activities:		
Trade-in value received for property and equipment	<u><u>\$ 19,250</u></u>	<u><u>\$ -</u></u>
Gain on refund of long-term debt	<u><u>\$ 869,000</u></u>	<u><u>\$ -</u></u>
Refunding of long-term debt	<u><u>\$ 7,700,000</u></u>	<u><u>\$ -</u></u>
Purchase of land with long-term debt	<u><u>\$ -</u></u>	<u><u>\$ 2,000,000</u></u>