



The Florida Senate

Local Funding Initiative Request

Fiscal Year 2020-2021

LFIR # 1972

1. **Project Title**
2. **Senate Sponsor**
3. **Date of Request**

4. **Project/Program Description**

Today's learners are digital natives. They process media and learning in rapid chunks that accommodate their limited attention span and tendency to be easily distracted. To support our Florida K-12 schools, the National Center for Simulation (NCS) proposes to model several modules of State of Florida approved K-12 American History standards in an interactive, engaging virtual learning environment (VLE). Building on the strong partnerships forged between industry, military research labs and the University of Central Florida, this collaborative effort will be conducted in our Partnership Building's in Central Florida Research Park which will result in fielding an engaging experience to students' based on the proven science of learning through virtual experiences. The goal is to demonstrate that immersing students in virtual historical contexts will improve learning outcomes and memory retention, while making the process of acquiring this knowledge a fun classroom activity.

5. **State Agency to receive requested funds**

State Agency contacted? Yes No

6. **Amount of the Nonrecurring Request for Fiscal Year 2020-2021**

Type of Funding	Amount
Operations	<input style="width: 80%;" type="text" value="320,000"/>
Fixed Capital Outlay	<input style="width: 80%;" type="text" value="000"/>
Total State Funds Requested	320,000

7. **Total Project Cost for Fiscal Year 2020-2021 (including matching funds available for this project)**

Type of Funding	Amount	Percentage
Total State Funds Requested (from question #6)	<input style="width: 80%;" type="text" value="320000"/>	<input style="width: 80%;" type="text" value="100.0"/> %
Matching Funds		
Federal	<input style="width: 80%;" type="text" value="00"/>	<input style="width: 80%;" type="text" value="0"/> %
State (excluding the amount of this request)	<input style="width: 80%;" type="text" value="00"/>	<input style="width: 80%;" type="text" value="0"/> %
Local	<input style="width: 80%;" type="text" value="00"/>	<input style="width: 80%;" type="text" value="0"/> %
Other	<input style="width: 80%;" type="text" value="00"/>	<input style="width: 80%;" type="text" value="0"/> %
Total Project Costs for Fiscal Year 2020-2021	320,000	100 %

8. **Has this project previously received state funding?** Yes No

If yes, provide the most recent instance:

Fiscal Year (yyyy-yy)	Amount		Specific Appropriation #	Vetoed
	Recurring	Nonrecurring		
<input style="width: 100%;" type="text"/>	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>

9. **Is future-year funding likely to be requested?** Yes No

If yes, indicate nonrecurring amount per year.



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10. Details on how the requested state funds will be expended

Spending Category	Description	Amount
Administrative Costs:		
Executive Director/Project Head Salary and Benefits	Monitor each phase of the requirements generation, design, development, alpha and beta prototyping, and user evaluations and fielding. Review project performance to meet project costs, schedule, and performance. Provide testing feedback and user evaluation. Conduct progress reviews on a monthly basis. Review project reports, software, and approve final report.	25,000
Other Salary and Benefits	Administrative support for scheduling meetings, cost accounting, monitoring deliverables, testing schedule, and interface for high school testing, deployment, and any future media events.	5,000
Expense/Equipment/Travel/Supplies/Other		
Consultants/Contracted Services/Study		
Operational Costs: Other		
Salary and Benefits	Research, design, development, testing, and user evaluation labor provided by the University of Central Florida (UCF) (School of Modeling, Simulation & Training (SMST) and Department of Computer Science), Historical Services provided by history experts from UCF.	200,000
Expense/Equipment/Travel/Supplies/Other	Purchase of Virtual Reality hardware and software with sets for classroom use. Travel required by student subjects from school districts to UCF Partnership Building laboratories. Travel by investigators to present tools and results to school districts and at state education conferences	50,000
Consultants/Contracted Services/Study	Simulation consultant with simulation front end analysis and requirement generation experience and proven ability to transition research products to classroom use.	40,000
Fixed Capital Construction/Major Renovation:		
Construction/Renovation/Land/Planning Engineering		
Total State Funds Requested (must equal total from question #6)		320,000



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11. Program Performance

a. What specific purpose or goal will be achieved by the funds requested?

- a) To incorporate Science, Technology, Engineering and Mathematics (STEM) into non-STEM instruction like American History.
- b) To take advantage of the Modeling, Simulation and Training (MS&T) capabilities in Florida in creating physically, mentally, and emotionally engaging scenarios of State of Florida approved curriculum for K-12.
- c) To incorporate the science of learning using virtual reality technology and gamification to improve learning, memory retention, and academic performance.
- d) To present non-traditional technology courses such as American History in a unique, impacting manner, with proven technology used in the \$6B MS&T industry in Central Florida.

b. What activities and services will be provided to meet the intended purpose of these funds?

A professional program of requirement definition, applied research, prototyping, development and alpha and beta testing will be undertaken by the University of Central Florida key personal in collaboration with the National Center for Simulation, and Hagerty High School to incorporate virtual reality and gamification into a significant historical event: the signing of the Declaration of Independence. This will be a "deployable" product, available to Florida schools initially and then made available to schools across the nation showcasing the impact the Florida modeling and simulation community has to offer in education and workforce development.

c. What direct services will be provided to citizens by the appropriation project?

Students will have access to a new platform and method of instruction that will physically, mentally, and emotionally, engage them through virtual reality and gamification theory and experience. Students welcome this type of instruction. Additionally, this instruction will be consistent with the State of Florida frameworks and standards. Studies have shown students will retain learning and be able to activate when needed which will increase student performance.

d. Who is the target population served by this project? How many individuals are expected to be served?

Initially, a target grade will be selected within middle or high school. Discussions have taken place with Seminole County Public Schools in that regard. Most likely, the initial prototype will be tested at Hagerty High School because they have the modeling & simulation program of emphasis school in Florida and their associated feeder school of Lawton Chiles Middle School will give this project an excellent population to call on for their STEM initiatives and current lab space. Potentially fielding this system may impact thousands of students in Florida as well as a showcase for the State of Florida.

e. What is the expected benefit or outcome of this project? What is the methodology by which this outcome will be measured?

Students will become impacted by this deployment of engaging technology by physically, mentally, and emotionally creating more interest in History and this interest will be reflected in retention of the material and thus their academic scores. The virtual reality approach will be evaluated at Hagerty High School in Seminole County which is the modeling and simulation program of emphasis in which 260 plus students are engaged in the modeling and simulation curriculum. A design of experiment will be conducted with a control group. Students will participate in the signing of the Declaration of Independence through virtual reality and this instruction will tie into it many aspects of the time, space, and culture aspects of the time period as compared to traditional lecture, Power-Point, and text-book methods.

f. What are the suggested penalties that the contracting agency may consider in addition to its standard penalties for failing to meet deliverables or performance measures provided for in the contract?

Penalties are not anticipated. All deliverables will be made ahead of or on schedule through strict project management techniques, including project reviews and software tracking. Dr. Neal Finkelstein is a 30 year veteran of managing complex software development projects for the military, this project is considered low-risk.



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12. **The owners of the facility to receive, directly or indirectly, any fixed capital outlay funding. Include the relationship between the owners of the facility and the entity.**

The National Center for Simulation is physically located in the University of Central Florida Partnership III Building, 3039 Technology Parkway, Orlando, Florida, 32826, in the Central Florida Research Park. Partnership III represents the military, academia, and industry partnership in which volunteers from each of the partners will support the project.

13. **Requestor Contact Information**

a. First Name Last Name

b. Organization

c. E-mail Address

d. Phone Number Ext.

14. **Recipient Contact Information**

a. Organization

b. Municipality and County

c. Organization Type

- For-profit Entity
- Non-Profit 501(c) (3)
- Non-Profit 501(c) (4)
- Local Entity
- University or College
- Other (please specify)

d. First Name Last Name

e. E-mail Address

f. Phone Number

15. **Lobbyist Contact Information**

a. Name

b. Firm Name

c. E-mail Address

d. Phone Number Ext.