

# Communicating STEM to Diverse Stakeholders



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**RIDER**  
Resilient Infrastructure & Disaster Response Center

## Introduction

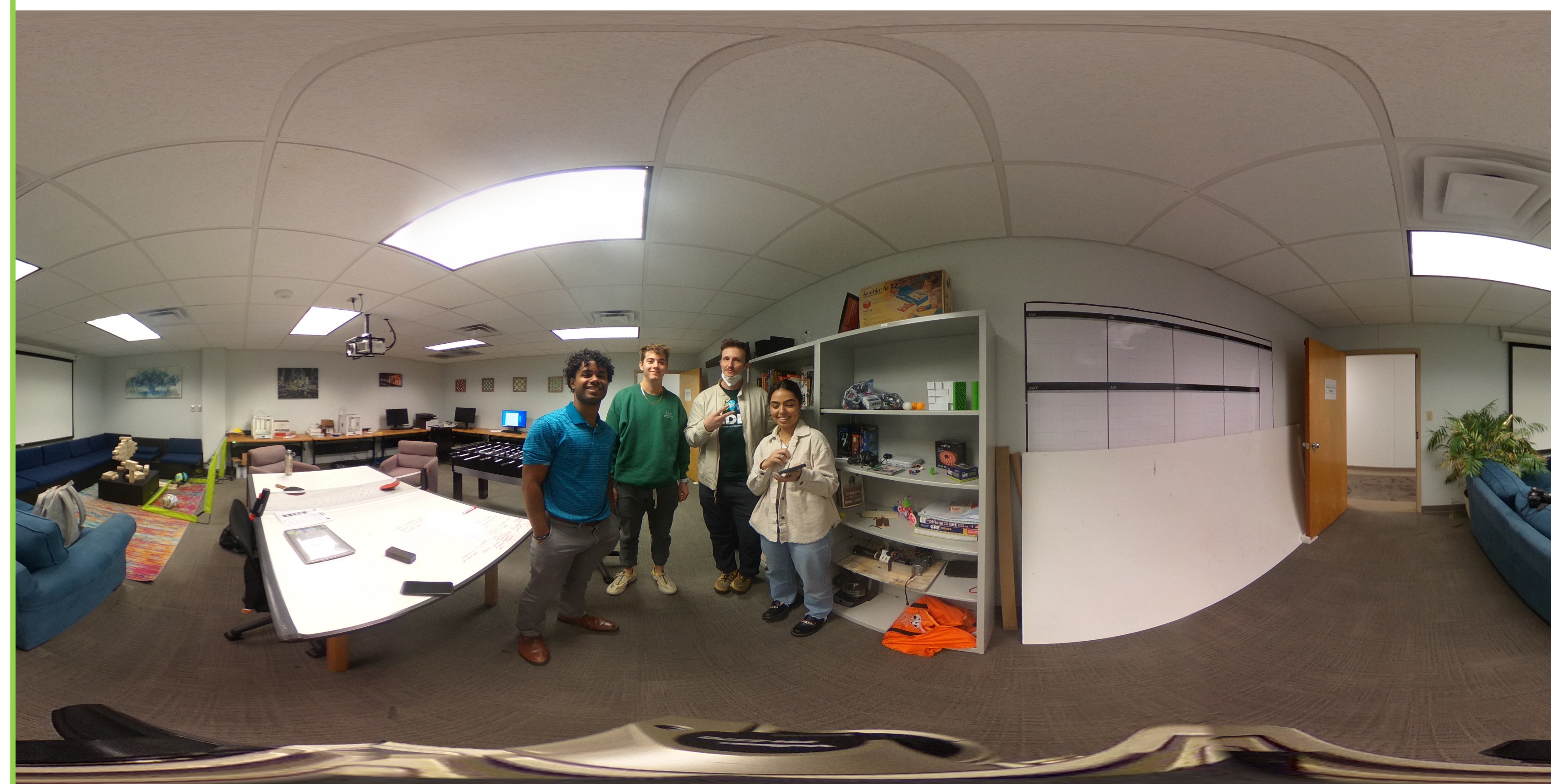
When COVID-19 hit, research facilities such as the Resilient Infrastructure and Disaster Response Center (RIDER Center) in Tallahassee, FL, lost stakeholders due to social distancing and quarantining. To discover a new way to bring in stakeholders, a 3-D virtual tour is created of the RIDER facility to showcase the research projects being conducted. With the 3-D tour, potential stakeholders can explore the facility without traveling directly to Tallahassee. This can broaden the number of stakeholders for RIDER due to the 3-D tour being available from anywhere in the world with access to Internet. This is also convenient for business ventures when there is a rise in COVID-19 cases and to decrease the spread by enforcing covid-19 guidelines. With this project, stakeholders gain information about the research currently being coordinated in RIDER Center.

## Methods

- Through the use of a RICOH THETA 360-degree camera, the facility was filmed for stakeholders to view from the comfort of their homes. I
- The process of obtaining the 360-degree camera and understanding the new technology was the most extensive part of the task.
- The RICOH THETA 360-degree camera had a short span battery life.
- Used email to find current projects going on at the RIDER Center to post on the Twitter account.

## Abstract

The Resilient Infrastructure and Disaster Response (RIDER) Center is a branch of the FAMU-FSU College of Engineering that specializes in research regarding minimizing the effects of both natural and manmade disasters. The RIDER Center's goal is to increase communication with stakeholders in which the idea of a development of a 3-D virtual tour of the facility stemmed. The method used to create the 3-D virtual tour was through the use of a 360-degree camera and several programs to code the footage together. Once the footage was compiled it was posted on the RIDER Center website. Through the communication of STEM research conducted by the RIDER Center and its facility, stakeholders will be more informed and likely to contribute in meaningful ways that help facilitate further research.



Shown above is the first trial picture taken with 360-degree RICOH THETA camera at RIDER Center in the team collaboration room.

## Acknowledgements

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## Conclusion

- Through the research done with RIDER Center, they concluded that the creation of a 3-D virtual tour is possible, but difficult with a limited budget and out of date devices.
- Although with the virtual 3-D tour of the facility, RIDER Center would be able to reach a vast audience of stakeholders from all over the world.
- Through the incorporation of this new technology into the RIDER Center website, they are able to expand and spread the knowledge of their research.

## References

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Nelson, L., Cook, D., & Cruz-Neira, C. (1999). Xgobi vs the c2: Results of an experiment comparing data visualization in a 3-d immersive virtual reality environment with a 2-d workstation display. *Computational Statistics*, 14(1), 39-51.

To the right is an image of the RICOH THETA 360-degree camera which was used in the production of the 3-D virtual tour of the RIDER Center facility.

