



Water POD

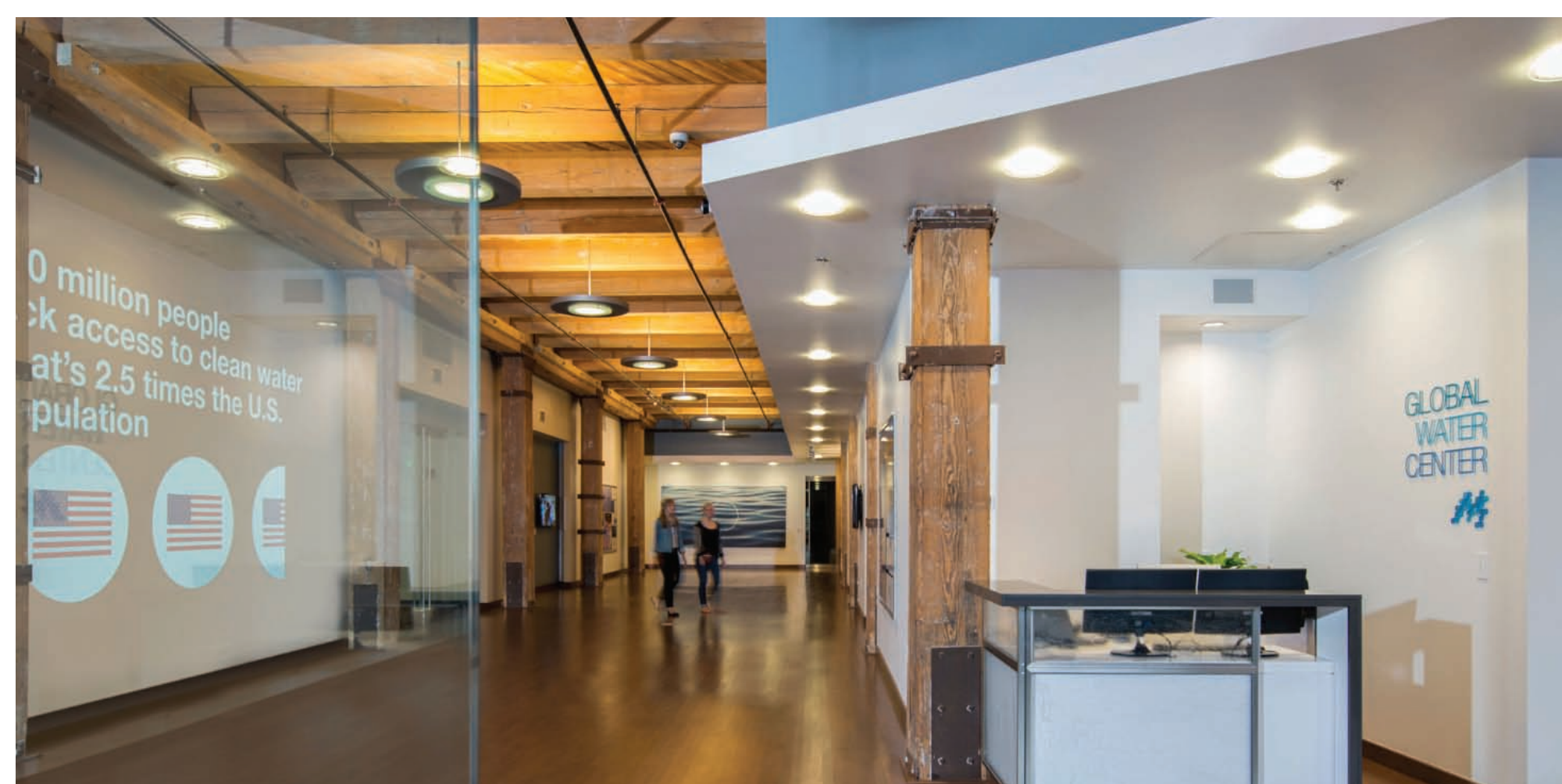
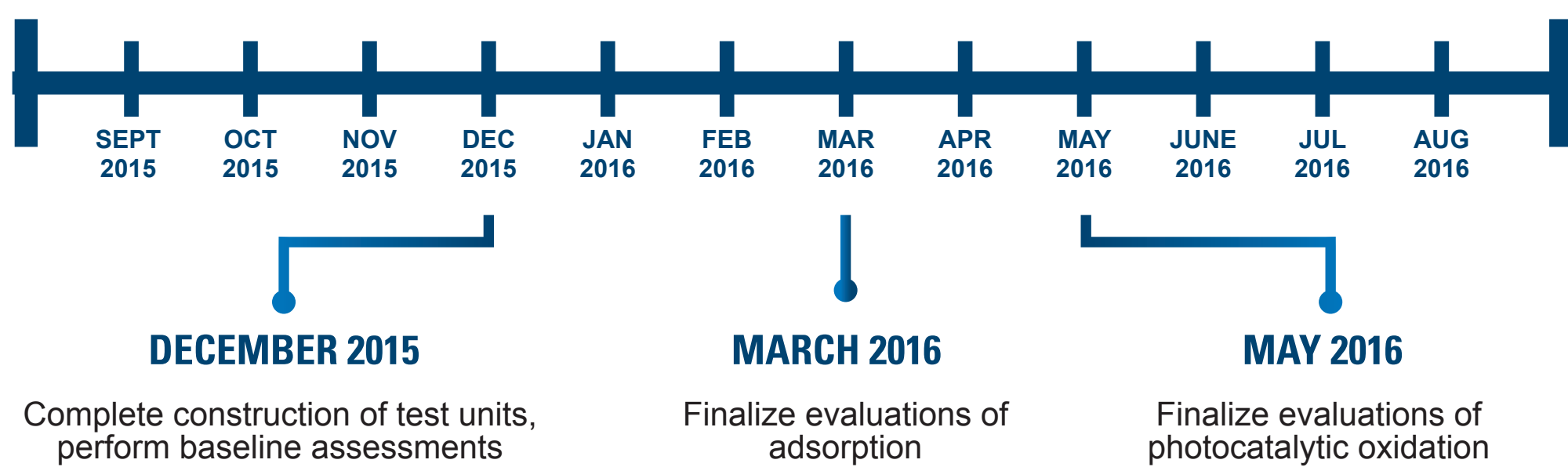
A Mini Water Purification System

WATER POD – A MINI WATER PURIFICATION SYSTEM

Focusing On Using Titanium Dioxide To Enhance Water Treatment Using The Water Pod System.

The aim of this project is to develop and evaluate approaches to integrate titanium dioxide (TiO₂) treatments into the Stonehouse Water Technologies Water POD drinking water treatment system. The team will assess the treatability of different reactor configurations, including A) a filter bed approach designed to adsorb contaminants and physically remove them from the water, and B) a photocatalytic chamber designed to chemically degrade harmful pollutants. The team will initially focus on contamination from organic micropollutants.

MILESTONES



Entrance to the Global Water Center

SCAN QR CODE FOR
[HTTP://STONEHOUSEWATER.COM/](http://stonehousewater.com/)



Brooke Mayer



Krassi Hristova



Stonehouse Water Technologies team with the Water POD

Brooke Mayer, MU Environmental Engineering
Krassi Hristova, MU Microbiology
Hensley Foster, Stonehouse Water Technologies
Charles Bensinger, Stonehouse Water Technologies

ABOUT OUR TEAM

Stonehouse is based in the Global Water Center near Marquette. Their Water POD treatment system was developed as a low maintenance and low cost approach to providing safe drinking water to people in both developed and developing world contexts. Stonehouse became interested in incorporating titanium dioxide (TiO₂)-based treatments into future versions of the Water POD. The Innovation Fund provided an ideal opportunity for Stonehouse to partner with Drs. Hristova and Mayer, who have expertise in TiO₂ treatments as well as chemical and microbial water quality research.

BEYOND BOUNDARIES

Sustainability of Valuable Resources

Providing access to safe drinking water using advanced science and technology solutions is at the heart of the research and business interests of the Marquette researchers and the team at Stonehouse Water Technologies. Globally, almost one million people die annually from water-borne diseases, and polluted water is the leading cause of death for children. In Wisconsin, 30% to 50% of wells in certain rural areas suffer from contamination. Our project creates an opportunity for industry-university collaboration in the pursuit of solutions restoring wellness and good water stewardship to those individuals and communities presently in need of clean water.

This project addresses multiple aspects of Marquette's strategic plan in **the pursuit of academic excellence for human well-being, research in action, and sustainability of valuable resources**. An undergraduate student will work together with a research technician and the rest of the Marquette and Stonehouse team to complete this project. The student will benefit from active involvement in research that translates classroom education into action with an ultimate focus on human well-being. The collaboration and research findings of this work are expected to build a strong foundation for future industry-university partnership, intellectual property, and related research pathways.