

# Capturing Engagement During a Solar Eclipse

A Mobile App for Citizen Scientists Drew 50,000 New Users

## Summary

The GLOBE Program is an international network of students, teachers and citizen scientists working together to learn more about our shared environment and climate. When a project idea was proposed to the GLOBE Observer team for the 2017 solar eclipse in North America, Liferay was used to quickly develop new features and manage a large influx of users.

[observer.globe.gov](http://observer.globe.gov)

## In Brief

### INDUSTRY:

Government (Federal)

### COUNTRY/REGION:

United States

### USE CASE:

Mobile, Public Website

### KEY FEATURES:

User Management,  
Mobile Integration,  
Data Visualization

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David Overoye, Science Systems and Applications, Inc. (SSAI),  
Project Manager for GLOBE DIS

## Challenges

- A short project time frame
- Need for an easy development solution
- Required the ability to scale and accommodate a large influx of users and data input
- Last-minute feature requests needed to be delivered within a week

## Results

 **50,000 NEW USERS**  
Added within a few weeks

 **100,000 NEW MEASUREMENTS**  
Taken in a few hours — a massive spike from normal operations

 **INDUSTRY BUZZ**  
Positive feedback from NASA, national and international media buzz

 **READY TO SCALE**  
More than doubled their environment cost-effectively

# Citizen Collaboration for Global Science

GLOBE Observer is part of the Global Learning and Observations to Benefit the Environment (GLOBE) Program, sponsored by NASA and supported by the National Science Foundation (NSF), NOAA and the Department of State. The GLOBE Program allows students to take part in Earth science by recording observations and analyzing them online with other students around the world. GLOBE Observer extends participation to citizen scientists; any member of the public can contribute data about their environment to this worldwide database.

“Facilitating those connections for people and helping them understand the world around them is something that’s really powerful,” says Autumn Burdick, NASA GLOBE Observer Communications Director.

“It inspires people to pursue new ideas in science.”



## Gaining 50,000 New Users

With a solar eclipse approaching in 2017, the team at GLOBE decided to start a campaign that would give people the opportunity to be involved with the eclipse. The team planned to create a single page in its mobile app that would enable users to take eclipse-specific measurements.

As the eclipse approached, the number of new users steadily increased, adding about 50,000 new users to the system in total — far more than the

team had anticipated. The team used the identity management features within Liferay to manage the new additions, which were tagged with a particular role so they could keep track of who was coming in through the eclipse project.

A week before the eclipse, the GLOBE team came up with the idea of displaying the aggregated observation data on a map that showed the path of the eclipse across the U.S. Users could move a time slider left to right and see the temperature data show up on the map as the eclipse progressed.

SSAI’s development team was able to build the map and put it up within a week, and it instantly became popular. Several of the NASA centers had it displayed throughout the day and it was picked up on some of the news coverage of the eclipse.

In the end, over 100,000 measurements were taken during the eclipse with the GLOBE Observer app, a massive spike relative to normal operations.

## Driving Scientific Engagement

With Liferay, GLOBE Observer was able to act quickly on an idea that contributed to its mission: Giving citizen scientists of all ages the opportunity to participate in the scientific process, and by doing so, contribute meaningfully to our understanding of the Earth system and global environment.

“Once our developers understand the Liferay platform, they can modify it to do anything,” says Dave Overoye, Project Manager for the GLOBE website. “Literally anything.” This flexibility is a strong advantage as he works to balance the requirements of stakeholders from around the world.

GLOBE is now working on opening up the eclipse project worldwide. A one-off, experimental project idea has become an exciting new way to engage people globally, and they were able to validate the idea with the support of Liferay.