



# Florida Department of Transportation Research

## Improving Access to Transit through Crowdsourced Information

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### Project Number

BDV26-977-05

### Project Manager

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### Current Situation

The widespread ownership of cell phones presents an opportunity for public transportation agencies to provide their customers with real-time information about bus routes, detours, vehicle locations, and expected arrival times. This information improves the predictability of using public transit and increases ridership. Additionally, feedback from these customers can be a valuable source of information regarding transit operations and other aspects of the roadway system, such as downed power lines, blocked sidewalks or bike lanes, and others. Key to the usefulness of this information is proper triaging and ensuring that it is directed to the right agency.

### Research Objectives

In this project, University of South Florida researchers implemented software that took advantage of the Open 311 issue-reporting standard to capture various types of data from users of public transportation in Pinellas and Hillsborough counties.

### Project Activities

Public transportation agencies in Pinellas and Hillsborough counties make available cell phone apps that provide riders with a range of information about bus routes, schedules, arrival times, etc. Riders in the Tampa Bay area can use the OneBusAway app to access this information. Into this app, the researchers integrated SeeClickFix, an issue-reporting software compliant with the Open311 standard. The software was deployed in February 2017, and user feedback was collected through July 2017.

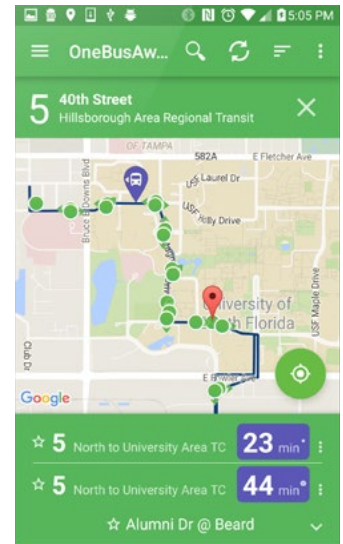
The researchers collected 677 issue reports in Hillsborough County, the majority of which (87%) were related to bus arrival times and schedules. Approximately 13% of the reports (88) were related to other issues, including an open electrical control box, a crushed corner storm drain, and debris blocking sidewalks and bicycle paths. Users also reported bus stops in locations that exposed riders to safety hazards. Over 4,750 reports were received in Pinellas county, 57 of which were transit related; the significantly larger number of reports is explained by the county's use of SeeClickFix for many years for non-transit issues.

The transportation agencies reported a positive experience with the issue-reporting system, and they provided suggestions for improvements. The researchers worked with the agencies to improve the reporting process, including adapting the user interface of the app to show issue categories dynamically defined by the jurisdiction and ensuring that issues were directed to the appropriate agency (e.g., transit agency, county, Florida Department of Transportation) based on these categories. The agencies found metadata, like time and location, provided by user's phones through the app to be very useful. The project team in turn was able to suggest improvements to the Open311 standard which govern protocol used in the reporting system.

### Project Benefits

Improved ability of agencies to triage and manage issues reported by the public that affect the different users of the roadway and transit system, which can lead to more timely repair and replacement as well as greater efficiency and safety.

For more information, please see [www.fdot.gov/research/](http://www.fdot.gov/research/).



The OneBusAway app shows riders the location of the bus they are waiting for.