Learning Objectives

Attendees to this webinar should be able to:

• List the challenges and opportunities for accommodating issue reporting for transportation infrastructure

• Explain the advantages of using an issue reporting standard
Challenges

- Florida has highest bike/pedestrian fatality rate per capita in the nation - two straight years
- Need to identify ways to make multimodal travel safer
  - Listen to public!
- Issues that affect travel are cross-jurisdictional
  - Difficult for the public to understand who should manage specific infrastructure (street, light, sidewalk, bike lane, etc.)
- How can we improve issue reporting from the public to government?

Cross-jurisdictional Challenges

I want to report a
...sand in bike
...broken sidewalk
At bus stop? Yes
Bench color?
Gray
Contact nonprofit
No
Green
Contact transit agency
Contact county
In city limits?
Yes
Contact city
No
Which one?
Contact local municipality?
What is OneBusAway?

• **What?** Suite of open-source software that provides real-time bus/train/rail tracking information

• **Why?** Make riding public transit easier via mobile apps and enabling research that has shown benefits:
  - Shorter perceived wait time [1]
  - Shorter actual wait time [1]
  - Lowers learning curve for new riders [2]
  - Increased ridership [3][7]
  - Increased feeling of safety (e.g., at night) [5][6]
  - Riders prefer accessing real-time transit info via mobile apps [1]

Mobile Apps and More!

Open Developer APIs - https://github.com/OneBusAway/onebusaway-application-modules/wiki
Where is OneBusAway?

- Seattle, WA: Original deployment
- New York, NY: Adapted for the MTA (Bus Time)
- Atlanta, GA: 2013
- Tampa Bay, FL: 2013 HART 2016 PSTA (in progress)
- York, ON: 2014
- New York, NY: Adapted for the MTA (Bus Time)
- Lappeenranta, Finland: In testing

Can add new agencies/regions easily - https://github.com/OneBusAway/onebusaway/wiki/Multi-Region

OneBusAway Challenges - Submitting issues

- Users are willing to send agencies feedback (which is good!)
  - Potential source of information for improving multimodal travel
- ...but multiple reporting screens confuse users
  - What issues can be reported isn’t clear to user
  - Single “Contact Us” email contact point per region
  - Many users don’t discover structured stop/trip reporting

- Rouge Valley, OR: 2015
- San Joaquin, CA: In testing
- San Diego, CA: 2016
OneBusAway Challenges – Managing issues

- Single regional email contact point is difficult to manage
  - Especially if multiple agencies
- Structured stop/trip reports only accessible to OneBusAway admins
- No pictures/reporting/analytics features
- Can’t communicate with user via structured stop/trip reports
- Supports only data issues, not infrastructure issues

How to address challenges?

- OneBusAway users are willing to report problems that affect multimodal travel

- How can we improve OneBusAway issue reporting to best harness this information?
  - Make it easier for users to submit issues
  - Make it easier for agencies to manage issues
Open311 – Issue Reporting Protocol Standard

Open311.org

Pinellas County & City of St. Pete

• Using SeeClickFix.com for issue reporting / management
• SeeClickFix has an Open311 API
Solution - Leverage Open311 in OneBusAway

- Send feedback via Open311 protocol to ANY system
- Enables discovery of issue categories per geographic location

Open311 integration

- App can submit issues directly to any Open311 server (e.g., SeeClickFix) for any area
  - Include picture attachment
- Categories and follow-up questions defined by local municipalities, county, DOT
- Transit agency, city, county, or DOT is notified based on issue category and geographic bounds
**Improved feedback experience**

- **Nearby**
  - Nearby
  - Starred stops
  - My reminders

- **Settings**
  - Help
  - Send feedback

**Send feedback**
- Contact Customer Service
  - Driver compliments and complaints, lost & found, etc.
- Report a Stop Problem
  - Missing route, broken beach, etc.
- Report an Arrival Time Problem
  - Vehicle never came, wrong arrival time, etc.
- Send App Feedback
  - Design, bugs, etc.
- Ideas For New Features
  - Submit and vote on future improvements

**Reporting stop/infrastructure issues**

**Stop Problem**
- 118TH AVE N + 46TH ST N

**Categories**
- PSTA - Bus Stops
- PSTA - Arrival times/schedules
- OTHERS
  - Animal Related
  - Mosquito Control
  - Accumulations of Garbage/Refuse/Debris
  - Appliance, Furniture, and Bulk Pick-Up
  - Ask City Administration

*Categories for THIS LOCATION retrieved via Open311*
**Reporting stop/infrastructure issues**

Sub-categories also controlled via Open311 server

**Benefits – Automated geographic issue routing**

**Before**
- Citizens have to individually contact each local government office

**After**
- Issue reports are automatically assigned to FDOT, Pinellas County, and others based on GIS data
Benefit – Improved D7 workflow

Before

- Government entities manage issue reports via email

After

- Issue reports are managed via centralized issue reporting tool (SeeClickFix)
- Issues are automatically assigned to proper department based on issue category
- Issue categories defined by government office

Benefit – Advanced analytics tools
Current status

• Started OneBusAway limited beta at Pinellas Suncoast Transit Authority (PSTA, in Pinellas County) on May 3rd
  – Email invitation to 2000 riders
  – Full PSTA rollout planned August 1st
• Research project runs through early 2017
  – Will be monitoring reported issues and agencies’ experiences
• Any OneBusAway region can use their own Open311 server to receive and manage issues
  – Vendor options (http://wiki.open311.org/GeoReport_v2/Support/)
  – Open-source options (http://wiki.open311.org/GeoReport_v2/Resources/)

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