OneBusAway:

Improving the Usability of Public Transit

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Why am I “here”?

- To tell you about my work on OneBusAway
- To provide an iPhone developer perspective

Motivations

- The goal of OneBusAway is to help provide a better experience for transit riders, and to encourage more people to use public transit.
- Focus on:
  - Real-time arrival information
  - Innovative technical solutions
  - Usability
  - Free as in speech and beer

OneBusAway

Home | Tools | Research | Blog | Contact Us

Where is your bus?

Let's find out. We provide easy access to real-time transit information for King County Metro.

Our Goal

We want to make it easier to use public transit by providing easy access to schedule and real-time arrival information for the buses and trains you ride every day.

We provide:

- Real-time arrival information for King County Metro buses.
- Arrival info for every bus stop.
- Easy access to information across a variety of devices.

Why? We're riders just like you and we don't like waiting for the bus any more than we have to.

Our Tools

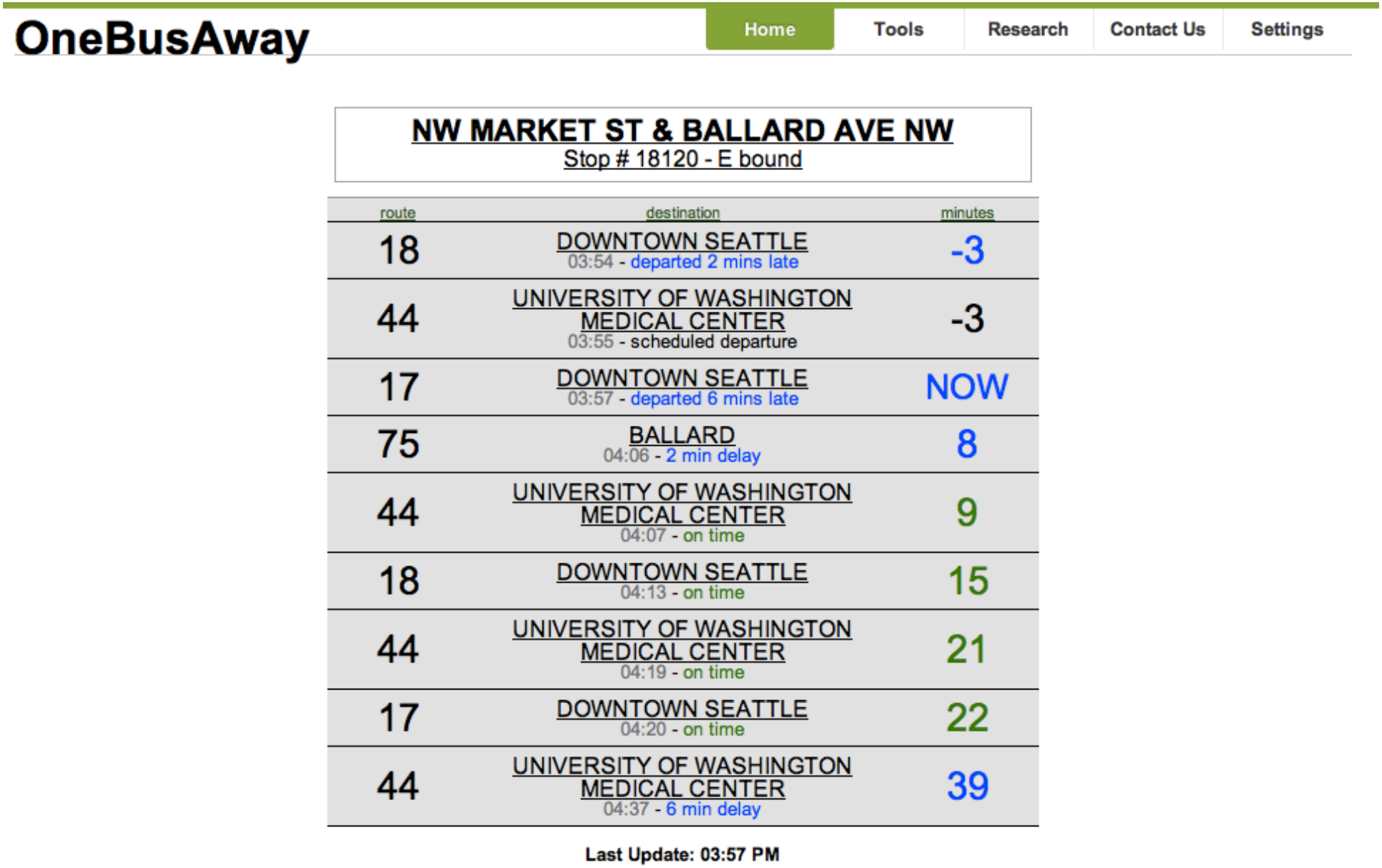
Our tools are available across a number of interfaces:

Web | Phone | SMS

iPhone | Android | Mobile

Our Research

OneBusAway was started by students at the University of Washington, and it supports research on improving the usability of public transportation, such as the Explore Tool shown above. Check out our research page for more information.


OneBusAway
Home
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Settings
NW MARKET ST & BALLARD AVE NW
Stop # 18120 - E bound
route
destination
minutes
18
DOWNTOWN SEATTLE
03:54 - departed 2 mins late
-3
44
UNIVERSITY OF WASHINGTON MEDICAL CENTER
03:55 - scheduled departure
-3
17
DOWNTOWN SEATTLE
03:57 - departed 6 mins late
NOW
75
BALLARD
04:06 - 2 min delay
8
44
UNIVERSITY OF WASHINGTON MEDICAL CENTER
04:07 - on time
9
18
DOWNTOWN SEATTLE
04:13 - on time
15
44
UNIVERSITY OF WASHINGTON MEDICAL CENTER
04:19 - on time
21
17
DOWNTOWN SEATTLE
04:20 - on time
22
44
UNIVERSITY OF WASHINGTON MEDICAL CENTER
04:37 - 6 min delay
39
Last Update: 03:57 PM

We've Got You Covered

Web Interface

A map-based web interface for finding stops, routes, and real-time arrival information.

Phone Interface

An touch-tone phone interface for real-time arrival information.

SMS Interface

An text-messaging interface for real-time arrival information.

iPhone Interface

A native OneBusAway client for iPhones, with location-aware features.

Android Interface

A native OneBusAway client for Android phones, with location-aware and notification features.

Mobile Web

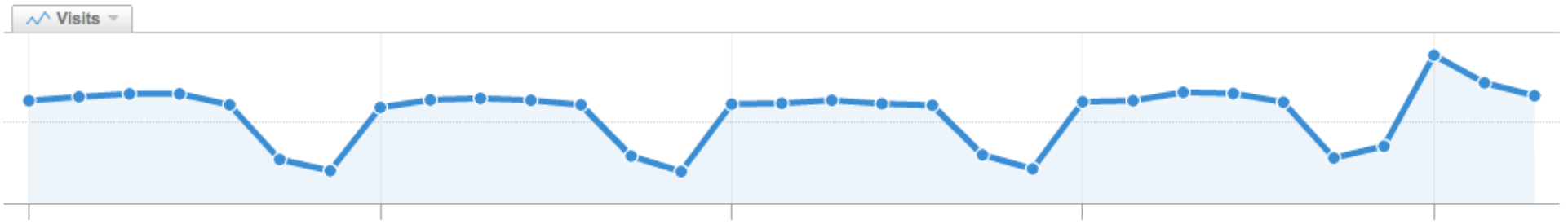
Real-time arrival information optimized for mobile web browsers and text-only web browsers.

Explore

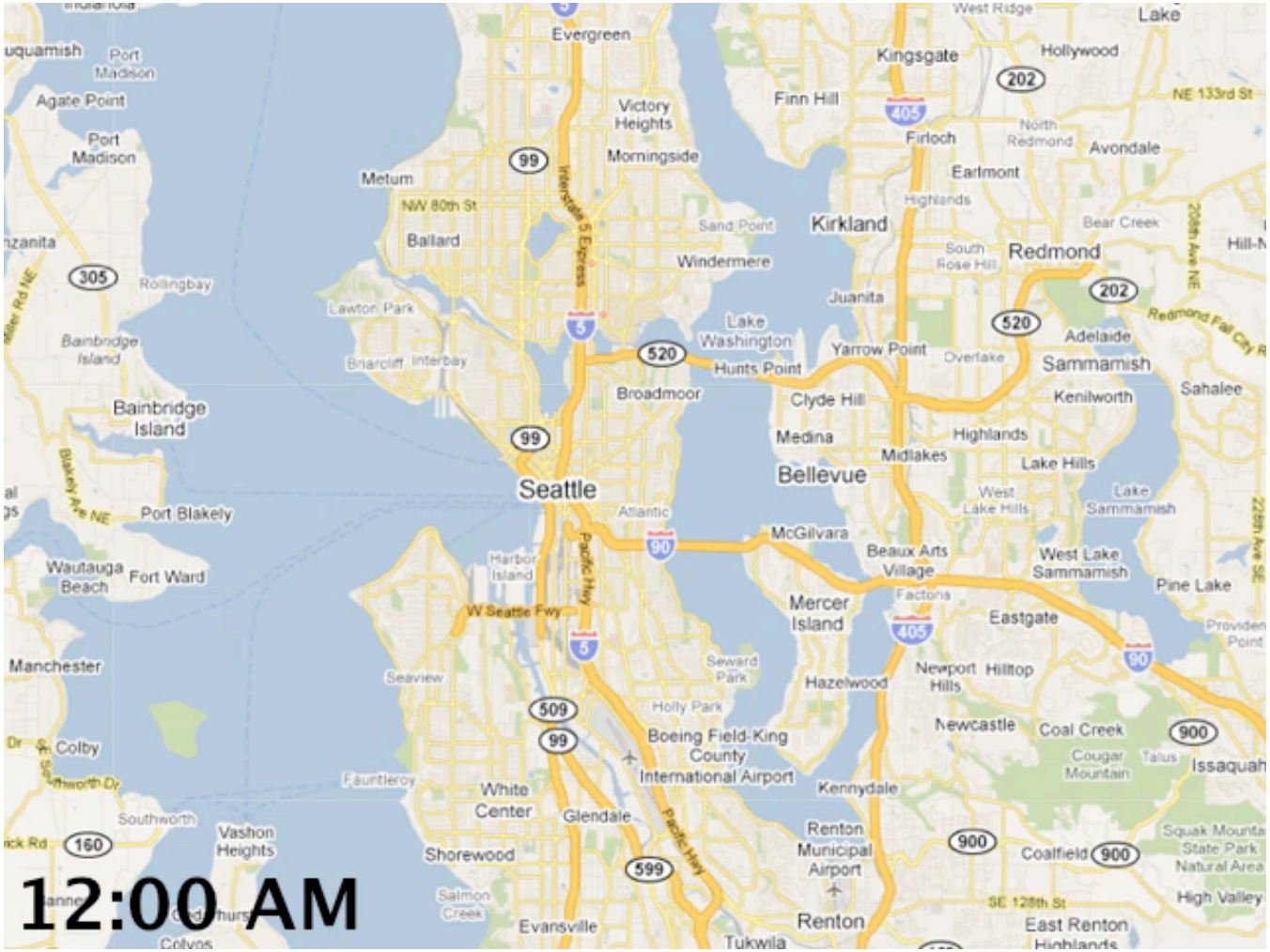
The Explore Tool lets you search for nearby restaurants, businesses, parks, and other amenities that are easily accessible by public transit.

Usage Statistics

- On a weekly basis: **40k unique users**
  - Web: 15,000
  - iPhone and Android: 25,000
  - Phone: 2,000
  - SMS: 800
- More traffic than transit agency's own tools



iPhone App Access over 24 hrs


12:00 AM
Seattle
Bellevue
Kirkland
Redmond
Bainbridge Island
Mercer Island
Renton
Evergreen
Kingsgate
Hollywood
Finn Hill
Victory Heights
Morningside
Firloch
Avondale
Earlmont
Meturn
Ballard
Sand Point
Windermere
Juanita
Lake Washington
Yarrow Point
Hunts Point
Broadmoor
Clyde Hill
Medina
Midlakes
Highlands
Kenilworth
Adelaide
Sammamish
Sahalee
Lake Hills
West Lake Hills
Lake Sammamish
West Lake Sammamish
Pine Lake
Eastgate
Beaux Arts Village
McGilvara
Factoria
Newport Hills
Hilltop
Hazelwood
Newcastle
Coal Creek
Issaquah
Cougar Mountain
Talus
Kennydale
Renton Municipal Airport
Coalfield
East Renton Highlands
Tukwila
Boeing Field-King County International Airport
Seward Park
Holly Park
Seaview
Harbor Island
Atlantic
Pacific Hwy
W Seattle Fwy
Interstate 5 Express
Lawton Park
Briarcliff
Interbay
Rollingbay
Port Madison
Agate Point
Port Blakely
Wautauga Beach
Fort Ward
Manchester
Colby
Southworth
Vashon Heights
Fauntleroy
White Center
Glendale
Shorewood
Salmon Creek
Evansville
Colvos
Bear Creek
South Rose Hill
Overlake
Redmond Fall City Rd
NE 133rd St
NW 80th St
SE 128th St
Squak Mountain State Park Natural Area
High Valley
Overlook
Provident Point
Miller Rd NE
Blakely Ave NE
205th Ave NE
228th Ave SE
Hill-N
Lake
West Ridge
North Redmond
Highlands
Lake Hills
Factoria
Talus
Cougar Mountain
Squak Mountain State Park Natural Area
Overlook
Provident Point
Lake Sammamish
West Lake Sammamish
Pine Lake
Eastgate
Issaquah
Coalfield
East Renton Highlands
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Kenilworth
Sahalee
Adelaide
Sammamish
Redmond
Kirkland
Bellevue
Seattle
Renton
Tukwila
Evansville
Shorewood
Vashon Heights
Southworth
Manchester
Wautauga Beach
Fort Ward
Port Blakely
Bainbridge Island
Rollingbay
Port Madison
Agate Point
Meturn
Ballard
Windermere
Juanita
Lawton Park
Briarcliff
Interbay
Broadmoor
Clyde Hill
Medina
Midlakes
Highlands
Lake Hills
McGilvara
Beaux Arts Village
Mercer Island
Eastgate
Newport Hills
Hilltop
Hazelwood
Newcastle
Coal Creek
Issaquah

Awards

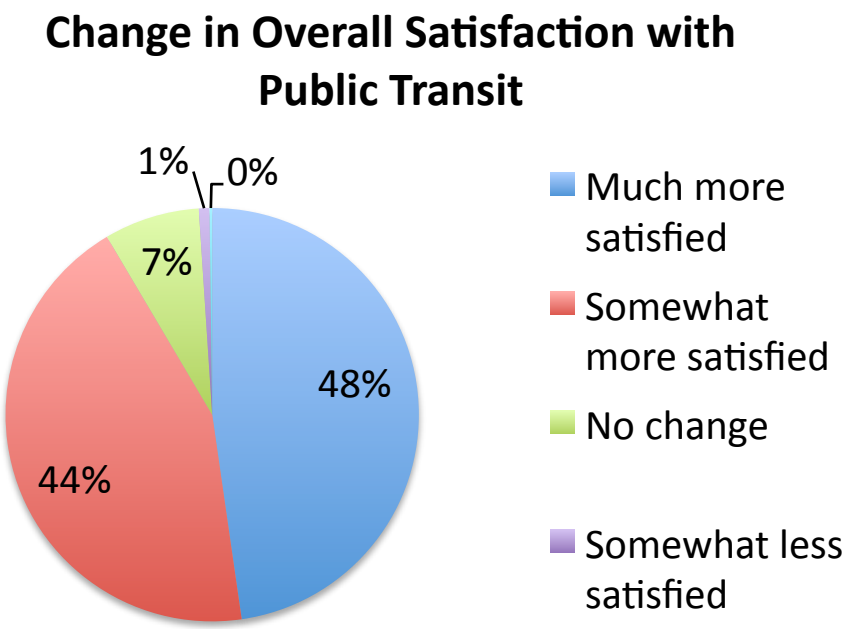
- Washington Technology Industry Association - 2010 Industry Achievement Awards
  - Best Use of Technology in the Government, Non-Profit, or Educational Sector
- Seattle 2.0 Startup Awards
  - Best Non-profit Startup – Nominated
- Seattle Magazine – Best of Seattle 2009
  - Best Local iPhone App
- Seattle Weekly – Best of the Web 2010
  - Best Local iPhone App - Nominated

Impacts of OneBusAway

How is OneBusAway changing user perceptions and behavior with respect to public transit?

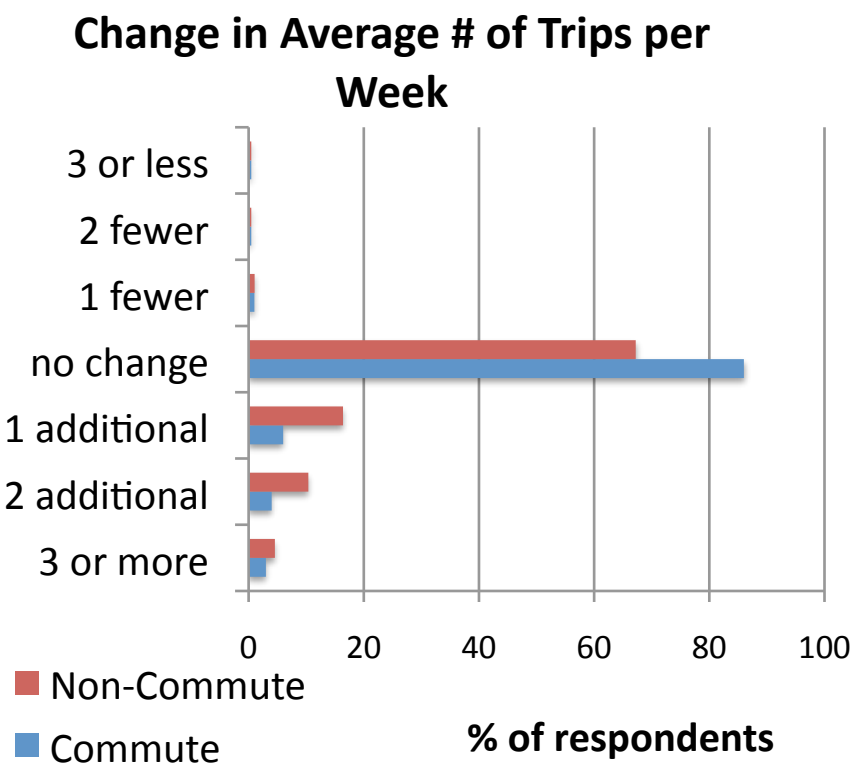
We surveyed 488 OneBusAway user to find out.

Change in Satisfaction



- *"I no longer sit with pitted stomach wondering where is the bus. It's less stressful simply knowing it's nine minutes away, or whatever the case."*

Change in Usage



- *"While my work usage was pretty much on a fixed schedule, OneBusAway has made impromptu trips much more convenient."*

Personal Safety

- 18% of respondents reported feeling somewhat safer and 3% reported feeling much safer.
- Safety was correlated with gender

- *"Having the ability to know when my bus will arrive helps me decide whether or not to stay at a bus stop that I may feel a little sketchy about or move on to a different one. Or even, stay inside of a building until the bus does arrive."*

What makes this possible?

Open Transit Data!

Open Transit Data

- OneBusAway inspired by trips to Portland
  - "Why can't we have that here in Seattle?"
- Transit agencies publish their transit data (GTFS)
  - Developer ecosystems in the Portland, Bay Area, Chicago, NYC, Boston, beyond
- Different names: #opengov, #gov20, #opendata
- One result: innovative apps that help the public

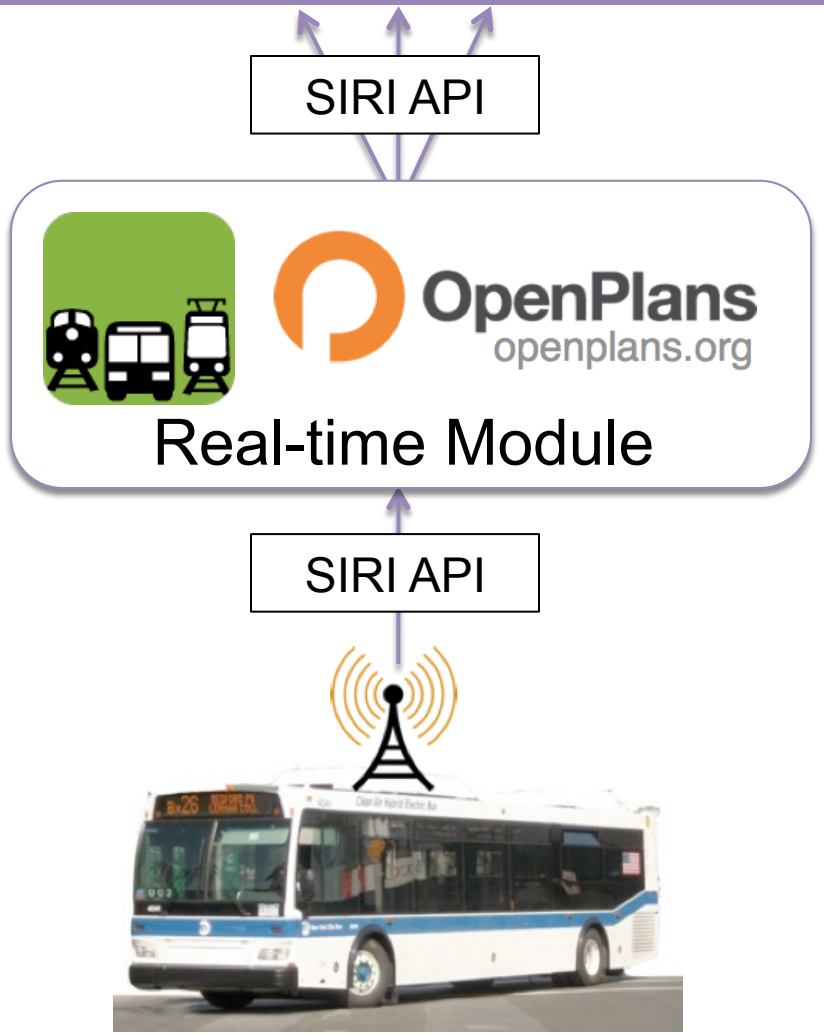
Government as a platform

- "Why should I rely on 3rd-party developers to provide essential tools to my riders?"

- Developing or procuring tools like these yourself can be expensive, time-consuming, and outside the tech comfort zone of many agencies.
- The public can do it cheaper, faster, and better
- Why reinvent (and re-pay for) the wheel?

Case Study: NYC MTA

- MTA has made multiple attempts to deliver real-time bus info
- 34th Street Pilot: $140M estimate to extend citywide
- Looking for cheaper solution

OneBusAway + OpenPlans + MTA

- OneBusAway, in partnership with OpenPlans and MTA
- Open-source vehicle tracking solution
- Using open standards: GTFS + SIRI