TriMet's Next Generation Trip Planner, an FTA MOD Sandbox Grant Project

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Manager, Mobility & Location-Based Services

Disruption
private mobility service providers

space required to transport **60 people**

car

bus

bicycle

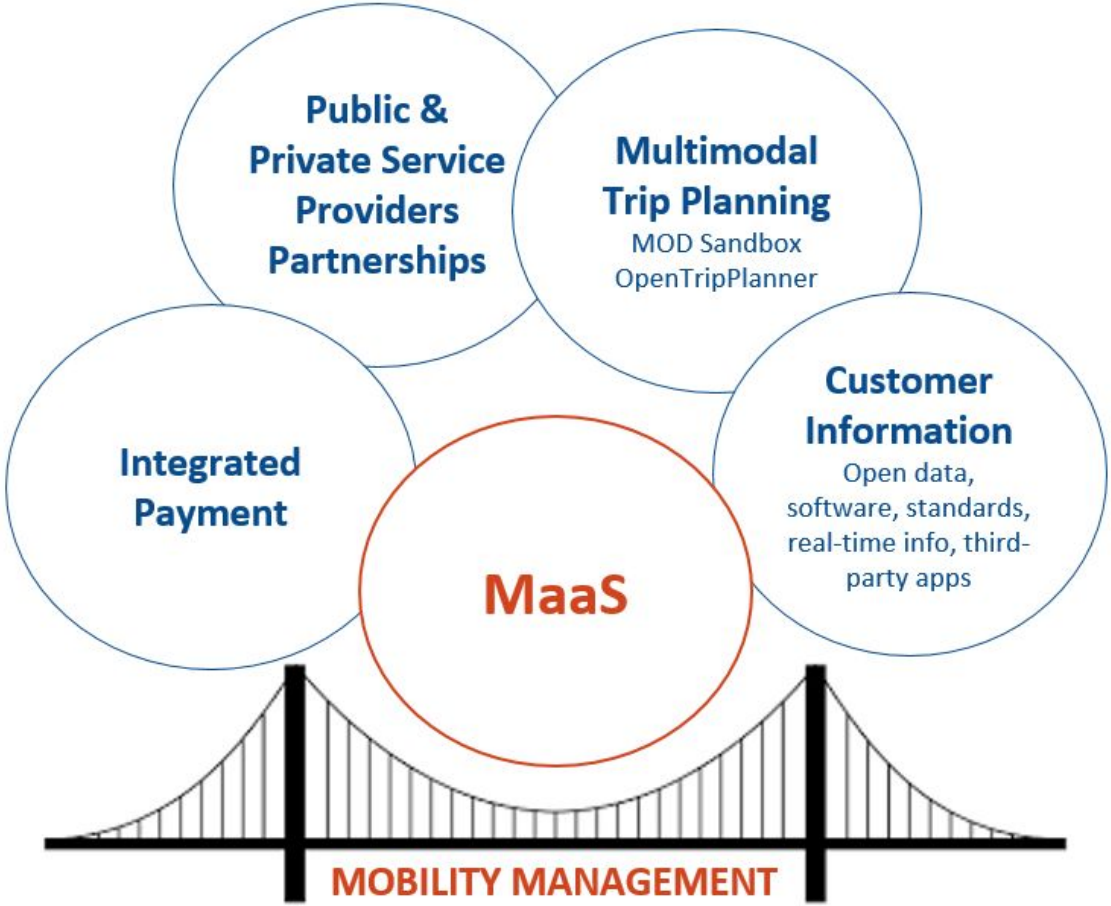
space required
to transport **60 people**

car

uber

autonomous car

Evolving Vision for Transit


Public & Private Service Providers Partnerships
Multimodal Trip Planning
MOD Sandbox
OpenTripPlanner
Integrated Payment
Customer Information
Open data, software, standards, real-time info, third-party apps
MaaS
MOBILITY MANAGEMENT

1. TECHNOLOGY & INNOVATION
2. EQUITY & ACCESSIBILITY
3. POLICY & REGULATIONS
4. INCENTIVES & INFLUENCE
5. FACILITIES & ON-STREET INFRASTRUCTURE
6. DISPATCH, OPERATIONS, TRAFFIC MANAGEMENT
7. LAND-USE PLANNING
8. MODE MANAGEMENT AND INTEGRATION

TriMet.org/MOD

MOD Sandbox Grant 2017 – 2019

TriMet's OpenTripPlanner Shared-Use Mobility (OTP SUM) project will create a complete open platform for the integration of transit and shared-use mobility options. With an improved address locator, Mapzen's Pelias geocoder, the open data, software and user interfaces, responsive on both web and mobile, will help customers make informed decisions about their mobility choices, including the critical first and last miles of transit trips where a bus or train alone doesn't provide full access.

This dashboard provides a snapshot of the MOD Sandbox project's progress. These key indicators help us track progress toward project deliverables and the budget. In addition, we will be sharing project updates and lessons learned through this dashboard.

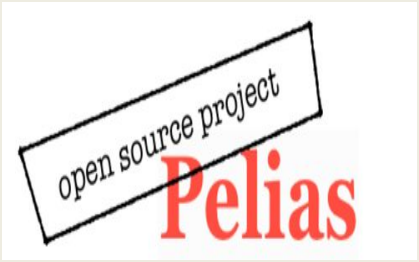
- About TriMet and and Open Source
- About MOD Sandbox Grant
- About moovel
- About OpenTripPlanner (OTP)
- About the Pelias Geocoder
- Research on Shared Mobility

Solution

Extend existing software & data platforms to integrate shared-use modes with transit.

Strategy

Leverage open source software, open data, and open standards to facilitate widespread adoption.



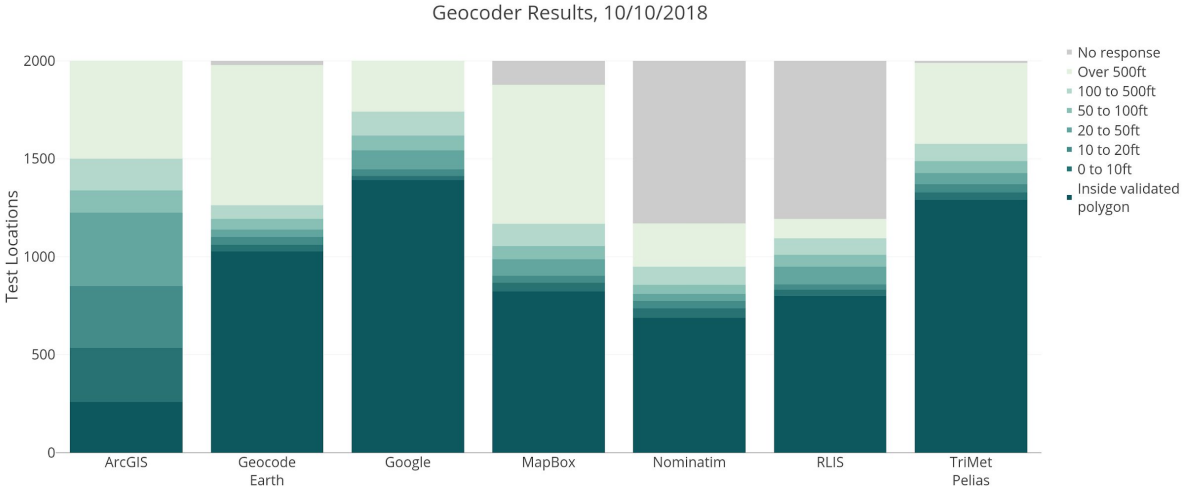
Pelias Geocoder

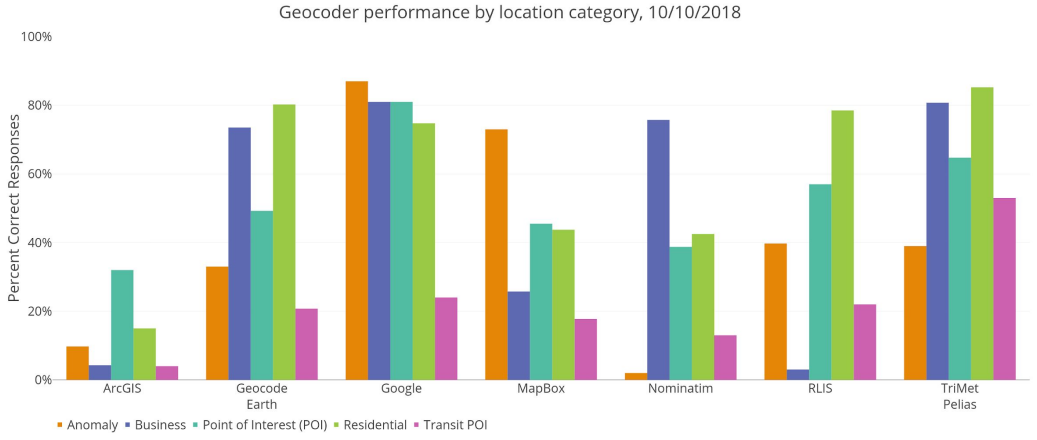
Non-proprietary, non-restrictive option for address locating

Open Address Data

OpenAddresses
OpenStreetMap
Who's on First
TIGER

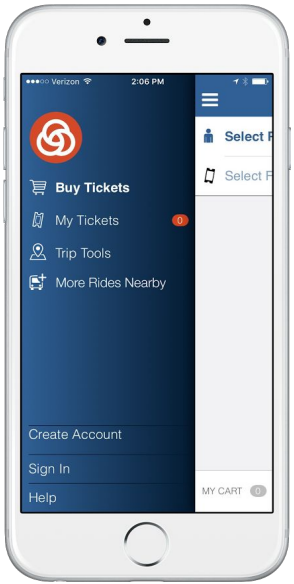
Pelias Benchmark Tests

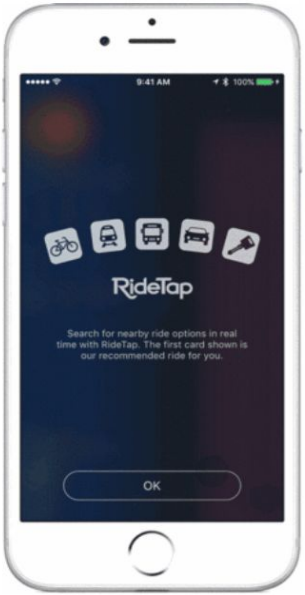


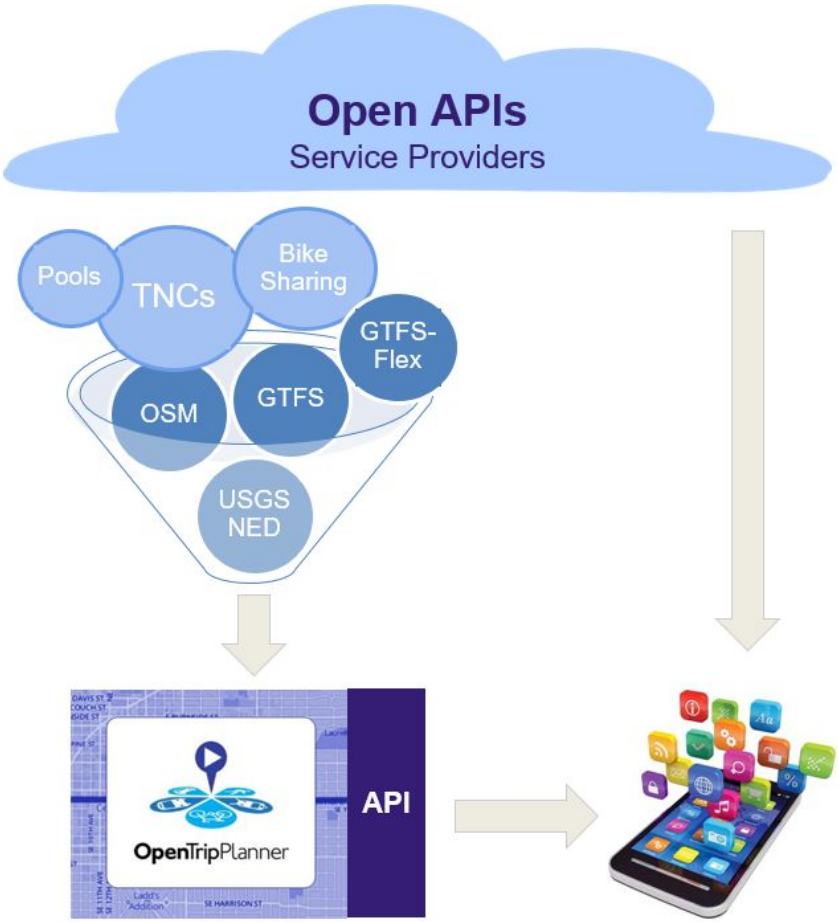


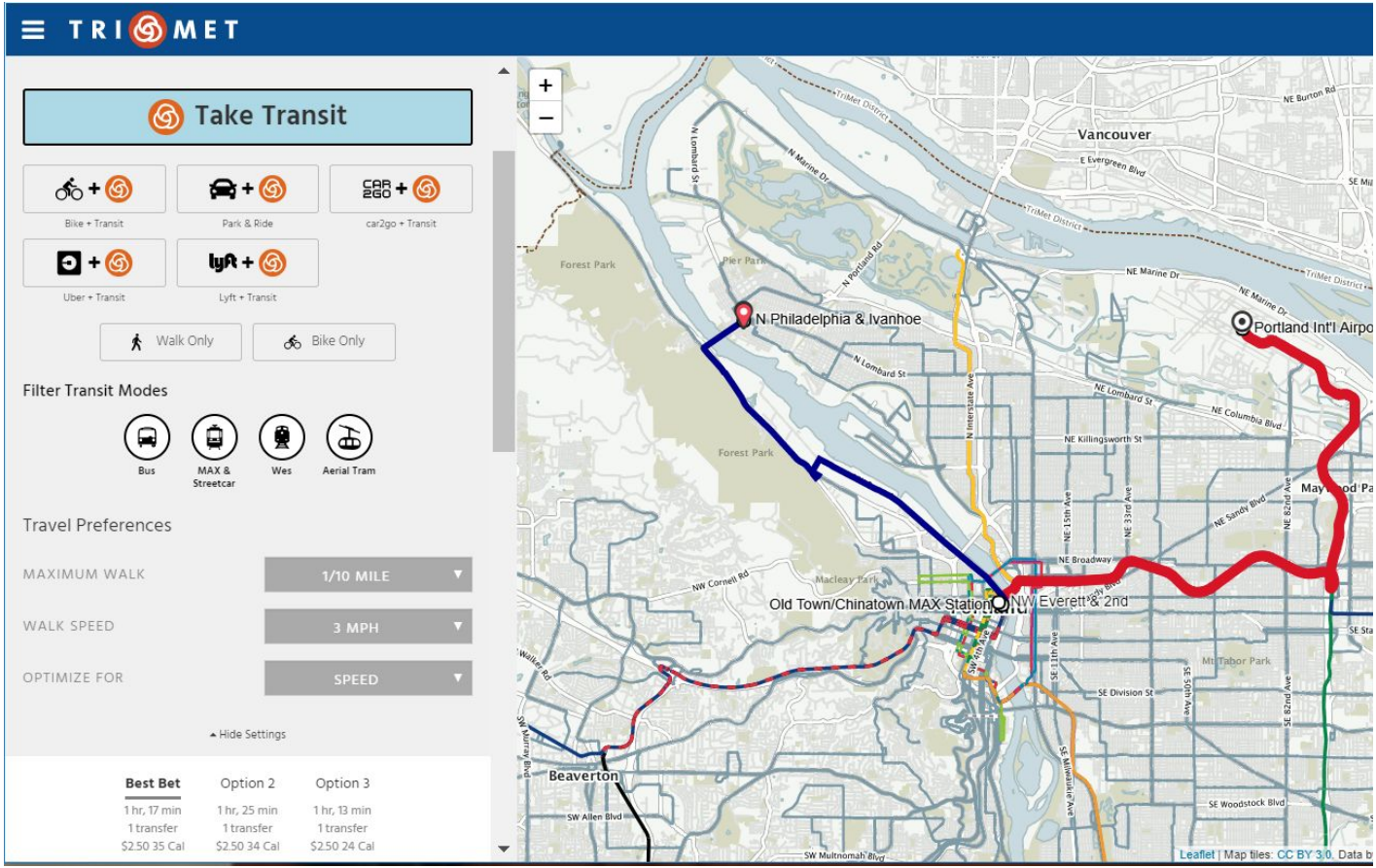
Integrated Payment Plan

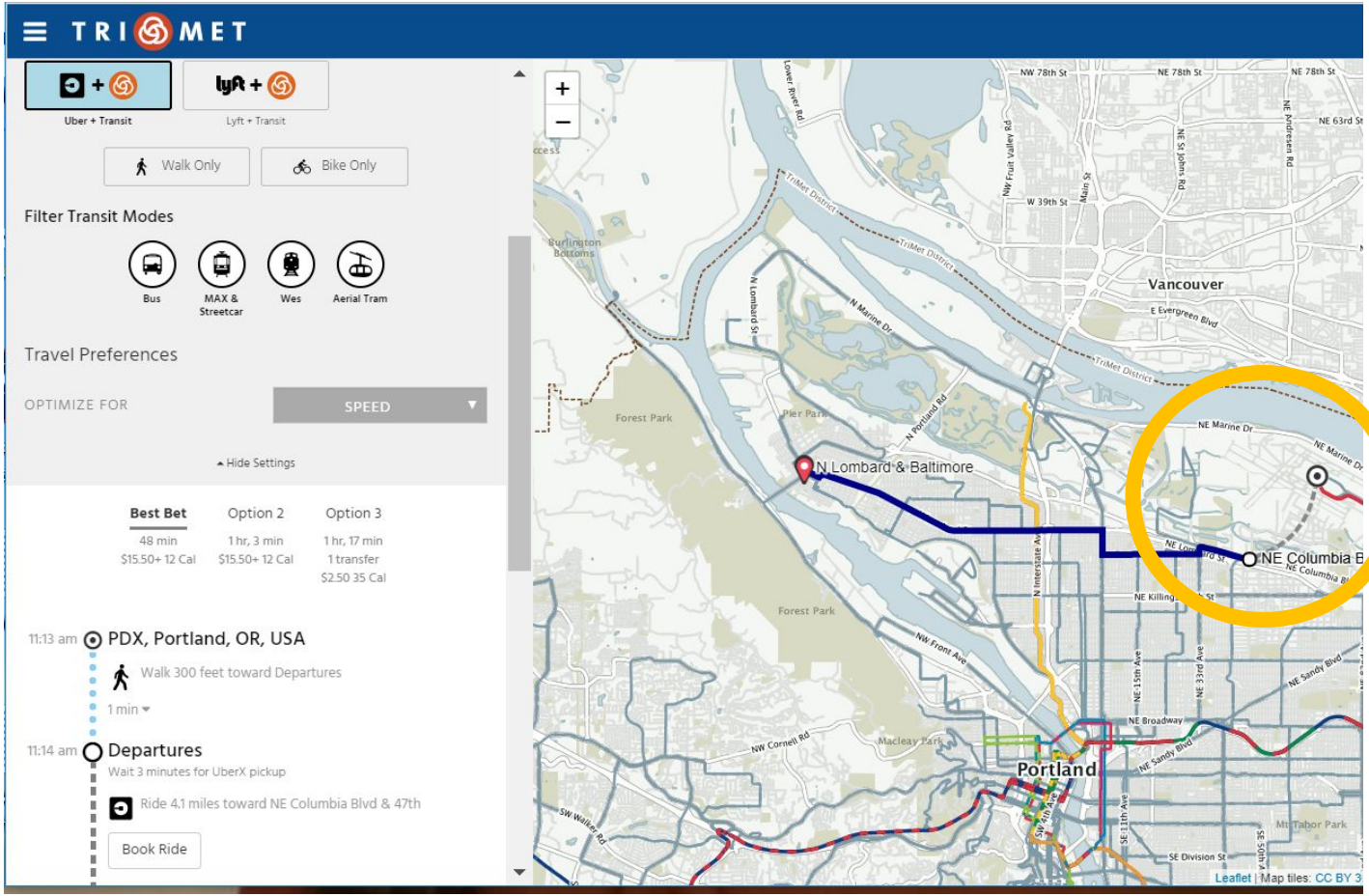
moovel will facilitate compatibility with planned booking and payment features in RideTap feature

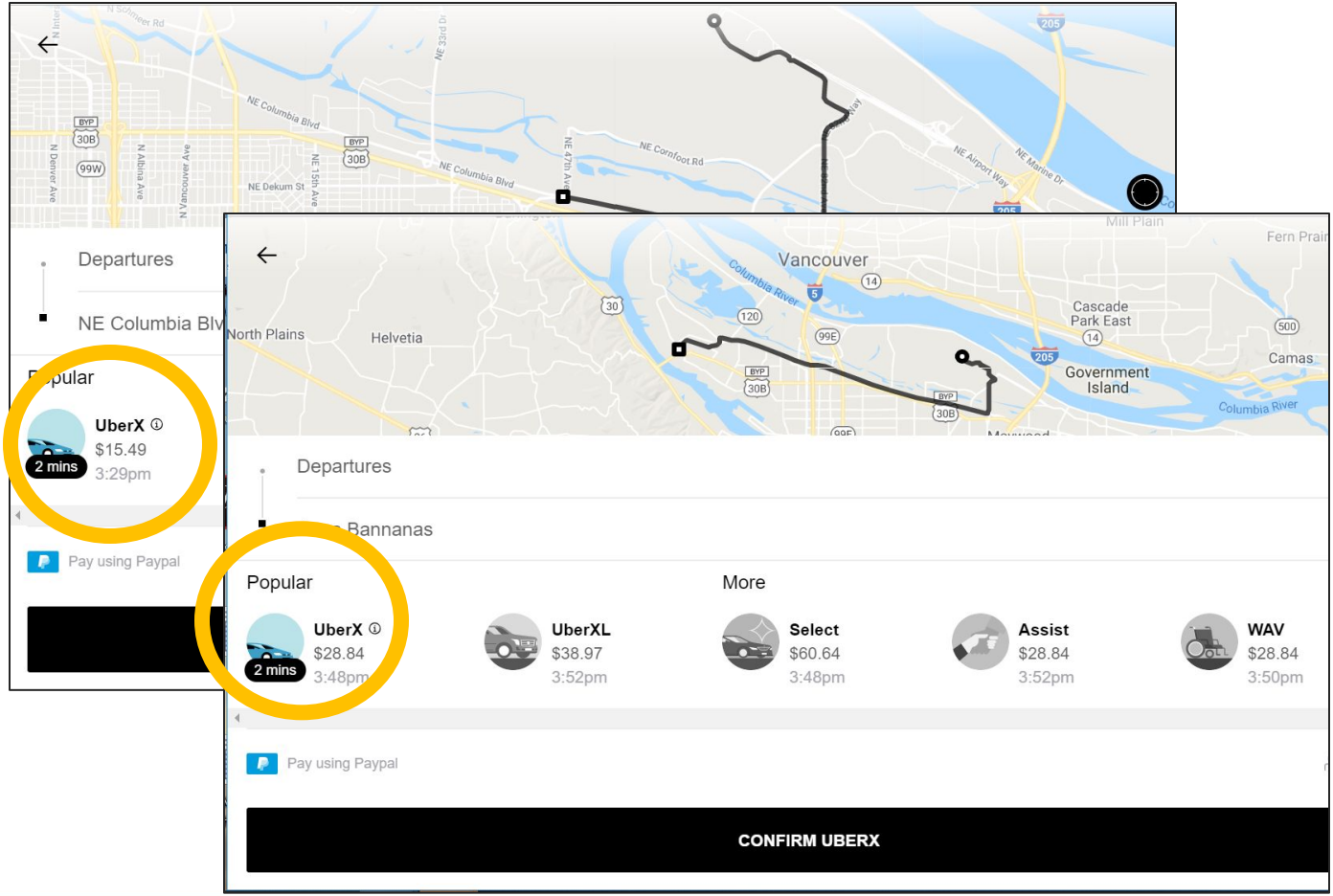


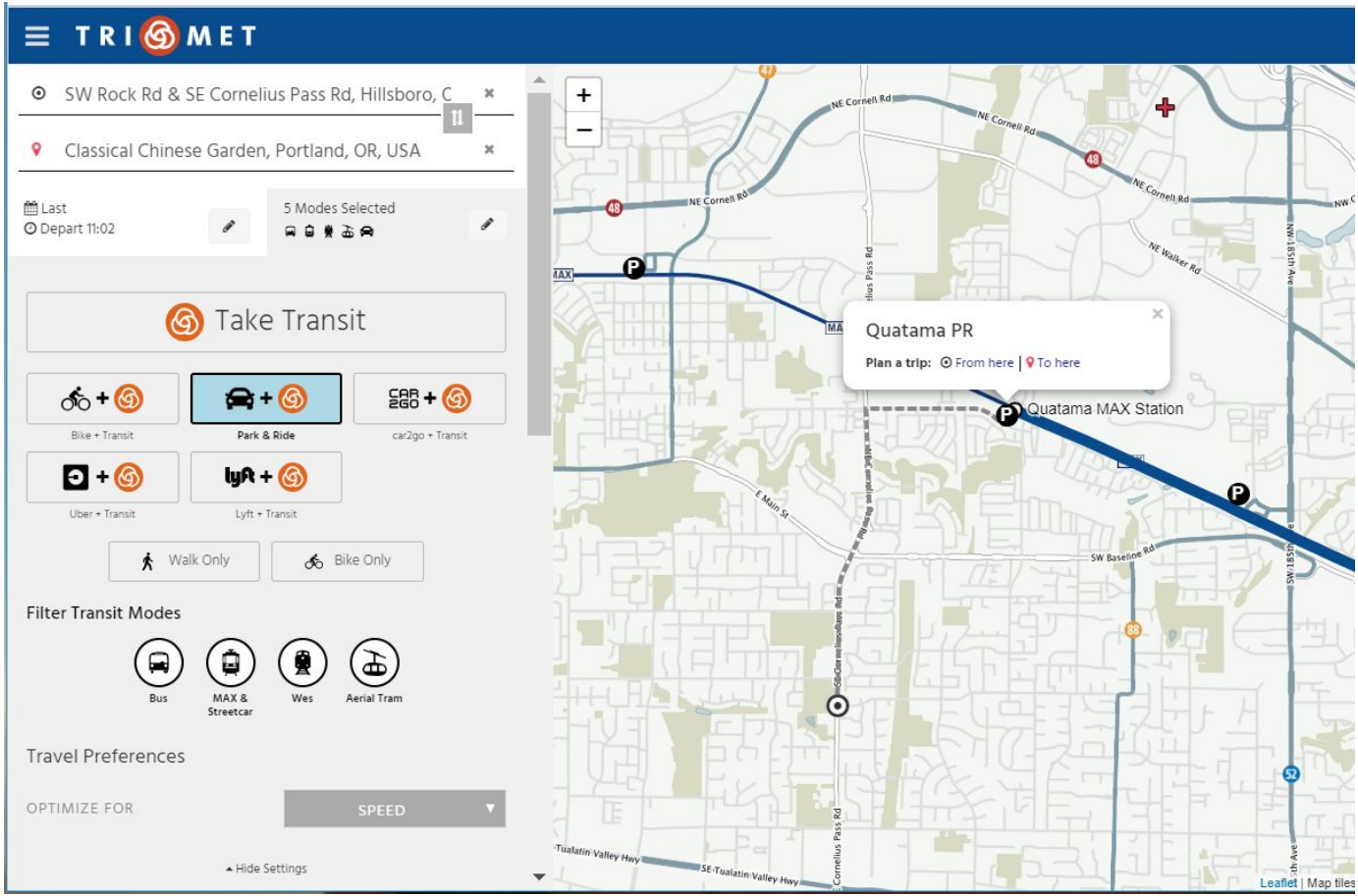


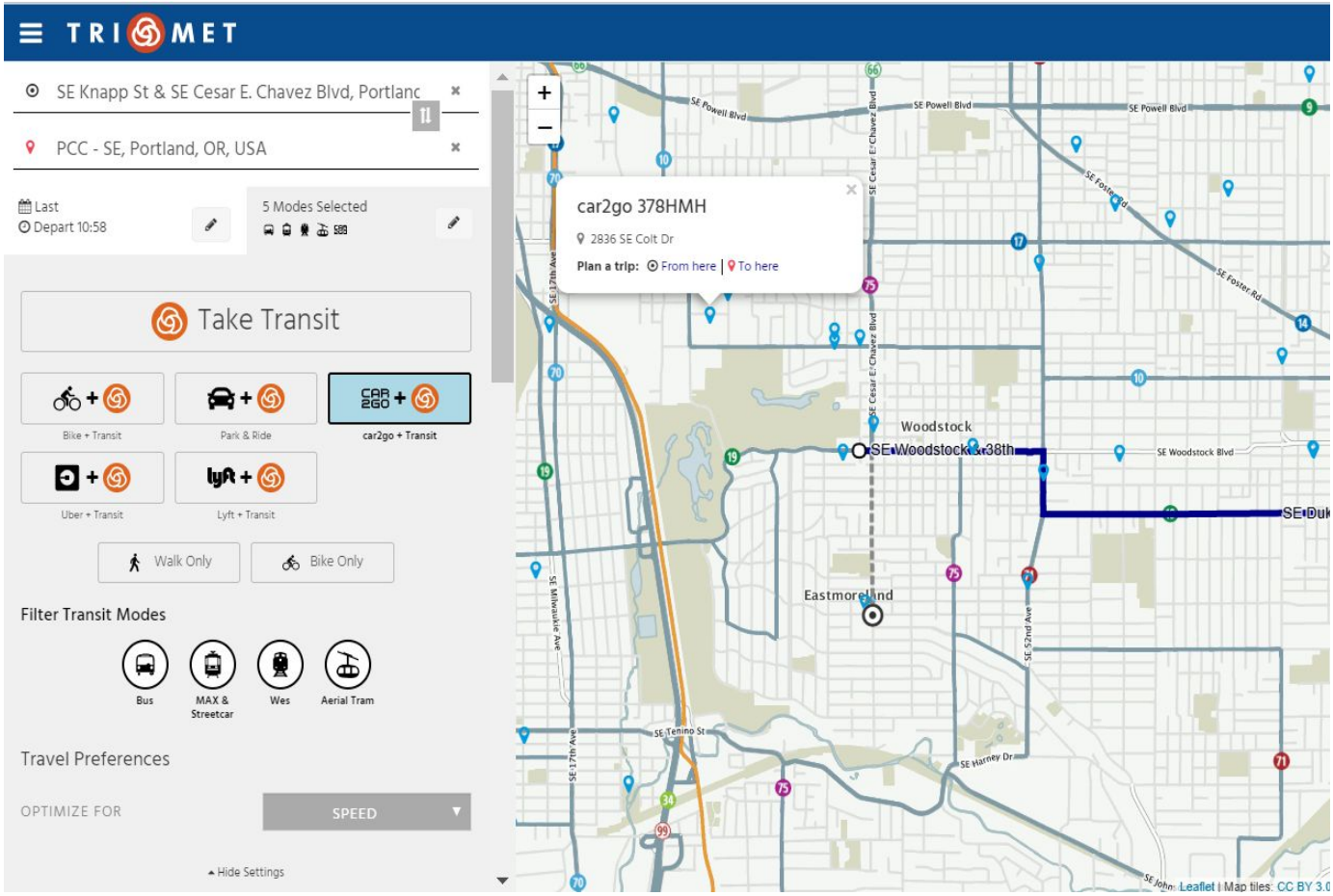

Open APIs
Service Providers
Pools
TNCs
Bike Sharing
GTFS-Flex
OSM
GTFS
USGS NED
OpenTripPlanner
API

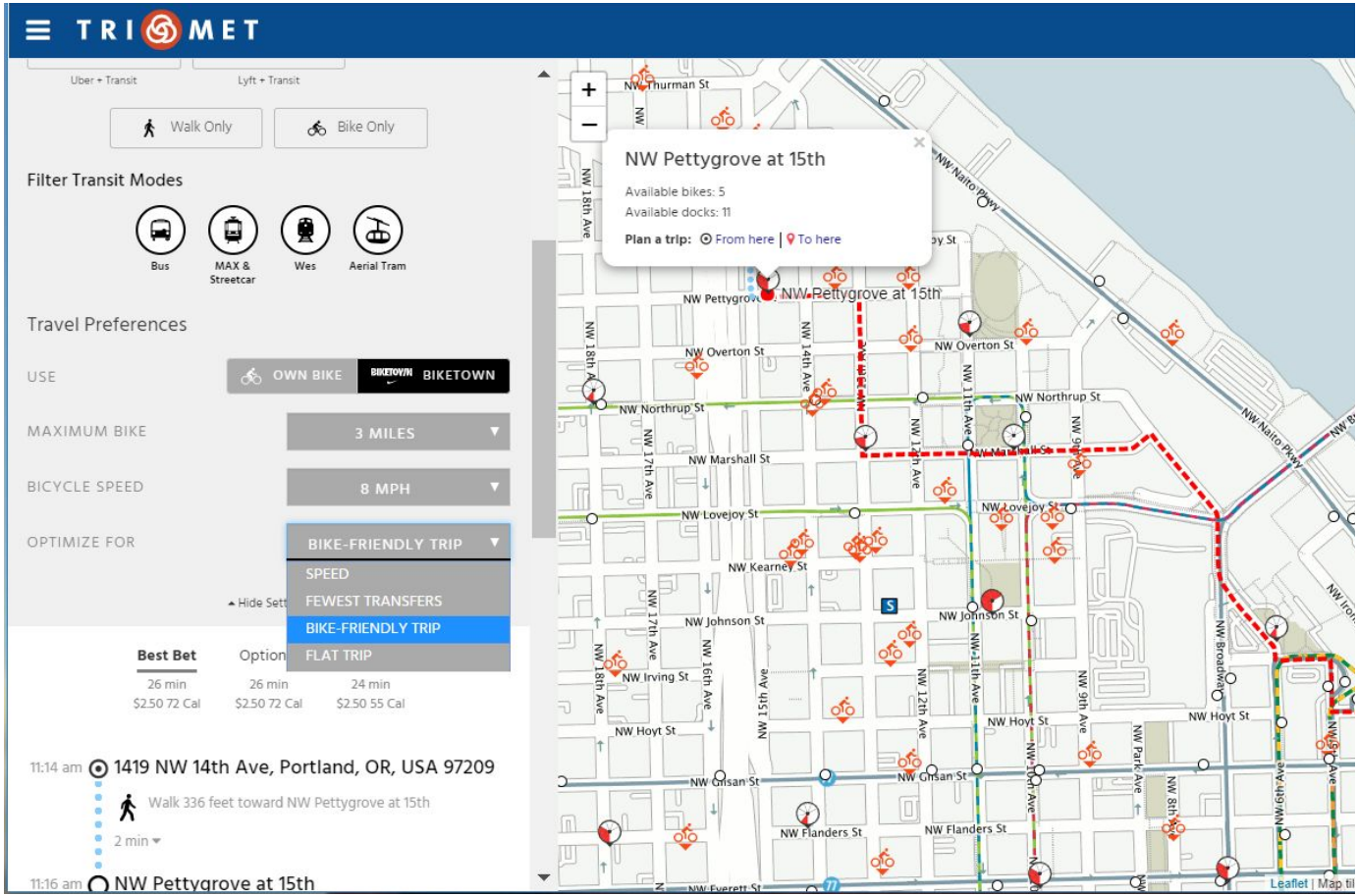

TRIMET
Take Transit
Bike + Transit
Park & Ride
car2go + Transit
Uber + Transit
Lyft + Transit
Walk Only
Bike Only
Filter Transit Modes
Bus
MAX & Streetcar
Wes
Aerial Tram
Travel Preferences
MAXIMUM WALK
1/10 MILE
WALK SPEED
3 MPH
OPTIMIZE FOR
SPEED
Hide Settings
Best Bet
1 hr, 17 min
1 transfer
$2.50 35 Cal
Option 2
1 hr, 25 min
1 transfer
$2.50 34 Cal
Option 3
1 hr, 13 min
1 transfer
$2.50 24 Cal
N Philadelphia & Ivanhoe
Portland Int'l Airpo
Old Town/Chinatown MAX Station
NW Everett & 2nd
Beaverton
Vancouver
Forest Park
Macleay Park
Mt Tabor Park
Leaflet | Map tiles: CC BY 3.0. Data b

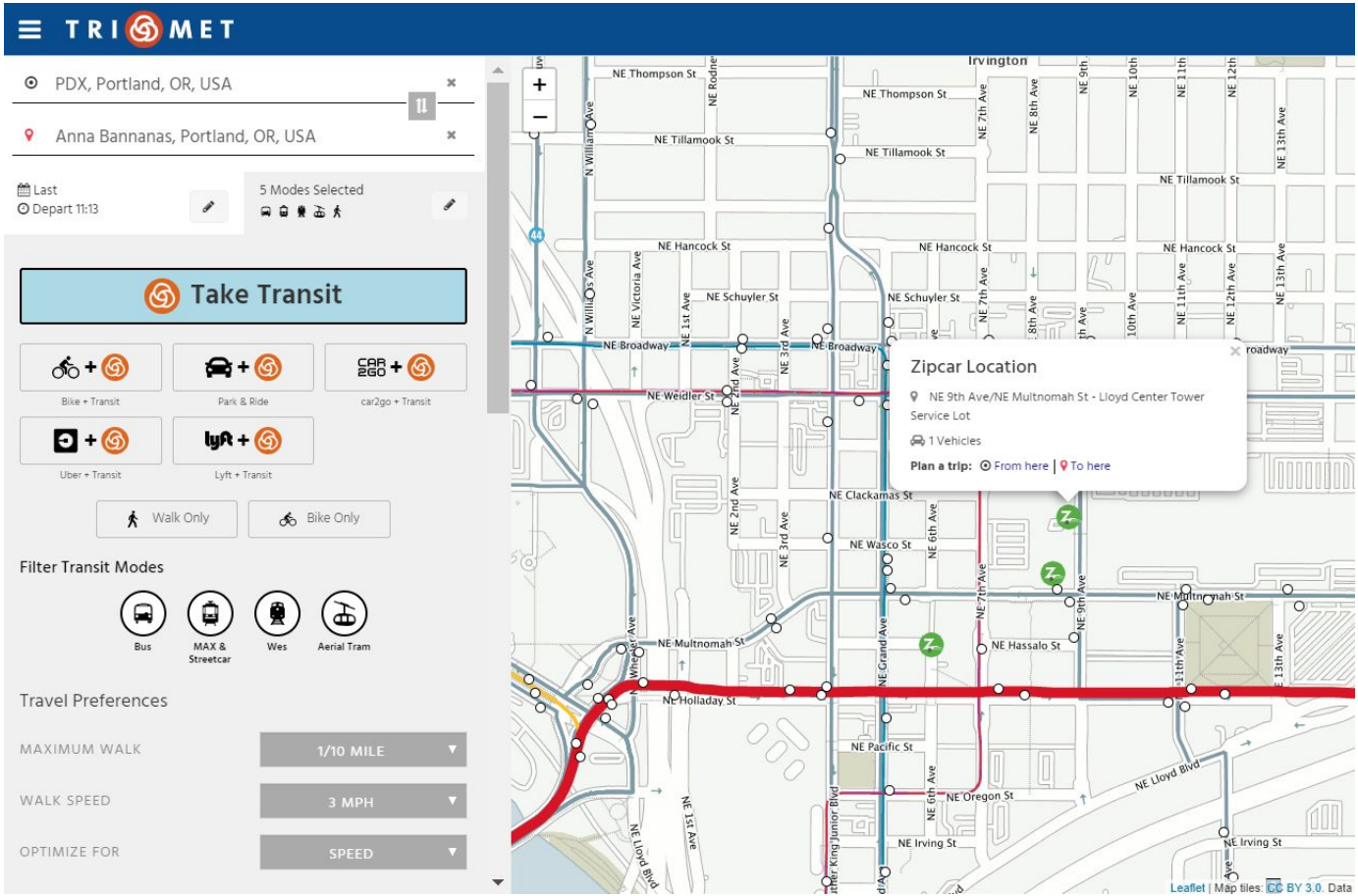

TRIMET
Uber + Transit
Lyft + Transit
Walk Only
Bike Only
Filter Transit Modes
Bus
MAX & Streetcar
Wes
Aerial Tram
Travel Preferences
OPTIMIZE FOR
SPEED
Hide Settings
Best Bet
48 min
$15.50+ 12 Cal
Option 2
1 hr, 3 min
$15.50+ 12 Cal
Option 3
1 hr, 17 min
1 transfer
$2.50 35 Cal
11:13 am PDX, Portland, OR, USA
Walk 300 feet toward Departures
1 min
11:14 am Departures
Wait 3 minutes for UberX pickup
Ride 4.1 miles toward NE Columbia Blvd & 47th
Book Ride
N Lombard & Baltimore
NE Columbia B
Vancouver
Portland
Forest Park
Macleay Park
Mt Tabor Park
Leaflet | Map tiles: CC BY 3

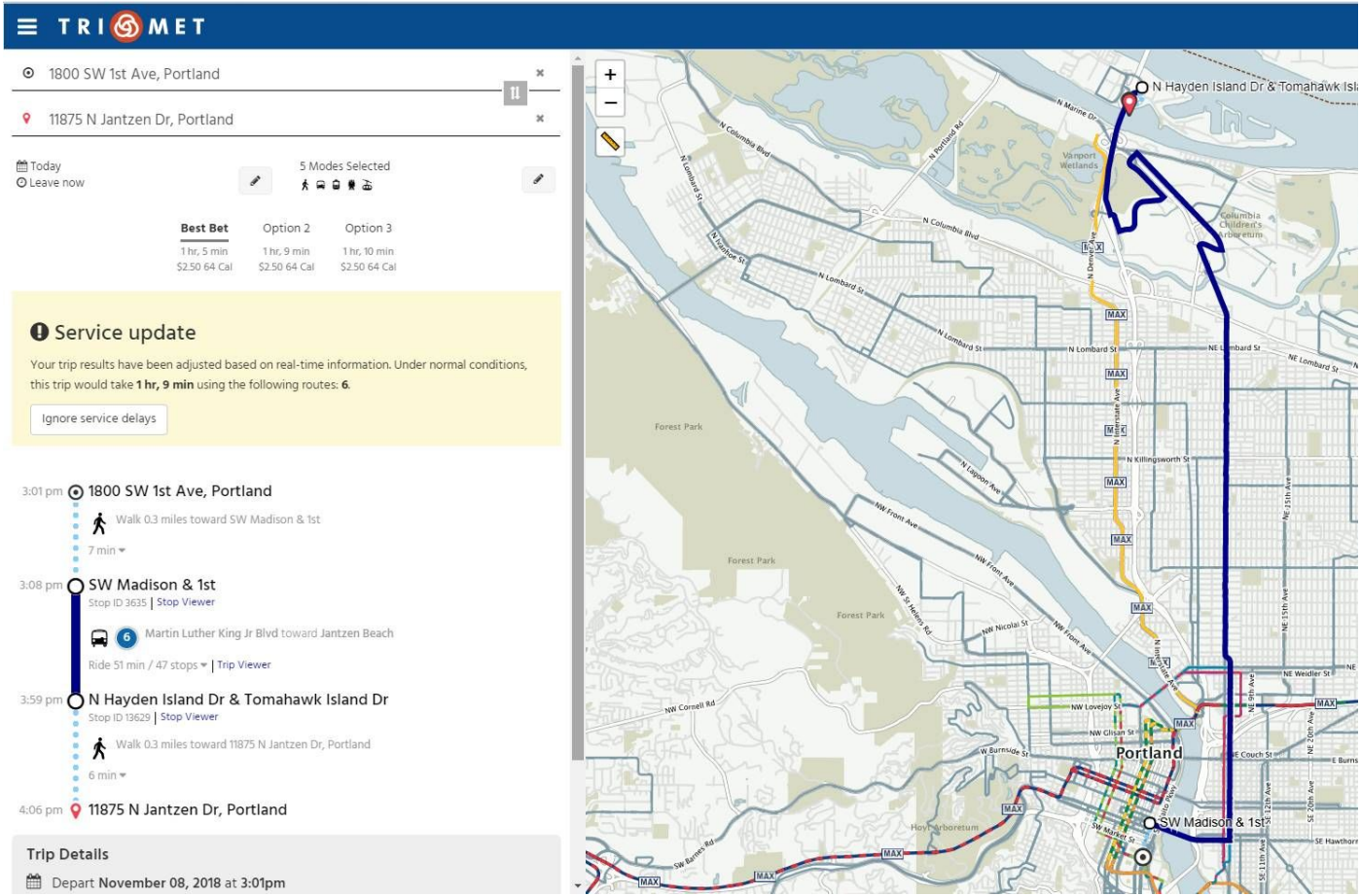

Departures
NE Columbia Blv
Popular
UberX
$15.49
3:29pm
2 mins
Pay using Paypal
Vancouver
North Plains
Helvetia
Cascade Park East
Government Island
Camas
Columbia River
Departures
Bannanas
Popular
UberX
$28.84
3:48pm
2 mins
More
UberXL
$38.97
3:52pm
Select
$60.64
3:48pm
Assist
$28.84
3:52pm
WAV
$28.84
3:50pm
Pay using Paypal
CONFIRM UBERX


TRIMET
SW Rock Rd & SE Cornelius Pass Rd, Hillsboro, C
Classical Chinese Garden, Portland, OR, USA
Last
Depart 11:02
5 Modes Selected
Take Transit
Bike + Transit
Park & Ride
car2go + Transit
Uber + Transit
Lyft + Transit
Walk Only
Bike Only
Filter Transit Modes
Bus
MAX & Streetcar
Wes
Aerial Tram
Travel Preferences
OPTIMIZE FOR
SPEED
Hide Settings
Quatama PR
Plan a trip: From here | To here
Quatama MAX Station
NE Cornell Rd
NE Walker Rd
E Main St
SW Baseline Rd
SE Cornelius Pass Rd
SE Tualatin Valley Hwy
Leaflet | Map tiles


TRIMET
SE Knapp St & SE Cesar E. Chavez Blvd, Portlanc
PCC - SE, Portland, OR, USA
Last
Depart 10:58
5 Modes Selected
Take Transit
Bike + Transit
Park & Ride
car2go + Transit
Uber + Transit
Lyft + Transit
Walk Only
Bike Only
Filter Transit Modes
Bus
MAX & Streetcar
Wes
Aerial Tram
Travel Preferences
OPTIMIZE FOR
SPEED
Hide Settings
car2go 378HMH
2836 SE Colt Dr
Plan a trip: From here | To here
Woodstock
SE Woodstock & 38th
Eastmoreland
SE Powell Blvd
SE Cesar E Chavez Blvd
SE Woodstock Blvd
SE Foster Rd
SE Tenino St
SE Harney Dr
SE 17th Ave
SE Milwaukie Ave
SE 52nd Ave
Leaflet | Map tiles: CC BY 3.0

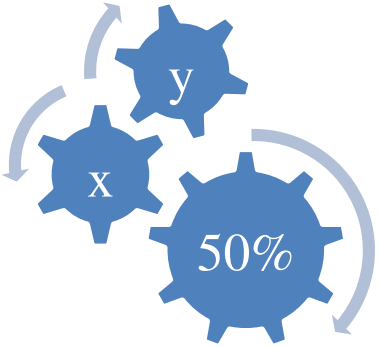

TRIMET
Uber + Transit
Lyft + Transit
Walk Only
Bike Only
Filter Transit Modes
Bus
MAX & Streetcar
Wes
Aerial Tram
Travel Preferences
USE
OWN BIKE
BIKETOWN
MAXIMUM BIKE
3 MILES
BICYCLE SPEED
8 MPH
OPTIMIZE FOR
BIKE-FRIENDLY TRIP
SPEED
FEWEST TRANSFERS
BIKE-FRIENDLY TRIP
FLAT TRIP
Hide Sett
Best Bet
Option
26 min
$2.50 72 Cal
26 min
$2.50 72 Cal
24 min
$2.50 55 Cal
11:14 am
1419 NW 14th Ave, Portland, OR, USA 97209
Walk 336 feet toward NW Pettygrove at 15th
2 min
11:16 am
NW Pettygrove at 15th
NW Pettygrove at 15th
Available bikes: 5
Available docks: 11
Plan a trip: From here | To here
NW Pettygrove at 15th
NW Thurman St
NW Overton St
NW Northrup St
NW Marshall St
NW Lovejoy St
NW Kearney St
NW Johnson St
NW Irving St
NW Hoyt St
NW Glisan St
NW Flanders St
NW Everett St
NW 18th Ave
NW 17th Ave
NW 16th Ave
NW 14th Ave
NW 12th Ave
NW 11th Ave
NW 9th Ave
NW 8th Ave
NW Naito Pkwy
NW Broadway
NW Park Ave
Leaflet | Map til


TRIMET
PDX, Portland, OR, USA
Anna Bannanas, Portland, OR, USA
Last
Depart 11:13
5 Modes Selected
Take Transit
Bike + Transit
Park & Ride
car2go + Transit
Uber + Transit
Lyft + Transit
Walk Only
Bike Only
Filter Transit Modes
Bus
MAX & Streetcar
Wes
Aerial Tram
Travel Preferences
MAXIMUM WALK
1/10 MILE
WALK SPEED
3 MPH
OPTIMIZE FOR
SPEED
Zipcar Location
NE 9th Ave/NE Multnomah St - Lloyd Center Tower Service Lot
1 Vehicles
Plan a trip: From here | To here
NE Thompson St
NE Tillamook St
NE Hancock St
NE Schuyler St
NE Broadway
NE Weidler St
NE Clackamas St
NE Wasco St
NE Multnomah St
NE Holladay St
NE Pacific St
NE Oregon St
NE Irving St
NE Lloyd Blvd
NE Hassalo St
Leaflet | Map tiles: CC BY 3.0. Data


TRIMET
1800 SW 1st Ave, Portland
11875 N Jantzen Dr, Portland
Today
Leave now
5 Modes Selected
Best Bet
1 hr, 5 min
$2.50 64 Cal
Option 2
1 hr, 9 min
$2.50 64 Cal
Option 3
1 hr, 10 min
$2.50 64 Cal
Service update
Your trip results have been adjusted based on real-time information. Under normal conditions, this trip would take 1 hr, 9 min using the following routes: 6.
Ignore service delays
3:01 pm 1800 SW 1st Ave, Portland
Walk 0.3 miles toward SW Madison & 1st
7 min
3:08 pm SW Madison & 1st
Stop ID 3635 | Stop Viewer
6 Martin Luther King Jr Blvd toward Jantzen Beach
Ride 51 min / 47 stops | Trip Viewer
3:59 pm N Hayden Island Dr & Tomahawk Island Dr
Stop ID 13629 | Stop Viewer
Walk 0.3 miles toward 11875 N Jantzen Dr, Portland
6 min
4:06 pm 11875 N Jantzen Dr, Portland
Trip Details
Depart November 08, 2018 at 3:01pm
N Hayden Island Dr & Tomahawk Isl
SW Madison & 1st
Portland
Forest Park
MAX

Next Generation Trip Planner
Next Steps

1. Beta Testing
   - 250 Riders Club Participants
   - Internal and External Partners
   - In-Field Shadowing
   - Second Heuristic Study
2. Analysis of Results and Reassessment
3. Public Release 1st Quarter 2019



OTP Deployments

New York State Department of Transportation
Albany, NY 12232
https://www.511ny.org/

Arlington County Commuter Services
Arlington, VA 22209
http://www.carfreeatoz.com/

TriMet
Portland, OR 97201
http://ride.trimet.org/

Helsinki Regional Transport Authority
Helsinki, Finland
https://digitransit.fi/en/

Municipal Transport Company of Valencia S.A.U
Valencia, Spain
http://www.emtvalencia.es/...

SMTC, Grenoble Alpes métropole, l'État Français
Grenoble, France
http://www.metromobilite.f...

Service des Transports en Commun de l'Agglomération Rennaise (STAR)
Rennes, France
https://itunes.apple.com/us...

Urban Transport Authority of Poznań (ZTM Poznań)
Poznań, Poland
http://pozman.iplaner.pl/

ZTM Lublin
Lublin, Poland
https://www.ztm.lublin.eu/

Adelaide Metro
Adelaide, Australia
http://jp.adelaidemetro.com...

ViaggiaTrento and ViaggiaRovereto
Trento Province, Italy
https://play.google.com/sto...

Smart Campus Project
TrentoRise, UNITN, and FBK, Italy
http://www.smartcampusla...

Ruter
Oslo, Norway
http://ruter.no/reiseplanleg...

USF Maps
Tampa, FL
https://maps.usf.edu/

Valley Transit Authority
Santa Clara, CA
http://www.vta.org/

Regional Transportation District
Denver, CO
http://www.rtd-denver.com/

Cherriots, Salem-Keizer Transit
Salem, OR
http://cherriots.org/

SMRT
Singapore
http://journey.smrt.com.sg/

SoundTransit
Seattle, WA
http://www.soundtransit.or...

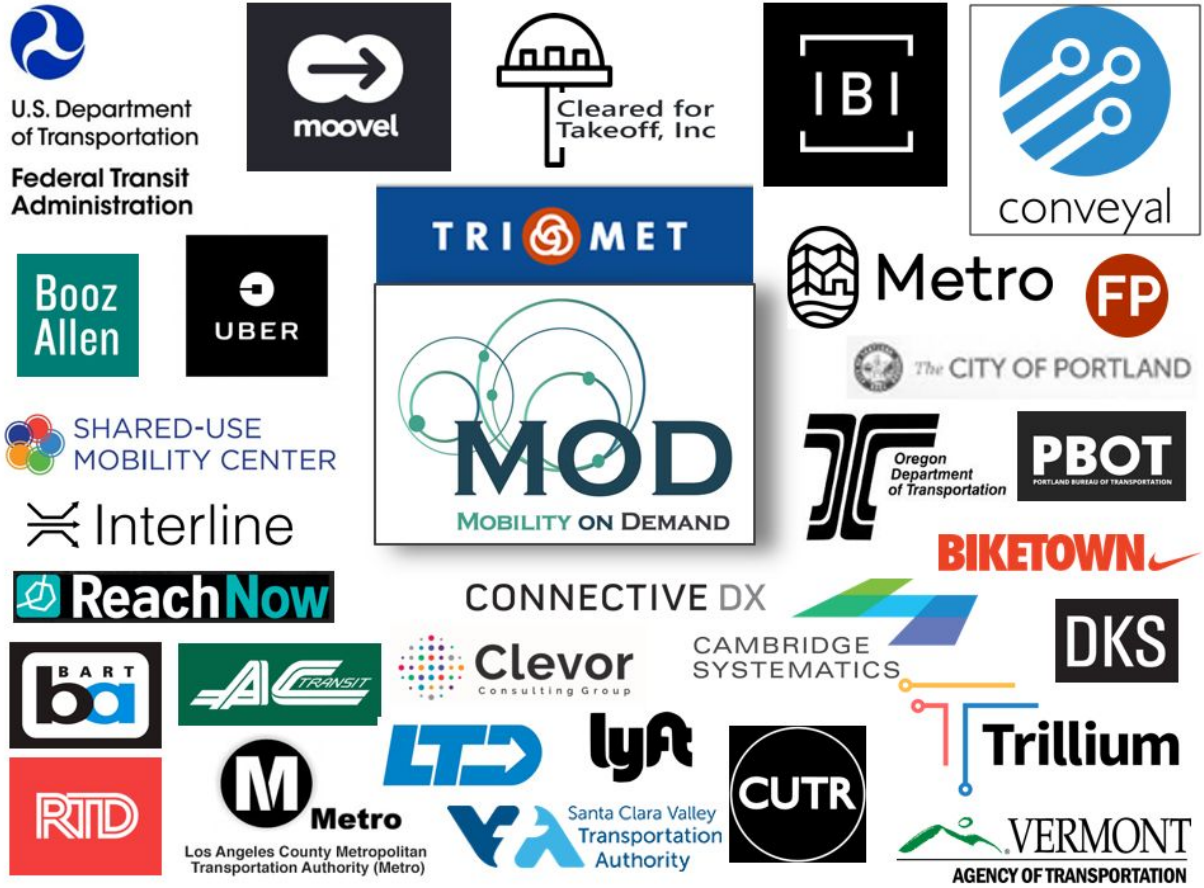
VivoBus Bologna
Bologna, Italy
http://bologna.vivibus.it/

Singapore Nextride
Singapore
https://itunes.apple.com/us...

BJCTA
Birmingham, Alabama
https://www.bjcta.org/

TransMate
Tel Aviv, Israel
http://www.tranzmate.co.il/

Netherlands (Nationwide)
A Coruña, Spain
Athens, Greece
Budapest, Hungary
Canberra, Australia
Helsinki, Finland
London, UK
Marseille Métropole
Portugal
South Africa
Tampa, Florida


U.S. Department of Transportation
Federal Transit Administration
moovel
Cleared for Takeoff, Inc
IBI
conveyal
TRIMET
Booz Allen
UBER
Metro
FP
The CITY OF PORTLAND
SHARED-USE MOBILITY CENTER
MOD
MOBILITY ON DEMAND
Interline
Oregon Department of Transportation
PBOT
PORTLAND BUREAU OF TRANSPORTATION
BIKETOWN
ReachNow
CONNECTIVE DX
DKS
BART
AC TRANSIT
Clevor
Consulting Group
CAMBRIDGE SYSTEMATICS
Trillium
LTD
lyft
RTD
Metro
Los Angeles County Metropolitan Transportation Authority (Metro)
Santa Clara Valley Transportation Authority
CUTR
VERMONT
AGENCY OF TRANSPORTATION

Thank you!