

# OpenTripPlanner Year 1 Webinar





# About OpenPlans

OpenPlans informs and engages communities through journalism and open source software.

**Journalism covering  
urban policy**



**Open Gov't / Open Cities  
applications & strategy**



**Open Source  
Software Development**



Making Cities Work Better since 1999.



# OpenPlans' Clients & Partners





# Demo

<http://demo.opentripplanner.org>

Please use an up-to-date browser (not IE6).

This is alpha software. You may encounter bugs or technical issues. Please report them to [mkeating@openplans.org](mailto:mkeating@openplans.org) so we can fix them.

Screenshots follow for those not able to access the demo.



# OTP Transit and System Map



The screenshot displays the OpenTripPlanner Map interface. The browser address bar shows <http://demo.opentripplanner.org/>. The page title is "Open Transit" with the URL [openplans.org](http://openplans.org).

**Open Transit**  
PLAN A TRIP W 48 ST TO PEARL

1: Wed, Jul 21st 12:52PM - Wed, Jul 21st 1:18PM  
1 transfer, 28 minutes

**Start at W 48 ST**

**Walk to 50TH STREET**  
About 3 minutes - 0.2 mi  
1. Walk southeast on W 48 ST (0.1 mi)  
2. Left at 8 AV (0.1 mi)

**SUBWAY C**  
12:56PM Depart 50TH STREET (To EUCLID AVENUE)  
13 minutes  
1:11PM Arrive BROADWAY - NASSAU

**Walk to FULTON STREET**  
About 2 minutes - 0.1 mi  
1. Walk southeast on FULTON ST (0.1 mi)  
2. Right at WILLIAM ST (96 ft)

**SUBWAY 2**  
1:13PM Depart FULTON STREET (To FLATBUSH AVENUE)  
1 minute  
1:15PM Arrive WALL - WILLIAM ST

**Walk to PEARL ST**  
About 3 minutes - 0.2 mi  
1. Walk southwest on WILLIAM ST (194 ft)  
2. Left at WALL ST (0.1 mi)  
3. Right at PEARL ST (39 ft)  
4. Slight right to continue on PEARL ST (160 ft)

**End at PEARL ST**

Buttons: Reverse, Edit, Print, Link

Map details: The map shows a route through Manhattan, New York City, starting at W 48th St and ending at Pearl St. The route is color-coded: red for walking, blue for Subway C, and yellow for Subway 2. Key locations labeled include Chelsea, Tribeca, and Little Italy. A scale bar indicates 500m and 2000ft.

(screenshot)



# OTP Biking



**Open Transit** [opentripplanner.org](http://demo.opentripplanner.org/)

**Trip Planner**

PLAN A TRIP W 48 ST TO PEARL W 48 ST TO PEAF

1: Wed, Jul 21st 12:51PM - Wed, Jul 21st 1:10PM  
18 minutes, 1.8 miles

**Start at W 48 ST**

**Bike to PEARL ST**

About 19 minutes - 4.5 mi

1. Bike southeast on W 48 ST (0.2 mi)
2. Right at BROADWAY (0.1 mi)
3. Slight right to continue on BROADWAY (0.1 mi)
4. Slight right to continue on BROADWAY (1.1 mi)
5. Left to continue on BROADWAY (124 ft)
6. Right to continue on BROADWAY (0.1 mi)
7. Slight left to continue on BROADWAY (221 ft)
8. Slight right to continue on BROADWAY (0.3 mi)
9. Slight right at UNION SQ W (0.1 mi)
10. Slight left at UNION SQ S (0.1 mi)
11. Left at E 14 ST (137 ft)
12. Right E 14 ST becomes BROADWAY (0.2 mi)
13. Slight right to continue on BROADWAY (2.0 mi)
14. Left at WALL ST (0.2 mi)
15. Right at PEARL ST (38 ft)
16. Slight right to continue on PEARL ST (160 ft)

**End at PEARL ST**

**Trip Details:**  
Travel: Wed, Jul 21st 12:51PM  
Valid: July 21st, 2010 @ 12:55pm  
Time: 19 minutes  
Walk: 4.5 mi

W 48 ST	BROADWAY	BROADWAY	BROADWAY
0.2 mi	0.1 mi	0.1 mi	1.1 mi

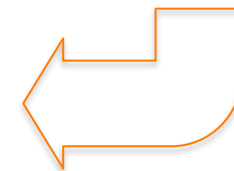
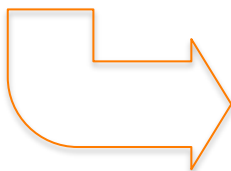
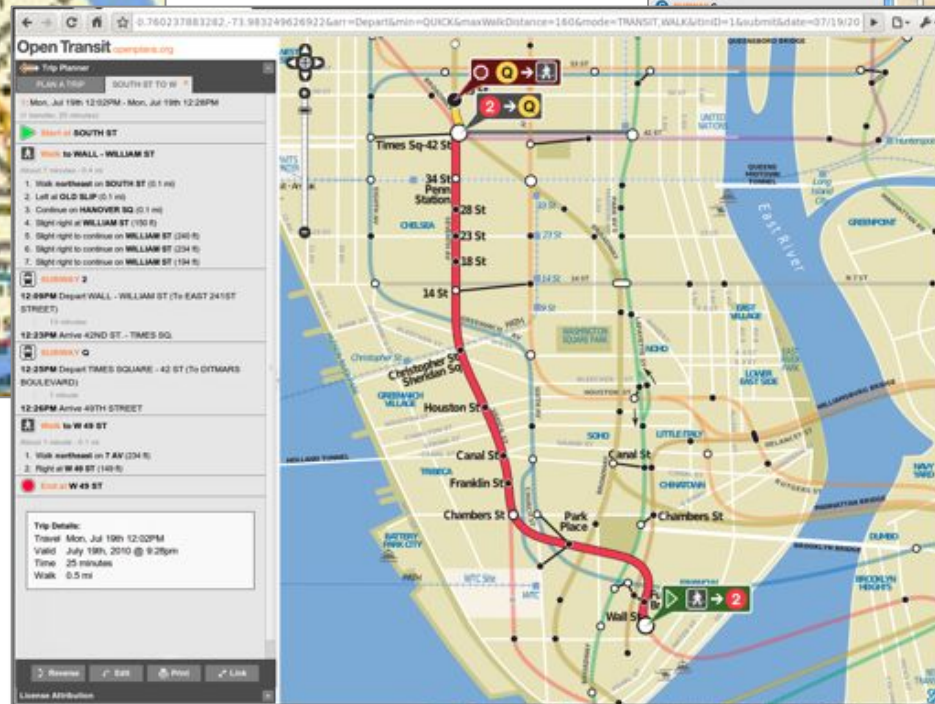
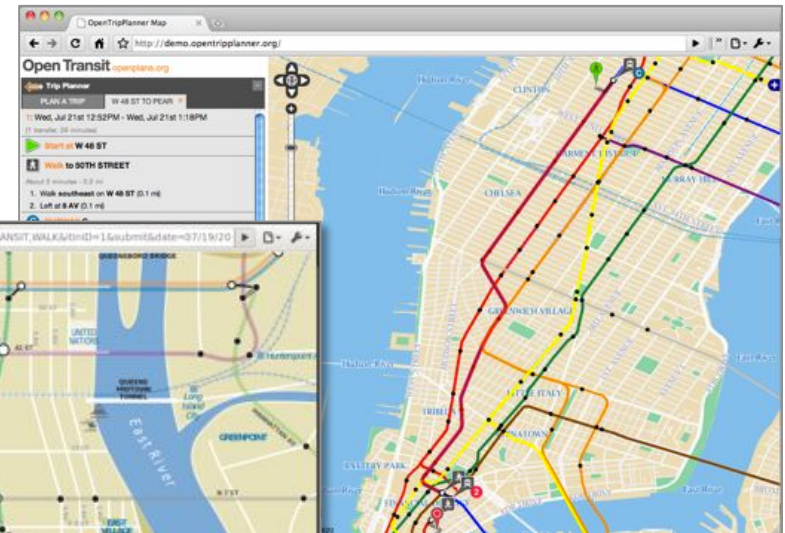
(screenshot)



# Future OTP System Map

Print Map or PDF

Geographic OTP Web Map



**Best of Both Worlds (coming soon!)**



# Open Development Process



The screenshot shows the OpenTripPlanner website interface. At the top, there is a navigation bar with the OpenTripPlanner logo, a search box, and user information (logged in as mkeating). Below the navigation bar, there are tabs for Wiki, Timeline, Roadmap, Browse Source, View Tickets, New Ticket, Search, and Hours. The main content area is titled "(1) Active Tickets (78 matches)" and includes a list of active tickets. The tickets are displayed in a table with columns for Ticket ID, Summary, Component, Version, Milestone, Type, Owner, Status, and Created date.

Ticket	Summary	Component	Version	Milestone	Type	Owner	Status	Created
#1	Make transportation extremely easy				enhancement		new	07/17/09
#69	Multiple itinerary support	api-webapp		0.5	task		new	12/04/09
#50	Propose using Log4J as our plugin of choice to slf4j	api-webapp		1.0	enhancement		new	11/20/09
#215	Byrd bug fixes make bike safety routing slow	routing		0.4	defect	novalis	new	03/24/10
#90	Setup system for testing webapp	webapp		Future	task		new	12/11/09
#268	bike -> transit routing includes a transfer by bike	routing		0.4	defect		new	05/05/10
#275	Street snapping should take into account transportation mode	routing		0.4	defect	novalis	new	05/11/10
#45	What does OTP Deployment look like?	api-webapp		0.4	enhancement		new	11/13/09
#280	Improve graph builder documentation	graph-builder		0.4	enhancement	nicholasbs	new	05/17/10
#172	Import and test using complete Portland dataset	none		0.4	task	nicholasbs	new	03/05/10
#227	Memory usage too high to load New York everything	graph-builder		0.5	defect		new	04/05/10
#41	FivePoints-style topo map	webapp		0.5	enhancement		new	11/08/09
#155	Additional WS (optional) parameters	api-webapp		0.5	enhancement	fpurcell	new	02/26/10
#157	VOTE: Should we update the Trip Itinerary?	webapp		0.5	enhancement	fpurcell	new	02/26/10
#94	Handle prefer greenways/quick/safe optimization preferences	api-webapp		0.6	task		new	12/15/09
#154	GeoCoder/GeoSearch tool (Apache SOLR based)	api-webapp		0.7	enhancement	fpurcell	new	02/26/10
#10	Explore overall project branding and namespacing	api-extended		1.0	enhancement		new	07/17/09
#165	Add support for frequencies.txt in GTFS	graph-builder		1.0	enhancement		new	03/03/10
#186	graph-builder runs out of memory even when	api-webapp		Future	defect		new	03/11/10

Next features and known bugs are visible online for contributors to work on.



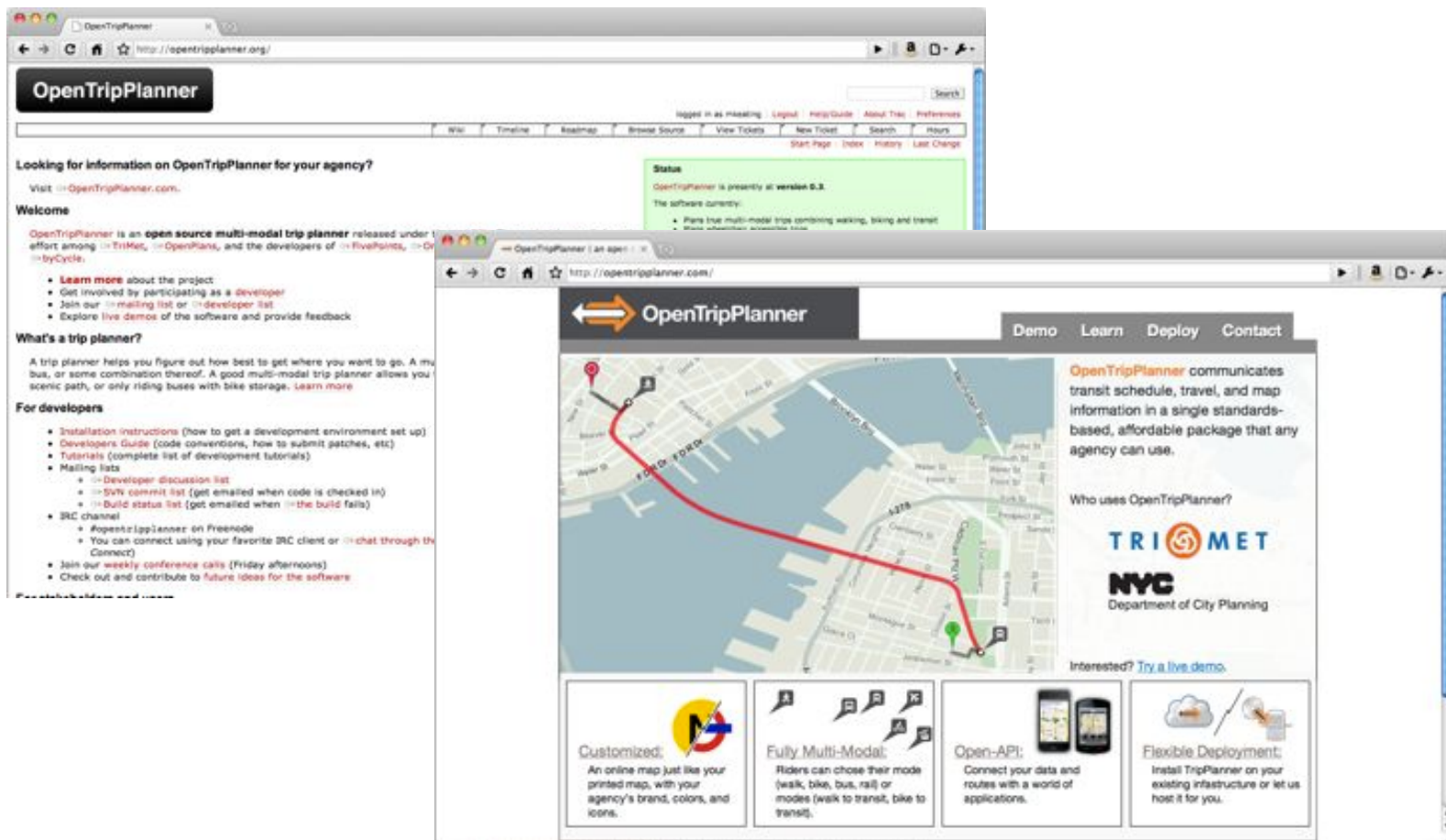
# The Developers

- **OpenPlans:** David Turner, Nick Bergson-Shilcock, Robert Marianski, Chris Patterson, Colin Zwiebel
- **TriMet:** Frank Purcell, Wyatt Baldwin, Mike Gilligan
- **The Predecessors:** Brian Ferris, David Emory, Brandon Martin Anderson
- **The New Faces:** goEuropa, Ingartek

Based on established software and built with contributions from TriMet, OpenPlans and developers around the world.



.org --> .com



*A new commercial site (.com) has been created to complement the .org developer site.*



# OTP Project Overview

## Task 1. Project Management Plan

Project Initiation Workshop  
July 15-17, 2009



Task 2. Develop and implement the software

Jan 2011

Task 3. Evaluation Study

May 2011

Task 4. Develop Final Report

June 2011

*The project is already **6 MONTHS** ahead of schedule.*



# Requirements Fulfilled

- Minimum requirements for grant have been fulfilled six months ahead schedule
- Next phase is improving the data and testing the planned trips
- Ultimate goal fro TriMet is to replace ATIS/ Trapeze trip planner including the customer service module
- Begin sharing and gathering requirements



# OTP vs. “The Leading Brand”



**Multimodal:** Your riders are walkers and bikers, too

**Map-based:** Riders want to see where they are going, not just follow the directions

**Accessible:** Making it easier for mobility-challenged riders to use your fixed route services - saving you money

**Yours:** Giving you total control over the schedules, branding, and messages your riders see

**Open:** Easy to update and support without vendor lock-in

**Affordable:** Cheap enough for you to adopt it right now, and keep it running for years without additional staff

*What can your trip planner do that OTP can't do better and cheaper?*



# OpenPlans' Support Model



- OpenPlans will customize, host, and support OTP for agencies
- Pricing for customization is based on the size of the agency's system and the level of customization required
- Pricing for hosting is based on the number of trips the system typically serves and the level of support required
- Small agencies with only basic needs could set up OTP for as little as \$10,000 and have it hosted for as little as \$5,000 per year

## Customization Options

- OpenStreetMap base map
- Geocoder integration
- Agency branding
- Custom geographic map
- GTFS creation support
- Bike lane and bike facility integration
- Your printed map as the base map
- Custom interactive features

## Support and Hosting Options

- Patches/bug fixes
- Email support
- Automated data loads
- Developer hours for additional customization
- Phone support
- Data upload support
- Data management tools
- High availability, fault tolerance, and recovery



# Current and Prospective OTP Users

## **Existing production deployments**

Coming soon!



## **Investments in OTP**

TriMet, NYC DCP (biking)



## **Live demos**

OpenPlans NYC subway, TriMet, UTA, DART, Poznan, Bilbao, Granada, Oregon DOT



## **Early conversations**

Sound Transit, King County (Seattle), Intertwine (Oregon Metro), Unified Dispatch, various commercial entities



# Suggestions

- Features to add to the roadmap?
- Features to prioritize?
- Advice on how to promote OTP and get it used widely?



# Q&A



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