

Go! Vermont Flexible Trip Planner

Vermont, USA



Key Dates & Project Owner

The Vermont Agency of Transportation (VTrans) first released their trip planning platform '[Go! Vermont](#)' Flexible Trip Planner to the public in Spring 2018. The current version of the trip planner is live and operational.¹



VTrans serves as the project owner, while supported by several private organizations who led the trip planning platform development.

Geographic Context

This project serves all geographic contexts present across Vermont, ranging from urban areas such as Burlington, to rural contexts which span much of the state.

Project Goals

The FTA report on this project² explains that the main goal of Go! Vermont was to “develop foundational data and software tools that would enable rural and demand-responsive transportation to be discovered in trip planners, similar to how fixed-route transit providers could already be discovered.” In particular, the project aimed to display demand-responsive transportation options by leveraging the [GTFS-flex data specification](#), which has become standard practice in the US.

Specific User Groups

While spanning a variety of geographic contexts, Go! Vermont focuses on the needs of users in rural areas or other users in need of demand-response transit in Vermont.

Governance Model

¹ <https://government.agilemile.com>

² <https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/146891/fta-report-no-0150.pdf>

As the project lead for this MaaS initiative, VTrans played the role of ‘MaaS promoter.’ Find out more about this public sector governance role, and others, on the MaaS Governance Models page.³

A wider project team of consultants and technical advisors supported VTrans in this effort as well. That team included Trillium and Cambridge Systematics, TriMet, the University of South Florida, Conveyal, IBI Group, and Entur.⁴

Funding

A \$480,000 grant from the FTA’s Mobility on Demand (MOD) Sandbox program in 2017 helped VTrans develop the Go! Vermont Flexible Trip Planner.

The Shared Use Mobility Center (SUMC) reports that “VTrans was one of eleven agencies that received federal funding through this program. In sum, VTrans received \$480,000 from the FTA, and contributed \$120,000 of its own funds. An additional \$10,000 from the state was spent on outreach activities, and another \$35,000 spent to promote the tool through media buys and additional outreach through fiscal year 2020.”⁵

Project Components

The core components that helped shape this project were largely centered around GTFS-flex and OTP improvements. These included:⁶

- **Creation of GTFS-flex data for all public transit providers in Vermont:** All transit agency data for the state of Vermont is now public, and this includes “flexible” or demand-response services.⁷ Instead of using the GTFS-flex specification as it existed when the project began, VTrans provided “change proposals” to the GTFS-flex community based on the local needs for GTFS-flex in Vermont revealed during the research phase of the project. These changes were the foundation for GTFS-flex v2. More information on the GTFS-flex data specification is provided under “related efforts” below.
- **Adaptation of [OpenTripPlanner \(OTP\)](https://www.opentripplanner.org) to include GTFS-flex data in trip planning results:** This project component connected Vermont’s newly created GTFS-flex data with the possibility for demand-response transit results to be displayed in Vermont’s trip planner. OTP, which began in 2009, is a “family of open-source software projects that provide passenger information and transportation network analysis services.”⁸ OTP was upgraded through this VTrans project to include flexible/demand-response data, enabling services such as “dial-a-ride” to be

³ MaaS Governance Models page

⁴ <https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/146891/fta-report-no-0150.pdf>

⁵ <https://learn.sharedusemobilitycenter.org/casestudy/vermont-flexible-trip-planner-bringing-fixed-and-flexible-transit-together-on-a-single-platform/>

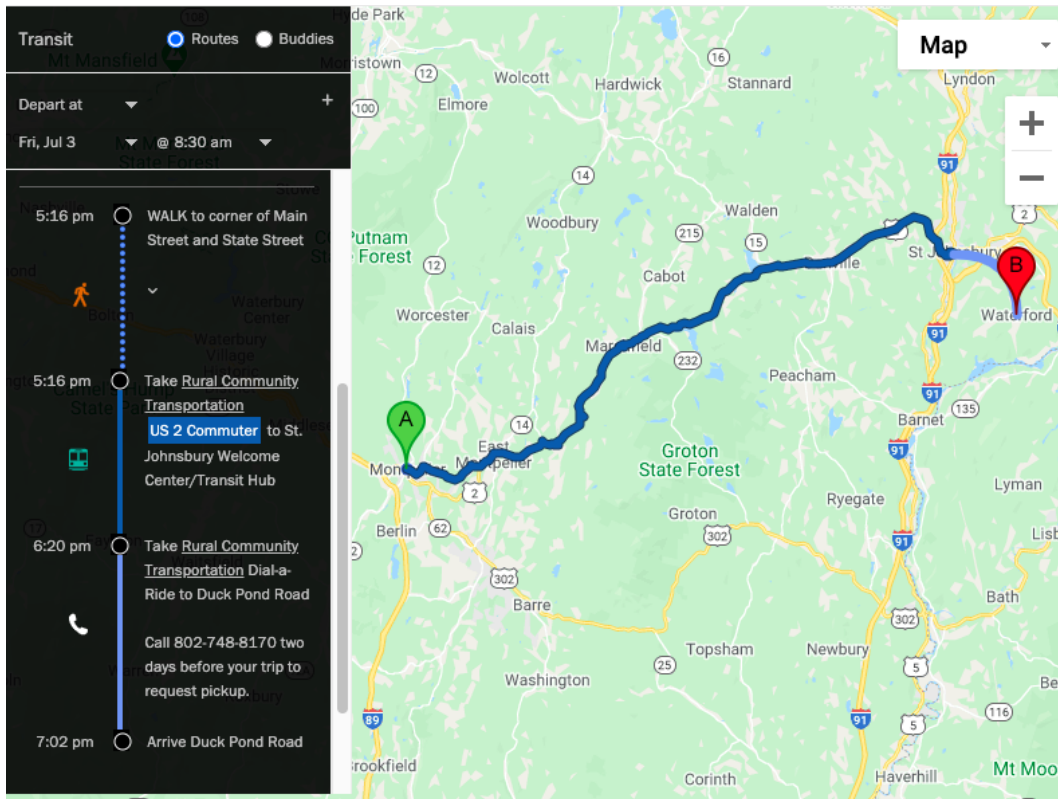
⁶ <https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/146891/fta-report-no-0150.pdf>

⁷ www.vermont-gtfs.org

⁸ <https://www.opentripplanner.org>

displayed as trip planning results. Displaying results in a trip planner provides the user with more complete information about what options are available while also providing critical booking information, such as the transit agency’s contact information. These OTP code enhancements were merged into a new version of OTP, version 1.4. More information on OTP is provided under “related efforts” below.

1. Example of Go! Vermont Trip Planner combining Fixed-Route and Dial-a-Ride Options⁹



- Contributions to GTFS-flex and OTP developments:** According to the FTA report for Go! Vermont, “the project team presented the GTFS change proposals incorporating GTFS-flex data concepts in partnership with MobilityData IO, constituting the GTFS-flex v2 specification now under consideration for adoption by various parties. The project team also successfully merged OTP code enhancements into OTP 1.4 in partnership with the OTP Project Leadership Committee and reviews by developers at Entur in Oslo and Conveyal in Washington, DC.”¹⁰

Related Efforts

⁹ <https://trilliumtransit.com/client-profile-go-vermont/>

¹⁰ <https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/146891/fta-report-no-0150.pdf>

Open Trip Planner: This trip planner was built on top of the foundation provided by an open-source software project. As explained in an N-CATT report, “The Vermont DOT was funded, under the Sandbox program, to develop the first large-scale GTFS-flex trip planning tool—using the OpenTripPlanner (OTP) web application—for all agencies in the state of Vermont. This required upgrading OTP to read flex data and include trip results for services like dial-a-ride, route deviations, and continuous stops.”¹¹

GTFS-flex data specification: This trip planner was enabled by the existence of an existing data specification—GTFS-flex. To learn more about GTFS-flex including its history, common uses, and potential future developments, refer to N-CATT’s white paper on the topic, “[GTFS Flex – What is it and how is it used?](#)”¹²

A detailed report on the project can be found on the Federal Transit Administration’s (FTA) website.¹³ The NCMM project profile¹⁴ and SUMC case study¹⁵ also provide detailed project overviews.

¹¹ https://n-catt.org/wp-content/uploads/2020/12/GTFS-Flex_WhitePaper_Final.pdf

¹² https://n-catt.org/wp-content/uploads/2020/12/GTFS-Flex_WhitePaper_Final.pdf

¹³ <https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/146891/fta-report-no-0150.pdf>

¹⁴ <https://nationalcenterformobilitymanagement.org/resources/oc-oc-state-of-vermont/>

¹⁵ <https://learn.shareusemobilitycenter.org/casestudy/vermont-flexible-trip-planner-bringing-fixed-and-flexible-transit-together-on-a-single-platform/>