

GTFS-Flex



GTFS-Flex white paper
prepared by Trillium for N-CATT

A PROPOSED EXTENSION TO THE GENERAL TRANSIT FEED SPECIFICATION (GTFS) THAT MODELS DEMAND RESPONSE, ROUTE DEVIATION, AND OTHER “FLEXIBLE” SERVICES FOR USE IN DIGITAL PASSENGER INFORMATION TOOLS

What kind of technology is GTFS-Flex?

GTFS-Flex extends the **GTFS** data format with files and fields that describe demand-responsive transportation (e.g., “dial-a-ride”), enabling riders to discover those services online in trip planning apps.

What problems does GTFS-Flex solve for public transit?

Demand-responsive transit has historically been excluded from the trip planning ecosystem, making it difficult for riders, especially for seniors and people with disabilities, to discover and access these services. **GTFS-Flex brings demand-responsive trip planning to these apps**, resulting in:

- Wider visibility of *all* transportation services an agency offers
- Clearer, more consistent information of those services
- Increased rider trust and confidence

Each one of these outcomes contributes to **increased ridership**.

Where is GTFS-Flex in its development today?

- Because it is not yet officially part of GTFS, some organizations have implemented GTFS-Flex in fully-realized trip planning tools to test and demonstrate its viability. Other major companies plan to support the technology once it is officially part of GTFS.
- Significant developments around Flex in recent months have brought Flex closer to integration with GTFS than ever. A vote on its adoption is expected to take place in Fall 2023.
- GTFS-Flex also lays groundwork for future improvements to the rider experience like real-time information and integrated booking.

ADDITIONAL DETAILS/RELATED TECHNOLOGY

- GTFS-Flex is a free, open-source (i.e., non-proprietary) technology, compatible with any already-existing GTFS dataset.
- OpenTripPlanner has been a key supporting technology in developing GTFS-Flex-based trip planning.

WHERE IT IS USED

- [Southern Minnesota MaaS Platform](#) (Transit + Cambridge Systematics + Trillium)
- [RideNoCo](#) (IBI + Trillium)
- [One-Call, One-Click, by King County Mobility Coalition](#) (IBI + Trillium)

OTHER GTFS-FLEX RESOURCES

- [GTFS-Flex GitHub](#)
- [gtfs.org Flex page](#)
- [OpenTripPlanner](#)

ABOUT N-CATT

[The National Center for Applied Transit Technology](#) is a technical assistance center funded through a cooperative agreement with the FTA. N-CATT’s mission is to provide small-urban, rural, and tribal transit agencies with practical, replicable resources that help them apply technological solutions and innovations.

ABOUT TRILLIUM

[Trillium](#), an Optibus company, is a software company developing GTFS-based technologies. They maintain GTFS data for over 300 transit agencies in the U.S.