# Case study: On-demand transit

Durham Region Transit

When it launched a new bus network that included on-demand service, Durham Region Transit (DRT) wanted riders to see microtransit as a convenient connection to frequent fixed-route service. Working with *Transit* and Spare Labs, DRT was able to educate riders and integrate microtransit with the agency's core network – using the app passengers already open every day.
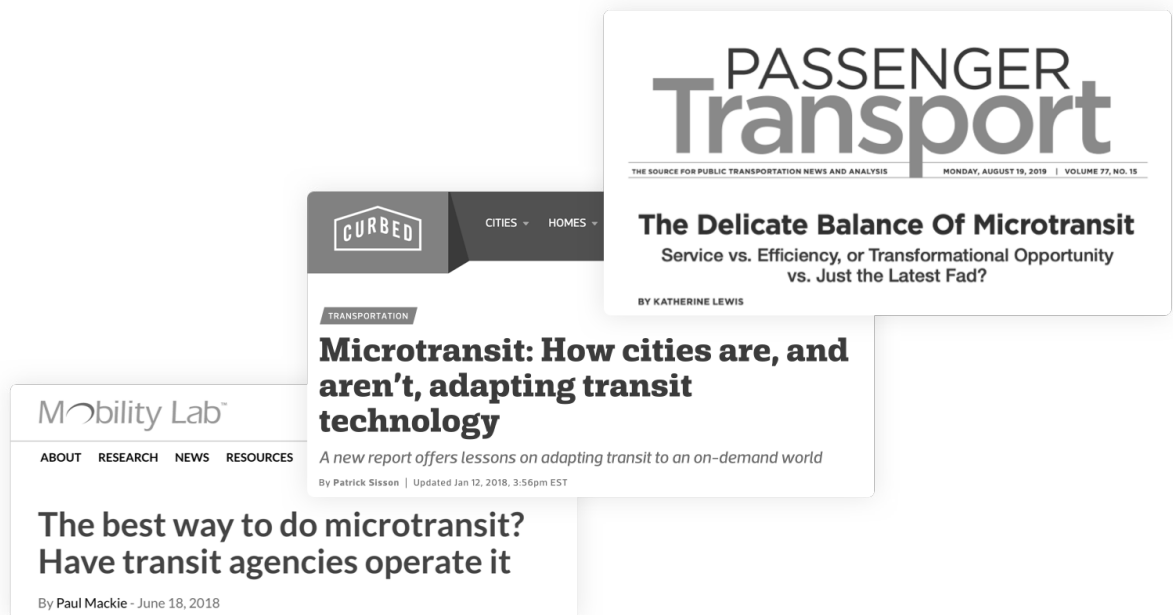
About Durham Region Transit

Covering an area almost the size of Rhode Island, Durham Region Transit served 11 million unlinked trips in 2019. Durham Region, home to 700,000 people in a mix of urban, suburban, and rural areas, is connected to Toronto's central business district by GO train service along Lake Ontario.

The challenge

Responding to ridership changes during the pandemic, Durham Region Transit launched a microtransit service, DRT On Demand, to replace low-ridership routes with on-demand transit.

DRT's frequent grid service was already carrying 90% of its ridership. Introducing DRT On Demand allowed the agency to focus resources on core lines, while expanding DRT's reach to riders farther from a bus stop or train station.

A top priority: encourage riders to combine on-demand transit with buses and trains for faster and more efficient A-to-B trips.

DRT saw this as an obvious fit for its endorsed trip planning app, *Transit*, which thousands of its riders were already using daily. DRT had a clear requirement for its new program: make sure the new microtransit service integrates into *Transit*.

After DRT selected Spare Labs as its microtransit provider, all three teams – DRT, *Transit*, and Spare Labs – got to work, quickly bringing this integration to riders.

About Spare Labs

Based in Vancouver, Canada, and operating across four continents, Spare's on-demand transit solutions help agencies simplify operations by integrating public and private transportation services. With real-time ETAs from the Spare Open API, microtransit can quickly integrate into the trip planning apps and tools riders are already using.

How we did it

Once in place, the new tech team – agency, app, and microtransit platform – moved fast to help riders incorporate on-demand transit into their commutes for the first time.
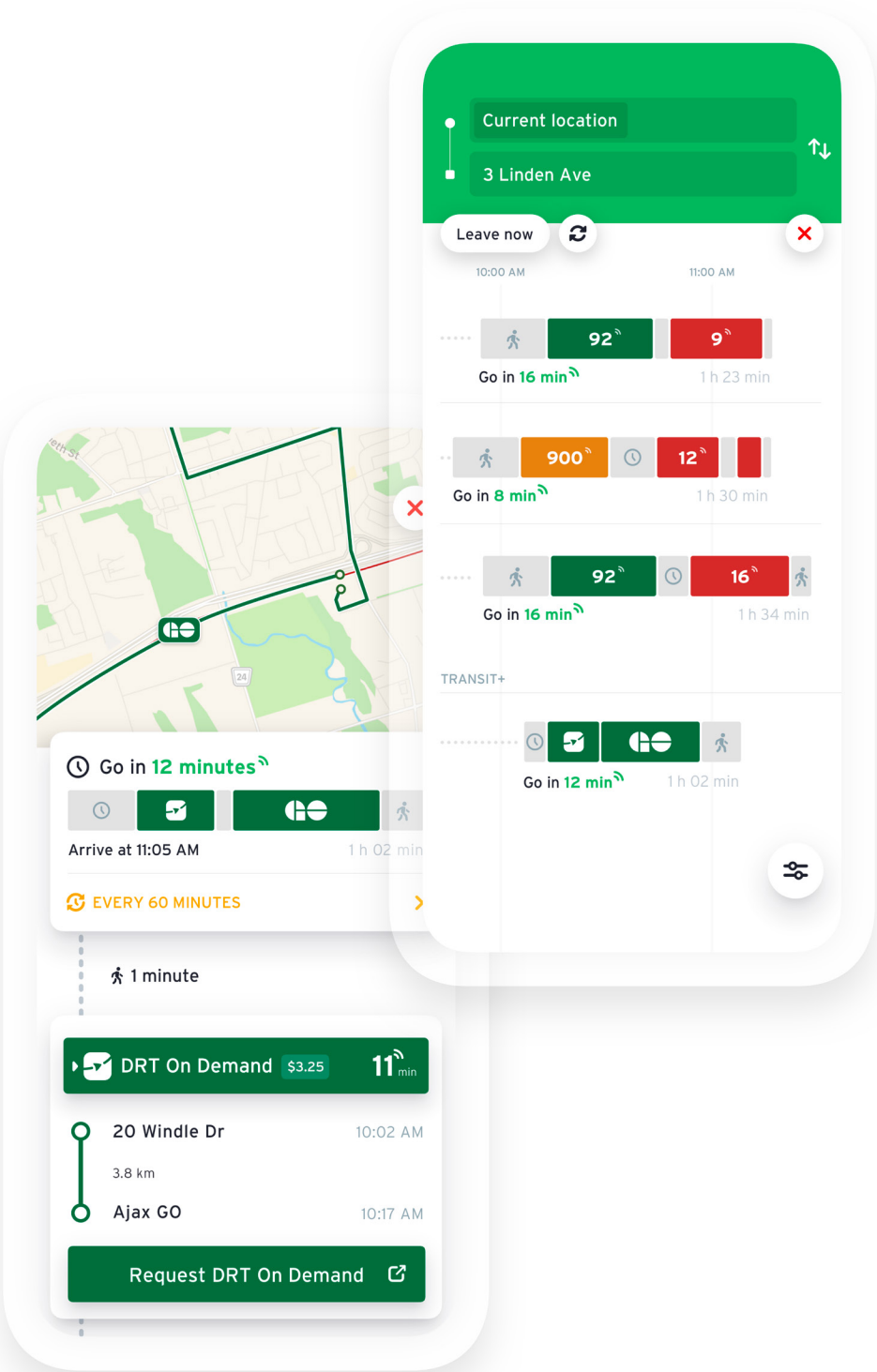
Each partner had its role:

Durham Region Transit

DRT outlined the zones and determined exactly how its on-demand service would operate with dedicated vehicles and drivers from the agency. It also prepared fixed-route service changes to strengthen core routes fed by on-demand service.

Spare Labs

Spare's publicly-available open API allowed *Transit* to integrate DRT On Demand into the app. Spare's team also converted DRT On Demand's service zones into a compatible format for *Transit*'s trip planner.

Transit

With Spare's open API, *Transit* added DRT On Demand and its new service zones to the app. *Transit* adjusted its trip planner to generate trips that bring riders to and from transit connections for each zone. With these real-time ETAs and a one-tap link to the DRT On Demand app for booking, *Transit* could now merge on-demand with fixed-route service in real time.

After beginning work in July 2020, the project launched just three months later to begin serving riders that September.

Initial results

So far, so good.

More than one in three Durham Region Transit riders open *Transit* each day to track their bus or train. When DRT relaunched its network to include DRT On Demand, more than 15,000 riders received push notifications and in-app messages from *Transit* about the new service — a valuable component of DRT's outreach to inform riders about a major service change.

## DRT On Demand pick-up locations
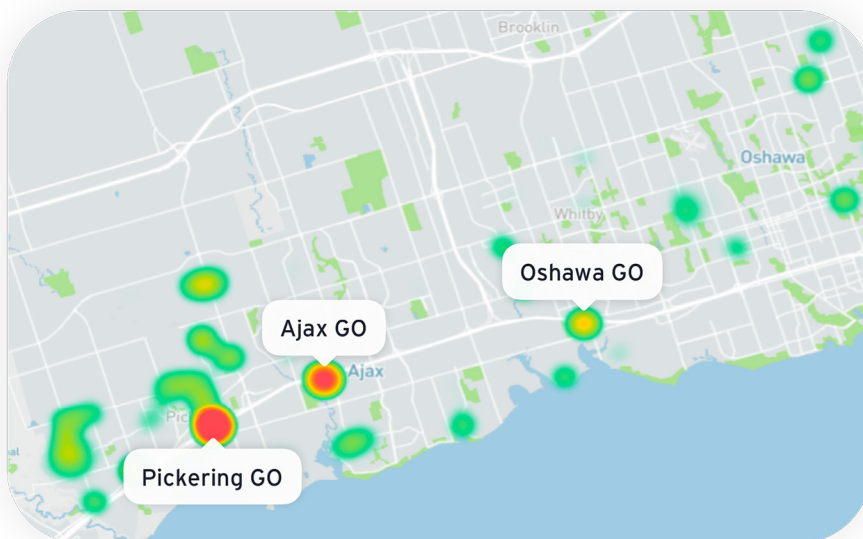
The start of the last mile: a glimpse of pick-up location data shows trips cluster around key corridors and stations where riders make connections with fixed-route service, such as these three GO train stations.

Whenever riders plan a trip where DRT On Demand provides a helpful connection to their destination or to fixed-route transit service, it appears in *Transit*'s trip planner.

Within the first 50 days after launch, riders tapped on DRT On Demand more than 4,500 times from *Transit*'s home screen, and selected more than 2,600 DRT On Demand trip plans in the app. Two-thirds of those are multimodal Transit+ trips connecting with DRT bus or GO train service.

Transit's users requested more than 1,100 DRT On Demand rides after planning a trip with the app — that's more than 1 in 10 DRT On Demand journeys.

Within DRT On Demand's first 50 days...

15,000   **Riders reached in *Transit***

4,500   **DRT On Demand taps from *Transit*'s home screen**

2,600   **DRT On Demand trip plans selected in *Transit***

1,100   **DRT On Demand trips requested from *Transit***

10,000   **Total DRT On Demand journeys**
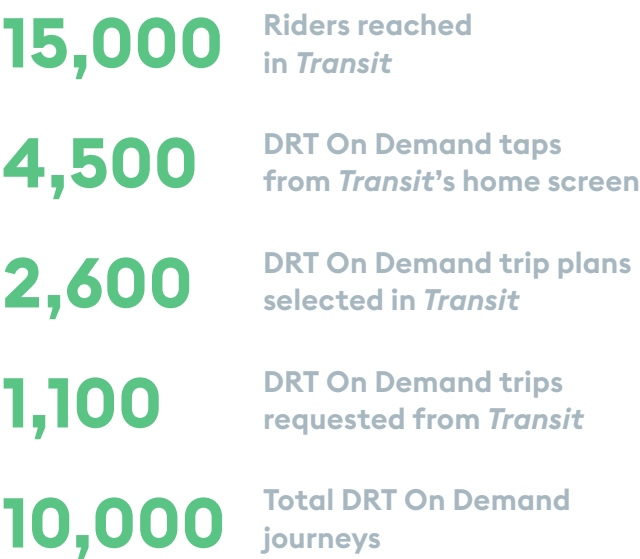
Types of DRT On Demand Trips Planned with *Transit*
Within DRT On Demand's first 50 days...

DRT ON DEMAND-ONLY TRIPS	TRANSIT+ TRIPS COMBINING DRT ON DEMAND WITH FIXED-ROUTE SERVICE
853	1,811
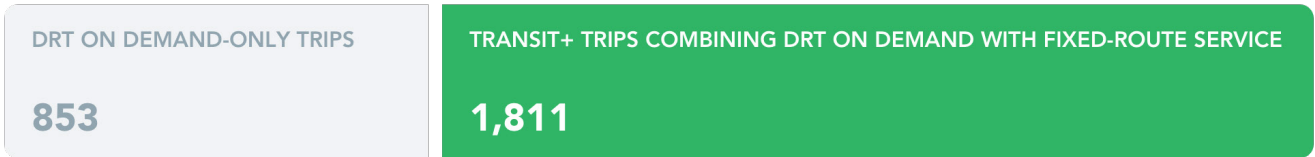
Total DRT On Demand trips planned   **2,664**

All together, riders are taking hundreds of DRT On Demand trips daily, totaling more than 10,000 journeys in the service's first 50 days. More than 30% of DRT On Demand riders provided feedback to DRT about their trip, with 9 out of 10 rating the experience as positive.

The role of fixed-route

Since the launch of DRT On Demand, the system's fixed-route ridership has held steady at approximately 20,000 trips each weekday. In other words, DRT On Demand complements — rather than competes with — fixed-route service, extending the reach of the whole network.

To more efficiently serve riders in high-demand areas, DRT is tracking microtransit usage. The agency then expands its fixed-route services as specific DRT On Demand zones meet established ridership thresholds.

What's next?

These promising early results are a step in the right direction for on-demand transit. Yet there's still more work to fully integrate microtransit as part of an agency's network.

The first step is to use data standards, saving agencies time and money with each new deployment and microtransit provider. Just as GTFS is the data standard for fixed-route transit, and GBFS exists for bikeshare and scooters, it's time to lock in a similar data standard for microtransit.

MobilityData, the international non-profit that manages GTFS and GBFS, is working with the industry to develop (drumroll please) GOFS, or the General On-Demand Feed Specification.

There are many possibilities for GOFS: not just for microtransit, but for all sorts of on-demand services that could use a healthy dose of open technology, like taxis, ridehail, and dial-a-ride. Cities, transit agencies, apps and on-demand service providers are encouraged to lend their expertise and get GOFS off the ground.

MobilityData

Accessibility

Scheduling paratransit pick-ups and surfacing wheelchair accessible vehicles can frustrate riders and agencies alike. Eligible riders often have to call days in advance to schedule a trip, or face long waits to hail an accessible vehicle, making it nearly impossible to connect with fixed-route transit.

GOFS could simplify the e-hail process by providing riders with real-time ETAs and information about vehicle accessibility from multiple on-demand fleets. With a new data standard, agencies can efficiently meet riders' needs and connect them to the larger transit network.

Even with GOFS to ease trip planning, there is still work that remains to achieve a full "mobility as a service" integration. Planning, booking, and paying for a DRT On Demand trip, for example, still requires three different apps: *Transit*, Spare, and Presto. A central focus for *Transit* is developing additional industry standards so riders can plan, book, and pay for on-demand and fixed-route trips in one app.

Microtransit

Plan　　Book　　Pay

Microtransit has shown promising results, but too often, it's not seen as part of the larger transit network. When agencies' trip planning tools don't include microtransit, it's all but impossible for riders to merge on-demand with fixed-route services.

By integrating DRT On Demand into the app riders were already using, Durham Region Transit educated passengers about a major service change and jump-started microtransit ridership.