

DEPARTMENTAL INPUT
CONTRACT/PROJECT MEASURE ANALYSIS AND RECOMMENDATION

☒ New ☐ OTR ☐ Sole Source ☒ Bid Waiver ☐ Emergency Previous Contract/Project No. n/a

☐ Contract ☐ Re-Bid ☐ Other LIVING WAGE APPLIES: ☐ YES ☒ NO

Requisition No./Project No.: BW10026 TERM OF CONTRACT 3 YEAR(S) WITH 0 YEAR(S) OTR

Requisition /Project Title: Transit Performance Analysis Software

Description: Software agreement for real-time vehicle tracking information for the Department of Transportation and Public Works ("DTPW") fleet for improvement of the transit fleet's reliability. The software-based solutions will: Use DTPW's existing real-time transit data feed for its analysis; Provide granular, stop-segment level data for on-time performance, transit speeds, and transit trip time (including variable run time) analysis; Provide results in dynamic, visually appealing, and easy-to-understand form, including charts, graphics, and maps where possible through an easy-to-use interface that can be made available to all DTPW staff across divisions; and Provide a software-based solution that has unlimited licenses.

Issuing Department: DTPW Contact Person: Javier Bustamante Phone: 786-469-5244

Estimate Cost: \$1,800,000.00 Funding Source: GENERAL FEDERAL OTHER

Operating n/a n/a

ANALYSIS

<u>Commodity Codes:</u>	<u>20554</u>			
Contract/Project History of previous purchases three (3) years				
Check here <input checked="" type="checkbox"/> if this is a new contract/purchase with no previous history.				
	<u>EXISTING</u>	<u>2ND YEAR</u>	<u>3RD YEAR</u>	
Contractor:				
Small Business Enterprise:				
Contract Value:	\$	\$	\$	
Comments: <div style="border: 1px solid black; height: 20px; width: 100%;"></div>				
Continued on another page (s): <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				

RECOMMENDATIONS

	Set-aside	Sub-contractor goal	Bid preference	Selection factor
SBE				
Basis of recommendation: <div style="border: 1px solid black; height: 40px; width: 100%;"></div>				
Signed: <u>Brian Webster</u>			Date sent to SBD: <u>07/15/2019</u>	
			Date returned to DPM: <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	



Swiftly

SWIFTLY, INC.
Miami-Dade County
project **proposal**

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project goals

Swiftly enables agencies to thrive in today's rapidly changing mobility environment.

ENHANCE THE PASSENGER EXPERIENCE

- » Improve real-time arrival information accuracy
- » Experience mobile apps, SMS, IVR, and website seamlessly
- » Update schedules quickly and effectively
- » Integrate with electronic displays

IMPROVE PERFORMANCE AND RELIABILITY

- » Measure on-time performance quickly
- » Understand trip running times and dwell times instantly
- » Visualize where vehicle speeds are declining

REDUCE OPERATING COSTS

- » Re-balance vehicles in your network
- » Eliminate excess run-times
- » Minimize driver overtime

FUTURE-PROOF YOUR NETWORK

- » Adapt to both current and future on-vehicle hardware

about **swiftly**

Swiftly is the first big data platform developed to help transit agencies and cities improve urban mobility. Built by transportation experts for transportation professionals, the Swiftly platform harnesses billions of data points using sophisticated algorithms to improve transit system performance, service reliability, and real-time passenger information. Over 50 cities and agencies around the world use Swiftly's technology platform, improving transportation services for millions of riders every day.



product overview

Swiftly's platform consists of two core products, powered by historical and real-time data, that build a comprehensive transit network view for both agencies and passengers.

■ SWIFTLY TRANSITIME

30% more accurate than industry standard

Provides best-in-class real-time information externally to passengers and internally for dispatchers and controllers.

■ SWIFTLY INSIGHTS

90% faster project completion

A new way for agencies to leverage historical big data to improve operational efficiency and service reliability.

seamless integration

Swiftly integrates with your existing infrastructure. Our solutions can integrate directly with your operator's existing CAD/AVL system, or supplement them with additional low-cost hardware if limited data is available.

cloud-based software

All of Swiftly's software is cloud-based, so you'll never have to worry about maintenance, hosting, or downloading software updates. We're constantly taking our software a step further based on feedback from customers. As soon as Swiftly adds a new feature in a software module you have purchased, your agency will automatically have access.

swiftly transitime

Swiftly Transitime generates accurate real-time information for riders, dispatchers, and controllers. Building trust with passengers is key to increasing ridership and keeping them happy. Connect with riders where they are — transit apps, webpages, SMS, and IVR — to give them the industry's most accurate real-time vehicle predictions. With reliable and accurate updates, passengers in Miami will catch their ride, keeping the county] moving happily and efficiently.

- » **HIGHER ACCURACY** 10–30% more accurate than current industry RTPI systems.
- » **MORE PREDICTIONS** Updates every 5–30 seconds at every GPS ping.
- » **MORE RIDERS** Many agencies experience an increase in ridership with Transitime.
- » **HAPPY RIDERS** Up to 90% of customers report greater satisfaction with transit.
- » **TIME SAVINGS** Riders report an average of two minutes saved for wait times.
- » **EASY DEPLOYMENT** Swiftly supports any GPS/vehicle location system.
- » **SIMPLE OPERATIONS** Swiftly automatically assigns vehicles to routes.
- » **NATIVELY MULTIMODAL** Swiftly can combine all fixed route modes into a single data feed.

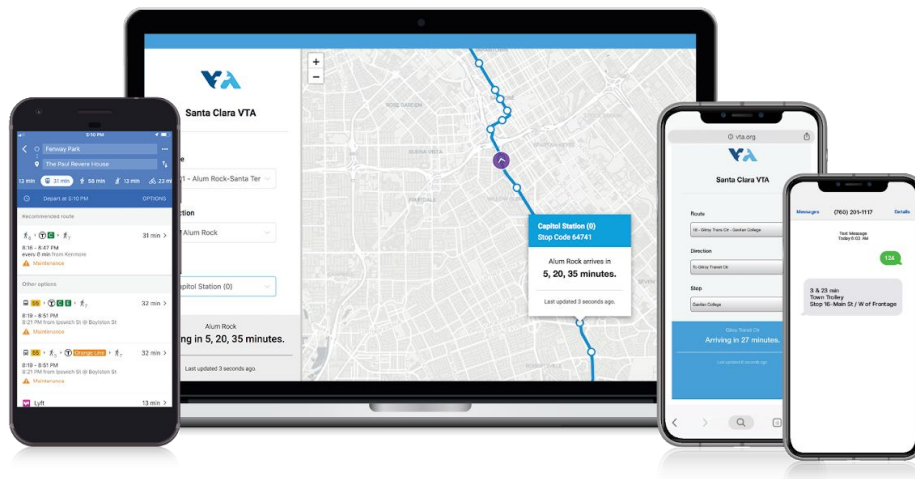
accurate predictions

Swiftly stores billions of historical GPS points, analyzes historical speeds and travel times, adjusting predictions by time of day, day of week, and more based on historical trends.

api library

You and your passengers have open access to Swiftly's real-time information on any journey planning service.

passenger-facing tools



OPEN DATA SUPPORT FOR THIRD-PARTY MOBILE APPS

Seamlessly send real-time information to Google Maps, Transit, Moovit, and other applications through the common GTPS-real-time format, JSON, XML, and SIRI data fields. Swiftly's open data API enables third party developers to easily add different real-time information interfaces to your website or app. This saves you the cost of developing custom apps, and gives riders access to many different platforms and apps of their choosing.

REAL-TIME INFORMATION FOR SIGNS

Swiftly can work with many sign providers to supply arrival times and transit alerts to passengers. There's often no need to purchase new signs, though we're happy to recommend our signage partners.

REAL-TIME INFORMATION VIA SMS AND IVR

Your agency will be given a dedicated phone number so riders do not need to memorize an agency key. The rider simply texts or calls in with the stop number and system will respond with the arrival times, route name, and nearest stop location.

PASSENGER PREDICTIONS MAP

Empower users with real-time information for the routes they ride, including vehicles moving on a map in real-time with arrival information. Optimized for web and mobile, users can easily and quickly access real-time passenger information.

live map module

Swiftly provides real-time management tools for your agency, in addition to passenger facing real-time information. Swiftly's Live Map Module is a web-based portal that lets you monitor the state of your transit network in real-time.

NETWORK IN REAL TIME

Get a precise, down-to-the-second picture of the whereabouts of every vehicle in your network.

ENSURE COMPLIANCE

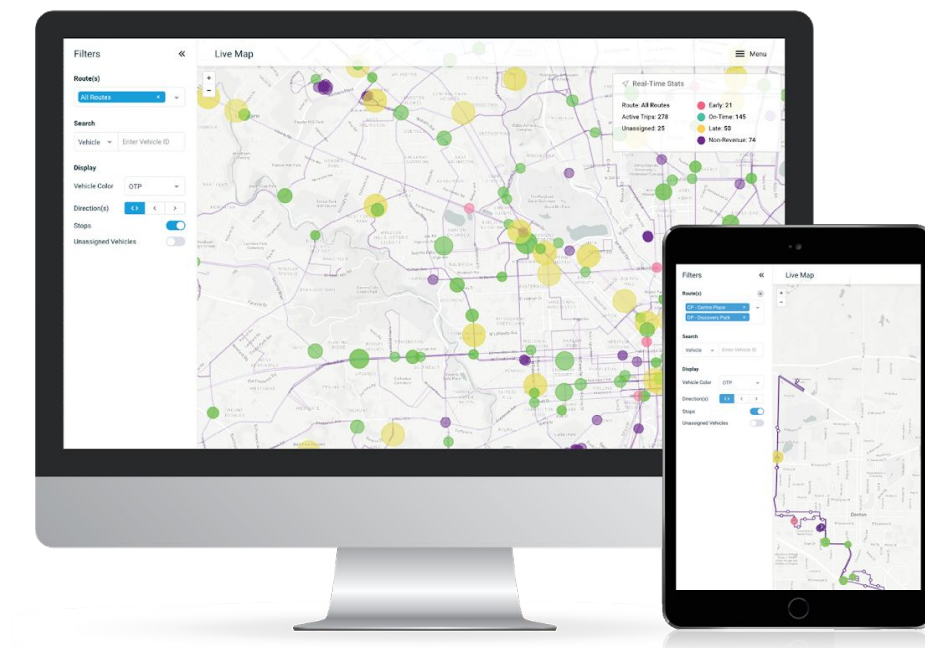
Follow drivers in real time to ensure compliance with detours and new route alignments.

GET ANSWERS QUICKLY

Give your team the tools they need to answer customer inquiries quickly and to shorten call lengths.

REDUCE BUNCHING

View live headway status to detect bunching or gaps and quickly mitigate problems.



best practices & return on investment

We work with dozens of transit agencies and continue to demonstrate measurable results. We share the brightest ideas across our customer base and the following are a few customer examples:

AGENCY	PROJECT	BASELINE	USING SWIFTLY	BENEFIT
MTA Baltimore, MD	Improve vehicle tracking accuracy	120 second ping rate	10 second ping rate	12x increase in vehicle tracking accuracy
MTA Baltimore, MD	Improve passenger information and schedule accuracy	RTPI accuracy less than 60%	RTPI accuracy above 80%	50% decline in passenger complaints from 2016 to 2017
VTA San Jose, CA	Seamless passenger information updates	3 weeks for updates	3 hours	Improved passenger experience
MBTA Boston, MA	Commuter rail predictions	77% accuracy	95% accuracy	Reduced passenger complaints
CARTA Charleston, SC	Reduce customer service call length	10 minutes	3–4 minutes	\$40,000 in gained productivity
TCTD Tillamook, OR	Reduce passenger calls and complaints	20 calls per month	1–2 calls per month	90% decline in passenger calls and complaints

swiftly insights

Swiftly Insights analyzes and visualizes millions of data points in seconds to help you quickly locate and resolve performance issues. Intuitive reports surface issues and are seamlessly connected, showing not only problem areas, but also root causes — equipping planners, schedulers, customer service, and operations teams with the information they need to make more efficient and effective decisions.

- » **ACCESS DATA** Easily access data, organized to make decisions, when you need them.
- » **IMPROVE EFFICIENCY** Analyze data in-house in a fraction of the time and cost.
- » **REDUCE COST** Identify fleet and corridor inefficiencies for cost-savings.
- » **SHARE DATA** Use the same data with the same assumptions across departments.
- » **COMMUNICATE PLANS** Easily share data-driven plans with external stakeholders.
- » **MEASURE PROJECTS** Quickly measure ROI and conduct before-and-after studies.
- » **TARGET ANALYSIS** Home in on specific adjustments with large impact.

gtfs–
based

Swiftly's on-time performance calculations are always aligned with the same schedule used by passengers in Google Maps or other trip planning applications, ensuring passenger experience remains top of mind.

open data

Your data will always be available via API or download for additional analysis in Microsoft Excel, R, Tableau, or other applications.

on-time performance module

The On-Time Performance (OTP) module is a robust toolkit for monitoring and improving your agency's on-time performance

IDENTIFY INEFFICIENCIES

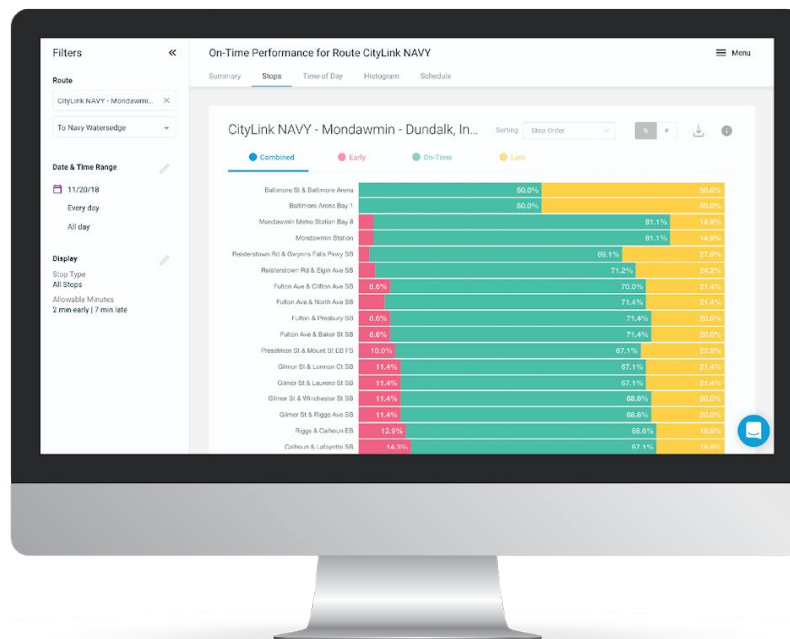
Identify specific stops and trips impacting your overall on-time performance.

DISCOVER ISSUES

View when and where operational issues occur along every route in your network.

IMPROVE PASSENGER EXPERIENCE

Make informed adjustments that increase service reliability.



"Swiftly has a level of customization for on-time performance queries — for different routes, places, times. It's allowed me to do analysis that I just couldn't have done before."

MIKE HELTA, CHIEF INNOVATION OFFICER, MTA MARYLAND

runtimes module

The Runtimes module enables you to monitor scheduling accuracy by easily comparing actual run times, relative to both the scheduled run time and the next trip start.

SUGGEST SCHEDULE CHANGES

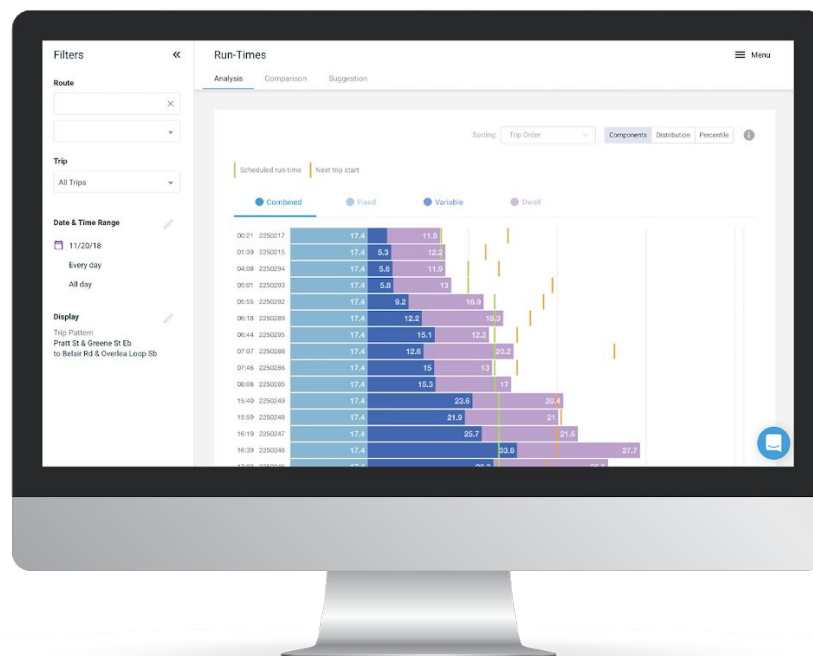
Create schedule improvements based on historical GPS records and actual performance.

IDENTIFY EXCESS SLACK

Find trips that exceed recovery time or have unnecessary slack to ensure reliable schedules.

VISUALIZE INSTANTLY

Communicate impacts of schedule changes, stop relocation, TSP, and other infrastructure projects.



"After 10 years, we finally added time to routes to accommodate increased ridership. Now, we can see exactly where we need to add a minute here, or two minutes there."

KATHY BOND, TRANSIT SPECIALIST TCTD

gps playback module

Instantly replay any moment in time for any route to reveal historical schedule adherence, speeds, vehicle positions and more.

REPLAY VEHICLE MOVEMENTS

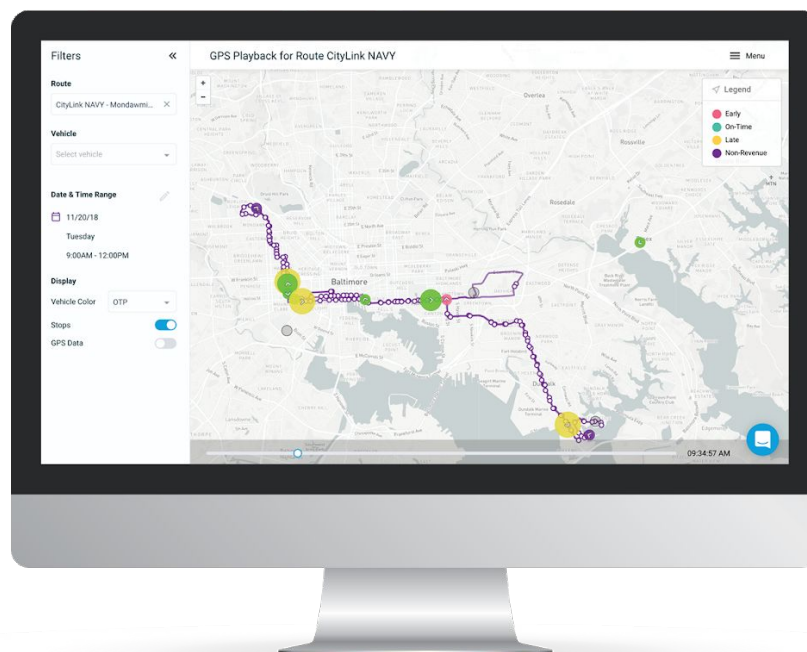
Easily replay historical GPS data for every vehicle in your network.

RESOLVE RIDER ISSUES

Resolve issues like, “My bus never showed up,” and “I lost an item, but I’m not sure which bus” in minutes.

CHECK DRIVER COMPLIANCE

Monitor driver adherence to detours or new route alignments and improve driver training.



“This is the fastest playback you can imagine.”

GURPREET SINGH, OPERATIONS MANAGER AT VTA

speed map module

The Speed Map Module enables you to quickly visualize and analyze vehicle speeds and dwell time across any corridor and any time period.

IDENTIFY SLOWDOWNS

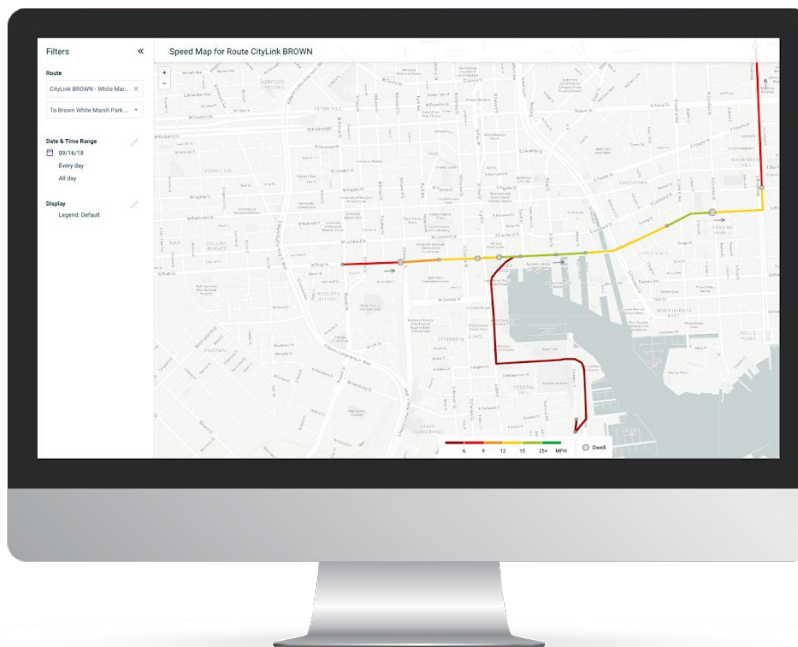
Find route segments and intersections causing avoidable performance issues.

VISUALIZE SPEEDS

Create intuitive visualizations of vehicle speeds and dwell times for any route and direction.

COMMUNICATE IMPACT

Quantify and communicate the impact of infrastructure projects on vehicle speeds and dwell times.



“On our complete streets project, we use the Swiftly dashboard to compute the data we need on-the-fly. It used to take two weeks, now it’s a few minutes. It’s all right there.”

SENIOR TRANSPORTATION PLANNER, VTA, SAN JOSE, CA

headways module

The Headways module gives you a way to quickly understand how well your high-frequency routes are adhering to scheduled headways.

FLAG PROBLEM AREAS

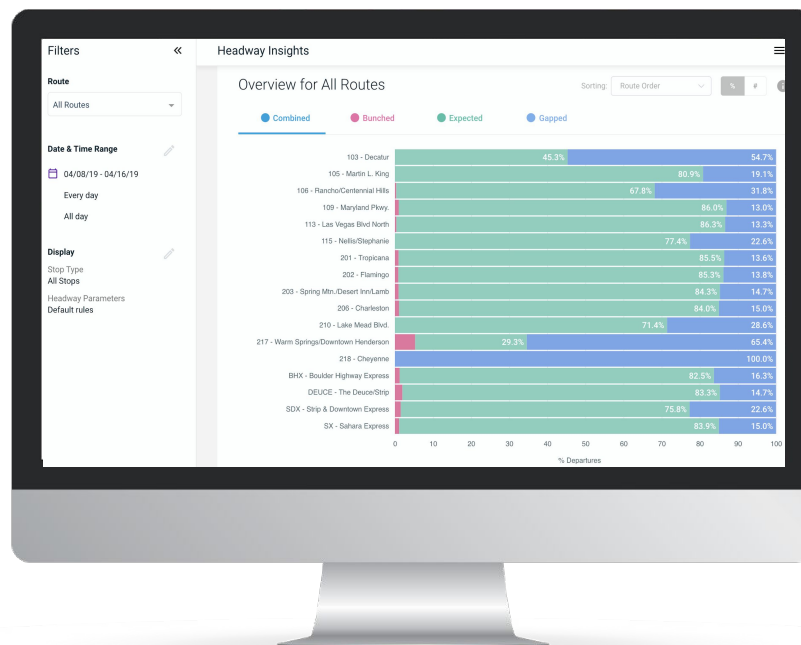
Compare actual headways with scheduled headways including fully customizable definitions of bunching and gapping.

SPOT VEHICLE SPACING ISSUES

Quickly identify the exact times of day and places along your routes where vehicles spacing issues typically arise.

ALIGN WITH AGENCY PRIORITIES

Analyze how additional dwell time could help reduce bunching and gapping



best practices & return on investment

We work with each of our customers to find the most value in Swiftly. That means finding ways to demonstrate return on investment. We will always work with you on the projects that drive the most impact. The following are a few examples from our customers:

AGENCY	PROJECT	BASELINE	USING SWIFTLY	BENEFIT
MTA Baltimore, MD	TSP study	9 month in-house project	1 month in-house project	> 3,500 staff hours saved
MTA Baltimore, MD	0% early departure initiative	Insufficient tools to complete project	Operations, planning, dispatch, scheduling	10% increase in on-time performance in one quarter
VTA San Jose, CA	Quarterly service analysis	Week-long study	Study complete in 4 hours	76 staff hours saved per quarter
VTA San Jose, CA	FAST initiative	Multi-year consultant study	6 months in-house	\$150,000 consultant cost savings
CARTA Charleston, SC	Reduce customer service call length	10 minutes	3–4 minutes	\$40,000 in gained productivity
TCTD Tillamook, OR	Reduce passenger calls and complaints	1,000 hours of driver overtime per year	Less than 100 hours of overtime per year	\$18,000 per year in overtime savings

product history

Swiftly has a longstanding history of delivering value to transit agencies. By partnering with our customers, we have positioned ourselves to understand common (and not so common) issues that agencies in the U.S. — as well as abroad — are facing. We identify shared problems and act quickly to build out solutions, helping our partners make transit more efficient, reliable, and cost-effective in their communities.

Our goal is to help agencies overcome these obstacles and thus provide exceptional transit services, making public transportation a competitive player in the changing urban mobility landscape.

We work nonstop to identify problems and to deliver valuable solutions that meet the needs of all our agencies. As thought leaders in the mobility space, we have novel improvements in the pipeline today, and we're exploring several new areas that are increasingly important to our partner agencies.

V1

Q4 2015

Transitime RTPI

Real-time passenger information via feed

V2

Q2 2016

Transitime Dashboard

Real-time live map and system overview for agencies

V3

Q4 2016

Historical OTP

Access to basic on-time performance data over time

V4

Q2 2017

Swiftly Dashboard

Highly performant live map, GPS playback and OTP in a single view

V5

Q3 2017

Real-time Headway

New real-time stats in live map, including headway status

V6

Q2 2018

Run-times

Charts that highlight key trips and corridors to improve

V7

Q3 2018

Speed Map

Heat map for finding high-impact improvement opportunities

V8

Q3 2018

Data Filters

Advanced searching and filtering enhancements

V9

Q1 2019

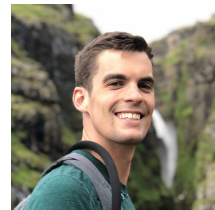
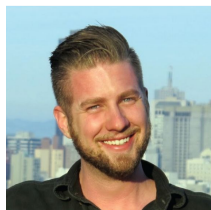
Headways

Insights about where, when, and why bunching occurs

customer success

We pride ourselves on having the best support team in the industry. Your Customer Support Manager (CSM) is always there to work through questions, comments, or suggestions.

We assign a CSM who is personally responsible for fielding and addressing all project needs during implementation and beyond. Swiftly's team of CSMs ensure seamless service in all of our partnerships with transit agencies. Our CSMs delight in serving clients with responsiveness and high-quality communication, and our client agencies have been consistently thrilled with our exceptional service.



Your Swiftly CSM will create a success roadmap for your team, including a comprehensive onboarding process, access to online training materials, and assistance with your public launch for customer facing tools.

Your CSM will work with you to share Swiftly throughout your agency. That means ensuring planners, schedulers, operations, dispatchers, customer service, and C-suite teams are all proficient users. We've found a mix of separate trainings for each team, onsite visits, workshops, and project assisted training work well to get teams acquainted with Swiftly.

Swiftly CSMs are versed in best practices and common challenges across agencies so they are well positioned to provide advice and resolve problems. We host webinars with clients for other agencies to learn from, write joint case studies, and share client stories about novel uses of Swiftly.

implementation timeline

» STEP ONE

Review GTFS and GPS data

Swiftly staff reviews current data and notifies agency if changes are needed to create a real-time feed.

» STEP TWO

Data integration

Integrates with your existing AVL and GTFS information.

» STEP THREE

Perform initial internal testing

Swiftly analyzes and provides documented records of AVL reports, real-time prediction accuracy, and system on-time performance. Swiftly and agency tests customer interfaces.

» STEP FOUR

Launch GTFS, GTFS-rt, web and mobile apps

Swiftly works with agency to launch new passenger web and mobile apps. Launch includes a press release, social media assets, vehicle and bus stop advertisements, etc..

PROJECT START Swiftly Team

Review GTFS and GPS data

2 WEEKS Swiftly Team

Data integration

4-6 WEEKS Swiftly + Agency

Perform initial internal testing

6-8 WEEKS Swiftly + Agency

Launch GTFS, GTFS-RT, and web and mobile apps

cost estimate

The estimated cost for a full implementation is provided below. Notes:

- » Pricing is based on a 3 year contract minimum duration.
- » Swiftly is currently offering a promotion for Q3 2019. If you purchase any two Swiftly Insights Modules, your third module is free.
- » Pricing expires 60 days after this cost estimate was provided.
- » If you decide to move forward with a full implementation, Swiftly will follow up with a separate Order Form and invoice for signature.
- » Sales tax may be added to your order for GPS tracker purchases if you are based in California and are not sales tax exempt.

PRODUCT	QTY	UNIT COST	TOTAL COST
Swiftly Platform Initial Setup & Configuration	131 Routes	\$300 / Route	\$39,300 One-Time \$0-Fee Waived if purchased by 9/30/19
Swiftly Transitime			
Real-Time Passenger Information Module	up to 1000 vehicles	\$375,000/ Year	\$375,000/ Year
Live Map Module	-	Included	-
Data APIs (GTFS-rt, JSON, XML, etc.)	-	Included	-
SMS and Voice automated services	-	Included	-
Passenger Facing Website	-	Included	-
Swiftly Insights			
GPS Playback Module	up to 1000 vehicles	\$225,000 / Year	\$225,000 / Year
On-Time Performance Module	up to 1000 vehicles	\$225,000 / Year	\$225,000 / Year
Vehicle Speed Module	up to 1000 vehicles	\$225,000 / Year	OPTIONAL
Runtime Module	up to 1000 vehicles	\$225,000 / Year	OPTIONAL
GPS Playback module free with purchase of OTP module and Transitime if purchased by 9/30/19			-\$225,000 / Year
Initial Training & Dedicated Customer Success Manager	-	Included	-
TOTAL SETUP			\$39,300 One-Time \$0 Fee Waived
TOTAL COST PER YEAR			\$600,000
TOTAL YEAR 1			\$600,000
TOTAL PER YEAR AFTER YEAR 1			\$600,00

general terms

- » We use a Software as a Service (SaaS) model with annual subscriptions per product. There are no hosting or maintenance fees.
- » If you decide to move forward with a pilot or full implementation, Swiftly will follow up with a separate order form and invoice. The order form is a one page agreement that reflects the information presented on this page.
- » All contracts are bound by Swiftly's SaaS Terms of Service located at: <http://goswift.ly/saas-terms-of-service>.
- » Subscriptions include unlimited users within your agency.
- » We believe in data access and availability. As long as your agency is a paying customer, you will have easy access to download any data from the modules you purchase.
- » Every time we update the platform or launch or a new feature, your agency will automatically have access to that feature so long as you have paid for that module. Since the system is cloud-based, you will never need to download nor re-install new software. Simply log in, and you'll see the new feature.

SUPPORT PLAN

- » You will be assigned a dedicated customer success manager.
- » Your customer success manager will create a success roadmap for your team, including a comprehensive onboarding process, access to online training materials, and help with your public launch for customer facing tools.
- » We pride ourselves on having the best support team in the industry and we'll never charge you for our time. Always feel free to reach out with questions, comments, or suggestions on how we can better serve you. We typically respond to inquiries within 24 hours.

TECHNICAL REQUIREMENTS

- » Everything is hosted in the cloud — you do not need to install nor download any software.
- » You can access the software from any desktop or laptop computer, anywhere, anytime.
- » Swiftly works on the latest version of any browser.



Swiftly

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