Memorandum to the Board of Directors

Taxi Upfront Fare Pilot – First Quarter Report

TO: SFMTA Board of Directors
Amanda Eaken, Chair
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THROUGH: Jeffrey Tumlin, Director of Transportation

FROM: Kate Toran, Director of Taxis, Access & Mobility Services

Date: June 22, 2023

Subject: Taxi Upfront Fare Pilot – First Quarter Report

This first quarterly report of the Taxi Upfront Fare Pilot Program (Pilot) provides a summary of the program and its policy goals, as well as an analysis of key metrics identified during the first quarter, December 2022 through February 2023. It is intended to help the SFMTA assess the impact of the Pilot and understand whether the Pilot is on track to meet key policy goals. It also provides transparency to the public regarding key findings during the term of the Pilot.

INTRODUCTION

In September 2021, the San Francisco Municipal Transportation Agency (SFMTA) Board of Directors (Board) authorized the Director of Transportation to create a one-year Upfront Fare Pilot Program (Pilot) to allow taxi E-Hail application (Taxi E-Hail App) providers to offer taxi customers the ability to book a taxi trip through the Taxi E-Hail App and pay a flat rate fare in advance of the trip, instead of paying the Taximeter amount at the end of the trip. Under the Pilot, the upfront fare offered to taxi customers through the Taxi E-Hail App is based on the estimated Taximeter and should closely match the cost to the customer of a fare based on the Taximeter rate.

The Pilot allows taxi customers to book a ride through a Taxi E-Hail App and pay the upfront fare in advance of the trip, book a trip through the app and pay the fare at the end of the trip. Allowing the taxi industry to provide customers with an upfront fare can potentially eliminate the price uncertainty and "meter anxiety" that some riders may experience, while allowing the taxi industry to evolve and offer services that align with current trends within the for-hire transportation industry.

Subsequent to SFMTA Board approval in September 2021, during the development of Pilot program rules, taxi industry stakeholders requested that the SFMTA allow Taxi E-Hail App providers to dispatch trips that originate with third-party entities (e.g., entities that do not receive permits issued by the

SFMTA), which may offer upfront fares that are not based on Taximeter rates. This requested expansion of the Pilot program required an amendment to the Transportation Code, which was approved by the SFMTA Board in April 2022.

The Upfront Fare Pilot allows two types of trips:

1. **Taxi Pilot Trips** have the following characteristics:
    - originates with a customer requesting a ride through a Taxi E-Hail App
    - driver is dispatched by a Taxi E-Hail App
    - ride is provided by a permitted San Francisco taxi driver in a permitted SF taxi vehicle
    - upfront fare payment is based on the estimated Taximeter amount

2. **Third-Party Pilot Trips** have the following characteristics:
    - originates with a customer requesting a ride through a third-party entity (Third-Party Provider)
    - ride is transferred to a Taxi E-Hail App
    - driver is dispatched by a Taxi E-Hail App
    - ride is provided by a permitted San Francisco taxi driver in a permitted SF taxi vehicle
    - upfront fare is **not** required to be based on the estimated Taximeter amount
    - In the first quarter of the Pilot, the only approved third party is Uber

BACKGROUND

Taxi fares are regulated by the SFMTA and are adjusted by the SFMTA Board periodically. Customers and drivers can negotiate fares below the Taximeter[1] rate, although most taxi trips are based on the Taximeter rate. Additionally, on a trip where two or more passengers have a different origin or destination but are sharing the taxi for some duration of their trips, a driver can charge a flat rate of up to $20 per person instead of charging the metered rate. The flat rate may only be charged with the advanced consent of all affected customers.

The original intent of the metered fare system was to provide price certainty and protection to customers. The SFMTA and other taxi regulators around the world implemented the meter fare system to ensure that the taxi market could function efficiently while providing customer and driver guarantees that fares were distributed transparently and equally. Although the fees are standardized, posted in every cab, and on SFMTA's website, as the Taximeter clicks up incrementally during the trip, riders may experience "meter anxiety" watching the fare increase based on time and distance. Additionally, some passengers may be confused about the additional fees that apply to certain trips, such as fees for exiting the airport, fees for traveling long distances, and bridge tolls.

In the last decade, the emergence of Transportation Network Companies (TNCs), such as Uber and Lyft, upended customer expectations regarding trip pricing and certainty for on-demand trips. TNCs are

[1] Any capitalized terms that are not otherwise defined herein shall have the meaning ascribed in Article 1100 of the San Francisco Transportation Code.

regulated by the California Public Utilities Commission, which preempts nearly all local regulation of TNCs in California. TNCs allow customers to input their trip origin and destination into a mobile application, and in return, customers are given an upfront price for the trip, estimated time until rider pick up, estimated time of arrival to the rider's destination, and a live location of the driver's vehicle.

Pursuant to the San Francisco Transportation Code, all SFMTA permitted taxi Dispatch Services are required to affiliate with at least one SFMTA-approved Taxi E-Hail App. The Taxi E-Hail requirements were originally created in 2015 to establish criteria and performance standards for compliance. The SFMTA updated its Taxi E-Hail requirements in mid-2021 to require the functionality that customers have come to expect. The updated E-Hail criteria requires approved Taxi E-Hail Apps to allow customers to personally input their pick-up and drop-off location. In addition, Taxi E-Hail Apps are required to provide customers with an estimated trip time and fare based on the meter rate. Although Taxi E-Hail Apps are required to provide a trip fare estimate, prior to the Pilot, a customer could not pay for a trip in advance through the app. The Pilot allows this additional functionality by allowing Taxi E-Hail Apps to offer customers the ability to book and pay for Taxi Pilot Trips in advance of the trip and to offer Third-Party Pilot Trips.

PILOT GOALS AND METRICS

Goals: Desired Outcomes

The SFMTA has established six main goals for the Pilot:

1. Improve taxi customer service by:
    - Offering upfront fare estimates and bookings through Taxi E-Hail Apps
    - Relieving meter anxiety for customers by providing price certainty for taxi trips
    - Allowing customers to price shop for similar on-demand services
2. Increase taxi trips
3. Maintain a consistent level of service for traditional taxi trips, including Paratransit taxi trips
4. Increase taxi drivers' fare revenue
5. Increase the number of permitted taxi drivers offering service to the public
6. Ensure that Taxi Pilot Trip fares closely match the Taximeter rates

Metrics: Measuring Success

The SFMTA requires Pilot participants to submit various types data, including Taxi Pilot Trips and Third-Party Pilot Trips, driver fare income, and other relevant datasets to help measure the success of the Pilot in meeting the stated goals. Staff may also use the data to identify potential areas for improvement, assess participant compliance, and to update program criteria and processes. Some metrics do not have a specific numeric target, but rather, describe the data that will be collected. Since the Pilot is novel, there may be multiple variables associated with an enumerated metric, showcasing the importance of identifying associations or trends within the Pilot and the data itself. The metrics have been slightly revised from the original policy memo establishing the Pilot as described below and

may be further updated during the Pilot term, depending on staff assessment and key stakeholder feedback.

Goal 1: Improve customer service

Metric 1A: Track the total number of Pilot trips
The total number of Pilot trips is a proxy for customer satisfaction. Staff will track the number of Taxi Pilot Trips as compared to the number of Third-Party Pilot Trips. This metric has changed slightly from the policy memo that established the Pilot. The original metric was: Increase E-Hail App Trips by 10%. Staff updated the metric because not all Taxi E-Hail App providers are participating in the Pilot and the intent of this metric is to track satisfaction with the Pilot. Therefore, the metric was updated to provide a more targeted proxy measure of customer satisfaction with the Pilot.

Metric 1B: Complaints
The SFMTA will track the number of complaints by taxi drivers and customers regarding Pilot trips. Staff will also track the total number of complaints, comparing the number received prior to the Pilot's launch and the number received during the Pilot term. Staff will pay particular attention to complaints about response times.

Goal 2: Increase taxi trips

Metric 2A: Increase total taxi trips by 10%
The SFMTA will track the total number of taxi trips provided during the Pilot term and compare it to the total number of taxi trips provided prior to the Pilot, with a goal of increasing total taxi trips by 10%.

Goal 3: Maintain a consistent level of service for traditional taxi trips, including Paratransit taxi trips

Metric 3A: Taxi trips by hail type
The SFMTA will assess the impacts, if any, of Third-Party Pilot Trips on traditional taxi trips, including street hails and phone dispatch trips, by analyzing the distribution of trips by hail type before and during the Pilot term.

Metric 3B: Paratransit taxi trips
Staff will analyze the relative proportion of paratransit taxi trips to all taxi trips before and during the Pilot term to help assess potential impacts of the Pilot.

Goal 4: Increase taxi driver fare revenue

Metric 4A: Increase taxi driver fare revenue by 10%
The SFMTA will track taxi driver fare revenue during the Pilot and compare it to the same period for the prior year to establish a year-over-year comparison. SFMTA will also track driver fare revenue for Taxi Pilot Trips and Third-Party Pilot Trips.

Goal 5: Increase the number of taxi drivers

Metric 5A: Increase the number of active taxi drivers in service
Active drivers in service are defined as drivers who have provided at least one trip during the period of analysis (which is quarterly for the Q1 report). Tracking the number of active drivers in service will help SFMTA assess whether more drivers are actively working during the Pilot term as compared to prior. While there are many factors external to the Pilot that may impact this metric, it is important for SFMTA to track this metric as one measure of the Pilot's success.

Metric 5B: Increase the number of new taxi drivers
The SFMTA will track the number of taxi drivers, assessing for an increase in the total driver pool. As the agency anticipates an increasing number of trips after the launch of this Pilot, the number of drivers willing to conduct trips can help determine the impact that the pricing system has on drivers. Additionally, if more trips are provided there will need to be a corresponding increase in the number of drivers available to serve these trips. An increase in the number of drivers may be a result of the opportunities to increase driver revenue, however, national labor issues and other factors outside of the SFMTA's sphere of influence could also be contributing factors to driver pool supply limitations. Therefore, there is not a specific target for this metric, but changes in the number of drivers during the Pilot will be tracked.

Goal 6: Ensure that Taxi Pilot Trip fares closely match the Taximeter rates

Metric 6A: Taxi Pilot Trip fares should be within 10% of the Taximeter rate on average
During the Pilot the SFMTA will assess how closely the Taxi Pilot Trip fares match the estimated Taximeter rate for those trips. On average, Taxi Pilot Trip fares should be within a 10% range of the Taximeter.
Although Third-Party Pilot Trips are not required to adhere to Taximeter rates, SFMTA will track how those fares compare to Taximeter rates on average, for informational purposes.
SFMTA will collect the final upfront fare charged to the customer for both Taxi Pilot Trips and Third-Party Pilot Trip fare data in order to conduct this comparison for both trip types.

PILOT LAUNCH

The Pilot launched on November 9, 2022 with two approved participants: Flywheel Technologies and Arro. Flywheel Technologies provides Taxi E-Hail App services to SF Centralized Dispatch Service, which serves the following taxi companies: Flywheel, ABC Taxicab, Alliance Cab, Eco-Taxi, Flywheel Taxi, Fog City Cab, Lucky Cab, Max Cab, National Cab, Regents Cab, San Francisco Super Cab, USA Cab and Veterans Cab. Flywheel Technologies is approved to provide both Taxi Pilot Trips and Third-Party Pilot Trips. Arro provides Taxi E-Hail app services to SF Taxi Dispatch, which serves SF Taxi Cab Company and Comfort Cab Company. Arro was only approved for Taxi Pilot Trips and has only provided a handful of these trips.

YoTaxi provides Taxi E-Hail App services to Yellow Cab Dispatch, which serves Yellow Cab Company, American Taxicab, SF Taxi, Metro Cab and Green Cab taxi service providers. YoTaxi was conditionally approved, pending full compliance with the Pilot's data integration requirements, but has yet to meet full compliance and therefore is not yet participating in the Pilot.

Although the Pilot officially launched on November 9, 2022, the first quarter metrics analysis covers the first three full months of Pilot activity – December 2022 through February 2023 - to create a comparable baseline between periods that allows for year-over-year comparisons of full months (rather than split months, which create reporting challenges).

Overall, the Pilot experienced a slow start due to many technical issues, including the need to update the upfront fare estimate algorithm based on the meter rate increase, which went into effect in mid-November, shortly after the launch of the Pilot. Flywheel Technologies is the only Taxi E-Hail App currently participating. The level of technical integration required for Pilot trips is significant and the SFMTA Data Analytics team meets nearly every week with Flywheel Technologies to provide integration support and to work through any challenges.

During the first quarter of the Pilot launch, Flywheel Technologies ensured the data integration for Third-Party Pilot Trips was functioning properly and that the data stream provided to the SFMTA properly tracked the required data fields. The SFMTA Data Analytics team spent significant time ensuring that the data received as part of the Pilot was accurately labeled, establishing internal dashboards for data review and analysis, and reviewing the data for proper validation. This is described in more detail in the Methodology section below.

In addition to the technical issues associated with data integration, Flywheel requires that drivers undergo a training process before they can participate in the Pilot. This was a factor that contributed to a slower Pilot rollout.

As part of SFMTA's ongoing commitment to transparency, staff held three Taxi Outreach meetings, shared data and updates on the Pilot's status, and solicited feedback regarding the first quarter of the Pilot. Staff also attended the SFMTA's Citizen's Advisory Council (CAC) to report on the results of the first quarter of the Pilot. The feedback from the taxi industry and the CAC has been very helpful and has resulted in clarifications to metrics and further refining of the analyses, particularly to attempt to

better understand and explain the impact of the Pilot. Staff will continue to hold quarterly meetings with the taxi industry.

A quick snapshot of key data points during the first quarter of the Pilot shows the following:

- A total of 10,834 Pilot trips were provided, including 1,604 Taxi Pilot Trips and 9,230 Third-Party Pilot Trips
- 276 drivers participated in the Pilot – 257 drivers provided Taxi Pilot Trips and 77 provided Third-Party Pilot Trips, with some drivers providing both types of Pilot trips
- Driver fare revenue increased about 33% during the first quarter of the Pilot as compared to the same three-months in the prior year
- Drivers who provided Third-Party Pilot Trips earned an average of $1,103.02 per month from those trips alone, and earned 15.5% more on average than drivers who did not provide Third-Party Trips
- An analysis of the geographic distribution of Third-Party Pilot Trips indicates that these new types of trips are helping to extend the density of taxi pick-ups to outer neighborhoods in San Francisco that have historically been underserved by the taxi industry

As discussed in more detail below, some of the metrics SFMTA is tracking are impacted by a number of factors and therefore cannot be solely attributed to the Pilot, but nonetheless are important to include in this report, along with a more detailed explanation of additional contextual factors.

METHODOLOGY AND ASSUMPTIONS

The metrics discussed below are based on a set of methods and assumptions applied to the collection, validation, and analysis of taxi industry data.

The main source of the data presented in this report is the data reported by the taxi industry. As required by the Transportation Code, all taxi companies permitted to operate in the City and County of San Francisco transmit digital records of their fleet's activity to SFMTA in real time through the SFMTA Taxi Application Programming Interface (API), which is the software interface that allows the SFMTA to receive data securely from the taxi industry. Prior to launching the Pilot program, SFMTA updated its specifications for the Taxi API data by requiring the submission of the types of data necessary for tracking the Pilot's performance, such as upfront or metered fare payment method and the trip application origin (Taxi E-Hail or Third-Party). For Third-Party Trips, the relevant data was transmitted to SFMTA on a bi-weekly basis by Flywheel, currently the only taxi company permitted to service the trips — the SFMTA does not receive any data directly from third-party entities.

As the SFMTA receives data from the industry, the Data Analytics team continuously applies automated and manual validation procedures to check the quality of the data in each record received. The validation process has identified numerous data quality issues since the start of the Pilot, such as regular taxi trip records mislabeled as Taxi Pilot Trips and inaccurate meter fare estimations for Pilot trips. Every time the validation process identifies an issue, the Data Analytics team conducts an independent investigation and then collaborates with industry partners to identify a solution. SFMTA hosts weekly technical troubleshooting sessions with each of the participating taxi companies

individually to address data quality issues in a timely fashion. The data presented in this report has been vetted by the Data Analytics Team and is therefore reliable and accurate to the best of our knowledge. However, since this is a new program that involves significant technical updates and challenges, the validation process is ongoing, and all industry data remains subject to future corrections and updates.

Based on the validated industry data, SFMTA tracks key metrics to measure the actual impact of the Pilot on the industry based on the goals of the program. To measure that impact, the metrics compare the data received since the start of the Pilot to historical data from before the Pilot began. The historical data has undergone a similar validation process, and also remains subject to future corrections and updates. The team primarily uses year-over-year comparisons to account for strong seasonality in the taxi industry but relies on short-term baseline comparisons to a period immediately preceding the pilot if deficiencies in the long-term historical data make it necessary. For example, the taxi industry did not consistently report how a passenger requested a trip (i.e. hail type) prior to October 2022. Therefore, when analyzing hail type during Q1 of the Pilot, due to historical deficiencies, staff used October 2022 as the baseline period for comparison purposes.

In addition, SFMTA acknowledges that the impact of the Pilot on the industry may be confounded by other contextual factors such as the easing of COVID-era restrictions or other SFMTA efforts to benefit the industry like increasing the taxi meter rate. We take these factors into account and do not intend to claim that the industry trends captured by our metrics below are solely the result of the Pilot.

QUARTER 1 RESULTS (DECEMBER 1, 2022 – FEBRUARY 28, 2023)

Metric 1A: Total Number of Pilot Trips

SFMTA tracks the number of pilot trips as a measure of customer satisfaction with the Pilot and its impact on the overall growth of the industry. In addition, SFMTA also compares the number of Taxi Pilot Trips to the number of Third-Party Pilot Trips, and monitors both as a percentage of all taxi trips in the industry.

Figure 1: Total Pilot Trips during Q1

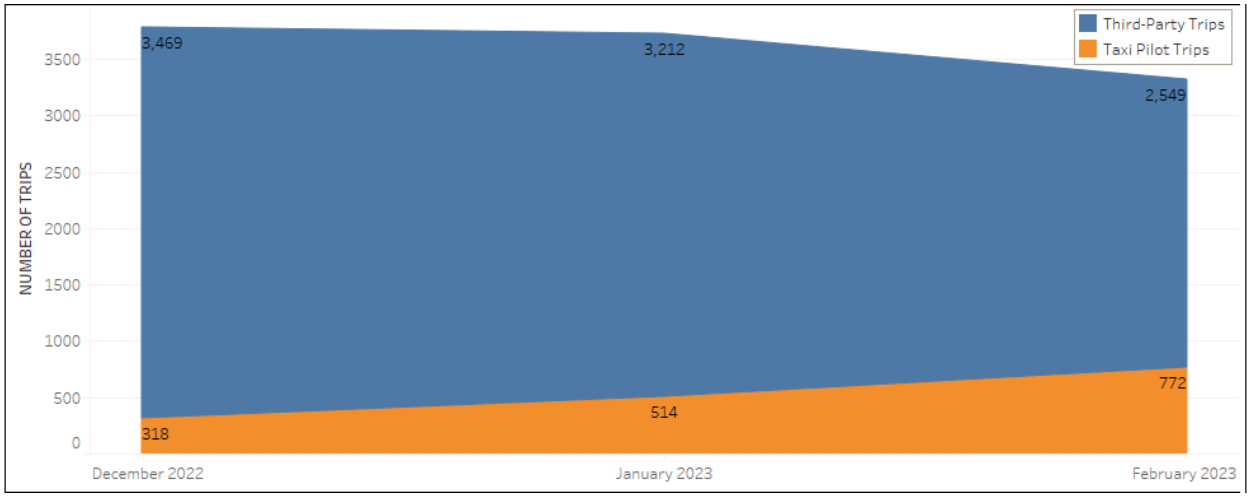


Figure 1 above shows the number of pilot trips by month during the first quarter. Altogether there were 10,834 total Pilot trips in this quarter, 15% (1,604) of which were Taxi Pilot Trips and 85% (9,230) were Third-Party Trips. Pilot trips represent approximately 2.1% of all taxi trips in the industry during the same period (see the next section below).

The relatively small number of Pilot trips is due to the slow ramp up of the Pilot during the first quarter, as described above in the Pilot Launch section. Two Taxi E-Hail Apps, Arro and Flywheel, were approved for Taxi Pilot Trips. However, Arro only provided a handful of such trips, and Flywheel's rollout was impacted by the taxi meter rate increase in November. Third-Party Pilot Trips, which were not affected in the same way by the meter rate increase, consequently overshadowed Taxi Pilot Trips in the first quarter.

Metric 1B: Complaints

The SFMTA tracks the number of complaints by taxi drivers and customers regarding upfront fare trips, as well as the overall number of complaints to monitor potential impacts on service delivery. Staff is paying particular attention to complaints about response times. The majority of complaints are filed

through 311, but SFMTA staff also receive and investigate complaints that are filed through email, over the phone to TAMS staff and in person at the Taxi Window at 1 South Van Ness.

As with other Pilot metrics, to account for potential impacts due to seasonality, SFMTA compared complaints during the Pilot period to the same timeframe from the prior year. Additionally, to account for the increase in total taxi trips, staff analyzed complaints per 1,000 trips to provide a more accurate comparison.

Table 1: Taxi Complaints per 1,000 Trips

	Before Pilot (Dec 1,2021 to Feb 2022)	**Q1 of Pilot** (Dec 1, 2022 to Feb 2023)
Dec	0.05	0.11
Jan	0.07	0.08
Feb	0.09	0.04

Taxi complaints increased slightly during Q1 as compared to the prior period, from an average of 0.21 to an average of 0.23 per 1,000 trips.
Staff also separately analyzed complaints about taxi driver response times, and per Table 2 below, there was a marginal change during Q1 of the Pilot.

Table 2: Taxi Driver Response Time Complaints per 1,000 Trips

	Before Pilot (Dec 1,2021 to Feb 2022)	**Q1 of Pilot** (Dec 1, 2022 to Feb 2023)
Dec	0.04	0.05
Jan	0.04	0.03
Feb	0.05	0.08

SFMTA is also tracking paratransit taxi complaints, paying particular attention to complaints received about response times, which would indicate paratransit taxi customers are waiting longer for taxi trips. During Q1 of the Pilot, there were no complaints filed about taxi response time and there were fewer complaints about paratransit taxi trips per 1,000 trips than during the same period for the prior year.

Table 3: Paratransit Taxi Complaints per 1,000 Trips

	Before Pilot (Dec 1,2021 to Feb 2022)	**Q1 of Pilot** (Dec 1, 2022 to Feb 2023)
Dec	0.21	0.14
Jan	0.13	0.07
Feb	0.29	0.14

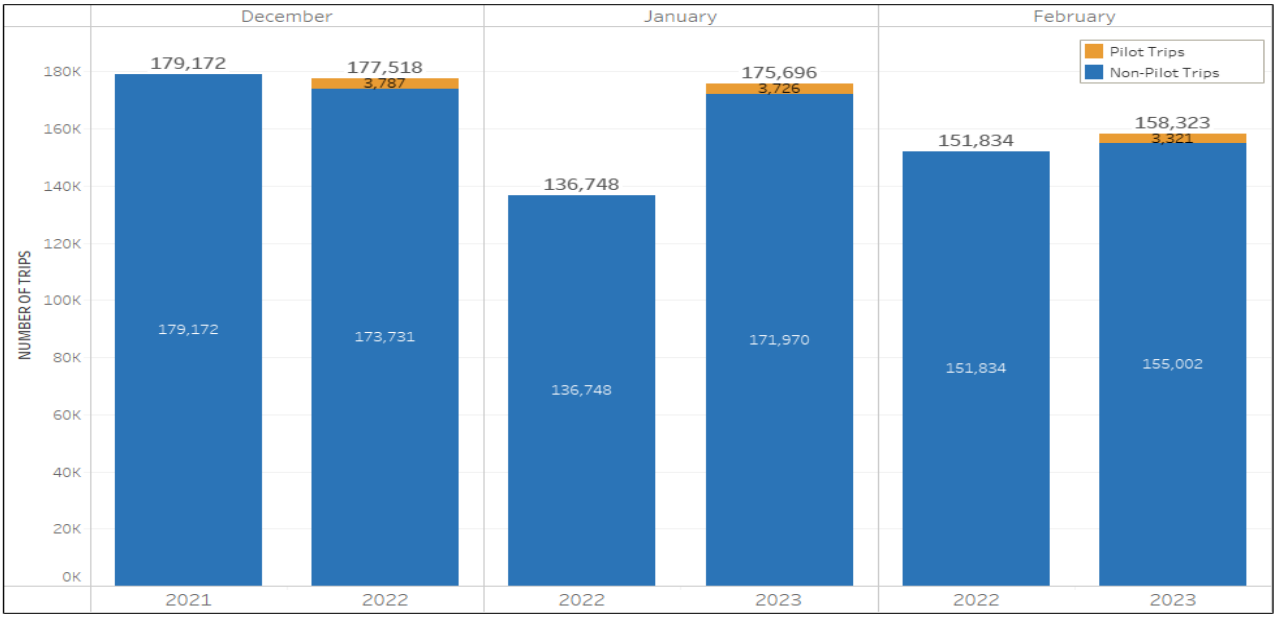
In general, SFMTA did not see a dramatic increase in complaints during Q1 of the Pilot. Given the relatively small number of Pilot trips, it is unclear if the Pilot impacted the number or type of complaints for general public taxi trips or paratransit taxi trips during Q1 as there are multitude of possible factors that could explain any increase or decrease in complaints.

Metric 2A: Increase Total Taxi Trips by 10%

Increasing the total number of taxi trips is a key goal for the SFMTA, particularly since the number of taxi trips significantly declined after TNCs began operations in San Francisco. There were further taxi trip reductions during the pandemic, which severely impacted taxi trip demand, reducing trip volumes by 70% on average SFMTA. SFMTA views an increase in the total number of taxi trips as indicative of the Pilot's positive impact on taxi industry growth. The total number of taxi trips includes all taxi trips in the SF market, including all Pilot trips (including Taxi Pilot and Third-Party Pilot Trips) and non-Pilot trips. To account for strong seasonality in the industry, a year-over-year comparison is used to measure the total number of taxi trips against the number of trips during the same period one year earlier. We also acknowledge that other contextual factors, in addition to the Pilot, may influence the increase in total taxi trips.

The total number of taxi trips increased 9.4% (from 467,754 to 511,537) during the first quarter of the Pilot compared to the same three months in the previous year. This increase was only slightly short of SFMTA's goal of a 10% increase. However, pilot trips only accounted for 2.1% of all taxi trips (10,834 out of 511,537) during the first quarter, indicating that the Pilot was not the sole factor that caused the 9.4% industry growth increase. Other factors are likely to include the easing of pandemic-era restrictions, the taxi marketing campaign, the new Essential Trip Card subsidized taxi program that was established during the pandemic and other efforts by the SFMTA to support the industry (see the section on Taxi Initiatives). Figure 2 below shows the total number of taxi trips by month during the Pilot period compared to the prior year.

Figure 2: Total Taxi Trips during Q1 compared to the previous year

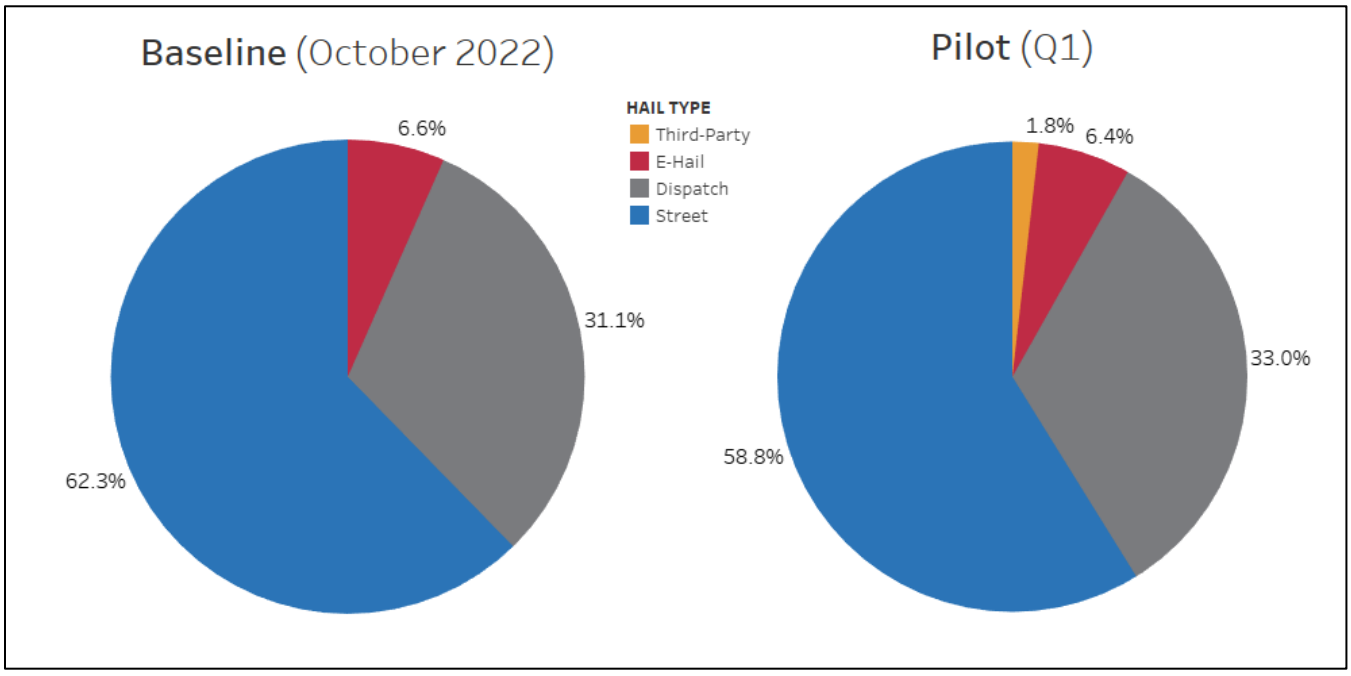


Metric 3A: Taxi Trips by Hail Type

SFMTA is tracking the distribution of trips by hail type as a measure of the Pilot's impact on customer service in the industry, particularly on the level of service for traditional taxi trips. Hail type refers to the method used by the customer to hail the vehicle. There are three main methods for hailing a taxi in San Francisco: street trips are those hailed by hand on the street; dispatch trips are those hailed through a phone call or website; and e-hail trips are those hailed through one of the three approved Taxi E-Hail Apps. Street and dispatch trips are both considered traditional taxi service trips that many customers continue to rely on. E-hail is a relatively new option that makes it easier for customers to hail a nearby taxi on their smart phones without the need to flag the vehicle down in the street or speak with a phone dispatch operator. In addition, the Pilot has introduced a fourth method for hailing taxis through apps operated by third-party entities that have partnered with one of the taxi companies authorized to offer Third-Party Pilot Trips. Due to deficiencies in the historical data on hail type from last year, SFMTA is unable to make a year-over-year comparison of trip distribution by hail type. Instead, we measure change by comparing the distribution during the Pilot to the last full month before the Pilot began (October 2022).

During the first quarter of the Pilot, the distribution of trips by hail type remained largely unchanged from the baseline distribution from before the Pilot began. Street hail consistently accounted for a little less than two-thirds of all trips; dispatch for nearly one third; and e-hail for the much smaller remainder. Aside from minor fluctuations in the relative proportions, the only notable change was the addition of Third-Party Trips during the Pilot period. However, those Third-Party Trips accounted for only 1.8% of the total. Figure 3 below displays the distribution of trips by hail type during the pilot compared to the baseline distribution.

Figure 3: Taxi Trips by Hail Type



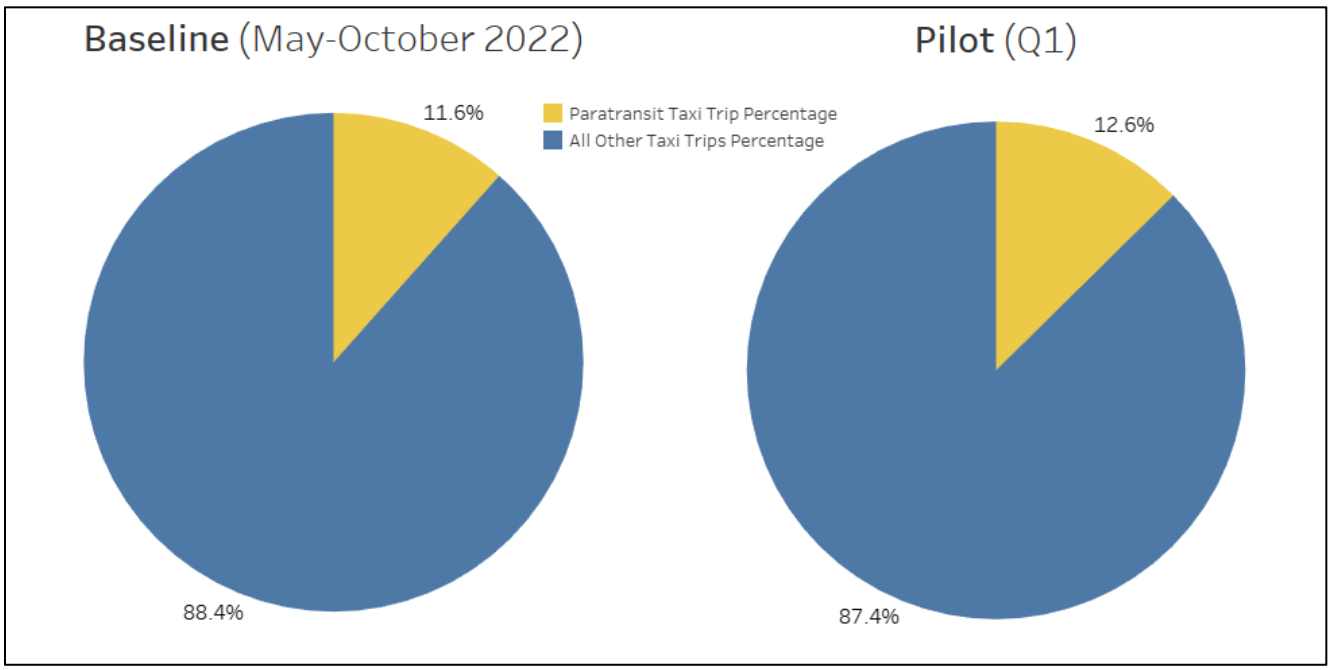
This data indicates that the Pilot had little impact on the distribution of taxi trips by hail type during the first quarter. Neither of the traditional methods of hailing a taxi—by street and phone dispatch—saw a meaningful decline in their percentages of the total. In fact, dispatch trips even saw a slight increase. Meanwhile, the small number of taxi pilot trips was not enough to boost e-hail as a method of choice among customers. Although the Pilot did introduce a new method for hailing taxis via third-party app, the number of such trips still represented only a narrow slice of the total (1.8%) that appears to have been absorbed in small measure from both street and e-hail.

Metric 3B: Paratransit Taxi Trips

SFMTA is tracking the proportion of paratransit taxi trips of total taxi trips as a measure of the Pilot's impact on the paratransit taxi service. Paratransit taxi trips are those where the customer is currently registered in the SF Paratransit program and pays for the fare using their SF Paratransit Debit Card. In order to measure change in paratransit taxi service over time and account for industry seasonality, we compare paratransit taxi trips as a percentage of all taxi trips during the Pilot to a six-month baseline period before the Pilot began (May-October 2020).

During the first quarter of the Pilot, paratransit taxi trips accounted for 12.6% of all taxi trips (64,308 out of 511,537). This represents a small increase over the baseline percentage of 11.6% from the six months preceding the Pilot. Figure 4 below displays the paratransit trip percentage during the Pilot compared to the baseline period.

Figure 4: Paratransit Taxi Trips as a Proportion of Total Taxi Trips



The paratransit trip percentage remained largely consistent before and after the start of the Pilot. This indicates that the Pilot did not have a significant impact on the level of service provided to SF Paratransit Taxi Program customers during the first quarter. This is an expected outcome given the small number of Pilot trips during this period. However, SFMTA will continue to closely monitor the level of paratransit service as the number of Pilot trips increases in future quarters.

Metric 4A: Increase taxi driver fare revenue by 10%

SFMTA monitors driver fare revenue to determine the Pilot's impact on driver income. Fare revenue is the base amount charged to the customer for a trip, excluding tip, airport fees, baggage fees, out-of-town fees, tolls, and any other associated fees. These additional customer costs are not reported to SFMTA consistently enough to generate reliable data. Fare revenue also excludes any calculation of fees charged to the driver by the color scheme, Taxi E-Hail App, or third-party app operator.* Calculating net driver income would require an in-depth analysis of taxi driver costs, which may be a future project for staff to undertake, but is not included as part of the Pilot metrics.

Although fare revenue is not equivalent to the final amount received by the driver, it is the most reliable indicator of driver revenue available to SFMTA given the current data reporting protocols in place. To account for industry seasonality, SFMTA measured the increase in fare revenue during the first quarter of the Pilot by comparing it to the same period last year. SFMTA also tracks the amount of fare revenue that drivers earned from Pilot trips compared to non-Pilot trips.

** Note: Third-party apps report the weighted average fee amount they charge to drivers monthly. During the first quarter of the pilot, the average fee charged to drivers by third-party apps was approximately 15.6% of the fare charged to the customer during the first quarter of the Pilot.*

Figure 5: Taxi Driver Average Monthly Fare Revenue during Q1 compared to the previous year

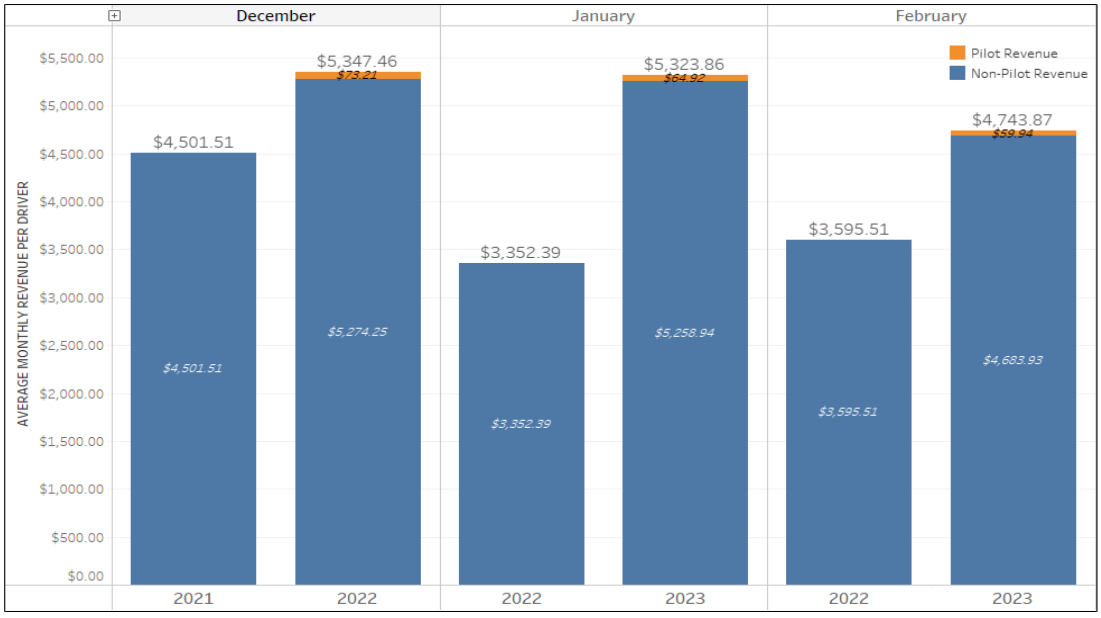


Figure 5 above shows the average monthly fare revenue per driver, broken out into revenue from Pilot trips and revenue from non-Pilot trips. The overall average monthly fare revenue per driver during the first quarter of the Pilot was $5,134.15, which represents a 32.6% increase over the same period last year ($3,817.04). Drivers who serviced Taxi Pilot Trips earned a monthly average of $40.86 from those trips. Meanwhile, drivers who serviced Third-Party Pilot Trips earned a monthly average of $1,103.02 from those trips. In the case of drivers who serviced Third-Party Pilot Trips, 18.8% of their overall fare revenue ($5,872.88) came from those trips and they earned on average 15.5% more in monthly fare revenue than drivers who did not service Third-Party Trips ($5,084.78).

Taxi drivers earned significantly more (32.6%) during the first quarter of the Pilot than they did a year earlier, which surpasses the initial goal of a 10% increase. A key factor in the increase in driver fare revenue was the Taximeter rate increase that went into effect in mid-November 2022, although this does not account for the entire increase in driver earnings during Q1. The increase in taxi meter rate, which went into effect shortly after the start of the Pilot, raised the average driver fare revenue per month by approximately 17.4% ($891) during the first quarter of the Pilot compared to the same period last year.

The impact of Taxi Pilot Trips on driver fare revenue was relatively minimal due to the small number of Taxi Pilot Trips that were provided during Q1. However, in the case of drivers who serviced Third-Party Trips, nearly a fifth of their revenue came from such trips. This helped them to earn more on average than drivers who did not service Third-Party Trips.

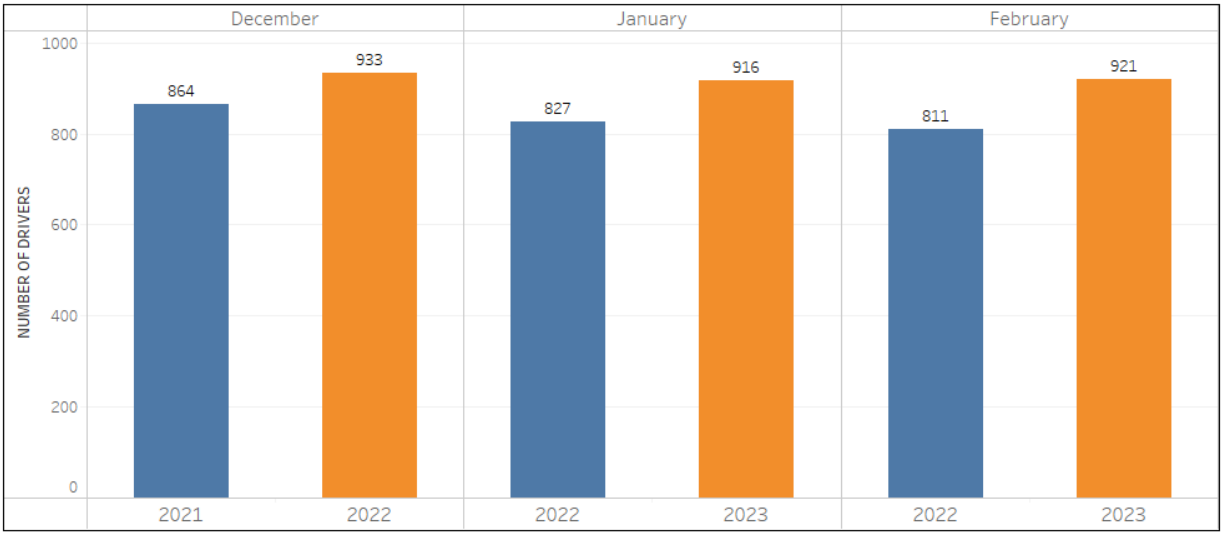
The taxi industry has expressed concern regarding the fee charged to drivers by Uber for the Third-Party Trips. As with Uber's passenger fares, the driver fees are dynamic, and this has been an area of concern for the taxi industry, because the payment structure for the taxi industry is not dynamic. As noted above, the monthly weighted average fee charged to drivers for Q1 was 15.6% of the customer fare. This is comparable to the 13.5% fee that Flywheel Technologies charges drivers. In addition, to provide taxi drivers with full transparency regarding their potential earnings for Third-Party Pilot Trips, drivers are able to see in advance of the trip the pick-up and drop-off locations and the amount they will earn for that trip. The driver can then make an informed decision about servicing each specific trip.

Metric 5A: Increase the number of active taxi drivers

SFMTA is tracking the increase in active drivers to measure the Pilot's impact on growth within the taxi industry available driver pool. Active drivers are defined as those who serviced at least one trip during the first quarter. To account for industry seasonality, changes in the active driver pool were measured using a year-over-year comparison between the first quarter of the Pilot and the same period the previous year. The percentage of active drivers who serviced Pilot trips was also tracked.

The total number of active drivers during the first quarter of the Pilot was 1,039, a 10.3% increase over the previous year (942). Additionally, the number of active drivers who serviced Pilot trips also increased during the first quarter of the Pilot from 146 in December 2022 to 232 in February 2023. Holistically, 27% (276 out of 1,039) of all active drivers during the first quarter of the Pilot serviced Pilot trips. Figure 6 below shows the number of active drivers per month during the first quarter of the Pilot.

Figure 6: Number of Active Drivers per Month during Q1 compared to the previous year



The fact that more than a quarter of active drivers have participated in the Pilot indicates that the Pilot has been a factor in the 10.3% year-over-year growth in total active drivers. Nevertheless, we acknowledge that other factors, such as the easing of pandemic-era restrictions, may also have played a role in this increase.

Metric 5B: Increase the number of new taxi drivers

The number of new taxi drivers has increased year over year, per Table 4 below. The number of new taxi drivers entering the industry increased dramatically in calendar year 2022, and the trend is continuing through the first five months of the rebound of the taxi industry.

Table 4: New Taxi Drivers by Calendar Year

Year	2018	2019	2020	2021	2022	2023 (YTD)
New Taxi Drivers	43	33	23	22	135	95

An analysis of new taxi drivers during Q1 of the Pilot as compared with the same period during the prior year also shows a significant increase in new drivers entering the SF taxi industry.

Table 5: New Taxi Drivers during Q1 compared to the previous year

	# of New Drivers			# of New Drivers
Dec-21	1		**Dec-22**	22
Jan-22	6		**Jan-23**	19
Feb-22	4		**Feb-23**	24

The increase in new taxi drivers cannot be solely attributed to the Pilot, as there are many associated factors and few Pilot trips during Q1, but clearly this is a very positive trend.

Metric 6A: Taxi Pilot Trip Fare within 10% of the Taximeter rate on average

SFMTA is tracking the difference between fare for Taxi Pilot Trips and the Taximeter rate to ensure that the former closely tracks the latter as required by the Pilot rules. The Taxi Pilot Trip fare is the fare offered to and paid by the customer before the start of the trip. The Taximeter rate refers to fares calculated by the taxi meter based on the time and distance traveled. SFTMA measures the difference between Taxi Pilot Trip fare and the meter rate by subtracting the fare charged for a Taxi Pilot Trip from the estimate of the Taximeter rate for a trip of the same distance and duration. In the case of Taxi Pilot Trips, the rules of the Pilot state that upfront pricing rate must be within 10% of the Taximeter rate. Although Third-Party Pilot Trips are not required to adhere to Taxi meter rates, SFMTA is also tracking how those fares compare to Taximeter rates, on average, for informational purposes.

Figure 7: Average Taxi Pilot Fares Compared to the Taximeter Rate during Q1

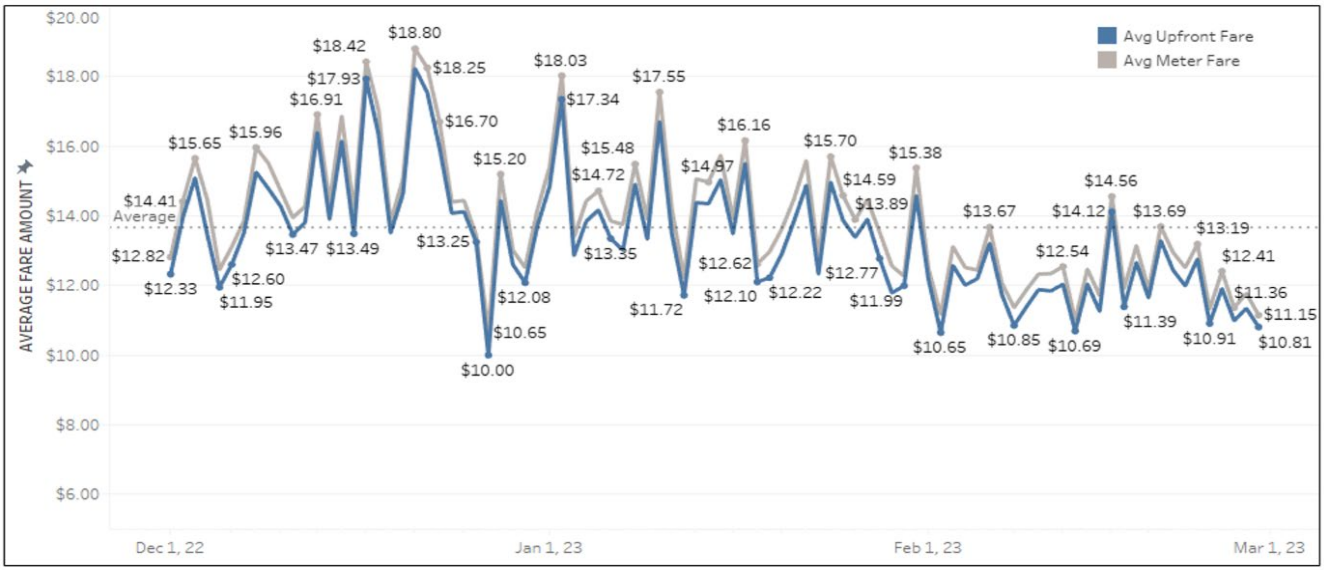


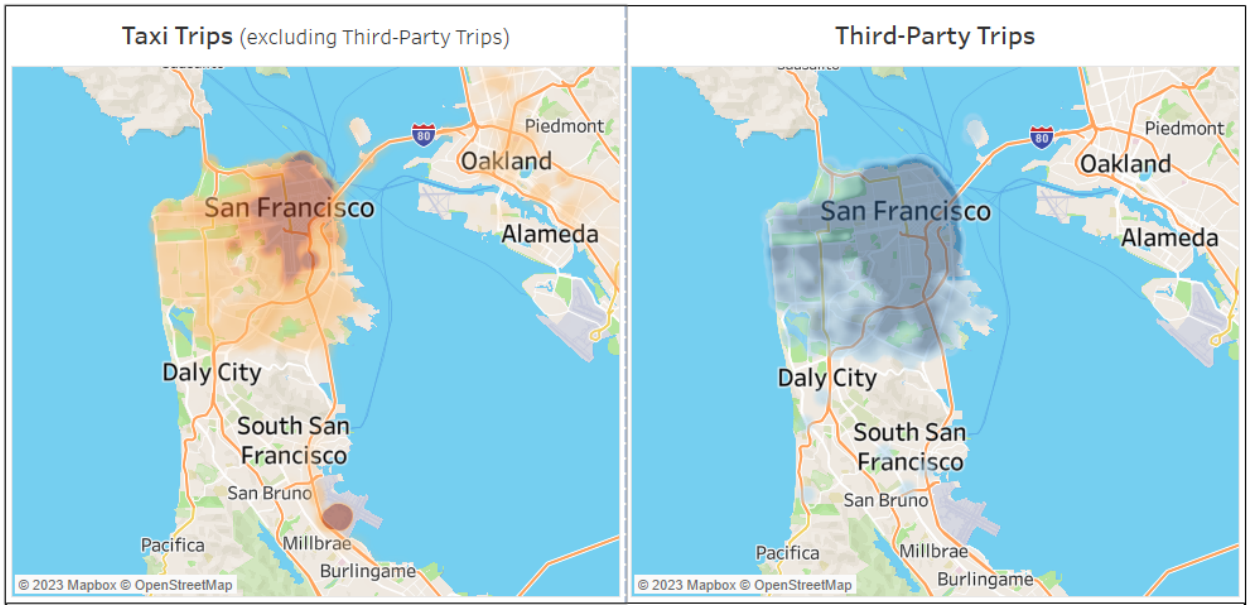
Figure 7 above shows the daily variation in the average upfront fare per trip for Taxi Pilot Trips compared to the average estimated meter fare during the first quarter of the Pilot. Overall, the average upfront price for Taxi Pilot Trips ($13.01) was 3.8% ($0.52) lower than the average estimated meter fare ($13.53). In the case of Third-Party Pilot Trips, the average upfront price ($17.06) was 10.4% ($2.05) lower than the average estimated meter fare ($19.66).

Upfront pricing for Taxi Pilot Trips has remained well within the maximum 10% difference from the taxi meter rate allowed by the Pilot rules. In the case of Third-Party Trips, the difference between upfront pricing and the meter rate was more significant but did not violate any Pilot rules.

GEOGRAPHIC EXPANSION OF SERVICE

Although it is not an official metric of the Pilot, SFMTA is tracking the geographic expansion of taxi service within the city as a measure of the Pilot's impact on customer service in the city. SFMTA uses trip pick-up and drop off locations to determine the geographic distribution of taxi service. SFMTA measured the expansion of service by comparing the geographic distribution of pick-up locations for Third-Party Pilot trips with non-Pilot trips.

Figure 8: Spatial Distribution of Trip Pick-Up Locations during Q1



The spatial comparison in Figure 8 shows that the Pilot is helping to expand the geographic distribution of taxi service to outer neighborhoods where taxi service is historically sparse. The heat map for taxi trips highlights the concentration of taxi service in the downtown area and at the airport. By contrast, the heat map for Third-Party Pilot Trips displays a much more even geographic distribution of service that encompasses outer neighborhoods in addition to the downtown area.

ADDITIONAL CONTEXTUAL FACTORS

As noted earlier, there are many contextual factors that may impact many of the metrics that SFMTA is tracking as part of the Pilot. While staff is working to isolate impacts of the Pilot on the metrics to the extent possible, this section is intended to acknowledge additional contextual factors associated with broad trends in the taxi industry.

SFMTA has been working over many years to support the taxi industry and particularly during the global Covid-19 pandemic. A brief summary of taxi initiatives that have been implemented over the past few years and that may impact the key Pilot metrics, such as increases in taxi trips, new drivers and driver income, are summarized below.

- **Taximeter rate increase**: new Taximeter rates went into effect mid-November 2022, providing a much-needed increase for taxi drivers. After extensive outreach by staff, the SFMTA Board passed an 18% increase in the Taximeter rates.
- **Paratransit tip increase**: In September 2022, the Paratransit taxi tipping policy increased from 10% to 15% of the meter fare, with a maximum tip of $4. The new tipping policy applies to all Paratransit taxi programs, including ADA, Essential Trip Card (ETC), Shop-a-Round, and CHOICE taxi programs. This increase has resulted in about a 56% increase in the tipping amount for paratransit taxi trips.
- **Waived Taxi Fees**: The SFMTA Board waived all taxi-related fees for fiscal years 2022-23 and 2023-24, and since 2014, SFMTA has foregone over $11.2M in revenue from reduced or waived taxi-related fees.
- **Essential Trip Card Program**: In response to the Muni service reductions in April 2020 in the early days of the pandemic, the (ETC) program was launched to provide seniors and persons with disabilities with safe and subsidized door-to-door taxi service to essential services during the pandemic as a supplement to existing Muni services. Such essential trips include grocery shopping, pharmacy visits, medical treatments, and later, vaccination appointments. Since its inception, approximately 6,287 seniors and persons with disabilities have enrolled in the program and over 229,777 trips have been performed.
- **Taxi Marketing Campaign:** The Taxi Marketing Campaign is a collaboration between TAMS and the SFMTA Communications Division. The campaign was put on by the SFMTA in 2021 and 2022 to promote the taxi industry. The campaign began by asking drivers which messages they would like to use to promote the industry to the public. Taxi drivers as a small business was the most popular message. Ads placed by the campaign on Muni also highlighted that taxi does not have surge pricing.

  As part of the campaign, staff wrote blogs for the SFMTA website, worked with an advertising consultant, and placed advertising in Muni buses and trains. The campaign team partnered with a digital marketing firm to test different ads via social media between April and July 2022, aimed at encouraging San Francisco residents and visitors to download and use a Taxi E-Hail app. The campaign messaging focused on supporting taxis

as small businesses. The ads were targeted at San Francisco residents and frequent visitors, rideshare users, those who use airport transportation, car rentals, taxi services, bus and rail users, and those supportive of charities and community issues.

- **Transit Only Lane Access:** Approximately 83% of transit only lanes in the City allow taxis, which provides taxis more efficient access through certain areas of the City. The only lanes that do not allow taxi access are labeled Muni Only and have safety considerations, such as raised track areas for light rail or cable car areas. As part of SFMTA's commitment to supporting the taxi industry, access to transit only lanes are typically included in new projects. Access to transit only lanes provide a significant benefit to taxi drivers, who can move more quickly and safely through the City using red lanes.

KEY TAKEAWAYS FOR Q1

The Pilot had a gradual but promising start during its first full quarter. Contributing to the slow start was the fact that, so far, only one taxi company, Flywheel, has meaningfully participated in the Pilot. Moreover, the increase in the Taximeter rate occurring near the time of the Pilot launch impacted Flywheel's ability to fully launch the Taxi Pilot Trips. Additionally, the launch in mid-November meant that the start of the Pilot occurred during the winter holiday season, which is typically the slowest time of year for the taxi industry. These factors are reflected in the relatively small total number of Taxi Pilot Trips that have been offered as part of the Pilot so far.

Despite this slow ramp up, the Pilot has nevertheless begun to take root and show its potential promise in creating positive impacts in the taxi industry. First, salient increases in both the overall number of taxi drivers and the number of those who are serving Pilot trips indicates that some drivers are embracing the Pilot, and that it's having an impact on driver income for participating drivers. Although the rise in driver fare revenue is partially attributable to the meter rate increase, additional revenue from Pilot trips (particularly Third-Party Pilot Trips) is also a contributing factor. Finally, evidence indicates that Third-Party Pilot trips are helping to extend taxi pick-up service to outer neighborhoods that have historically been underserved by the taxi industry.

Feedback from the taxi industry and the SFMTA's CAC has been particularly helpful to staff and has resulted in a deeper analysis and revision of the Pilot metrics to more accurately attribute outcomes to the Pilot, when possible and to add additional contextual information.

Throughout Q1 of the Pilot, the Data Analytics team has spent considerable time on data validation of Pilot data and, in some cases, historical data. Staff anticipates that data validation and analysis will remain an iterative process throughout the one-year Pilot term.

Given this slow but promising start for the Pilot, SFMTA does not intend to make any significant changes to the program rules at this time. Staff will continue to track and analyze Pilot metrics and report quarterly to the SFMTA Board.