Q70 Assessment & Improvement
New York City Economic Development Corporation
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The consultant for this project was a three-person student team from Cornell University’s Architecture, Art and Planning in New York City (AAPNYC) program:

Max Miller (MRP ’15) | Chen Sun (MLA ’15) | Akshali Gandhi (MRP ’15)

As the consultant, the team was asked to assess the rider experience on the current Q70 Limited bus service and make recommendations for customer experience improvements. Completed over the course of one semester, this project was completed in Fall 2014. The scope of this project included background research, key stakeholder interviews, site documentation, curbside passenger surveys, data analysis, key recommendations and illustrative interventions.

Through an approach emphasizing service design thinking, this project focused more on assessments and improvements from a passenger and/or customer satisfaction perspective and less on operational, maintenance and financial considerations.

The views expressed herein are solely the views and opinions of the authors and do not reflect or represent the views of NYC EDC, the City of New York, or any other agencies mentioned herein.
The Metropolitan Transportation Authority (MTA) introduced the Q70 Ltd. in the Fall of 2013 as a limited stop, express transit connection from Queens, New York to LaGuardia Airport. The Q70 currently connects travelers to LGA in approximately 15 minutes from the 7 line and Long Island Railroad at 61st Street-Woodside Station and the EFMR subway lines at Roosevelt Ave-Jackson Heights Station, thus providing easy access from Midtown/Lower Manhattan and Queens. With two subway connection stops and four stops at airport terminals, the route serves as a gateway to Queens and New York City for many first-time passengers. In addition to serving air travelers, it also is a popular choice of transportation for airport and airline employees, who make up approximately 40% of riders.

According to a New York City Transit Customer Service survey done this summer, Q70 customers are exceptionally satisfied with Q70 service and its improvement over the Q33 route, which previously made local stops on the way to the airport; survey respondents estimated that their ride times were cut nearly in half. Since launch in Sept 2013, average daily ridership has increased by 28.5% from 2,613 to 3,358 one year later.

A year later, ridership is growing, and service is relatively quick. Despite initial popularity among riders, however, the service faces competition from private shuttles and the M60 Select Bus Service, which connects upper Manhattan and Astoria to LGA albeit through a longer route with more stops. Assuming that the Q70 is able to provide one of the most efficient transit connections to LaGuardia, this study examines ways to attract more riders and improve the Q70 from a passenger perspective, elevating it in primacy comparable to the AirTrain’s connection to John F. Kennedy International Airport. This also means improving queuing areas and accessibility for people otherwise unfamiliar to the NYC transit system.

LaGuardia Airport is poised to undergo significant renovation to its Central Terminal Building (CTB) in the coming years. With the CTB Redevelopment Project about to begin at LGA, improved transit connections, such as those supplied by enhanced Q70 service, could mitigate parking concerns during and after construction. This also presents an opportunity to introduce more first-time passengers to the Q70.

What follows is an analysis of existing conditions, ridership trends, curbside passenger surveys, and key stakeholder interviews with the Port Authority of New York and New Jersey, MTA Bus Company, New York City Department of Transportation and Long Island Railroad. This report also outlines recommendations for improvement in five main categories: Information/Wayfinding, Marketing/Branding, Service, Atmosphere, and Queuing with illustrative interventions highlighting key concepts. While these recommendations vary in nature from maintenance improvements and short term solutions to longer term capital investments, we believe there is significant potential to increase efficiency, improve passenger satisfaction, and enhance tourism in NYC.
BACKGROUND
LaGuardia Airport (LGA) is New York City’s main domestic gateway for business travel. Covering 680 acres, it is located in Queens County near Flushing and Bowery Bay. In 2013, LGA saw a record number of air passengers (26.7 million) traveling through eleven different airlines [7]. In addition to serving air-travelers, the airport employs more than 11,300 people [8], many of whom reside in Queens and use the Q70 Ltd. to get to work. In the coming years, LGA’s Central Terminal Building (CTB) is scheduled for significant renovation which will impact ground transportation and passenger access. Although the proposed 1.3 million sq-ft, 35 gate terminal building [7] will roughly accommodate the same number of aircrafts, the renovation will include expanded capacity for larger airplanes to land, and thus serve more passengers. With the CTB Redevelopment Project set to begin with the removal of almost half of LGA’s automobile parking, improved transit connections could mitigate potential parking concerns. This also presents an opportunity to introduce more first-time visitors to the Q70 Ltd.

Before the introduction of the Q70 Ltd., ground transportation options to LaGuardia were restricted primarily to private taxi/hired car/van service, personal car, the NY Airporter service operated by New York Airport Shuttle Bus, and a variety of public MTA buses. The latter included the M60 Select Bus Service, the Q33 (rerouted with LGA excluded), the Q47 serving the Marine Air Terminal, the Q48 and the Q72. The LaGuardia Airport Access Study, which was important in providing the impetus for creating the Q70 Ltd., documented that only 7% used a public bus to get to the airport [4]. Within that number, passengers were divided into Airport Employees and Non-Airport Bus Riders who used LGA as a transfer point. Employees cited ‘convenience of service’ as the primary reason for accessing the airport via bus. Employee shift time also impacted the decision of whether to drive to work or travel by transit.
The Q70 Ltd. service started in September 2013 as a limited stop, direct transit connection to LaGuardia Airport. In order to reduce travel time, MTA separated the service from the existing Q33’s local stops and limited the route to two subway connection stops and four stops at LaGuardia. The bus currently serves the 61st St-Woodside Station with connection to the 7 train and the Long Island Railroad, as well as the Roosevelt Ave-Jackson Heights station with connection to the EFMR and 7 lines. It then continues on to LGA Parking and Terminals B, C and D. The route excludes Terminal A, the Marine Air Terminal, due to distance from the other terminals and low passenger demand. Passengers may still access Terminal A through the Q47 bus route, but excluding Terminal A from the Q70’s route significantly adds to its speed and efficiency. The Q70 runs 24 hours a day, seven days a week, approximately every 12-20 minutes during daytime and evenings[11]. Because the route runs along the highway, transit times to the airport are small, averaging 8-10 minutes from Jackson Heights and 15 minutes from Woodside.

According to pre-and-post customer satisfaction surveys undertaken by New York City Transit in June 2014, Q70 Ltd. customers are exceptionally satisfied with the new service and its improvement over the Q33; many estimate that their ride times have been cut nearly in half[6]. Since launch in Sept 2013, average daily ridership has increased by 28.5% from 2,613 to 3,358 one year later[12].
It is important to note that Queens County, where the Q70 Ltd. runs, is considered the most ethnically and linguistically diverse county in the nation. This diversity is especially reflected in the retail offerings near both Woodside and Jackson Heights station, as well as in MTA ridership aboard the route. As a gateway to New York City, the diversity of Queens also represents an opportunity for neighborhoods and local business districts to showcase their offerings to first-time passengers using the Q70 Ltd bus service.

**Woodside**

Woodside is a working class and commercial neighborhood.

With large-scale residential development in the 1860s, Woodside became the largest Irish American community in Queens. In the early 1930s, the area was approximately 80% Irish. Even as the neighborhood has seen growth in ethnic diversity today, the area still retains a strong Irish American presence. There are a number of Irish pubs and restaurants scattered across Woodside, and an abundant number of retail options surrounding the Woodside station.

**Jackson Heights**

Jackson Heights is among the most diverse neighborhoods in New York City and the nation. It is home to large numbers of South Americans (particularly Argentineans and Colombians), as well as people of South and East Asian descent. Most of the original neighborhood is a National Register Historic District and a New York State Historic Register District. About half has been designated as a New York City Historic District by the New York City Landmarks Preservation Commission. It is comprised of large garden apartment buildings (the term was invented for buildings in Jackson Heights), many clusters of private homes and a thriving retail district.

There is a year-round greenmarket every Sunday morning at Travers Park, as well as various family-oriented spring and summer concerts. A street one block away from the Jackson Heights station has been turned into a pedestrian plaza by the New York City Department of Transportation in recent years, allowing visitors and potential passengers to eat, drink or shop before or after boarding the Q70 Ltd. to the airport.
STATION ANALYSIS
Background

The Q70 Ltd. route serves six stops in total, two in Woodside and Jackson Heights Stations, and four at LaGuardia Airport. The following site observations present issues and opportunities currently existing along the route.

As the first stop along the route, the 61st St-Woodside station remains significantly underutilized as compared to the Jackson Heights stop, albeit serving as an important connection to the Long Island Railroad (LIRR). Because of this connection to LIRR, Woodside has the potential to bring in more ridership from Penn Station, which is just one stop away, and of course Long Island. However, visibility at this station is low due to being underneath an overpass. Poor lighting conditions at the bus stop itself detract from the feelings of safety, security, and confidence. Signage for the Q70 Ltd. is also placed high above eye-level. First time users often seem confused when all they see are off-duty buses parked, or with their doors open next to obstructions like girders.

Data Analysis

Poor lighting makes for an uncomfortable waiting environment at night

Best Practices

Parking the bus in front of obstructions confuses riders and interferes with boarding

Key Recommendations

Inactive buses parking and idling at the stop confuses first-time riders

New eye-level signage strategically placed en route from subway station to bus stop

Station Analysis

Woodside

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**JACKSON HEIGHTS**

The Roosevelt Ave-Jackson Heights station, on the other hand, is very busy and crowded. Serving nearly 51,000 rail passengers a day, the subway station is the second busiest in all of Queens [3]. It also serves as the main boarding stop along the Q70 Ltd. route. Although there is clear signage leading up to the station exit, Q70 signs often get lost amongst many other bus signs. It can also be difficult for potential riders with luggage to find the elevator. While temporary solutions are currently in place, such as ad-hoc paper Q70 signage at the exit, more permanent signage will be necessary in the future.

In addition, the Jackson Heights station has a queuing problem. Because the Woodside-bound Q70 returning from LGA also stops at Jackson Heights, people often get confused as to which Q70 Ltd. bus to take to the airport. Some people queue for buses going in the wrong direction to Woodside. This usually resolves itself beforehand, but bus drivers have observed people running out into the street after the Woodside-bound bus thinking they are missing their bus to LGA.
At LaGuardia Airport, there are three main stops (Terminals B, C, and D) as well as an initial first stop at Airport Parking, nearby Terminal B, which serves mostly airport employees and can be confusing to first-time passengers.

Due to a lack of clearly visible signage on the terminals as well as lack of airline and terminal information on board the bus, it difficult for passengers to distinguish which stop to get off at. The on-bus audio system is loud, but not always clear, and terminal signs face drivers, not passengers. Although drivers try to help, assisting passengers with repeated concerns is a waste of energy on their part and may distract from the main task at hand, which is driving. While some stations have curbside bus pick-up and drop-off, others do not. For example, passengers must cross through two traffic medians, past taxi lanes via faded crosswalks in order to reach the Terminal D bus stop; this may deter people from using transit.

Lastly, small maintenance issues, such as broken MetroCard machines and outdated maps may confuse first-time passengers. In the month-long period of fieldwork, the Metrocard Machine at the Terminal C stop was continuously out of order.
Currently, MTA Bus Company operates eight luggage-rack equipped buses in its fleet reserved for the Q70 Ltd, and preferred method of payment is by MetroCard. While service is quick and fare is low, the bus could be better designed to serve airport travelers and could benefit from some of the amenities outlined in the Best Practices section.

Although it runs every 12-20 minutes, at peak times the route can still become very congested. Queuing problems at the stop spill over onto the bus when boarding, especially when first-time passengers are confused on how to use a MetroCard or stop and ask the driver questions. Interior circulation in the bus is also sub-optimal, as luggage racks are placed in the back but passenger behavior gravitates towards filling in seats front-to-back as people board. Passengers could feel more comfortable if they were in close proximity to their luggage.

As explained in further detail in the Key Recommendations section, the audio announcement is often too loud, too soft, or generally unclear. This may result in passenger stress, repetitive questions being asked to the driver, and a decrease in on-time performance and/or overall customer satisfaction.

High ridership levels can have spillover effects on passenger queuing, traffic flow, and customer experience.

Blank ad space aboard the Q70 presents an opportunity for neighborhood branding, advertising, and wayfinding.
BEST PRACTICES
Based on some of the feedback we received, we determined that there was potential for the Q70 to have its own distinguished brand and more space during peak time. We decided to research some innovations happening on other public airport buses around the world. Here are some best practices we found from Austin, TX, Montreal and Hong Kong.

- Austin Airport Flyer
- Montreal 747 Airport Bus
- Hong Kong City Flyer

The MetroAirport bus provides a straight trip to downtown Austin in 30 minutes or less. The ride has direct access to the Capitol, business and entertainment districts, restaurants, museums, the University of Texas, plus the Hyatt, Omni Marriott, and Hilton hotels. The bus leaves every 30 minutes to and from the airport. The route is notable for its branding and customer service options.

**Bus Branding**
- Distinguished bus wrap
- Special name: Metro Airport Flyer
- Unique signage at bus stop
- Bus brochure for the Service

**Service Design**
- Affordable fare ($1.50 one-way)
- Multiple payment options (Metro Card, Cash, Smart Phone)
- Ample luggage storage space
- Well-designed website for bus information and trip planning
The 747 bus line runs 24 hours a day, 7 days a week, between the Montréal-Trudeau airport and the Gare d’autocars de Montréal terminal. Travel time may vary between 45 to 60 minutes, depending on traffic conditions. Wi-Fi service is available on most 747 buses.

**Bus Branding**
- Distinguished by bus wrap
- Consistent unique logo throughout system signage
- Dedicated signage at Airport

**Information**
- Well-designed website for bus information and trip planning
- Airport’s Ground Transportation webpage emphasizes 747
- Map of ticket stations along route
- Onboard map of airport route & stops
- Bus helpfully advertised at ticket machine

**Service Design**
- 24/7 Service
- $10 CA for a day pass
- Connects to main bus depot and subway interchange
- Ample luggage storage space
- Tap-to-pay fare cards
Citybus’s Cityflyer service is the most convenient and comfortable way to get to and from Hong Kong International Airport. Geared towards tourists, the bus takes passengers over the Tsing Ma Bridge, providing convenient access to major locations in Hong Kong and Kowloon.

Tourist Friendly
- Maps highlight popular destinations along the route.
- Online bookings, discounted return fares and free transfers to key destinations.

Bus Amenities
- Comfortable coach seating and footrests
- Personal reading lights and adjustable sun blinds
- Free wifi
- Multi-lingual bus stop and audio announcement system
- Secure storage of luggage
- Connection to various tour bus companies

Real-Time Arrival Data
- Pay at Customer Service Center
- Exact fare in Hong Kong dollars on board
- “Octopus” transit smart card

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DATA ANALYSIS
Limitations and Assumptions

While the results are informative and care was taken in obtaining them, there are some limitations and assumptions worth noting.

The design of the survey instrument and its subsequent deployment could have better captured the ideas of first-time riders with regards to assessing service improvements. Because surveying occurred at bus stops while people waited, it was not possible to talk to a first-time rider before they had experienced the bus-ride part of their journey.

There were some other elements that tended to confuse riders, such as the “Out of NY” choice in Question 2. This choice was meant to capture whether a rider had come from or was headed back to somewhere in the greater metropolitan region, such as New Jersey or Connecticut. Occasionally, people misinterpreted it to mean “flying out of NY.” Surveyors were vigilant in informing riders of the meaning.

In Question 3, some riders misinterpreted the question and answered in the Other section that they took the Q70 “to get to the airport,” even though, along that thinking, it is nearly the only reason one would take the Q70. Surveyors were attentive, when possible, to correcting this mistake by informing the rider if the rider filled out his or her own survey.

On the first day, Question 5 excluded the option for “Greater Frequency of Buses.” That said, on the first day so many people indicated that they wanted a “greater frequency of buses” that surveyors had to include it as a standard write-in option. They immediately redesigned the survey form that night to include this as a printed option. This became the most requested improvement.

Surveyors conducted the survey by approaching people as they waited at each bus stop. This was found to be the most opportune and least stressful time to engage busy passengers. Most of the people that the surveyors approached agreed to answer the survey, and refusal was minimal.

Surveyors targeted busy travel times and days in order to capture the most participants. That said, they also attempted to survey on each type of travel day:

- Friday/Monday/Thursday being typically busy weekdays
- Saturday and Sunday being treated as interchangeable for weekend
- Tuesday/Wednesday being interchangeable as the slowest day of air travel within the workweek.
Limitations with online surveys:

The online survey pulled in 26 surveys. Eventually, the stock of candy ran out, and a constant supply of cards was not always available in the field; ultimately surveyors used this method too inconsistently. Giving candy to people who got on the bus but may not actually fill out the survey, while excluding those who filled out paper surveys seemed like an illogical standard for incentivization.

The online surveys were also unable to capture which bus stop the rider originated at and whether they were coming from or going to the airport. This survey instrument may also have been biased toward those who were more familiar with QR code technology and or who were more smartphone savvy. For these reasons the results were not incorporated into the final analysis. That said, a more consistent and thought out approach to this method could yield better, more useable results in the future.

In addition to a paper survey, the team also created an online version of the survey through Google Forms, which was accessible via web or mobile through business cards printed with a scannable QR code. To incentivize participation for people rushing to board the bus, surveyors handed out Halloween candy attached to the business cards so passengers who did not have a chance to take the written survey could take it via smartphone on the bus or while waiting at the airport.
Background

Airline/Airport Workers make up a strong, reliable base of daily ridership for the Q70. This is followed by those traveling for leisure. Business travelers were the least numerous of the bunch that were surveyed.

Data Analysis

The team analyzed the data from around 270 paper surveys. When possible, surveyors recorded comments riders had for future analysis as to any insights or opinions that may have fallen outside of the survey structure itself. These are included for posterity in the data table under the “Comments” tab.

<table>
<thead>
<tr>
<th>Trip Purpose</th>
<th>Count of Trip Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport/Airline Employee</td>
<td>108</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
</tr>
<tr>
<td>Unanswered</td>
<td>33</td>
</tr>
<tr>
<td>BL - Business &amp; Leisure</td>
<td>2</td>
</tr>
<tr>
<td>Business Traveler</td>
<td>34</td>
</tr>
<tr>
<td>Leisure Traveler</td>
<td>94</td>
</tr>
<tr>
<td>Grand Total</td>
<td>272</td>
</tr>
</tbody>
</table>
Excluding airport workers, the greatest amount of riders originated from Manhattan, south of 59th Street. This was followed by passengers from Queens.

Conversely, a great majority of Airport Workers were coming from or going to some other place in Queens.
Airport workers emphasized the Speed of the Q70 as a motivating factor over all other options.

Leisure travelers emphasized cost and subway connection as equally important, with less thought to speed.

Business travelers were motivated more by the subway connection than any other factor. Cost, the next biggest motivator, came in only half as important as Connection to the Subway.
Subway connection remains one of the most important motivations for all riders, but repeat riders come to emphasize its speed, whereas new riders seem to think more about cost.
SURVEY ANALYSIS

How did you hear about the Q70?

Online Trip Planners or Transit apps seemed to contribute the largest amount of new ridership to the Q70 during the survey period. Word of mouth seemed to play an important factor as well among both new and repeat riders. Many airport workers cited an employer or fellow employee as how they first heard about the service. Station and Terminal signs contributed less than 10 new riders and perhaps indicate a lost opportunity to introduce more subway riders to the Q70 service.

What Improvement is Most Important?

First time riders were generally unsure about improvements, but many expressed an interest in better wayfinding/signage. Repeat riders overwhelmingly asked for greater frequency.
The Q70 Ltd. Service, initiated in September of 2013, is one year old. Therefore, there are limitations to the amount of reliable analyses that can derive from its ridership data. In addition to this, some of the initial months of ridership data reflect a ramp-up period where riders either discovered the service or switched from other ones like the M60. This means it is hard to plot an accurate growth trajectory for the bus’s ridership based simply on the ridership numbers to date. That said, there are a couple of trends worth noting.

Q70 ridership differs from typical bus ridership trends. Fridays typically see the highest number of riders on average. Mondays and Thursdays vie for the weeks’ second highest ridership. Tuesdays and Wednesdays consistently have the lowest ridership numbers of the workweek. All of this follows the well established pattern of popular air-travel days at LaGuardia Airport. Sunday, typically the day of lowest average ridership in the MTA Bus Company system, surpasses Saturday in terms of ridership.

Although only one full year of ridership data is available for the Q70, its ridership peak in August correlates with the Port Authority’s passenger data for LaGuardia air travel, which indicate consistent peak activity in August for the past several years. This may be due to high tourism demand in New York City at the end of summer.
The schedule of major shift changes at LaGuardia airport also merits review, as passengers who work at LaGuardia make up a significant and stable amount of the Q70’s ridership. Delta and American Airlines, two of the largest employers at LaGuardia, have major shift changes at noon, 8pm, and midnight. The first shift of workers starts at 6am, so they typically arrive between 5am and 6am. While many public transit services in New York City simultaneously cater to a wide array of work commutes, the very predictable nature of the restricted number of commute typologies for those who work at LaGuardia perhaps merits a more tailored consideration.

Contrasting the above information and the Q70’s schedule, many transit services in New York City operate with reduced service schedules on weekends—provision of stable and frequent schedules is typically prioritized for the work-week. However, a review of the Q70’s schedule reveals that it is essentially the same for every day of the week; 8am-9pm has the highest frequency - a bus every 12 minutes. Around both midnight and 5am it is every 20 minutes. If so, with many people getting out of work at LaGuardia at midnight, it may not be possible to avoid crowding and long wait times if the bus runs only every 20 minutes. It is also worth considering how the Q70 is able to absorb the different daily fluctuations of air-travelers and still efficiently and reliably provide service to its more stable base of airport workers. In light of this and more, it seems there are several justifications for adjusting the Q70’s schedule to better reflect its unique circumstances.
KEY RECOMMENDATIONS
There is a clear need to better market the Q70 Ltd. and to address the identity of the service itself.

A sufficient number of reasons warrant further differentiating the Q70 Ltd. service from the rest of the MTA’s bus offerings. The Q70 Ltd. as conceived, is the only limited stop bus service that is designed to provide a simplified connection from the subway system to LaGuardia Airport. While the MTA currently denotes any bus service that goes to an airport by appending a yellow airplane symbol to the name, there are many such buses and only a combination of letters and numbers to distinguish them from each other on a map.

There is a distinct need to distinguish the Q70 Ltd. from other buses and overcome the psychological resistance new riders may have toward them. Systematic and holistic marketing of this new identity could aid in creating a brand of lasting value. Taking another cue from the success of the AirTrain, the team recommends marketing the Q70 more as an extension of the subway. This means integrating its visibility into the subway system, much like the AirTrain is currently advertised along the E and A lines. This would also help target key ridership coming from Manhattan. Referring to the service as a “line” instead of as a bus would help verbally integrate it with the subway system. It would also help to incorporate the purpose of the bus into its name, like the AirTrain – thus the concept of ‘FlyLine.’ At the same time, a distinct name would help elevate the service above other bus services to stand out on subway maps, again as the AirTrain currently is with its distinct thick yellow line.

In addition to this, the impending parking reductions at LGA do not only necessitate increasing ridership to the Q70 Ltd., they also provide an opportunity to motivate more people to switch to this service as well.
In addition to marketing and branding the service, there’s also a need to improve the wayfinding experience at the connecting stations. Take, for instance, the Jackson Heights station. Given that Jackson Heights is a very busy subway station and hub for MTA buses, it is important to help distinguish the FlyLine from the litany of other buses listed on the station’s wayfinding signs. Given that the FlyLine is meant to serve people who are not necessarily familiar with the rest of the system, it is doubly important to make sure that the FlyLine stands out. This is another reason to avoid the original nomenclature – the Q70 originally got lost in a list of other Qs and numbers. Taking a cue from the successful branding and wayfinding efforts of the Select Bus Service, FlyLine signs would have their own color and block so as to stand out better.

As mentioned before, the Flyline is meant to serve a great deal of people who are otherwise unfamiliar with the transit system or New York in general. Therefore it is imperative that improvements be made to all areas of the wayfinding experience. On-board the bus, travelers could benefit from a couple of changes:

One improvement would be the provision of clear pre-recorded announcements indicating arrival at each stop. This would also help take the onus off of vigilant bus-drivers who already have to devote extra attention to assisting people who are unfamiliar with New York. The MTA and the DOT have been experimenting with this technology since at least 1999. A review of the MTA’s 2015 financial plan lists which buses are outfitted with IVN [15] and the MTA's public guide on its Bus Time technology indicates that most of the technology or hardware is already in place on their buses[16]. A system of GPS, backed up by a technology called Dead Reckoning, help to indicate what stop a bus has recently come in contact with. The GPS approximates its location and, in order to overcome interference from NYC’s urban jungle, Dead Reckoning estimates the distance from the bus’s last reliably recorded location. Dead Reckoning does this by tracking the speed and direction of the bus’s wheels. Even if this technology cannot be made more foolproof, other technology, such as signpost transmitters, would allow for automated audio announcements based on bus stop proximity. More importantly, the FlyLine’s limited stops (6) and short travel time present an opportunity to pilot this technology.
Passengers would also benefit from being able to see a route map on the bus, indicating the connecting services available at each stop—or in the case of LGA terminals, the airlines operating at each stop. In addition to this, it would be helpful to put up large signs at the terminals, facing the passenger side of the bus, to indicate which terminal the bus has just arrived at. Currently, most of this type of signage at LaGuardia is only oriented toward drivers.

While Woodside is a logical place for buses to wait before running the route, this confuses some people, especially first-time riders. Including a sign at the Woodside stop that indicates that riders should wait for the next “on-duty” bus might help mitigate some of this confusion and increase overall confidence in the service.

Other possible improvements include deploying scannable QR codes that lead to airline departure/arrival boards, updating information at the airport (some signs still refer to the Q33), and clarifying on LGA wayfinding signs the way to the MTA buses, as opposed to just “buses.”

New signs allow FlyLine route to stand out from other bus routes for those unfamiliar with transit system.
There are a couple of queuing interventions that would help improve the service. Most are simple and easy to implement:

At LaGuardia, some of the bus shelters are positioned too close to the curb to allow for comfortable overflow of passengers waiting for the bus. Setting these back further would help with flow.

There are also problems at LaGuardia with cars occupying, idling, or otherwise obstructing the bus’s lane. The problem is significant enough that Port Authority officers are stationed in cars nearby these lanes in order to chase away anyone violating this space, despite the presence of no-standing signs. Painting these designated lanes red would help to make them less inviting to idling cars. Indicating a very visible fine for occupying the space could also act as a deterrent, such as camera-enforced penalties.

With Jackson Heights being busy, crowded and cramped for space, it may be hard to improve the queuing experience there. However, at Woodside it would be helpful if drivers could orient their buses so that the doors do not open up in front of obstructions like girders. This is a minor improvement though, as Woodside currently does not feed enough riders into the bus for their to be any sort of crowding to address.
There are some clear opportunities not only to tap various spaces and surfaces for their advertising potential, but also to use these advertisements as a way to contextualize bus stops. The Woodside stop, in particular has a very long blank wall that could be used for various Airline or Travel advertisements. These advertisements could fund various improvements, such as increased lighting at the stop. Even more importantly, however, having airline and travel advertisements at the bus stops themselves would help contextualize the stops as being an appropriate place to catch an airport connection, thus providing a win-win opportunity.

Advertising space on the bus itself presents additional opportunity. Airline and travel advertisements could target these spaces as well, but there is also a potential to fulfill some of Queens Borough President Melinda Katz’s goals as outlined in her latest Strategic Policy Statement[17]. Namely, there is an opportunity to take advantage of Queens’s position as the gateway to NYC and help advertise its attractions to visitors taking the bus from the airport. Business Improvement Districts local to Queens, or various cultural institutions, such as the Museum of the Moving Image, could tap this space to advertise themselves and the rich cultural attractions that Queens provides. With notable fanfare, Lonely Planet recently profiled Queens as a destination worth visiting all on its own. It may be worthwhile to take advantage of the momentum of increased interest in the area.

A reimagined Woodside bus station includes increased lighting under the bridge as well as airline advertisements adorning the wall.
There are a number of ways to improve overall service:

When surveyed, repeat riders overwhelmingly asked for greater frequency of buses. In addition to this, people who work at LaGuardia mentioned that the bus service could be better aligned with their shift changes. Major shift changes for American and Delta at LGA occur at Noon, 8pm, Midnight. In addition to this airline operations mainly start at 6am, so workers also come in between 5am and 6am.

Increasing service to target these specific shift changes could mean a lot for the workers who make up a relatively stable ridership base. This would be especially noticeable for workers who change shifts really early in the morning or really late at night and potentially have to wait 20 minutes or longer for their bus or even longer if they have to miss the first bus.

There are other fixes to notable dilemmas in service provision. At LaGuardia, depleted Metrocard dispensers can directly interfere the service’s accessibility, particularly because these machines are not within close vicinity of other MTA operations. It’d be useful to train or certify certain LaGuardia workers in being able to refill these machines. At the very least, it is important to smooth out the chain of communication so that issues with Metrocard machines can find a quick resolution.

The disparity between the conventional payment system and SBS’s off-board fare payment system also needs to be addressed, as it causes confusion for visitors unfamiliar with the various workings of New York City’s transit system. The MTA is currently working on introducing a new smart-card fare payment system which could consolidate these payment systems. If it mimics other conventional fare payment systems elsewhere, then contactless fare payment might also allow passengers to board at the rear of the bus and thus improve circulation.
One major service improvement to consider is a redesign of the interior of the bus itself in order to reduce crowding on buses and serve more customers while still accommodating luggage. Currently, luggage often clogs up the aisles and people do not always use the luggage rack if it is far from their seats. The short travel-time of the Q70 Ltd. route, however, may make standing more tolerable.

Therefore, strong consideration ought to be given to removing most of the seating. This would not only allow for better circulation, but it would also provide more space to set luggage down close to the passenger. This would also mean that more people could fit on the buses during peak hours, whereas less busy times would allow the use of fold-down seats. If safety concerns prohibit the removal of most of the seats, the seating arrangement could still be redesigned to mimic that of the newest subway trains, where seating only lines the sides of the vehicle. Foldable seating would also allow for luggage to be stored underneath.

Increased luggage racks, removal of some seating, installation of foldable seating, neighborhood advertising space, better route information, and an automated audio system are some improvements that address passenger concerns, especially as ridership increases over the next few years given the route’s present popularity with both first-time riders, business travelers and airport/airline employees.
CONCLUSION/NEXT STEPS

The Q70 Ltd. bus service poses a unique challenge in that it serves both a reliable base of airport employees, but also a disproportionate amount of first-time users or out-of-towners relative to other transit services in the city. The encouraging successes of its first year of service signal that the MTA should take additional steps now to strengthen the service and increase its visibility. It holds the promise not only of helping to address the temporary removal of parking at LaGuardia, but also of instituting a modal shift that could bring greater efficiency and comfort to the overall process of getting flyers to and from LaGuardia Airport. Even acknowledging the various design guidelines, signage restrictions, and advertising constraints that the relevant agencies operate under, there is considerable opportunity to improve the branding and wayfinding elements of the service just enough to really distinguish it as a special element of New York City’s transit offerings.

At the same time, this service may be able to take advantage of LaGuardia’s, and by extension, Queens’s role as a gateway to New York City and further advertise the distinct qualities of Queens to tourists. All in all, as demand for alternative transportation to the airport increases, the Q70 Ltd. service is poised to become even better, both for travelers and New York City as a whole.
11. Q70 Schedule, as of Summer 2014, Courtesy of MTA (http://web.mta.info/busco/schedules/q070cur.pdf)
12. Ridership Information from Service Start to Present Day, Courtesy of MTA


23. 2013-2014 Q70 Ltd. Ridership Data, courtesy of MTA, December 2014


