Revel Enhanced Safety & Rider Accountability Protocols
August 2020

As a company, we've been humbled to see how important Revel has become to so many New Yorkers, especially in a time of great uncertainty about the future of all aspects of daily life- including transportation. We understand and take seriously the magnitude of responsibility we have operating a shared transportation service in the public right of way. Since the day we launched our pilot we have taken measures to ensure safe operation of our vehicles.

There is no doubt, however, that there have been changes in New York City riders' behavior in recent months. More of our users were breaking the rules, and as a mobility provider we decided we had to do more to address this issue and make the streets safer for everyone.

Therefore, on July 28th we chose to voluntarily pause our service in New York City. We had already begun to take steps to strengthen our user protocols, but ultimately decided the better course was to pause service in New York completely until all new measures in development could be fully implemented. Detailed below, these include updates to our technology, increased rider safety awareness and greater accountability amongst our rider community.

While we are confident the scope and content of the enhanced safety protocol described below will make a distinct impact on day one of resumed service, we acknowledge this is just the beginning of a cycle of continuous improvement. We look forward to working with city leaders and communities, as we have been doing steadily since our inception in 2018, towards the mobility and public safety goals we all share.

I. Background

Revel was founded in 2018 initially launching a free-floating moped share pilot with 68 vehicles and five employees working out of a storefront in Bushwick, Brooklyn. The pilot area covered Bushwick, Greenpoint and Williamsburg, over 10 months, 4,000 riders travelled almost 30,000 miles. In this time, the team developed and honed its operations and provided hundreds of lessons. In May 2019, based on our learnings from the pilot we launched the first phase of our permanent service with a newer, more approachable vehicle[1] and expanded access to cover 20 neighborhoods in Brooklyn and Queens.

Since then, Revel has built a team of over 300 <u>employees</u> including engineers, service and field techs, mechanics and customer service agents. We work with organizations like Brooklyn Workforce Innovations (BWI) and the Department of Small Business Services to identify, train and hire talented New Yorkers. **We do not do gig economy**. We have opened the service to residents across four boroughs and to date over 350,000 New Yorkers are Revel riders. Over three million rides, covering nearly 10 million miles, have been completed in the city. Under our Access program (which provides a 40% discount to riders participating in or eligible for most federal, state or local assistance programs) members have taken over 45,000 rides, totaling 170,000 miles travelled, saving those members $180,000.

In March, when the city shut down to all but essential workers due to COVID-19, we opened our service area to serve the Bronx and Manhattan and made our full fleet available 24/7 as existing transit options were limited. We offered free rides for all healthcare workers and delivery workers from 25 small businesses. Between March and June we provided 50,000 rentals to essential workers who traveled over 200,000 miles. As New York began to reopen more broadly in June, we saw a dramatic spike in demand beyond just essential workers and our average trip length grew from ~3 miles to more than 4 miles as New Yorkers were looking for a socially distant travel option.

Additionally, ridership in our newest neighborhoods has exceeded initial projections. In the first four months there have been over 170,000 rides, 700,000 miles travelled, 45,000 users in the Bronx and over 500,000 rides, 2.2 million miles travelled, and 95,000 users in Northern Manhattan.

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[1] The vehicles in our pilot were manufactured by Torrot. The vehicles we currently have in operation are manufactured by NIU Technologies [NASDAQ: NIU], the world's leading manufacturer of electric mopeds, and use Panasonic batteries and Bosch smart motors. Rider feedback and observations during lessons conducted during our pilot indicated the need for a more approachable vehicle. Our current model has a seat lower to the ground; greater weight distribution for better balance; auto turn-off blinkers; and a bicycle-style kickstand.

II.   Helmet Compliance

a. Self-Certification and Helmet Selfie Before Every Ride

Revel now requires all riders to take a selfie at the beginning of their rental to show that they are wearing a helmet.

If a second rider is indicated they will be required to take a selfie as well. Revel will manually check these photos for compliance and suspend users who were not wearing helmets in their selfies. As we collect images, we are training a machine learning helmet detection model that will replace the manual moderation and reduce review times. This technology requires a large quantity of images in order to get the necessary accuracy. We are also collecting images of non-helmet objects on heads in order to train the model on head-worn objects that are not helmets.
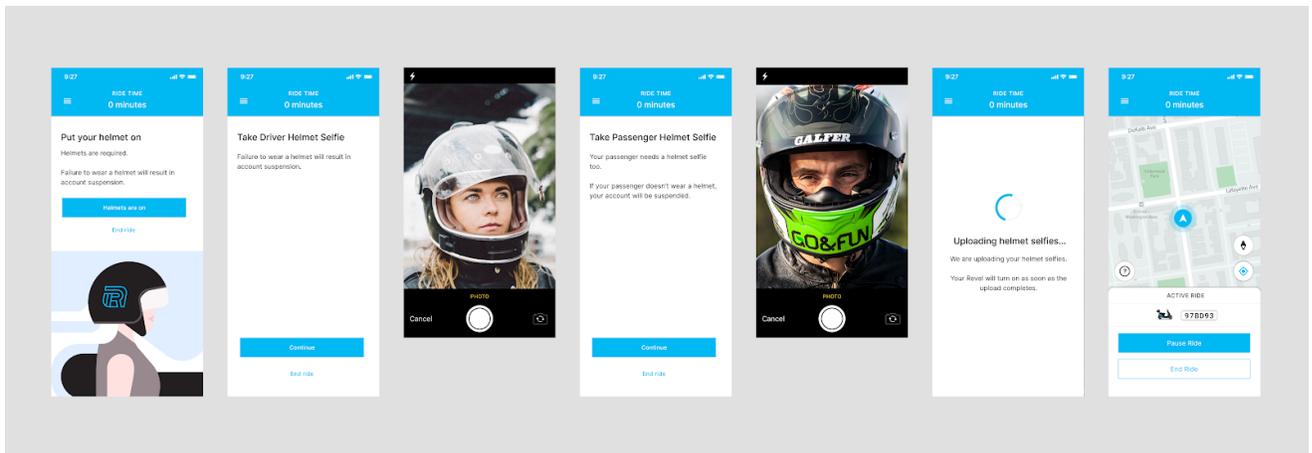
As the app is the only way that users can start their ride, it is the best method to communicate required safety information. With the helmet selfie, we require and enforce the use of helmets (and remind users that it's not just our rule, but also New York State law).

We have made significant technical changes to our app's user flow when starting a ride. Previously the "Start ride" command in-app would open the helmet case and unlock the moped simultaneously. Our improved user flow now unlocks the helmet case only when users select "Start ride". The moped will not turn on until the user has taken the helmet selfie and confirmed they are wearing a helmet.

b.   Additional measures

Additional efforts to get to increased compliance with our helmet requirement include:

- USDOT-certified helmets will be available for sale on our website for $35 plus $5-10 for shipping and handling. We have worked with our suppliers to drive down this cost. For context, similar USDOT-certified helmets retail for $60 to $100.

- Helmets are frequently inspected, cleaned using COVID-19-effective disinfectants, and replaced as needed by Revel's in-house operations team. Additionally, free, one-time use disposable head liners are provided in every Revel helmet case for riders to use.

- We will continue to regularly survey users to gather important information on any barriers to safe riding and ways we can improve user education.

c. *In exploration phase*: Sensor Technology

As a longer term initiative, we are looking into sensor technology for our helmets and helmet cases. We have found this technology is not yet reliable or readily available for use at the scale of Revel's operations. We are continuing to speak to the industry and will do so until there is an available solution we can realistically adopt.

III. Operator enforcement

a. Revel Automatic Alerts

In addition to community reporting, we have implemented a system to automatically detect when a rider enters a park, travels the wrong way down a one-way street, or enters a bridge or tunnel, where riding is prohibited by law and/or Revel's terms and conditions. Internally we call these areas "No Ride Zones".

Revel's data science team created this function using New York City's Open Spaces data set using Parks, Courts, Tracks, Playgrounds and NYC Street Centerlines and One Way Streets layers to detect rides that enter a park or travel the wrong way down a one way street. We have also manually mapped bridges. If a rental enters any one of these areas we receive an automatic alert so we can issue the appropriate

notifications to riders, per our current suspension policies. Although it is too soon to tell the extent to which this change will be effective, as a share of total rentals, we immediately saw a decrease in bad behaviors, such as riding in no-ride zones and travelling the wrong way on one-way streets.

Examples of no-ride zones and one-way streets monitored.

Many of the systems that we are creating can help other mobility companies and government agencies. We are hoping to provide open source licenses to our automations, especially regarding one-way street detection, park detection and helmet detection, so that others could utilize this technology.

Note: GPS cannot reliably detect sidewalks, bike lanes or riding the wrong way on multi-lane streets to the degree we would need in order to use Revel auto-alert detection. We will continue to engage with experts in the field and monitor as technology/the capability to do so evolves.

b.   Community Reporting Tool

While we will continue to promote community reporting of bad rider behavior through our social channels and paid media, we are also developing a community reporting tool. Anyone will be able to use this tool, regardless of whether they have a Revel account. This will not preclude people from calling or emailing our Customer Experience team, but for those interested in using it, it will be a quick and easy way to ensure Revel has received and is investigating complaints submitted. It will also allow for an easier path to submit photos or other evidence of bad behavior. The tool will be available in-app and on our website.

We will also include information on this service in our marketing materials, including in social media.

c.   Updated Suspension Policies to Remove Bad Actors Faster

Revel has always been responsive to reports of bad rider behavior. Since we launched our permanent service in 2019, we have had a system to report infractions through our Customer Experience Department. We also continuously monitor all social media channels for photos, videos and bystander reports of irresponsible operation of our vehicles.

Given the uptick in bad behavior reported by the general public and our employees, we adjusted our suspension policies to remove bad actors faster. We have always immediately and permanently suspended reckless riders who put others at risk, but

had allowed for more discretion in the use of warnings and monetary penalties, in addition to rider suspensions, as a way to prevent rule violations that did not endanger the safety of others.

Considering the trends that we have observed this summer and our general feeling that monetary penalties are not the most efficient or equitable way for a private company to enforce its rules, we have updated our policies.

The most serious violations will result in a permanent suspension on the first offense. This includes things like reckless riding, riding on a highway, or riding on a sidewalk. For other offenses, riders will receive a 7-day temporary suspension (as opposed to a simple warning or fine) on the first offense, and on the second offense will be suspended permanently. For more minor offenses, we will issue a warning before issuing suspensions.

Our rental agreement sets out all of our rules and links to our website for further details. The website reflects the currently enforced schedule of suspensions: https://gorevel.com/violation-suspension-policy/.

d.   Limiting Overnight Hours on a Pilot Basis

We initially opened our service 24 hours to accommodate essential workers during the height of COVID-19, particularly with MTA overnight subway service suspended. Prior to the pandemic, however, we were discussing extending our hours to accommodate shift workers and others needing additional transit options at night. Second to safety, transportation access is a core goal for Revel. We do not think shutting down between midnight and 5 AM is a long-term solution, necessarily, as it restricts access to safe, affordable transportation for many of the people that need Revel most.

That said, it is an unprecedented time and the extreme and sudden shift in what is happening on our streets is our foremost concern. Therefore, we will be suspending service between midnight and 5am for at least the initial 60-days of resumed operations.

Revel will continue discussing this issue during this time with NYCDOT and community stakeholders with the goal of identifying steps to ensure safe overnight operations for users that rely on our service.

IV.   Training

a.   Mandatory Comprehensive Safety Training

We worked with [The Behavioral Insights Team](#) (BIT), leading behavioral science experts, on a Comprehensive Safety Training to improve users' (1) knowledge of our safety practices, and (2) behavioral compliance with our safety practices. Although the training uses an exam-like structure, the goal of this training is not for users to fail, but to ensure that no user can pass without learning the information presented.

All riders, including those activated prior to our NYC relaunch, will have to watch an instructional video and take a 30-question safety course. Mock-ups below.
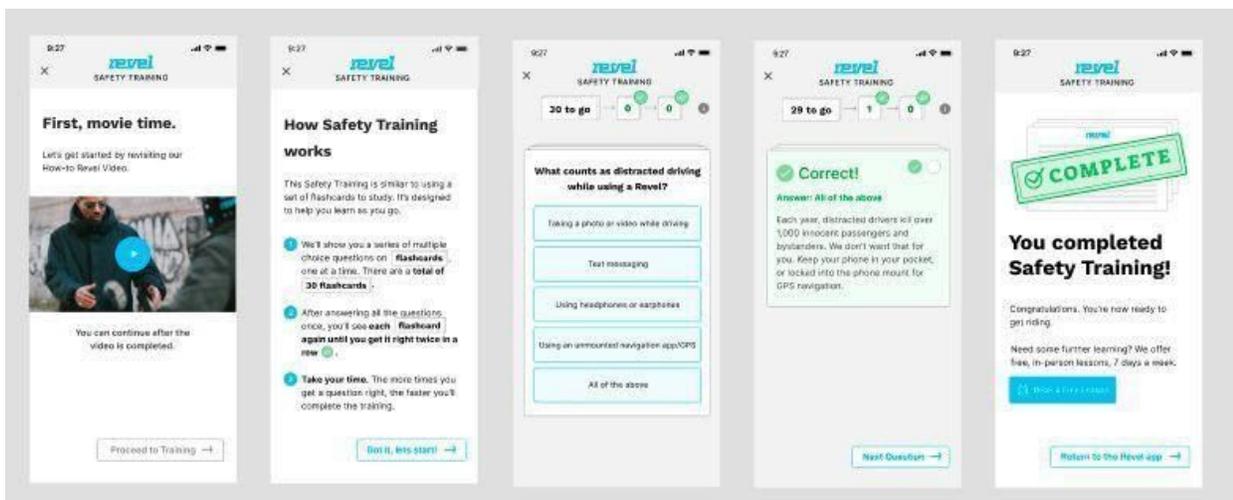
Revel worked with BIT and consultant Sarah Kaufman, a transportation expert currently at NYU's Rudin Center, to develop a set of questions aimed at the most critical information to users based on behavior observed and/or reported to our Customer Experience team.

Topics include: pre-ride safety procedure; requirement of US-DOT certified motorcycle helmet for each operator and passenger; requirement to obey traffic control devices; travelling on certain bridges, highways, parks, sidewalks, bike lanes, wrong way down one-way streets prohibited; account sharing prohibited; riding with minor passengers prohibited by Revel; consequences of violating Revel rules, or New York State or City Traffic Law; DUI and distracted driving prohibited; and general information on operating the vehicle.

Revel will continue to refine the training with input from experts at NYCDOT and the transportation safety community.

b.   Increasing Access to In-Person Lessons: 4 Boroughs, 7 Days/Week

Since our inception in 2018, we have provided free in-person lessons, seven days a week out of our headquarters in Brooklyn. Riders can schedule a lesson via our booking tool or email customer service to schedule an appointment. Additionally, we have offered pop-up lessons in neighborhoods across our operating area on a recurring basis. To make lessons even more accessible, we will expand our pop-up lesson program by providing free lessons in all four boroughs where we operate, seven days a week. Lessons are going from being available at one location in Gowanus, Brooklyn with 1x1 availability from 1-7pm (7 days a week) to now a location in each of the four boroughs we operate in (locations in Inwood, Astoria and the Bronx along with Gowanus) and hours extended to 10am-7pm on the weekends as well. Based on the schedule we have created, we will have the capacity to train 1164 people a week. This is a 10x increase from 112 a week.

We will be also putting systems in place to track demand for lessons in real time and will scale lessons availability accordingly. Our lessons are designed to help our riders get comfortable with basic techniques needed to operate our mopeds while promoting rider safety within the Revel community. We will evaluate additional ways to encourage new riders to take the training through the many tools we use to communicate with our user base.

V.   Steps to Combat Account Sharing

Like all companies today, particularly in shared mobility, taking extra steps to prevent fraud is critically important. Due to the nature of this risk, it is something we have and will continue to prioritize and improve upon. We are committed to doing so, and believe the following measures that are already in place reduce fraudulent activity significantly, specifically for instances where an account is accessed by a rider who has not undergone the vetting process required to access our platform.

a.   Two-factor authentication

Anytime a user signs in to their account, they must authenticate with a two-factor code that is automatically sent to the phone number associated with their account. Phone numbers can only be associated with one single account.

b.   Verifying valid credit card

Before every rental we create a temporary $1 pre-authorization charge to validate the user's credit card. Once the rental has started, the card cannot be switched. If a payment fails at the end of a rental the user's account will be suspended until they have cleared the outstanding balance. All new credit cards are validated via our payment processor Stripe using Radar (their proprietary machine learning software that provides a credit card confidence level) as well as CVC and zip code match.

c.   ID verification

We use a third party identity verification service to ensure valid driver's license and face match upon signup. For your account to be activated, you must upload a picture of your ID (front and back). Multiple images of your face are also captured and used to validate that your face matches the photograph on the license. Once this process is complete we also check for age, license type and expiration and block users who don't meet our requirements.

d.   Require unique users

Our database allows phone numbers, emails, and driver's license numbers to be used with only ONE account. Therefore, if you've used your driver's license (or phone number or email) to create an account, no other account will be activated with that same driver's license.

e.   Restricting fraudulent access to the vehicle

Each account can only be signed into one phone at a time. Upon signing into a new phone, the previously signed in phone is signed out. Renters must also be within 50 meters of a vehicle to unlock it and each user can only have one rental at a time.

f.   *In exploration phase:* automatic alert to detect proximity of phone to vehicle

We are exploring the feasibility of developing an alert for when a user's phone and vehicle are not in the same location. We are in the process of determining whether this is possible and if so the road map/timeline to implement.

VI.   Data Sharing

Revel will share anonymized trip data with DOT on a weekly basis and will notify DOT of major incident reports as we become aware of them. Because we rely partly on reports from our users and third parties to identify incidents, there may be times when we do not receive timely notice of incidents. We will notify DOT of such incidents as we are able to. Revel will also report monthly on its in-person lessons program, including the number of lessons scheduled, and its operator enforcement initiatives, including automatic suspension system data.