

Wheels Labs, Inc.

2020-2021 Free-Floating Scooter Share Pilot Permit Application



Seattle
Department of
Transportation

WHEELS 



July 27, 2020

Dear Seattle Department of Transportation,

Wheels is excited to express our strong interest in partnering with the City of Seattle to offer a micromobility service that emphasizes safety, cleanliness, accessibility, and equity.

Safety

Wheels was born out of a desire to make micromobility safer, and accessible to a diversity of ages, sizes and economically disadvantaged communities. Every action that drives our company forward is built on the safety concerns of our community. Our ‘safety first’ strategy led us to forego using the traditional stand-up scooter in favor of a completely different form factor – one with much bigger wheels, a lower center of gravity, and a seat for more points of contact with the rider.

The Wheels device delivers these safety benefits while still being the size of a traditional scooter. This is important because larger devices are much more likely to create congestion, interfere with pedestrians, and introduce a range of other problems. The Wheels device delivers the best of both worlds: significantly increased safety and a size that is proven to work.



In the past year, Wheels has rolled out new safety features that are unique to us. First off, we have started rolling out a smart helmet system that is directly integrated into the device – the first such system being introduced on the market. At Wheels, we believe that riding with a helmet is absolutely critical as approximately half of all injuries on micromobility devices are head injuries, and yet about 99% of riders have been found to not wear helmets. Our blog post, including photos and video of the Wheels Helmet, can be found [here](#).

Secondly, 100% of Wheels devices are now equipped with tip-detection technology to help ensure that they are properly staged, including being upright. This has helped us ensure sidewalks are safe and accessible for people of all ages and abilities.

The data has proven out the safety benefits of our device. As reflected in the attached report, Exponent, a leading third-party safety consultant, recently compared our injury rates to the rest of the micromobility industry, and it found that Wheels’ injury rates are exponentially lower than those reported for scooters and bicycles:

Wheels’ Injury Rate	Comparison to Other Micromobility Devices
1 injury for every 74,577 miles ridden	4 times better than bicycles; 3 to 66 times better than other scooters
24.99 injuries for every 1 million trips taken	5 times better than bicycles; 8 to 26 times better than other scooters
0.12 injuries for every 1,000 hours of riding	2 to 5 times better than bicycles; 9 to 19 times better than other scooters



Cleanliness

In line with our commitment to safety, Wheels is uniquely situated to address the challenges of the COVID-19 pandemic.



We recently announced a partnership with NanoSeptic, the leader in self-sanitizing surfaces, on a first-of-its-kind offering in the shared transportation space. Through this partnership, we are rolling out custom-made NanoSeptic surfaces on our handlebars and brake levers so that our riders only touch self-cleaning surfaces. NanoSeptic surfaces contain mineral nanocrystals that are powered by visible light to continuously break down any organic contaminants at the microscopic level without the use of poisons, traditional heavy metals or dangerous chemicals.

Accessibility

In order for micromobility to help cities responsibly reopen, devices not only have to be safe and clean, they have to be capable of being comfortably ridden by *everyone*. With the need to assist with the burden on public transportation in favor of transportation modes that promote social distancing, this has never been more important.

Wheels devices are uniquely situated to appeal to everyone. We are the only micromobility company to exclusively offer a seated option as we believe strongly in the safety and accessibility benefits of seated devices, and we have stayed relentlessly focused on perfecting the best seated device on the market. Our seated design provides increased comfort for those who do not have the physical capability of standing up on a scooter or pedaling a bicycle. And our device is lightweight (only 40 lbs.), has a low step-through for easier access and operation, and does not require users to pedal or stand and balance. Because of these differences, Wheels attracts a particularly broad demographic, with half of our riders being women and one-third being over the age of 35.

To demonstrate the clear accessibility benefits of the Wheels form factor, we recently asked Exponent to conduct a comparative analysis of a Wheels seated scooter, a common stand-up scooter, and a pedal bike. As indicated in the attached report, riders of a wide variety of weights and ages prefer the Wheels seated scooter. It is easier to mount and dismount than a pedal bike. It is more stable to ride than the other devices. It is easier to start up from an orthopedic perspective than the other devices. And our riders have less fatigue because of the ability to sit down and remain stable.

Sustainability

Due to our swappable battery technology and the modular design of our device, we believe that Wheels is the most sustainable option in the micromobility industry. Wheels avoids the typical “juicer” model where scooters are thrown in people’s trucks, charged overnight at their homes, and then brought back out in trucks to be re-deployed. The use of swappable batteries instead enables our devices to receive new, charged batteries without ever having to be removed from the field, resulting in a much more efficient operations model and lower carbon footprint.

Additionally, because we purposefully chose not to buy a traditional off-the-shelf scooter like other companies and because our device instead uses a unique modular design that allows parts to be easily swapped in and out, the life span of our vehicles is unusually long. Indeed, we are confident that our devices will easily last at least 2,000-3,000 miles on average (likely more than 3 years), and likely far more. This dramatically lowers vehicle churn and waste, and significantly improves sustainability.

We know Seattle has a commitment to sustainability, and so does Wheels.



Partnership with Lime

Wheels has entered into a partnership with Lime in which Wheels devices in select cities will be available through the Lime app. Wheels and Lime have already spoken about the possibility of including Seattle as part of this partnership to the extent each company receives a permit to operate in the City. This would be a unique way for two operators in the City to integrate their offerings, resulting in a more streamlined and convenient user experience.

Commitment to Seattle

We're more confident than ever that Wheels is well positioned to help the City and Seattleites as a transportation option in the 2020-2021 pilot and meet SDOT's general goals and five objectives for the scooter share pilot. In addition to this letter, our application to the City details our many other benefits and innovations. We love Seattle and hope to create a long-standing partnership with the City.

Sincerely,

Vicki Roan
VP, North American Operations
Wheels



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Equipment and Safety

As supported by the information below and the attached injury data report showing that Wheels has the lowest injury rate reported in the micromobility industry due to our seated design, large 14" wheels, and other unique safety features, we certify that the Wheels device is safe to operate within the City of Seattle under all conditions that include, but are not limited to, potential wet, icy, or snowy weather; steep slopes; pavement imperfections; cobbled or roughly-paved streets; and streetcar and train tracks in the street.

A-ES2.1 Attach all illustrative images and specifications described in Requirement ES1.2(c).



The Seated Wheels Device: Increased Safety in the Size of a Traditional Scooter

Wheels was born out of a desire to make micromobility safer. Every action that drives our company forward is built on the safety concerns of our community. Our 'safety first' strategy led us to forego using the traditional stand-up scooter in favor of a completely different form factor – one with much bigger wheels, a lower center of gravity, and a seat for more points of contact with the rider.

Importantly, Wheels is the only operator that exclusively uses a seated device -- one that has been used by millions of riders across the US and Europe -- and we have done so ever since our founding in 2018. This experience has allowed us to continuously make safety and performance enhancements.

Additionally, the Wheels device delivers these safety benefits while still being the size of a traditional scooter. This is important because larger devices are much more likely to create congestion, interfere with pedestrians, and introduce a range of other problems. The Wheels device delivers the best of both worlds: significantly increased safety and a size that is proven to work.



Dimensions

Wheels devices are 39.9 inches tall, 21.1 inches wide, 49.2 inches long, and weigh 40 lbs.

14-Inch Wheels

In contrast to most other devices, Wheels devices have large, 14 x 2.2-inch pneumatic tires for navigating roadway cracks and uneven pavement surfaces. This significantly improves safety.

Security

Wheels devices use a self-lock technology on top of geofencing capabilities and a local field team to keep our devices organized and in the appropriate parking locations.

Wheelbase

The distance between the center of the front and rear wheels on the Wheels device is 35 inches.

Maximum Load Capacity

The maximum load capacity of the Wheels device is over 500 lbs.

Standover Height

Standover height, which was measured from the ground to the topmost structural frame component that a rider must step over to mount the device, is 14 inches allowing for easy access and operation.

Dual Brakes

Wheels devices have front and rear independent dual actuated brakes.



Anti-Theft and Vandal Resistant Hardware and Components

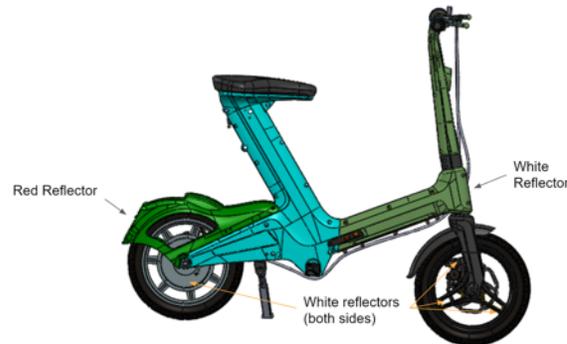
Wheels devices have recently been retrofitted with custom-developed tamper proof screws, and an anti-tamper, custom-built locking system to prevent battery theft. Our software-enabled protocol provides real-time alerts that notify our operations team if any tampering of our devices is occurring in the field.

Lighting

Wheels devices include an always-on at night white headlight visible from a distance of at least 500 feet and an always-on at night red tail light visible from a distance of 600 feet to the rear, which stay illuminated for at least 90 seconds after the user ends their ride.



For Seattle, Wheels devices will also be equipped with reflectors that meet the approved type by the WAC 204-10-060.



Location Tracking Technology

Every Wheels device includes integrated, tamper-proof GPS technology. Based on device specifications, the integrated GPS technology Wheels uses for tracking is accurate within 3-5 feet. The GPS technology samples every 30 seconds while in use and every 30 minutes while parked. When our device signal is lost, our GPS technology continues the same behavior based on if the device is moving or in use.

Motor

Wheels devices have a 350 watt motor and have recently been updated to add more than double the amount of newton meters per torque, which significantly improves trips up hills. The motor is configurable and can be set to propel the device at a maximum speed of 15 mph. The rider will use the throttle on the right handlebar to propel themselves forward and manage speed.

Bell

Wheels devices have recently been updated from a horn to a bell. This helps to navigate the city better as it produces a sound that pedestrians, cyclists and vehicles are familiar with.

Swappable Battery

Wheels devices come with swappable batteries with a range of about 25 miles – a more sustainable solution that avoids the typical “juicer” model where scooters are thrown in people’s trucks, charged overnight at their homes, and then brought back out in trucks to be re-deployed. The use of swappable batteries instead enables our devices to receive new, charged batteries without ever having to be removed from the field, resulting in a much more efficient operations model and lower carbon footprint.

To reduce vehicle miles traveled, Wheels utilizes our proprietary Service Hub technology, which incentivizes “Transporters” (described in section A-P1) to drop off low battery devices in dedicated locations reserved for devices that need service. Our Field Operations Specialists can then go and pick up multiple devices at one stop.

The Wheels Integrated Helmet System

As an additional safety feature that is unique to Wheels, we are rolling out a smart helmet system that is directly integrated into our device – the first such system introduced on the market. Using the app, riders can unlock the helmet from the device and peel off a new biodegradable headliner for every use. (There is a tab on the outside of the helmet that a rider pulls in order to get a fresh headliner; the rider never has to touch the part of the headliner that was used by another rider.) Because the helmet is connected to the device’s sensors and other electronics, we have numerous options to encourage helmet use by our riders and we provide discounts that encourage and reward use.





We strongly believe that having an integrated helmet is the right solution, and any micromobility device without one is incomplete, as it is lacking the most important safety system a micromobility device can have. Our blog post, including photos and video of the Wheels Helmet can be found [here](#).

Baskets

Because of Wheels' unique form factor, we are in the process of rolling out baskets on the front of our devices. Micromobility becomes much more practical and safer for the rider if it can be used for shopping, picking up essential items, or doing errands and not having to carry their items while riding. By incorporating baskets, Wheels makes that possible.



Wheels baskets are 33.5 x 24.5 x 26cm and can hold up to 50lbs.

Spring-loaded Kickstand

Wheels devices include a newly-designed spring-loaded kickstand capable of keeping the device upright when not in use. Whether parked on a steep incline or flat surface, our spring-loaded kickstand is designed to support a very high tolerance of weight and excellent balance no matter the surface. At approximately 9" in length with a 1" width base in diameter, our alloy-based kickstand has a 5" compression spring that can withstand more than 35 pounds of compression per inch.

Tip-Detection Technology

Wheels devices are equipped with tip-detection technology to help ensure that they are properly staged, including being upright. Our devices contain an accelerometer that gives us the orientation of the device. When a device is tipped over, the accelerometer detects this and we are sent data in real-time letting us know that a device is knocked over, so that prompt action can be taken by our field team.

Bluetooth Speakers for Hands-Free Navigation

As another safety feature that is unique to Wheels, Wheels devices come with Bluetooth speakers. These speakers mitigate the risks of distracted riding by enabling riders to use hands-free navigation when pairing their phone through the Wheels app.

We are also working on making the Bluetooth speakers capable of providing a range of other safety and warning messages to riders, including, but not limited to, no riding on the sidewalk and parking appropriately.

Locking Rear Wheel

Wheels devices have a rear locking wheel, which is unlocked at the beginning of a trip and relocked at the end of a trip by riders using our mobile app. This prevents unintended use of the vehicle.

Sidewalk Riding Controls

Although no operator currently has operational and effective sidewalk recognition technology, we are currently developing such a system that will be able to identify riders who are riding on the sidewalk, convey audible messages to them over the Bluetooth speaker to tell them to stop riding on the sidewalk, and to take enforcement action against riders that repeatedly ride on sidewalks contrary to our instructions to them.

Environmental Testing

The Wheels device meets environmental standards for batteries and electronic equipment. Wheels has been certified to meet the standards of EN 60950-1, EN 62479:2010, ISO 11014:2009, and RoHS 2 directive 2011/65/EU, among others. Additionally, Wheels batteries are certified under IEC 62133:2012, meeting requirements and tests for the safe operation of portable batteries under the international standard.



Product Lifespan

Our devices have a product lifespan that we believe is many times longer than other dockless vehicles on the market. This is for a number of important reasons.

First, we purposefully chose not to buy a traditional off-the-shelf scooter like other companies because, among other things, those scooters are not built for the micromobility use case where many users ride them every day. Our devices use particularly high-quality materials and are built to withstand the rigors of outdoor storage and constant use.

Second, our device is unique in that it has a modular design that allows parts to be easily swapped in and out. This is true for our batteries, and it is also true for all of the other parts on the device. The modular design of our devices coupled with our robust spare parts inventory results in very low vehicle churn.

Third, even though our devices are designed from the beginning to be much more durable than other dockless vehicles, we have a relentless commitment to continuing to improve and innovate on that design. Indeed, our lifeblood at Wheels is product and innovation, and we never stop making improvements through an intensely data-driven approach. We are constantly looking at data to identify any areas on our device that are breaking or not working up to our standards. When we identify such an area, we either directly build or find a solution that can be retrofitted onto the device using its modular design. We typically arrive at several solutions and then trial them in the field to see which solution works best, and based on the data, we select the winner and retrofit all of the devices in the field.

These steps have led to a highly effective retrofit strategy that has allowed us to constantly improve the durability and lifespan of our devices, and in a remarkably short timeframe at that. Indeed, it is extremely unusual for hardware companies to be able to update and fix issues without a prolonged product cycle. The reason we have been able to do that is because we have a uniquely modular design, which allows us to quickly and easily take devices apart and put them back together again using retrofits. Also, we have been able to take these solutions and design them directly into the device such that the new versions of our devices, which we are regularly launching, are even stronger and more durable than those that came before.

As a result of these steps, the life span of our vehicles is unusually long. In our view, life span is not properly measured by the amount of time between the date the device was built and the date it is scrapped because if a device is merely sitting in a warehouse unused for a long period of time, that does not lead to any reliable conclusions about life span. Rather, we believe that life span is most properly measured by how many miles the device gets ridden before it reaches the end of its useful life. For the version of our device that will be used in Seattle (our newest version), we are confident that they will easily last 2,000-3,000 miles on average (likely more than 3 years), and that they could continue well beyond that. The pieces of the device that are most likely to wear down are also the most modular, so they can be easily swapped out in about 15 minutes. The remainder of the parts have been reinforced so strongly based on our data-driven approach that they should only break extremely rarely based on highly unusual circumstances.

Recycling

To the extent a vehicle has a service issue that is beyond repair, we've partnered with a third-party to strip devices for parts and responsibly dispose of any materials that can't be utilized. We also partner with local recycling centers for any end-of-life batteries or scrap parts realized through our maintenance operation.



A-ES1.2 Attach illustrated images of the placement of the information described in Requirement ES3.1-4.

Wheels' devices are equipped with our company name, logo, a 24 hour customer service phone number, website, and email address, as well as a unique identifier. Devices also include clearly visible signage under the handlebars stating that a helmet and license are required, and that riders need to yield to pedestrians, park responsibly and sanitize hands and wipe down the device before and after riding.

Wheels is also committed to produce the decals that will be provided to us from the program manager that includes the City's contact information and we will affix these to each device within 60 days of receiving artwork.



A-ES1.3 Attach illustrated images of the Braille Identifier described in Requirement ES3.4.

Wheels commits to including Braille and raised lettering on each of our devices that will show the scooter's unique identifier, as well as our name and phone number.



A-ES1.4 Will devices participate in Emergency Unlocking, as described in Requirement ES2.8? (Attach a description [≤ 250 words] of the method for unlocking and providing devices free of charge.)

Our device is not designed to physically unlock itself. However, Wheels can allow our devices to be unlocked free of charge during Emergency Unlocking for any existing users plus anybody that signs up during this time.



Parking

A-P1 Attach a description and illustrative images of the plan for ensuring staff parks devices correctly.

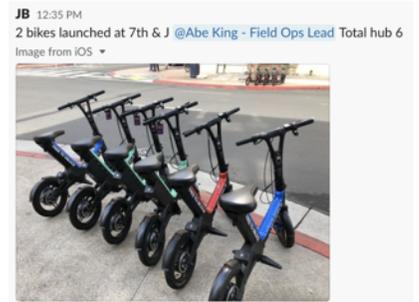
Our Field Operations team functions 24 hours a day, 7 days per week to ensure that devices in the field are in excellent condition and properly located at all times. Field Operations Specialists are responsible for rebalancing and deploying devices under the supervision of a local Supervisor. In Seattle, our team will customize device parking instructions to meet all permit regulations before they are distributed to the team.

This team is also responsible for swapping batteries to ensure that the Wheels fleet is fully charged at all times. Additionally, to keep our devices “In the right place at the right time,” we use an efficient, reliable network of independent contractors known as “Transporters.” This network (a) moves devices so they are grouped together for our Field Operations Team to pick up and (b) rebalances our devices to areas we instruct them to within acceptable ride or parking zones. Transporters work in tandem with our geo-fencing technology to ensure that our devices are where they are supposed to be and eliminate the possibility of clutter in high-use areas, including no more than 15 devices per block.

Our Operations Managers and General Manager will monitor rebalancing and hubs accordingly, prioritizing fills in priority zones. Together, Field Operations Specialists and Transporters ensure Wheels devices are deployed each morning and equitably distributed throughout the day using our dynamic, real-time rebalancing model.

Field Specialist Photo Review of Device Placements

Through Slack messaging, each Field Operations Specialist shares a picture after placing devices to show that they have been properly placed and are not blocking the sidewalk. Supervisors review each picture and provide a thumbs up mark (see image to the right) if the placement was satisfactory. If placement was not satisfactory, the Supervisor will tell the Field Operations Specialist what changes need to be made, and the specialist will not move onto their next task until the changes are made.

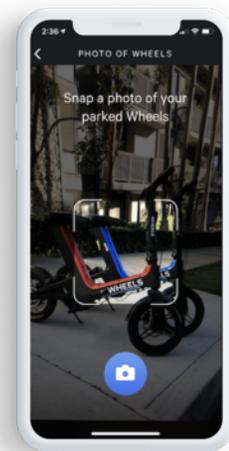


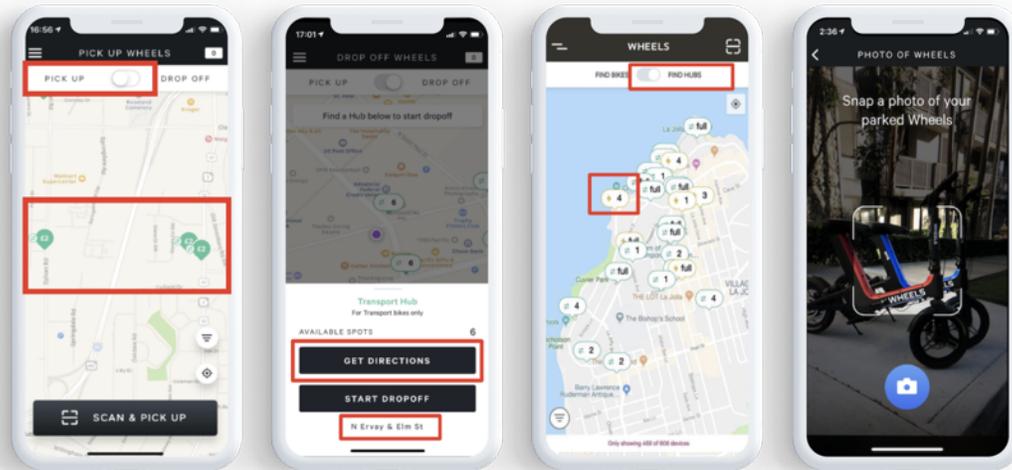
Transporter Photo Review of Device Placements

Transporters use a custom app that features specific instructions on how many dockless vehicles are permitted to be parked in each hub, GPS navigation to each location, realtime data to prevent overflow at hubs that are no longer available, and education on how to properly park the vehicles according to City rules and guidelines. The app also requires that Transporters submit reviewable photos each time a vehicle is parked to ensure it is correctly parked and not left in prohibited areas or blocking the right of way.

Geofencing of Approved Hubs

Wheels identifies approved hubs where devices may be deployed, displays those zones in geofenced maps in our app, and informs our Field Operations Specialists and Transporters the locations of those zones to make it easy for them to navigate there.



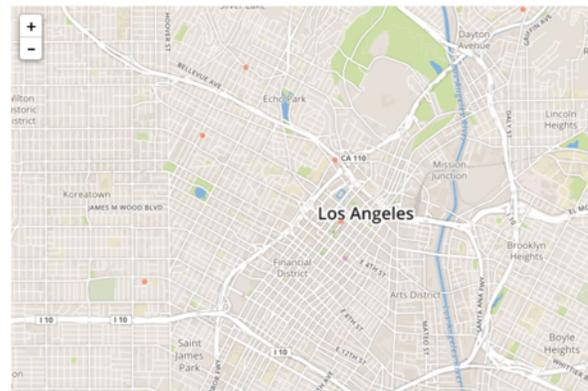


Wheels' operations model, both through our Field Operations Specialists and Transporters, is designed to ensure that devices are parked properly according to Seattle rules and regulations, and that quick and proper corrective action is taken if notified by our technology or community of improperly parked devices.

Tip-Detection Technology

Additionally, Wheels devices are equipped with tip-detection technology to help ensure that they are properly staged, including being upright. Our devices contain an accelerometer that gives us the orientation of the device. When a device is tipped over, the accelerometer detects this and we are sent data in real-time telling us that a device is knocked over, allowing our field team to take prompt action. This map to the right (orange dots) shows the knocked over devices in Los Angeles based on this technology.

Location and Status of Knocked over Bikes in LA



A-P2 Attach a description and illustrative images of the plan for employing appropriate geofencing capabilities (include the limitations of geofencing technology).

Our flexible GPS technology allows us to set operational parameters at the geofence level to help us meet city goals, including the ability to safely lower speeds all the way down to 0 mph within designated geographic areas or facilities. After a device's speed has been safely reduced to 0 mph when nearing a university or geospeed protected zone, Wheels remotely locks the device if it continues into the non-operational zone and warns users that the device needs to be removed from that zone. Further, users are not able to end their ride until the device is returned to the operational zone.

Our geofence parameters are easily customized to City needs, including adding no-parking zones required by Sound Transit, King County Metro, University of Washington-Seattle, and Washington State Ferries. Furthermore, these parameters can be modified at any time to accommodate for special events, transit issues, inclement weather, or based upon community feedback as identified by the City from time to time.



Our geofence system has the ability to prevent trip start and end, show non-operating zones in-app, display required and encouraged parking zones, and remotely lock devices that have been transported out of the geofenced zone. Wheels currently has geofence parameters implemented in every city we operate.

Below are a few examples on how this has worked in practice:

In the Los Angeles neighborhood of Venice Beach, micromobility operators saw a backlash from businesses and community members regarding the operation of shared mobility devices on city streets, specifically on the Venice Boardwalk and the Venice Canals. Wheels worked together with local stakeholders to devise a plan to address this issue. As part of this effort, Wheels was one of the first companies to commit to and implement a geofencing plan that safely reduced the speed of our devices to 0 mph whenever a device attempts to enter the Boardwalk or the Canals. We also revised our operations plan in response to community concerns by limiting the number of devices deployed at a single location to five and we sped up our response time to move improperly parked devices.

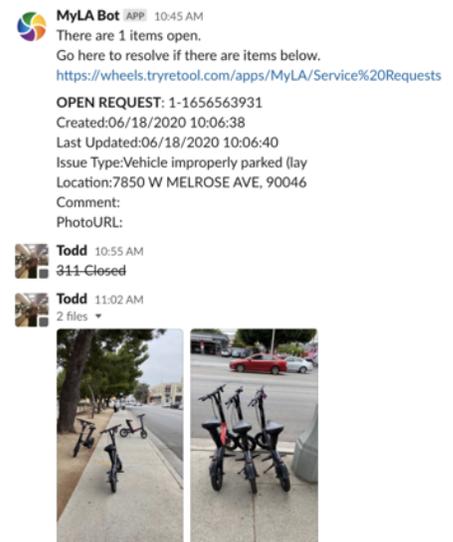
As an additional example, Wheels recently partnered with the City of Cleveland to prioritize pedestrian traffic surrounding sports, concerts, and other special events located at Progressive Field, Quicken Loans Arena, and First Energy Stadium by establishing geofences that restrict device use around these locations two hours before and after each event.

These are just a few ways of how Wheels has worked with cities to implement and maintain strict geofencing compliance. Our local contact will always be available for requests and general managers can easily put together a plan within 24 hours notice should something unexpected arise.

A-P3 Attach a description and illustrative images of the plan for detecting and reparking improperly parked devices (including the use of any Automated Driving Technology, as defined in Requirement O2.9).

Field Operations Specialists

Our Field Operations Specialists are continuously in the field and are trained and instructed to ensure that our devices are parked properly. Our response time to public requests is a key metric we're proud of and monitor consistently. In Los Angeles, our biggest market with 3,000 permitted devices, the average time to close a public request is under one hour. As a representative example, that's in line with our typical practice, to the right is a screenshot of our field Slack channel showing that in less than an hour from when an issue was raised, three devices that had been blocking the sidewalk were properly moved and parked correctly, with before and after photos sent to demonstrate.



Whenever we receive a request through email, phone, or our app that a device is improperly parked (or that there is another issue), we treat these as #1 priority alerts and our Field Shift Supervisor's responsibility is to handle this request above all else. The Supervisor immediately finds the nearest Field Operations Specialist (via an all hands on deck message via Slack) to address the request, provide instructions on how to remedy the issue, and receive photographic confirmation from the Field Operations Specialist that our device has been properly parked.

Our field team is also continuously out in the community handing out our community cards to residents describing how they can get in contact with us about any issues. We welcome and solicit feedback because it helps us to keep innovating and improving.



As an example, Wheels is proud to have had the fewest number of community complaints (12) out of all ten operators in Chicago's 2019 pilot. In contrast, the average number of complaints per operator was 29, with the highest number of complaints for an operator being 65.

Technology

Wheels is excited to introduce a number of new technologies that will even further improve parking compliance and non-rider safety in Seattle.

First, Wheels is introducing rear wheel locking technology to prevent the use of devices while they're not being ridden. Preventing the unwanted movement of our devices while not in use will reduce obstruction or blocking of the right of way and will help prevent devices from rolling or falling over.

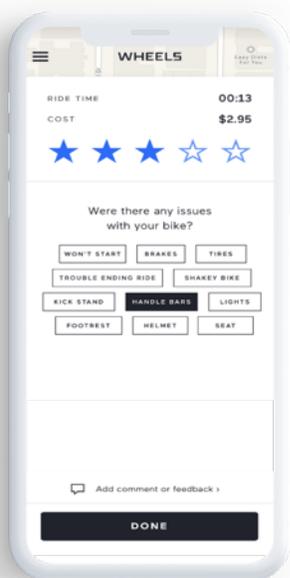
Second, Wheels devices are equipped with tip-detection technology to help ensure that they are properly staged, including being upright. Our devices contain an accelerometer that gives us the orientation of the device. When a device is tipped over, the accelerometer detects this and we are sent data in real-time telling us that a device is knocked over, allowing our field team to take prompt action.

A-P4 Attach a description and illustrative images of the plan for inspecting devices to ensure they are in good working order and removing devices that are not in good working order.

Maintenance Specialists

Our team of Maintenance Specialists conducts preventative maintenance and repairs to Wheels devices. Maintenance Specialists are highly trained to repair our devices, and they are equipped to replace every part on the Wheels device. This team's ability to repair any part of the device allows Wheels to abide by its mission of sustainability by ensuring that no part is wasted.

We cast a broad net to identify potential maintenance, cleaning, or repair needs in our fleet using a combination of user feedback, active management, and proactive analysis of data and diagnostics. These methods include:



- Providing a direct option (#3 in our initial main menu of our customer service support number) for City and other officials to directly report any issue;
- Collecting and reviewing in-app reports from riders and Transporters (see photo to the left) for potential maintenance issues;
- Monitoring support calls to our 24/7 support number or emails informing us that a device requires service;
- Performing routine field quality checks by Field Operations Specialists during battery swaps;
- Processing error codes and other telemetry data flowing into our database, allowing us to take devices out of service remotely;
- Responding to system alerts for consecutive low app ratings, extended device idle time, and repeat low speed and short trip triggers; and
- Performing routine diagnostics and maintenance checks.



Devices requiring service by our in-house maintenance specialists team are returned to our warehouse where we have a full stock of inventory to replace parts as needed. Upon arrival at the warehouse, all devices enter our repair flow, starting with full diagnostics by a Quality Technician. Devices are then routed to the appropriate area for service and undergo an outgoing quality check before being returned to the field. By using a local warehouse, we avoid the need to ship vehicles to remote repair facilities, thus reducing our carbon footprint and putting local talent to work. To ensure top-quality repairs, maintenance specialists are overseen by a Warehouse Manager and General Manager.

This operations model is a significant reason, in addition to the design of our device itself and the unique safety features that we use, why we have far and away the lowest injury rate in the micromobility industry.

A-P5 Attach a description and illustrative images of the plan for requiring riders to park safely with an increased awareness for those with disabilities, including photos and description of how the rider is instructed to take a correct "Trip-End Photo" capability, required in O4.4.

Education

Good parking behavior starts with rider education. Wheels educates our riders about good parking behavior in four ways.

First, Wheels uses in-app screens to educate users regarding proper parking (in addition to local riding rules, helmet use, and safety tips). We specifically inform our riders to not block public pathways. Riders are informed that improper parking can result in a fee.

Second, Wheels regularly conducts education and outreach events both in person and virtually. Our local community engagement team will develop extensive relationships with local organizations to allow for our outreach efforts to be done in coordination and collaboration with our important community leaders.

A great example of these efforts was our Chicago 21st Ward Outreach Event. In October 2019, Wheels participated in an outreach event on Chicago's South Side where we brought 20 of our devices to the local community. We provided education on how to use our app, how to ride and park properly, and how to use the various features on our device. The response we received was overwhelmingly positive. Riders were highly involved, asked many questions of our staff on site, and were pleased with the comfort, safety, and experience of our rides. Additional community members who were walking or driving by were drawn in to the event and participated as well.

This is consistent with other large scale events we have held in our other markets. For example, in the Venice neighborhood of Los Angeles, we held an event where 20 Wheels Brand and Safety ambassadors distributed materials and spoke to riders about safe riding and parking practices in the Venice Beach area over a busy three-day weekend. With short notice, Wheels was able to hire and train staff that served as Wheels Brand and Safety Ambassadors on beach front areas, and we estimate that they interacted with more than 5,000 beach goers during the weekend. In Orlando, we participated in the "Touch a Truck" event in March 2020. This family-oriented event provided a unique opportunity for families to explore vehicles of all types and we were fortunate to be invited and able to educate participants on Wheels devices, proper riding and parking. During our launch



week at Texas A&M, Wheels Brand and Safety Ambassadors spoke to students on campus about how to properly use Wheels devices and unlock the included helmets with removable sanitary head-liners.



In addition to these large events, we also require our senior managers to go out at least one day every week to a local community and bring devices with them to engage with local citizens and educate them on how to use Wheels, how to properly ride and park them, and to answer any questions they may have from seeing our devices out in the field. These events allow our local leadership team to stay connected to the areas we serve and hear feedback and concerns directly from local citizens.



We also have had great success using field staff as ambassadors for community outreach and education. Our Field Operations Specialists are out every day in the field rebalancing our devices and are often the most frequent point of contact for local citizens. We pride ourselves in our onboarding and continuous training of our Field Operations Specialists on how to answer any questions and provide education to users on best riding and parking practices.

Finally, as a result of COVID-19, Wheels has started holding virtual educational sessions. We are committed to working with our civic partners in priority areas to be added to their digital content (newsletters, virtual events) to still be able to engage with local citizens even when in person engagement is more challenging.

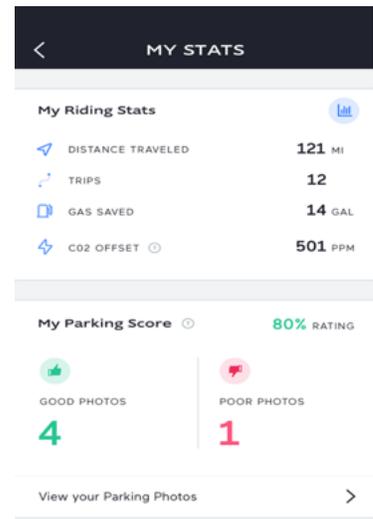
We have identified the below community partners that we will initially work with to help educate Seattle riders via email communications, events and social media. We will work with each partner and their unique network to identify different ways to engage with their audience. A big focus will be around proper parking, but will also include education around how to operate Wheels, where you can find our devices and the Wheels-for-All program details.

- Cascade Bicycle Club
- Commute Seattle
- Climate Solutions
- FORTH
- Futurewise
- EarthCorps
- Environmental Council of South Seattle
- Sustainable Queen Anne
- Sustainable Ballard
- Seattle Good Business Network
- Seattle Green Drinks
- Seattle Transit Riders Union
- Sierra Club
- Sightline Institute
- Sustainable Seattle
- Transportation Choices Coalition
- Washington Environmental Council

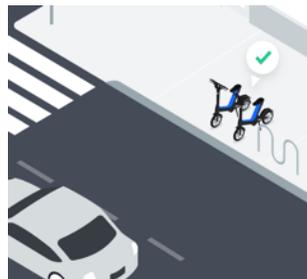
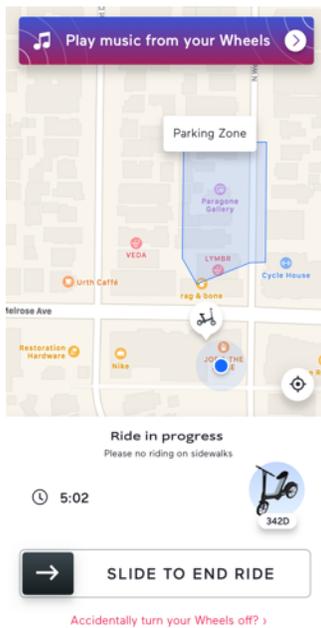


Technology

Beyond rider education, engagement, and training, Wheels also uses technology to ensure proper parking. Wheels is currently rolling out a new feature that builds on our “End of Ride” photo requirement to include a “Parking Score.” Currently, all Wheels riders must take and submit a photo in order to end a ride, and Wheels reviews these photos along with GPS data to ensure compliance with parking rules. To improve this even further, Wheels will use the data collected through the use of our geofencing technology and “End of Ride” photos to provide riders with a “Parking Score.” This score will allow riders to know on an ongoing basis whether or not they are parking correctly, and we will use this score to incentivize riders who display good parking behavior with rewards, including free ride credits, discounts, and other incentives, and to disincentivize riders who display bad parking behavior with penalties, including mandatory parking and riding education classes, suspension of device use for a period of time, or removal from the platform for those who consistently display poor parking behavior.



Additionally, Wheels is able to identify preferred parking zones, display those zones in geofenced maps in our smartphone application, and message our riders the locations of those zones to make it easy for them to navigate there.

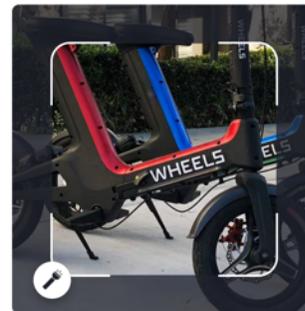


How to park your bike properly

- 1 Park on the sidewalk near a curb or bike rack
- 2 Don't block public walkways, ramps, crosswalks, or bus stops
- 3 Don't park in a garage, building, home, or gated community
- 4 Step back and take a clear picture of the entire bike

GOT IT

Improper parking will result in a \$5 fee



Check the steps below to confirm you've parked properly

COMPLETE 3/3

- Parked on the sidewalk
- Not parked in a garage, building, home, or gated community
- Entire bike is in the bounding box

TAKE PHOTO

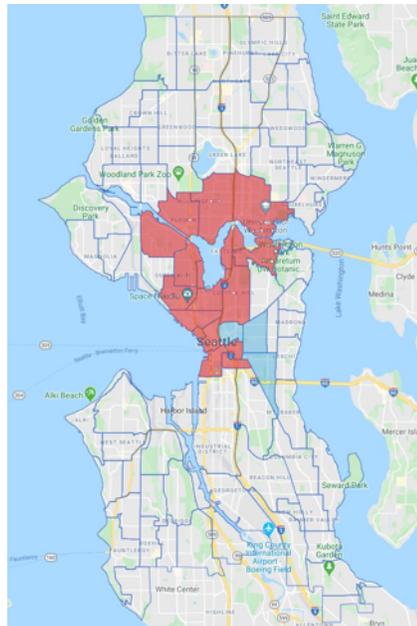
Improper parking will result in a \$5 fee



Operations

A-O1 What is the initial number of Type 2 Scooters to be deployed? (In an attachment, map the initial service area for each Type 2 Scooter.)

On Day 1, Wheels will deploy 100 devices in a central location to acclimate and educate residents and visitors in Seattle. By Day 30, Wheels will have deployed at least 500 devices.



A-O2 In an attachment, map the phased approach of getting from the initial deployment size to a fully deployed fleet (include fleet size), including the Environmental Justice Community (EJC) focus areas (described in Requirement O1.5 and Appendix D) and West Seattle (described in Requirement O1.6).

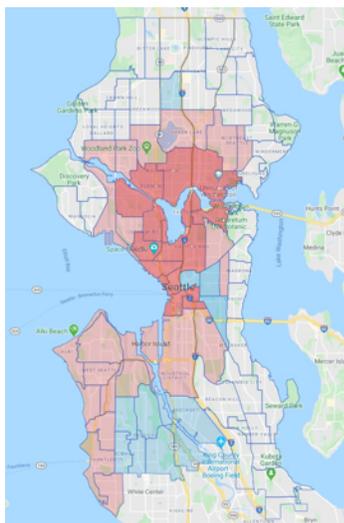
Phase	Month	# of devices	EJC focus areas
Phase I	August 2020	500	Central EJC
Phase II	September 2020	750	Southern EJC
Phase III	October 2020	1,000	Southern EJC + Northern EJC
Phase III	by April 2021	2,000	All



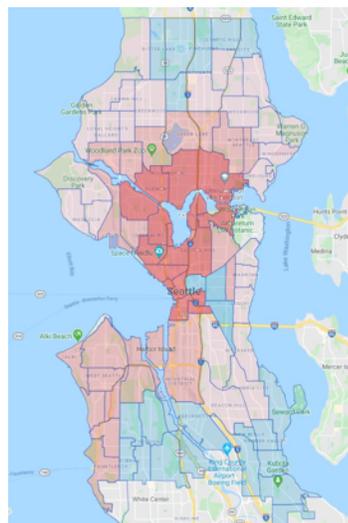
Phase I



Phase II



Phase III



Phase I will include downtown Seattle, First Hill, Capitol Hill, South Lake Union, Lower Queen Anne, North Queen Anne, East Queen Anne, Westlake, Eastlake, Fremont, Wallingford (with the south side of Greenlake), Portage Bay, and the University District. These neighborhoods are among the densest, most pedestrian-friendly, and transit-accessible neighborhoods in Seattle. We took into account that the Sound Transit light rail runs up the middle, with stops downtown, Capitol Hill, and the University District. This phase will also include the entire Central Environmental Justice Community (EJC).

Phase II will include more higher-density neighborhoods including -- north of the Ship Canal -- Ballard, Upper Queen Anne, Phinney Ridge, Greenlake, Roosevelt, and Ravenna/Byrant, along with the North College Park neighborhood in the Northern Environmental Justice Community. South of the Ship Canal, it will comprise Interbay, Upper Queen Anne, East Capitol Hill, the entire Central District, North Beacon Hill, Georgetown, and all West Seattle and the southwest quadrant of Seattle -- including the west side of the Southern Environmental Justice Community.

We have included West Seattle in our second phase to ensure alternative modes of transportation are placed in this area as soon as possible due to the closure of the high-level West Seattle Bridge and expectation that it will not be repaired or replaced for -- potentially -- several years. We have identified the below organizations in West Seattle that we would immediately connect with to discuss their needs and organize events and communications to their residents. The biggest need will be connecting residents to other forms of transportation (ie Ferry) to get them to where they need to go.

- Delridge Neighborhoods Development Association
- Delridge Neighborhood District Council
- Highland Park Action Committee
- Seattle Green Space Coalition
- Southwest District Neighborhood Council
- Sustainable West Seattle
- Welcoming West Seattle
- West Seattle Bike Connections
- West Seattle Transportation Coalition
- West Seattle Junction Association



Phase III will bring Wheels to the remainder of the city and will include the entirety of the three EJC communities.

A-03 Attach a description of the procedure for receiving and responding to reports received under Requirements O2.1, O2.4, and O2.7.

Customer Service Response Process

Wheels' customer service team is particularly high achieving (less than 20 second response time via chat, ~90% of phone calls resolved in less than 10 minutes). After receiving a request via phone, email, or our app, our customer service team sends an immediate message through Slack to the local team with instructions on what needs to be done to resolve the request. Our response time to public requests is a key metric we're proud of and monitor consistently. In Los Angeles, our biggest market with 3,000 permitted devices, the average time to close a public request is under one hour. Once the field team takes care of the issues, a picture and summary of action is sent back to the customer service team to let them know the request has been resolved. We use data to ensure the effectiveness of our shared mobility system and customer satisfaction by reviewing in-app reports from riders and Transporters, collecting information via published surveys, processing device error codes and other telemetry data flowing into our database to identify potential maintenance and safety issues, and monitoring system alerts for consecutive low app ratings, extended device idle time, and repeat low speed and short trip triggers.

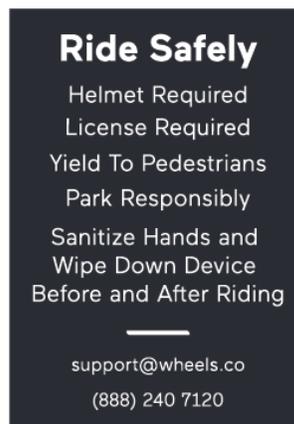
Our field team is also continuously out in the community, where, among other things, they hand out community cards to residents describing how they can get in contact with us about any problem areas. We welcome and solicit feedback because it helps us keep innovating and improving.

We are happy to participate in a City-supported centralized parking reporting system and take all actions required to respond to, and resolve tickets via this mechanism.

We are confident that our field team will be able to meet and exceed expectations from the City on response time.

A-04 Attach illustrative images of the required public contact information described in Requirement O3.1.

The below "Ride Safely" sticker is affixed to all Wheels devices under the handlebars and includes our support email address and toll-free number that connects to our 24/7 customer support. We also include a callout to download our smartphone app "Wheels – Ride Safely".





A-05 If known, attach the contact information for City use as described in Requirement O3.2.

Community Staffing Plan

Wheels will maintain a staff of community outreach professionals experienced in community engagement, grass roots planning, and public affairs locally in Seattle. This team will consist of the General Manager, Community Manager, Public Affairs Manager and community ambassadors. This team has not yet been assembled in Seattle, but should Wheels be entrusted to serve Seattle in its shared mobility program, we will update this information and communicate it in written form to the City.

A-06 Over the pilot period, what is the maximum amount a low income rider will pay to unlock and ride the device for 15 minutes? (Attach the pricing structure and exhibits showing disclosure of the pricing structure to riders, as described in Requirement O4.2)

The maximum amount a low income rider will pay to unlock and ride our device in Seattle for 15 minutes is 37 cents*. Users will receive a pop-up notification on their first use displaying our reduced-fare program. Information on this program will also live within the Wheels mobile app.

Wheels-for-All program	Unlock for Free	37 cents first 15 minutes*	\$1.50 / hour*
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**We have signed onto the attached industry letter providing feedback with respect to this requirement, but if this requirement remains unchanged, we commit to complying with it.*

A-07 Attach a description and illustrative images of the plan for a low-barrier rental to take place, as described in Requirement O4.3.

Wheels-for-All

Wheels’ transparent pricing structure provides low barriers to entry and lets users ride worry-free. Upon scanning a device, users are shown current rates before every ride, eliminating the need for guesswork. Our pricing model is designed with equity in mind and does not require hefty upfront deposit fees, memberships, or time limitations. Wheels prices are competitive with existing options and enable us to cover operational costs. The price is always shown to users before they choose to start a ride and does not change during the trip. Wheels also provides a prepaid credit program, offering discounted rides of 5 percent to 20 percent based on the amount of pre-purchased credits.

Reduced Rate Option

Equitable service is very important to the Wheels team and we believe access to safe, affordable transportation should be available to everyone. In addition to our standard pricing structure and payment procedures, Wheels also offers a low-income plan, Wheels-for-All, which includes cash payment options and a reduced rate option on rides to any customer with an income level at or below 200% of the federal poverty guidelines. Wheels is proud to offer our reduced rate plan and the other two options listed below in every partner city.

To qualify for our low-income plan, individuals must be currently enrolled, or eligible to enroll, in a city, state or federal assistance program, including the ORCA Lift reduced-fare program, the Regional Reduced Fare Permit program, Seattle Public Utility Discount Program, Seattle Housing Authority, Apple Health (Medicaid), Seattle Housing Authority Senior Housing program, Seattle Housing Authority Low-income Public Housing, Washington Basic Food program, or the Washington State Food Assistance program.



To enroll, individuals can (1) sign up via a simple form on <https://www.takewheels.com/wheels-for-all>, OR (2) email proof of eligibility/enrollment in an acceptable assistance program along with their full name and phone number to equityplan@wheels.co, OR (3) by mail to Wheels Labs, Inc., 8149 Santa Monica Blvd #297 West Hollywood, CA 90046.

Cash Payment Option

Users who have established an account under our Wheels-for-All low-income plan and are without a credit or debit card can add a cash balance to their account by sending a check or money order, along with their full name and telephone number, to our corporate address: Wheels Labs, Inc. ATT: PREPAYMENT Wheels Labs, Inc. 8149 Santa Monica Blvd #297 West Hollywood, CA 90046. This address is visible on our site and readily provided to any customer that calls into our customer service number.

Additionally, unbanked users can use prepaid debit cards or gift cards, which they can purchase at any local retail store that carry them.

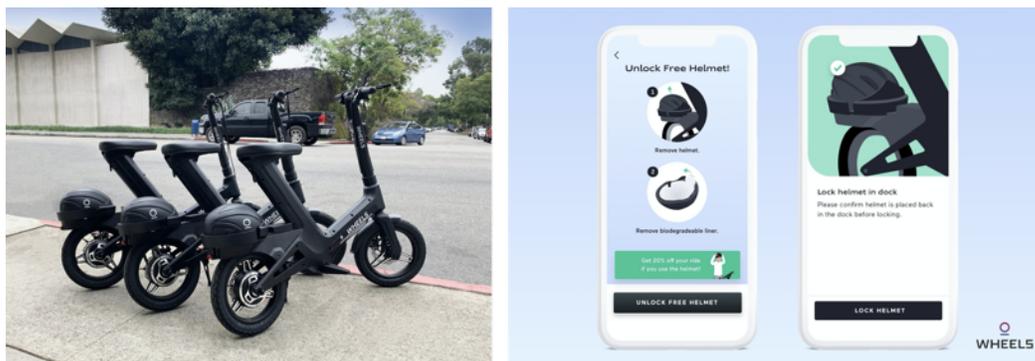
Non-Smartphone Service

For customers who have established an account under the Wheels-for-All low-income plan and are without a smartphone, Wheels provides the ability to have a device unlocked for use by sending an SMS text message, along with the QR code of the device, to a dedicated Wheels' SMS number.

A-08 Attach a description and illustrative images of the helmet distribution plan, as described in Requirement O4.6.

As a safety feature that is unique to Wheels, we are rolling out a smart helmet system that is directly integrated into our device – the first such system introduced on the market. Using the app, riders can unlock the helmet from the device and peel off a new biodegradable headliner for every use. (There is a tab on the outside of the helmet that a rider pulls in order to get a fresh headliner; the rider never has to touch the part of the headliner that was used by another rider.) Because the helmet is connected to the device's sensors and other electronics, we have numerous options to encourage helmet use by our riders and we provide discounts to encourage and reward use.

At Wheels, we believe that riding with a helmet is absolutely critical since approximately half of all injuries on micromobility devices are head injuries, and yet about 99% of riders have been found to not wear helmets. While simply handing out helmets to riders is a good step, it is not enough because the vast majority of riders do not have helmets with them at the moment they decide to rent a mobility device. We strongly believe that having an integrated helmet is the right solution, and any micromobility device without one is incomplete, as it is lacking the most important safety system a micromobility device can have. Our blog post, including photos and video of the Wheels Helmet can be found [here](#).





A-O9 Will the maximum device speed be limited to a speed of 8 MPH on a riders first use of the device, as described in Requirement O4.7?

Wheels will create a maximum device speed of 8 MPH for riders that are using a Wheels device for the first time.*

**We have signed onto the attached industry letter providing feedback with respect to this requirement, but if this requirement remains unchanged, we commit to complying with it.*

A-O10 Attach illustrative images of the Rider On-Device Education signage, as described in Requirement ES3.3 and O6.3(c)1.



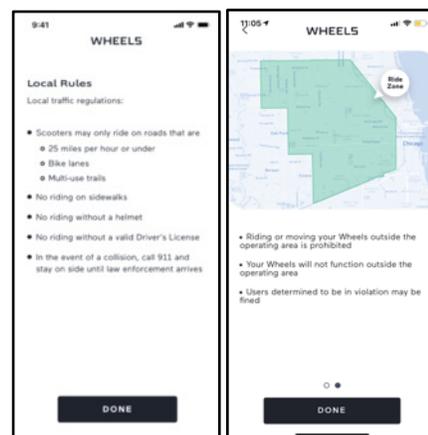
A-O11 Attach a description and illustrative images of the Digital Safe Parking and Riding Education Program described in Requirement O6.2.

When signing in, riders are prompted through a series of screens to learn how to use our device and be a good road partner. This tutorial provides a.) local rules and b.) a map of where it is permissible to ride. These local rules are always available in the app and can be updated remotely. Wheels creates this local rule page for each city in which we operate to make sure new and out of town riders are up to date.

We are committed to developing a Seattle-specific safe parking and riding education program where riders will be prompted through a series of screens where they will be asked to identify correctly parked scooters, scooters parked as obstruction hazards, and safe riding behavior. The interactive quiz will be active within 30 days after the first day of our permit and will be required for riders to complete within their first three rides and then again once every three months.

To the right you will find a mockup of what the in-app Local Rules screen will look like in Seattle and an example from Chicago showcasing the area it is permissible to ride that will updated for Seattle.

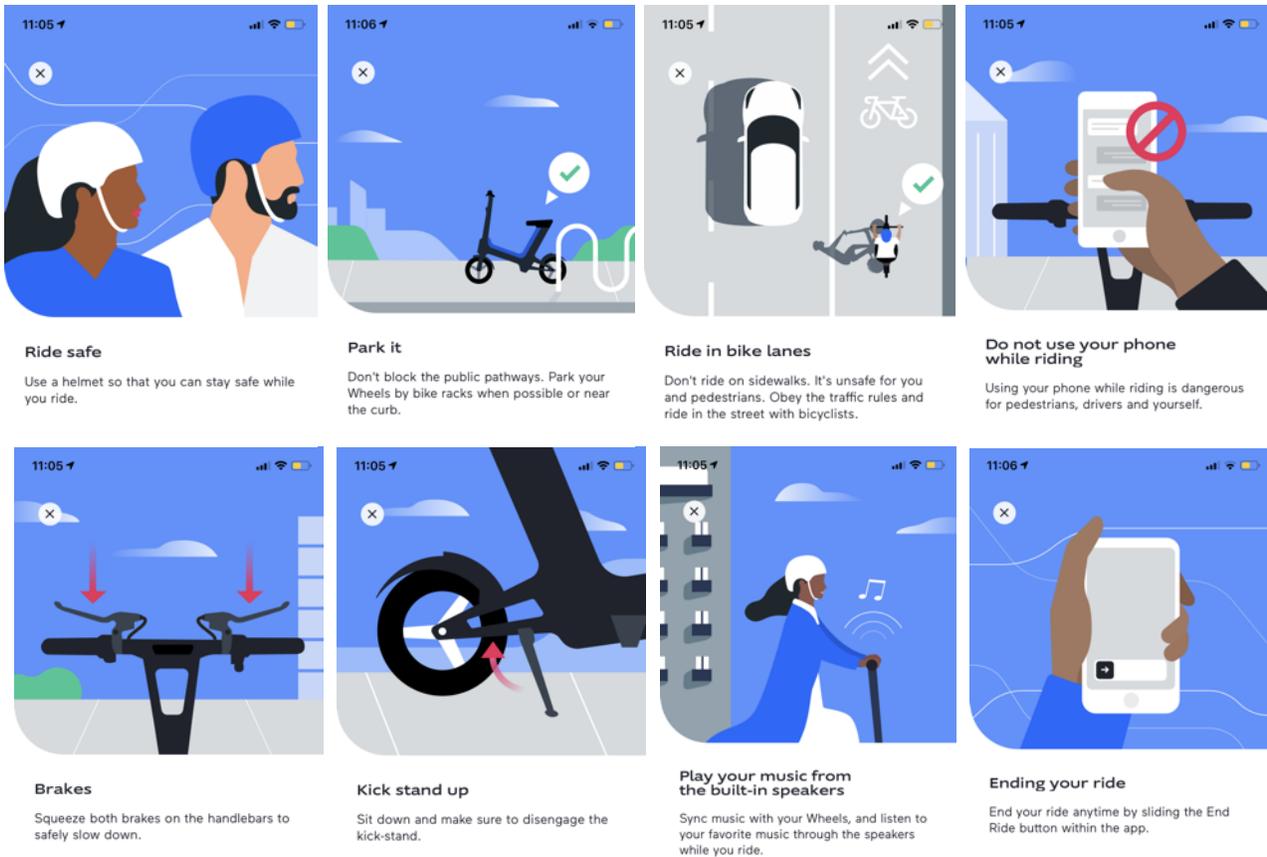
A second set of screens (see below) educates on rider safety and covers topics such as wearing a helmet for safety, not using a phone while riding, not riding on sidewalk, and how to properly use our dual brake.





The in-app education is shown to all riders before their first ride and then every fifth ride. Riders are required to go through the entire app carousel and may not dismiss it.

- 1st time riders: Two local Seattle-specific screens (local rules, geofence operating zone); Five safety screens (wear a helmet, parking, ride in bike lanes, do not use phone while riding, brakes)
- Returning riders: Two local Seattle-specific screens; One summary safety screen.
- Fifth ride: Two local Seattle-specific screens (local rules, geofence operating zone); five safety screens (wear a helmet, parking, ride in bike lanes, do not use phone while riding, brakes).



A-012 Attach a description and illustrative images of any other educational programs related to safe parking and riding.

Senior Manager Outreach Events

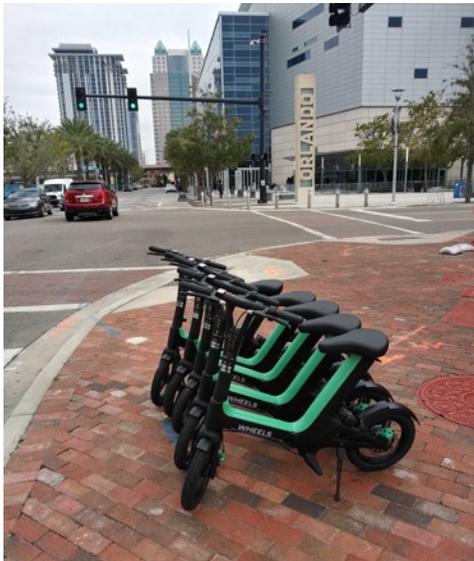
At least one day a week, our General Manager and Operations Managers are required to visit a local community and bring our devices to engage with local citizens to educate them on how to use Wheels, proper riding and parking, and to answer any questions they may have from seeing our devices out in the field. These events allow us to stay connected to the areas we serve and hear feedback and concerns from local citizens. Leadership's commitment is to do two-thirds of these events in priority zones, which includes all of the EJC's.





Field Staff Ambassadors

Our Field Operations Specialists are out every day in the field rebalancing our devices and are often the most frequent point of contact for local citizens. We pride ourselves in our onboarding and continuous training of our Field Operations Specialists on how to take the time to answer any questions and provide education to users on best riding and parking practices. Pictured below: a rider gives a thumbs up after being instructed by a Field Operations Specialist on best riding practices and how to unlock and use our helmet that comes with the device.



For example, in the Venice neighborhood of Los Angeles, we held an event where 20 Wheels Brand and Safety ambassadors distributed materials and spoke to riders about safe riding and parking practices in the Venice Beach area over a busy three-day weekend. With short notice, Wheels was able to hire and train staff that served as Wheels Brand and Safety Ambassadors on beach front areas, and we estimate that they interacted with more than 5,000 beach goers during the weekend. In Orlando, we participated in the “Touch a Truck” event in March 2020 -- a family-oriented event that provided a unique opportunity for families to explore vehicles of all types. We were fortunate to be invited to educate participants on Wheels devices, as well as proper riding and parking. Finally, during our launch week at Texas A&M, Wheels Brand and Safety Ambassadors spoke to students on campus about how to properly use Wheels devices and unlock the included helmets with removable sanitary head-liners.





Virtual Events

As a result of COVID-19, Wheels has started holding virtual educational sessions. We are committed to working with our civic partners in priority areas to be added to their digital content (newsletters, virtual events) to still be able to engage with local citizens even when in person engagement is more challenging.

A-013 Attach a description of the plan to inform riders and prospective riders in Environmental Justice Communities (described in G2(d).7), people with disabilities, people experiencing homelessness or housing insecurity, LGBTQ people, women and girls, youth, and seniors about the equity elements described in Requirement O7.4(b).

Equitable service is very important to the Wheels team and we believe access to safe, affordable transportation should be available to everyone. In addition to our standard pricing structure and payment procedures, Wheels also offers a low-income plan, Wheels-for-All, which includes cash payment options and a discount on rides to any customer that registers with the program. Wheels is proud to offer our reduced rate plan in every city we operate.

EJC Education Plan

An early point-of-contact will be the City of Seattle Department of Neighborhoods’ Community Engagement Coordinators. They’re experts on the areas of the city in which they work and will help us get in front of the key stakeholders in each neighborhood to further our education amongst residents.



We will also work with a mix of neighborhood councils, police districts, City Councilmember’s offices, business improvement districts, residents, local chambers of commerce, property owners, and ADA providers/organizations. These events will target current riders (through in app invitations and notifications) and non-riders (through marketing collaboration with partner organizations and paid marketing).

To the left, you will see a screenshot of an in-app notification that our riders received when we donated proceeds, from their first 8 minutes and 46 seconds of their ride, to NAACP Legal Defence Fund, the Equal Justice Initiative, Color of Change, and the American Civil Liberties Union.

In Seattle, we will also have an in-message notification in our app that will have easy-to-follow instructions on how community members can take advantage of the reduced-fare option.

We have identified the below organizations, in Seattle, that we will use as a starting point to connect and building local relationships.

Citywide and Neighborhood Business Organizations

- Ballard Alliance
- Belltown Business Association
- Denny Hill Association
- Capitol Hill Chamber of Commerce
- Chinese Chamber of Commerce
- CID Business Improvement Area (CIDBIA)
- Downtown Seattle Association
- Filipino Chamber of Commerce
- Georgetown Merchants Association

- Greater Seattle Business Association (GLTBQ chamber)
- King County Hispanic Chamber of Commerce
- MLK Business Association
- North Seattle Chamber of Commerce
- Queen Anne Chamber
- Seattle Metropolitan Chamber
- West Seattle Chamber
- SODO Business Association
- West Seattle Junction Association



Stakeholder and Community-based Organizations

Alliance of People with Disabilities
Asian Pacific Islander Coalition of King County
Cascade Neighborhood Association
Denny Triangle Neighborhood Association
Duwamish Tribe

InterIm Community Development Association (ICDA)
El Centro de la Raza
First Hill Improvement Association
Uptown Alliance
Seattle Chapter JAACL

For priority areas, we will focus on the following topics during our outreach:

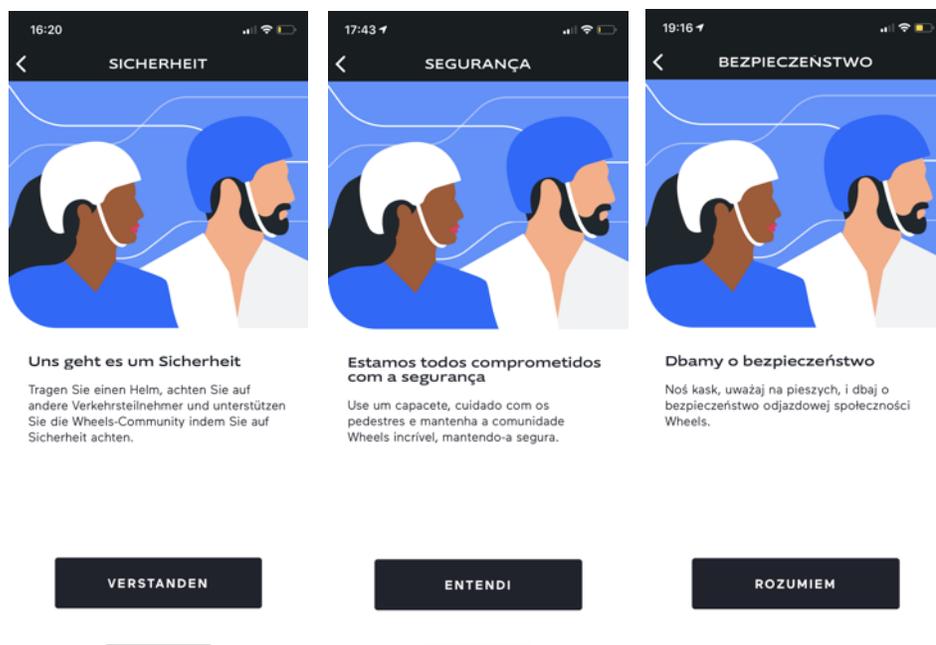
- Ways to enroll in the Wheels-For-All program that discounts rides
- Community Cards that have our phone number and community@wheels.co email so that they can reach us with any questions, concerns, or feedback
- Options for unbanked and non-smartphone users

A-O14 Attach a description and illustrative images of the plan to provide the Tier 1 language support described in Requirement O7.2 and the marketing documentation described in Requirement O7.4(a).

Wheels customer service support is already provided in both English and Spanish, 24/7 at 888-240-7120, and Wheels commits to adding the translated version or translation support for all City of Seattle Tier 1 Languages, including Cantonese (written: Traditional Chinese), Korean, Mandarin (written: Simplified Chinese), Somali, Spanish, Tagalog, and Vietnamese.

Our Live Chat & Email feature offers 24/7 Support - in virtually any language - through our in-app chat or by emailing support@wheels.co. Information on how to contact our Customer Experience team is visibly displayed on every device and our customer center responds to every inbound report.

Below is an example of our Rider Education screen from our app highlighting “wear a helmet” in German, Portuguese and Polish:





A-O15 Attach a description and illustrative images of any other appropriate equity-related goals, strategies, or actions proposed with respect to Requirements O7.4(d).

In Seattle, Wheels will equitably distribute per the City’s requirements and deploy at least 10% of our fleet in the EJC neighborhoods. Wheels will also include a focused plan to rebalance them to desired areas and locations near transit. Our 24/7 operations and swappable battery model will allow us to keep our devices available for longer to give the residents and visitors of Seattle a reliable form of transportation for work, school or shopping.

Priority EJC zone placements will be one of the main priorities of our General Manager and Operations Manager. Our Seattle team will be directed at the start of daily operations (5am) that they will drive to priority zone areas first and place at least 10% of devices in each of the priority zones before placing any other device.

Marketing Plan

Wheels understands the cultural diversity in, and within, each neighborhood and that no two communities are the same.

Our commitment is reflected in our ongoing development of our app in multiple languages and our diverse hiring practices. Wheels is committed to develop a Wheels 101 document that will be provided to the city within 60 days of permit issuance and will be translated in all Seattle Tier 1 languages. The Wheels 101 one pager will include basics of device sharing, how to rent a Wheels device, details on our device, pricing that includes our Wheels-for-All reduced-rate program and information on how to register.

Wheels devices are also fully “wrappable” which means that artwork and community related and neighborhood related themes can be incorporated onto the frames of our devices. We look forward to establishing an engaging art contest to bring local art and culture back to the community, using our vehicles as the vehicle!

Partner Programs

Wheels hires local wherever possible and has many opportunities for community members in need of employment due to prior employment history, incarceration, or challenges attaining housing.

Wheels is also committed to engaging small businesses with opportunities to partner in various ways, such as parking, distribution and marketing. Our intent is to supplement the current transportation system while maintaining a place for rental businesses to support recreational activities.

Commitment to Local Hiring

We have identified the below organizations that we will team up with to hire locally.

Association	Website	Address	Contact
Consolidar Network	consolidarnetwork.com/	3435 Martin Way E. Lacey, WA	Mike Sotelo
Pioneer Human Services	pioneerhumanservices.org/	7440 West Marginal Way S. Seattle, WA	Karen Lee
Puget Sound Sage	pugetsoundsage.org/	414 Maynard Ave S. Seattle, WA 98104	Esther Handy
Seattle Jobs Initiative	seattlejobsinitiative.com/	1200 12th Avenue South, Suite 160 Seattle	Linda Helenberg
Asian Counseling and Referral Service	acrs.org	3639 Martin Luther King Jr. Way Seattle, WA	Employment Placement



Accessibility

The unique seated design of the Wheels device is ideal for expanding access to people with various physical disabilities, and to generally accessibility overall. The reality is that many of those with physical disabilities do not have the physical ability to stand up on a scooter or ride a bike with pedals. The Wheels device provides maximum comfort, is lightweight, has a low step-through for easier access and operation, and does not require users to pedal or stand and balance. Because of these differences, Wheels devices are comfortable for a much wider range of users, and as a result, we have a particularly broad demographic. Half of our riders are women and one-third are over the age of 35. This is so important to us because it's our mission to enable everyone to have access to a safe micromobility option. That is especially true in the wake of COVID-19 when cities like Seattle are seeking to give as many residents as possible access to sustainable transportation options that promote social distancing.

Partnership with Lime

Wheels has entered into a partnership with Lime in which Wheels devices in select cities will be available through the Lime app. Wheels and Lime have already spoken about the possibility of including Seattle as part of this partnership to the extent each company receives a permit to operate in the City. This would be a unique way for two operators in the City to integrate their offerings, resulting in a more streamlined and convenient user experience.

A-O16 Attach a description of any COVID-19 procedures that are in addition to the requirements described in Requirement O9.

Self-Cleaning Technology and Best-In-Class Cleaning Protocols

In line with our commitment to safety, Wheels is uniquely situated to address the challenges of the COVID-19 pandemic. Before the pandemic accelerated, Wheels was taking all the appropriate actions to keep our devices clean. Among other things, we were frequently and thoroughly cleaning our devices with disinfectant and wiping them down with a microfiber towel. But with shared scooters and bikes being ridden by many different people every day, we believed a more comprehensive solution was needed.

To that end, Wheels partnered with NanoSeptic, the leader in self-cleaning surfaces, on a first-of-its-kind offering in the shared transportation space. Through this partnership, Wheels devices come with custom-made NanoSeptic surfaces on our handlebars and brake levers so that riders' hands only touch self-cleaning surfaces when using Wheels. NanoSeptic surfaces contain mineral nanocrystals that are powered by any visible light to create a powerful and toxin-free oxidation reaction that continuously breaks down any organic contaminants at the microscopic level without the use of poisons, traditional heavy metals or dangerous chemicals. Having self-cleaning handlebars and brake levers is obviously critical now, and we believe it will remain that way going forward.



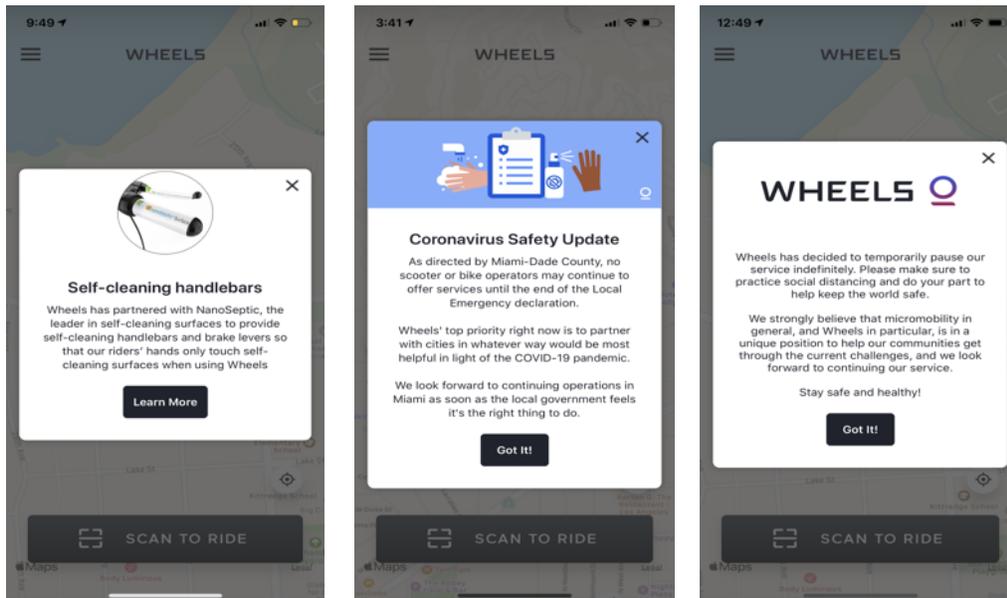


This adds to the many other steps we've taken to elevate our sanitation measures for our riders, our teammates, and our communities:

- Our 24-hour field operations team regularly sanitizes Wheels devices at our hub locations where the bikes are set up for deployment. As part of this process, our team runs a UV wand over our devices since they have been shown to break down the virus's genetic material.
- All work areas at Wheels' warehouses are separated by at least 6 feet, and there are hand washing and sanitizing stations located at each entrance and throughout our facilities.
- Work areas and tools are sanitized before and after each shift in accordance with the strict sanitization procedures we have implemented.
- All inbound and outbound devices at our warehouse are also sanitized, with all Wheels devices being sprayed with a disinfectant and wiped down with a microfiber towel.
- All of our warehouses are equipped with the UV wands, which are being used on all devices and work surfaces in the warehouse.
- All our team members wear PPE, including masks and gloves, that are disposed of after each work shift.

In addition, in order to properly communicate with the community and our riders, we put together a [blog post](#) regarding our elevated standards for safety and sanitation, and will send any updates by in app messages directly to our riders with this information.

Below are a few examples of in app messages:





Data Sharing

A-D1 Provide the plan for providing SDOT accurate VMT reports, as described in Requirement DS1.2.

Wheels will share data with Seattle through the use of our MDS and GBFS APIs as well as monthly reports with raw data as requested. For example, the MDS Provider API/trips endpoint provides ride GPS information regarding start location, end location, the GPS points of the ride (spaced out approximately every one minute), and cost of the ride or ride revenue. Also, past statuses and locations of a device are accessible through the MDS Provider API endpoint /status_changes. Further, to understand the current location and count of vehicles, Wheels provides data regarding the current utilization, availability, and location of every device in the city through the GBFS /free_bike_status.json endpoint.

In addition to providing data in accordance with the MDS and GBFS specifications via API, Wheels can also share anonymized data via web-based dashboards customized for Seattle. Wheels can provide records for the entirety of the operation period and grant login information at the City's request to identified individuals. Wheels currently provides dashboards to cities and universities showing daily trips, unique riders, vehicles launched, total ride time, and vehicle miles traveled. Wheels is also able to share data with third party aggregators.

An example of the customizable dashboard interface is shown below:

DASHBOARD

City of [REDACTED] Dashboard ⓘ ↻ ☆

FILTERS [0] ▾ No filters selected

[REDACTED] Trip Data

	DAY	TRIPS	UNIQUE RIDERS	VEHICLES DEPLOYED	TOTAL RIDE TIME (MIN)	TOTAL RIDE DISTANCE (MI)
75	2019-08-04	926	790	304	14254	2,671
76	2019-08-03	1028	855	337	13929	2,379
77	2019-08-02	766	606	324	11135	1,356
78	2019-08-01	408	311	315	6035	622
79	2019-07-31	540	408	345	8557	847
80	2019-07-30	531	390	329	8697	1,140
81	2019-07-29	621	468	321	10405	1,912
82	2019-07-28	1039	856	320	15882	2,458
83	2019-07-27	1164	973	335	16060	2,257
84	2019-07-26	771	584	332	12509	2,051
85	2019-07-25	581	448	309	8480	1,489
86	2019-07-24	520	393	305	8600	1,358
87	2019-07-23	257	212	205	4259	717

We also use data to ensure the effectiveness of our shared mobility system and customer satisfaction by reviewing in-app reports from riders and Transporters, collecting information via published surveys, processing device error codes and other telemetry data flowing into our database to identify potential maintenance and safety issues, and monitoring system alerts for consecutive low app ratings, extended device idle time, and repeat low speed and short trip triggers. This data can be shared with the city via regular reports to ensure community satisfaction with the Wheels system.



A-D2 Attach the disclosure language to which riders must agree, as described in Requirement DS5.

Wheels complies with the disclosure language to which riders must agree, as described in Requirement DS5. Users agree to our Privacy Policy when they sign up for Wheels (see image below).



Link to view: [Privacy Policy](#)

Appendix G: Vendor Signature Page

I, Todd Maron declare the following:

1. I am a duly authorized agent of Wheels Labs, Inc., a Vendor applying for a permit under the City of Seattle’s Free-Floating Scooter Share Program.
2. I have reviewed and understand the Free-Floating Scooter Share Program Permit Requirements for the 2018-2019 Permit Year, including all requirements and appendices.
3. I have the authority to bind the Vendor-applicant to the permit application and to the permit requirements the City established for this program.
4. The Vendor-applicant has complied with all permit requirements in preparing the permit application and all the information in the application is true and complete.
5. The Vendor-applicant shall comply with all permit requirements for the duration of any permit approved under these permit requirements.
6. The Vendor-applicant understands that if the Vendor does not comply with all permit requirements, the City may revoke the permit or take other enforcement actions described in the permit requirements and the Seattle Municipal Code.

I certify under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Todd Maron July 24, 2020 Los Angeles, California
 Signature Date and Place

State of California)
) s.s.
 County of Los Angeles)

This is to certify that on this 24 day of July 2020, before me, the undersigned, a notary public in and for the State of California, duly commissioned and sworn, personally appeared Todd Maron to me known to be the Chief Legal Officer (title) of the corporation or limited liability company that executed the foregoing instrument, and acknowledged the said instrument to be their free and voluntary act and deed of said corporation or limited liability company, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument, and that the seal affixed is the corporate seal of said corporation.

WITNESS my hand and official seal, the day and year first above written.

[Signature]
 Notary Public in and for the State of California



Ride Safe with Wheels

First and foremost, Wheels encourages safety by having what we believe is the safest device in the industry, including first-of-its-kind safety features like our integrated helmet system, 14 inch wheels, a low center of gravity, and Bluetooth speakers to enable hands-free navigation.

The data demonstrates Wheels' safety benefits. Wheels recently hired Exponent, a leading engineering and consulting firm that studies safety to go through the many independent studies that have been done across the micromobility industry to measure injury rates. We asked Exponent to then compare those findings to our own injury data. Exponent found that Wheels' injury rates were exponentially lower than those reported for other types of micromobility devices, including both bicycles and traditional stand-up scooters. Specifically, here's what Exponent found:

Wheels' Injury Rate	Comparison to Other Micromobility Devices
1 injury for every 74,577 miles ridden	4 times better than bicycles; 3 to 66 times better than scooters
24.99 injuries for every 1 million trips taken	5 times better than bicycles; 8 to 26 times better than scooters
0.12 injuries for every 1,000 hours of riding	2 to 5 times better than bicycles; 9 to 19 times better than scooters

Notably, with one exception, all of the studies that Wheels was compared against rely entirely on hospital emergency room visits for their injury reporting, which means they leave out a large number of other injuries. In contrast, Wheels' injury data is based on every single injury reported to the company through all of our various channels, including through our app, calls or texts to our 24/7 support number, or to our support email, even though only a small fraction involved an emergency room visit. The only other injury rate report that we know of that is not limited to emergency room visits is Bird's, which stated that its riders had 1 injury for every 26,882 miles ridden – an injury rate that is nearly 3 times higher than Wheels'.

A complete version of Exponent's report is attached.



Injury Data Analysis Comparing Wheels and other Micro-Mobility Devices

Project Manager:
Jeffrey Wishart, Ph.D.
jwishart@exponent.com

Contributors:
Ian Campbell, Ph.D., P.E.
Tina Garman, Ph.D.
Heather Watson, Ph.D.

March 3, 2020



Scope

- Exponent was retained by Wheels to research and study micro-mobility usage and injuries.
- The study comprised a qualitative and quantitative investigation of injury rates and types of injury of various micro-mobility modes and devices, and making a comparison to the Wheels device.
- The appendices to this report contain supporting information:
 - A) Literature Review of Usage and User Behavior
 - B) Literature Review of injury Types and Incidents
 - C) Trends in NEISS Injury Patient Demographics



Wheels Data

- Wheels provided injury data and ride metrics from all markets in which Wheels operates from September 2018 to January 2020.
- Injury Data: Wheels reported three groups based on level of confirmation of the incident that Wheels performed. All 3 were combined to provide the most conservative estimate:
 - Group 1: Subject provides statement, no further contact
 - Group 2: Subject provides statement, additional contact
 - Group 3: Subject provides statement, dropped contact
- Exposure Data: Wheels provided the number of rides, total distance traveled, unique riders, and total traveling hours by month from September 2018 to January 2020.
- Exponent calculated the injury rate for the various exposures:
 - Injury Rate Per Million Trips: 25 injuries per 1 Million trips
 - Injury Rate Per Million Miles Traveled: 13.4 injuries per 1 Million miles
 - Injury Rate Per 1,000 Hours: 0.12 injuries per 1,000 hours

Wheels Data (cont'd)

- The Wheels data is dependent on consumers voluntarily reporting injuries and this may result in injuries not being reported and/or injuries being incorrectly being attributed to Wheels device usage.
- The ride metrics were not broken down by market. The analysis disregards any differences between markets.
- It should be noted that the reporting methodologies for the NEISS data and the Wheels data are different. NEISS is a random sample of ER visits and the Wheels estimate is based on voluntary reporting of injuries. It is unknown how those differences will manifest.
- The analysis included different exposure periods and reporting methodologies. There was no accounting for seasonal effects, trends with increased usage, rider characteristics/demographics, user behaviors or other confounders that could affect the results.
 - The rider age distribution of the data sources may be different, with most powered scooters and the Wheels e-bike being restricted to 18 years of age and older.

Comparison of Injury Rates Per Trips

- According to the references reviewed, Bicycles* have exhibited injury rates per million trips that are five times higher than Wheels devices; Scooters** have exhibited injury rates eight to 26 times higher.

Source	Years	Product	Injury Rate Per Mil. Trips	95% Lower/Upper Bound for Injury Rate		Ratio of Other modes to Wheels	95% Lower/Upper Bound for Ratio	
Wheels	2018-2020	Wheels	24.99	19.85	31.30	Reference	-	-
NEISS/NHTS	2017-2018	Bicycles*	120.66	120.45	120.87	4.83	3.88	6.08
NEISS/NACTO	2017-2018	Powered Scooters	301.30	298.05	304.57	12.06	9.68	15.18
Bekhit 2019	2018-2019	E-Scooters	641.67	604.11	681.03	25.67	20.44	32.59
APH 2018	2018	E-Scooters	202.97	179.37	228.91	8.12	6.30	10.55
Trivedi 2019	2018-2019	E-Scooters	199.77	166.44	238.04	7.99	5.99	10.72

*The rider age distribution of the data sources may be different, with most powered scooters and the Wheels e-bike being restricted to 18 years of age and older with no such restriction on bicycle ridership.

**The NEISS database does not allow for separation between gasoline-fueled and e-scooters. The other sources includes e-scooters only.

Comparison of Injury Rates by Miles Traveled

- According to the references reviewed, Bicycles* have exhibited injury rates per million miles traveled that are four times higher than Wheels devices; Scooters** have exhibited injury rates from three to 66 times higher.

Source	Years	Product	Injury Rate Per 1M Miles	95% Lower/Upper Bound for Injury Rate		Ratio of Other modes to Wheels	95% Lower/Upper Bound for Ratio	
Wheels	2018-2020	Wheels	13.41	10.65	16.69	Reference	-	-
NEISS/NHTS	2017-2018	Bicycles*	50.75	50.66	50.84	3.79	3.04	4.77
NEISS/NACTO	2017-2018	Powered Scooters	301.30	298.05	304.57	22.47	18.05	28.30
Bekhit 2019	2018-2019	E-Scooters	885.06	833.26	939.35	66.00	52.56	83.79
Bird Report	2017-2019	E-Scooters	37.2	27.59	48.68	2.77	1.91	3.99
APH 2018	2018	E-Scooters	213.21	188.43	240.47	15.90	12.34	20.67
Trivedi 2019	2018-2019	E-Scooters	151.15	125.93	180.10	11.27	8.44	15.11

*The rider age distribution of the data sources may be different, with most powered scooters and the Wheels e-bike being restricted to 18 years of age and older with no such restriction on bicycle ridership.

**The NEISS database does not allow for separation between gasoline-fueled and e-scooters. The other sources includes e-scooters only.

Comparison of Miles Traveled per Injury

- According to the references reviewed, Bicycles* have exhibited injury rates per mile traveled that are nearly four times higher than Wheels devices; Scooters** have exhibited injury rates from three to 66 times higher.

Source	Years	Product	1 injury per XX Miles	Injury Ratio of Other Modes to Wheels
Wheels	2018-2020	Wheels	1 injury per 74,577 miles	Reference
NEISS/NHTS	2017-2018	Bicycles*	1 injury per 19,703 miles	3.79
NEISS/NACTO	2017-2018	Powered Scooters	1 injury per 3,319 miles	22.47
Bekhit 2019	2018-2019	E-Scooters	1 injury per 1,130 miles	66.00
Bird Report	2017-2019	E-Scooters	1 injury per 26,882 miles	2.77
APH 2018	2018	E-Scooters	1 injury per 4,690 miles	15.90
Trivedi 2019	2018-2019	E-Scooters	1 injury per 6,616 miles	11.27

*The rider age distribution of the data sources may be different, with most powered scooters and the Wheels e-bike being restricted to 18 years of age and older with no such restriction on bicycle ridership.

**The NEISS database does not allow for separation between gasoline-fueled and e-scooters. The other sources includes e-scooters only.

Comparison of Injury Rates Per Travel Hours

- According to the references reviewed, Bicycles* have exhibited injury rates per travel hours that are two to five times higher than Wheels devices; Scooters** have exhibited injury rates from nine to 19 times higher.

Source	Years	Product	Injury rate per 1,000 Hours	Ratio of Other Modes To Wheels
Wheels	2018-2020	Wheels	0.12	Reference
NEISS/NHTS	2017-2018	Bicycles ^{x,*}	0.26	2.2
NEISS/NHTS	2017-2018	Bicycles ^{xx,*}	0.60	5.1
NEISS/NACTO	2017-2018	Powered Scooters ^{xxx}	2.26	19.3
APH and Austin Public Data	2018	E- Scooters ^{xxxx}	1.04	8.9

^xAssuming an average of 28 minutes per ride. NACTO (2017).

^{xx}Assuming an average of 12 minutes per ride. NACTO (2017)

^{xxx}Assuming an average of 8 minutes per ride. Mathew (2019)

^{xxxx}Assuming an average of 11.5 minutes per ride. Austin Public Health (2018).

*The rider age distribution of the data sources may be different, with most powered scooters and the Wheels e-bike being restricted to 18 years of age and older with no such restriction on bicycle ridership.

**The NEISS database does not allow for separation between gasoline-fueled and e-scooters. The other sources includes e-scooters only.

Conclusions

- According to the data reviewed, and the study limitations expressed on the next slide, the Wheels injury rates per trips, per miles traveled, or per riding hours are all less than bicycles, powered scooters, or e-scooters:
 - The injury rates per million trips for the other micro-mobility devices reviewed were 5 times to 26 times higher than for Wheels.
 - The injury rates per miles traveled for the micro-mobility devices reviewed ranged from three times to 66 times higher than for Wheels.
 - The injury rates per hours of travel for the other micro-mobility devices reviewed ranged from two times to 19 times higher than for Wheels.

Limitations

- The purpose of this report was to communicate Exponent’s review of the identified micro-mobility usage and injury data.
- In the analysis, we have relied on information provided by Wheels Labs, Inc. We cannot verify the correctness of this input, and rely on Wheels Labs, Inc. for accuracy.
- The analysis included data sets using different exposure periods and reporting methodologies. There was no accounting for seasonal effects, trends with increased usage, rider characteristics, user behaviors or other confounders that could affect the results.
 - Rider age, especially, may impact the results since e-scooters (mostly rentals by micro-mobility companies), as well as the Wheels e-bike, are generally age restricted (18 years of age and older). Bicycles are generally not age restricted (except for the bicycles offered as rentals that generally have the same age restriction).
- The Wheels data is dependent on consumers voluntarily reporting injuries and this may result in injuries not being reported and/or injuries being incorrectly being attributed to Wheels device usage.
- The ride metrics were not broken down by market. The analysis disregards any differences between markets.



Limitations

- Reporting methodologies for the NEISS data and the Wheels data are different. NEISS is a random sample of ER visits and the Wheels estimate is based on voluntary reporting of injuries. It is unknown how those differences will manifest.
- The NEISS database does not allow for separation between gasoline-fueled and e-scooters. The other sources includes e-scooters only.
- Although Exponent has exercised usual and customary care in the conduct of this analysis, the responsibility for use of this analysis in the design, manufacture, quality, or operation of the product remains fully with Wheels Labs, Inc.



Accessibility and Comfortability Testing of Micro-Mobility Devices

Project Manager:
Jeffrey Wishart, Ph.D.
jwishart@exponent.com

Contributors:
Tina Garman, Ph.D.
Ben Lester, Ph.D.

June 1, 2020

Scope

- Retained by Wheels to examine comfortability and accessibility of Wheels device in comparison to Bird e-scooter and Grid Bike bicycle
 - Quantitative and Qualitative testing was conducted with four participants of varying age and weight
- The Quantitative testing examined:
 - Device mounting and dismounting
 - Rider stability
 - Start-up Task: Ankle loading
- The Qualitative testing included participants' impressions of devices:
 - Comfort
 - Accessibility



Wheels



Bird



Grid Bike

Subject #	Age	Height (in)	Weight (lbs.)
1	53	68	170
2	35	69	220
3	49	78	305
4	46	65	140

Limitations

- The purpose of this report was to communicate Exponent's review of the accessibility and comfortability of the Wheels micro-mobility device.
- The study participants consisted of four people. The participants were selected for age (over 35 years) and to ensure weight category diversity. The selection process did not account for participant physical ability (e.g., strength, flexibility, etc.) or micro-mobility device riding skill. As a result, the observations are not meant to be fully representative of the overall public.
- Although Exponent has exercised usual and customary care in the conduct of this analysis, the responsibility for use of this analysis in the design, manufacture, quality, or operation of the product remains fully with Wheels Labs, Inc.

Observations Summary

The following observations apply*:

- Quantitative Testing:
 - Mount/Dismount: Compared to the Grid bike, the Wheels device has less of an orthopedic demand during the mounting and dismounting task.
 - Rider Stability: The Wheels device was the most stable overall. The Wheels device requires less rider control to remain stable during the ride than do the other devices.
 - Start-up Task: The Wheels device has less of an orthopedic requirement during start up, compared to the Grid and the Bird devices.
- Quantitative Testing:
 - Step-through height on Wheels device preferred by user that chose to step through.
 - Less self-reported fatigue experienced on Wheels device during extended ride.
 - Ability to sit down and remain stable on the Wheels device noted as a potential benefit for longer rides.

* The observations are not meant to be representative of the overall public due to sample size and diversity.

Mount and Dismount Task

E^x

Observations: Mount and Dismount Task

The following observations apply*:

- Step Through
 - Hip flexion angle and knee height were lower for the Wheels device compared to Grid.
 - Compared to the Grid bike, the Wheels device has less of an orthopedic demand during the mounting and dismounting task.
- Swing Over
 - Hip extension and abduction angles were lower for the Wheels device compared to Grid.
 - Compared to the Grid bike, the Wheels device has less of an orthopedic demand during the mounting and dismounting task.

* The observations are not meant to be representative of the overall public due to sample size and diversity.

Rider Stability

E^x

Stability Calculations

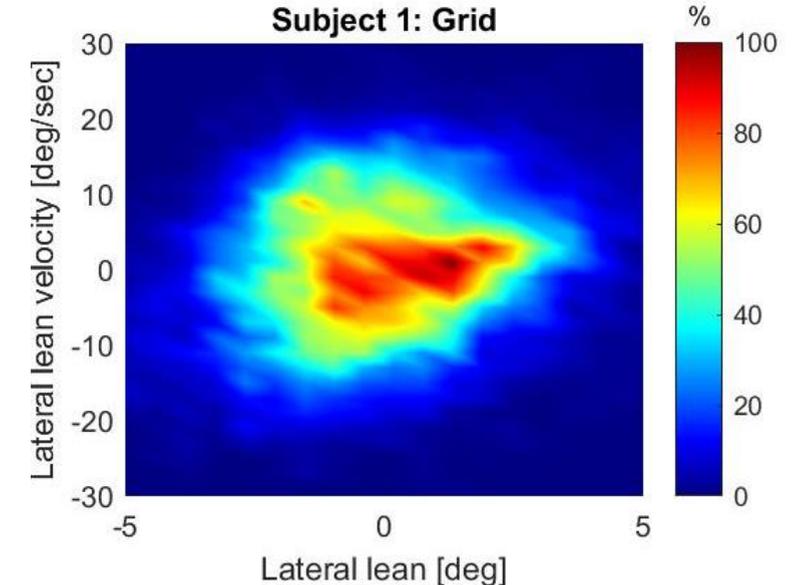
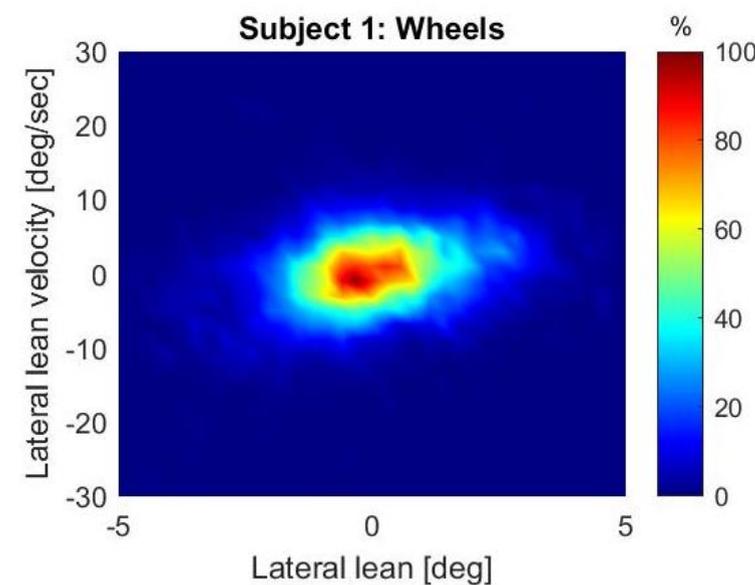
- Task: Riders were asked to ride each device following a curved path with a constant radius for approximately 5 minutes.
- Lateral lean and lateral lean velocity are both metrics that have strong ties to a person's stability: these metrics are estimates of how much a person's center of mass is moving and at what speed it is moving, respectively.
- Less movement in the lateral direction is associated with greater stability.
- Lower velocities of movement in the lateral direction are associated with greater stability.

The larger the distribution, the more excursion the participant had on the device

Forward Lean Angle Direction



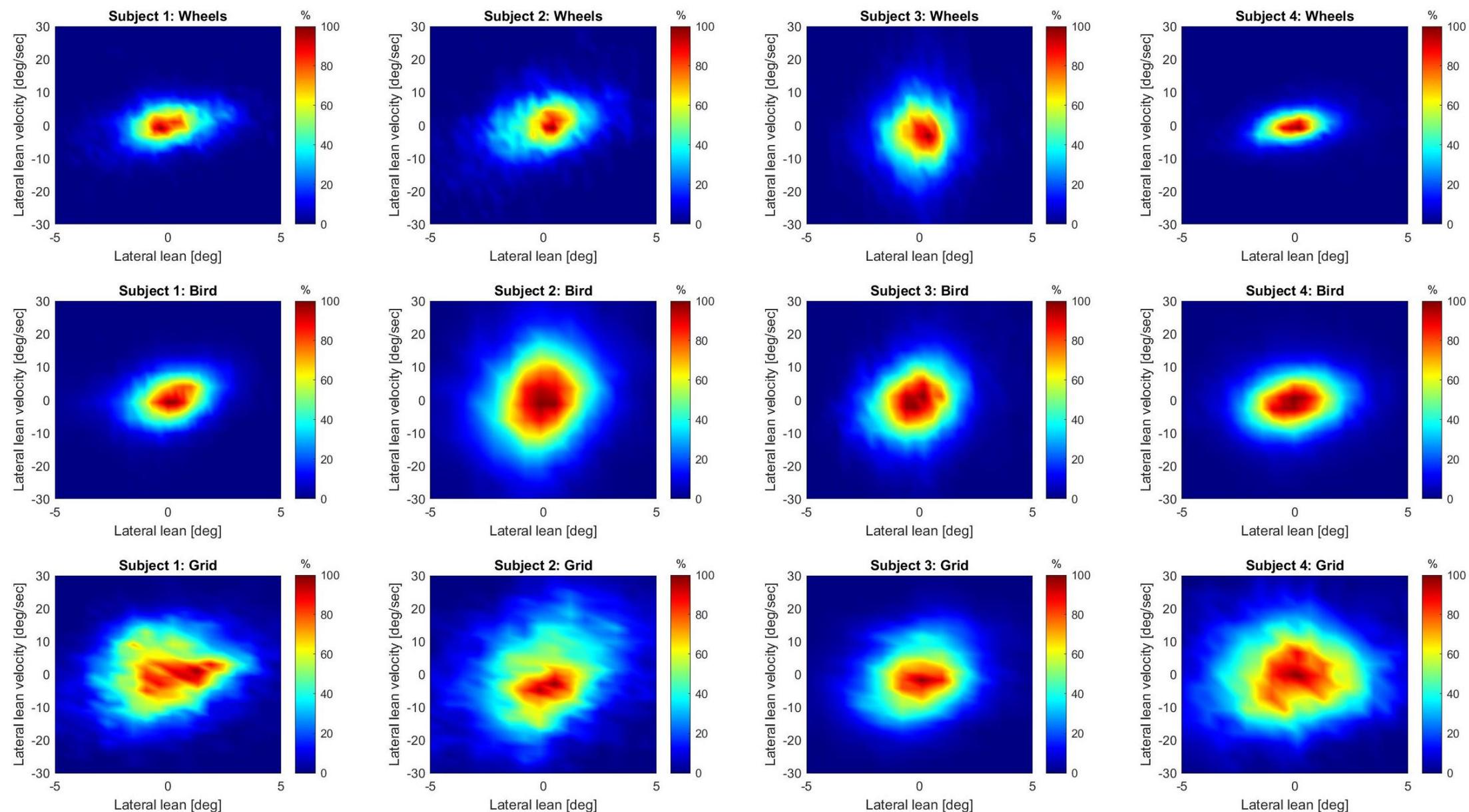
Lateral Lean Angle Direction



Stability Calculations

Trunk lean angle in lateral direction and trunk lean angle velocity

- Overall, the participants showed lower lateral lean angle and lean angle velocity while riding the Wheels device, compared to Grid bicycle and Bird scooter.



Observations: Rider Stability

For the participant population studied*, the following observations apply:

- Overall, riders were most stable on the Wheels device, compared to the Grid and the Bird devices.
- The Wheels device requires less rider control to remain stable during the ride than do the other devices.

* The observations are not meant to be representative of the overall public due to sample size and diversity.

Start-up Task: Ankle Loading

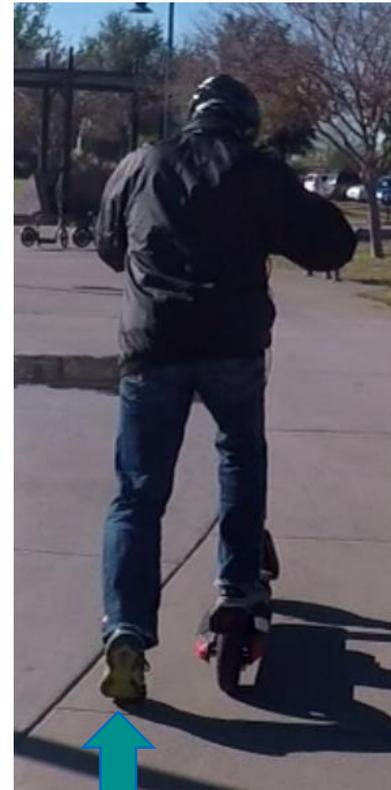
E^x

Tibia Shock During Start-Up

- Task: Riders were asked to initiate riding the devices and forces at the tibia were calculated
- The shock to the tibia is transmitted through ground reaction forces (GRF) at the foot, ground or foot pedal interface
- Tibia shock is the highest during the start-up task for each device

Start Up Requirements

Bird: Push off



GRF

Grid: Pedal



GRF

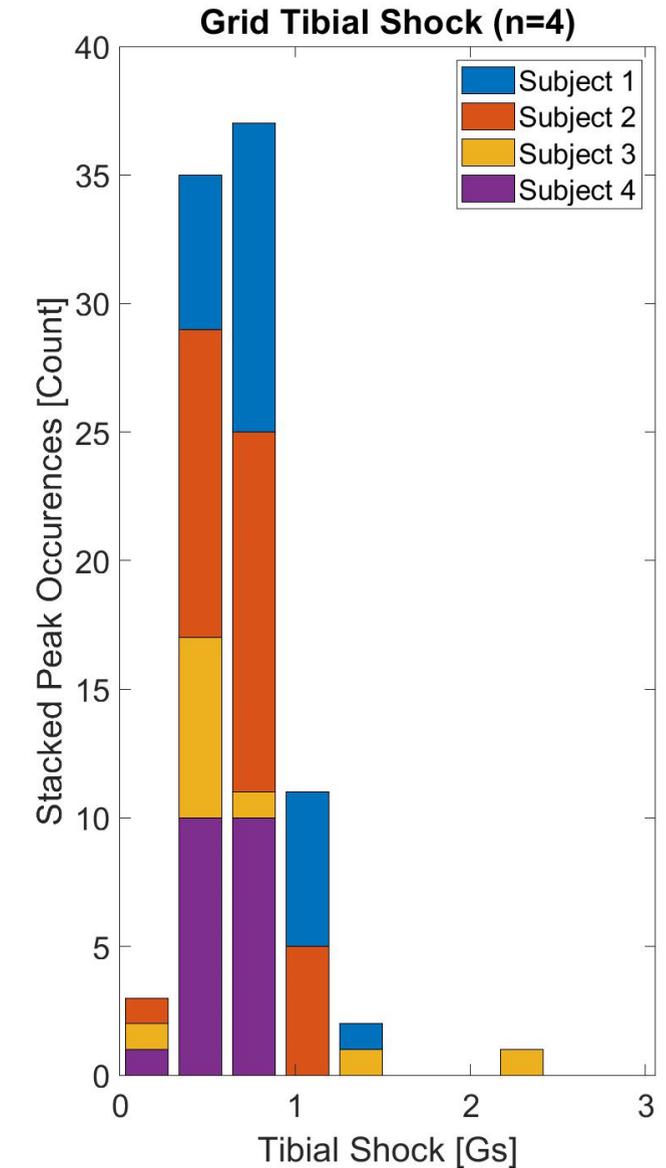
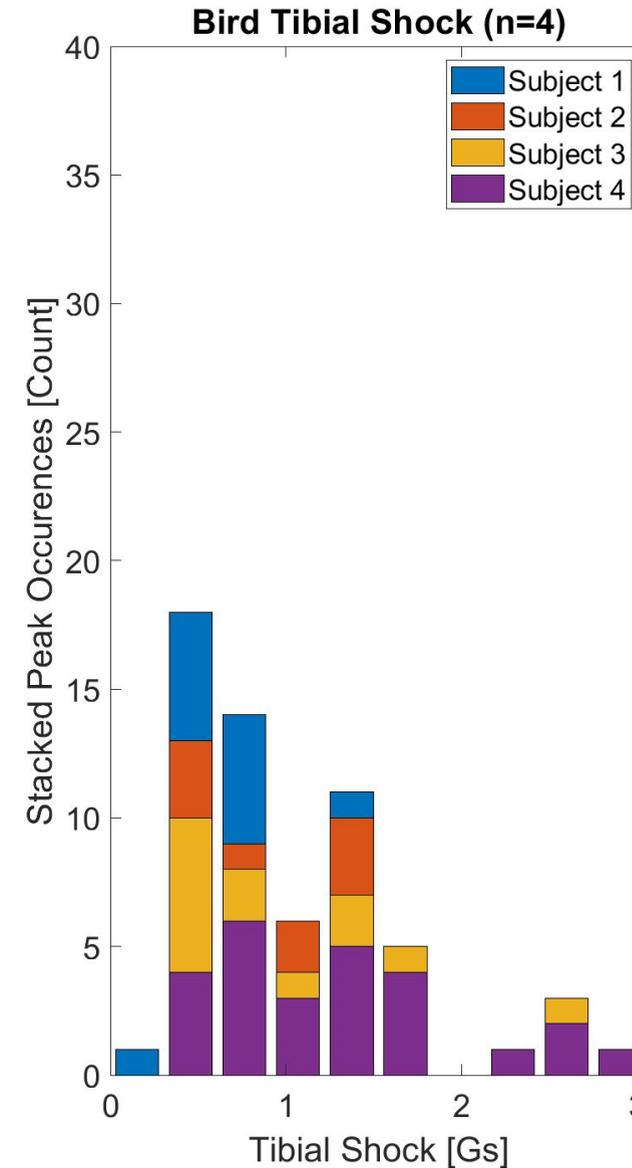
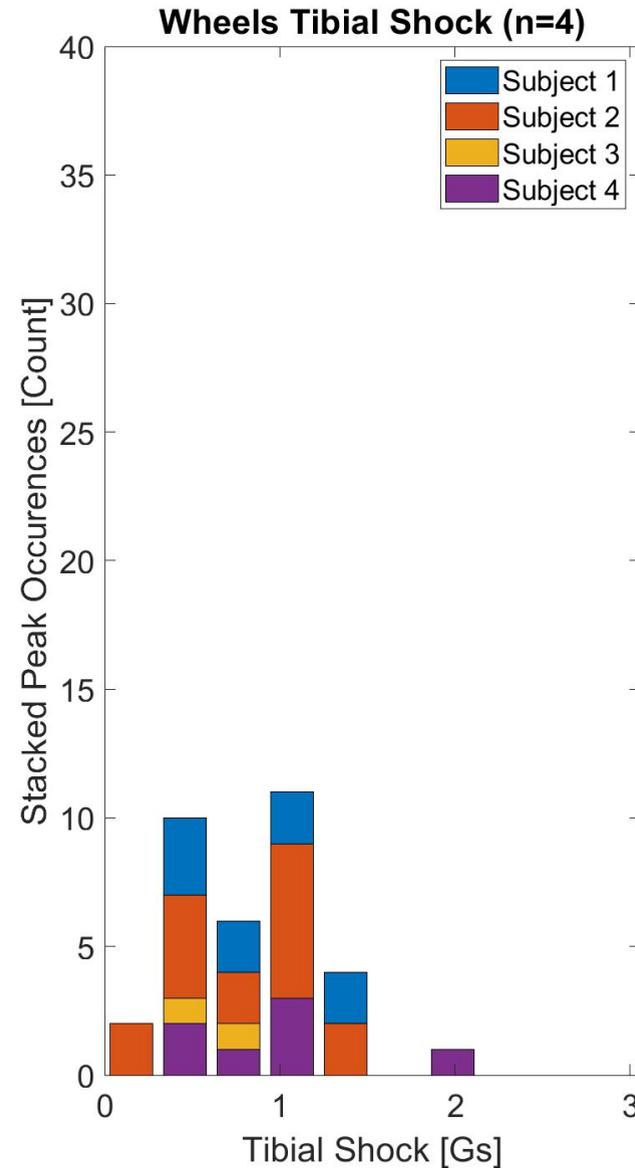
Wheels: Seated



GRF

Tibia Shock During Start-Up: Comparison

- The peak tibia shock during start-up was measured (units of G is used as a proxy for ground reaction forces in a clinical setting). For comparison, walking is 0.2 - 1.0 G
- **Wheels:** Least amount of tibia shock events. Tibia shock was lower than Bird.
- **Bird:** Highest tibia shock
- **Grid:** Most frequent tibia shock



Observations: Start-up Task – Ankle Loading

For the participant population studied*, the following observations apply:

- The Wheels device has fewer tibia loading events during the start up, compared to the Grid and the Bird devices.
- The Wheels device had lower tibia loading forces, compared to the Bird device.
- The Wheels device has less of an orthopedic requirement during start up, compared to the Grid and the Bird devices.

* The observations are not meant to be representative of the overall public due to sample size and diversity.

Qualitative Testing

E^x

Qualitative Testing Summary

- Participants were asked for their impressions of various aspects of Accessibility and Comfortability of the devices in parallel with Quantitative data collection*.
- Accessibility components:
 - Ease of mount
 - Ease of dismount
 - Reach of feet (bikes)
 - Foot placement space (scooter)
 - Pedal/peg position (bikes)
 - Handlebar position
 - Seat height (bikes)
 - Seat width
 - Weight of device
- Comfortability components:
 - Support/stability of the device
 - Maneuverability
 - Posture
 - Hand and foot placement
 - Leg positioning
 - Rate of acceleration
 - Rate of deceleration
 - Arm positioning

* Testing results are not meant to be representative of the overall public due to sample size and diversity.

Qualitative Testing Summary

- Participants provided their responses via Likert scales and open-ended questions regarding their impressions of the devices.
- The results of the qualitative testing summarize general impressions and comments offered by participants*.
- The comments relate to issues of design, fatigue while riding, and ease of mounting and dismounting the devices.
 - Some highlighted comments are included in the boxes to the right and for mount/dismount and Comfortability in the following slides.

Wheels

- *Step-through height preferred over Grid device*
- *Overall rated "accessible"*

Grid Bike

- *Step-through height noted as less accessible than Wheels*
- *Handlebars intrude in step-through*

Bird

- *Limited placement for feet/narrow*
- *Handlebars too low for some*

* Testing results are not meant to be representative of the overall public due to sample size and diversity.

Qualitative Testing*: Mounting/Dismounting

- Grid Bike comments from participants
 - Leg pass-through noted as “too high”
 - Frame shape provides less room to move
 - Handlebars can be in the way
- Wheels device comments from participants
 - One tester stated there was a “[c]lear way in-and-out”
 - Frame design provides more space
 - Design allowed for various mounting techniques
 - Step through and swing over



* Testing results are not meant to be representative of the overall public due to sample size and diversity.

Qualitative Testing*: Comfortability

- Extended rides
 - Participants rode each device for 15-20 minutes
 - Completed a series of questions on fatigue and comfort following the ride
- Grid Bike
 - Experienced most perceived fatigue by all
- Wheels device
 - Experienced little to no fatigue
 - Overall, participants preferred Wheels for longer rides
 - Unlike Bird device, able to sit down and remain stable on Wheels
 - Good acceleration
 - Stable posture



* Testing results are not meant to be representative of the overall public due to sample size and diversity.

Observations: Qualitative Testing

The following observations apply*:

- Step-through height on Wheels device preferred (by user who chose to step through).
- Less self-reported fatigue experienced on Wheels device during extended ride.
- Ability to sit down and remain stable on the Wheels device noted as a potential benefit for longer rides.

* The observations are not meant to be representative of the overall public due to sample size and diversity.

July 24, 2020

Seattle Department of Transportation
700 5th Ave
Seattle, OR 97204

SUBJECT: Requested Amendments or Changes to SDOT Scooter Share Pilot

Dear Director Sam Zimbabwe,

We, the undersigned companies, are providing feedback as requested by SDOT in the July 9, 2020, Call for Permit Applications to the 2020 Scooter Share Pilot Program. As prospective providers and promoters of sustainable mobility options for the City of Seattle, we are dedicated to the city's goal of improving accessibility, equity, safety, and long-term viability of this mode of travel as a means to reduce car reliance with the City.

In order to facilitate a fair, reasonable and sustainable program, we want to draw attention to the following requirements and suggested modifications:

Lock-to requirement

- **Reference:** The definition of a Type 1 Scooter: “A standing, electric-scooter share device with a floorboard, dual brakes, front and rear lights, **locking cable**, and a maximum speed of fifteen (15) miles per hour.” Upon follow up from a vendor, SDOT clarified that “a magnetic or velcro mechanism that can secure the scooter to a rack or fence so that it doesn't tip over” also meets this requirement.
- **Discussion:**
 - We understand the City's interest in having flexibility to require lock-to at a later time.
 - However, given the acceptability of velcro or magnetic straps, we recommend the City require that a company have the proven **capability** to install such devices at a later date if required. This also aligns the City's definitions used for all scooter types, except for the necessary differences between seated and standing scooters.
 - Installing devices now will result in locking devices/materials being damaged, broken, defaced or otherwise harmed through normal wear and tear, necessitating their replacement prior to the potential establishment of a City lock-to requirement.
- **Recommendation:** Update definition for a Type 1 Scooter to: “A standing, electric-scooter share device with a floorboard, dual brakes, front and rear lights,

locking cable, and a maximum speed of fifteen (15) miles per hour,” removing the immediate locking cable requirements. **Instead, companies should be required to have the capability of installing acceptable locking devices within 60 days of SDOT notification that lock-to operations will be required, in order to keep their fleet operational.** The run-up to this requirement could be used for an education phase focused on the changing requirements for users.

Indemnification

- **Reference:** The indemnification provisions of the Seattle Bike Share program and the Seattle Scooter Share program are substantively different. The bikeshare program requires indemnification except to **“the extent caused by the negligence of the City.”** The scooter requirements require companies indemnify the City against, notably, **“[t]he City’s negligent failure to design or maintain roadways” ...** except for damage or injury caused by the **sole or gross negligence of the City...**
- **Discussion:** Bike share and scooter share serve the same function. City streets must be designed to accommodate both. **Operators have no authority to fix or repair the City’s infrastructure.** There is no mechanism for private operators to cure a dangerous condition caused by the City’s infrastructure. Thus, Operators are subjected to claims it cannot curtail and citizens who rely on scooters as a transportation option are left with a public-right-of way that lacks improvements.

Indemnification against negligent design reduces city incentives to build and maintain safe streets in an equitable way. Notably, there is a clear inconsistency and inequity between other users of different means operating the same mode. There are many personal scooters already on Seattle streets, and they will predominate in higher-income areas and higher income users. The cost of such scooters ranges from \$500 to \$3,500. These users do not indemnify the City of Seattle, nor do the companies selling the scooter. Therefore, someone who is able to afford a personal scooter is uniquely able to pay to retain the right and privilege to hold the City accountable for the “City’s negligent failure to design or maintain roadways.” People with this privilege are more likely to live in higher-income areas. **However, someone who cannot afford such a device, and instead is renting one for \$2 to \$4, is denied the same redress with the City.** As a result, the city is treating two different users of the same mode inherently differently, based upon their ability to pay for usage of the mode. This is inequitable, unfair, and not how we treat rentals of any other mode within our City. **Like many other historical precedents, this seems to create yet another structural financial incentive to prioritize street fixes in the most privileged neighborhoods first.**

- **Recommendation:** Apply the bikeshare indemnification to scooter share.

Slow Ride on First Trip

- **Reference:** “O4.7 First Time Rider Feature. On a rider’s first use of a Vendor’s device, the vendor shall govern the maximum speed from fifteen (15) miles per hour (MPH) to eight (8) MPH for the duration of the rider’s first ride. If the rider has used the Vendor’s device in another U.S. city, this does not apply.”
- **Discussion:**
 - Many riders have ridden scooters before, whether from other companies or their own personal devices. Individual companies have no way of determining this. Riders who experience this slow first ride unnecessarily will elevate complaints to the companies and to the city.
 - Other riders who do not prefer this feature will easily evade it. They will lock and unlock the scooter a second time in order to quickly proceed to their second ride (the price being the charge of an extra unlock fee).
 - In some cases, rider’s ability to get to where they are going in a timely fashion will be affected. Scooters can be a last-minute, last-mile solution. This intentional slow ride behavior, with no rider control over the feature, will prevent riders from catching trains, making meetings, or even reduce their ability to get up Seattle hills.
 - This creates barriers to users trying other scooter brands because one would be partial to the first vendor the rider uses (the rider won’t want their next trip on a different vendor to slow them down).
 - Other riders will likely be deterred from using scooters in lieu of cars because they will learn on their first ride that scooters don’t move as fast as they’re liking. This reduction in apparent utility reduces desired modeshift away from cars.
- **Recommendation:** Allow vendors to provide slow ride **as an option** for riders, giving riders the choice to participate at a slower speed. Some riders will appreciate this greatly, while others who would have simply avoided the slow ride altogether.

Low Income Fare

- **Reference:** Requirement O4.2: “(b) Unless the Vendor proposes and the Program Manager approves a different price structure, the Vendor shall charge eligible riders no more than \$1.50 per hour.”
- **Discussion:**
 - Most vendors have rates that are already discounted 60-70% for low-income users. This is far in excess of equity discounts provided in almost any other industry, and is a result of our companies’ commitment to opportunity. While **trips taken at our existing low income rates always operate at a loss,**

the City’s request is to reduce fares **by an additional 60-70% beyond that heavily company-sponsored rate.**

- We, like the City, are committed to equity. One of the most equitable investments a community makes is in its public transit system. A comparison of public transit fares and the City’s requested low income rate are illuminating (assuming \$1.50 hourly fare is spread evenly per minute, or 2.5¢ per minute).

DISTANCE <i>(TIME BY SCOOTER)</i>	SCOOTER LOW INCOME FARE <i>0% public subsidy</i>	METRO BUS <i>72% public subsidy</i>	W / ORCA LIFT <i>85% public subsidy</i>	ST EXPRESS <i>72% public subsidy</i>	LINK <i>62% public subsidy</i>
1 mile <i>(5 min)</i>	\$0.14	\$2.75	\$1.50	\$3.75	\$2.25
2 miles <i>(11 min)</i>	\$0.27	\$2.75	\$1.50	\$3.75	\$2.25
5 miles <i>(27 min)</i>	\$0.68	\$2.75	\$1.50	\$3.75	\$2.50
11 miles <i>(1 hr)</i>	\$1.50	\$2.75	\$1.50	\$3.75	\$3.00
22 miles <i>(2 hrs)</i>	\$3.00	\$2.75	\$1.50	\$3.75	\$3.25

- Scooters are not intended for hour-long trips. They are first/last mile transportation. **The average scooter trip is 10 minutes**, meaning the low income fare would be 25¢ on the average trip. This takes someone nearly two miles, a distance many people ride on the bus. This rate, required of the unsubsidized scooter company, is **95% lower than the cost of a for this trip on a bus bus, which is subsidized 72% by public funds.**
- Our data shows that **92% of scooter trips are 2 miles or less.** Under the city’s requirement, the fee for this low-income trip is **90% lower than the cost of a for this trip on a bus, which is subsidized 72% by public funds. It is also 82% lower than Metro’s low income fare, which is subsidized 85% by the public.**
- If someone rode a scooter 5 miles (very unusual; less than 1% of trips are 5 miles; less than 2% of trips are 5 miles or more), their trip (68¢) would still be **75% lower than the cost of a bus ride**, which is subsidized 72% by the public.
- Someone would have to ride a scooter **for a full hour, for 11 miles** (longer than most Metro routes in Seattle and equivalent to the longest RapidRide routes) to have their low income fare be **equivalent to Metro’s ORCA Lift** low income fare (subsidized 85% by the public). Only 0.1% of trips are 10 miles or more.
- **Someone would have to ride 20 miles, or 1 hour and 49 minutes**, to have their fair be equivalent to the standard Metro bus fare, and even longer to catch up to ST Express or Link.
- An additional challenge of charging a quarter for a standard trip or \$1.50 an hour is it undermines intended behaviors of a shared system. Extreme low prices **disincentive people from ending a trip and returning a scooter to**

circulation, since the rider could hold onto a scooter for 2 hours at the cost of a bus fare, even though it is extremely unlikely for users to be traveling on a scooter for 2 continuous hours (our data shows 0% of people do this). **This reduces availability for other users, including other users in Environmental Justice Communities, that need scooters for trips as well.**

- **Recommendation:** Allow companies to apply for a permit with low income fare structure that is competitive with public transit on a typical or reasonable micromobility trip instead of rigid \$1.50/hour structure, such as: “(b) Unless the Vendor proposes and the Program Manager approves a different price structure, the Vendor shall charge eligible riders no more than \$1.50 per *quarter* hour.”

We thank the city for its consideration and commitment to a micromobility program that achieves strong safety, equity, and environmental goals.

These are the shared industry recommendations from the undersigned companies.

Respectfully,

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