An Analysis of the Scootershare Industry & Major Technology Vendors

A COMPARISON REPORT OF THE TOP SCOOTERSHARE TECH VENDORS AND AN ANALYSIS OF WHERE THE SCOOTERSHARE INDUSTRY IS GOING
Introduction

The scootershare industry is experiencing a tremendous growth spurt that is placing a heavy demand on the underlying technology. Techvendors are living up to the challenge by providing operators with an increasing number of solutions that empower them to effectively manage their scooter fleet and their membership.

In this report, we take a look at three of the top scootersharing technology software vendors. Based on our expertise in designing, launching, and operating shared mobility services, we evaluated each techvendor across a range of five modules that are essential for the successful operation of a scootershare service.

While this report is not an overview of the entire technology platform landscape, or all the possible features that each techvendor offers, it serves as a guide to what exists and what is under development for software technology.
The Scootershare Industry

Scootersharing began to gain a foothold in the United States (Scoot) and Spain (eCooltra) in 2012. By 2017, there were 38 Vespa-style scootersharing services operating in 29 cities globally with 17 services scheduled to begin operations in 2018 (See Chart 1). Today, 79 percent of the cities with scootersharing services are in Europe with 41 percent of the global fleet located in just two cities, Berlin (1,700 scooters) and Paris (1,600 scooters) where the most popular operators are COUP, emmy, and Cityscoot.¹

Click here to view a map that displays the latest information about where scootersharing services are operating or being proposed throughout the world. Note that this map only shows services that offer Vespa-style scooters.

Scootersharing continues to gain popularity, particularly in the United States and Canada, due to its affordability and convenience. Most Vespa-style scooter rides in the United States are $4 for the first 15 minutes then 10 cents per minute after that. Most kick scooter rides are $1 to unlock and then 15 cents per minute after that.

The Vespa-Style Scooter – A part of the motorcycle family, the Vespa-style scooter is small and battery powered. Some models are able to reach up to 60 miles per hour. And, they come in both two-wheel and three-wheel versions. The two-wheel version is widely preferred by users. One potential drawback of the Vespa is the weight of the scooter which can be harder to manage than the kick scooter.

The Kick Scooter – The other scooter style is the kick scooter which travels at 15 miles per hour (See Figure 2). Having been popularized by Bird and Lime, this scooter style is particularly popular in North America. Predicting a large increase in users, Uber and Google’s parent company Alphabet led a group of investors that pumped $355 million into Lime in mid-2018. The company is now worth $1.1 billion. Not to be outdone, Bird continues to raise money and is valued at $2 billion.²

Originally, kick scooters were human powered. But today, scootershare operators like Bird and Lime use electric kick scooters. Lime’s kick scooters produced in partnership with Segway made their debut in San Francisco, California in early 2018. They are designed to be safer and more durable to match the demands of the sharing economy. With a longer-lasting battery, these scooters can travel a distance of up to 35 miles. That surpasses the 20-mile limit of earlier models.

² CNBC, Uber and Alphabet Just Invested $355 Million in Lime – Here’s Why Scooter Start-Ups are Suddenly Worth Billions, July 2018.
For this report, we looked at software vendors that fuel scootershare operators. These techvendors are responsible for helping operators manage their fleets and support their members.

The importance of the white-label mobile app that the techvendors provide cannot be overstated. Because it’s the main touchpoint with members, the app controls the user experience from end to end. Through the app, users can perform all the functions necessary to make a successful trip. They can register to become a member, reserve a scooter, locate a scooter, and pay for their ride. For operators, it is important to have a back-end that allows them to setup custom features and rules to encourage users to perform the right behaviours. More importantly, to manage their fleet effectively, operators need to have maximum visibility of where their scooters are and which are in or out of service.

For this report, we compared three scootershare techvendors: ElectricFeel, Omoove, and fleetbird. At the time this report was written, fleetbird was acquired by Wunder Mobility and will operate as Wunder Fleet.

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<th>Founded</th>
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<td>Italy, France, Spain, UK and USA</td>
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<td>Largest operator using their system</td>
<td>eCooltra</td>
<td>Mobility</td>
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The following is an overview of the comparison criteria.

**MEMBER MANAGEMENT**  
We assessed how easily members can manage personal and corporate accounts, in addition to other tasks such as updating their password, payment methods, and driver’s license. We also assessed what types of support the techvendors provide to members, and the ability to remotely troubleshoot member issues.

**TRIP MANAGEMENT**  
This criterion involves the user experience. We asked questions relating to member registration, what methods can members use to unlock vehicles, vehicle location assistance, damage reporting, and navigation assistance. We also assessed whether the techvendor provides any notification to members about whether the helmet is properly returned and locked at the end of their trip.

**FLEET MANAGEMENT**  
Here, we assessed key functionalities relating to relocation, supply and demand forecasting, maintenance, and repairs.

**BILLING & INVOICING**  
Among other criteria, we evaluated each techvendor’s capability of automating billing and whether their system could calculate applicable tax rates.

**PRICING, PROMOTIONS, & DISCOUNTS**  
We assessed each techvendor’s ability to handle various pricing schemes as well as the extent to which operators have control over pricing, promotions, and discounts.
CHAPTER TWO

Scootershare Techvendor Comparison Highlights

The following are highlights from our detailed comparison of the three selected techvendors. Here, we point out where the techvendors excel in relation to one another.

Pricing, Promotion & Discounts

All three techvendors offer operators the flexibility to set pricing by the minute, hour, or day. Also, they all allow operators to create membership groups with customized pricing. And, they all provide the capability to use promotional codes. Unique to ElectricFeel and fleetbird is their ability to set up a “Refer a Friend” program.

At the time of our interviews, fleetbird offered clients the option of using dynamic pricing. Fleetbird also provides clients with other pricing options that can be attractive to members. Fleetbird clients have the option of setting daily caps, credit packages and among other options.

Fleet Management

Battery swapping is one of the core tasks that an operator must handle. Scooters need to be adequately charged so that members trust it will reliably get them from point A to point B. The fleet team also must take care of tasks such as cleaning the scooters, cleaning the helmets, and performing maintenance on the scooter. Given the importance of these tasks, we assessed how much assistance the featured techvendors provide to help operators with these types of tasks.

In this category, although fleetbird and Omoove are working on improving their fleet-management modules, ElectricFeel is the clear standout. This is because they have a task-management system that is automated and optimized.

ElectricFeel and fleetbird offers an app that assigns battery swapping duties. Both apps also assign other duties for the fleet technicians. That said, ElectricFeel is high-performing because task assignment is automated where it is based on factors such as the technician’s proximity to the scooter and traffic conditions. What is impressive about this feature is that task distribution is automatically done based on these factors. Additionally, ElectricFeel is the only techvendor to deploy a heat map to enable operators to understand where the most popular areas are (and conversely aren’t) so they can better relocate scooters.

The foundations of a good fleet management system needs live-fleet tracking, geofencing, and battery status tracking by scooter. All these vendors provide these features where geofencing in particular is easy to setup.
Trip Management

For all three techvendors, registration is easy for members to use and for operators to manage. When it is time to locate the scooter, only ElectricFeel and Omoove provide turn-by-turn navigation. At the end of the trip, members can report damage through the app provided by all three techvendors. However, only ElectricFeel and Omoove provide helmet tracking assistance. This technology uses sensors embedded in the helmet and helmet box to detect whether the helmet has been reattached to the scooter. If no helmet is detected, the member cannot end their trip.

Although the trip-management features are helpful, there is room for improvement. Members would benefit from getting assistance with knowing where to park the scooter at the end of their trip.

Member Management

All the techvendors provide operators with the capability to remotely lock and unlock the scooter. Additionally, through each techvendor’s app, members can self-manage their account by updating credit card information, driver’s license information, and passwords. Members can also view the previous trips they’ve taken.

fleetbird is a standout in this category. Their backend has a beautiful user experience design for the call-center agent who is troubleshooting an issue a member is having with their scooter or their account.

Billing and Invoicing

movmi evaluated the basics for billing & invoicing; of which, are standard for all three techvendors. However, the invoicing feature offered by ElectricFeel and fleetbird look slightly better than what is offered by Omoove. There are possibilities to setup custom rules for billing & invoicing through fleetbird such as sending automatic emails for missed payments and reapplying charges to credit cards but this was not a part of this edition’s evaluation.

Reporting and Analytics

ElectricFeel and Omoove provide built-in reports and analytics. While fleetbird offers basic in-house reporting, it allows operators to easily use APIs to connect to a third-party business intelligence platform.
CHAPTER THREE

Best-in-Class Features

During our comparison, we discovered features that were either unique to a techvendor or that added significant value to how their technology was deployed. Here are the best-in-class features for each of the three techvendors.

**ElectricFeel - Exceptional fleet-management module**

ElectricFeel handles task management extremely well. This is vital for operators that must manage a mobile fleet team over an expansive area. Tasks, such as repairing mirrors, can be assigned by person or by location. And, the system keeps track of service intervals by mileage or by time.

The task-triage system works in real time to make sure that the tasks with the highest priority get completed first. In the battery-swapping scenario, the technology takes into consideration the work shifts of the team members, where they are located, where the scooters are located, the battery charge of the scooters, and traffic conditions. Then, it can automatically send a push notification to direct the optimum team member to swap a battery.

**fleetbird - Excellent troubleshooting interface**

As we mentioned above, fleetbird gives operators a backend interface that supports easy troubleshooting of member issues. A likely scenario involves a member calling customer support to complain that they can’t end their trip through the app. The agent can go to a dedicated screen that shows all the time-coded activity for the scooter from the moment the reservation was made to the present. The agent might discover that the member has ridden the scooter outside of the service area and is therefore not allowed to end their trip. The member can then be instructed to return the scooter back inside the service area. If necessary, the agent can end the trip.

**Omoove - The first connected scooter**

Omoove partners with Silence, a Spanish company dedicated to the design, development, and manufacturing of electric scooters. Essentially, because Omoove’s technology is installed by the manufacturer and embedded within the scooter, Omoove has created the first “connected” scooter. This feature gives operators greater access to telematics and data points about the functioning of the scooter than aftermarket technologies can’t easily reach.
Here, we present visualizations of our overall evaluation of each techvendor. The charts represent how well the techvendors perform in each of the six categories we examined.

**ElectricFeel**

ElectricFeel provides a comprehensive solution. They excel in fleet management and provide great reporting capabilities that help operators understand how their fleet is performing.
Omoove

Omoove has all the core features necessary for launching a successful scootershare service such as a flexible pricing, promotions and discounts module and a functional trip management module. While not a part of our evaluation, the connected scooter produced in partnership with Silence will save operators time and costs. By integrating telematics at the factory, this will allow Omoove to extract more data points from the scooter hardware and, in theory, result in less connection errors (compared to a third-party after-market provider connecting to a scooter).
When it comes to member management, fleetbird offers an excellent troubleshooting solution for customer service agents. They also offer a comprehensive solution from pricing and discounts to trip management and invoicing.
We took a small survey of scootershare members to gather their opinions about the service they use. We found that both locals and tourists enjoyed using scootershare services. They like that registration is easy and can be completed within minutes. And, they like that the helmets are kept clean.

They appreciate the free-floating model. They found it convenient to have the ability to park the scooter at the end of their ride without having to worry about returning it to its original location. When they were ready to resume their trip, they could simply select another scooter.

Regarding the technology, one survey respondent told us of an unintended benefit provided by the mobile app eCooltra offers. He and his girlfriend rented scooters while visiting Barcelona. During their ride, they got separated in traffic and lost sight of each other. However, because the app displays where the rented scooter is on a map, he used the app’s turn-by-turn navigation system to easily find her.

Survey respondents did, however, point to two areas where there is room for improvement. One wished that the scooter he rented had a bit more speed so that he could keep up with traffic. Another suggested offering different pricing schemes, one for locals and one geared more towards tourists.
Our work around the world in the shared mobility arena gives us a unique vantage point from which we can identify both challenges and opportunities in the scootershare industry. The industry is still a young one and it must deal with both expected and unexpected growing pains. As the industry matures, operators and the cities they operate within will be poised to take advantage of a range of opportunities.

1 Challenges

**KEEPING SCOOTERS RECHARGED**

Ideally, every time a member unlocks a scooter, the battery will be fully charged so the member can get to their destination without fear that the battery will run low on charge. For Vespa-style scooters, operators deploy a team of people dedicated to scooter maintenance. And, this ongoing effort is supported by real-time, backend data that guides team members to scooters in need of battery replacement.

For kick scooters, however, things are different. The work is crowdsourced. Operators contract out battery charging to members of the gig-economy. Since they are paid a fee for every scooter they charge, charging has become a popular way for young people to earn money. Bird gives contract chargers an app that displays a real-time map of an area where there are scooters that require charging and pay between $5 to $20 per scooter. The underlying challenge involves managing this gig-workforce and making sure that they are sufficiently compensated so that they will continue to find and charge scooters.

**DEALING WITH SIDEWALK KICK-SCOOTER LITTER**

The lack of docking stations for kick scooters, combined with human behavior, has resulted in what some are calling “scooter litter.” Because members can drop off a scooter wherever they like, multiple scooters can pile up on sidewalks in locations that annoy pedestrians and store owners.

The problem is so big that cities like San Francisco, California and Austin, Texas have enacted ordinances that empower the city’s transportation agency to issue permits that govern the operation and parking of scooters. Ordinance violations can result in impounding and fines. It’s foreseeable that these types of ordinances will add significant costs to scootershare operators as they seek to comply.

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3. SFMTA. *A New Permit and Pilot Program for San Francisco’s Scooters*, 2018.
 Opportunities

REDUCING GREENHOUSE GAS OUTPUT

Burning gasoline releases carbon dioxide, a greenhouse gas, into the atmosphere. And, it’s the buildup of carbon dioxide and other greenhouse gasses that are causing the Earth’s atmosphere to warm, resulting in changes to the climate. In most countries, transportation is the biggest contributor to greenhouse gas emissions. In Canada, for instance, transportation represents a whopping 24 percent of all greenhouse gas emissions\(^5\). In the United States, that figure is 27 percent\(^6\).

Because scooters are battery operated, they do not emit greenhouse gasses. This positive quality is compounded because the more people use scooters the less they are using gas-burning vehicles. And when fewer gas-burning vehicles are on the road, there is less greenhouse gasses being emitted. This makes scooters a vital part of the future of electric mobility.

REBALANCING DOCKLESS SCOOTERS

In Paris, LimeBike may have figured out a way to avoid the “scooter litter” problem and satisfy city officials. They’ve taken a page out of the Vespa-style scooter operator playbook and have assembled a team of employees tasked with finding, recharging, and rebalancing their kick scooters every evening. This move does away with the uneasy reliance upon freelance gig-workers to recharge the scooters. Not only does having a professional team reduce vandalism, LimeBike’s rebalancing is more efficient since they are directly in control of where scooters are located each morning.

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MICRO-MOBILITY – FIRST AND LAST MILE TRANSPORTATION

As time goes by, urban cores across the world will become more densely populated and vehicle traffic will be more of a problem. This raises the issue of how the ground transportation industry will cope with getting urban citizens from Point A to Point B.

While mass-transit systems will play a large role in the solution, the question becomes how people will efficiently move along the first and last mile of their journey. The answer is the micro-mobility offered by scooters. According to the National Household Travel Survey conducted in the United States, more than 60 percent of all trips are less than 5 miles in distance. This is the perfect distance for micro-mobility solutions like scooters.

Lime has produced their own data which supports the argument that scooters are poised to resolve the first and last mile problem. A survey of their members shows that 40 percent of respondents use Lime-S scooters to facilitate rides to and from public transportation stations.

SERVING THE UNDERSERVED

San Francisco is a fresh testing-ground for community-friendly scootersharing services. Now, operators seeking to have their scooters available to the public must apply for a permit. To "sweeten the deal" operators are finding ways to become good corporate citizens by making it easier for lower-income residents and those who live in underserved transit communities to use their scootershare services.

To better serve lower-income residents, Bird has offered to waive its $1 unlocking fee and only charge the 15 cents-per-minute usage fee. Lime has offered a 50 percent discount. And, both Jump and Lyft are considering annual memberships that start at $5. These companies are even exploring a cash-payment system so that their services are available to people who don’t have bank accounts or a mobile phone.

Similarly, there are proposals to help bridge access to public transit in neighborhoods that are poorly served by the city’s buses and trains. Operators including Bird, Lime, Skip, and Jump are willing to dedicate a percentage of their scooter fleets to these needy areas.

Today, these may all be concessions necessary to win a permit. Tomorrow, these overtures may be a part of the ordinary course of doing business.

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9 Recode. Scooter companies tried to barge into San Francisco and got kicked out. Now they’re making big promises to get legal, 2018.
The scootershare industry is young. Even so, its techvendors are providing operators with a comprehensive suite of capabilities that allow operators to effectively manage their fleet and serve their members. Still, there is much more on the horizon.

**INCREASED FLEET MANAGEMENT SOPHISTICATION**

As we can see with ElectricFeel’s current offering and fleetbird’s future plans, fleet management modules are becoming more sophisticated. It’s certain that improvements in these modules will help operators keep their scooters sufficiently charged. And, a greater level of sophistication will help address the “scooter litter” problem by helping operators effectively rebalance kick scooters.

**DYNAMIC PRICING IS COMING**

Currently, none of the techvendors offer dynamic pricing capabilities. movmi predicts that dynamic pricing will become more prevalent in the market within the next two years as operators will see value in being able to offer discounts as an incentive for returning scooters to specific locations. Rebalancing initiatives such as this are also supported by the ability to charge rates based on supply and demand.

**COORDINATION FOSTERS INNOVATION**

movmi is excited to see how techvendors, operators, and other key stakeholders work together to innovate in the scootershare space. The partnership between Omoove and Silence that resulted in the first truly connected scooter is an excellent example of what can happen when ideas and resources are pooled to target a common goal. Also, city ordinances that regulate scooters can be seen as an opportunity for operators to partner with cities to create a scootershare system that works for everyone to improve city-wide mobility.

**FIRST AND LAST MILE CONVENIENCE**

Based on the ways that urban environments are developing, movmi expects that free-floating scootershare services will live up to the promise of providing first and last mile convenience. To make it work for everyone, operators must find a way to share the service with with lower income neighborhoods and communities that are underserved by the existing mass-transit service.

We hope that you have found this report helpful. If you have any thoughts you would like to share, we’d love to hear your feedback.

Feel free to reach out to us at info@movmi.net and we will connect you with one of our scootershare experts.
About movmi

movmi is a global boutique agency specialized in Shared Mobility Design: the planning, implementation and launch of new mobility services. We have directly been involved in launching or supporting shared mobility services in more than 20 projects worldwide.

We work at the intersection of technological innovation and driving change towards smarter cities, sustainable economies, and more equal societies. We are recognized in our industry as a thought leader: TED and Next Visionaries has selected our vision out of hundreds of applications to present on TED’s global stage in November 2017.

We have years of hands-on experience in running shared mobility services and we have turned this experience into best practices, workshops, playbooks, and toolkits to help new operators launch successfully.

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THANKS TO:
Creating the Next Generation of Shared Mobility