

Mobility in a post-pandemic world: From evolution to revolution



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Introduction

COVID-19 is reshaping mobility patterns and the sharing economy around the world. Local retailers found their footing with last mile delivery as packages and pizzas moved more often than people.¹ The first driverless delivery service was licensed in December 2020 for commercial use on public roads in California at speeds of under 35 mph (52 km/h).² In April 2020, all categories of bicycle sales were up in the US by 75% to US\$1 billion a month for the first time ever³ while in Berlin 150 kilometers of new bike lanes are being built along with 100,000 parking spaces.⁴ Shared e-bikes and dockless e-scooters are being offered to first-responders and transit workers for free to aid their commute as essential workers⁵ — taking advantage of thousands of miles of roads that have been converted to bike and pedestrian lanes from New York to Copenhagen, Madrid to Singapore.⁶

Some of these shifts in mobility and sharing economy activity and infrastructure may be momentary, but will inspire future action. Many other mobility developments, however, are likely to become permanent fixtures of daily life as we embrace the “new normal” of a post-pandemic society and economy.

TRUST: CRITICAL TO SUSTAINING MOMENTUM

It is remarkable to reflect on how much, and how quickly, our mobility habits have evolved and how the pandemic has accelerated adoption of these new offerings.

A decade ago, ridesharing sounded to an underwriter like hitchhiking. Autonomous vehicles and air taxis were the visions of futuristic movies and television shows. Pre-pandemic, rideshare was Uber's most profitable business and now, it is the food delivery platform, Uber Eats.

One thing has not changed: When wheels turn on public streets — be they e-scooters, autonomous long-haul trucks, e-bikes rented monthly by food delivery gig workers, or anything in between — we as a society need to trust that these modes of transit are safe. Insurance plays an essential part in the trust dynamic that facilitates permission to operate and protects the platform and the user where responsibility for risks may not be clear.

To keep pace with the accelerating changes, new forms of insurance will need to be created to support the newest ways we move, share, and trust. Done poorly, this can slow progress; done well this can empower growth and possibility.

With all of this change on the ground and in the air, what will the next 12–18 months bring? Six global trends are now at the point of ignition in the mobility and sharing economy space. As they are most prevalent in the US and Europe, our analysis and commentary mainly focuses in these regions.





THE SIX TRENDS SHAPING MOBILITY AND THE SHARING ECONOMY

The six trends fall into two groups: customer demand for new mobility solutions and supply of risk capital.

Customer demand for new mobility solutions

Supply of risk capital



**Mobility
Services**



**Autonomous
Commercialization**



**Last Mile
Delivery**



**Global
Marketplace**



**Digitizing
Payments**



**Social
Cost-Shifting**

As the world continues to manage through and overcome the COVID-19 pandemic, it is essential that organizations involved in or relying on the mobility and the sharing economy know which way the winds are blowing — whether head or tail winds — to either avoid potential threats or take advantage of opportunities.

Customer demand for new mobility solutions

MOBILITY SERVICES — WHAT, HOW, AND WHO IS MOVING POST-COVID-19?

In our previous report, released at the start of global lockdowns, we explored Mobility as a Service.⁷ The report delved into the challenges and potential of insuring rideshare, car share, car subscription, and micromobility. As we move towards a post-pandemic society and economy, we believe the following three areas are trends to watch within those mobility sectors.

1. Access over ownership

In 2020, new cars sales dropped in Europe by 12% and by 22% in the US, the worst year since the 2012 financial crisis.⁸ But, according to a McKinsey study, the number of 18- to 34-year-olds who believe “access to a private vehicle is important” rose to 42% during the pandemic.

While the number of rideshare rides also is down, according to earnings reports from Uber and Lyft⁹, another form of “access,” car share, is having a moment. In December 2020, UK based Cazoo acquired Drovers¹⁰, adding 100 employees to its team of 800, calling itself “the Netflix of cars,” and becoming the UK’s fastest Unicorn ever.¹¹ In the US, public car share company HyreCar increased its number of rental days 41% to 277,000 in the fourth quarter 2020

and 63.3% to 1,014,000 for the year.¹² And while there has been mixed success to date, several automotive original equipment manufacturers (OEMs) are now re-launching their car share programs in light of the rising consumer interest in car share.

As a way of building access-over-ownership trust with their customers, car share companies implemented COVID-19 cleansing techniques. At the height of the pandemic, this included waiting two to three days between bookings, which was aligned to the known gestation period of COVID-19 on plastic and stainless steel.¹³ Car share companies continue to highlight clean and safe protocols to their customers.

The rise in car share activity throughout 2020 shows that individuals are finding this a favorable option.





But public transit and road safety suffered

Public transit no doubt lost a tremendous amount of riders in 2020 and early 2021. According to one study reported on in *Science Daily*, overall ridership across the US dropped by 73% during the first several months of lockdowns.¹⁴ While there was variation nationwide, and many essential workers continued to access public transit, it was observed by the authors that, “In some cities, there wasn’t even a morning or afternoon peak anymore – and weekdays and weekends started to resemble each other more in terms of demand.”

Mid-pandemic in the red, San Francisco’s transit systems have experienced large losses. San Francisco’s MUNI operated at a loss of US\$1 million per week¹⁵, while the Bay Area Rapid Transit (BART) system forecasted a total of US\$975 million in losses over the next three years.¹⁶ Ridership in London’s Underground fell by 95% in the first wave of COVID-19¹⁷, forcing London Transport Limited to seek three bailouts from the government totaling more than £4 billion through June 2021 and commit to raise fares in 2022.¹⁸

In April 2020, after stay-at-home orders were issued in the US, over a quarter of Americans stopped driving entirely.¹⁹ The US Federal Highway Administration reported a decline of 40% in driving that month.²⁰ With commuting for those “working from home” dropping, rush-hour miles were distributed more evenly throughout the day. By contrast, during the first lockdown in the UK, there was an even steeper 78% decline in driving; during the second lockdown it only fell by 33% given schools in session and fewer restrictions on commerce.²¹

Unfortunately, despite the lack of miles driven during the pandemic, many roads became less safe due to often riskier driving behaviors. In the US, fatalities spiked 4.6% between January 2020 and September 2020 compared to the same period in 2019.²² Where stricter lockdowns were in place, such as in Germany and Spain, overall traffic accidents and fatalities fell significantly from the previous year, though the number of bicycle accidents rose.^{23,24}





2. Greener alternatives — e-bikes, micromobility, electric vehicles — responding to greener cities

Around the world, cities are using the COVID-19 related decrease in commuting and personal vehicle usage to accelerate sustainability initiatives:

- Madrid banned 20% of vehicles to its urban core.²⁵
- London announced an ambitious plan — Streetspace — to rezone urban roads for the benefit of pedestrians and cyclists.²⁶
- Copenhagen banned the sale of new gas or diesel cars by 2030, contributing to the lowest rate of car ownership in Europe.
- Brussels enforced a EUR€350 (approximately US\$415) fine on diesel vehicles entering the city centre's low-emission zone.
- Barcelona implemented the Super Block in the city centre, preventing the use of cars in a 9-block radius and encouraging the micromobility use.

With thousands of miles of urban roads now closed to vehicle traffic, and more on the way, micromobility such as e-bikes and e-scooters is gaining popularity. Dutch smart- and e-bike manufacturer Van Moof reported that it sold more bikes in the first four months of 2020 than in the previous two years combined while Arizona-based e-bike company Lectric reported a 140% increase in

sales, highlighting e-bikes as a preferential mode of transport during COVID-19.²⁷ More recently, in June, the first month of the London e-scooter trial, over 30,000 rides were taken.²⁸ There are some limitations being placed on micromobility in these early stages — Oslo, for example, caps the number of available daily rentals and bans usage after 11 pm.²⁹

Some companies have taken it a step further to promote consumer trust and expand use of their fleets. One e-scooter sharing company even introduced innovative self-sanitizing handlebars.³⁰

For those who still desire owning a private car, OEMs are responding by engaging in a race toward electrification. Tesla is on track to sell 500,000 electric vehicles (EVs) in 2021. In Europe, Ford announced it would go all-electric by 2030.³² This follows GM announcing it will go all electric, for all brands, in all territories by 2035. Volkswagen promises it will spend €73 billion on electrification over the next five years.³³ Meanwhile, there is a third wave of digitally native OEMs, which will have all-electric vehicles available this year, including Rivian, Lucid, Fisker and Karma.

Beyond the OEMs, new ventures are forming to enable a green ecosystem for batteries at the end of their life. Companies engaged in solving the problem of reducing electric vehicle battery waste and improving recyclability include Redwood Material in the US, Li-Cycle in Canada, Aceleron in the UK, and Green Li-on in Singapore, among others.

Riding into the unknown: Regulating shared micromobility

The rise of shared micromobility — with its value proposition of being a cleaner and more efficient urban transportation option — comes with a unique set of unknowns. Government bodies, whether national, regional, or local, often create insurance regulations for motorized devices based on power and maximum speed. However, coverage requirements such as motor liability insurance seldom extend to e-bikes and e-scooters. This leads to a unique challenge for the burgeoning shared micromobility sector: lack of historical loss data.

Ride share, car share, and car subscription pricing actuaries are able to peer into the looking glass of personal and commercial auto losses in order to gain a general understanding of loss trends for auto-based mobility. For the shared micromobility sector, quantifying risk, whether injuries to other pedestrians or riders themselves, has proven challenging.

Regulators across the globe are taking a variety of approaches. France and the UK require motor liability insurance for e-scooters. One of California's state houses recently passed AB371, which, as currently written, would shift a micromobility device user's personal liability to the service provider.³¹ It would require shared micromobility companies to carry general liability insurance covering any personal injury suffered by a pedestrian when the injury involves the negligent conduct of the micromobility device user.

This regulatory, safety, and cost uncertainty creates additional risks for shared micromobility companies.

3. Non-emergency medical transit

The latest permutation in rideshare in the United States is non-emergency medical transit or NEMT. NEMT caters for scheduled, non-emergency trips, such as dental or physician appointments.³⁴ It helps healthcare entities provide a more cost-effective option to leasing or buying vehicles and hiring drivers and helps keep appointment schedules on track.

Patients schedule their appointments days or even weeks in advance, usually at their last visit to the doctor. This results in each NEMT driver having a day filled with pre-scheduled rides.

In many cases, NEMT is covered as part of government-sponsored Medicare or Medicaid.^{35,36} Today, 46 US states consider NEMT a covered benefit in some form according to The Kaiser Family Foundation.³⁷ Whether reimbursed or covered directly, the ultimate payer is not always the patient — which facilitates new customers and revenue streams to rideshare providers.

Among other benefits for patients, the door-to-door service provided by NEMT serves as a favorable alternative to public transit for speed, efficiency, and safety. NEMTs also are more likely able to provide Wheelchair Accessible Vehicles (WAVs).

For any company offering NEMT rideshare services, driver training is an important risk management strategy. Ensuring that passengers can load and unload into vehicles safely, and are properly secured while in transit, is crucial to rider safety and building trust in this service.

AUTONOMOUS COMMERCIALIZATION

Over the next 12–18 months, commercial deployments of autonomous vehicles are anticipated to become a reality. Consistent with “access over ownership,” the first fully autonomous models are not likely to be owned by private individuals.

One of the key factors why autonomous technology will likely first be deployed in a fleet model is the current cost of the technology. Complete systems, inclusive of LIDAR, radar, sensors, and cameras can cost upwards of US\$100,000. The average cost of a vehicle sold to a consumer in the US is around US\$30,000. As with any new technology, the price of the component parts will trend downward with competitive market forces and a more established supply chain. That said, the fleet model of autonomous commercialization will likely be commercially-owned fleets that provide rideshare and delivery services.



Urbanization and mobility readiness

A little more than 50 years ago, New York and Tokyo were the world’s only megacities, with more than 10 million inhabitants. Now, over half of the world’s population lives in urban areas, ranging from small towns of 300,000 to one of 33 megacities.

As our cities become smarter, urban planners, engineers, and policymakers are exploring innovative ways to mitigate traffic congestion, and in turn reduce carbon emissions and improve air quality. New mobility services hold the key to this.

Mobility as a Service (MaaS) offers cities a future that is greener, safer, and less congested. Micromobility in particular provides city planners with a way to address the increased demand for road space. In many cases, cycling lanes are being leveraged as micromobility pathways.

However, without risk and resilience preparedness, smarter transportation alone may not be enough for these cities to meet their — and their citizen’s’ — sustainability aspirations.

Oliver Wyman’s Urban Mobility Readiness Index 2020 ranks cities against five criteria — system efficiency, social impact, innovation, market attractiveness, and infrastructure. According to the index, the top five cities leading the charge on mobility readiness were Singapore, London, Stockholm, Hong Kong, and Amsterdam. Furthermore, New York was the only US city to make the top 10 rankings — at number 10. The megacity was previously ranked at number 5, but has been overtaken by several smaller European cities, each pushing ahead on infrastructure.



That's not to say that the general population is not yet familiar with the technology. Waymo has a rideshare service operational today in Phoenix, Arizona open to the public. Autonomous testing is taking place in dozens of urban areas in the US and will continue to increase. In 2020, according to state filings, 29 autonomous operators logged nearly two billion miles in test-mode in California alone.³⁸ Last year also saw the first driverless delivery service, Nuro, licensed for commercial use on public roads in California at speeds under 35 mph (52 km/h).³⁹

As the number of autonomous deployments, miles tested, and operators expands, so will the ecosystem of component parts needed to support it. This includes the software supply chain — mapping systems, routing optimization, and edge and cloud technology, and hardware — LIDAR, radar, and more. Indeed, the auto industry — which spends US\$13 billion a year on advertising⁴⁰ — is redefining itself in line with innovation: Today, the category's key selling features are all about digital safety, or how connected the car is to your life via iPhone, garage doors, thermostat at home, and more. The lines of competition among OEMs are being redrawn.

Mobility players are working to build trust among regulators and the general public — though they have a long way to go. According to a 2020 poll conducted by Partners for Automated Vehicle Education (PAVE), 60% of Americans said they would have “greater trust in AVs if they understood better how the

technology works.”⁴¹ A recent study in Finland reached similar conclusions, noting that trust, safety, and security are the most important factors affecting attitudes towards self-driving cars.⁴²

Many potential AV passengers worry about the risk of a vehicle getting into an accident and harming themselves or others. Leading AV companies are taking immense precautions to avoid these types of accidents from occurring whether driven by a system failure or cyber event. One key risk is the potential of bricking, or the loss of use or functionality of AV hardware as a result of a hacking event. The halting of global supply chains associated with a malware attack has been seen before, for example, with the victims of NotPetya.⁴³ Industrial control and IT systems have also been recently compromised by malware at power plants, manufacturing facilities, and pipelines, leading to shutdowns.⁴⁴ AVs are not immune to similar business interruptions, and insurers and companies worldwide need to be prepared to address them.

Key players in the autonomous space have begun to release their own safety reports. Eventually, self-published data won't be enough. We expect standardization requirements for risk quantification and safety measures to be driven by key stakeholders, such as insurers, with regulators and governments to follow.



Autonomous vehicle risks

The Society of Automotive Engineers (SAE) notes that there are six levels of autonomous driving:

- **Level 0: No Driving Automation** — The driver performs all tasks.
- **Level 1: Driver Assistance** — There are driver assist functions, but the driver controls the vehicle at all times.
- **Level 2: Partial Driving Automation** — Enhanced driver assist features exist, but the driver is engaged and continuously monitors surroundings.
- **Level 3: Conditional Driving Automation** — The driver does not continuously monitor surroundings, but is prepared to assume control at any point when notified.
- **Level 4: High Driving Automation** — The vehicle can operate autonomously in specified conditions and the driver may have the option to assume control.
- **Level 5: Full Driving Automation** — The driver is completely out of the loop, and the vehicle can operate in all conditions.

The drive for viable business models to commercialize AVs will lead to two scales that require balancing: one between the technology companies and the original equipment manufacturers (OEMs), and the other the sliding scale of autonomy on the road.

As we begin to accelerate through these levels of autonomy — caused by increased utilization of autonomous machines (warehouse robots and drones) and emergency usage (particularly in China and the US during the height of the COVID-19 crisis) — it is necessary to keep pace with risk developments in the following areas:

- **Regulatory risk relating to autonomous functional safety:** “Redundancy” is key to unlocking autonomy — put simply, fail-safe protocols are needed for steering and brakes in order to achieve L4 and L5 autonomy. In addition, the physical vehicle will have to fall under government regulations relating to autonomous functional safety (AFS). These developments are essential for customer trust.

Due to the new and novel nature of autonomous vehicles, consumer trust is fragile. Accidents in this space due to inadequacies in AFS could be detrimental, causing significant reputational damage.

Regulation in this space is likely to see significant evolution as the desire to build customer trust grows and the complexities of malfunctions increase beyond electric/electronic systems (E/E) into the realms of software and systems design and engineering failures.

- **Increased duration of varying levels of autonomy on the road:** The shift to high-level autonomous vehicles will be a gradual one leading to a protracted period of vehicles with varying levels of autonomy on the road. Having L4/L5 AVs on roads alongside L0 vehicles could create a challenging risk environment and myriad complex liability scenarios.
- **Increased risk relating to data management and storage:** The large amounts of data gathered from sensors to facilitate the autonomous driving solutions (ADS) algorithms increase the susceptibility of technology companies and OEMs to cyberattack and regulatory risk.

These developments raise questions relating to how much data capture is essential, and what can and should be discarded.



LAST MILE DELIVERY

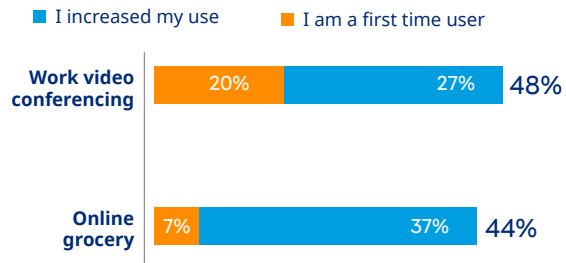
Last mile delivery has seen exponential growth during the COVID-19 pandemic. With lockdowns across the globe, digital shopping and delivery was the safest — and sometimes the only — option for consumers. For local retailers, executing a strategy to get goods, groceries, and food to a customer's door was key to their business survival.

In the United States, the first half of 2020 saw an increase in ecommerce equivalent to that of the previous 10 years — and this only includes the first tranche of lockdowns. Other regions experienced significant gains as well — in Latin America e-commerce use doubled and in Europe overall digital adoption rose to near universal levels at 95% compared with 81% at the start of the pandemic.⁴⁵

Furthermore, an Oliver Wyman survey highlighted that the number of people who were first-time or increased users of online delivery on a global basis during lockdown was the same as the number of people who either increased their use of or were first-time users of video conferencing for work.⁴⁶

This shift online is real, will stick, and companies will need to continue to reformulate business strategies to meet consumers where and when they shop.

Online groceries, an ecommerce area that has struggled in the past, have seen a significant uptick during the pandemic. For example, grocery operator and app Instacart took six years to hit its first approximately five million users in 2019. It took



Source: Oliver Wyman Forum COVID-19 Survey; n=6686

only nine months to hit its next approximately five million in 2020.⁴⁷

We believe these changes in ordering and delivery habits, and sector growth, will stick for a very different reason. In the Oliver Wyman survey, when asked why people's behavior had changed regarding ecommerce, the response leaned more on convenience than on safety and security. This may explain many consumers' increased interest in the online purchasing and home delivery of cars, notably through companies such as Carvana and CarGurus.

We are entering an age where the delivery of products to our doorstep is not just a preference, it's an expectation, and it impacts the types of businesses we choose to buy from. This desire for convenience will live on long after pandemic-related health and safety concerns have subsided, changing risk profiles for companies.

Last mile delivery risks

With the growth of both e-commerce and the gig-economy, timely and accurate fulfillment has become a consumer expectation and a business necessity. The most costly stage of this journey is the final mile. "Last mile delivery" — the final step in the fulfillment process between warehouse and customer — is the most time-consuming part of the shipping process and by far the most expensive, accounting for 53% of overall shipping costs.⁴⁸

With the pandemic-related amplification of e-commerce accelerating developments in last mile delivery, the following risks may be heightened and in some cases even overlooked:

- Inability to 'on-board' appropriately due to fast scaling of DaaS and usage of gig-economy couriers:** Those operating in a crowdsourcing environment often have to come to terms with a loss of protocol. Gig-economy workers are independent and have no ties or allegiance to a brand. This could lead to an increase in parcel damage or theft.
- Greater expectation on fast delivery despite higher demand:** Dips in service could lead to loss of consumer trust and diminished customer loyalty.
- Greater expectation of differentiated and transparent pricing:** As customers become accustomed to digital and differentiated services, they may want to experience an increased level of differentiation in pricing on paid-for delivery. This puts even more pressure on retailers, restaurants, and others to engage in new logistics models.
- Potential disruption from changing regulation:** Traditional fleet operators could be impacted by regulations either relating to emissions or that are favorable to electrification. Operators in this space will also need to be aware of any data handling regulations they need to comply with; errors in this area are extremely costly.
- Greater need for cybersecurity measures:** Increased interoperability and the sharing of data will greatly widen the cyberattack surface for those engaged in last mile delivery. Cyber resilience needs to be embedded into this model at all levels.



Supply of risk capital

EVOLVING GLOBAL MARKETPLACES

Global marketplaces related to mobility and the sharing economy are evolving — OEMs are setting the pace, with energy and power utilities close behind. To do this, they are using their investment power to become involved in various categories of the mobility ecosystem.

OEMs pave the way

The first wave of investment in car share experiments by some OEMs began around five years ago.

Several companies with such ventures, including GM⁴⁹, Ford⁵⁰, Daimler, and BMW⁵¹, have shifted focus from the US market to Europe. However, other programs, especially those at the higher-end, still thrive.

Rarely are new ventures profitable in year one and the lessons learned in one market and infrastructure build — such as customer-facing apps, matchmaking marketplaces, and how to structure insurance in a sustainable way — are quite valuable and are being used in other geographies. OEMs have strong balance sheets, have proven themselves resilient, and cannot afford to not evolve with consumer preferences and trends growing away from car ownership.

The second wave of investment by OEMs will capitalize on a new crop of digitally enabled electric vehicle models that know more about “retail-driving risk” than personal auto

insurers. Broadly speaking, this is due to the sensors built into the vehicles. This shift is creating intense competition for advanced technology in the automotive world.

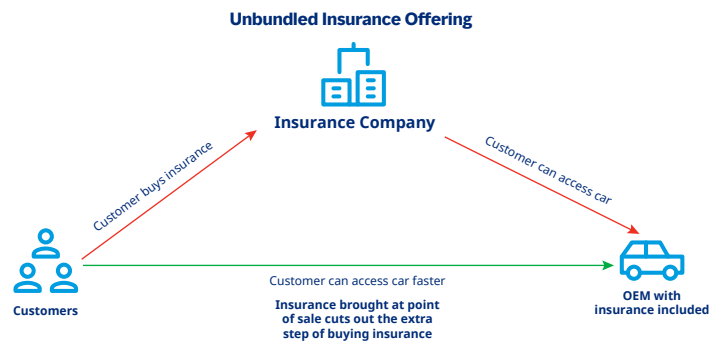
Advanced sensor technology is helping companies gain a deeper understanding of risk, especially with regard to driving behavior data. Knowing more, about more things, with more certainty is a gift to any actuarial scientist and has major implications for insurers. When aided by technology, a long-tail risk with human factors that would need to be litigated begins to act more like a short-tail risk like property. Such a risk can be more easily modelled, quantified, and verified without the need to resort to litigation as the first step to reach a settlement.

Several OEMs, many of them newer market entrants, are not only using sensor information and analytics to retain more risk, but also to develop in-house insurance offerings for their vehicles. Capitalizing on this level of risk knowledge generated by the product itself, these companies can provide and bundle insurance at the point of sale. To take this a step further,

drivers with safer behavior can be rewarded, while those with riskier behavior can be disincentivized. When driving behavior can be tracked, it can be priced in a very individual way, which is more equitable for both the insurer and the insured.

There are several OEMs building in-house insurance companies using embedded technology as a pricing input. In 2020, these included Movinx, a joint venture between Daimler and Swiss Re⁵², and OnStar Insurance, launched by GM.⁵³ Toyota had already been partnering with Swiss Re to risk-rate certain Advanced Driver Assistance Services (ADAS) technologies.⁵⁴ Reinsurers are clearly invested in this evolution, and retail insurers will likely follow.

With some OEMs investing in their own early stage in-house insurance companies, which can bundle insurance at the point of sale, traditional insurers writing personal auto liability may find themselves on a burning platform, with an acute need to evolve.



Interconnectivity is now expected by drivers. Whether driving their own vehicle or renting one, drivers expect to be able to connect to an interface where they can access their preferences — whether iPhone contacts, Spotify playlists, or navigation systems. In the

future, drivers may be able to take their loss history with them — just as easily as a music subscription — and plug it into a new or rented vehicle. Could auto insurance be as portable as an iPhone and individually risk-priced based on movement sensors in one’s personal mobile device — agnostic to personal or commercial use of the vehicle, where in the world one is driving, and agnostic to the vehicle itself?

These innovations are profoundly influencing business structures. The auto risk adviser of the future no longer deals solely with the head of finance — it’s the data monetization team at BMW, the head of digital innovation at Ford, and the car share group at a power utility, alongside the head of finance or general counsel — for example.

Many OEMs are changing the focus of their risk management function from controlling costs and managing risk to creating revenue opportunities by monetizing their data. Those building in-house insurance functionality are even now hiring actuaries. Tesla CEO, Elon Musk, went as far as telling investors during an earnings call: “We would love to have some high-energy actuaries... I have great respect for the profession.” An actuary could potentially use the Tesla balance sheet to insure and retain its risk, while for customers it could bundle insurance at the point of sale of the automobile itself. Vehicle performance data could then be used to help evaluate associated customer risks, which could be managed in partnership with capital providers.

There is also a lot of room for claims technology to be explored by OEMs. As well as retail insurance, they can explore captives to reinsure local fronts while allowing insurers in local territories to manage the retail end. There is also scope for OEMs to form relationships with rental car agencies, towing companies, repair shops, and others to lower the frictional cost in repairs. This could dramatically lower the cost of claims, creating an even more favorable environment for in-house operations.

Cars as a Service platforms present an opportunity and a threat

The rise and progression of tech platforms entering into the car-sharing space cannot be ignored.

New players are disrupting traditional sales and wholesale markets. For example, as noted earlier, Cazoo bought Drover in 2020 and then underwent a (de)SPAC on the NYSE in 2021. Pure-play car subscription or Cars as a Service business models also are aiming to disrupt the way cars are bought, owned, and utilized.

COVID-19 and broader social and environmental trends are also accelerating moves to “greener” asset-sharing models, with car sharing becoming more commonplace, particularly in inner city areas where such assets (especially EVs) can be expensive to maintain and are not fully utilized.

This presents major risk management and insurance hurdles, as well as opportunities.



Energy and power utilities catching up

The electrification space is one of the most dynamic, with utilities leading the way to sell more electricity to more people — including creating car share marketplaces and supporting automotive OEMs investing in or creating new electric car brands.

Take BP, for example, which has an entire division devoted to advanced mobility, and Shell which in January 2021 acquired ubitricity⁵⁵, the UK's largest charging network with over 2,700 street chargers.

Norwegian state-owned hydropower company, Statkraft, has also expanded into the electric vehicle ecosystem.⁵⁶ Already Europe's largest supplier of renewable electricity, in 2021 Statkraft acquired charging solutions in Sweden and the UK. Now under the Mer brand, Statkraft has expressed ambitions to scale.

This push into the electrification space has somewhat been driven by environmental, social, and governance (ESG) targets. In the US, for example, 2019 was a pivotal year as many utility holding companies committed to providing ESG reports, bringing their zero-carbon goals to the forefront.⁵⁷

This push for electrification and better ESG is as strategic as it is altruistic: sustainability is of increasingly growing importance to consumers as well as to shareholders. Today's investors are leaning their portfolios towards companies with better ESG metrics — some are even investing in sustainability-themed portfolios. Recent court cases and shareholder activism underscore this point, pushing companies further towards ESG accountability.⁵⁸

DIGITIZING PAYMENTS

At US\$4.8 trillion globally in 2020⁵⁹, more payments are being transacted digitally today than ever before. With the sustained impact of COVID-19, and availability of digital wallets like Apple Pay, AliPay, and WeChat, that number is rising fast. Mobility payments are not immune to this trend. We pay for rideshare, unlock e-scooters, and rent e-bikes all through our smart phones.

Mapping software allows journey planning across modes of transport — for example, an e-scooter, public transit, followed by a short walk — and if it is raining, that short walk may become a car share ride. If the e-scooter is unlocked and relocked with an app, the subway entered and exited using a digital wallet, and a car share ride started and ended on an app, the entire journey has a digital fingerprint. Furthermore, the various risk exposures on the journey can be segmented and allocated to each mode of transport in line with when they were started and ended.

Digitizing payments effectively digitizes risk exposure — which could have a profound impact on insurance pricing, rates, and the potential to reduce friction present in claims. The use of data collected from a person's digital journey could not only drastically improve the claims management process, but also create an opportunity for real-time individualized on-demand insurance.



SOCIAL COST-SHIFTING

With the rise of gig-labor facilitated by these new forms of mobility, some holes that have always existed in our collective social safety net to support workers have become even more apparent. The concepts of self-employment and independent contractors are not new. Creative artists, construction workers, taxi drivers, and more existed as freelancers long before smartphones made ride-hailing possible.

Digital companies providing wheel-based services have simply accelerated access to this type of work — and fueled demand on both sides of a marketplace. This phenomenon has provided access to income and flexible working schedules for millions across the globe. It also has shone a light on the vulnerabilities of laborers and the deficiencies of financial systems — including insurance — to support episodic work at scale.

For example, if an e-bike courier delivering a hot meal breaks a leg while on route, workers' compensation is not available to help with medical payments. And in countries with national healthcare, like the NHS in the UK, though the broken leg will be mended, there is still the question of lost earnings. These issues are also true of maternity leave and bereavement.

In a *New York Times* op-ed, Dara Khosrowshahi, Uber CEO, said, “The freedom to work whenever you want comes with a serious drawback: When the worst happens, too often you are on your own. There has historically been little to no paid support for independent workers if they couldn't work.”⁶⁰ This has huge implications for gig workers in their everyday lives, but the issue has been exacerbated during the global pandemic. It has affected couriers in the last mile delivery industry, rideshare drivers, independent contractors in the tasksharing business, and the list goes on.

Some government benefits, such as unemployment insurance in the US, are tied to an employer-employee relationship. By making gig workers eligible for unemployment insurance within the US\$2 trillion COVID-19 relief CARES Act⁶¹, some experts agree this further demonstrates how safety nets need to evolve. The future state is to center around the individual, not an outdated relationship between one worker and one company.

California voters overwhelmingly passed a law in November 2020⁶² that requires certain platforms (transportation and delivery network companies) to provide or make available certain benefits for app-based workers, including minimum earnings, healthcare stipends, and occupational accident insurance. A key feature of this legislation is that lost earnings due to on-the-job injuries apply to wages across platforms.

This is not just a US phenomenon. Three months after the new US law, a UK Supreme Court ruled that some Uber drivers who brought a case in 2015 were “employees” — giving them rights such as paid leave, national minimum wage, and more.⁶³ The debate is just beginning in the EU, where Uber published a white paper, “A Better Deal”⁶⁴, outlining a similar approach to support, including insurance, for gig workers there. While precedents have not been settled and none will apply uniformly, these are developments to watch and their variations will need to be managed.

Marketplace platforms are well-placed to manage this risk as they have data outlining how much each worker is earning. With their apps, they effectively have clock-in machines on all of their gig workers' phones. In the same way that digitized payments can lead to digitized risk, so too can digitized income be securitized and ultimately lead to a form of distributed portable benefits supported through a combination of public programs and private industry.

Beyond society's impact, this matters to a business's bottom line: Workforce “downtime” and a poor customer experience are poison to a mobility platform's reputation, and kills growth. There are strong fiscal reasons why digital companies may choose to provide or “make available” certain elements of “benefits” (small “b”) for an increasingly large portion of their labor pool. If platforms do not or are too slow, one can interpret the collective actions of states like California, countries like the UK, and transnational entities like the EU as effectively saying, “If you can't solve this, we will”.

Conclusion

The first wave of mobility startups were born on the heels of a financial crisis, and at the start of a smartphone boom — for example Uber (2009), Gojek (2010), and Deliveroo (2013). Now, with smartphone penetration up from 20% to 73% per capita in the US, and from 18% to a projected 83% by 2025 in Europe, the tailwinds have only gotten stronger. Each of these first wave companies is thriving and now operating at scale, globally, and has expanded into several adjacent businesses — from payments to last mile delivery, micromobility, bikes, e-scooters, and more. It's hard to imagine a world without the services they provide.

We are convinced that the next wave of successful mobility and sharing economy startups will be born from the current COVID-19 health crisis. They are likely already operating.

Successful companies likely will not look at risk and insurance as a “top three cost,” as many do today — but rather, as an opportunity to build trust and gain competitive advantage. By understanding global trends and managing downside risks, clear winners will emerge who will define how we move, share, and trust in the years to come.





Asia: Rise of the super apps

The rise of super apps in Asia is one of the most fascinating stories of innovation and success in the modern technological era. At the core of the success of these super apps — or digital marketplaces for services and other offerings — is a loyal customer base, high smartphone usage, digitally native customers, and affordable access to internet connectivity throughout Asia.⁶⁵ In this fast-paced consumer-driven region, the smartphone is at the core of consumer lifestyle, with younger populations readily purchasing services at the click of a button.

Platform evolution from the West to the East

In the West, platforms have been created to focus on one particular service, for example ridesharing, food delivery, or e-commerce. In contrast, super apps in Asia have evolved to service all facets of consumers' everyday lives, providing many digital services in one platform. A standout example of this is WeChat, which was initially created as a messaging app in 2011, and expanded into payments, social networking, and other core services. WeChat is now the dominant super app in China and has become a core part of people's habitual activities and patterns, with over 1 billion monthly active users.⁶⁶

Fertile region for super apps

The Asia landscape has provided huge opportunities for super apps to capture significant market share and go across verticals to secure deep customer pools. Some 40% of the world's Unicorns' value is generated in Asia, where more people have smartphones than bank accounts.⁶⁷ In Southeast Asia alone, there are 98 million underbanked and 200 million unbanked people, which has led to the rapid rise of e-wallets, P2P lenders, and the need to democratize access to banking and insurance products.⁶⁸

Inclusive mobility and sharing economy disruptors

Gojek and Grab are examples of Southeast Asia's largest disruptors — both super apps commenced their journey with a focus on transportation, before evolving to ecosystems that provide on-demand services including rideshare, food and parcel delivery, telemedicine, e-wallet, pay later, and wealth management services. These Southeast Asian tech giants are unique in their shared mission to drive financial inclusion for riders, driver partners, and micro SMEs, who play an intrinsic role in providing critical services on their platforms.

Data is king and is the new gold for the super apps and their strategic partners, as they consider entering into joint ventures to further ring-fence, consolidate segments, and capitalize on consumer needs. This is evidenced by the recent merger of the number one e-commerce platform, Tokopedia, with the number one super app, Gojek, to form GoTo Group in Indonesia.⁶⁹

As Asia begins its road to economic recovery following the COVID-19 pandemic, it will be fascinating to see whether there is a push for consolidation amongst platforms, as well as the expansion of services these super apps provide in the "new normal".



Europe: Car share moves forward

Whether an OEM, power utility, platform, or dealer, running a car sharing service in Europe requires solving several unique problems as every country operates differently.

Motor Third Party Liability (MTPL) is a heavily regulated form of insurance that is compulsory throughout Europe, yet how it works in each country can differ. Car sharing will typically not be covered under personal car insurance; to share the vehicle, the car owner will be required to have specific coverage through a separate insurance policy or supplement. In each country, insurance legislation needs to be accurately represented throughout the entire process, from the language used in the policy, to the claims that are filed in the case of an incident — and that process can be quite complicated when the use varies due to differing regulations across countries.

Technology can be an insurance enabler

Technology can be used to create a seamless digital experience and to innovate insurance solutions across business and personal uses — including car share.

- The use of applications and smartphones make this entire digital experience possible, utilizing the online world to connect lessors and lessees.
- Digital verification technology can unlock a seamless experience for a car owner to set prices and share access with a platform user.
- Tools such as a digitized experience, a user-friendly interface, and a digital First Notice of Loss, make possible the ability to find proper coverage that respects country-by-country car sharing market regulations.

What next for insurance?

When focused on rapid expansion, small local challenges may pose major threats to the growth of operations for a business. As insurance is a necessary tool for expansion, these regulations and barriers to enter the market cannot be avoided. Technology provides platforms with the capabilities to create bespoke insurance policies that abide by local regulation, and places an importance on consumer choice. The use of technology also facilitates trust between insurers and the car sharing platforms through the creation of these insurance solutions. With the correct tools in place, what once was seen by insurers as a complex, hard-to-insure market, is now an opportunistic space for growth.



UK: Gig worker reclassification risks

What used to be clear-cut demarcations of a worker's status — full-time, part-time, or contractor — has grown more complex as disruptive sharing economy and mobility (SE+M) companies have accelerated the change to more fluid and dynamic ways of working. This has been further complicated by the far-ranging economic and societal impacts of the COVID-19 pandemic.

The recent *Uber BV and others (Appellants) v Aslam and others (Respondents)* ["Uber"] UK Supreme Court ruling illustrates the ongoing challenges when defining "gig workers" and the benefits they may be eligible to receive.⁷⁰

In 2016, a small group of former drivers took Uber to a UK employment tribunal. These drivers argued that they worked for Uber — demanding additional worker status and rights — and won the case. Uber appealed the decision, but the ruling was upheld in December 2018. In early 2021, Uber lost its last appeal in the UK Supreme Court.

As a result, in March 2021, Uber announced that it would reclassify up to 70,000 drivers as workers, enabling them to receive, among other additional statutory rights, minimum wage, holiday pay, and access to a pension plan.⁷¹ Uber did not disclose how much this reclassification would increase its costs, but in a regulatory filing it noted that it did not alter the company's financial targets for the year.

According to many legal commentators, including the law firm BCLP, the ruling is not binding across the SE+M industry.⁷² As each SE+M company has different arrangements with its workforce, individuals engaged with their service platforms might not be classified as workers.

From a risk management and insurance perspective, and an ESG and brand value perspective, SE+M companies may need to re-evaluate how their workers are classified. They also may need to assess potential impacts: on employer's liability, workers' compensation, and similar policies and programs, including employee benefits liability and employee practices liability insurance; of offering more than the statutory minimum or more flexible employee benefits and related services; and of UK National Insurance Contributions (NICs) and retrospective backdating of disputed and/or applicable taxes.

The lack of clarity on how to reform employment status in the UK makes navigating the longer-term future challenging for all SE+M sector stakeholders. Collaborative approaches between SE+M companies, their internal/external advisors (including legal and public policy), and their risk and insurance partners will be key to achieving continuity of risk management and sustained insurance protection, compliant with the various regulations and laws.

SE+M companies also should take a holistic approach across risk management and insurance within their organizations, which can help ensure adequate protection for the dynamic workforce irrespective of classification or status.



About sharing economy and mobility

Marsh's global Sharing Economy and Mobility team is inventing new ways to insure and manage emerging forms of mobility, sharing, and trust for our clients. We help our clients mitigate the risk of innovation through creative approaches to insurance and risk management and deliver solutions seamlessly via our digital brokerage and servicing platforms.

We also collaborate with our experienced mobility services colleagues in Oliver Wyman and Marsh McLennan Advantage to provide integrated strategies and insightful thought leadership worldwide.

From mobility services, last mile delivery, and autonomous technologies to sharing assets and sharing labor, we deeply understand the opportunities, disruption, and challenges presented by a growing and complex range of emerging business and operating models.

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For more information about our sharing economy and mobility strategies and solutions, please visit [marsh.com](https://www.marsh.com).



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