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COVID-19: The future mobility delusion



A shock to the system

Beyond the panic and denial surrounding the initial stages of the coronavirus disease 2019 (COVID-19) pandemic, the world's short-term response naturally emphasised the health aspect of the pandemic, which was then followed by the mid-term realisation that one needs to 'get through' this in an economically viable manner that can ensure the solvency of the world economy. Only then is the economy able to refocus on the global long-term perspective. While the high-level approach of how to handle the pandemic overall was relatively clear to most governments, how to execute the script was less obvious and varied by regional specifics, especially as the speed of the impact left many governments, financial institutions, and companies shell-shocked.

With the prospects of future mobility in mind, let us simplify the situation by putting the pandemic solution at the centre: the vaccine. The end goal that represents some form of return-to-normality could only occur once a fully tested and approved vaccine becomes available not just to the happy few, but also in mass-volume to the global population. This is deemed possible only in about two years' time, so at best towards the end of 2022 or beyond. Any time before this will continue to be a highly sensitive and potentially contagious time for the world at large, in which intermediate solutions such as adjusting human behaviour or utilising technology will need to be embraced to safely navigate the world's population.

Pandemic grasp

Among the first observations that became apparent during the initial stages of the COVID-19 pandemic were the contradictions that the (automotive) world at large was faced with. While many governments around the world were scrambling to secure any personal protective equipment (PPE) supplies they could get hold of to support their medical frontline workers, numerous temporary car manufacturing plant closures resulted in manufacturers contemplating when they could safely re-start vehicle production even though the majority of globally available FFP3 masks – also required for vehicle paint shops – were effectively reserved for global medical care requirements.

Similarly, the often very restrictive lockdowns imposed by governments led to heavily reduced vehicle traffic, encouraging large parts of the population to embrace active mobility options such as walking or cycling instead of being 'personally owned car'-dependent. The implications of this could significantly affect the automotive and mobility sectors in the longer term. However, the more immediate effects that became visible was a noticeable reduction in vehicle accidents¹. This highlights a further paradox for the automotive sector as the OES/replacement component market suffers initially, but lower vehicle usage rates also imply that vehicles could potentially last longer and eventually requiring more maintenance and spare parts.

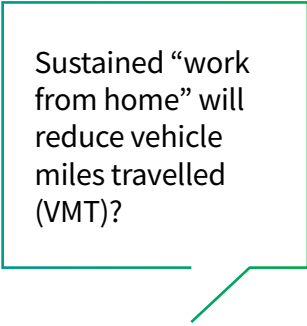
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¹ According to the British Government traffic during the lockdown was down by 75%; and British car insurers reported an almost 50% drop in UK claims during the initial lockdown. While in Russia the city of Moscow reported pre-lockdown that accidents had already reduced by 28% due to less people driving.

Societal impact

Arguably of greatest significance to the mobility sector could be the “work from home” (WFH) revolution that enabled so many businesses to continue their activities during the COVID-19 pandemic. If this becomes more sustained in the mid- to long-term future – which is a big IF – surely it will reduce vehicle miles travelled (VMT)? Let us think this through for a moment; in most large/mega-cities today the majority of commuters do not drive to their workplaces, but instead utilise public transit (PT) modes as traffic congestion and scarce parking availability (read expensive) effectively make driving ‘not an option’ for millions of commuters. So, will maintained WFH habits reduce VMT? Clearly there will be regional variations, as the United States, for example, only features a limited number of main cities where PT is a viable alternative option for commuters; in all other US cities VMT could indeed suffer². In many European cities selected demographics may decide to ‘leave the dense city’, which is perceived as dangerous and/or contagious and move to the rural area. But if the commute did not involve vehicle VMT and now they live in rural areas where vehicle usage is essential for shopping/medical/entertainment purposes, the VMT could actually increase.



Sustained “work from home” will reduce vehicle miles travelled (VMT)?

Other wider societal aspects in which the COVID-19 pandemic could manifest itself over the mid- to long-term outlook – from a mobility perspective – are similarly clouded with uncertainty at this point. Media reports from China³ suggest that prolonged home isolation measures could lead to higher divorce rates, which could potentially lead to more car sales as a typical ‘one car family’ might now become ‘two families in need of two cars’. Of course, this could be countered by increased usage of new mobility solutions instead, given that ride-hailing and car-sharing operators⁴ in China experienced relatively quick ‘return to almost normal’ business conditions.

A further, and more immediate, potential societal impact of the COVID-19 pandemic centres around the “lock down” measures and the often associated ‘track and trace’ initiatives to try to track and contain the number of infections. Could this potentially lead to more regulatory control over people movement and mobility providers for medical tracking and potential restrictions purposes? Perhaps it could pose an even greater opportunity for selected technology giants looking to exploit further mobility opportunities? Other technology companies might be keen to further push artificial intelligence (AI) camera-based solutions utilising light detection and ranging (LiDAR) sensors to enable surveillance tracking of social distancing compliance, possibly helping vehicle manufacturers to limit potential duty-of-care legal liability issues during the re-start of vehicle manufacturing operations. Either way, this could present a whole new business opportunity for LiDAR sensors, which might help to cut costs and further the advances of autonomous vehicle (AV) technology.

² Prior to the COVID-19 pandemic there was an approximate 5% WFH rate in the USA; during the peak of the pandemic this number jumped to close to 50% for the people that had the ability to work from home or could not go to work because of restrictions, resulting in an overall halving of American gasoline demand during the peak.

³ Chinese media reports from the cities of Xian and Dazhou reported record-high numbers of divorce filings in early March; while Shanghai’s Gentle & Trust Law Firm says divorce caseloads had increased 25% since the city’s lockdown eased in mid-March.

⁴ Didi Chuxing, China’s leading ride-hailing provider, announced early May that it’s ride volumes in China had reached 60%-70% of pre-COVID-19 levels. While Mobje Carsharing, jointly owned by FAW and Volkswagen, was back to pre-COVID-19 levels two and a half months after demand was hit by the pandemic.

MaaS on life-support

The previously booming Mobility-as-a-Service (MaaS) sector – such as ride-hailing or car-sharing – is currently facing its first global crisis, and the initial impact has been devastating to say the least. Recent Lyft and Uber financial releases suggest trip requests were down by between 75% to 80% respectively; while it is not as bad as the impact on PT at about 90%⁵ decline, it does highlight that the current ‘fear factor’ for MaaS is a major issue that could potentially derail the success story.

So far consumers around the world have been abstaining from MaaS apps and have been returning to the perceived safety of the personally owned car owing to the COVID-19 situation. In our view it is unavoidable that the growing reliance on personally owned cars will continue for the short- to mid-term outlook, especially as vehicle manufacturers will be keen to exploit this opportunity for perceived safety and cleanliness. Expect new solutions for vehicle interiors that fend off germs (especially for steering wheels, door handles, and high-grade air filters) as these will continue to amplify the safety of personally owned cars. Ironically though, these solutions will also become the enablers for MaaS to come back with a new, clean, and safe image until the emergence of a COVID-19 vaccine that could enable a re-birth of the MaaS sector. However, lately the only ray of light for the MaaS sector has been the growing success of food delivery and bicycle-sharing activities. Hence, the pursuit for the robo-taxi panacea – including for goods delivery – remains a high priority for the MaaS providers.

Technology roll-out trajectory off course

Even though the current oil price is in historically low territory, our future mobility solutions remain perfectly suited for electrification despite the COVID-19 outbreak. The pandemic highlighted the perceived contagion fear of handling the liquid fuel pump to fill up the internal combustion engine (ICE) vehicle. Even in times of exceptionally low oil prices most consumers are still likely to value safety, and this newfound fear could help to persuade drivers to safely ‘refuel’ their electric vehicle (EV) at home knowing that no strangers have handled the charger before them. Of course, in the short term we do expect some initial setback to EV penetration (depending on geographic region and fuel-efficiency regulation) as the pandemic did increase indebted consumer levels, which challenge EV affordability, and further policy support such as ‘green’ scrappage schemes could be necessary to further address this. But overall, the COVID-19 pandemic led to improved air quality, less traffic, and more active mobility. So gradually expect more consumers to put EVs on their shopping list in the mid-term by 2030.

Ironically, one of the beneficiaries of this trend could also include the automotive sector, as the COVID-19 pandemic also exposed the vulnerability of the world’s manufacturing supply chain, and as the EV typically comprises significantly fewer components compared with more complex ICE vehicles, it could help to simplify the supply chain.

Finally, another sector that appears to be affected by COVID-19 is the prospect of AV in the medium term. Paradoxically, instead of AVs transporting people, the 2020 image of AVs are robot-shuttles carrying COVID-19 test samples and/or equipment within a hospital campus: smaller autonomous robots disinfecting offices and metro stations or contactless delivery of essential food supplies. These new technology applications were highly visible in Wuhan and other major Chinese cities, where they facilitated people’s lives during the severe pandemic lockdown resulting in very high trust levels among the Chinese people. Now that contactless delivery has become critical in times of social distancing, the AVs seem to have found a more immediate usage-case that could appeal to a larger business community, but which could delay the originally planned roll-out for AV passenger cars significantly.

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The electric vehicle could help to simplify the supply chain

⁵ Transport for London (TfL) announced that tube/train usage declined by 95% during the peak of the lockdown; while bus usage declined 85% during the peak of the lockdown.

COVID-19 mobility resolution

In all it becomes clear that it is harder than expected to determine any lasting impacts on future mobility from the double-edged sword that is COVID-19. Nothing is as it seems! The COVID-19 constant fear of contagion, followed by waves of infections and finally, when it seems safe to return to some form of normality the automotive sector could get hit by what can best be described as the great mobility delusion. Hence, further research remains necessary, and IHS Markit is in the middle of a dedicated research programme uncovering exactly these and other issues; all centred around the themes of mobility channels, technology, remote working, personally owned cars, societal issues, and cities. Results of this research will be available during the summer of 2020.

For more information ihsmarkit.com/MobilityInsight

CUSTOMER CARE AMERICAS

T +1 800 447 2273
+1 303 858 6187 (Outside US/Canada)

CUSTOMER CARE EUROPE, MIDDLE EAST, AFRICA

T +44 1344 328 300

CUSTOMER CARE ASIA PACIFIC

T +604 291 3600

E CustomerCare@ihsmarkit.com

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