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INTRODUCTION

The impact of Covid-19 on the transportation sector has been huge. Ridership initially fell by 50–95%, and services cut by around 20–35%. And in addition to declining revenue, ensuring public safety has imposed additional costs.

Clearly, there are key challenges to be addressed in both the short and the long term. For an overview of how the sector is responding, Cobalt Search interviewed several senior executives in transportation companies in the US and UK. The pandemic presents an opportunity to review and improve transportation systems: to examine what is working, what isn't, and to redesign it for the better in a post-Covid-19 world.

RESPONDING TO COVID-19

First responses

There were three priorities for transportation companies following the Covid-19 outbreak. First of all, of course, was ensuring people's safety – the safety of front-line employees, customers and operators. This was backed up by securing personal protective equipment (PPE), reorganising and re-signing buses, arranging public messaging and deep cleaning.



'Number one for us has been the safety of our operators, employees and customers.

The company has invested \$500,000 in PPE and driver barriers etc.

and run an education programme for operators on the value of keeping safe, with follow-ups.'

said a senior executive in a California-based transit authority



Companies' second priority was keeping their businesses running, including doing whatever they could to avoid making lay-offs. Many staff were 'retooled' so that they could work from home, given leave of absence, or they had their hours reduced – although strong unions prevented some contracts being lowered below 35 hours per week.

'Employees that were uncomfortable working with the public through the pandemic were allowed to stay home, with their jobs and wages protected.'

Jarod Varner, a U.S. Transit Executive



To avoid lay-offs, many fell back to Sunday schedules. We also heard of transit authorities redeploying their extra operators to various community service programmes, including delivering meals and providing WiFi hotspots into areas without reliable internet connectivity. These activities have helped build more positive reputations during this time and demonstrated to the public that authorities are spending tax dollars positively.

The third priority for companies was looking ahead, exploring questions such as: What will be the impact of Covid-19 on future demand, and what kind of operating model would work in future?

'We've looked at the lessons that we can extract from elsewhere, such as the community approach adopted in New Orleans after Hurricane Catrina. We need to have a renewed interest in dynamic planning, listening to our customers and making improvements."

said Jarod Varner

The pros and cons of homeworking

Like many other industries, the transportation sector has taken advantage of IT-enabled remote working during the pandemic. Companies report it has brought about better, more frequent and more instant communication; increased staff availability (by streamlining meetings and eliminating commuting time) – and there are also some indications of increased productivity.

This is not to say that homeworking doesn't have its challenges. With people isolated and working alone, they need lots of support, and interaction and integration with their teams. Decision-making and line-management can also be harder.

'I'm a big advocate of leading by example, but it's definitely harder to lead from the front when there is no team physically around you,'

says Conner Burns, CFO and Treasurer at Hampton Roads Transit



Cobalt Search's view is that in the future a blend of both office-working and home-working will be the ideal solution, offering the best of both environments and a genuine work-life balance.



WHAT WILL THE FUTURE LOOK LIKE?

Predicting future demand

Public transport is likely to remain essential to our cities. Many of its users are people on low incomes, health workers, or those involved in keeping essential public services running. And there are the commuters too, although at this stage no-one really knows what proportion of commuters will return to working in city centres.

Ridership is starting to return – but ever so slowly. And in our interviews, the views on future trends varied widely. Some foresee a reduction of 80 per cent, or that it will take 6–18 months to get back to near normal. Others are more optimistic; after all, many of the customers are reliant on public transport and have no other option.

Jarod Varner believes:

'agencies that effectively match routes and service levels with demand should see ridership increase to be close to normal levels within 12 months.'

Whatever happens, understanding people's behaviours, and the reasons for them, will become an important requirement for transportation companies. So too will having contingency plans at the ready, either for localised outbreaks or a second wave.

'Those that can adapt well to change are going to be the successful ones; those that can't will be left behind,'

said Ken Pittman, VP Operations at Student Transportation of America

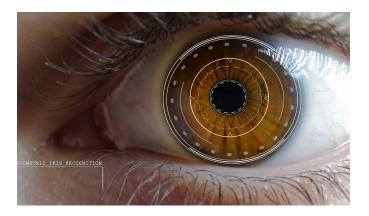


Keeping people safe from Covid-19

Keeping people safe will clearly be the biggest priority in the future. To help increase distancing, bus companies have already introduced more services. And in the near future we are likely to see limits on passenger numbers (introduced by the government) and a reduced schedule (with passengers having to wait longer – if only for a less-crowded bus). However, these changes will stretch companies financially, in particular when funding runs out.

Naturally, all companies have embraced rigorous cleaning and disinfecting, with hand sanitisers now ubiquitous. Mask wearing is now compulsory on all public transport in the US and UK – although several companies introduced their own policies earlier. Deep cleans of vehicles etc. is being undertaken by operators wearing full hazmat suits. And some companies have introduced UV light cleaning; it's automated, and at layovers or anytime the bus is turned off the lights turn on automatically. But all of these have imposed additional costs and meant employing additional staff.

A by-product of the Covid-19 crisis could be to accelerate automation of the travel experience. We may see the introduction of iris-recognition systems, which are already used at some international border controls.



In the quest for increased efficiency and cleanliness, 'Touch points' may disappear for ever, and so too 'Push' and 'Pull' doors. We could also see robots and drones equipped with UV lights continuously sanitizing surfaces. And a new air conditioning product is being talked of that can exchange a bus's entire volume of air within two minutes.

Impact on staff and employment patterns

New ways of working (i.e. homeworking and flexible hours) are sure to continue. However, some workforces may have to be trimmed, or shift patterns lengthened to cope with all the additional operational requirements.

'Ensuring adequate staffing and equipment to properly clean vehicles will be a challenge in future, I anticipate agencies will need to hire additional staff and invest in high-cost equipment to clean buses.'

says Jarod Varner.

There may also be some staff shortages, in particular for new drivers. In early June there was a backlog of 60,000 people whose road test was cancelled after the Motor Vehicle Commission closed its agencies on 13 March. And with ongoing uncertainties about the level of public demand, we may see a greater reliance on temporary and contract workers.

Some staff may also be slow to return to work – particularly if they are of high health risk or lack confidence about social distancing measures, and their enforcement.

Whatever the size of their future workforce, companies will need to maintain positive work attitudes among staff by building morale and engendering team spirit, and backing it up with good communication and a strong human 'touch'.

We have retooled everyone so that they can work from home – and have lots of online interaction, not just formal meetings,' said a Performance Manager at Keolis UK.

'In one of our initiatives, one of our employees who used to be a teacher regularly reads to other employees' children.'

And as the sector moves forward, it will need to embrace new technologies and address major issues including climate change. This will require recruiting people with transformation skills, and drawing on sectors that have experience of implementing large scale transformation projects.

Social distancing in offices will require physical measures, including changes to layout, lunch rooms and cafeterias – while taking care to maintain a positive work environment, where staff can meet, relax, get support, and raise any frustrations and challenges.

'No matter what happens, human communication and partnerships are essential to business growth and must always be nurtured,'

said Rick Ramirez Diaz, Director of Talent Acquisition at Keolis America.



Changes in transportation modes

People's fear of close proximity with others could lead to them seeking out smaller -scale, micro-transit options in future. Options such as ride-hailing (such as Uber, Ola and Didi), micro-mobility schemes (e-bikes and scooters), on-demand shuttles and car-sharing – not to mention increased cycling and walking. Driverless cars may get a boost for the same reason.

However, the experience of micro-transit during the pandemic has been mixed. Some flourished; some folded. And car-sharing and ride-hailing (where drivers were particularly at risk) were paused for social distancing reasons – although some companies pivoted into transporting food and other products for those with health risks.

Meanwhile, Covid-19's massive indirect benefits on the environment – improved air and noise quality, improved road safety, and reduced carbon emissions – could see an increased push for electric buses. Politicians and lobby groups are likely to seek to drive forward measures that will cement and safeguard these societal benefits.

Future road design could also be impacted: dedicated bus lanes and rapid bus transport can help maximise

low-density public transportation. Indeed, during the pandemic, some cities began using road systems more productively.

Maybe they were inspired by the two-lane busways introduced to Minneapolis-St. Paul by MetroTransit in 2009, which have decreased travel times through prepaid boarding, limited stops and specially designed stations. [4]

An increasing role for IT

Solutions for remote working and homeworking have come to the fore in the pandemic, and many companies are exploring how IT can be used more widely across transit.

The biggest debate is likely to be around fare collection. Most people see this as the end of the farebox, and its replacement by contactless payment or fare-less systems. However, neither of these is likely to happen immediately. Some passengers still don't have access to contactless payment; and some companies are more dependent on ticket revenue, so may resist the fare-less option.



And there may be wider possibilities for innovative IT. Al technology could be used for route-finder computer systems and drones might be employed for sanitising equipment. Cameras and surveillance systems may play an enhanced role in monitoring passenger numbers and movements – minimising queuing and human interactions [2]. And UV lights might be used for cleaning, and thermal cameras for identifying Covid-19 symptoms (as was done during the pandemic, in South Korea).

'We expect to be able to leverage data from people behaviours to help create better solutions,' said one of the Performance Managers from Keolis UK.



What future for public-private sector partnerships?

Public—private sector partnerships are the mainstay of some transportation projects, be it for their financing, construction, operation or maintenance. [3]

'They are incredibly important to the industry,' says Jarod Varner

He and others believe Covid-19 could well have positive impacts for the private sector, as they leverage their assets and resources to provide more services. Keolis feels the same way.

Another boost for the sector post Covid-19, is that Transport Authorities may be interested in outsourcing more of their services – and risks.

'I think there will be a big opportunity for companies like Keolis, MV and Transdev to secure more contracts and provide more services,'

concludes a senior executive in a California-based transit authority

Lessons from elsewhere

In the same way that none of us foresaw the scale of Covid-19's impact, few of us can confidently predict its longer term effects. However, there are two parallel incidents which provide experience to draw upon.

9/11

Following 9/11, there were notable effects on people's transportation patterns, as reported in research conducted by The Bureau of Transportation Statistics. These included: an immediate but temporary decline in highway travel, but no major decline in business travel and no effect on train travel. Travellers also switched from air to highways.

Psychological research found that people's increased fear led to higher perceptions of risk and increased precautionary behaviour. But while air travel initially took the major knock – and didn't recover for nearly three years – policy changes in accompanying transit procedures made air transport more secure and increased people's confidence. [2]

It is probable that Covid-19 will make people fearful of coming into close contact with others for a long time hence, and these fears will affect transportation during the 2020s. But for exactly how long remains unknown.

SARS

Ridership wasn't as badly affected by the Severe Acute Respiratory Syndrome (SARS) outbreak in Asia in 2003, which had an estimated impact on the global economy of \$40 billion. During the peak of the epidemic in Taiwan, there was a 50 per cent decrease in daily underground ridership. But within three months it was back up to its pre-SARS level – and across the region, air travel rebounded within roughly seven months. [2]



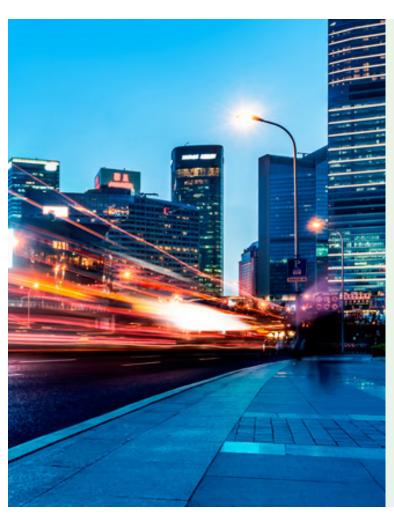
CONCLUSION

Transportation companies have responded quickly and innovatively to the public safety challenges of Covid-19 – by introducing homeworking/remote-working, advancing IT systems, and by improving their communications and services. Other safety improvements are in the pipeline, which we document and welcome.

But surely we cannot just go back to that pre-Covid world: the daily commuter gridlock and congestion, escalating climate change, and damaging levels of pollution. Rather, this could be the opportunity to embrace the clean, green agenda. For example, seeing how electric buses and micro-transit can harness the reduced pollution that occurred under the pandemic – as well as assisting in public safety.

The sector could have an important role to play in boosting economic recovery and employment. According to a report commissioned by the British Trades Union Congress, 'clean infrastructure stimulus' projects can replace jobs wiped out by the COVID-19 pandemic. It estimates that 19 projects would create 1.24m jobs in the UK over the next two years, including 289,000 jobs linked to transport upgrades. [5]

Moving forward will require vision, adopting new technologies, new skills and new ways of working and making some large scale transformations – but we are confident that the sector is up to the challenge.



With many thanks to a number of transportation executives including:

Conner Burns

CFO and Treasurer at Hampton Roads Transit **Rick Ramirez-Diaz**

Director of Talent Acquisition at Keolis America **Ken Pittman**

VP Operations at Student Transportation of America **Jarod Varner**

U.S. Transit Executive

References

We have drawn upon the following articles published in A Collection of Articles on Transportation in a Post Covid-19 World Assembled by IBTTA (April 2020): [1] Eby, B., How Might Personal Transportation Behaviors Change as a Result of Covid-19, and What Does That Mean for Policy?; [2] Liddell, D., Covid-19 could forever change how we travel—for better or worse; [3] Salo, R., Five Ways Covid-19 May Impact The Future of Infrastructure and Transportation; [4] Welle, B. and Avelleda, S., Safer, More Sustainable Transport in a Post-Covid-19 World. Also cited is [5] Rebuilding after recession; a plan for jobs, Trades Union Congress.

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