

CHATTING ROUND THE FIRESIDE - TRANSPORT TALES FROM THE PANDEMIC

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ABSTRACT

On 23 April 2020, one month after the UK Prime Minister announced a national lockdown in response to COVID-19, PTRC hosted an online Fireside Chat to address the implications for transport of the pandemic. At a point when working (full-time) from home was still relatively new for many transport practitioners, and when online events were yet to be normalised, over 600 people participated in this event. The panel discussion that took place considered the unprecedented shock that the pandemic represented for the transport system and its use. It was becoming apparent that this could be highly significant for the future of mobility.

This was, however, not to be a one-off event. Any hopes that disruption in response to COVID-19 might last a matter of weeks were dashed as weeks turned into months (and then years). The Fireside Chat event became a Fireside Chat series. The free-to-attend format, thought provoking orientation, and high-profile panels have proved popular. I have had the privilege of being centrally involved in the organisation of the series and have chaired and written up most of the events.

This paper examines the written accounts of the Fireside Chats to assemble a combined picture of key issues that have been and will be faced by the transport sector during and beyond the pandemic. It draws out overarching messages for the sector and contemplates what may lie ahead. Coverage includes: the plight of and prospects for public transport; the purpose and priorities ahead for our road network; the outlook for and importance of goods movement; the need to marshal the mutation of mobility towards a better future that has walking at its heart; the role of young professionals in shaping the future; the future form and function of modelling in the wake of the prolonged global behaviour change experiment; consequences of the pandemic in terms of the urgent need to decarbonise transport; perspectives on transport beyond white male privilege; and views from around the globe.

1. INTRODUCTION

This paper reflects on a journey of continuing professional development (CPD) that has taken place during the COVID-19 pandemic. Specifically, it considers the PTRC Fireside Chat Series and what key insights emerged from it.

The first death in the UK from COVID-19 was confirmed on 5 March 2020, as the number of cases exceeded 100. Following Government instruction on 23 March to the British people to stay at home, by 6 April the UK death toll from COVID-19 had exceeded 5,000 with over 50,000 reported cases¹. On 8 April I got an email from PTRC² asking if I would Chair an online chat about transport and COVID-19. Before March 2020 I had been leading a hypermobile existence. Online events were the exception not the rule. Little did we know how substantially things had shifted.

This proposed online chat we called a 'Fireside Chat'. The term is attributed to a series of evening radio addresses given by U.S. President Franklin D. Roosevelt between 1933 and 1944. Roosevelt connected directly with his public through these intimate sessions as he addressed the banking crisis, recession and the World War³. The PTRC event was intended to gather us together in our time of need. Around 1200 people within and beyond the UK registered for the free event, with some 600 attending on the day – 23 April 2020.

It was barely two weeks between receiving my email from PTRC and the event taking place. What a contrast to the lengthy build up involved in bringing hundreds of people together in the 'old' way.

The format worked well – a panel of experts holding a discussion in Zoom and broadcast to an audience in YouTube where people were able to 'chat' as the event proceeded and pose questions for the panel. I prepared a writeup of the event afterwards which was published on LinkedIn (and in turn in abridged format in CILT's Focus magazine), and linked to the recording available on YouTube (now viewed over 3,000 times).

It was clear that this engagement model had further potential as an agile means of addressing COVID-19 issues for the transport sector 'in the moment'. And so the Fireside Chat became the Fireside Chat *Series*. Between April 2020 and the 19th Annual Transport Practitioners Meeting in July 2021, 10 events have taken place. Each event has addressed a different topic – all bound together by the Series' focus on the transport implications from the pandemic. Working closely with Brogan McPherson at PTRC, I have been involved in co-organising and promoting all but one of them, have chaired seven of the events and written up

¹ Landmark details in this paper of the unfolding pandemic and societal responses for the UK are drawn from Wikipedia's "Timeline of the COVID-19 pandemic in the United Kingdom", starting with: [https://en.wikipedia.org/wiki/Timeline_of_the_COVID-19_pandemic_in_the_United_Kingdom_\(January%E2%80%93June_2020\)](https://en.wikipedia.org/wiki/Timeline_of_the_COVID-19_pandemic_in_the_United_Kingdom_(January%E2%80%93June_2020))

² <https://www.ptrc-training.co.uk/>

³ https://en.wikipedia.org/wiki/Fireside_chats

eight. It has been an absolute privilege. I've got to know (better) some wonderful people and shared in some inspiring conversations and insights into the richly complex world of transport at a time of upheaval and uncertainty. Over the Series there have been over 4,600 registrations to attend events (over 2,800 unique individuals), with over a third of people registering for more than one event.

Feedback from participants has included:

- *"it's a useful and thought-provoking source of CPD";*
- *"I've attended a few of the PTRC Fireside Chats over the past year, and found them to be highly relevant, thought-provoking and a valuable use of time";*
- *"I have enjoyed following the Fireside Chat Series over the last months - I have appreciated your nuanced perspectives, and learned much from the voices you amplify";*
- *"Some of fireside chats really caught the moment, and played a major part in addressing rapidly changing context";*
- *"I normally keep a look out for PTRC Fireside Chats as they discuss current and relevant issues with regard to the transport industry - there is a variety of perspectives from panelists in different fields, with different specialisms, and topics addressed - they are highly beneficial to my professional development within transport engineering";* and
- *"I've found the sessions really enlightening and they have all given me food for thought to bring into my professional and personal life".*

The remainder of the paper offers a summary account of each event in the Fireside Chat Series, and the concluding section offers some reflections on the Series as a whole and considers the challenge and opportunity ahead. To help readers who, from such summary content would like to learn more, at the back of the (electronic version of the) paper Table 1 provides links to the recordings and writeups of the events. Figure 1 (also at the back of the paper) shows the full 'Class of 2020-2021' – the speakers who have contributed to the Series.

2. AN EARLY ASSESSMENT OF THE PANDEMIC'S IMPLICATIONS FOR TRANSPORT

The first Fireside Chat took place on 23 April 2020, by which time over 17,000 deaths had been recorded in the UK. Prior to that on 16 April nationwide lockdown measures had been extended by at least three weeks. The day before the event, the Health Secretary had said to MPs that we were at the peak of the outbreak. On the day of the first Fireside Chat, the first human trials of a COVID-19 vaccine in Europe began in Oxford.

The first event was one of the earliest opportunities for a discussion about what implications we might be seeing from the pandemic and the societal response to it.

The conversation considered the short-term changes that had already been seen and what the future might have in store. The pandemic was illustrating how, *“given a big enough stick, a greater proportion of people have been able to change their behaviour”* (Sunita Mills) - a lesson for policymakers when looking to the future. There was optimism that temporary changes concerning reallocation of street space from cars to active travel might be a sign of things to come and that *“hopefully those won’t be temporary changes”* (Sonya Byers) and would help support diversity and inclusion.

Would a new mindset emerge from the pandemic creating an opportunity to fast-track further reallocation of roadspace? There was hope that the pandemic was giving people a different perspective on modal hierarchy – *“all the things we’ve been saying in policy terms, now’s the time to put them into practice”* (Brian Deegan). The question would become, what views do the wider population hold - *“do we like it, shall we keep it?”* (Brian Deegan). The backlash there would be from some quarters about ‘Low Traffic Neighbourhoods’ later in the pandemic was not yet apparent.

There was a strong sense that *“this is a paradigm shift – none of the normal assumptions we make in transport planning hold true anymore”* (Alison Irvine). Of course, at this point we were only at the outset of having entered uncharted territory. Three challenges were apparent and all very demanding (especially for frontline players in the mobility system): (i) dealing with the here and now of the unfolding shock; (ii) dealing with transition out of COVID-19 (which I sensed at that point many transport professionals were underestimating in terms of the length of transition time); and (iii) shaping the future of mobility in the medium to long term. These challenges really needed to not only be confronted but seized as opportunities to effect real, positive and lasting change – *“we have a great opportunity now to be able to do something different; we shouldn’t lose this opportunity, even though we are in a difficult climate at the moment”* (Karen Agbabiaka).

What would become of infrastructure projects in the appraisal pipeline in the face of a paradigm shift? *“If this situation has taught us one thing it’s that we’ve got enough capacity for cars and we probably don’t need to carry on trying to build more capacity”* (Sunita Mills). The bounce back in car traffic so apparent a year later was not yet on the cards in this conversation.

What place do transport planners have in the pandemic and emerging from it? It was suggested that *“it’s a key time for transport planning with a strong need for our skills”* (Fintan Geraghty). Tim Gent in the audience had referred to transport planners having superpowers and it was indeed suggested that *“transport planners should be seen as superheroes, and we should provide the leadership that we know that we can do”* (Alison Irvine). Yet would this sense of opportunity and agency in the profession stand the test of time as the pandemic continued? Big issues remained to play out and be understood, including: whether the pandemic would exacerbate social inequality and exclusion; and

whether car use would thrive on cheap oil prices and on social distancing being a deterrent to public transport use. Could public transport respond to much greater flexibility in working practices? Would it 'bounce back' to pre-COVID levels of use? Such questions (particularly from a vantage point early in the pandemic) were reflective of an acknowledgement that *"in terms of scale of the challenge and where we are going to go to next in terms of what the new normal might look like and how those scenarios play out, the level of uncertainty is massive"* (Alison Irvine).

3. THE DEATH KNEEL FOR PUBLIC TRANSPORT?

The second Fireside Chat took place on 18 June, 2020 with a focus on the implications for public transport, and especially buses. On 5 June, the number of recorded deaths from COVID in the UK had passed 40,000; over the following two days, anti-racism demonstrations took place across cities in the UK (relating to the murder of George Floyd in the US – returned to later in Section 9). On 15 June (with non-essential shops reopened in England), wearing a face mask became mandatory on public transport with Government messaging being "avoid public transport if possible" but also "you must wear a face covering if you have to use public transport". We found ourselves in the remarkable position of being told that public transport was a risk to public health (in spite of a lack of clarity over whether or not this was indeed the case). These were sombre and volatile times.

Passenger numbers had fallen dramatically in the face of the lockdown. While buses, especially in rural areas, are not known for always operating to capacity, the sight of 'ghost buses' running empty had been eerie. Concerns were already apparent relating to the viability of public transport services, with a short-term dependence upon increased public funding to continue running, alongside early indications that social distancing could result in a car-led recovery. It was clear that while public transport may be on its knees, it would need to be fighting fit to address the future mobility challenges of climate change and social inequality. Indeed, *"if bus and coach services are not restored and improved, a once in a lifetime opportunity will have been lost as we return to the confused and contradictory transport policies of the past"* (Nick Richardson).

With reduced services, pre-COVID efforts to revitalise public transport had received a major blow from the pandemic. With a public anxious to make sense of how to behave, the announcements from Government were troubling for the industry – *"in times of crisis ... people listen very very carefully to what the Government says and that's quite right too - but that's obviously a challenge that we have"* (Martin Dean). A 2-metre social distancing rule was massively reducing the carry capacity of public transport, even where demand existed. Yet frustratingly the industry had responded strongly in terms of the safety of the travelling environment - *"I think it's today more dangerous to go shopping in a supermarket than using one of our buses"* (Catherine Chardon).

A Government message for those needing to travel of “[i]f possible walk or cycle or go by car” highlighted the issue of choice (‘if possible’). Bus drivers were now keyworkers themselves and responsible for getting keyworkers, who did not have the choice of going by car, to and from their workplace. The pandemic had *“really accentuated the existing fault lines of inequalities in transport...we’re definitely weathering the storm together but we’re not necessarily all in the same boat”* (Heather Allen). It was apparent that for public transport to respond positively to the consequences of the pandemic and its aftermath, it would need to have more diversity of perspective (especially regarding gender) and accommodate the changed and changing future circumstances in people’s lives, including a (much) greater level of flexible working. Looking back to when today’s industry leaders were starting their careers, *“everybody was taking the same bus at the same time at the same bus stop every day... this is over, this is definitely over”* (Catherine Chardon).

There seemed a dual challenge for the industry of getting the market back and getting the margins back to remain commercially viable. This may be in the context of a smaller future market and one with a very different composition. Yet buses remain vital for social inclusion - they are agile and can go where other modes cannot or choose not to go, ensuring deprived areas have mobility solutions. There is also racial discrimination alongside inequality to consider. The very public space that public transport occupies (disproportionately relied upon by black people compared to white people) makes it an environment where discrimination can play out. *“I think it’s in the DNA of the industry – it has to be tackled...it cannot be ignored and it’s happening now ... be it for a customer or an employee”* (Jane Cole).

The session strongly demonstrated the weight of responsibility that is on the shoulders of public transport as a service that supports society and the diversity of individual needs. Living up to this responsibility will be helped by adding strength through diversity in the industry – pursuing diversity because it is not only the right thing to do, but good for business.

4. THE FUTURE OF ROADS

A month later, following more easing of restrictions in England, the third Fireside Chat on 16 July 2020 turned to consider what we want from our roads as we emerge from the pandemic. On 8 July a £30bn spending package had been announced by the Chancellor aimed mitigating the economic impact of COVID-19. On 14 July the Government announced that face coverings would be mandatory in shops in England from 24 July (over a month after becoming mandatory on public transport).

This Fireside Chat, Chaired by Steve Gooding, was to commemorate 70 years since the foundation of the Rees Jeffreys Road Fund in 1950 - eight years before the first stretch of UK motorway opened – a network now covering 2,300 miles.

Earlier in 2020, the Government's £27bn Road Investment Strategy 2 had been published⁴, as had the framework for its Transport Decarbonisation Plan⁵. Taking both together, the stage was set for considering the future of roads.

While the lockdown had taken traffic levels back to those recognisable in the 1950s with a sense of a moment to contemplate a new normal, by July with restrictions eased, car traffic was already on the return – *"maybe with traffic already rapidly returning, that moment has slipped past us; let's hope not"* (Steve Gooding).

In terms of enabling our roads to contribute to a better quality of life and tackle the climate emergency, one message was 'stop building more of them'. *"My number one priority is let's stop making things worse, let's stop building more roads"* (Lynn Sloman), allied to reallocating roadspace to public transport, cycle lanes and wider pavements to help tackle the climate and obesity crises (and address poor air quality, from which the pandemic had provided some temporary reprieve). Roadspace reallocation was recognised as something needing guidance and an area which is proving challenging in the heat of the pandemic, albeit that *"the vast majority of the schemes are getting really positive feedback and surprisingly positive feedback in some cases"* (Rachel Skinner). There was support for ensuring that roads catered for a diversity of societal needs – *"let's try and make sure this is a future for every one of us rather than just some of us"* (Ginny Clarke).

The early panic buying of toilet rolls in the pandemic was a reminder of the need for roads (and kerbsides) to support goods movement as well as people movement now and in the future. *"We don't move stuff for the sake of it, we move it because someone somewhere ordered it; and when we take the rubbish and recycling away it's because someone somewhere created it so as our population grows so does our demand for goods"* (Natalie Chapman). Freight is often taken for granted, and fittingly it became the subject of the following fourth Fireside Chat on 23 July (see below).

Technology could be a key part of making better and cleaner use of the roads we already have, but who would be paying for this and achieving the advances needed? This was seen to be a dual responsibility for Government and industry – the former providing pump-priming and direction for the latter then investing. There were concerns over inequity as solutions emerge at scale, for example with richer people taking advantage of electric vehicles and benefitting from infrastructure changes paid for by all taxpayers. Meanwhile, would public transport's predicament considered above leave it on a commercially viable footing to offer attractive services on our roads after the pandemic? Perhaps

⁴ <https://www.gov.uk/government/publications/road-investment-strategy-2-ris2-2020-to-2025>

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/932122/decarbonising-transport-setting-the-challenge.pdf

this was the wrong question - *"I don't think we should think about our public transport network as something which is defined by whether or not it's commercial"* (Lynn Sloman). Road user charging was seen to be part of the picture for the future of roads. Further still, given the proposed move forwards to 2030 for the ban on new petrol and diesel vehicles (which would later in November be confirmed by Government) *"we need to be thinking about this very soon"* (Sujith Kollamthodi).

Are experts in tune with what the public want from their roads? This is a moot point in the state of flux caused by the pandemic and with economic recovery and a climate crisis in front of us. Engagement will be needed on this but the answer may be *"a mix of what people want and perceive they need versus the opportunity to provide something which actually in some cases might be even better"* (Rachel Skinner). Planning for the future of roads (which is more than just building big infrastructure) will also benefit from a diversity of people and perspectives in the highways sector itself and there is a clarion call to attract them *"we have the biggest challenge of our lifetimes - here [in the UK] transport is the sector of the economy which is now the biggest carbon emitter; somehow we have to get those emissions down dramatically in the next 10 years"* (Lynn Sloman); *"the next 10 years has to be radically different if we're going to find some solutions"* (Ginny Clarke).

It was notable that on the day of the Fireside Chat, Greta Thunberg had challenged all EU leaders in an open letter saying "Net zero emissions by 2050 for the EU – as well as for other financially fortunate parts of the world – equals surrender". The Fireside Chat panel was unanimous in its agreement with this, setting a clear tone for the future of roads, as we emerge from the crisis of the pandemic to face the greater crisis of climate change.

5. GOODS MOVEMENT MOVING INTO FOCUS

Swiftly following consideration of the future of roads, on 23 July 2020 the fourth Fireside Chat addressed the fortunes of freight including the decarbonisation challenge. This was chaired and written up by Alan Braithwaite.

As epitomised by the panic buying of toilet rolls (touched upon above), one of the early effects of the pandemic was to remind society of its (taken for granted) dependence upon goods being available where and when they are needed. The question arising is whether or not the dependence upon, and importance of, goods movement would remain something in focus beyond the pandemic?

Rail freight saw one of the silver linings of COVID-19 – with reduced traffic on the rail network associated with a sharp drop in passenger travel, (longer) freight trains were running very reliably and more efficiently moving goods. With rail freight having lower carbon intensity than road freight, perhaps the

importance of rail for goods movement was becoming clearer and might offer some easing of pressure on goods movement by road.

With a lot of 'mothballed' capacity in the sector (associated, for example, with a 60% reduction in activity at the start of the pandemic for ports and a total loss of air freight in passenger planes), it was unclear to what extent and in what (new) ways that capacity might come back into use in future. The industry was expecting a long period of uncertainty but with a view that perhaps there would be a shift from just-in-time and 'lean' operations to seeking more resilience with 'more inventory being a natural defence' against uncertainty and disruption.

With such low barriers to entry for road freight, it was being envisaged that there would be scope for new entrepreneurial activity in response to changing circumstances and requirements. An anticipated silver lining from the cloud of unemployment that was expected as a consequence of the pandemic was a possible increase in driver availability to address the shortage the industry has been facing (though at the time of writing in July 2021, the Secretary of State for Transport has just relaxed rules for how long drivers can work "as a temporary fix for a severe shortage of qualified heavy goods vehicle (HGV) operators")⁶.

In terms of decarbonisation, key issues include consumer preferences as well as the actions of public authorities in promoting particular technological solutions and business model solutions through regulation. Whether consumers' green awareness translates into changed preferences and behaviours in relation to price remains to be seen and information and communication may be key here. In terms of technological solutions, electrification of vehicles in cities was the obvious direction of development. However, the Fireside Chat conversation at least showed little appetite for hydrogen for long distance freight while implications of 'wiring the motorways' to become electric roads were not clear.

Addressing decarbonisation of freight will go hand in hand with the industry adapting to the consequences of the pandemic. At the point of the Fireside Chat it was felt that consequences could include: sustained new high levels of online retail needing to be supported; changed high-streets with depleted business and reduced property values with re-purposing of buildings to residential, hospitality and logistics; and reconfiguration of streets to support active travel.

6. THE PROSPECTS OF A STEP CHANGE

The UK saw lockdown restrictions eased further over the summer and as September arrived, the majority of schools in England, Wales and Northern Ireland were reopened. Yet days later it was apparent that cases of COVID-19 were (again) increasing exponentially.

⁶ <https://www.theguardian.com/world/2021/jul/07/working-hours-rules-to-be-relaxed-to-ease-uk-lorry-driver-shortage>

With the pandemic having forced most of the population into 'living locally', the fifth Fireside Chat on 17 September 2020 addressed walking with a panel who someone referred to as 'walking royalty'. Two months earlier, the Department for Transport had published "Gear change: a bold vision for cycling and walking"⁷. While talk of a modal hierarchy puts walking at the top (alongside wheeling), it seems that walking always struggles to get the top priority in practice that it is meant to deserve. On 31 August the Government had also launched a consultation on pavement parking in England – don't hold your breath for an enforced outright ban (though I'm still holding mine at the time of writing). On 13 September Sir David Attenborough was narrating for the BBC documentary 'Extinction: The Facts'. We need walking to be unashamedly prioritised as part of a movement to tread more lightly environmentally. So, what views were expressed in the Fireside Chat about the fortunes of walking in light of the pandemic?

The pandemic has helped ease walking into people's consciousness (again) and given more people the experience of walking in their local environments, at points benefitting from reduced motor traffic levels. Yet this has also highlighted huge inequalities of experience: some places are well-planned for walking with proximity in mind while others are planned around the car. Once again, the unevenness of the pandemic experience is exposed, with walking a mental health lifeline for many during lockdown. It was suggested that building back better from the pandemic should mean understanding that more space for walking is the innovative solution that will help our cities rebuild and restore our economy whilst protecting lives, cutting dangerous pollution and at the same time increasing community spirit and local pride - *"a green and just recovery is the only way we can dig ourselves out of this hole"* (Chris Martin).

It's baffling that walking is still the poor mobility relation given that it's *"fun, free and one of the easiest ways to be more active and become happier and healthier"* (Hana Sutch). Perhaps it's because it's not new and shiny and there is no money to be made – there is *"little scope for people to sell you stuff before you go out and do it"* (Chris Martin). *"We went and spoke to a few investors and they all pretty much laughed me out of the room and saying a walking app, you're not going to make any money, it's not going to make any difference"* (Hana Sutch). Even within the active travel sphere, cycling quickly dominates over walking in professional discussion. *"It is often amazing - you have to pull them back and remind them: walking too"* (Natalie Grohmann). Indeed, it can even be suggested that *"walking should always come before cycling"* (Susan Claris).

In our streets, often movement prioritises motor vehicles. Social distancing rules have highlighted how space is prioritised: while car drivers typically have a space next to them in the vehicle and space between them and other vehicles,

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904146/gear-change-a-bold-vision-for-cycling-and-walking.pdf

pedestrians can be crammed on narrow pavements which are also occupied by parked cars (and wheelie bins). In passing, the Fireside Chat panel was unanimous in its support for a nationwide ban on pavement parking in England.

By the time of this Fireside Chat, (temporary) Low Traffic Neighbourhoods (LTNs) had become a source of controversy with the farcical sight of protestors able to march in their streets complaining about LTNs because of the absence of traffic due to LTNs. A problem here would appear to be that while the majority may support such roadspace reprioritisation, this is not vocalised, or vocalised effectively – *“it seems to be easier to express objection (to change away from car-centric streets) than it is to express support”* (Susan Claris). Objection may be founded upon nostalgia and self-interest. *“Schemes are getting sunk by a small number of highly motivated older people quite often who drive a lot, who are mourning the loss of their parking spaces”* (Pete Zanzottera).

So what did the panel think the next 3-5 years had in store for walking? It was seen as key that cities continue to thrive and helping them thrive should have walking at its heart. There are opportunities to create more friction in the immediate future, allowing people to experience and express views about reorganisation of space in their neighbourhoods. There is an opportunity here in front of us *“to capitalise on this groundswell of newfound love of walking or rediscovery of walking”* (Natalie Grohmann). Yet there was also a concern over the poisoning of public discourse already becoming apparent regarding such opportunity. Given the state of flux we are now in because of the pandemic, the key is to *“marshal the mutation”* (Chris Martin) and shape our cities appropriately, with walking at the heart.

7. GENERATIONAL PERSPECTIVES

On 24 September and with cases soaring, the UK coronavirus alert level was upgraded to level 4, meaning transmission was "high or rising exponentially". New restrictions were introduced the following day. A survey of 2,000 people aged 16–25⁸ indicated that 44% have lower aspirations for the future following the pandemic. In early October, the number of recorded cases of COVID-19 in the UK had passed 500,000.

On 15 October 2020 the sixth Fireside Chat took place. It was chaired by Ed Downer (who also produced the writeup) and brought together early career professionals from the Future Transport Visions Group⁹ (FTVG) with former early career professionals from the Transport Visions Network (TVN) that ran from 2000 to 2003. This was an opportunity to appreciate the importance of the voice of early career professionals within wider debates and responses to a changing world: a world that was being changed by the impact of the digital age

⁸ <https://www.bbc.co.uk/news/business-54329554>

⁹ <https://www.ftvg.co.uk/>

at the start of millennium, and a world now being changed by the global shock of COVID-19 and the imperative to address the climate emergency.

Reflections from the TVN representatives (Nicola Kane, Ali Clabburn and Greg Marsden) included that: (i) in the era of the TVN, as now in the pandemic response, infrastructure and technological change receives more attention than social change; (ii) then as now, there is a tension between individually-oriented personal mobility and community-oriented shared mobility; and (iii) sustainable transport has remained a key issue and priority, with today's prominence of the environmental agenda already anticipated 20 years ago by the TVN. A sense, then, of perennial issues facing the transport sector.

In response, FTVG representatives (Clare Linton, Laura Menendez Gonzales and Daniel McCool) emphasised how central climate change and environmental awareness was to them as early career professionals with the decarbonisation agenda front of mind. Their energy, enthusiasm and activism were not, however, necessarily being matched by the actual progress around them in the wider sector. The TVN panellists could relate to this. Moving from ambition to delivering change was not easy, with the frustration that many of the changes and solutions needed are already identified but just not being taken forwards (to the extent needed).

The FTVG panellists, while recognising these frustrations, were optimistic about new opportunities for change, including the catalyst of the pandemic itself. The plausible homeworking future the TVN had contemplated 20 years ago was now in play during the pandemic (capitalising upon two decades of digital age advances), accompanied by greater prospects for active travel, together providing opportunities to 'live local, act global'. Technological developments in connectivity and communication since 2000 might now provide a means to 'unlock' and implement old ideas in new ways.

Younger and older panel members were in agreement that the laborious processes of the last 20 years - in consensus seeking, analysis, decision making and action - needed to change now in the face of the decarbonisation challenge. Early career professionals have an important opportunity to introduce a more disruptive dynamic in the sector. This may come from a greater open-mindedness and a willingness to learn from outside the sector. Such disruption could now be coupled with the state of flux created by the pandemic to really create an opportunity for positive change. Just as the TVN young professionals had, in hindsight, been able to demonstrate foresight about the time we are now living in, so too must the profession recognise the importance of the voice of early career professionals today.

While early career professionals may feel daunted by the prospect of being agents and communicators of change, the panel felt that they could in fact be more effective than some more senior professionals – able to strike a chord with the silent majority of the public who would welcome change towards truly more

sustainable transport and liveable communities. TVN panellists reflected on how valuable the ‘fellowship’ of young professionals created by TVN had been for them in building confidence and collegiality at an early stage in their careers (when digital networking was much more clunky) and throughout their careers. Looking forwards, change is desperately needed. A new fellowship is to be greatly welcomed - as Greg Marsden put it *“it takes a long time to change an industry; it’s really important to get your voices into the debate early on in your career. We’ve got some very difficult changes to make and we need to bring everyone with us”*.

8. ALL MODELS ARE WRONG

On 5 November 2020 a second national lockdown came into force in England, ending on 2 December with return to a three-tier system of restrictions. Also on this day the UK became the first country in the world to approve the Pfizer/BioNTech COVID-19 vaccine. The following day, marked by the number of COVID-related deaths in the UK passing 60,000, the seventh Fireside Chat took place, focused on transport modelling. It had this question in mind: with the system shock of the pandemic further exacerbating a state of flux in trends affecting transport demand, how on earth is the world of transport modelling coping?

To spur on our panel (referred to as modelling royalty), I had highlighted the quote from George Box that “all models are wrong, but some are useful”. I also ventured to suggest that it stood to reason that what followed was a conclusion that “all models are wrong, and some are useless”. It did the trick.

Uncertainty about the future has likely (I cannot say certainly) deepened as a result of the pandemic. While it may have commonly appeared that our transport models exist to give us ‘answers’ about the future, they now – more than ever - need to be understood and used rather differently. *“We need to wean ourselves off the idea that our models can predict the future”* (Charlene Rohr). We need models of a form that can fulfil a function of helping us to think, to ask ‘what is going on here?’, and then in turn support our decision makers.

Phil Goodwin was quoted by Helen Bowkett on the panel: “good models will tell you a lot of things that you already knew; and a few things that you haven’t thought about”. Models can be used as explorative tools to help us think. *“What am I learning through the process of building a model; and then through using the model and looking at what the model is bringing to my attention?”* (Helen Bowkett). Modelling concerns the model but also the modeller. *“If there’s anything wrong with models, I think it is the way in which we’ve used them, and particularly the way in which we have used model results, and sometimes misused model results”* (Tom van Vuren). It was agreed that perhaps a fitting new quote would be “all models are wrong but they can usually be usefully used” – provided that the right underlying philosophy was in place regarding

their role in robustly planning in the face of uncertainty. In this regard, purpose was important with a need *“to go back to basics in our understanding of why we’re modelling”* (Tim Gent).

Politicians are still hungry for answers – answers which can no longer be confidently based upon predictions. This calls for modelling to be able to help examine different possible futures and how transport interventions may perform in these. With more scenarios to be explored comes a call for simpler, quicker models that can fulfil this role. However, the ultimate challenge is how modelling insights are translated into information that can be clearly communicated to decision makers to avoid the temptation to be drawn back to the appeal of assuming a ‘most likely’ central projection future. This is not trivial. *“I think having tried to explain to a minister, why a project is a good idea when you’re looking at three different scenarios, it’s actually remarkably difficult to explain”* (Amanda Rowlatt). When it comes to scenarios about the future, ministers want *“to hear a simple story that they can get in their heads and intuitively understand”* (Amanda Rowlatt).

Modelling is *“very much a mix between art and science”* (Charlene Rohr) – and a product of the modellers involved and the assumptions they make in building and running the models. In this respect, diversity in the makeup of the body of transport modellers is important. A strong sense also came through from the discussion that thinking philosophically about modelling is what changes a good modeller into a great modeller. Such thinking includes being able to reach beyond the limits of data availability and to appreciate the different forms of modelling from quantitative to qualitative and the importance of dialogue.

Goods movement – as was apparent earlier in the Fireside Chat Series – can be the ‘Cinderalla’ of transport planning and it was recognised that freight is not dealt with at all in many of the models or is dealt with superficially. This seems troubling in a world where we appear increasingly reliant upon goods being delivered to us in a connected society and with a need for such deliveries to tread as lightly as possible environmentally. *“We’re going to need to spend some time actually thinking about it, which we don’t”* (Tim Gent).

When asked whether this pandemic period would be significant for shaping the future of modelling, all but one of the panel felt it would. While this may seem encouraging to many, the reason for one panel member thinking otherwise may be cause for concern: best intentions as we emerge from COVID-19 may lapse with a reversion to simply collecting new data for the same models. Nevertheless, *“the pandemic has illustrated the uncertainty that I think a lot of people didn’t feel really existed”* (Charlene Rohr). In light of this there was real opportunity for thinking in fresh ways about modelling and having the confidence to build trust with the wider transport profession in using the models that we have better: to ‘explain and explore’ the complex world out there.

9. COVID-19'S ROLE IN ADDRESSING CLIMATE CHANGE

Nearly a year after the first recorded death from COVID-19 in the UK, we were still in the pandemic. However, by 24 February 18 million people in the UK had received their first vaccination. For the eighth Fireside Chat on 25 February 2021, attention turned to the topic that had come up throughout the Series: climate change (with less than 10 months until COP26¹⁰ in Glasgow).

Earlier in the week of the Fireside Chat the UK Prime Minister set out a “roadmap to cautiously ease lockdown restrictions in England”. What a contrast with the very different type of roadmap we need to rapidly bring about systemic change in the transport sector if we are to draw down levels of greenhouse gas emissions at the pace required. After several largely unheeded warnings of danger ahead, the pandemic is the equivalent to delivering perhaps the last opportunity to the captain of the Titanic to change course before disaster strikes. Indeed, it could be seen as even forcing the ship to change course, at least temporarily. Yet what should or could lie ahead? Has the pandemic reminded us of our capacity to adapt; or are the economy, livelihoods and people’s mental health so battered that we will crave our old freedoms and resent any government looking to bring about uncomfortable, even if manageable, change?

A car-led recovery from the pandemic at any cost is not tenable – to achieve the level of decarbonisation needed requires a reining in of car use supported by accompanying targets. This comes into conflict with an ever-increasing sense that car as a mode has already bounced back strongly from the initial impact of the pandemic. It is crucial instead to embrace a green recovery that can make both good environmental sense *and* good economic sense. Yet doing so will be far from easy - *“the fact that successive governments have failed to put a penny on the price of fuel duty for over a decade despite record low oil prices is an indication of just how difficult this is going to be”* (Claire Haigh). Public transport’s capacity to play a part in such a recovery is not clear (as considered earlier in the Series) – the operating model of fare-box reliance is broken and in the wake of difficulties experienced during the pandemic needs a rethink. There are challenges too (again discussed earlier in the Series) regarding how to rebalance the use of our streets away from the dominance of the car. The pandemic and the associated transport measures introduced (and related communication experimented with) have helped open up an important, albeit fractious, conversation about what our streets should be for.

Speculation is rife concerning what the future has in store for globalised living. It is reasonable to assume there will be no bounce-back for international aviation from the pandemic, reinforced by a newfound experience of business interaction through the screen rather than via time and resource hungry travel. Aviation’s hopes of being part of a green recovery also seem slim with “no

¹⁰ <https://ukcop26.org/>

credible way to zero emissions for long-haul aviation by 2050 outside of the completely murky world of offsetting” (Andrew Curry). There are meanwhile exciting prospects of new dynamics and norms of working but it is not yet clear how these will play out – and how they do may be as much to do with power and control as with working arrangements themselves.

The climate emergency we face is coming into ever sharper relief and unlike the pandemic, this is a *“global emergency without a vaccine” (Bob Moran)*. Yet while there are many reasons to sense that hope may be fading regarding a mobility future changed radically for the better by the pandemic, there are also grounds for some optimism. There is political appeal to ‘the economy and the environment’ rather than ‘the economy or the environment’ and *“the whole agenda and climate around green business and green investment has changed really really radically in the last two or three years” (Andrew Curry)*. Also, one of the recent eye-catching commitments is by Transport Scotland to reduce car kilometres by 20% by 2030 (compared to pre-pandemic levels). This reflects a significant extent of ambition but also how the global climate emergency *“is crystallizing minds” (Brendan Rooney)*.

In the heat of the pandemic, the UK Department for Transport has been developing its Transport Decarbonisation Plan (TDP) whose publication at the time of writing is eagerly anticipated, in advance of COP26. With reference to the adage *“things take longer to happen than you think they will, and then they happen faster than you thought they could”*, the TDP may catalyse change that builds momentum. It is possible that *“in future years we will look back at this time and say, gosh, wow, that was the time that we can pinpoint when we really got to grips with climate change, the year of COP in Glasgow... the TDP was a step change, it signalled that people had got a grip and pushed through change... and you did all that at the same time as you were dealing with COVID as well” (Bob Moran)*.

Communication (as seen before in the Series) is going to be key - *“it's important to have a narrative that the data fits into, that the evidence fits into” (Rachel Aldred)*. Such a narrative can help join together different aspects of problems and solutions; without such a narrative, people may struggle to believe that things can change and to have faith in the steps being taken. Low Traffic Neighbourhoods have been an important example of the communication challenge but also opportunity; yet in this, our politicians needs support – for local councillors engaging with the public on difficult issues *“I think it's an incredibly difficult job, it's a lot of work and it's not very much money” (Rachel Aldred)*. Part of the post-pandemic communication agenda about climate change is about bringing it back to wellbeing and a ‘my world’ conversation that helps people identify real benefits for themselves and their families. *“You get much further when you talk about the trade-offs and the wellbeing outcomes and distribution of losers and winners than do talking about individual policy instruments” (Jillian Anable)*. There is also something to be said for giving the public regular climate crisis bulletins that inform them of steps being taken and

progress being achieved, as has been the expectation in relation to the pandemic.

10. BEYOND WHITE MALE PRIVILEGE

White male privilege has been a defining characteristic of the transport profession which has in turn shaped the transport system used by others – the majority of whom are not white and male. We don't have the results of the March 2021 census for England and Wales yet; but the last census in 2011 revealed that 51% of the population were female; and 14% of the population (nearly 8 million people) were not white. If you've ever had the experience of walking in someone else's shoes, you will know how very different things can appear and feel when you change position.

For the ninth Fireside Chat on 15 April 2021, attention turned to women of colour in an attempt to better appreciate the true importance of diversity and inclusion in the transport profession and in turn in the design and use of the transport system. At a personal level as a white male, there were developments during the pandemic that opened my eyes profoundly and this Fireside Chat quickly became the most important of all the events in the Series for me.

In terms of white privilege, George Floyd's murder on 25 May 2020 and the Black Lives Matter protest globally that followed exposed my own ignorance concerning the nature and extent of institutional racism, and how lacking my education had been in this regard. In terms of male privilege, being introduced by Stephen Cragg to the book 'Invisible Women' by Caroline Criado Perez¹¹ was a shocking exposure to how over half the population is all but ignored – including within transport system developments.

The killing of Sarah Everard in early March 2021 prompted a national outcry. She went missing after leaving a friend's house near Clapham Common to walk home. Her death provoked protest about a society in which women do not feel safe, and may not be safe, alone outdoors. Like many others I'm sure, I discussed with female family members their own longstanding feelings and experiences which seem to remain significantly, if not entirely, invisible to the system, and to the dominance of white males presiding over it.

When we talk about a 'new normal', this must surely be an opportunity to think about a more *inclusive* new normal – in transport's case, a sector that can respect and embrace diversity and in turn one that can help shape a more inclusive transport system for the future.

¹¹ <https://carolinecriadoperez.com/>

I cannot do justice within this crowded paper to the richness of the conversation we had in this event or the bountiful insights and reading list that emerged. Please watch the recording and/or read the writeup. Here are the headlines:

- Transport touches, and is fundamental to, most people's lives - a transport system is not successful if it is not supporting the needs of a diverse society.
- Race and gender are all around us in our daily lives - they may be invisible like oxygen, but like oxygen, they are an essential part of life on this planet.
- The pandemic has highlighted inequalities and prejudice but it may also have created a state of flux and introspection that provides a chance to move towards a more inclusive new normal.
- If you haven't tested your eyesight lately when it comes to seeing race and gender issues in transport, the resources are there, you just need the time and inclination to make use of them.
- There is great value in becoming self-aware of how different things can be when you change position (including looking beyond white male privilege).
- Beware of having an orientalist mindset in which you impose generalisations about country, race and culture in ignorance, with a saviour mindset linked to inherent privileges and biases – seek training to raise your cultural intelligence.
- Empathy is important but do not be presumptive - ask, don't assume (it's a false economy to do otherwise), and certainly don't presume to tell others when in ignorance of their own legitimacy of perspective.
- On a fundamental level, equity and design of inclusive transportation systems cannot be addressed without a representative workforce, without people who bring in more diverse perspectives.
- Workforce turnover is a crucial dynamic through which to help change the makeup of the profession for the better, provided that the approach to recruitment and promotion is consciously (if not unconsciously) competent regarding matters of diversity.
- The race and gender data gap is very real - if we are going to have a user-based perspective on supporting travel that meets the needs of all in society, we need to understand the diversity of users and collect data that supports this.
- We need to move as individuals from unconscious incompetence regarding racial and gender inequality towards becoming unconsciously competent in how we behave to promote more inclusive transport.
- Don't be a bystander when it comes to addressing diversity and inclusion, be an upstander – it's never too late to speak up and start

conversations – and this applies especially if you are white and male: be an ally and don't be afraid of making mistakes (learn by doing).

Our panel were thoughtful, passionate and authentic in their sensitive articulation of the many important insights above. They were as follows: Nishma Mistry; Sarah Barnes; Georgia Yexley; Jannat Alkhanizi; and Stephen Cragg.

11. GLOBAL PERSPECTIVES

With the importance of diversity on our minds, the tenth and final Fireside Chat in the 2020-2021 Series that has accompanied me through the pandemic (to date) took us to global perspectives. While the online and free to attend format of the Series had been attracting an international audience, our panels had been UK-based. Yet the pandemic is global. The impacts of the digital age are global. The threat from climate change is global. How absurd it would be for us to presume we could all but ignore over 99% of the world's population¹² by focusing our attention 'only' on UK-based panel discussion of such profound issues affecting transport and society. This event which took place on 27 May 2021 was a chance to make amends, with representation on our panel from Australia, Nigeria, the United States, Chile and India.

At the time of the event at least, the impact of the pandemic in Australia had been much less. Nevertheless, there has been a greater normalisation of homeworking, a huge increase in telehealth services and greater use of public spaces. Car use was now at pre-pandemic levels, in a country where *"the proportion of households with three or more cars is going up"* (Kate Mackay).

With a population of some 20 million, Lagos is the most populous city in Nigeria and second most populous in the continent of Africa – not far short of the entire population of the continent of Australia (about 25 million). Life in the city is reliant upon the informal economy – *"everybody needs to go out to go and work for something they will eat today"* (Emmanuel Mogaji). This in turn puts huge pressures on road transportation, added to by instable electricity supply and internet connectivity in homes (where available) obliging people to travel to work.

The United States has seen a change of President since the start of the pandemic and is a country that has a stark urban and rural divide in terms of lived experience and world views. Essential workers (those assuring continuity for others of health, sanitation, food acquisition etc.) are especially reliant upon public transport and have been vulnerable during the pandemic, in a country where society and infrastructure are designed for the car. Yet ironically, *"we have 50% of the population at any given moment that doesn't have a driver's*

¹² The UK makes up less than 1% of the world's population - https://en.wikipedia.org/wiki/List_of_countries_and_dependencies_by_population

licence doesn't have access to a car, or doesn't have the money to spend on fixing that car, or putting fuel in that car" (Robin Chase).

Chile has experienced three shockwaves in quick succession: public revolution (due to a small rise in subway fares on the Santiago metro in a country with stark social inequality), a political and constitutional crisis (with preparation of a new constitution for the country underway, prompted by the revolution) and then COVID-19. *"It's been like a century since 2019 I think for everyone, and especially in the case of Chile"* (Juan Antonio Carrasco). The issues of inequality and lack of dignity started to become even more prominent as a result of the pandemic. It was found for example that 80% of the wealthiest 20% could telework, while only 20% of the poorest 20% could telework. Transportation is a huge dimension of the inequality with half of households not owning a car and reliant on public transport, often in sprawling city contexts.

For India, over the weeks preceding the Fireside Chat, the pandemic had once again taken aggressive hold with over 300,000 COVID-related deaths recorded, 100,000 of which were within the last month¹³. Like Nigeria, in India (with over 17% of the world's population) a high proportion of its workforce is informal; and working from home does not work: *"they are totally dependent on public transport, walking and cycling infrastructure"* (Sarika Panda Batt) – in a country where 98% of the infrastructure is built for cars when it has only 2% of global motor vehicles. With motor vehicles bringing air pollution and road traffic deaths, motor vehicle sales (including two-wheelers) have gone up post-COVID because people still have to go to work; with many people pushed (further) into poverty.

From such glimpses of life from the round-the-world there was a real sense of just how wicked the problems are that we are facing and trying to address. There is no 'technology fix' answer to these – restoring greater equality, greater dignity and greater opportunity to thrive in healthy, sustainable ways calls for fundamental socio-political change. Even where sustainable transport intentions are pointed to in policymaking, there appears a stark policy-implementation gap in significant parts of the world, with a lack of systems thinking. Current infrastructure continues to serve the car at the expense of wider multi-modal opportunity to support the needs of the majority and under-privileged. Are we to remain perpetually caught in a cycle of optimism and disappointment when it comes to making transport more sustainable and better able to support a fair and dignified society? Electric vehicles appear to be the easiest political answer to addressing transport without apparent appreciation of the wider systemic problems of which the car is a part – *"we are doubling down on climate and equity mess that cars brought to us"* (Robin Chase).

Balance of power is key in looking to what happens to addressing social justice and climate change as we emerge from the pandemic – *"we cannot be naïve*

¹³ https://en.wikipedia.org/wiki/COVID-19_pandemic_in_India

about these dimensions of power” (Juan Antonio Carrasco). In Australia’s last federal election, with jobs and the economy on the agenda, “the party that got into power with a sizeable majority got in essentially on an anti climate change agenda” (Kate Mackay). Addressing climate change and the solutions on offer can be at odds with swathes of the world’s population that are more concerned with meeting their day-to-day needs and for whom solutions are out of reach. For example in Nigeria, many people cannot even afford a car to put petrol in, let alone one powered by electricity and “you don’t even have enough electricity to power your freezer in the house, would you now use that electricity to power a car?” (Emmanuel Mogaji).

It seems that when inequality and lack of dignity create sufficient discomfort across enough people, revolution may be coming to redress the balance of power. Referring to an address to executive office staff in the White House under the Obama administration, when asked whether climate change and income inequality could be addressed by evolving the current system or would need a revolution, *“with their eyes open 60% said it’ll take a revolution, and that made me not sleep for three days” (Robin Chase). If we are to make progress in the current system then we urgently need to “plan for the mass, not for the class” (Sarika Panda Batt).*

12. REFLECTIONS

If you have got this far in reading the paper – thank you. There has been an enormous amount to cover in attempting to share the breadth and depth of insights from the Fireside Chat Series. The series has punctuated and indeed defined my own journey through the pandemic. It’s been a journey of sharing – coming together around a digital fireside to meet some remarkable people and draw upon their experience and wisdom at a time when we are all united by the global shock of COVID-19.

It has been and continues to be an unprecedented time of reflection as we bear witness to a state of flux in our lives and societies. The Series has touched upon some big topics that are fundamental to the future of transport, though by no means comprehensively covered the full nature and extent of the complex socio-technical system that as transport professionals we seek to understand and influence. The magnitude of the issues is almost overwhelming when you become absorbed in them. In this time of reckoning, they conjure up a mixture of hope and fear.

I am particularly proud of our efforts to embrace diversity in the Fireside Chat Series. In all the events I’ve been involved with we have never had a ‘manel’ and indeed women have made up at least half of the panel and often more. Diversity is more than a matter of gender. Ethnicity is another dimension that has enriched our conversations and insights during the Series. We have not been tokenistic. The calibre of our panellists as experts in their fields is a reminder

that if we consciously work to encourage diversity in our debates, a richness of talent and perspective is available.

Diversity really matters in a world in which social inequality is never far away. Inequality and discrimination have recurred throughout the Series as a signal that we can and must do so much better in shaping a transport system that can support future society. For all that the motor age has done for some in society, the externalities and unintended consequences now surround us in countries around the world. Technology alone is not going to address the wicked problems of car dependence, social inequality and climate change that we face internationally as we emerge from the pandemic. As transport professionals we face great challenges but have a tremendous opportunity to influence the current dynamics if we are upstanders and not bystanders for the need for a just and green recovery.

For me the Fireside Chat Series has been time consuming and at times exhausting, from the organising and promoting with Brogan McPherson to the events themselves to the writeups afterwards. However, it has been one of the great privileges of my career. As many others have noted, the Series has been a source of continuing professional development as well as a chance to come together in the midst of a pandemic. I've found it an unparalleled learning experience and a reminder to remain hungry to learn and to learn from others with different perspectives.

So, is this the end of the road for the Series? Well, perhaps not, but let's see. It is, after all, an uncertain future.

13. ACKNOWLEDGEMENTS

My thanks to PTRC and especially to Brogan McPherson with whom I've worked closely throughout the Series, sharing in the challenges and delights along the way. I owe thanks to Mott MacDonald who sponsor my position at UWE Bristol and have made my investment of time in the Series possible. Our audiences have always been lively and their support and enthusiasm is much appreciated. Most of all, thanks must go to the many wonderful people who have willingly given their time to join the Fireside Chat panels and bring their richness of insight to the discussions. Any misrepresentation or error in the paper is my own responsibility.

TABLE 1 – EVENT DETAILS

Event date	Title of event and link to YouTube video	Title of writeup and location on LinkedIn (with further links where appropriate)
23 Apr 2020	Coronavirus and the future of transport planning	<ul style="list-style-type: none"> • As we face the greatest fight of our professional lives we need transport planners with super powers • Abridged version in CILT's Focus magazine
18 Jun 2020	Social distancing – the death knell for public transport?	<ul style="list-style-type: none"> • Public Transport: Overcoming social distancing to help ensure people are not socially excluded • Abridged version in CILT's Focus magazine
16 Jul 2020	What have the roads ever done for us?	<ul style="list-style-type: none"> • Never waste a crisis: rethinking what we want our roads to do for us • PDF version
23 Jul 2020	Freight and Logistics: Post Covid-19 & zero carbon – unpacking the 6 'C's	<ul style="list-style-type: none"> • Freight and Logistics in the context of Climate Change and Covid-19
17 Sep 2020	And don't forget walking: taking steps out of the pandemic	<ul style="list-style-type: none"> • And don't forget walking: taking steps out of the pandemic • PDF version • Abridged version in CILT's Focus magazine
15 Oct 2020	Reflections from emerging and established transport professionals	<ul style="list-style-type: none"> • 2020 Vision: The role of young professionals in shaping the future of transport (writeup by Ed Downer) • Abridged version in CILT's Focus magazine (pages 28-30)
03 Dec 2020	All models are wrong... especially after a pandemic	<ul style="list-style-type: none"> • All models are wrong...especially after a pandemic • PDF version
25 Feb 2021	COVID-19: Friend or foe for decarbonising transport?	<ul style="list-style-type: none"> • Transport decarbonisation – will the pandemic help us change course in time? • PDF version • Abridged version in CILT's Focus magazine
15 Apr 2021	Diversity of perspective on the implications of COVID-19 for transport	<ul style="list-style-type: none"> • The chance for a more inclusive new normal in transport • PDF version
27 May 2021	International perspectives on a global shock: where now for transport?	<ul style="list-style-type: none"> • After the revolution? • PDF version

FIGURE 1 – FIRESIDE CHAT SERIES SPEAKERS

