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The Review

North American Edition
Issue 22
Dec 2021

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A Steer publication
Published by Steer Davies & Gleave Ltd. trading as Steer, 28-32 Upper Ground, London, SE1 9PD, UK.

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Investing for future generations

By Neil Chadwick

The Department for Transport has been consulting on whether it should extend the appraisal period for transport schemes beyond the current 60 years. At the root of the question is the recognition that some transport interventions have a life longer than the appraisal period and can continue to give benefits long after the 60 years that are considered. How should this be captured when coming to a view on value for money? Over recent weeks Steer considered the question and its implications and submitted a response.

Our opinion is that the long-term costs and benefits of a transport investment should be considered when decision-makers come to a view on its value for money. However, we do not believe that extending the appraisal period beyond the current 60 years is the way to do this. We believe alternative approaches to extending the monetised appraisal period beyond 60 years would be strongly preferred.

We developed this view for a number of reasons, which we summarise here:

- **Inherent forecasting uncertainty:** Models can only look so far into the future before forecast uncertainty is so great that there can be little confidence in the numbers that are produced. The longer the look into the future, the more uncertain are the forecasts.
- **Reliance on extrapolation:** all appraisals rely on extrapolating from the last forecast year. The longer the appraisal period, the greater the proportion of the Present Value of Benefits (PVBs) which is simply an extrapolation from the last forecast year and the greater is the importance of assumptions on inputs to the appraisal including the growth of population, GDP and values of time. Such assumptions are themselves inherently uncertain and therefore the longer the appraisal period, the less certainty there is in the PVB, regardless of our confidence with our forecasting models.
- **Compounding (multiplicative) effects:** The assumptions used to extrapolate benefits interact and have multiplicative effects. The assumptions are applied to forecasts that are also uncertain. Errors compound over time.
- **The profile and scale of costs:** The longer the appraisal period the more important the assumptions made on on-going maintenance and renewal costs. However, there are considerable uncertainties around these which increase the longer we look into the future.
- **Changing technology, operations and competition:** Our appraisals assume that the infrastructure being appraised delivers the same outputs in the final appraisal year as it does in the final forecast year. They also assume that the competitive position is also largely unchanged. For example, a generalised minute's advantage of rail over road has the same impact in the last forecast year and the final appraisal year. Both these positions are implausible, but with a 60-year appraisal have a limited impact on the assessed PVBs and Present Value of Costs (PVCs).

Extending the appraisal period places greater weight on an implausible position.

- **Value for money thresholds:** In our view, the value for money thresholds that are used to assess whether schemes are poor, low, medium, high or very high value for money should be a function of the applied discount rates and appraisal periods. It is important to consider not just social returns on investment, but also how long it takes for those returns to occur. And the increased inherent uncertainty of costs and benefits when assessed over a longer appraisal period also suggest the need for higher Benefit Cost Ratio (BCR) thresholds. Extending appraisal periods should therefore also require a rebasing of the value for money thresholds. In general, with a longer appraisal period because of forecasting uncertainty and the greater impact of extrapolation from the last forecast year on the BCR, we find it difficult to see sufficient reasons to adjust the view on value for money of an intervention even if the BCR increases.

- **Stakeholder perception and credibility:** Longer appraisal periods will mean that greater proportions of PVBs are extrapolations beyond the last forecast year and more of the BCR is explained by the assumptions made to make the extrapolations. Our view is that appraising over a longer period will undermine confidence in appraisal, not increase it.

Our conclusion is that the appraisal period does not have to be extended to allow the long life of certain assets to be considered when coming to a view on value for money. We suggest that the Department focus its efforts on increasing confidence in the appraisal system that we have currently and work with decision-makers to help them interpret the Benefit Cost Ratios produced to allow a broad-based assessment of value for money. We have put forward a number of suggestions that may help with this.

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The post-recovery aviation industry and its implications for airport management and policy

By Steve Van Beek

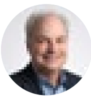
For over 30 years, the [AAAE Aviation Issues Conference] has brought together the most notable aviation professionals, top-level government officials, and representatives from all sectors of the aviation industry for in-depth discussions on key issues that will help set the agenda for the coming year.

[Steve Van Beek], Steer's Head of North American Aviation, recently spoke to AAAE's Board of Directors and Policy Review Committee at the 35th Annual Aviation Issues Conference held in Kauai, Hawaii.

In his remarks, Dr. Van Beek summarized commercial airlines' traffic recovery, examined issues of concern for U.S. airports and aviation stakeholders, and identified issues regarding the upcoming reauthorization of the Federal Aviation Administration and its programs in 2023.

Download the presentation.

Please reach out to Steer if you have any questions or comments about the presentation.



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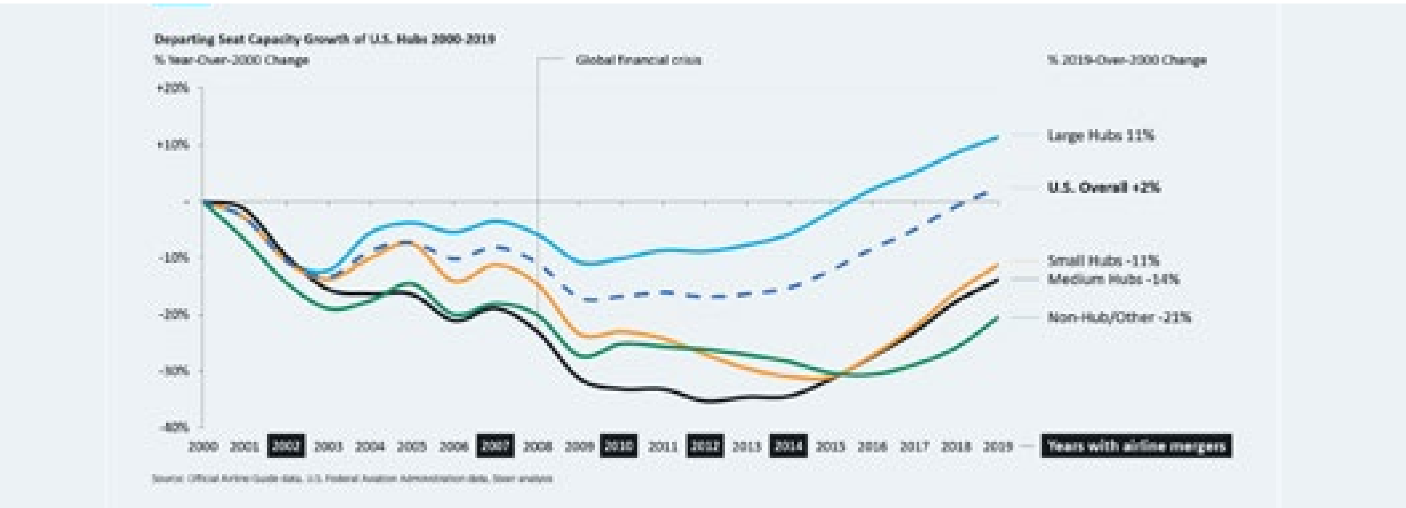


The economic value of air freight services

By Peter Wiener

Air freight is of great importance to the UK economy, as Steer has demonstrated in the study we undertook for Airlines UK in 2018 (with support from Heathrow Airport Limited, Manchester Airports Group and the Freight Transport Association). During the COVID pandemic, in strong contrast to the performance of passenger air services, air freight has held up relatively well, with a fall of only 32% at London Heathrow airport (normally by far the dominant air freight hub for the country) compared to a 65% reduction in passengers to the end of August (CAA data). At two of the other largest freight-handling airports, East Midlands and Stansted, freight volumes have actually increased.

In 2017 belly-hold cargo at Heathrow accounted for over 60% of total UK air freight volume, with forwarders and shippers utilising its extensive intercontinental passenger network. Over 30% of total air freight was shipped on US routes and most of the remainder on Asian routes. Freighter and integrator cargo was concentrated at East Midlands and Stansted, which together accounted for over 20% of all UK freight and the majority of freighter (60%) and integrator (79%) activity. Integrators accounted for over 90% of freight at East Midlands. At Stansted, integrators FedEx and UPS were the largest cargo airlines, although intercontinental freighters such as Qatar Airways, Cargolux and China Southern also accounted for a large share of volume.

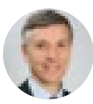
While air freight is relatively small in volume terms, it has high value. In 2017, the UK's non-EU trade classified as being transported by air accounted for over 40% in terms of value but under 1% of total trade in volume terms (with sea accounting for over 98%). Air freight represented 49% by value of non-EU exports (£91.5 billion) and 35% by value of non-EU imports (£89.9 billion).

Many of the products with a high share of UK trade value transported by air, such as aircraft engine parts and power-generating machinery, have a high share of both import and export value, likely reflecting the global nature of these industries' supply chains and manufacturing processes. One exception is pharmaceuticals, which account for a significant proportion of export (but not import) value.

In estimating the economic value of air freight, there are two different but complementary perspectives. The first approach is to estimate the traditional measure of economic impacts on employment, income and GVA of the air freight industry and associated services. The second approach is to estimate the wider economic impacts of air freight, sometimes referred to as "catalytic impacts", which consider how air freight facilitates economic activity in other sectors.

Using the first approach, we estimated that the air freight industry (including indirect and induced impacts) supports GVA of £7.2 billion, 151,000 jobs and associated income of £4.1 billion (2017 data and prices). Using the second approach, we estimated that £87.3 billion of national GVA was based on air freight exports, representing 5% of the total GVA measure of national output (£1,747 billion in 2016).

The air freight study was presented to policymakers in the House of Commons and was well-received across the political spectrum. It represents an excellent example of how Steer's expertise contributes to discussion and understanding across the industry, based on our independent and fact-based approach.



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Is flexibility the answer?

By Fabrizio Carippo

Undoubtedly, the COVID-19 pandemic has imposed a sudden stop to our daily routine and reshaped our mobility needs and priorities; we have all started wondering what mobility trend will remain once the global emergency is over. A variety of different scenarios have been identified in relation to mobility trends and new transport behaviours for the short, medium- and long-term horizons.

Our perception is that crisis and all that it entails, including fear and anxiety, can heavily influence our judgement. Nevertheless, Governments have been called to quickly reshape the future of mobility based on transport users' new needs and behaviours, and local authorities are asked to connect the dots and complete a picture that is currently blurry.

We can all acknowledge that the future is unlikely to look like it did before and that we are not going back to the same pre-COVID normal, but in reality, nobody knows what the future will look like. However, if there's one simple and universal lesson we have all learnt from the pandemic, it is that the flexibility and the ability to adapt our behaviour in a quick and efficient way will be the key for whatever future we're likely to face.

Global experts have begun to track trends for the predictive future: part of them will be confirmed over time, while others will disappear simply because people tend to forget. Future trends such as working from home, de-urbanisation, change in travel patterns, and economic disparity growth have been heavily analysed but, at present, no one is in a position to quantify their real impact, especially in the longer term where it is likely that our decisions will not be influenced by restrictions imposed by authorities or by the fear of infection.

Central and Local Governments across Europe have been asked to propose short, medium- and long-term visions needed to design new and sustainable mobility systems. Macro factors to consider are:

- **the effect on travel behaviour of changes** in lifestyle, social interactions, and economic conditions
- **the impact of new technologies** and innovation will be crucial to speed up the process of reshaping the future of mobility by creating new forms of transport or providing real-time (multimodal) information and/or new mobility solutions for users and authorities.

For this new challenge, a multidisciplinary vision is required based on a new approach focusing on the concept of flexibility and resilience. Flexibility, where possible, may represent the key to design and implement agile mechanisms that can quickly respond to unpredictable and/or unexpected changes.

There are multiple applications of the flexibility concept. These include:

- **Flexible public transport service contracts** – regulatory uncertainty could increase in the next few years, and local authorities, which are about to launch new tendering procedures for the concession of public transport services, will be asked to design new service contracts without having a clear picture of how mobility demand will react. The introduction of new flexible mechanisms in the service contracts may allow rewarding operators despite changes in volume of services and of demand.

- **New and flexible lower-cost transport modes** – loss in revenue and simultaneous increase of unitary costs may speed up the introduction of new and flexible lower-cost transport modes, with the involvement of interested private partners aimed at reducing the mileage operated by public transport operators on those routes with lower load factors.

- **Flexible working hours** – the ongoing economic downturn, which is impacting public transport operators, could benefit from lower future capital expenditure (rolling stock) and operating costs, mainly driven by the number of drivers to be reached through the introduction across Europe of new policies aimed at promoting, where possible, well organised and flexible practices in working hours.

- **Flexible transport systems** – The Recovery Plan will allow Member States to finance sustainable mobility systems and new transport infrastructures. Each Government, rather than proposing PPM (Pre-Pandemic-Made) projects, need to think about the real benefits of new fixed and capital intensive transport modes such as tramways versus more flexible and equally environment-friendly solutions such as e-buses, which bring the advantage of being more easily relocated over the territory in relation to potential and unexpected changes in urban mobility patterns and demand over time.

- **Development of new urban management systems** – Central and Local Authorities will be forced to embrace new forms of technologies to access data in real time across all the mobility systems to optimise flexibility among mobility flows and asset management. In the same way, public operators may reconsider their future offer by introducing new and more effective solutions relying on digital technology and algorithms that optimise routes and, above all, passenger capacity in real time which has been one of the most difficult issues to handle during the pandemic.

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Steer acquires US-based economic development agency, Fourth Economy

Steer is delighted to announce the acquisition of Pittsburgh-based economic development consultancy firm, Fourth Economy.

For over a decade, Fourth Economy has delivered projects for economic development organizations and other private and public entities at the national, state and regional level across the USA, from reviewing climate change and clean energy issues in Indiana, to economic development in Rhode Island, through to providing the National Economic Development Administration with advice on innovation and the economic impacts.

The Fourth Economy acquisition bolsters Steer's global economic development offering, and complements their already successful UK-based boutique consultancy, Steer Economic Development. Collectively, they will offer a comprehensive approach that embraces people, skills, infrastructure, mobility and innovation to deliver sustainable, inclusive and equitable economies.

Hugh Jones, CEO at Steer, says "We are delighted that Fourth Economy is joining Steer, bringing deep economic development expertize to our North American business and also complementing our UK-based economic development practice; Steer ED. Through our aligned values, expertize and unwavering commitment to our clients, I have every confidence that, together we will make a powerful impact on behalf of our clients and communities. We look forward to welcoming our new colleagues and growing in partnership".

Rich Overmoyer, CEO of Fourth Economy, says "Joining Steer allows us to build on over a decade of changing how people view economic development. This partnership will allow us to scale our offerings and make an even greater impact for our clients".

COP26: We need heroic leadership and commitments in line with scientific advice, not more political theatre

By Dr Victoria Johnson

As the first week of the 26th UN Climate Change Conference of the Parties (COP-26) comes to an end, the political theatre and platitudes of world leaders makes way to the armies of negotiating teams to thrash out the details of the evolving global climate agreement. COP26 President, Alok Sharma stated in his opening speech to the conference, 'It is clear. There is no turning back. The world is firmly united in net zero resilient future.'

But is it?

COPs have always been a media circus. For two weeks a year, there is a notable spike in media coverage of climate change. The world turns its head. Civil society organisations have a platform to call for urgent and ambitious action. The Global South collectively have a louder voice to express how climate change is already affecting livelihoods, causing loss of life and destruction and that finance to support urgent adaptation and a low carbon transition is grossly inadequate. Be that as it may, once the COP is over, most of us get back to sleep walking towards climate catastrophe.

As cynical as this may seem, the performances seen at the 25 previous COPs have tended to be a showcase of multi-lateral jostling by the world's biggest emitters to show willing but avoid commitment to anything that might affect economic growth. Whilst understandable, given the devastating impact of a sudden and unforeseen economic contraction, this has led to year-on-year emissions growth and inadequate commitments to emission reductions.

Greta Thunberg's emotive Blah Blah Blah speech perfectly summed-up the past 30 years.

The role of the COP in negotiating the architecture for delivering on commitments is important. The COP also plays a critical role in the dissemination of information, institutional and capacity building for through the extensive side-event programme. But ultimately, the very real and urgent question for COP26 is, can global GHG reduction commitments be made that give us a more than 50% chance of keeping global average temperatures below 1.5C?

A 1.1C warming has already led to catastrophic extreme weather events such as those seen this year - extreme high temperatures, wildfires, inland and coastal flooding and drought. We are already living with the dire impacts of climate change.

According to research published earlier this year, there is already a 1-in-6 chance the carbon budget – the total amount of GHG expressed as carbon remaining that can be emitted before it becomes more likely than not global average surface temperatures will exceed 1.5C – has been exceeded.

Net zero – where GHG emissions are decreased to zero or to a level that is matched by the intentional removal of from the atmosphere - by 2040 currently means there is only a 50% chance of not exceeding 1.5C. For 67% chance, it is estimated that total CO2e emissions (all GHG emissions expressed as carbon) must not exceed 230 billion tonnes. This is about 5 years of current emissions and net zero by 2030.

Commitments currently on the table at COP are insufficient keeping us within this remaining carbon budget. Negotiations so far have failed to commit to limiting warming to less than 1.5C.

But even if the necessary commitments are made, how are nations going to deliver on these? It's not the target set, or the ambition of reaching those target that matters, but rather a realistic and achievable pathway. This means rapid deployment of low carbon technologies and infrastructure, phasing out (or even mothballing) high carbon technologies (such as coal fired energy generation), and transformation of patterns of consumption, particularly in the Global North.

At the peak of global lockdowns in April 2020 daily CO2 emissions decreased by almost 20% relative to the same period in 2019. And, overall, for 2020, global emissions fell by 7% relative to 2019, compared to a 1% increase year-on-year over the past decade. But these were exceptional circumstances, and the societal impact of a sudden contraction of economic activity was huge. Yet continued decreases at this rate is what is necessary. Researchers estimated that if this trajectory had continued, global emissions could potentially reach net-zero by 2035.

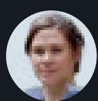
Historically, economic crises have led to short-term decreases in GHG emissions. But these have quickly rebounded. The 2008–2009 Global Financial Crisis led to a global CO2 emissions decline of –1.4% in 2009. But this was immediately followed by a growth in emissions of +5.1% in 2010. This was well above the long-term average. Emissions soon returned to their previous trajectory.

The exception to this rule was the economic crises caused by the 1970s and 80s oil crises which led to energy efficiency programmes and kick-started a shift towards alternative energy solutions. This historical example points to the importance of the recovery packages after a crisis, but also illustrates how a crisis can create the space for rapid diffusion of niche technologies.

Recovery programmes have the potential to lead to structural changes in the economic, transport or energy systems and allow niche technologies or business models to break through into the mainstream. Undoubtably there will be incumbent institutions and actors that will resist change, but crises such as the COVID-19 pandemic open the doors to opportunity.

Huge amounts of public spending is underway to deal with the economic consequences of the COVID-19 pandemic. It is essential this is seen as an opportunity for a net-zero transition by ensuring deep structural changes in infrastructure and industry are made. As individuals we all have a role to play, but ultimately, we are often locked into patterns of consumption which can be costly and difficult to break out from. Which is why not only, strong, but heroic leadership is required, and that goes against the grain of the past 30 years. This type of leadership can be seen at the sub-national scale. It now needs to take the global stage.

Find out more



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Matthew Lipka
Head of Policy,
Nuro

Nuro's Head of Policy discusses the benefits and evolution of self-driving delivery vehicles in the US

The use of autonomous vehicles (AVs) will revolutionize the convenience and efficiency of last-mile delivery. Autonomous delivery services can provide an effective solution to carry goods from local stores and restaurants to improve access to food and essential supplies while enhancing safety, reducing congestion and transport emissions. We recently interviewed Nuro's Head of Policy, **Matthew Lipka**, to understand the advantages and challenges of these electric custom-built vehicles. We gain insight into how AVs can better serve communities and aid with wider challenges such as decarbonization; explore the regulatory factors involved in placing driverless vehicles on America's roads.

Nuro is the first robotics company approved to operate a driverless delivery service in California. Matthew highlights, "We developed the software that allowed the vehicle to drive itself from the store to the customer's curb, and we own and operate these vehicles. In addition, we have partnered with leading retailers, such as Domino's and Kroger to bring groceries, medicine, pizza and ultimately anything else you need".

As Head of Policy at Nuro, Matthew is responsible for three core company initiatives:

- Developing policy research and messages around benefits and policy issues
- Engaging with policymakers to educate and advocate for policy positions
- Participating in city and community engagement in local municipalities where Nuro operates to build trust amongst neighbourhoods.

What are the advantages of contactless delivery services to cities, businesses, and local communities?

- Access to more affordable goods that are delivered efficiently and conveniently for people living in cities
- Avoiding the human causes of error such as speeding, distraction and impairment to reduce the number of road accidents - more than 37,000 deaths are recorded yearly on US roadways alone; therefore, safety is of paramount importance.
- Reducing carbon emissions and air pollutants due to fewer vehicles on the roads
- Creating new jobs in the community – hiring people to pick and pack the goods and operate the vehicles
- Expanding access to everyone – more than 20 million people living on low incomes are in food deserts, and it's difficult for them to travel to a store due to distance or not having access to a car.

Last year, Nuro commissioned Steer to conduct an independent study to evaluate the potential economic impacts and wider benefits of introducing contactless delivery services in the US between 2025 and 2035. Matthew reports, "the study concluded that there are some substantial economic impacts and being able to quantify those are really helpful when one, dealing with policymakers to understand the significance of this new technology and secondly, it's important for us to reaffirm our decision to build zero emission vehicles". Taking these factors into consideration and upholding their ambitions to expand, Nuro's immediate focus lies within developing a partnership with local institutions to start building skill sets and creating training programs to fill the important jobs needed to maintain the robotic vehicles.

Reaction to the pandemic

Matthew highlights some of the biggest challenges faced during the pandemic - one being the vast increase in demand for contactless delivery services. "Nuro saw a five-year growth in just eight weeks due to the substantial uptake in eCommerce. Testing and operations were also significantly impacted as originally, and we had planned to use our test vehicles with two safety operators overseeing and deploying our zero-occupant robot, the R2, in commercial service". However, once COVID-19 hit, Nuro's strategy consequently shifted as they partnered up with the California Office of Emergency Services to provide deliveries to emergency sites, maintaining low numbers in patient areas. The vehicles transported food, medical supplies and other necessities into patient areas while also partnering with several food banks such as Houston Food Bank to bring supplies to needing families and communities. In 2021, Nuro began delivering Domino's Pizza with R2 in Houston.

Evolving people perception

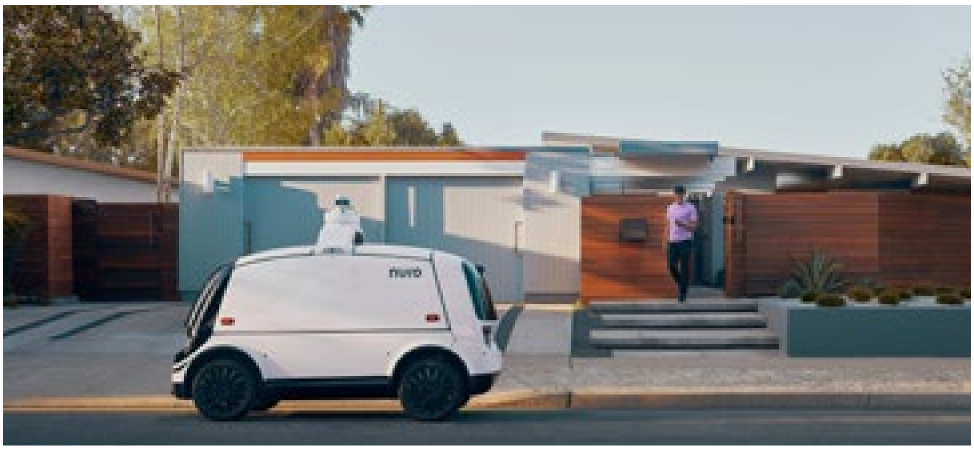
Nuro's vehicles have been well received, with tremendous feedback from users. Part of the positive feedback derives from a fascination with advanced technology and the fun element it demonstrates, combined with the low price and punctual distribution. "Other parts of the community including Mayors, Law enforcement, City council members, and the general public were coming out to see Nuro at local community events like the Houston Tech Rodeo or the Mountain View Art and Wine Festival and have really embraced the technology and interacted well to find answers to their curiosity", Matthew is proud to report. While it's a long-term process to gather the trust and vision of everyone, more conversations lead to a greater understanding of how autonomous vehicles benefit and fit with city priorities and net zero initiatives.

What's next for Nuro?

Nuro recently announced a new end of line manufacturing facility and test track in Nevada, the first facility designed to produce zero-occupant vehicles and develop Nuro's next-generation vehicle, enabling further scaling to more cities and communities. Matthew defines the industry as being at the "pilot stage", with the next couple of years anticipated to be more at a city scale across multiple communities. However, meeting the ambitious timeline of rolling the service out into wider areas comes with its own difficulties. Firstly, the technology – moving from the research and development (R&D) phase to the commercialization phase is a challenge as it's all relatively new. Secondly, the regulation – current rules governing motor vehicles at the federal level were written over the last 50 years when these vehicles were science fiction. So the establishment of a regulatory framework for vehicles that don't contain a brake pedal or side-view mirrors will be essential. The final and most critical challenge will be gaining public acceptance and trust; in the abstract, people have many questions; therefore, addressing these concerns and curiosity is paramount before deployment.

What does the future of travel look like?

AVs need to be electric and shared vehicles, Matthew claims. "The future is electric, and yet today in the US, only 1.5% of all vehicles on the road are electric, and that's lower in trucks than it is in passenger car segments. We must seize this opportunity; Nuro is building a battery electric vehicle with R2 and our future vehicles". As pointed out by Steer's study, in terms of the wider economic impact across the US from delivery AV services, between 2025 and 2035, there is an expected reduction in CO_2 emissions of 407 million short tons, which is the annual equivalent of 88 million passenger vehicles off the road for one year - a significant potential impact.



As we discuss what the future of travel will look like, Matthew reveals, "if you think back to 1995 when Amazon started and shipped its first book with a 2–3-week delivery slot, to now offering a free, one-day delivery option, the expectation and demand is constantly changing. By 2030 the expectation will no longer be two weeks or two days, but now, and this will completely evolve how we live and travel in the future".

David Edwards
President and CEO,
Greenville-Spartanburg

Greenville-Spartanburg Airport District's CEO discusses growth, expansion and diversifying revenue as aviation bounces back

The aviation industry is hugely important to the social and economic welfare of millions of people across the planet. Heavily consumed within airport management, and with strong credentials in business development, infrastructure, operations, and governmental affairs, we speak to nationally recognized airport executive, **David Edwards**; President and CEO of the Greenville-Spartanburg (GSP) Airport District. Edwards carries more than 30 years' experience in airport management and was previously a Chairman of Airport Council International (ACI) North America before taking his role at the District in 2009. He shares his vision and growth opportunities for the District, the impacts of COVID-19 on aviation, and presents a reflection of his airport experience and leadership.

Edwards began his career at Miami International before moving to Orlando International Airport where he spent almost 13 years. His first opportunity to lead an organization came through a much smaller authority - Titusville Cocoa Airport Authority. He jumped from an airport with a $1.2 billion capital program in Orlando to a zero-capital program at Titusville Cocoa Airport Authority, but the experience and opportunity led him to Asheville and then his current assignment. "The upstate of South Carolina between Greenville and Spartanburg had an excellent business base with good economic based manufacturing, regional headquarters, and US headquarters facilities for major corporations including Michelin and BMW. It was a very exciting environment to potentially be part of and the experience I gained on both sides, being at two large hub airports for a total of 15 years and then some smaller airports, gave me an opportunity to learn a lot over the years".

What makes the District enticing and attractive to Edwards is that it's run more like a private sector business as opposed to a political subdivision or Governmental agency. "My board only meets six times a year and they allow staff to run the airport. There is a lot of leeway and freedom in exchange for building that confidence with the board". Edwards demonstrates how well the authority is structured, executed, and supported, making it a great operating environment.

With an emphasis on generating and diversifying revenue, and setting the airport up with low debt levels, Edwards successfully implemented a $127 million terminal modernization project from 2012 to 2017 and built the project effectively without borrowing money, delivering a debt free project. "While we understand that some projects will require borrowing, such as the $90m parking garage and rental car facility, we will always put ourselves in a position to diversify revenue streams as best we can to increase cash flow as much as possible", Edwards explains.

Aviation analysts may be forgiven if they believe that the airport's margin and revenue generation necessarily require high costs per enplanement or airline charges, but Edwards refutes that and explains exactly how it's achievable. Back in 2009 cost per enplanement ran at $10 and the percentage of airline revenue as a percentage of total revenue, was running between 35 to 40%. Now airline costs per enplanement are down around $6.50 and have been stabilized for many years. "These results are down to us involving ourselves into other businesses such as running our own Fixed Based Operator (FBO) business, as well as managing all of the commercial fuelling, cargo operation and handling and warehousing for GSP's international cargo activity. Diversifying is what puts us in a strong position to continue generating a significant amount of revenue, especially during the pandemic".

It was interesting to gain Edwards' insight into the new type of terminal concessions contracts and how he recently conducted his RFP process to better allocate risk and get concession businesses attracted to deals in this environment. With the 96% airline traffic drop during COVID, concessionaires were looking for relief. "We put together an RFP for a management agreement for our primary food and beverage operation. We shortlisted from six responses and took a risk in implementing an innovative management agreement structure. While we bear the capital- expenditure costs and face risks as we continue to move and grow the program, we gain a lot of upside revenue potential that we didn't necessarily have under a traditional type of concession agreement. Ultimately, we are here to serve the public, albeit in an unconventional private sector company way".

In 2016, the District's traditional FBO agreement was coming up for expiration and the District decided to take full control of their FBO services with the vision and purpose of being able to generate a revenue level that provides the highest level of customer service, both for corporate customers and other general aviation users. Edwards' philosophy was, "we weren't going to be the cheapest nor the most expensive, but somewhere in the middle to ensure we could maintain and deliver a high level of customer service and loyalty". The District's commitment to this philosophy resulted in the doubling of corporate aviation fuel sales in the first 12-18 months through the execution of competitive pricing and providing high levels of customer service that such entities had not been experiencing previously.

The District invested in a 110,000 sq. ft, $12 million new cargo facility that opened in 2019 and are expanding it further by 50,000 sq. ft due to the significant increases in air cargo demand. The District is set on driving forward more growth opportunities and Edwards reinforces how taking over corporate fuelling operations significantly turned the tables. "While we saw passenger traffic dip during COVID, with fuel volumes consequently taking a hit, we also saw air cargo activity spool up from overseas. For example, a 747-400 aircraft requires 25,000 gallons for one flight, so we've had some of our busiest ever fuel volume months during COVID".

Like many airports and aviation businesses, the District is working hard to recruit, develop and retain its most valuable resource, its workforce. Managing this as the airport recovers from the pandemic has been a challenge, but new strategies have proven successful. Given the demand of cargo operations and changing supply chains, Edwards has faith in the District's augmented "core, base workforce" who are the pillars behind delivering the growth strategy as international travel begins to gear back up. "We are using external temporary firms that are able to bring in new talent and we hope to take them on as permanent staff going forward. When I arrived in 2009, we had 80 full time equivalent people and we now have 220 positions here at the District, so things are looking very promising".

Bouncing back from the Pandemic

Last Spring, the District had hoped that the precipitous drop in passenger traffic would be a short-term blip; while that proved elusive, finally, after 18 months Edwards believes a recovery is underway. "We are predominantly a business-driven market as opposed to a popular tourist destination like our friends in Myrtle Beach and Charleston, who have seen as much as a 150% increase in passenger traffic over Summer since 2019", Edwards observes.

Based on early discussions in Spring 2021, it looked like businesses in the Upstate were going to re-engage around now (September), however the Delta variant has counteracted that prediction and we're not likely to see real re-engagement or significant growth of business travel until Q1 of 2022. "The growth trend we were starting to see has now flattened out due to the variant, with traffic recovery commencing at 80% in July 2019, to dropping circa 75% this September. We projected very early on in April 2020 that we would not see full recovery levels until 2024, but we're on track and continuing to grow and expand the cargo side, which is the silver lining for us". Edwards highlights.

The District is venturing into non-traditional grant funding sources through Economic Development Assistance (EDA) for some projects and conducting other discussions with surrounding South Carolina airports to collaboratively develop and advocate for a state-based airport funding program.

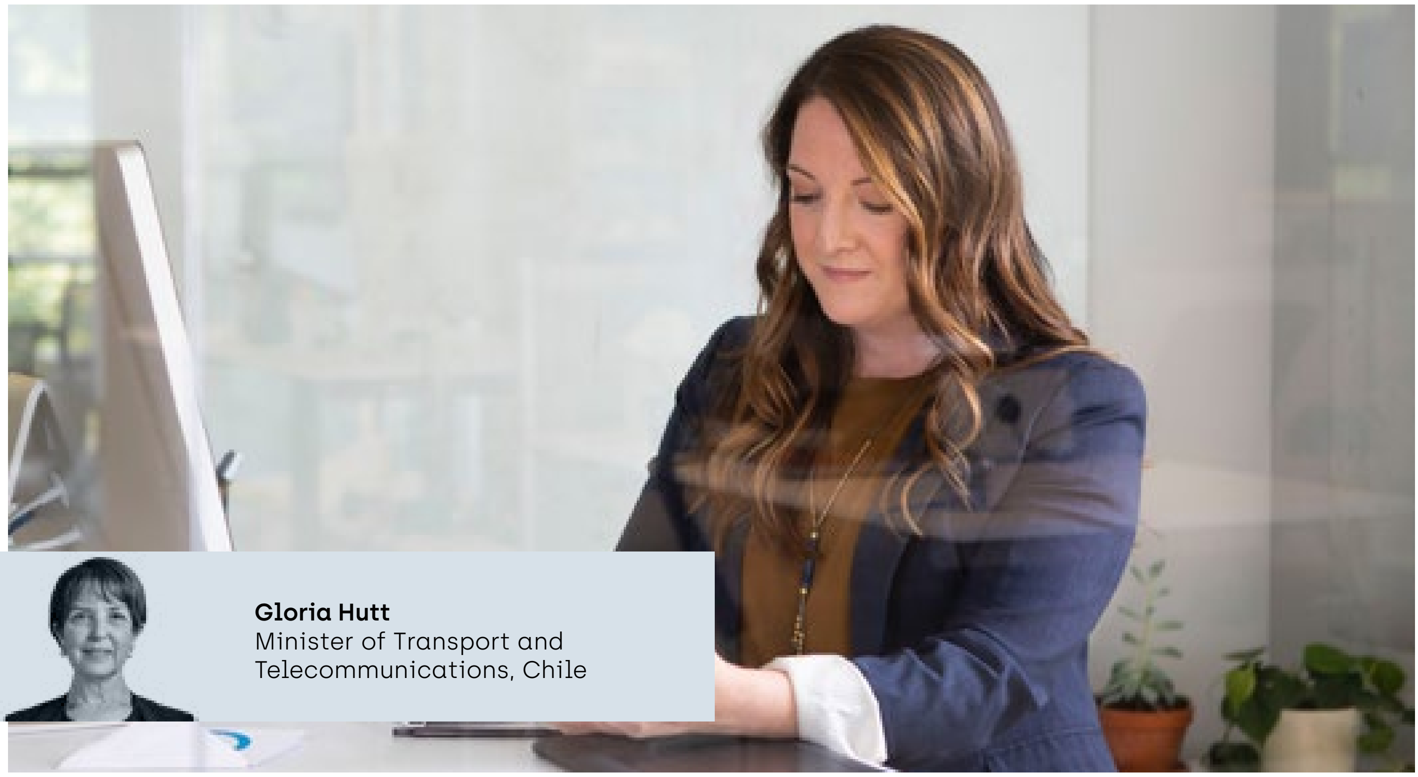
What does the future at the District look like and what legacy will you be leaving behind?

In the words of Edwards, "like with every job I've taken, you should leave it better than when you found it – not to say people were doing a bad job, but the ambition should be to take the organization to the next level in an innovative way".

While it's difficult to take risks in a political environment, the District takes pride in thinking outside the box and taking calculated risks to allow everyone to be successful. Leadership to Edwards means building the team for succession. It is about making sure that when he decides to step away, there is a seamless transition without any change or upheaval to the organization, whether it be for the airport commission or his staff team. "I like being on the leading edge of bringing new things to the industry and known for people approaching us about how we achieved success - we're a very sharing airport in a sharing industry, Edwards reflects.

View and download the [Greenville-Spartanburg Airport District Strategic Business Plan 2021-2025.]

You can watch the full interview [here].



Gloria Hutt
Minister of Transport and
Telecommunications, Chile

Women leadership gaps and the challenges around a male dominated industry in Chile

A woman of many talents, expertise, and wide-spanning careers, we were honoured to speak to Gloria Hutt, Minister of Transport and Telecommunications Chile (and a former Steer colleague), as part of our inspiring International Women's Day seminars. Tying in with this year's theme of 'choose to challenge,' we asked Gloria to shed some insight into how she manages to balance her demanding roles, family life and personal projects, as well as sharing her thoughts on the current gaps for women in leadership, particularly in Chile.

Gloria's words of wisdom stem from an extremely fascinating and varied background. She was once a professor for the Master's in Public Policy program, a transportation vice minister, a member of the board of freight and passenger's companies, and a founding member, coordinator and general manager for the Evópoli political party. She has previously worked for fishing industries, libraries, schools and even had a TV show! She mentions how being a woman engineer gives you access to lots of tools and opportunities (and they aren't necessarily always bad).

Gloria explains how historical facts strongly suggest that the lack of opportunities for women began a very long time ago. The first real opportunity was presented during World War I and II, which massively brought women to work, although not specifically to showcase their capabilities but as a necessary measure.

Gloria speaks of a primitive example that clearly indicates the existence of these very large gaps in society. She admires Gabriela Mistral's story, a dedicated educator and the first Spanish American author to receive a Nobel Prize in literature in 1945. Mistral defended the rights of children, women and the poor, the freedom of democracy and the need for peace in times of social, political, and ideological conflicts, not only in Latin America but in the rest of the world. However, at the time, she had no right to vote for the president of the country until 1952. This highlights the importance to call attention to some objective situations that make it necessary to have a special day for women and legislation around the sizable difference in gender gaps.

Throughout her diverse career, Gloria has spoken to numerous women across different countries, and in many cases, the same patterns repeat. Women have a significantly higher probability than men of:

- Being harassed in public transport
- Experiencing violent interaction with their partner
- Not finishing a career in technology
- Receiving lower salaries for the same job
- Not being elected for the 'Board' of the company
- Taking responsibility for the illness of a relative.

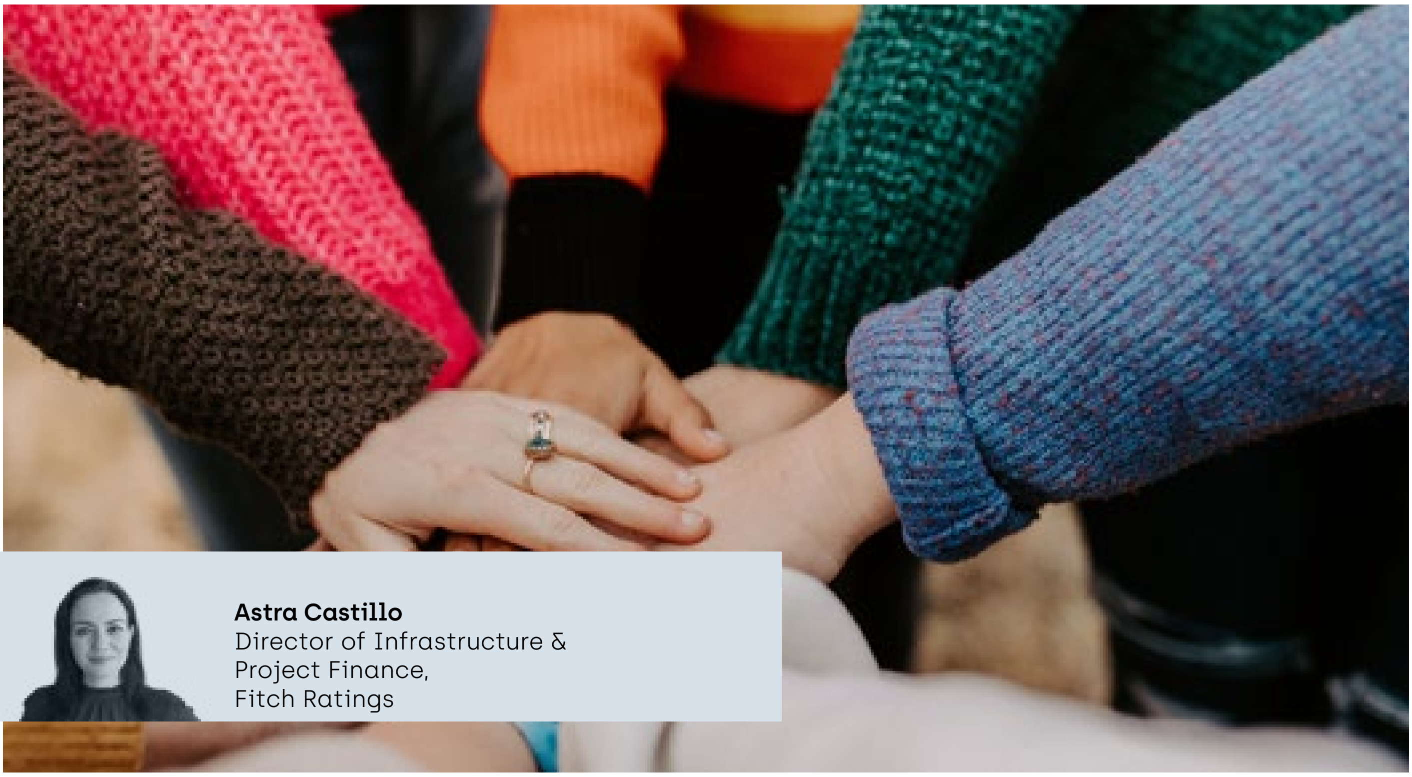
"As Minister of Transport and Telecommunications, this is something that is of real concern to me. We recently completed a successful bid to deploy 5G, and we will require technical capabilities to develop the potential of 5G within mobile technology. However, in Chile, the proportion of women in STEM (with higher education) is 9.1% compared with men at 47.2%, which unfortunately leads to an unbalanced probability of women developing this new 5G technology in the coming years. If the future is technology, then we are implying that these gaps in STEM will continue to exist, and valuable talent will be lost repeatedly. A balanced condition is unattainable without specific actions," Gloria admits.

Gloria shares with us a personal travel experience of a time she visited the channels of Patagonia where she came across an interesting narrative about the local tribes named 'The Chonos'. Dating back to 500 years, the women were tasked with simultaneous responsibilities such as; diving in the cold waters to obtain seafood to feed their families, taking care of the children, the fire and the paddles while men stayed visible and fished from the front of the boats. Gloria questions whether this is any different even after 500 years, and why it still feels as though some behaviours are difficult to change. "Women still face a major barrier in accepting opportunities due to the pressures of family responsibilities."

"The objective for women is to develop their capabilities, feel well and at peace, contribute to the world and fight on an even playing field. We need public policy based on quotas and public support. I was not always positive about quotas, but without the legal push to change the situation, it's not going to change or it will take a long time to change so we need to build a structure of law and regulation to create a balanced approach," Gloria correctly emphasises.

Undoubtedly, the access to the top is different. Women still must build the road and fight against prejudices. Men have the networks, and that is what makes the biggest difference. Respectively, neither case is negative, but they are different and that's the kind of scenario that needs improvement. While Gloria herself has never experienced any explicit discrimination, she has somewhat faced difficulties overcoming challenges and achieving objectives. "The situation has improved in the last 30 years – now there is full conscience of discrimination and unbalanced conditions and it's much easier to speak about women's rights. This was not the case 30 years ago and that continuous legal push is essential, Gloria claims.

Gloria departs us with a simple word of advice – "be curious and never stop learning." She believes these are the key stimuli in giving you the power to approach every problem.



Astra Castillo
Director of Infrastructure & Project Finance,
Fitch Ratings

Equity, diversity and inclusion: a gap that should be unnoticeable

Equity, diversity, and inclusion are becoming increasingly important workplace issues, particularly for women who face greater challenges succeeding in male-dominated industries. We recently spoke with Astra Castillo, Senior Director of Infrastructure & Project Finance at Fitch Ratings, who shared her perspective on these challenges. Astra, who has been working for Fitch Ratings for 13 years, joined as an Associate Director and is currently a Senior Director, leading part of the Latin America team analyzing credit risk in several asset classes of infrastructure project transactions, including transport, energy, and social infrastructure.

Astra believes that women share similar challenges regardless of the industry they work in. Companies are noticing and increasingly taking a strong position on inclusion, equity, and diversity. Financial services, where Astra works, is predominately male, particularly in Mexico, which is a country deeply rooted in a male-dominated culture. “In my 20 years of professional experience, the main challenge I have faced is gaining and maintaining credibility; to get them to believe in what I can do, and to be treated the way they would treat a male in the same position. Another significant challenge that I have had to overcome in the last five years was to learn how to match my professional life with my role as a mother in order to find the right balance that works for Fitch, my family and I. Dealing with these challenges has taught me valuable skills, but above all, the importance of patience and emotional intelligence,” she says.

Astra’s extensive career experience has helped her to identify certain advantages and disadvantages that women experience throughout a career in financial services. As for the advantages, she believes the opportunities for women to rise to leadership positions are increasing, which consequently promotes equity. Another advantage is the flexibility of being able to work remotely, which makes it easier to successfully manage both work and family needs. However, among the disadvantages she finds is that senior management positions have been predominantly held by men, which could slow the transition to having more women in managerial positions. The financial sector also often requires frequent trips and long working hours, which can be hard to manage when you have young children.

Mexico, like many other countries, has a long way to go to reach gender equality, especially when challenges around the gender pay gap still exist. Astra realizes how difficult it is to achieve a perfect 50/50 balance due to women abandoning their careers in the early years, often due to caregiving responsibilities. As a result, in the labour market, there are fewer women than men and, therefore, there is a smaller proportion of female presence in the highest hierarchical levels of organizations. It is also believed that women will settle for lower wages, and unfortunately, in many cases, this is true. Astra believes that even if the pay gap is not fully closed, setting this as an objective is important to making progress towards solving the issue of gender equity.

The COVID-19 pandemic has also had an impact on the career opportunities for women, but Astra says it has also given us great lessons:

The unexpected can happen.

We do not have the absolute truth. What you think is one way is not necessarily so. We must be more open-minded.

Flexibility proved to be the best asset, and this applies to all aspects of life, beyond work.

To reverse the gender gap, Astra strongly emphasizes that "the most important element is education. I come from a very traditional Mexican family, where being a woman means that you must be at the service of others; I am convinced that gender inequality is born at home. An education based on meritocracy, without privileging a certain gender, is essential. All of us as parents have the need, and at the same time, the obligation to teach our children to look at the world from a perspective of equality and empathy. This will not only make them better people, but it will prepare them to live in what I hope will be the society of the future. To achieve this, we must first examine ourselves and acknowledge our own biases as, ultimately, the support of this male-dominated culture also exists among women and not just men. I believe and hope that there is less and less room for this gender gap."

When asked how Fitch Ratings develops or implements policies related to diversity, inclusion, and equity from a gender perspective, Astra proudly points out that Fitch is a very employee-oriented company – its most precious asset is its people. It has a culture of support for its staff and has focused intensively on the issues of equity, diversity, and inclusion. Some recent programs to support the company's goals include:

Pandemic Caregiver Support: Financial support to all staff who are caregivers to cover the additional expenses associated with the pandemic.

Credit Path: A workforce reentry program (in credit analytics and research) aimed at women who left the workforce, in most cases due to caregiving responsibilities. It is a full-time internship during which they are given all the tools they need to return to work with confidence. Many of the graduates have been hired at Fitch upon completion of the program.

Forward Path: This program identifies high performing mid-career women and provides on-the-job training to build their skills in preparation for increased responsibilities and potential promotion.

Astra's last words sum up the message that the importance of perseverance is one of the main lessons learned throughout her career. Her advice to all women seeking a successful career is: "Women must find what drives them and establish their career goals based on what fulfils them; we must stop being so shy, speak more about our achievements and promote them. Finally, we must not let other people's attitudes towards us define us or allow us to be treated in an unrespectful way. We have to raise our voice even when it doesn't seem easy."

TOP 50 COMPANY 2021

BETTER BUSINESS TOGETHER

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Steer is pleased to announce that we feature in the Employee Ownership Association's Top 50 Report 2021 as one of the fifty largest employee-owned companies in the UK.

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The Top 50 list, compiled annually by employee ownership advisers RM2 in partnership with the Employee Ownership Association (EOA), covers independent UK-registered companies that are at least 25% owned by their employees on a broad basis, together with UK subsidiaries of non-UK companies that are more than 75% employee-owned.

To view the full findings of the Employee Ownership Top 50 Report, please visit the Employee Ownership Association website.

James Taylor
General Manager,
Zipcar UK

The evolution of car ownership and use in our cities

The car sharing sector has become a global phenomenon and offers both personal convenience and societal benefits for its members and cities. It can predominantly be split into two different services: schemes operated by companies such as Zipcar that own a fleet of vehicles for rent on a flexible basis, and peer-to-peer options where owners rent their car to others. In the UK, Zipcar was first introduced in 2006 with the aim of pursuing one mission – to enable simple and responsible urban living. **James Taylor**, General Manager at Zipcar UK, recently shared with us his views on the adoption and benefits of car sharing, how car clubs can support the Ultra Low Emission Zone (ULEZ) expansion and what the future holds for shared mobility services and changing travel patterns.

In a nutshell, James describes Zipcar as "having flexible access to a car when you need it without the hassle of owning one." He leads the UK business and manages the team to deliver the services of car sharing to its members as well as looking at how they can grow the service through building relationships with local authorities, particularly in London. His responsibilities include developing the business strategy to grow car sharing as a whole, not just for Zipcar and to make sure authorities and stakeholders understand the benefits of car sharing and the positive impacts it can have for members transitioning away from private car ownership.

Benefits of car sharing through Zipcar

The philosophy behind Zipcar (and car sharing) is to eliminate the hassle and cost of running a private car especially when you can get access to wheels on demand. The mission is to make member's lives simpler, cheaper, greener, and our cities more liveable.

User benefits:

- Flexible access to a car without the hassle of maintaining and owning a private car (which often sits unused for residents in London)
- Avoids expensive asset ownership – the car rental service covers all maintenance, parking, and fuel costs within the membership
- Vehicles within the fleet are kept for a shorter period so they're generally newer, cleaner cars.

Car sharing benefits in reducing congestion:

Car sharing makes the cost of each individual trip more visible, making users more aware of the different choices available. Users can easily calculate the cost per minute/ hour and determine what the cheapest option would be for their journey, altering their overall transport behaviour.

Research evidently suggests that car sharing reduces emissions by using the cleanest vehicles and EV's. Data also suggests that Zipcar members walk, cycle, or use public transport more than the average Londoner creating positive impacts on cities and boroughs.

Car sharing promotes a reduction in the overall number of vehicles on the roads as well as a reduction in the number of trips made, consequently reducing traffic congestion, and improving air quality.

What is Zipcar doing to encourage the use of Electric Vehicles (EVs)?

"We set a bold vision back in 2018 to be fully electric by 2025 and our first step towards that goal was introducing 325 EVs into our Flex fleet." James explains the reason behind adopting EVs into the Flex fleet first rather than the round-trip fleet was simply down to the trips being shorter, hence more suited for an earlier transition to EVs due to the current range values of an EV. The on-demand availability also makes it easier to manage the EVs, ensuring they are charged and not affecting future bookings.

There are two factors that Zipcar needs to consider when introducing EVs. Firstly, how members respond to using EVs within their fleet and secondly how Zipcar responds in terms of an operational perspective to manage an EV fleet. The first few years have shown an incredibly strong uptake; over 55,000 members have driven EVs over 3 million zero emission miles during that time, indicating that members evidently appreciate driving them. "We know anecdotally that the motivation behind many members joining is to test out EVs and so we are playing a significant role in introducing EVs to people for the first time, helping them overcome any concerns," James confidently states. Nonetheless, the operational aspect and overall management for Zipcar is still a learning curve – the recharging process is managed internally and currently works well with a small fleet however, as the percentage of EVs increase, the company will need to investigate alternative methods, such as members recharging vehicles during or at the end of their rental period.

The rate of EV growth is dependent on cities having the right infrastructure in place and while there has been a focus on improving residential charging, there is a need to take into account the impact of car clubs or fleet owners who don't have dedicated EV charging infrastructure. James recognises that a limiting factor to electrifying the round-trip offering can be the coverage and type of infrastructure that currently exist not just in London but also in other areas of the UK, where members travel to. For example, rapid and ultra-rapid chargers will be essential for car club customers to recharge the vehicles themselves. Trickle or slow chargers would just simply take too long, and means that a large percentage of the fleet would be dormant at key points in time. Even if this were to occur overnight, this would not logistically work if a customer were en-route somewhere and just needed a top-up charge to complete their journey.

Car clubs supporting the ULEZ expansion

The forthcoming ULEZ expansion in October 2021 should encourage Londoners who own a non-compliant car to consider alternatives. TfL has calculated that 20% of London's privately owned vehicles won't comply with the extended ULEZ. ULEZ expansion could present a key moment in time to achieve a systemic shift away from private ownership.

Car clubs can play a massive role in supporting whether users opt to buying a privately owned compliant vehicle (which doesn't solve the congestion dilemma) or changing their travel behaviour to make use of car sharing services alongside other forms of transport such as walking and cycling. Collectively, the sector works closely to discuss, support, and take action working with authorities, particularly Transport for London which heavily promotes walking, cycling and public transport, all of which Zipcar can help to accelerate.

"Zipcar match funded the scrappage scheme when the central London ULEZ was first introduced by the Mayor of London to help support and compensate for scrapping an old, polluting vehicle. The scrappage money could be used towards credit when becoming a Zipcar member and we match funded that amount." James is keen to work with local authorities and TfL to see more incentives like this being put in place to encourage people to make the switch.

Low Traffic Neighbourhoods (LTN) deliver genuine benefits for all residents, creating more space for walking and cycling to allow people to travel safely especially during the pandemic. The challenge is getting boroughs to communicate with car clubs on plans such as LTN to ensure the benefits of shared cars are prioritised over private cars to help support the delivery of schemes like this, James admits. "There's also some disconnect between policymakers and authorities when it comes to accepting the role car clubs can play. It's important for policies to be introduced that recognise the clear-cut differences of owning and sharing a car and the impacts it can have on people making that switch. I would love to see more car sharing operators in London, and increased competition means more awareness towards car clubs (helping them become more mainstream)."

The future of car clubs and changing travel patterns

Given lockdowns continue, car clubs like many businesses are taking a hit with members following Government rules and undertaking little to no travel during these periods. James touches on the impact this has previously had on the business during the two previous London lockdowns in March and November last year. However, Zipcar is hopeful that car sharing will not only bounce back but will have an even bigger role to play as people look for more sustainable transport choices. In the short term, the sector has benefitted, with large volumes of new members joining as they looked for alternatives to public transport during the pandemic. The hope is that this will lead to long term benefits as members continue to use car sharing alongside walking, cycling and public transport. While James is confident seeing this travel behaviour change, he also recognises there's a big risk in people who didn't previously own a car now considering private car ownership during the pandemic. "The key challenge is minimising users from making this purchase and actively showing them that car sharing is a viable, better alternative than buying a car."

Car sharing is well placed to grow, and COVID-19 has certainly heightened the awareness and benefits of what car sharing can achieve for authorities, cities, and its members. While positive relationships and conversations are forming, it's still not quite reached a policy decision-making stage and there's much work yet to be done around getting these policies in place.

James assures us that travel will be different by 2030. The green industrial revolution will bring a ban on the sale of petrol and diesel vehicles, changing travel behaviour and prompting people to make a change prior to this. The car club sector is already a few steps ahead of this curve with the use of EV fleets, and by 2030 all car club fleets will fully adopt EVs. It would be amazing to see car clubs continue to grow in other major cities and towns across the UK with many more members, bringing an overall reduction of the number of vehicles on the road. James expresses, "the only way to support that change in a positive way is by working with the policymakers, lawmakers and authorities to demonstrate the impact of car sharing so that we are included as part of that wider conversation rather than being an afterthought. We need to be stronger as a sector and be bold, loud and proud of what we can deliver."

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