

Aeravai



Autonomous Electric Road & Air Vehicle Association of Ireland.

Pre-Budget 2025 Submission

By Cormac McKay
Founder and spokesperson

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Biography

Cormac McKay is a passionate advocate for environmental sustainability, with a particular focus on the urgency of addressing climate change through technology and behavioral adaptation. His expertise in autonomous and electric vehicles, both for road and air, drives his mission to educate industry professionals, urban planners, and the public about current and future advancements in transportation. Cormac believes that embracing innovative transport technologies will not only mitigate the climate crisis but also provide numerous societal benefits.

A regular commentator across TV, radio, online platforms, and at in-person events, Cormac frequently speaks on topics related to transport, the climate crisis, autonomous technologies, future road safety, and the need for a just transition to sustainable systems. His extensive knowledge and persuasive communication skills have made him a trusted voice in the ongoing discussions around climate action and technological innovation.

Cormac is also a registered, unpaid, and unfunded independent lobbyist to the Irish Government, well-versed in the intricacies of public affairs both in Ireland and abroad. His work has seen him testify before the California State Government and participate in oral hearings with Ireland's planning authority, An Bord Pleanála. He has also advised the Office of the Comptroller and Auditor General, further solidifying his role as a key consultant on environmental and transport issues for both public and private clients.

Cormac's educational background is as impressive as his professional achievements. He holds a Level 9 Postgraduate Degree in Climate Change Entrepreneurship from Trinity College Dublin, where he developed his skills in creating innovative solutions to environmental challenges. His academic pursuits also include a course on Sustainable Development Goals (SDGs) and the Law from the University of Cambridge, which gave him a deep understanding of the intersection between global environmental goals and legal frameworks. Additionally, his qualifications in Communications, Healthcare, Nutrition, and Health & Safety underscore his commitment to holistic, interdisciplinary approaches to sustainability.

In 2019, Cormac founded Aeravai, the Autonomous Electric Road & Air Vehicle Association of Ireland, where he serves as the lead spokesperson and independent lobbyist. Aeravai is a platform through which Cormac advocates for the widespread adoption of autonomous and electric transport in Ireland, aligning with his broader goals of climate change mitigation and technological innovation.

Abstract Summary

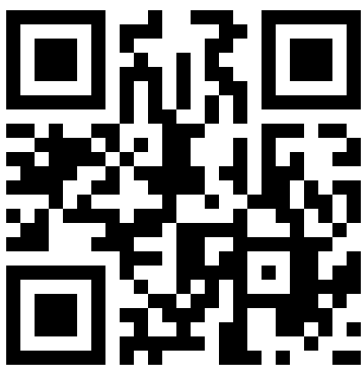
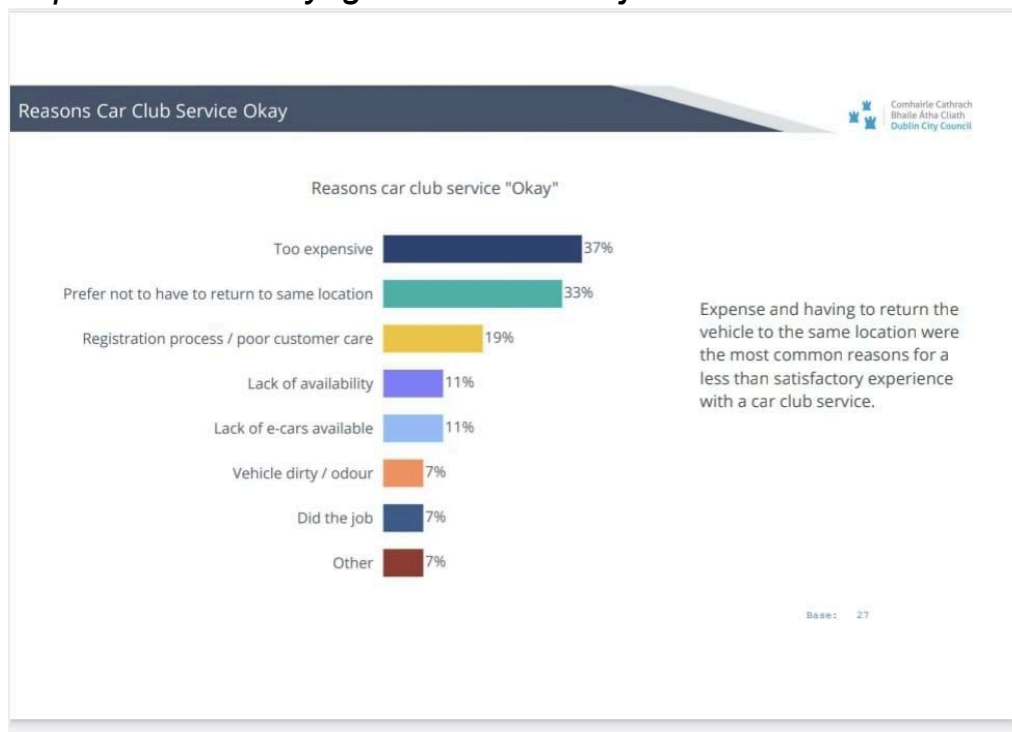
There have been several public consultations over the years under the Green Party Eamon Ryan administration of Transport in the current coalition government, Unfortunately, there has been an opinion formed, whether it is true or not with some members of the general public and business community, that they have all become a bit Chinese Communist Party-styled consultations in their nature looking for the answer they want while ignoring or not seriously fully exploring all other future options, many of which rely upon outdated unrealistic undesirable behavioral change expectations, 20th-century solutions for our 21st-century transport and societal needs not looking 10, 20 years ahead to what will be available and is actually already available in many cities around the world at this very moment that we really should be looking to for inspiration and how these solutions will help us meet our climate goals while improving the quality of life for all in society.

The importance of individual needs and expectations in transport cannot be understated, what effects it has on our wider society, from urban development, our local economy, our health and mental health with many of these deteriorating in recent years due to lack desirable transport or Government imposed guilt for using private transport and the effects this has on the wider society along with missing our climate goals.

Autonomous Electric Shared Mobility and Artificial Intelligent technology is the future of Transport both public and private and could address many of the concerns and shortfalls that traditional public/private transport and business models have failed to do, most importantly including the ever-deteriorating decline in road safety, with our aging demographic and ever increasingly distracted negligent drivers, that has just become so socially acceptable that these tragic are reported in the news like the weather! with the devastating effects from these life-altering or ending events not given the same seriousness as it would be in say the Aviation industry or any other aspect of basic health and safety in our lives, with the adoption of transport technological solutions much of the technology is already currently available, just not adopted and made mandatory, retrofitting existing vehicles is an alien concept and safety features are only for a privileged few, those purchasing a new vehicle with those safety systems on board, disregarding all other road users, inside and outside the vehicles

Current CarSharing Shared Mobility options are extremely limited and have many issues that is affecting their uptake and popularity,

Although we have 5 operators they all operate a very limited service and are not ideal for complete private car ownership replacement, from a cost or service provision perspective, with most Local Councils using them as revenue collection source, rather than climate mitigation and reduction in private car ownership initiative with Dublin City Council only holding its first CarShareDay this year and ignoring the feedback regarding shortfalls from users and this does not bode well for the role out of further Shared-Mobility Hubs when feedback of customer needs is quite deliberately ignored or worse just not understood.



Your Dublin Your Voice survey

All Our current CarSharing services, use a return-to-base and exclusive use model. This means you have to bring it back to where you collected the vehicle and no other member of the public can use the vehicle while you have it booked. Prohibitively high Insurance excess is also off-putting to potential users

VW Group's Europcar GoCar



Toyota's Yuko



Hyundai/Kia DriveYou



Enterprise CarClub



Hertz CarClub



Unfortunately, most of the vehicles are fully fossil-fueled and Hybrid Petrol vehicles with very few Electric Vehicles available to Hire

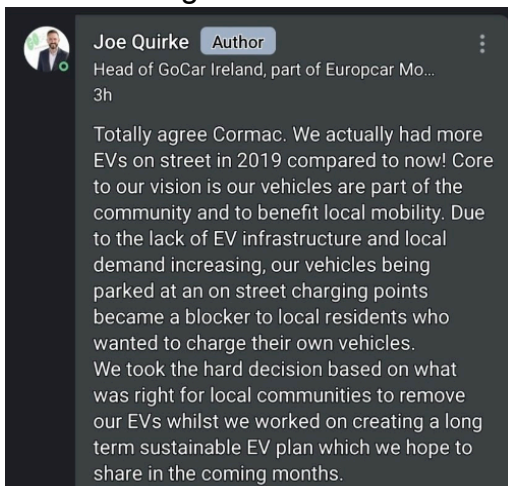
Unfortunately having EV's in your fleet is not a requirement of Operators to be issued a license to operate by the Local Councils/DOT.



UFOdrive.com is the only exclusively Electric Vehicles car rental company in Ireland, They only do full-day exclusive use rentals, with pricing geared to encourage multiple-day rentals to match the price of petrol/hybrid CarSharing hire rates. along with requiring a €2000 cash deposit or credit card hold for excess insurance.



Joe Quirke of The VW Group's Europcar GoCar even had to reduce the number of electric vehicles it had due to the poor infrastructure, with little or no improvement or investment by councils over the past 5 years compared to other Cities around the world and as been completely surrendered to the for-profit private sector has been a failed policy for Electrification of CarSharing services.



Other operators would have liked to enter the Irish market but the charging infrastructure for electric SharedMobility is just completely missing and again we have Councils blaming National Authorities for failure to role out sufficient Charging infrastructure.


Transport

New car-sharing scheme to put 400 all-electric cars on Dublin

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Green Mobility customers will not have to return cars to designated locations

Expand



Green Mobility's Dublin scheme will be similar in scale to its operation in Copenhagen, which employs 35 full-time staff.

Michael McAleer Motoring Editor
Mon Feb 04 2019 - 16:48

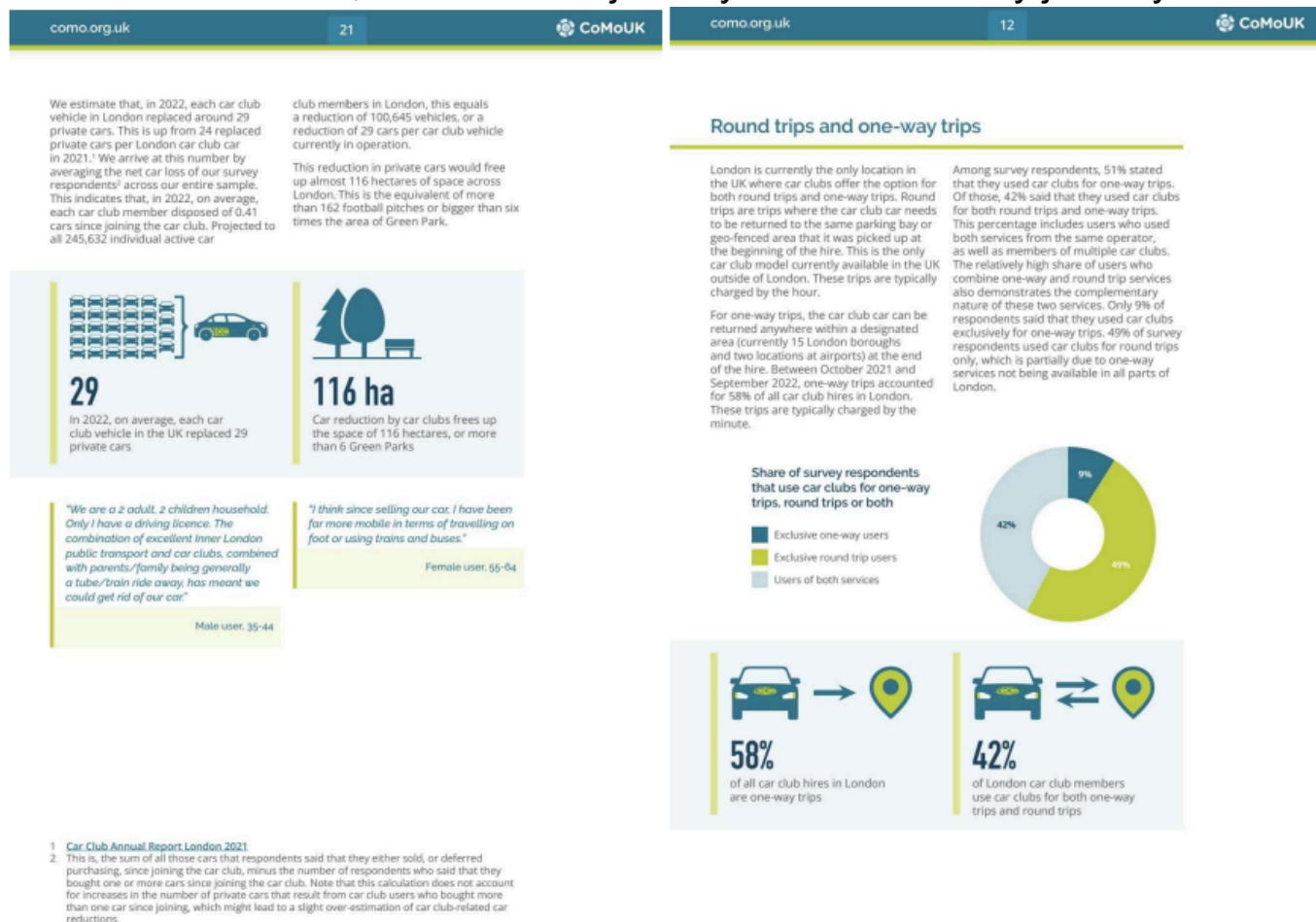
Danish car-sharing company Green Mobility is to set up a scheme in Dublin this year with a fleet of 400 electric cars.

<https://cleantechnica.com/2019/02/05/green-mobility-bringing-400-evs-to-dublin-in-new-car-sharing-scheme/#:~:text=5%2C%202019%20%E2%80%8C-.Ireland%20is%20set%20to%20get%20some%20serious%20electric%20vehicle%20love,to%20drive%20an%20electric%20vehicle.>

The lack of public EV charging infrastructure is the reason this company decided against deployments here, this would have been Dublin's first fully electric free-floating CarSharing service had it gone ahead.

Most cars are parked unused for over 90% of their lifetime, there have been several studies to back up this claim and Irish cars are no different including all current return-to-base exclusive use Irish CarSharing services! This is an incredible waste of carbon-intensive to produce, hoarding of precious limited resources, that are getting harder and more expensive to source, due to world events and protectionist policies by governments and is actually delaying the electrification of our transport and meeting our climate goals by hoarding these vehicles for limited use instead of maximizing Electric Vehicle use, that would be possible with either remoting piloted or fully Autonomous SharedMobility services.

In other cities such as London CarSharing services have been much more successful at reducing private car ownership replacing up to 29 private cars with just one Free-Floating CarSharing Vehicle, Free-Floating means you can make one-way journeys and do not have to bring back to where you collected the vehicle, 58% of those journeys where one-way journeys.



www.como.org.uk/documents/car-club-annual-report-london-2022

Irish CarSharing services providers are reluctant to do one-way journeys for fear of losing control of vehicle locations and having to relocate them and free-floating has not been a requirement for issuing a license to operate by councils.

Remotely Piloted TeleDriver CarSharing Services

One of the solutions for repositioning and delivering vehicles is by remote pilot TeleDriver Hyundai/Kia plans on using remotely piloted CarSharing services in Las Vegas it will be done by German company vay.io



www.qibus.com is another remotely piloted service operator that is partnering with Italian company www.next-future-mobility.com a unique multi-purpose flexible adaptable Taxi/Bus that will be deployed around the world.

Qibus is a platform that connects cars and remote drivers.

Our technology installs into any modern vehicle to enable driverless operations in **under 1 hour**.

Once on our platform, a vehicle can be driven from anywhere, at any time, with or without passengers.



modular electric vehicles

NExT is an advanced smart transportation system based on swarms of **modular** electric vehicles.

Each module can **Join and detach** with other modules on standard city roads.

When joined, they create an open, bus-like area among modules, allowing passengers to stand and **walk from one module to another**.



one vehicle | many use cases

[here the main MaaS use cases](#)

Services in Motion

80% Less Traffic

50% Less Energy Consumption

100% Ubiquity

The advantage of this vehicle over traditional public buses is the whole vehicle doesn't have to stop at every single bus stop, if you want to get off just walk to the back and the back module could simply drop off, for passengers wishing to disembark and then to collect new passengers, it could then catch-up and re-join the vehicle in front or a vehicle following behind could be added behind.



<https://www.youtube.com/watch?v=j6L3DCpGg5w>

They also have another function when not carrying passengers, the NExT vehicles when not carrying passengers could be rented out for cargo deliveries as an additional revenue source to reduce the cost to operators.





The National Transport Authority which is responsible for vehicle selections is, unfortunately, lacking in technology innovation, and are extremely risk averse, they come up with all kinds of excuses for failures without producing solutions such as the RTI Real Time Information and contactless payments debacles, and they have only awarded contracts for new buses to established traditional “preferred bidders” regardless of how long this decision will delay the switch to all-electric vehicles and this could be one of the reasons for us missing our 2030 Transport Climate Targets and cause for us receiving huge EU Commission fines!

These slow journeys with traditional vehicles may be the reason some current car owners would never switch to public transport and if we are serious about trying to promote public transport and SharedMobility advanced vehicles like NExT should be seriously considered I would like to see an allocation of funding for a trial to take place on our roads as soon as possible to speed up electrification of our transport to make sure we reach our climate targets come 2030 and avoid heavy fines from the EU commission.

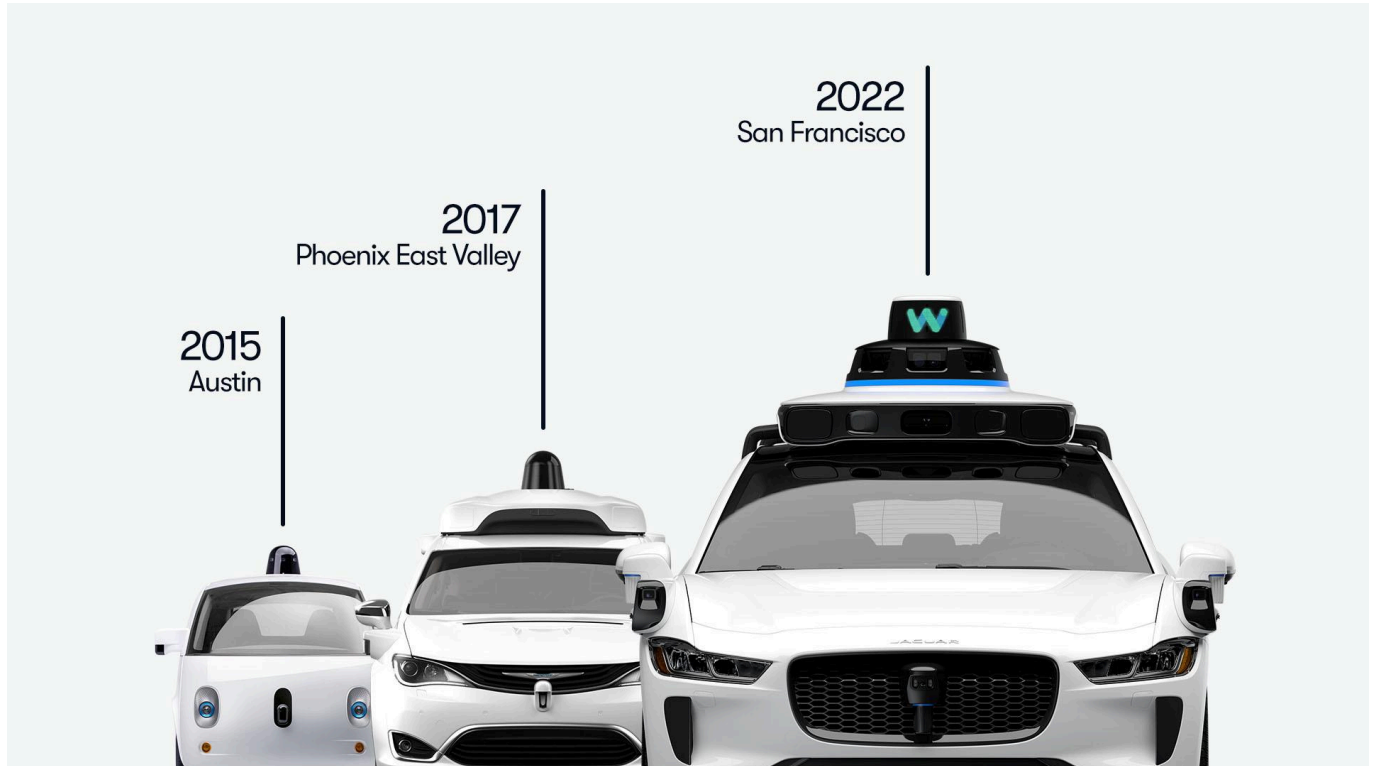
If the DOT/NTA is not prepared to award traditional Bus Eireann or Dublin Bus bus routes to NExT vehicles they should be offered a free license to operate privately on any routes they wish.



Even our mostly fossil-fueled National & LocalLink Buses lack of flexibility which means these expensive to purchase buses often run practically empty alot of the time.

Autonomous Electric RoboTaxis could be much more productive and efficient SharedMobility services.

Figures from Waymo and Baidu RoboTaxi services show their vehicles are being used up to 20 or 30 times per day, some of our CarSharing services would be lucky to do this in a month because of the return-to-base exclusive use model they operate.



Public Consultations



An Roinn Iompair
Department of Transport

Moving Together: A Strategic Approach to the Improved Efficiency of the Transport System in Ireland

www.gov.ie/en/consultation/b51b0-moving-together-a-strategic-approach-to-the-improved-efficiency-of-the-transport-system-in-ireland/

Aeravai's submission to the questions asked



[Objectives and Vision of Moving Together](#)



An Roinn Iompair
Department of Transport

Shared Mobility Hubs

Public Consultation: Shared Mobility Hubs

<https://www.gov.ie/en/consultation/7e2fc-public-consultation-shared-mobility-hubs-issues-paper/>



Cormac McKay's submission



[Cormac McKay's Submission to the public consultation on Mobility hubs](#) link

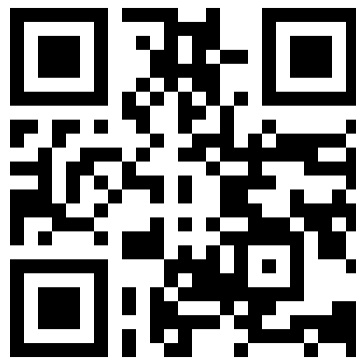
Public Consultation on Connected and Autonomous Mobility in Road Transport

<https://www.gov.ie/en/consultation/15a35-public-consultation-on-connected-and-autonomous-mobility-in-road-transport/>

Public Consultation on the Development of the Government's Road Safety Strategy 2021–2030



Aeravai's submission to the questions asked



<https://consult.nationaltransport.ie/ga/node/1392>

Published: 29 Aug 2024

By Aviva

Some 21% of drivers actively trying to use their car less for environmental reasons, according to new Aviva research

Regular journeys too long, weather and safety concerns are the main reasons preventing people from doing so

28 August 2024, Dublin: More than 1 in 5 (21%) motorists say that they are actively trying to use their car less for environmental reasons, while 1 in 10 (10%) adults don't have a car for the same reason. However, some 28% of drivers claimed that they won't change their driving habits for the environment. These are some of the key findings of new research carried out amongst 1,000 consumers, 879 of whom were motorists on behalf of Aviva Insurance Ireland DAC (Aviva).



<https://www.aviva.ie/group/media-centre/research-drivers-using-cars-less/>

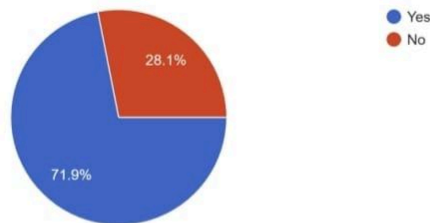
***Cormac McKay also conducted a number of surveys one was done as part of his Post Grad Climate Enterperunureship studies
Transport & Systems Change assignment***



Some of the main findings

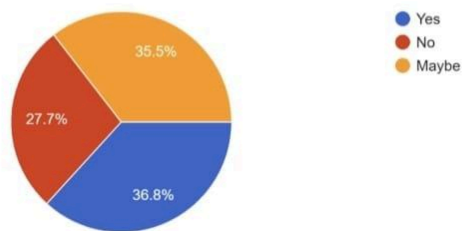
Have you heard of autonomous self drive cars?

153 responses



Do you think a self drive robot car providing an on demand service like a taxi is something you could consider using in the future?

155 responses

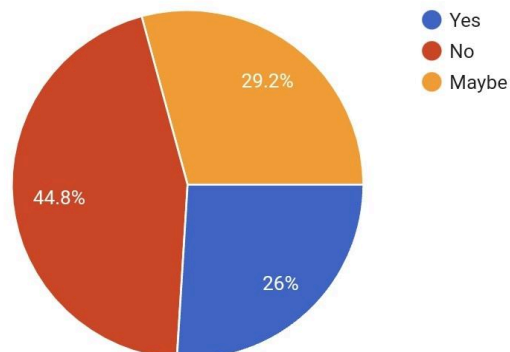


The public transport system is evolving all the time. Private car sharing is also an evolving with the help of new sharing apps.

Would you consider sharing a bookable car journey with people you might or might not know?



154 responses



Legislation to allow deployments on Irish roads

PART 4

AMENDMENT OF ACT OF 1961

Amendment of Act of 1961

5. The Act of 1961 is amended— 20

(a) in section 3(1)—

(i) by the insertion of the following definition after the definition of “approved policy of insurance”:

“ ‘**autonomous** vehicle’ means a mechanically propelled vehicle that has been designed, constructed, adapted or modified to move **autonomously** for certain periods of time but in respect of which driver intervention is still expected or required;” 25

and

(ii) by the substitution of the following definition for the definition of “driving”:

“ ‘driving’ includes— 30

(a) managing and controlling,

(b) in the case of an **autonomous** vehicle during periods of time in which the vehicle is moving **autonomously**, monitoring, overseeing and supervising, and

(c) in relation to a bicycle, tricycle or powered personal transporter, 35
riding,

<https://www.irishstatutebook.ie/eli/2023/act/16/section/5/enacted/en/html#sec5>

Unfortunately, it is unlikely this will be passed in the current Dáil Éireann term and has been delayed yet again and Aeravai has unfortunately had no other option but to report Ireland to the EU Commission for failure to legislate falling fowl of EU Trade rules and possibly Windsor Framework violations for North-South trade who have now opened an investigation.



EUROPEAN COMMISSION
Internal Market, Industry, Entrepreneurship and SMEs

Brussels, 27/08/2024



Thank you for your letter of 7/08/2024, which has been registered as a complaint under reference number CPL [REDACTED] (please quote this reference in any further correspondence).

The Commission's services will consider your complaint in the light of the applicable European Union law. You will be informed of the findings and of any steps taken concerning your complaint by DG Internal Market, Industry, Entrepreneurship and SMEs.

You may opt for confidential or non-confidential treatment of your complaint. If you have not done so in the complaint form, the Commission's services will by default treat your complaint confidentially. If you choose non-confidential treatment, the Commission departments may disclose both your identity and any of the information submitted by you to the authorities of the Member State against which you have made your complaint. The disclosure of your identity by the Commission's services may in some cases be indispensable to the handling of the complaint.

Please note that, if the Commission decides to act following your complaint, including by launching an infringement procedure, its general aim is to ensure that Member State laws and practices are compliant with EU law. The submission of a complaint to the Commission may thus not resolve your specific and individual situation. In order to obtain redress, including compensation if warranted, you should take action at national level in the Member State concerned. Submitting a complaint to the Commission does not suspend the time limits for starting legal action under national law.

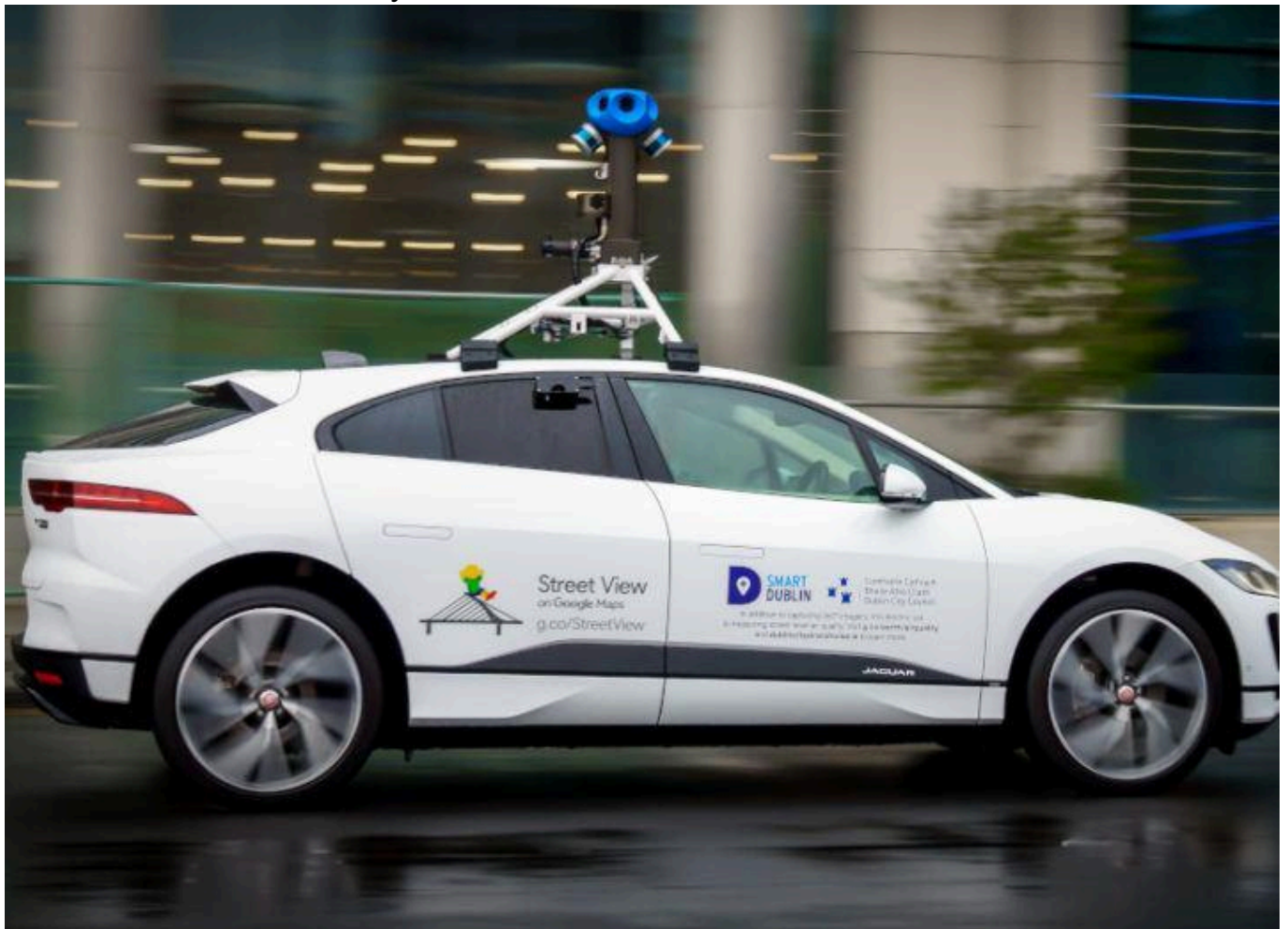
You can find further information on infringement procedures for breaches of European Union law in the annex to this letter.

Cormac McKay has written to the Dept of Transport Officials and our current Ministers; Jack Chambers TD Minister of Finance, James Lawless TD Minister of State and Eamon Ryan TD Minister of Transport and also members of the opposition; Darran O'Rourke Transport spokesperson for Sinn Fein and Cian O'Callaghan Transport spokesperson for Social Democrats to inform them of the investigation and I am awaiting a response from them and has offered his help and assistance to put an end to the EU Commission investigation as quickly as possible in the next Government term to help us meet our climate commitments in the Transport sector and allow for deployments on Irish and Northern Irish roads.

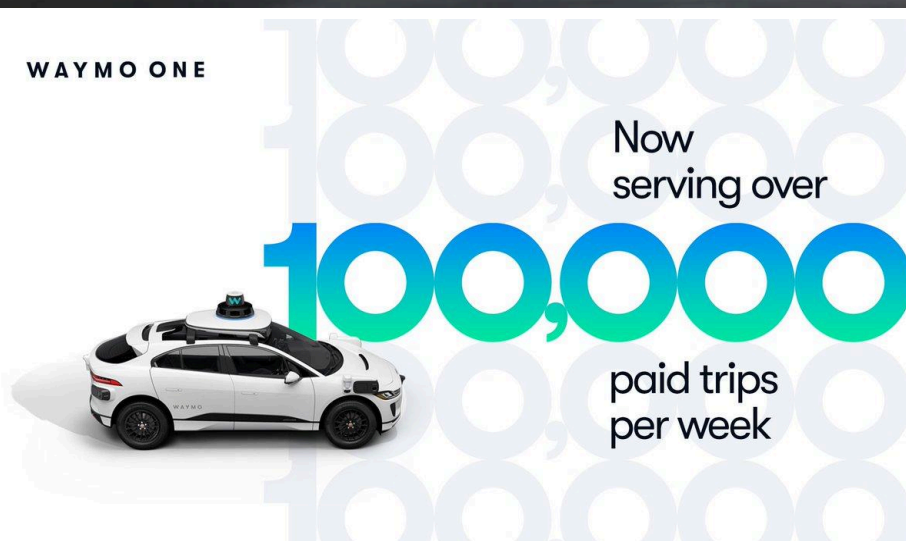


We asked what would it take to get Waymo to Ireland?" we boldly asked Cedric Dupont, director of product management at Waymo today. Surprisingly, the answer was equally bold and very straightforward. "A stable legal framework and a local partner willing to invest in a permanent deployment, not a pilot project" This would take a budget of only around €100m.

A lot of preliminary work as already been carried out in Ireland, by many different operators including Google's 4D mapping of Dublin streets, using the same vehicles they currently use for Autonomous Electric Shared Mobility RoboTaxi Services in the USA today.



WAYMO ONE



*in the USA

Waymo is ready and waiting to enter the Irish market with government support and local investment something our ISIF should consider.



Michael McGrath ✓
@mmcgrathtd

Seeing lots of examples of innovation and technological advancement here in the 🇺🇸 west coast but the most interesting experience so far has been a trip in a @Waymo autonomous vehicle through the streets of San Francisco!



Recommendations for Pre-Budget 2025 builds on our recommendations of last year's submission Pre-Budget 2024 recommendations. Despite inviting the then Minister for Finance Micheal McGrath TD to try the Waymo Autonomous Electric SharedMobility RoboTaxi services in San Francisco while on a Trade mission and him being extremely impressive with the trip our calls for SharedMobilityVouchers Car Scrappage Scheme unfortunately went unanswered, that have garnered more international attention than domestic with one German city adopting my proposal for SharedMobilityVouchers Car Scrappage Scheme

https://downloads.regulations.gov/NHTSA-2022-0079-9320/attachment_1.pdf



<https://www.polis-mobility.com/magazine/articles/marburgs-incentive-program.php>

The city of Marburg is planning an incentive program that encourages Marburg residents to give up their private cars. With a bonus of up to 1250 euros, participants can use car sharing, public transport and shop with Marburg Vouchers.

Aeravai's Pre-Budget 2025 Recommendations

€2500 one-off SharedMobilityVoucher Car Scrappage Scheme for any household that gives up a private car.

An extra €2500 if the whole household is completely private car-free

An extra €2500 if the household is outside Urban centers in rural areas

These ShareMobility Vouchers can then be used by current CarSharing and new SharedMobility providers to purchase a new Electric Vehicles and also Shared Wireless Vehicle Charging Infrastructure that can be used in a Free-Floating CarSharing service only.

€10,000 per vehicle for a non Autonomous or Remotely Piloted fully Electric Vehicle,

€50,000 per vehicle for a fully Autonomous or Remotely Piloted Vehicle with 24/7 use.

The idea behind this is to replace private cars with SharedMobility Vehicles.

The Customer can use the SharedMobilityVouchers in an Annual or Monthly Subscription Package or 50/50 pay-as-you-go per journey if your journey costs €20 euro €10 can be used by your SMV and the remainder paid by you.

SharedMobility services could actually be significantly more affordable than the average cost of running a family car for a year which is about €10,691.12 according to the AA www.theaa.ie/motoring-advice/cost-of-motoring/

Each household that signs their private electric car up to CarSharing Club or RoboTaxi Service can earn up to €10,000 tax-free (similar to the rent-a-room scheme) This is only available to electric Vehicles adapted to be shared.

Workplaces and Businesses can also benefit. Company electric cars can also work in car sharing scheme, inside or outside work hours, to benefit for up to €10000 tax-free earnings, if capable of being remotely piloted or RoboTaxi and available for SharedMobility services and €5000 for the purchase of a new electric vehicle for every fossil fuel vehicle they replace.

Time to get the stick out!

With the expected fines for failure to meet our climate goals the fines will be quite significant €8.2B yearly those who cause the emissions should be the ones who pick up the tab and not the exchequer and all other taxpayers.

The Stick against fossil-fueled internal combustion engine vehicles including all Hybrids, needs to get bigger as an extra incentive for going electric rather than increasing the grants available for private EV car ownership.

A new ICE Tax should be considered by the next government.

Any shortfall in the collection of ICE TAX and proportion of EU Fine caused by the Transport sector for missing our target should be paid directly by all remaining private fossil-fueled internal combustion engine vehicle owners when the fine is imposed. there should be this 5 year notice given to ICE vehicle owners to let them know this is going to happen.

This revenue could also help fund the SharedMobilityVoucher scheme.

National Future Transport Summit 2025

Consultation Submission

Aeravai Autonomous Electric Road and Air Vehicle Association of Ireland

Contact: Cormac McKay

Phone number: +353851489179

Position Title: Founder and Spokesperson

Company name: Aeravai Autonomous Electric Road and Air Vehicle Association of Ireland

Email: mckayco@tcd.ie

Which theme areas are you most interested in? (select all that apply):

Safety;Productivity;Sustainability;Social Legitimacy;Infrastructure

How would you describe the sector your submission represents? (eg: rail, aviation, community, research): Autonomous Shared Mobility services

How would you describe the geographic reach of your organization? (eg local, state, regional, national, international): Ireland UK and EU

Do you agree with the challenges described? Yes

What challenges are missing? Incentives for the general public

What are your solutions for addressing the challenges? Shared Mobility Vouchers, Car Scrappage Scheme

How would you prioritise the proposed solutions? It is the next evolution of public and private transport and journey sharing should be promoted and incentivized with some social engineering.

Upload Document:

[Pre-budget-submission-.pdf](#)

I acknowledge that this submission will be published online: Yes