

TR 059

SUSTAINABLE TRANSPORT IN BROADCASTING

Strategic Report

Geneva April 2021

ABSTRACT

The aim of this document is to capture and share best practices amongst our Members.

Transportation plays a key role in Public Service Media (PSM). As with most organizations, their employees' commute to and from work has an environmental impact, but in addition PSM has the factor of creating their offerings. The planning and production of content is increasingly done independently from the company's physical locations. The scope of business trips required for planning and production is affected by this just as much as the mobility of employees to the company's site.

This report contains an overview of current European measures that are being taken, or that are planned to improve sustainability in all forms of transport. It also gives information on several EBU members' initiatives toward greening their transport use in conducting their broadcast businesses.

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SUSTAINABLE TRANSPORT IN BROADCASTING

EBU Committee	First Issued	Revised	Re-issued
тс	2021		

Keywords: Broadcast, Sustainability, Green, Transport, EV, Electric Vehicle, Long-term remote working, Flexible mobile working, Part-time working from home, Energy conservation, Ecological, Environment, Carbon-footprint.

1. INTRODUCTION

Transportation, as a central component of supporting the interactions and the development of socio-economic systems, has been the subject of much discussion as to what extent it is sustainable. According to Dr Jean-Paul Rodrigue "sustainable transportation is the capacity to support the mobility needs of a society in a manner that is the least damageable to the environment and does not impair the mobility needs of future generations."

Sustainable development, when applied to transport systems, requires the promotion of linkages between the three pillars of environmental protection, economic efficiency, and social progress.

Within the environmental pillar, the objective consists in understanding the reciprocal influences of the physical environment and the environmental issues that are tackled by all aspects of the transport industry. Under the economic pillar, the objective entails directing progress towards economic efficiency. Transport must be cost-effective and adaptable to changing demands. Under the social pillar, the aim is to upgrade standards of living and quality of life.

Recent developments in the potential of self-driving vehicles highlights the sustainable usage of vehicles that potentially could remove up to 90% of vehicles from streets. This includes ongoing technological improvement in engine and drive technologies, which has reduced vehicle emissions¹.

¹ <u>https://transportgeography.org/contents/chapter4/transportation-sustainability-decarbonization/</u>

2. EUROPE-WIDE INITIATIVES

Europe's transport system has been a huge success, connecting people across the continent and reducing journey times. As we have all become more mobile, so the carbon footprint of our transport activities has grown. Transport today accounts for approximately 25% of the EU's greenhouse gas emissions and this continues to rise as demand grows. The *European Green Deal* pursues a 90% reduction in these emissions by 2050. Moving towards more sustainable transport means positioning users first and providing them with more affordable, accessible, healthier, and cleaner alternatives.

Europe's key objective is to boost the uptake of clean vehicles and alternative fuels. By 2025, it estimates that about one million public recharging and refuelling stations across Europe will be required for some 13 million zero- and low-emission vehicles. The Commission is supporting and financing the deployment of recharging and refuelling points where continuing gaps exist, particularly for long-distance travel and less densely populated areas.

Achieving these ambitious climate goals also entails a shift towards greater sustainable transport modes such as rail and inland waterways. For this to occur, the capacity of both modes of transport must be extended and better managed.

Multimodal transport (a combination of different transport modes throughout a journey) can also increase the use of sustainable modes of transport but the concept requires a strong boost. The *Combined Transport Directive* is designed to support multimodal freight operations involving rail and waterborne transport, including short sea-shipping.

The negative environmental and health costs of transport (known as *externalities*) are not usually reflected in prices. To rectify this, the Commission envisages reducing the *EU Emissions Trading System* allowances currently allocated to airlines free of charge. This will be coordinated with action at a global level, with the International Civil Aviation Organization². Other EU action in support of the 'polluter-pays' principle comprises effective road pricing in the EU, as well as ending subsidies for fossil fuels.

It is in cities that pollution is felt the most. A combination of measures is required to address the air quality, emissions, urban congestion and noise. These include improving public transport and promoting active modes of transport such as walking and cycling. The EU will pay specific attention to reducing pollution in EU ports as well as the pollutants emitted by aeroplanes and airport operations.

The Commission is committed to spending 60% of the budget on infrastructure projects with a link to sustainability. The European agency will become important in creating a network of charging infrastructure for alternative fuels, and in enabling a highly performing, interoperable European railway network.³

As well as at the EU level, there are initiatives happening at National Government levels too.

² ICAO - a United Nations specialized agency. It changes the principles and techniques of international air navigation and fosters the planning and development of international air transport to ensure safe and orderly growth. Its headquarters is in Quebec, Canada (from Wikipedia).

³ <u>https://ec.europa.eu/transport/themes/sustainable_en</u>

2.1 UK INITIATIVES

The British government has released a report concentrating on the decarbonisation of transport as part of its national climate crisis strategy. The report states that "rapid and unprecedented action" will be required to bring change, with hopes of reducing car use and making the UK a hub for green technology in the run-up to the Glasgow COP26 climate talks in November 2021.

Aiming to start a "green transport revolution", it is divided into six strategic priorities which will enable the UK to reach net zero by 2050. The Report pays particular attention to active transport, such as walking and cycling. During the coronavirus outbreak, cycling and walking were encouraged as a safe way to exercise.

Public transport is also part of the active transport umbrella, as some sort of physical activity is usually involved in getting to and from bus stops or train stations. The government report hopes this will soon become "the natural first choice for daily activities." The six priorities are:

- Accelerating a shift towards public and active transport.
- Decarbonising road vehicles.
- Decarbonising how our goods and services reach the people.
- Solutions for emissions reductions based on specific locations.
- The UK as a hub for green technology and innovation.
- Reducing carbon in a global economy.

In short, it covers how people travel, how goods and services reach people and deployment of clean technology. The report comes after the Prime Minister announced £5 billion worth of investment in local buses, cycling and walking infrastructures in 2020. This included funding for some 4000 zero-emission buses to make greener travel a convenient option, improving the frequency of services and implementing more affordable fares. Rail travel is also considered an eco-friendlier alternative to car use, described as "one of the most efficient ways of moving high volumes of people into city centres and moving people over long distances." The UK could even see a shift towards solar-powered trains. The sporadic nature of the sunshine, means it could be deployed almost anywhere, "from small rooftop arrays to solar farms a mile wide." This project would be the first time for connecting solar generation directly to rail traction networks to power trains.

The UK Director of Transport Environment, campaigning for sustainable transport in Europe, stated "there is no silver bullet to decarbonising transport, but at least the new report is 'balanced'". He went on to say "phasing out the sale of new cars and vans with internal combustion engines by the early 2030s is both essential and entirely feasible; but this must be complimented by reducing car use. It is imperative that the UK moves from building new roads and instead allocates more space and funding for walking, cycling and public transport."

The Report also details the discrepancies throughout the country when it comes to selecting the mode of transport for travel. Across the United Kingdom, 68% of workers typically travelled to work by car in 2018, but the number dropped significantly in London, to just 27%. According to the research, providing people with the right amount of information on the environmental impact of their journeys could help them change their habits. If the public can "access clear, transparent information about the emissions associated with their journeys, then this will enable more informed decisions about how individuals and goods travel," states the Report⁴.

⁴ <u>https://www.euronews.com/living/2020/03/30/uk-announces-ambitious-plan-to-become-hub-for-green-transport</u>

3. PUBLIC SERVICE MEDIA INITIATIVES

Mobility plays a key role in creating the offerings from Public Service Media (PSM). In the wake of the new possibilities facilitated by digital technologies and 'the cloud', the requirements for classic analogue logistics are changing. This affects journalistic, creative, as well as technical processes. The planning and production of content is increasingly done independently from the company's physical locations. The keywords here are terms such as long-term remote working, flexible mobile working or part-time working from home. The scope of business trips required for planning and production is affected by this just as much as the mobility of employees to the company's site.

3.1 PUBLIC TRANSPORT INITIATIVES

According to an article by the BBC, an average bus produces personal CO_2 emissions of 82 g/km⁵ and use of a train is 41 g/km⁶.

Many organizations encourage their employees to use public transport where necessary. In cities where transport links are good, this is not an issue, but many organizations that are not based in the city centre offer good alternatives to driving, e.g., company green buses to run from and between the building(s) to the train or bus station on a regular basis.

For example, **RTVE** has 74 different locations in Spain between production centres, delegations and news units. Access to most of them is possible by public transport; only five sites do not have public transport connections.

RTVE offers a bus service for employees in its Madrid, Barcelona and Valencia locations. This shared transport helps improve energy efficiency and reduces the carbon footprint of the organization. For the last two years, this bus service has maintained the same number of vehicles, with one exception, Seville (see later). Another initiative to improve efficiency was changing the size of a vehicle according to its load requirement, so that there are no unnecessary heavy vehicles in use.

Many organizations also provide interest-free loans to their employees to pay for public transport passes. **RTÉ** has a tax-saver scheme made available to staff using public transport. The car-parking spaces on their Donnybrook site were reduced in 2018, putting more emphasis on sustainable modes of transport in line with the South Dublin County Council's regulations.

Going forward, it will continue to monitor and review ways of reducing/addressing/offsetting the impact of staff travel.

Managed through a Green Broadcaster Advisory Group process, RTÉ 2021 targets:

- 1. Establish eco-driving training programme requirements for all RTÉ employees.
- 2. Increase the number of hybrid and/or electric vehicles in the RTÉ fleet and rentals.
- 3. Review and monitor the use of EV charge points through liaison with user groups.
- 4. Report fuel consumption through Sustainable Energy Authority of Ireland monitoring and reporting process⁷.

As far as business travel is concerned for the **RAI**, the goal is to foster the use of trains rather than aeroplanes. For this purpose, conventions with railway companies such as Italo NTV and Trenitalia

⁵ <u>https://www.bbc.com/future/article/20200317-climate-change-cut-carbon-emissions-from-your-commute</u>

⁶ <u>https://www.bbc.com/news/science-environment-49349566</u>

⁷ <u>https://www.seai.ie/business-and-public-sector/public-sector/monitoring-and-reporting/</u>

have been renewed on a national scale, registering a meaningful increase (+6.8%) in the use of trains and a slight reduction (-1.9%) in the use of planes in 2019. Moreover, it is quite common among employees on the same business travel to share cars or minibuses to optimize business travels costs and to limit their environmental impact. The RAI also provides employees with a subsidy amounting to 15% of the yearly cost of the subscription to local public transports.

ARD/RBB, as well as other ARD members, support their employees with a contribution to work vouchers for public transport and sharing solutions for bikes and cars⁸: **ZDF**, with its company headquarters in Mainz, continues to increase its integration into the regional mobility offerings. This includes bus and tram transport as well as offerings in car-sharing, ride-sharing or bike-sharing. The ZDF also supports its employees with a work voucher that offers discounts on local public transport. Similarly, the **YLE** has their main campus in Helsinki, 5 km from the city centre. The public transport (train, tram and bus) links are good, so staff are encouraged to use these to get to work.

The COVID-pandemic has had its part in transforming our lifestyle habits. Working remotely has become widespread and with it, significantly reduced travel and commuting. It is likely to continue this way into the future and so will have a definitive impact on reducing the carbon footprint of PSMs. The pandemic has also affected transportation services contracts. One example is the RTVE bus service in Seville, where the contract finished in March 2020. They decided to replace it with taxi services as most of their employees were working from home. In the case of ARD/RBB and other ARD members, home-office is the new normal. Everybody who can work from home is obliged to stay at home with the necessary equipment provided by the public service broadcaster.

3.2 BICYCLE INITIATIVES

Bike-sharing systems (BSS) are becoming progressively popular in urban situations. They are a mobility service of public bicycles available for shared use, use on a pay-to-use basis. These shared systems provide city users with a more sustainable and carbon-free mode of transportation (particularly suited for short-distance trips) that significantly reduces traffic congestion, air pollution and noise in city centres - and supports the greener growth of urban environments.⁹

As well as BSS schemes, many PSM organizations provide incentivisation for employees using bicycles, and these incentives take a wide variety of forms, from discounts on the purchase of a bicycle, to help with repairs and to buying company bicycles that can be borrowed by staff. The **YLE** has a fleet bicycles that staff can borrow, for instance.

The **ZDF** actively supports its employees who choose to make their daily commute to the company by bicycle. There are numerous parking places for bicycles, as well as a charging station for e-bikes on the premises of its headquarters in Mainz.

Since 2018 the **RTVE** has provided personal lockers, showers and changing rooms of those employees choosing to cycle into the Madrid workplace. The project was launched by the Labour Welfare area in RTVE after a petition from a group of employees. This highlights that aside from protecting the environment, cycling to the workplace encourages the practice of exercise and a healthy lifestyle for employees. They are also responsible for other initiatives such as the 2019 'Share your route' in-house website with safe bike itineraries, Google maps and riding advice shared by employees. To encourage employee's contributions there was a raffle to win the red

⁸ <u>https://www.ard.de/die-ard/ARD-Nachhaltigkeitsbericht-104.pdf</u>, p. 66.

⁹ <u>https://www.mdpi.com/journal/sustainability/special_issues/bike_sharing_systems</u>

jersey of the *Vuelta a España*, the main cycling race in Spain. The website is still active and employees can share new routes, however the numbers using the site have decreased through the Pandemic.

Similarly, the **RTÉ** has a bike-to-work scheme and a tax-saver scheme. Bicycle racks are available for staff to use. A bike repair centre is also located on site. RTÉ have a Teams forum for cyclists and engage with them on any issues or improvements. This creates a buzz in the workplace and can also lead more people to participate in such schemes, ultimately creating a culture change.

ITV (UKIB) also participates in the UK Government-backed *Cycle to Work* scheme. This is a salary sacrifice scheme that allows employees to purchase a bike, including e-bikes, in a very tax-efficient way, typically offering a 30 - 47% saving.

The **RAI** is currently outlining new bike-sharing agreements and renewing those that are shortly to expire. Moreover, it is looking into the possibility of endorsing agreements with companies managing the sharing of electric kick-scooters. The goal is to have forms of collaboration that favour the employees' use of eco-friendly mobility. Furthermore, parking for bikes is available in various premises. Eventually, agreements with shops specialized in the sale and repair of bikes will also be in place.

3.3 CAR INITIATIVES

Not all premises are situated within easy accessibility of public transport, however. In addition to providing buses for employees, many organizations, such as the \mathbf{RTE} , as already mentioned, have also reduced car-parking spaces and have implemented car-sharing schemes. An average car CO₂ emission is 180 g/km¹⁰. In some countries such as the Netherlands, the government incentivizes the notion by having special lanes in peak hours that can only be used by vehicles carrying passengers in addition to the driver, also known as high occupancy vehicles.

In the **RTVE**, there has been an informal car-sharing initiative running for years; it started with a single post on the corporate intranet. In 2019, the Labour Welfare team decided to go a step further and started to work on a new App designed to match colleagues having the same work schedule and route into work so that they could share a car. The *Ridesharing App* was one of the winning ideas of the '*Innova*' Project, an innovation hub for employees in which everyone in the company could participate with ideas or suggestions.

The Ridesharing App responded to the challenge of making RTVE a healthier company and it was adopted, with the organization having the commitment to implement it. Its goal is to improve the quality of life, foster a collaborative work environment and contribute to the Sustainable Development Goals in all aspects that refer to environmental protection and mobility; it helps reduce global and local emissions and save energy resources.

The RTVE strengthened its commitment to sustainable mobility during 2020 with the installation of 28 charging points for electric and hybrid vehicles in its Madrid, Barcelona and Las Palmas premises. This will not only promote the use of green transport among staff and suppliers but will inspire and contribute to a new energy model in the organization.

The **RAI** is currently evaluating a car-pooling project that similarly encourages the sharing of private cars between employees on their daily commute, thus creating a practical and economic alternative to public transport, with a reduced impact with respect to the individual use of private

¹⁰ <u>https://www.bbc.com/future/article/20200317-climate-change-cut-carbon-emissions-from-your-commute</u>

cars from home to the workplace. The service will be managed through an online platform exclusively set up for RAI employees.

ITV (UKIB) runs a car-leasing salary-sacrifice scheme that is highly tax-efficient for zero emission electric vehicles.

3.4 FLEET INITIATIVES

There is also a focus on vehicles owned or rented by organizations for the movement of goods and equipment and traditionally, PSMs have a variety of different types of vehicle from cars to huge broadcast vehicles. PSMs are seriously reassessing their fleet requirements in a number of ways, by reducing the size of the fleet, but also moving towards cleaner vehicles such as hybrid or electric.

RTVE's fleet does not have a fixed number of vehicles; it adapts to programmes' planned requirements. To achieve this the RTVE has transport service contracts with taxis and it rents vehicles to facilitate its news production. The use of these vehicles enhances the responsible management of the budget, as it is adjusted to the company's programme demand. Maintenance costs of the fleet are not (directly) borne by the RTVE and the service use depends on the service needs of the organization. When hiring, the RTVE prioritises 'zero emissions' or 'eco' vehicles.

The **ARD/RBB**'s main transport goal in 2020/21 is sustainability. Therefore, its fleet has been reduced from 35 to 30 cars; 23 of them are electric. Additionally, 10 outside broadcast vehicles are electric. The necessary charging infrastructure for these electric vehicles has been established in Berlin and Potsdam.

The **ZDF**'s passenger car and lorry fleets are successively being converted to reduced-CO₂ vehicles with low carbon and nitrogen oxide emissions. These include electric cars, hybrid vehicles, or vehicles with compressed natural gas (CNG), liquified natural gas (LNG) and liquified petroleum gas (LPG) engines. The definitions of these different types of natural gases are¹¹:

- 1. **CNG** It is the gaseous product of petroleum and is the first product that is separated during the distillation process. CNG is odourless, tasteless and non-toxic, and is made up of 93.05% methane, nitrogen, carbon dioxide, propane and traces of ethane. It is an environmentally clean alternative fuel, as its combustion process emits a lower percentage of greenhouse gases when compared to other fuels.
- 2. **LNG** is a natural gas converted to liquid form through liquefaction. During this process, natural gas is cooled at low temperatures until it turns into a liquid, and the volume of gas is reduced by approximately 600 times.
- 3. LPG emits less hydrocarbons, carbon monoxide and oxides of nitrogen. It also has a highoctane rating and increases engine longevity. The fuel weight-to-mileage of LPG is equal to that of petrol-operated vehicles.

The YLE's Transport Services are based around service points in Helsinki and in Tampere. Transport Services are responsible for procuring vehicles and arranging passenger transport services. Procurement of the vehicles is prepared in cooperation with the broadcast operating units and they are purchased from the *Hansel*¹² framework in accordance with the requirements of the EU Clean Vehicles Directive. Hansel always considers all three components of responsibility, namely:

¹¹ <u>https://www.uti.edu/blog/diesel/cng-lpg-lng-fuel</u>.

¹² Hansel is Finland's central purchasing body serving the entire public administration for procurement.

environmental, financial and social, in the preparation of procurement. Currently, the YLE's fleet comprises:

Type of Vehicle	Type of Fuel	Number
Cars	Petrol	63
	Hybrid	23
	Plug-in hybrid	15
	Diesel	101
	Electric	2
Trucks	Diesel	25
Vans	Diesel	29

	Table	1:	YLE's	Fleet
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3.4.1 PASSENGER CARS

RTÉ has a contract with Europcar 'GoCar' and hosts a GoBase at its Donnybrook premises. This comprises parking places and a charger for a Renault Zoe electric vehicle, which is based on the site. This service is operated through an App and it can be used by RTÉ staff who have unavoidable travel needs as part of their work. It allows staff to still use a bike to commute to and from work, but it enables them to make the necessary business journey in a sustainable way. A forum of electric vehicle users is monitored to ensure appropriate availability and location of the charging points. Along with RTÉ, ITV (UKIB) has a fleet of over 100 cars and 20 of these are Mitsubishi Outlander plug-in hybrids that have replaced previous diesel vehicles. Their next step is to go EV for the entire fleet once the right vehicles become available from manufacturers.

The **RAI** has adopted a policy of progressive replacement of its fleet vehicles at the end of their life cycle with hybrid or electric models. By the end of 2021, the company's fleet will be replaced, and, in this framework, the RAI's commitment is to increase the percentage of electric and hybrid vehicles.

The YLE's Transportation Services also manage shared cars (passenger cars and vans for 1+8 persons). Employees can book the vehicles from a service point when needed. There are 11 shared cars in Helsinki and 9 in Tampere. If there are no shared cars available, the demand peaks are handled by rental cars that are furnished through *Hansel*'s framework arrangement.

3.4.2 BROADCAST VEHICLES

Many organizations, such as the **RTÉ** and the **RAI** are replacing their broadcast vehicles with energy efficient vehicles when purchasing new vehicles or replacing others at the end of their life cycle. For the **YLE**, its production units are responsible for the use and costs of the vehicles they manage.

ITV (UKIB) has developed News Gathering solutions that fit inside an SUV. Their current vehicles are Mitsubishi Outlander plug-in hybrids that have been equipped with Live-U equipment and satellite connectivity. This kit would be able to fit in a zero emissions EV once the right model becomes available (it needs to be 4x4 and have a good battery range). They hope to achieve this in the next 2 years.

The **RTVE** tries to schedule as many shared transfers as possible to optimize resources. Ride-sharing and shared transports improve operational efficiency and energy efficiency.

3.4.3 OTHER VEHICLES

ITV (UKIB) is currently running trials with electric vans for some of its productions that only involve short journeys. The hope is to introduce the first of these in 2021 and to electrify the entire fleet of over 100 vans in the next 2 - 5 years. The culture at ITV is ready to make the switch, but the market is being slow to adapt and to offer the right kinds of vehicle. The ITV also features EVs in its programmes to promote the technology and to excite viewers' curiosity.

4. CONCLUSIONS

The schemes in place to green employee commuting are self-explanatory and it is relatively easy to calculate the reduction in CO_2 emissions by using fewer private cars in favour of bicycles or public transport.

Type of Transport	Personal CO ₂ Emissions (g/km)
Public Bus	82
Car	180
Train	41
Plane (Domestic Flight)	254
Motorbike	115

Table 2: Estimates of CO2 emissions for different modes of transport*

*Adapted from BBC articles "<u>Climate change: Should you fly, drive or take the train?</u>" and "<u>How our daily travel harms the planet</u>".

It is not so easy to calculate the savings to be made in greening the transport used for production, as there are so many variables.

Secoya Eco-tournage¹³ has tried to articulate what it considers for a green production. Depending on the projects and organizations it supports, the possibilities for action in the field of transport are very varied and depend on many factors.

Looking at the means of transport used:

- Public transport (metro, bus, suburban train, etc.).
- Trains.
- Planes.
- Individual cars.
- Company cars.
- Shared cars.
- Bicycles, scooters, rollerblades, etc.
- Company bus(es), etc.

Why the production locations are used:

- Recurring places.
- Temporary locations.
- Venues for a unique event.
- Urban area.
- Rural area.
- Accessible by transport.
- Isolated from all means of transport.

¹³ Secoya Eco-tournage - see <u>https://tech.ebu.ch/groups/greenproduction/greenprodinitiatives</u>.

The structure of the production team. Depending on the number of people involved, the options and solutions differ:

- Group(s).
- Teams.
- Individuals.
- External service providers.

The reasons for and recurrence of the travel considered:

- Is it possible to put in place a long-term plan for travel?
- Do the trips have to be repeated?
- What will be the frequency of travel?

Considering these issues and their elucidation, Secoya then identifies any solutions that may arise:

- Calculation of the carbon impact of travel.
- Setting up a travel plan to optimise the CO₂/person/km ratio.
- Organisation of a fleet of vehicles adapted to short journeys.
- Search for partnerships to optimise travel opportunities without impacting costs.
- Study of a carbon contribution.

No ready-made formula exists, let alone a solution that can be adapted everywhere.

Transport, like many other issues, must be studied precisely so that the proposed solutions meet logistical, time and budget constraints, without which the solution will neither be sustainable nor effective.