

Minimising the environmental impact of commuting and business travel

In a nutshell

SUMMARY

It is best practice to minimise the environmental impact of commuting and business travel by:

- staff engagement and behavioural change towards more sustainable commuting (e.g. campaigns through digital tools, economic incentives/disincentives, use of social games or reward based incentives);
- drawing up of organisation-wide staff travel plans which encourage sustainable modes of commuting and business travel (e.g. agreement with local public transport providers to adapt routes to the needs of commuters; carbon budgeting for business travel);
- including stringent sustainability criteria in the procurement of transport services (e.g. use of train rather than flights for short journeys; preference for direct flights or multimodal journeys over connecting flights);
- reducing commuting by car where public transport exists and encouraging efficient car use (e.g. reducing single passenger car journeys by promoting car-pooling among employees);
- enabling agile working for employees, thus reducing transport needs overall (e.g. introducing remote and home working, installing virtual meeting facilities).

Target group

Public administrations having office-based operations

Applicability

This best practice is applicable across all types and scales of public administrations. However, the specific measures to be implemented vary depending on local conditions, such as geographical setting and availability of public transport.

Environmental performance indicators

- Implementation of tools for promoting sustainable commuting (y/n)
- Percentage of staff commuting by car on a daily basis as single passenger (%)
- Percentage of staff commuting by walking, cycling or public transport at least 3 times per week (%)
- Annual total CO₂eq emissions from business travel (tonnes CO₂eq/year)
- Annual total CO₂eq emissions from business travel per full time equivalent (FTE) employee (kg CO₂eq/FTE/year)
- Implementation of carbon budgeting for all business travel (y/n)
- Availability of videoconferencing facilities to all staff and monitoring and promotion of their use (y/n)

Benchmarks of excellence

- Tools for promoting sustainable commuting for employees are implemented and promoted
- Carbon budgeting is implemented for all business travel
- Videoconferencing facilities are available to all staff and their use is monitored and promoted

Description

This best practice covers all work-related transport; including everyday travel to/from a main office base, along with any travel undertaken for work-related meetings or events. This may include local and/or international travel. For further reference on general mobility issues (e.g. the provision of public transport services, the promotion of sustainable modes of transport by local authorities in their territory) please see best practice on mobility.

While individual public administration offices have little influence over wider transport and infrastructure issues, they can encourage sustainable transport within their employees through internal initiatives such as staff travel plans, behaviour change and engagement, sustainable procurement and agile working. They may also engage with local transport providers to improve links. A selection of best practice approaches to minimising the impact of commuting and business travel are outlined below.

Engagement and behaviour change

Staff engagement is an easily achievable and low cost option for reducing the impact of business travel by Public Administration bodies. Staff engagement and behaviour change campaigns can result in significant reductions in inefficient modes of transport, frequency of travel and commuter miles and may not require any initial capital outlay. Campaigns driven through digital tools such as online platforms and social networks, have a near zero cost of scale, and can be delivered to thousands of staff at little additional cost than engaging a nominal number, allowing for acceleration of impact and savings. This is particularly appealing to Public Administration bodies that have a large outreach, but potentially limited funding for direct engagement.

Routine behaviour change has the potential to be a powerful instrument for carbon saving. While changing the mode of a transport for one single journey may not have a significant impact in itself, altering the behaviour of groups can have a large cumulative impact. At the same time, creating a culture of change across a whole office can multiply the effect, making unconventional behaviours common place and habitual.

Public administrations can also employ gamification tactics and incentivisations to engage staff and encourage behaviour change towards sustainable transport. Examples include team/individual cycle challenges, cycle to work days, provision of cycle facilities (showers, parking, lockers etc.), walking challenges, greater mileage payments for sustainable modes and subsidised season tickets.

Another measure which could drive commuting behaviour change, and allow raising funds to be committed for further actions to reduce the environmental impact, is the introduction of fees for employees using car parks provided by the public administration. When implementing this measure, however, public administration should take into consideration a number of factors when establishing the fee (e.g. the place of residence of the employee, family composition, annual income, long distance commutes, unavailability of public transport) since in several cases the use of the car is unavoidable (see section below on 'encouraging the efficient car use').

Staff Travel Plans

Staff Travel Plans are organisational wide plans or policies which offer support and incentives to encourage sustainable modes of commuting and business travel amongst staff. These plans help to reduce Scope 3 carbon emissions within an organisation while also helping to reduce local traffic congestion and air pollution. They also provide benefits to both the employer and employee.

Benefits to the employer/public administration office include:

- Reduced environmental impacts through encouraging alternative modes of transport and agile and home working
- Reduction in travel costs
- Reduction in the amount of land and maintenance required for car parking provision
- Better staff recruitment and retention and reduced absenteeism

Benefits to the employee include:

- Save money through season ticket loans, cycle loans or car sharing
- Help achieve work life balance through agile working and homeworking
- Improved health and fitness by incorporating exercise into daily routines

Public administrations may also wish to implement a carbon budget for business-related travel – this budget will place a cap on the amount of carbon to be expended on business travel in any given year. The budget cannot be exceeded, with carbon emissions for each trip calculated and deducted from the budget; this encourages staff to choose low carbon transport options.

Procurement policies

Sustainable transport procurement policies should in the first place deem whether the transport is actually necessary or, in the case of a meeting or an event, whether it could be attended remotely. Where transport is necessary, core criteria should stipulate that the most sustainable mode of transport is taken where applicable (i.e. a train journey within the EU, rather than a flight). Sustainability criteria should be stringent, however should also ensure there is sufficient market supply and not substantially increase total lifetime costs.

For domestic travel, sustainable public transport options should be sought (i.e. train and/or bus). For international travel it is recommended that any journey, of which the one-way journey (by train) from workplace station to destination address station lasts 6 hours or less according to the fastest connection schedule, should be taken by train. Flights should be avoided, both long-haul and short-haul have always a higher environmental impact than trips by train/bus; in some cases ferries may provide a viable alternative. However when overseas flights are necessary (i.e. the journey is over 6 hours, or no viable alternative is available) direct flights should be preferred; where this is not possible, connecting journeys should be undertaken by a sustainable transport mode (i.e. train, bus, ferry + flight rather than two flights). Public administration procurement policies can also stimulate the market for sustainable products on a wider regional scale and encourage frontrunner suppliers and/or progressive public purchasers through making sustainability criteria business-as-usual within the tendering process.

Encouraging efficient car use

In some situations, car use is unavoidable (e.g. rural locations, long distance commutes, poor public transport connections); in these cases efficient car use should be encouraged. Car-pooling, car-sharing, car hire schemes, along with efficient driving training should be initiated where car use is unavoidable. Significant individual CO₂ and monetary savings can be achieved through operating a car at full occupancy – for example a medium size petrol car (1.4 – 2 litres) commuting 20 miles with four occupants could reduce an individual's carbon footprint by 2.4 tCO₂ and save over £2,000 annually compared to occupying the car alone (Figure 1).

Where cars are used for business transport, the following average efficiency standards can be met across the fleet; average and minimum standards have also been included for reference (Table 1). A number of public administrations have introduced electric vehicles to their municipal fleet – for example 10% of the municipality fleet in Palma de Mallorca consists of electric vehicles (Civitas, 2013d).

Table 1: EU vehicle efficiency standards (gCO₂/km)

Electric vehicles (EVs)	0g/km	Vehicle Agency (VCA) Certification (2014)
Other vehicles	??75g/km	VCA(2014) [1]
EU average (2012)	132.2g/km	SMMT (2014)

Technologies to enable agile working

One of the quickest ways to achieve a reduction in the environmental impact of commuting and business travel is to introduce an agile working programme (this could include flexible hours, hot desking or remote and home working). Virtual meeting facilities, including video and phone conferencing and cloud-based office systems can all help to facilitate agile working practices.

While this may require some significant upfront investment to upgrade office technologies and cloud-based systems, an agile working programme can deliver relatively short pay back through a reduction in business expenses, office energy use and capital expenditure through office rationalisation. There are also a number of indirect benefits such as increased employee satisfaction and productivity, and a reduction in absenteeism.

[1] 75 g/km is the next band level for company cars following 0g/km electric vehicles in the UK carbon tax.

Environmental benefits

The chief environmental benefits of minimising commuting and business travel, both to the individual public body in question and the wider area in which they operate, include:

- Reduced fuel consumption and CO₂ emissions
- Reduced congestion
- Reduced air pollution

Dissemination of best environmental practice to other councils, business and individuals can multiply the impact of these environmental benefits (for example CarbonCulture, Perugia Home-Work Plan and Rome car-pooling initiatives have all been adopted by additional public bodies and private sector actors through dissemination).

Benefits to the individual employee are also significant; for instance, according to the UK Carbon Trust, the average UK employee can save 390 kg CO₂eq, 50 hours commuting time and £450 including travel costs, by working from home two days a week for a year (Carbon Trust, 2014).

Side effects

Agile working may lead to rebound effects that result in increased carbon emissions, particularly regarding home energy consumption; e.g. the impact of heating numerous individual homes compared to heating one office, especially in geographical areas with an inefficient housing stock. However, there are examples of companies including Accenture, EDF Energy, Aviva and HSBC in the UK (in association with DECC), who have piloted schemes, which are replicable in the public sector, to encourage employees to increase home insulation (Carbon Trust, 2014). There may also be inefficiencies within the office building, for example if the entire building is powered but not fully occupied.

However, along with significantly reducing the CO₂eq emissions associated with employee travel, if office space is appropriately rationalised, agile or home working can significantly reduce office energy consumption and rental costs. The average CO₂eq and monetary savings incurred through the reduction in employee commuting generally outweigh increases in home energy consumption (Carbon Trust, 2014).

Investment in new technologies, and staff IT training, may compete with investment in energy efficiency, however the entry cost point for agile working technologies has reduced significantly over the preceding years.

Applicability

This best practice is potentially applicable across all typology and scale of Public Administration organisations across Europe. However perceived benefits may vary depending on external situations, such as geographical setting and availability of public transport. In remote areas without access to public transport, agile working may be considered the most viable option.

Economics

While some upfront investment may be required to provide virtual meeting and agile working facilities, this can have a relatively short payback through savings in business expenses and staff time due to travel.

Similarly, internal sustainable transport initiatives, such as pool bikes or cycling facilities, will require some upfront investment but can also payback through reduced business expenses. If the number of staff travelling by car is reduced, financial savings can also be achieved through reduced parking costs and/or savings in land required for parking spaces. Season ticket loans are an initial upfront expense but are recouped over the space of the financial year, and can aid in staff wellbeing and retention, which bring about indirect economic benefits. Agile working and reduced commuting can also improve productivity and retention which can also produce economic benefits (Carbon Trust, 2014).

There are also economic benefits to individual employees; for example an individual commuting 20 miles to work five days a week, could save around £2,000 annually, sharing a medium-sized petrol car with three others (and splitting the cost of petrol) compared to driving alone. Similarly season ticket loan schemes allow employees to take advantage of economies of scale through purchasing annual tickets, while pool bikes also offer savings on business travel.

Business travel expenses, if flying by low-cost flights, may result cheaper than trips by train. Moreover, it may be argued that staff time spent travelling is unproductive and it is financed by taxpayers. It is reasonable to assume that, due to the availability of a comfortable environment, mobile and wireless internet connections and electricity sockets on trains, staff travelling can spend their time (if not all, partially) working using a computer. Therefore, any time difference between the trip by train and plane can be exploited as normal working time.

Driving forces for implementation

Business travel and employee commuting can account for a significant proportion of indirect emissions of public administrations. The support and provision of sustainable transport options and/or resources which reduce the need for travel reduce the associated carbon emissions, while also reducing costs (e.g. fuel bought).

There are also a number of additional 'soft' benefits to implementing a sustainable transport policy including: enhancing reputation, business continuity, improved employee satisfaction, productivity and retention (for example Aberdeenshire and Wokingham smarter working programmes), reduced business expenses and lost work time (i.e. where virtual meetings and agile working are encouraged).

Access to virtual meeting and agile working resources reduce employee commuting and travel time and improve productivity.

Reference organisations

[Aberdeenshire Council, UK](#)

Aberdeenshire Council were a frontrunner local authority in adopting a Smart Working policy, with a focus on flexible working profiles and working time patterns.

Brighton & Hove City Council, UK

Brighton & Hove City Council's Staff Travel Plan is designed to support staff in choosing more sustainable and healthy ways of travelling, both to and from work and within the working day.

City of Palma, Spain

In 2011, Palma procured a number of electric vehicles to their municipal fleet, equating to 10% of the total municipal fleet. Public tender guidelines were also launched which demand 10% of subcontractors vehicles to be electric.

Department of Energy & Climate Change, UK

The CarbonCulture Platform provides a user-facing communications channel, incentivisation mechanisms and practical examples of individual interventions to encourage sustainable behaviour.

European Commission

The European Commission is one of a number of public bodies based in Belgium which participate in the Bike to Work scheme. Under this incentive scheme, employees of participating organisations collect 'bike points' for every bike commute logged online; these points can then be exchanged for vouchers for a number of benefits, such as discount vouchers for high street stores.

Ministry of Finance, Belgium

The Ministry of Finance supports the national Cycle to Work scheme, under which, public administration bodies and organisations are entitled to pay their employees a tax-free allowance up to € 0.21 / km cycled / day (a total of up to 15 km / day or €3.15/a day) on their salaries.

Municipality of Perugia, Italy

Perugia Municipality created the Home-Work Journey Plan to change the travel habits of its employees and reduce the dependence on private car use for commuting.

Municipality of Rome, Italy

Rome Municipality introduced a car-pooling scheme as part of their home-to-work plans which were developed to reduce city-centre congestion and to change commuters' travel habits.

Netherlands Enterprise Agency / Ministry of Infrastructure and the Environment, Netherlands

The Netherlands Enterprise Agency commissioned by The Ministry of Infrastructure and the Environment has developed sustainability criteria for various product/service groups procured by public authorities, including international business travel.

South Tyneside Council, UK

South Tyneside Council has installed 'virtual meeting' facilities, including video and data conferencing facilities and video kiosks, at their main site to reduce unnecessary business travel.

Surrey County Council, UK

Through the 'Travel Smart' website Surrey County Council shares best practice on sustainable travel and information on public transport, cycling, walking and smarter driving.

Wandsworth London Borough Council, UK

Wandsworth London Borough Council was an early adopter of a Staff Travel Plan in 1999, which has successfully reduced the proportion of council staff driving to work.

Wokingham Borough Council introduced a homeworking policy in order to rationalise office space and reduce rental costs.

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