



## Essential Evidence 9

### Buses - realising the value of space

Buses are highly space efficient in comparison to other motorised modes, capable of carrying up to 10 times more people than by cars, and in so doing provide a more equitable means through which people can have the accessibility to meet needs.

**Space is one of the most valuable assets in urban environments.**

Space consumption is a transport externality as it occupies the public realm.

Currently, many towns and cities devote a significant amount of space to private transport (ranging between 30% and 60% of the total surface) yet provide mobility for a relatively few. Public space is scarce (and it will be even more in the future), although it is the key for the well-being of towns and cities: space supports human interactions and represents the backbone for urban mobility. To be efficient and equitable, urban traffic management must favour higher value trips and more space-efficient modes under congested conditions, so travellers will choose more efficient modes, not least the bus.

**Buses play a vital part in providing accessibility for everyone and, through their efficient use of space, in supporting the viability of high quality urban places.**

A typical bus takes the space of about 2.5 cars, so buses can be expected to move about 5 to 10 times more people along a given corridor compared to cars. For example, with 400km of space devoted to a transport system, the bus system is able to transport between 5 and 10 times more passengers than the car system depending on the living density.

The size of the bus vehicles also plays an important role. However, the experiments show that even small buses are sufficient to guarantee space efficiency. In the mid-1990s, David Begg and George Hazel of

Edinburgh City Council argued the case for bus lanes by saying that as half of all passengers to the city centre travelled by bus, the other half by car, half the road space should be allocated to buses.

**Bus lanes are an important way to increase urban transport system efficiency and equity** by favouring higher value trips and more space-efficient modes over lower-value trips and space-intensive modes.

**Bus lanes can carry more passengers than general traffic lanes**, and so increase total capacity (people per traffic lane), increase public transport system operating efficiency, directly benefit bus passengers, cause travellers to shift from cars to public transport which reduces various transport problems, and support more public transport-oriented development.

**Bus lanes can provide various benefits** including:

- operating efficiencies,
- passenger time savings,
- increased fare revenues,
- vehicle travel reduction benefits (reduced traffic and parking congestion, facility cost savings, traffic safety, energy conservation and pollution emission reductions),
- social equity objectives,
- plus support for strategic planning goals.

Even people who never use buses enjoy many of these benefits. All of these impacts should be considered when evaluating bus lanes.

**Thanks to Professor Adrian Davis for this Essential Evidence.**

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