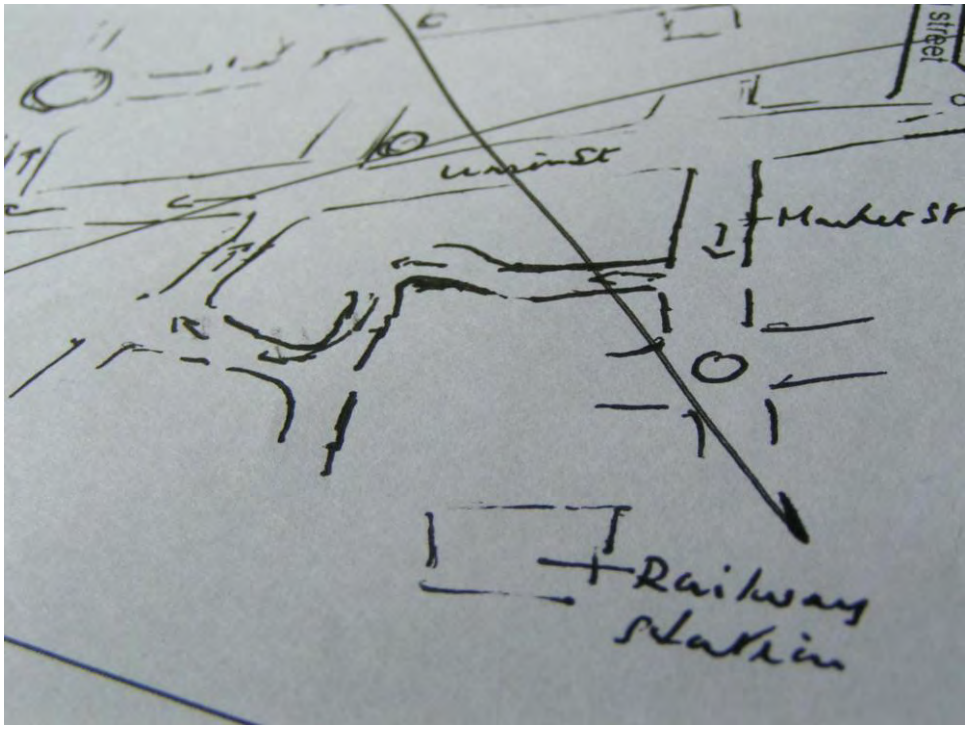
WP 4 Assessment of economic and ecological impacts



Involved Project Partners

Responsible Beneficiary:
Robert Gordon University

With input from partners across the consortium.

Overview

This work package dealt with the imperative to address climate change and CO2 emissions, specifically in relation to an integrated transport strategy.

This connects directly with current EU policies on climate change, including a recognition that meeting emission targets will be closely related to both technical and behavioural change. There is a need to connect engagement with communities, businesses and decision makers, and the technical analysis of potential projects.

The work package was innovative, in that both qualitative and quantitative approaches were used in an integrated methodology, and it was transnational in the application of these methods. The package aimed to capture best practice across the region, including recognition of existing work concerning carbon modeling, policy making, and effective communication of sustainable transport initiatives to stakeholders.

Work package contents

The work package covered a number of vital activities, all of which drew on best practice and emerging findings from the partner cities. These included the following inter related strands.

Public and stakeholder engagement

- Public engagement surveys and best practice
- Sharing of communication strategies

Carbon modelling

- Modelling transport initiatives
- Development of indicators for future modelling

Using videoconferencing to reduce CO2 from employee travel

- Estimating the benefits of substituting 15% of staff travel with video-conferencing
- Compliments many organisational IT policies
- Utilised individual travel 'diary' records, as well as official records of staff travel
- The study highlights how little many organisations know about travel undertaken on business (and the associated carbon and opportunity costs)

Urban realm improvements and low carbon transport

- The package considered the relationships between sustainable transport and the urban realm
- It was notable that many cities at the forefront of sustainable transport initiatives can also boast world leading urban design

Best practice reporting

- Policy documents from the package include studies of barriers and opportunities in reducing CO2 from city regions
- The package used best practice from Care North partners (especially regarding cycling and walking)
- Specific policy recommendations directed at national and local governments

Leuwaarden, Netherlands.

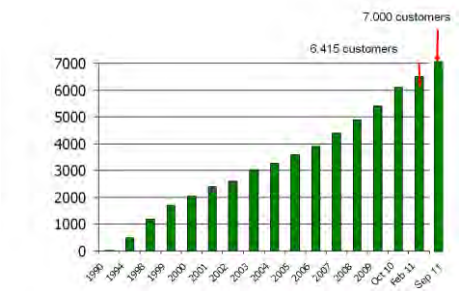
Vancouver, Canada. An example of an international city, past winner of 'most livable city' award', which has demonstrated how a strong commitment to planning around the connections between transport, people, urban design and the environment pasy significant dividends.

Case study 1: Bremen

We strongly believe in the (still underestimated) role of mobility culture – a rather life-style oriented understanding of transport. Thus, Bremen works in a combination of hardware (like infrastructure and services) and software (marketing, images and emotions).. By encouraging citizens to go for car-sharing instead of owning a car is one of our topics, which is broadly recognized and is leading to increasing user numbers since the start of the project. This tackles not only well known transport issues like limited street space but as well the problem of affordability of transport – a key challenge facing increasing oil prices.

Inauguration of first Car-Sharing club in Shanghai during EXPO2010 (Sept. 2010) by former Bremen Senator for Environment, Transport, Construction and European Affairs – Dr. Reinhard Loske

Bremen is well-known for its governmental support for the Car-Sharing development – and was selected as showcase for permanent presentation on the World Exposition 2010 in Shanghai.



Number of Car-Sharing users (provider cambio) in Bremen (2011)

Michael Stein, Chairman of SRL (Association for Urban, Regional and National Planning) and Kerstin Haarmann, VCD Chairwoman (Association for sustainable mobility), award the City of Bremen, represented my Michael Glotz-Richter, with the Transport Planning Award 2010.

Case study 2: Aberdeen

CARE North has enabled Aberdeen City Council to investigate a number of carbon responsible transport projects for Aberdeen City.

Specific initiatives which were explored through the project include:

- Low emission zones
- Off-bus ticketing
- Car clubs
- Idling strategies
- On-street bicycle rental

Although low emission zone schemes developed within the CARE North study would impact the whole City, the main focus of the work was on the city centre, as it forms a hub for many trips.

Here, both hourly and daily concentrations of NO2 and PM10 are regularly exceeded, and transport and traffic are the main contributors. An **Air Quality Management Area** has been declared for the City Centre and Aberdeen City has produced an **Air Quality Action Plan (2010)** to address the air quality problems. In terms of the problem freight and buses cause 80% of the air quality issues, but only represent 20% of the traffic within the city centre.

Whilst the larger vehicles are more polluting, other vehicles on the road contribute indirectly due to our main providers of public transport, and our primary means of moving goods, polluting even more as they get caught up in traffic.

The council has also commissioned a study into the feasibility of launching a Car Club in Aberdeen. A Car Club is an organisation that owns a number of cars which are shared amongst its members. Members simply have to book a car, via the phone or the internet, when they need it and are charged on a pay-as-you-drive basis.

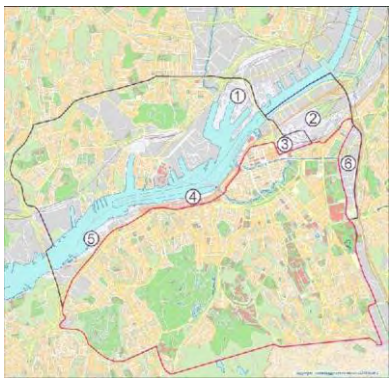
Members of the club benefit in that they do not have to own a car themselves, therefore saving them money and removing the need to find a parking space which can be difficult in City Centre locations. The local authority sets aside dedicated parking spaces for Car Club vehicles in key locations throughout the area.

Case study 3: Gothenburg

Strategies developed in Gothenburg which relate specifically to work within this work package included studies of

- Clean vehicles
- Efficient vehicle use
- Modal split
- Accessibility

It is interesting to note that strands of the work package dealing with the links between urban design, sustainable transport and urban quality have been realized in Gothenburg.



Gothenburg Environmental Zone

An example of innovative pedestrianisation methods

Hybrid electic/diesel public transport in Gothenburg

Specific attention has been paid to goods delivery, shared delivery schemes, and the provision of free and accessible methods to navigate the city on foot. The city is also investing effort in improving traffic safety, reducing noise pollution and improving air quality, partly through the testing of 'geo fencing' and public transportation. This will ultimately provide a more attractive living environment for the inhabitants of Gothenburg, whilst simultaneously addressing wider environmental concerns.

Carbon reduction from urban and regional transport

The study has concentrated on city regions (not air, sea or national strategic travel), to reflect the focus of CARE North, and has underpinned two written outputs.

The first report concentrates on the urban realm, with a second focussed more on transport policy slant.

Particular areas of interest within the study include: **cycling and walking** (replication of the 40%+ modal share in cities including Malmo and Bremen), and **safe cycling infrastructure** and requirements to meet a 10% cycling target (political will and targeted money); **Urban realm and planning** (live/work/recreation/retail).; integration of transport in **urban realm improvements**, so that urban regeneration promotes a low carbon, high quality of life city centre.

Data and indicators included within the study include the **scale** at which we count carbon (city region/ regional transport partnership.), and the **indicators** that we use to measure progress.

The study has produced practical and deliverable next steps for policy makers of all hues and at national, regional and local level.

Videoconferencing and sustainable business

The aim of the work was to estimate the carbon and financial savings elicited by **substituting 15% of staff travel** (both inter site and longer journeys) by video- and tele- conferencing.

Savings are defined in terms of **direct financial savings** for the business associated with the cost of substituted journeys (i.e. travel expenses); **tonnes of carbon** saved; and, the **opportunity cost** - the FTE cost of staff time lost while sitting unproductively in a car/bus/ train/ aeroplane (estimate as a percentage of FTE for each mode).

Public sector and public readiness for carbon responsible transport in the Region

The North Sea Region (NSR) programme deals with the effects of climate change and the development and implementation of transport-related carbon reduction strategies. There is a perception, however, that at local level - within some Scottish local authorities - there has been relatively slow progress in the uptake of new technologies and behavioural change related to reduction of carbon emissions. The reasons for this are unclear.

Successful implementation of strategies to reduce transport-related carbon emissions depends on a variety of factors including the extent to which national government uses policy instruments (legislation and/or incentivisation) to deliver the desired policy outcome; the translation of national policy into local policy; and the effective implementation of policy at local level. The latter will depend on the extent to which local authorities have the political drive and commitment to deliver national policy in the face of potential local opposition from businesses, citizens and other stakeholders; the extent to which policy implementation is resourced; and the effectiveness of engagement with and empowerment of local players.

Furthermore, major political, economic, social, environmental and technological changes at global level, coupled to public sector cuts and an increasing demand for public services within the UK, have placed increasing pressure on public sector delivery frameworks. Such pressures will inevitably highlight the potential conflicts and the opportunities for synergies between policies targeted at economic growth and those aimed at environmental protection.

Outputs

This work package has resulted in a series of outputs, which together form a practical and grounded set of guidance.

These include published papers and detailed carbon models, as well as policy documents and urban design studies.

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