Low Carbon Stations for Low Carbon Cities

The urban mobility context

How can we positively influence the attraction of public transport to passenger?
How can we make sure more people rely on public transport for their day-to day mobility ?
The next question, considering the need for accessible mobility is gender, location and climate independant,
how can we contribute to a better integration of stations in the urban tissue both in the global South and
North.

This requires a transversal approach of energy, environment and waste management, urban planning, mobility and land-use while at the same time remaining alert for input from the public health
community, gender and age aspects as well as cultural perspectives.

Climate mitigation imperatives

Trafikverket & Mistra Urban Future, following straight on from the climate policy resolutions under the Kyoto protocol and the European Union burden sharing which seek to reduce green gas emissions by around 16 per cent below the 1990 level by 2020, commissioned this independent report on Low carbon stations for Low carbon cities to Yellow design Foundation.

While the reduction target should be encouraged, we know this is not sufficient to meet the 2 degree cap that was agreed at the COP in Copenhagen in 2009.
A scientific target based on what is needed is an 80% reduction in GHG by 2100. Price waterhouse Coopers has calculated this as a 6% year on year decrease of GHG. 16% will not get us there. An alternative method of calculating the reduction needed is to assume the 80% reduction for stations and then back-cast to what is needed for the realistic year on year reduction.

The research outcome

The report defines as much a station as a big complex and multimodal interchange (e.g. an airport+rail+bus+taxi+car+bicycle+boat station) as a bus/tram flagpole on the sidewalk of a street (i.e.
the traveller transfers from the soft mode that are his/her feet to a vehicle or vice-versa).
Apart from their functional role in modal choice, for visitors, users, passengers, passers-by, stations are first and foremost places to meet, greet, agree and/or even disagree.
Stations form hugely varied universes with each specimen carrying its own particular characteristics of size, transportation available modes, age of the premises, construction methods, local climate, number of passengers,
services available, geographic location, operation type, etc. Nevertheless the common characteristic among all station types is that they all serve two or more modes, one, at least, being a public transportation mode.

Based on domestic and international field research and benchmarking of low carbon station initiatives, using the examples of station areas of Stockholm, Malmö and Gothenburg of which the results have been compared with performances of cities in Sri Lanka, Vietnam & Cameroun, this report proposes general strategies, specific requirements and key measures with highest potential in the design of station areas.

Finally the report also provides management tools for more efficient planning of smart movement of people/passengers and goods within and between cities so that mobility flows can contribute to the downgrading of urban carbon dioxide emissions and a people rather than car oriented modal balance is reached.

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Brussels, October 30th, 2015