

Saving cities from themselves

It has not escaped the attention of national and local politicians, officials, policy-makers and thought leaders that global status as a 'liveable', bicycle- and people-friendly city cannot but benefit tourism and the 'green' conferencing trade, attract international investment in the city and enhance global competitiveness. From bid books and awards entries to media releases, tweets and blogs, South African cities do well at telling us how green we are. Could it be, though, that when measured against a carefully designed set of indicators, our cities might not make it onto anyone's 'Top 15 most, best or greatest', after all?

Cities throughout the world face a mobility challenge of increasing traffic, chronic congestion, air and noise pollution and increased traffic accidents – against a background of climate change and the need to reduce our carbon consumption.

The challenge for cities is to alter the balance of priorities from motorised vehicles to more sustainable and active modes.

The Global Alliance for EcoMobility is an international organisation that aims to reduce people's dependency on private cars, especially in urban mobility, and raise the profile of the practice of 'EcoMobility' – self-propelled forms of transport like walking, cycling and skating, combined with the use of public transport. And they've come up with a plan – to keep cities from delusion and instead help them to assess their transport sustainability honestly, and set targets for improvement. In a pilot project called SHIFT, they have begun to establish a process that will help cities put a system in place to make the change, to measure the effectiveness of the change, and to compare their achievements with other cities. A city will be considered to be 'eco-mobile' when it succeeds in realising a more sustainable mobility.

Although South Africa is not a participant in the project, at MOBILITY we were asked to provide some comment on the draft. These are our initial thoughts, and we'd like to hear yours.

But what is more sustainable mobility?

The EcoMobility partners have defined an EcoMobile city as one that is developing, improving and encouraging alternatives to the private car. It is a city that is attractive, with a safe environment and a high quality of life, and enables users – citizens and visitors – to meet their mobility needs without jeopardising sustainability at the local or wider levels.

This means that:

- The city strives to reduce the need for travel and transport
- The city ensures that its facilities and areas are accessible to all its users
- The city ensures that an appropriate variety of modes of transport are available for all its users
- The city encourages travellers to prefer the use of walking to cycling, cycling to public transport, and public transport to the car
- The city supports the operation of environmentally friendly vehicles
- The city continually strives to improve its performance in planning and delivery of EcoMobility.

It wouldn't take much for South African cities and towns to claim EcoMobile status if all it takes is to 'realise a more sustainable mobility.' Coming off a rather low base in terms of providing dignity, safety, reliability and

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quality to anyone other than the private car user (with the exception of recent mega-projects), 'more' would require some sort of baseline. Would going from 'worse' to simply 'bad' count?

And then there's our modal split between private and public transport. Although between 60% and 80% of people take public transport, this is less an indicator of sustainable mobility and transport demand management than one of poverty and inequity. Here, the challenge for cities is not so much to alter the balance of priorities from motorised



vehicles to more sustainable and active modes, than to provide access and mobility for all. Nationally, South Africa is home to about 11 vehicles per 100 people. In Cape Town, 80% of residents do not own private vehicles, although 50% of households do have access to one. For the car-less resident, the desire to own one is strong, and the income threshold at which a commuter attempts to purchase a vehicle is low. New cars are no longer as affordable as they used to be, largely because of import duties and the cost of technology. Yet since 1994 there has been a steady

growth in car ownership, despite the increasing price of fuel and the stringent National Credit Act of 2007. This has been attributed not only to the status car ownership affords, but – where public transport is of startlingly poor quality – also to the obvious improvements in mobility.

There's also obvious merit in providing more motorised transport, particularly in rural areas, where distances are long and access to education, clean water and health-care is severely hampered by lack of transport.

Enablers	Products and services	Results and impacts
Society and user needs	Walking and cycling	Modal split
Vision and policy on EcoMobility	Public transport	Impact on safety
Strategy	Mobility management	Environmental impact
Leadership	Optimise the use of private car	
Means and personnel		
Citizen and stakeholder involvement		
External Partnerships		
Monitoring and evaluation		
Management review		

THE ECOMOBILITY ASSESSMENT FRAMEWORK

To enable EcoMobility to identify whether a city is EcoMobile, we need to have some indicators, says Nuno Quental, EcoMobility Officer at ICLCI (Local Governments for Sustainability). 'All of these indicators need to be taken together to show the full commitment and achievements of a city toward EcoMobility.'

INDICATORS Enablers

Enablers are indicators that evaluate the processes that exist within the city to achieve results. These enablers relate to various aspects of the decision-making and delivery processes. The table below shows the indicators for each aspect considered.

Products and services

Walking and cycling

In the field of walking and cycling, EcoMobility wants to measure:

- availability of walking and cycling facilities
- directness of the walking and cycle network
- safety of the walking and cycling network on road sections and intersections
- coherence of the networks for walking and cycling between all origins and destinations
- bicycle parking provisions.

In South Africa, however, we would suggest that walkers and cyclists are not evaluated as one category, and that the pedestrian and cycling environments are evaluated independently.

Pedestrians, for example, make up about 60% of all road users, and account for 40% of road fatalities. In 2008, in fact, there were an equal number of pedestrians killed on local roads as there were vehicle passengers.

Safety, too, takes on a different meaning here, where threats to personal safety are high (and where streetlights often illuminate the roads rather than the sidewalks).

It's good that the Alliance doesn't propose to evaluate cycling facilities based on the length of a bike lane, but instead on its coherence and directness; in South Africa there is a tendency to laud length over usefulness. Additional indicators that would serve our local context include a socio-economic overlay: in which areas are the bicycle and pedestrian infrastructure, for whom are they designed, and for what purpose (sport or transit)? And how appropriate is the intervention? For example, are the bicycle parking racks used or do they stand empty while nearby lampposts are festooned with bikes instead?

How well would South African cities do when evaluated against the indicators below? Would some cities be as quick to claim 'bicycle-friendly' status, for example?

- Percentage of population living within a 15 minute walk of city centre
- Length of dedicated cycle routes per capita
- Ratio between distance on main cycle network and linear distance
- Proportion of road length with more than 5 000 private car units per day and average speed >50 kph without segregated facilities for cycling
- Share of secure 30 kph crossings separate from motorised traffic and share of crossings with priority for walkers and cyclists on the main walking and cycling network (in this context, 'secure' means physical measures are used to ensure a speed limit of 30 kph)
- Percentage of schools with 30 kph zones and percentage residential areas with 30 kph zone
- A subjective judgement on whether the urban road network provides safe, direct and comfortable cycling connections between all origins and destinations
- Are the cycling routes continuous and recognisable?
- A subjective judgment on whether important destinations have sufficient facilities for safe bicycle parking.

Public transport

In the field of public transport, EcoMobility wants to measure:

- coverage of the public transport network



In the centre of Madrid, side roads with low speed limits ensure that people are as welcome (if not more so) as cars; pedestrians are treated with respect, with street markings highlighting their right to road space.

- speed of the public transport (relative attractiveness to car)
- punctuality of the public transport
- ease of use of the public transport.

For South African indicators, we may once again need to ask an expanded set of questions. For whom are the public transport services? Are they based where

there is the greatest socio-economic need? Where there is the greatest Transport Demand Management (TDM) need? Do they provide universal access? Are wheelchairs, prams and bicycles permitted on board? How safe are women travelling alone? Are the vehicles roadworthy, let alone 'green'? Does the driver have a licence and what is his or her traffic violation record?

How well would South African cities do when evaluated against the public transport indicators below?

- Percentage of citizens living within 500 m (linear distance) of a public transport stop with a service interval (peak period) of no more than 15 minutes
- Ratio between travel time with bus and travel time with car for three to five randomly selected trips between peripheral residential areas (middle of area) and city centre; travel time door-to-door
- Percentage of public transport on time at the major public transport hub in rush hour (\pm two minutes to schedule is regarded as being on time)
- Subjective judgement of how easy it is for a traveller to use the public transport system in respect of network design and information
- Understanding of the cost and how to purchase tickets. If more fare systems are available, the integration between them should also be included in the judgement.

Mobility management (what South Africans call Travel Demand Management)

In the field of mobility management, EcoMobility wants to measure the following:

- information and awareness-raising
- organisation and coordination of mobility management services and facilities
- site-based measures
- education.

The indicators that will assist in measuring include the way in which the city:

- Facilitates information, personal advice and awareness raising on the greater use of sustainable travel options to citizens and (potential) visitors through a range of different media
- Develops or supports services and facilities that promote a less car-dependent life style, eg bike rental, car club, car-pooling database, Park and ride

(P&R) facilities

- Promotes and supports site-based mobility management measures for schools, companies and events.
- And, the number of school children and other citizens who are trained in road safety per year.

In South African cities, most of the activities described above (perhaps other than P&R) are carried out by private organisations, civil-society groups and committed individuals (if at all ...). [And an interjection from MOBILITY here ... These are the kinds of activities we would like to hear about, so please make contact!]

Optimise the use of private vehicles

In the field of the optimisation of the use of private vehicles, EcoMobility wants to measure:

- green vehicles in overall fleet
- charging stations
- traffic restraint
- parking policy
- traffic usage
- land usage.

The indicators that will assist in measuring include:

- Percentage of city administration's own business fleet and percentage of public transport that are low-polluting
- Proportion of refuelling points for non-fossil-based fuels or electricity among all publicly available refuelling points across the city
- The city has congestion charges, road pricing, tolls or similar
- The city has parking regulations by which inner-city parking spaces have premium hourly rates or similar and/or are time-limited. Non time-limited parking is provided at P&R facilities outside city centre
- Number of all parking spaces in the central area per occupant of the city



The presence and use of bike rental schemes is one of the proposed indicators of a city's EcoMobile status.

- Non-public transport motorised traffic over all radial road routes approaching the Central Area per occupant of city
- Percentage of central city area used for road and parking infrastructure for motorised traffic.

An interesting set of indicators these, and in South Africa need to be investigated and reported on through a sustainability lens. Parking spaces, road pricing and toll fees make news headlines regularly, but are seldom welcomed and rarely exalted as a sustainability intervention ... And although non-motorised traffic counts do take place, on a limited scale, they're seldom on routes approaching central cities; in our local context, suburban development and urban sprawl have created a number of 'central' areas, and except for Cape Town, central city spaces seem to play a less important role than they do in European cities.

Results and impacts

And finally, the overall results and impacts of the EcoMobility approach within a city:

- Modal split (based on total number of trips)
- Modal split for non-motorised and public transport users over all radial path, road and local rail routes approaching the central area (or high activity areas) of the city
- Total number of public transport trips per person and per year

- Percentage walking and cycling to school
- Traffic fatalities and serious injuries per year per 10 000 inhabitants
- Traffic fatalities and serious injuries per year for non-motorised transport groups per 10 000 inhabitants
- Transport final energy consumption per capita
- Greenhouse gas emissions stemming from the transport sector per capita
- Number of exceedances of daily air quality standards due to traffic.

Adding road safety into the mix (in the South African public sector, usually sited within an entirely different department or unit from transport) puts a damper on our cities' 'green' credentials, while our modal splits offer an opportunity for misguided praise. When learners walk 20 km to school and 70% of people take informal public transport, this is an example of poor provision of essential services, not an enthusiastic support of sustainable modes.

The EcoMobility SHIFT project is an activity of the Global Alliance for EcoMobility. It is co-funded by the European Agency for Competitiveness and Innovation (EACI) as part of its Intelligent Energy Europe (IEE) program.

To comment on these proposed EcoMobility indicators, contact Nuno Quental on nuno.quental@iclei.org

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