

Better Place?

“Better Place is a venture-backed company based in Palo Alto, California that aims to reduce global dependency on petroleum through the creation of a market-based transportation infrastructure that supports electric vehicles. Better Place is building its first electric vehicle network in Israel, and among its partners has selected Denmark and Hawaii as the other two test markets due to their small size. The electricity needed will be generated by renewable energy from solar arrays and wind farms. Denmark and Israel have enacted policies, which create a tax differential between zero-emission vehicles and traditional cars, to accelerate the transition to electric cars. Better Place plans to deploy the infrastructure on a country-by-country basis with initial deployments beginning in 2010 and commercial sales beginning in 2012. ...

“In Australia a roll out of the network will begin in the major eastern coast cities before being rolled out nationally. It is estimated that 500 charge stations would give comparable coverage to the existing 13,000 petrol stations presently in operation. The total cost of this roll out would be between \$1 to \$1.25 Billion AUD. Currently Australia spends \$20 to \$30 Billion AUD on fuel. The roll out of the Australian network is estimated to be 6 months to a year after the roll out of the network in Denmark. The switch to electric transport is estimated to increase the current grid load by 7%.” Ref: Wikipedia http://en.wikipedia.org/wiki/Better_Place

“How sustainable is the electric vehicle program being developed by the Better Place team? At a cynical level one can view Better Place as a potential big consumer money trap (such a clever business model for the founders) and of dubious green credentials (unless the power provided is fully renewable and home generated and owned) and a very smart politically placed sell in Australia through the support of an ex-State Government senior minister who is exceptionally well politically connected in this country. Could you please overcome my cynicism by asking the question of your sustainable transport newsletter readership and tabling any useful information with none of the many carefully placed PR based articles Better Place is feeding into a gullible press?

“Better Place appears to be spending a fortune on PR feed and media releases and support – who is handling their marketing and PR and giving further political lobbying support?

“Net Result???? - More car spaces required in inner Melbourne, more congestion added weight to cross city tunnels, inner city impacts of the usual freeway extension nature and further expensive investment in further road infrastructure (another expensive PPP program) and related state government revenue streams? I often head east along the ‘Monash Carpark’ at 7am weekdays and see stationary vehicles stretching from Burnley to Endeavour Hills past Dandenong on a bad day. An efficient transport system at work? I think not...the environmental cost and eco-footprint would be fun to calculate by examining other planning/transport solutions for this crazy commuting solution.”

Ref: Name supplied, 9/12/09

‘Free’ EV Charging in the UK

“The North East of England is making good progress in the field of greener transportation as regional development agency One North East and car OEM Nissan Motor Co Ltd announce that they have entered the next phase of their partnership on the development of zero emission mobility. An agreement that sets out a road map for the roll-out of electric vehicles and infrastructure in North East England has been signed by both parties. Under the agreement, One North East will install at least 619 publicly available charging points by January 1, 2011, which will support both 3kW and 7kW charges. A dozen 50kW ‘rapid-charging’ stations will also be included. Electricity at the charging points will be provided free of charge until March 31, 2012, or until an itemized billing system becomes available.”

Ref: Traffic Technology Today, 21/12/09

And Also ...

“On the one hand we are being urged to use our cars less and to rely on public transport, while on the other we are having our driving life made easier [through extended clearways], so that we are encouraged to use our cars more.”

Ref: Peter Valder, The Age, 13/12/09



Photo: http://www.funny.co.uk/stuff/art_175-2746-Car-Washed.html

Transport and Health (Part 1)

“Transport is one of the largest and fastest growing contributors to Australia’s greenhouse emissions, increasing by 30% from 1990 to 2005. Close to 90% of Australia’s transport emissions originate from cars and trucks. Transport greenhouse gases are expected to grow (according to the Bureau of Infrastructure, Transport and Regional Economics) by 68% between 2000 and 2020.

“The health benefits to be derived from reducing urban pollution are considerable. As pointed out by the Intergovernmental Panel on Climate Change (IPCC) the saved health costs offset a significant proportion of the costs of reducing greenhouse emissions. The replacement of private car transport with public transport, cycling or walking significantly reduces the occurrence of obesity, type 2 diabetes and several other disorders that represent a significant personal toll and economic drain on health services.

“Pollution in the form of particulates and noxious gases from motor vehicles increases ill health from cardiovascular and respiratory diseases. Particulates are microscopic solid particles produced by the combustion of petrol and diesel and, combined with road dust, are suspended in the air and inhaled. This contributes to a cumulative decrease in lung function efficiency and can contribute to the incidence of breathlessness, heart disease and asthma. There is increasing recognition that even small exposures are injurious. A recent review of exposure to air pollution and, specifically, fine particulate matter derived from combustion, shows that this carries a similar degree of heart disease risk as is conferred by high blood pressure and high cholesterol levels.

“There is likely a correlation between low birth weight and urban pollution. Low birth weight carries additional morbidity and mortality. A reduction in available oxygen levels, and an increase in harmful particulates and gases, notably SO₂ and CO (sulphur dioxide and carbon monoxide respectively) found in urban environments with high vehicle density and activity (ie: the Australian urban built environment), are suspected of contributing to low birth weight and a higher incidence of pre-term delivery. Australia faces an epidemic of obesity, with almost 60% of Australian adults and 25% of children being obese or overweight, with type 2 diabetes and other adverse health effects from physical inactivity and unhealthy diets prevailing. The use of private transport is a major factor in inactivity.

“Currently diabetes is estimated to cost \$6 billion annually. This is expected to double by 2020. A lack of regular, reliable public transport - at a service density adequate for urban Australia - contributes to high reliance upon private transport. It is, therefore, a factor in the development of detrimental health outcomes through the concomitant reduction of physical exercise. It also conditions people to opt for the car ahead of other forms of transport that require physical effort. Research has indicated that each additional hour of daily driving leads to a 6% increase in the likelihood of obesity. On the other hand, daily activities such as walking, cycling to the shops or to public transport, can provide the level of physical activity recommended in the National Physical Activity Guidelines. In studies of cities throughout the world a positive relationship has been found between availability of public transport and lower levels of obesity. This is simply due to factors such as commuters needing to walk to and from the bus, tram and train stops.” {Cont in #138}

Ref: David Shearman, Doctors for the Environment, Submission to Senate Rural and Regional Affairs & Transport Committee, 2009
www.aph.gov.au/Senate/committee/rrat_ctte/public_transport/submissions/sub70.pdf

“A recent NSW government report showed that many more people die from the effects of air pollution than from traffic accidents. It is time we regarded driving a motor vehicle with same contempt we now regard cigarette smoking in public.” **Ref: Michael McGrath, ABC Radio National: Background Briefing website, 3/12/09**

“ ‘Blue skies are very rare in Hong Kong today’, Professor Anthony Hedley of the Department of Community Medicine at the University of Hong Kong said. ... It is a very toxic cocktail. The suspended particulates are so fine that they can penetrate to the very lowest region of our lungs, even cross into our (blood) circulation and damage our arteries as well as the air sacs’, Hedley said.”
Ref: Polly Hui, News.com.au, 17/12/09

“Cycling has enormous social and health benefits, but the Australian car culture is discouraging and a major factor for ill health through obesity, lack of exercise, pollution and road trauma. Society would greatly benefit from nurturing a cycling culture. As for specific measures, reducing road speed limits, educating drivers to look out for cyclists, and increasing cooperation between all road users. And following the lead of Bogota with greenways excluding motorised traffic.”
Ref: John Merory, Background Briefing website, 6/12/09

Our Oil Dependence (Part 1)

"Oil doesn't merely lubricate our machines; it literally drives our modern mechanised world. It's the blood that courses through the veins of today's civilisation, and it lies at the very foundation of our quality of life. The first and most obvious impact of a dearth of oil would be on transport. Petrol derived from oil is the prime energy that powers our cars and trucks. Not only would we find it difficult to get to work, but society would find it challenging to move around the many goods and services needed to keep it functioning.

"Australia uses about 45,000 megalitres of petroleum every year, 80% of which is used for transport. 55% of road transport fuel is petrol, 39% is diesel and 6% is LPG. Even if we found other ways of moving those goods and services around, a lack of oil would still prove very problematic because many of those products we depend upon are based on petroleum.

"Most plastics, for example, are essentially oil-based, from Tupperware through to AstroTurf; not to mention casings for electronic devices such as mobile phones, computers and cameras. Most of the fabrics you wear are polymers made from oil - from nylon and rayon, to Gore-tex, polyester and polypropylene. Indeed, oil flows into almost everything we use including cosmetics, crayons and credit cards, through to shampoo, shaving cream and shoes. The start of our addiction Petrochemicals began to dominate the synthetics market around the middle of last century, following World War II. By the end of the 20th century, petroleum had replaced starch, vegetable oil, and cellulose, the three primary components of plant matter that had served as the feed-stocks for industry in past centuries.

"Today, around two thirds of our clothing is made from oil. Virtually all of our inks, paints, dyes, pharmaceuticals, plastics, and hundreds of intermediate chemicals are made from oil. Plastics have replaced glass, metals and paper in an ever-expanding variety of products. Oil gets us around, clothes us, provides us with medicines and fills our lives with cheap, durable products. It also feeds us. The massive surge in agricultural productivity the world has witnessed since the 1940s is largely underpinned by the use of pesticides and fertilisers derived from petrochemicals combined with an increased

mechanisation (driven by petrochemicals). Indeed, modern petrochemical-based agriculture is one of the main reasons the world population has more than doubled over the last 50 years. It's not an equation we often consider, but food equals energy. It's been estimated that every energy unit delivered from food grown using modern techniques requires over 10 energy units to produce and deliver. And that equation only makes sense when you have a cheap and abundant supply of energy - presently, that's oil. Oil also configured our cities, towns and especially our sprawling suburbs. Only when it was cheap to get around could you allow people to live many kilometres from where they shop and work. The suburb was built on the back of the automobile, and therefore doesn't make any sense when you lose the car. How much oil does it take to sustain our current lifestyle?

Petroleum company BP estimates that in 2005 the world consumed about 82.5 million barrels of oil every day! The biggest oil consumer in the world is the United

States and it gobbles up a staggering 20 million barrels every day. The next country in line is China using around seven million barrels a day. Australia gets away with using under a million barrels a day." {Continued in #138}

Ref: David Salt, G Magazine, 31/8/09

Tax Break Means More Cars

"A last-minute rush to take advantage of the Government's 50% business investment tax break propelled new car sales to a record high [in Australia] in December, with a total of 88,700 vehicles being driven off lots. ... Four-wheel drives accounted for a record 20% of the new cars sold during last year, up from 19% in 2008. Sales of Australian-made cars fell from 171,400 to 147,700."

Ref: Peter Martin, SMH, 7/1/10

And Also ...

"Back in the 1960s, when the space race was at its peak, with The Jetsons beaming into suburban lounge rooms, it was assumed that by the 21st century we would be zipping around in flying cars while domestic robots cleaned the house. Fast-forward half a century and we're still driving bumper-to-bumper along congested roads, struggling to find time to cook, do the laundry and vacuum the floor. Not a reliable robo-servant in sight."

Ref: Stephen Cauchi, The Age, 2/6/09



'He would insist on breathing while riding to work.'

Masdar City in Abu Dhabi

"The multinational design firm EDAW prepared the master plan for Masdar City and is in charge of all its 'public realms': every open space, every landscape. ... Sydney-based managing principal Stuart Bowden was able to provide a glimpse inside this embryonic 21st-century city. 'The basic premise is that this will be a zero-carbon, zero-waste sustainable city and that means nil environmental impact and completely self-sustained in every core component: water, food, energy. There will be no vehicles at all. It will have light rail and most importantly a personal rapid transit system. They are trialling the PRTS on-site right now. ... The whole city sits above the natural ground level. There's an area at the base of the buildings that we will call the city ground level, but that sits two floors above the desert. The personal rapid transport system is effectively run underground'. The PRTS is a fleet of six-person, computer-operated pods that will ferry Masdar's 90,000 residents and commuters cleanly and quietly throughout this model society. An aboveground light rail will connect the city to greater Abu Dhabi."

Ref: Kendall Hill, The Australian, 5/9/09

See videos: <http://www.masdarcity.ae/en/index.aspx>

Biofuel Research at Masdar

"Boeing, the US aerospace giant, and Honeywell UOP, a fuels producer, announced yesterday they had commissioned the Masdar Institute of Science and Technology to study the potential for producing commercial quantities of fuel from two types of plants that grow in saltwater. The aviation industry hopes biofuels can provide a low-carbon alternative to petroleum, but biofuels producers have come under fire for displacing food production on arable land. Both algae and saltwater plants, known as halophytes, could be the answer, the industry hopes, since they do not need fresh water or valuable land. 'Halophytes can be highly productive sources of biomass energy, thrive in arid land and can be irrigated with seawater, making them suitable for biofuel development, and Abu Dhabi a viable location for conducting a life cycle-analysis study', the companies said."

"Several airlines including Air New Zealand, Virgin Atlantic and Continental have held test flights in which one engine was powered by a combination of jet fuel and biofuel. The Masdar Institute will look at the carbon life-cycle of producing fuel from mangroves and glasswort, a common saltwater plant. Both plants are already under study as a possible fuel source at several locations across the world."

Ref: Chris Stanton, The National, 6/10/09

Urban Villages in Virginia

"Arlington County, across the Potomac River from Washington, DC, was an early proponent of transit-oriented development (TOD) as a strategy to reverse significant declines in both population and commercial activity along a three-mile corridor running from Rosslyn to Ballston. Three decades of continual effort by a wide range of partners has resulted in the revitalization of a once-declining, auto-oriented corridor surrounded by low-density neighbourhoods, into one of the most active and successful commercial centres in the country. When the Washington region's Metro rail service reached Rosslyn in 1977, Arlington County envisioned development of dense and vibrant 'urban villages' around Metro stations, surrounded by lower-density residential neighbourhoods. The County adopted a General Use Plan that has resulted in enormous amounts of new development through the years. Since 1980, more than 17 million square feet of additional office space, 2 million square feet of retail, 21,000 housing units and 1,500 hotel rooms have been built, all within two square miles. More development is still in the works."

"Arlington County's land use development efforts have been successful in large part thanks to its balanced transportation strategy. The County has succeeded in creating and managing a transportation system in which transit, driving, walking and bicycling complement each other. Four boulevards and a grid of local streets serve the corridor and connect it to adjacent neighbourhoods, providing travellers with a choice of routes and making the system as a whole remarkably efficient and effective. Few commuters drive to the Metro because nearly all the streets in the corridor are pedestrian-, bicycle- and bus-friendly, and parking throughout the area is limited. The County has actively promoted transit use through management policies, including websites and 'Commuter Stores', which provide customer service and information about transit options and routes. Importantly, the County continues to rethink these strategies in order to improve them and adopt new ones. Arlington County's successful integration of land use and transportation strategies, as well as its careful and continuous management of the corridor, has resulted in dynamic economic growth, a minimal increase in vehicle traffic and a 38 percent increase in transit ridership since 1997. According to Christopher Zimmerman, a member of the Arlington County Board, community involvement has been essential to the corridor's success."

Ref: Great Corridors, Great Communities

www.pps.org/pdf/bookstore/Great_Corridors_Great_Communities.pdf **Project for Public Spaces, 2008**

Interview with Oz Kayak (Part 7)

Oz Kayak started as an engineering cadet with the Victorian Roads Authority, later worked with Victorian Railways and today is passionate about active forms of transport, community health and urban design. Here continues our discussion:

Oz Kayak: The other thing is – and maybe this reflected our military heritage in VicRoads – our labour force was far more command structured and skilled. Most of the construction gangs in the Railways had 10%, 20%, ex crims. Our social justice strategy manifested itself differently. As far as I know, if you had a criminal record you kept it quiet in the Country Roads Board (CRB). If you had a criminal record in the Railways – I'm talking about the track men – it was applauded.

Stephen Ingrouille: Are you saying that there were a high number of people with criminal records working in the Railways in those areas?

OK: Absolutely. There's no doubt about it. My friends who were Railway cadet engineers used to complain about it. The rules of supervising were different, a different culture. I'm not saying this led to the demise of the railways – social justice strategies are one thing but if you want to have a competitive product, even in the government sector, you need to have the best people. We would like to believe, certainly from the 1960s, that we looked after our men. You had [in the CRB] very much a military structure. You had for example eating facilities that were based on a hierarchy. Bear in mind that I'm talking about civil works in both organisations. The Railways had absolutely top class workshops. Mind you, when [Premier] John Cain came into power in 1982 his mission was to stop the longest card-playing school in Bendigo, in their workshops, which he did. We never had that sort of situation.

SI: Are you suggesting that perhaps there was not as much work going on in the Railways as there should have been?

OK: Absolutely. There wasn't. And also the work was not as highly skilled, in general, although both required as much design. I've always thought that track work design was as challenging as road work design but I don't think the track work design changed very much, whereas road work design changed a lot. Another factor [in the growth of the roads network]: it's very hard to disrupt the road system by strike action, but it's very easy in the railways to strike and stop the system. The main

motivating factor in moving the railway stabling yards from near Flinders Street Station was so that two men couldn't lock up the system. So the authorities began the process of relocation and it was a battle ground and a half because various people realised that it was not going to be so easy to lock up the system. Now they have moved the stabling yards to the end of the line, so that the trains are near where they need to be first thing in the morning.

SI: I understood that the land was cheaper at the end of the lines, but was more valuable in the city.

OK: It was not because of that. The land has always been valuable. Another problem was opposition from residents in the expanding suburbs. The people in the outer suburbs didn't want railway yards there so there was a counter-movement. I was involved in getting railway sidings out near Nunawading, and we thought we had it in the bag, until we went to the planning scheme, and the locals got up in arms about it

SI: You were working for the Railways then?

OK: At that stage I was. {Continued in #138}

Drive Your Melbourne Suburb Further

“Drivers in the outer suburbs are covering about 155 kilometres more each week than their inner-city counterparts, according to a report into how future petrol price rises would hit Melbourne drivers. Longest-distance drivers are residents of the Cardinia Shire in Melbourne's outer east, which includes suburbs such as Beaconsfield and Pakenham. They drive an average 205 kilometres per week, each. Close behind them are drivers from the Mornington Peninsula Shire, which includes Rosebud and Sorrento and has some of the state's worst public transport connections, with only a handful of buses servicing a large region. Drivers here cover an average 200 kilometres per week.

“Cardinia residents also do 91% of their weekday travel in a car, compared with 36% of Melbourne City Council residents, according to the report written by the Institute for Sensible Transport from data collected for the State Government's new VISTA travel report. And while residents in some of the city's lowest-income areas drive the furthest, the wealthiest drive much shorter distances. Melbourne City Council residents average just 50 kilometres per week. Residents in Stonington, which covers Prahran and Toorak, drive an average 100 kilometres a week.”

Ref: Clay Lucas, The Age, 23/12/09

Commuter Cycling in Copenhagen

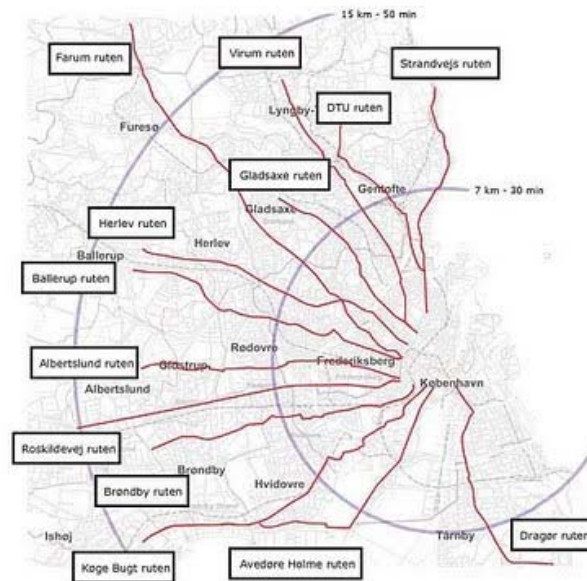
"The City of Copenhagen is currently planning to expand the existing, extensive network of bike lanes to extend farther out into the suburbs. A network of 13 high-class routes - 'bicycle superhighways' if you will - dedicated to bicycle commuters and aimed at encouraging more to cycle to work. Currently 55% of the citizens in central Copenhagen ride a bicycle daily and the number is 37% for Greater Copenhagen. While in many other countries anybody who cycles to work is often considered a 'bicycle commuter', most of the 500,000 people who cycle to work or education in Copenhagen don't fit into the Danish version of this statistical category.

"A 'commuter' is loosely categorised as someone who travels more than 10 km to work. The City of Copenhagen and the surrounding towns are aiming to increase the trips by bike on the new routes. There is an efficient network of public transport throughout the region but just as any train passenger or motorist knows, it feels much quicker and is much quicker if you don't have to stop all the time. The same principle applies to cycling to work and it is the key to the development of this new net of superhighways.

"Just like anywhere, there are many people who cycle longer distances but the focus for the new plan is the 'middle ground' - the zone between 7 and 15 km from the city centre. There are roughly 100,000 people who currently commute into or out of Copenhagen County (as opposed to within), travelling between 4-15 km. 15,000 of them ride their bicycle. The remaining 85,000 who take the bus, train or car are the target group for this project. The routes will be developed on the existing bike lanes but they will have a number of improved features, according to the City's vision:

- Smooth, even surfaces free of leaves, ice and snow.
- As direct as possible with no detours.
- Homogenous visual expression, for example, with signage and the trademark blue bike lanes through larger intersections.

- 'Service stations' with air and tools along the routes.
- Possibility to maintain a high speed and with sufficient width to overtake other cyclists.
- Safe and quick crossing priority for cyclists when they approach cross streets.
- Green Wave for cyclists through sections with frequent stop lights. Cycle 20 km/h and you hit green lights all the way.



"The new commuter routes are expected to cost roughly 250 million kroner [US\$47 million]. A net of routes of similar

length, isolated and away from the streets would cost between 1 and 1.5 billion kroner. [US\$200-280 million]." Ref: Copenhagenize.com 18/8/09 www.copenhagenize.com/2009/08/bicycle-commuter-superhighways-in.html

"After reading this article I have to ask one question: How long do I have to wait before the Danish army invades America? Seriously, Danish rule would expedite bicycle-infrastructure projects in the states! Let me know when you're bicycle-mounted infantry are coming - I'll roll out the red (and white) carpet for you. It may take a while, but we'll trade in our McDonalds for Frikadeller, our spandex for street clothes, and our SUVs for cargo bikes." Ref: Jon, Copenhagenize.com 18/8/09



Bicycle Parking in Holland Picture: Bruce Ingrouille