Integrating Cycle Facilities within a Transportation Strategy Framework

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Subject:

1. Cycle facilities *per se* are not the goal:

Promoting and developing cycle facilities in a large urban city or town is not an end or goal in itself. Rather, the goal is the development of sustainable urban centres and sustainable transport serving those centres. Cycling is one of the contributors to this goal.

This is a fundamental point. Let's take an extreme example. Do we have a problem if everybody travels by rail, and nobody by bicycle? Not really. Therefore it should not be a case of "bicycles and cycle lanes - no matter what". Rather, we need to recognise the potential contribution of all modes (public transport, walking, cycling, motorbikes, private cars etc), and maximise the contribution of the sustainable modes, including cycling. This leads logically to the requirement for an evolving integrated transportation strategy.

2. Each city's Strategy must be custom-built, tailored to its own needs.

Each city has a unique environment, and its own problems. There is no global panacea for solving individual city's traffic / transportation problems. These problems are a combination of local economy, culture, planning, infrastructure, politics etc., and the solutions must address these local factors.

We should not rely on a "Cycling Strategy" as a "must have" in isolation. Indeed, I would advise caution in transferring one city's cycling successes directly to another city. The cycling mode is clearly a major part of the transportation solution in the Netherlands, Denmark and elsewhere. However, the extent to which cycling can play a part (in the short term) in other regions and countries is dependent on some fundamental factors:

Four Basic Factors Determining Short Term Prevalence of Cycling
a) The characteristics of travel in the metropolitan area
b) The relative attractiveness of cycling for particular trips
c) The urban environment (topography, weather, etc.)
d) The cultural regard for cycling (political, legal, personal, parental, driver)

Taking each of these in turn…

a) Travel Characteristics: If the trip attraction / generation matrix for the network indicates that most trips, for instance, are more than 3 miles long, than it is unrealistic to assume a large potential mode shift to cycling. Some types of trips (deliveries, sales reps, etc.) do not lend themselves to cycling. On a macro level, land use planning should (but has not always) facilitate as many trips by non-car modes as possible, but it is difficult to retro-fit cycling if land use policy is poor.

b) Relative Attractiveness: For shorter non-discretionary trips, the attractiveness of cycling is relative to the other modes. With an annually-decreasing average car speed (currently 11 km/ hr for the Dublin region as a whole) the attractiveness of the cycle increases, even in a do-nothing-for-cycling strategy. However, the bicycle appears to compete primarily with the bus, and the extent to which cycling will progress appears to be determined to a certain extent by the quality of service, the penetration, and the frequency of the bus service.

c) Urban Environment: The urban environment plays a huge part in the determination of cycling numbers. This is a global phenomenon. The hillier parts of the Netherlands in the South have significantly less numbers cycling, than in Utrecht or Amsterdam. The density of the city, the general visibility of vulnerable road users, the prevalence of on-street parking etc. all "set the scene" for determining short-term changes in cycling numbers.

d) Cultural Regard for Cycling: Finally, and most importantly, the cultural attitude to cycling is critical. If politicians will not advocate cycling, if the law will not defend cyclists and cycling, if individuals do not recognise their part in traffic problems and traffic solutions, if parents inculcate a car dependency in their children, and if drivers do not recognise cyclists as fellow and equal road users (and as car-users who choose not to use their car), then it is unlikely that cycling will succeed as a major input to overall transportation numbers.

The balance of the various modes, and the travel behaviour of the metropolitan population must be generated by the city for the city. The willingness of the population to endorse sustainable alternatives such as light rail, cycling, metro etc. is a fundamental requirement of a workable strategy. It cannot be imposed from outside except in the most unusual or restrictive of political environments.

3. Government Support for an Integrated Strategy:

An overall transportation strategy, within which cycling is integrated and identified, must be driven by government, and implemented by transport professionals. This is, in my opinion, the most effective way to anchor the strategy, (and the cycling mode) against the prevalent cultural tide. With government backing, it officially flags the alteration of the urban environment, and provides funding to proceed with the alterations. It sets the stage to upgrade sustainable modes, and to make it more attractive to use these modes for travel. Ultimately, it feeds back into how and where people live, and the type of trips they make. That is to say, a government-backed strategy addresses the four fundamental factors governing cycling numbers outlined earlier.

The development of cycle facilities, and the cultural move to accept and use these facilities, is then achieved in the wider context of creating a healthy and sustainable environment for our children, or 'saving the town/city from suffocating air pollution or traffic gridlock". Most people can accept this objective of sustainability. Thus we move away from providing token cycle facilities. Instead cycling is knit into a transportation solution for our towns and cities. This reduces or obviates the need to "justify" certain cycle links or provisions on an item-by-item basis.

3a. The Dublin Transportation Initiative:

Dublin has followed the approach of an overall transportation strategy. After many years, and many transportation studies, it was only with the adoption by the Irish Government of the Dublin Transportation Initiative (DTI) Final Report in 1994, that changes began to occur in a meaningful and co-ordinated way. Indeed, the £626M funding of the Strategy came as a result of Government approval of the Strategy. (I will return to the finance issue later).

The DTI Strategy is ongoing rather than "set in stone", and has included various reviews and parallel studies. The 1999 Regional Planning Guidelines amended the macroscopic land use part of the Strategy. This was followed by the DTO Update (2000), which has undertaken a overall review of the 1994 Strategy in the light of the changed circumstances of the "Celtic Tiger". Papers will be presented on the Update in due course. Two interim plans were produced, namely the 1998 DTO Action Plan (cycling elements include a further 100kms of cycle track, additional cycle parking spaces) and the DTO Blueprint for 2000-2006, setting out work projects and funding requirements for all modes (cycling works include completion of the DTO Strategic Cycle Network by 2001, 25,000 cycle parking spaces in the city centre and at transport interchanges etc., together with the development of 300kms of local cycle network).

4. Integrated Strategy, but Separation of Modes:

The core philosophy behind the strategy must be a significant modal shift away from un-sustainable transport to sustainable transport and improved environment and safety. Ideally, within a transportation network strategy, each mode should act independently, but interact with each other at mode interchange points. This includes the cycling and walking modes. (This does not automatically presume segregated cycle facilities, but rather an *identifiable cycling environment* that is safe, pleasant and direct, regardless of which other mode shares the same environment).

The logical consequence of this "mode desegregation" approach is that a cycle mode infrastructure can be identified, and performance of that infrastructure measured. (*Aside*: The IHT Cycle Audit and Review approach is welcomed in this regard, and is being piloted in Dublin during 2000 by Mike Sharpe for the DTO on some existing and proposed cycle routes).

5. New Infrastructure - The Line of least Resistance (and most money)

As an intrinsic part of the plan, cycle facilities should integrated or 'piggy backed' on other major infrastructure provisions such as Light Rail Systems, Quality Bus Corridors, necessary new highway infrastructure (e.g. to remove traffic from city/town centres) pedestrianisation projects etc. This means that that not only is the cycling function integrated into new "hardware", but also cycling *funding* is integrated in the new projects.

Without money, the best plan is always a plan. In the Dublin situation, it is unlikely that funding would have been provided for the DTO Strategic Cycle Network in the absence of an overall Integrated Strategy. In fact, the initial Government funding of the 1994 Strategy did not earmark funds for cycling *per se*. In 1997, the DTO superimposed a Strategic Cycle Network on the well-funded Quality Bus Corridor (QBC) Network, and therefore piggy-backed cycling provision along key arterial routes to the city within another project. It was argued at the time that "piggy-backing" cycle routes on QBCs would compromise both modes. There is no doubt that the large part of design difficulties and public consultation concerns arose from the cycling elements of the QBC projects. Indeed, some of the QBC corridors are not necessarily the optimum cycling alignments.

However, in overall terms, the decision was the correct one, as it made cycling an active issue for designers, it raised its profile on the road, and the resultant cycling routes have contributed to increased numbers of cyclists in Dublin. There is now recognition of the cycling mode in its own right in Dublin. Most importantly, funds for expansions to the network are forthcoming.

The success of the approach is reflected in the progress to date in cycle track provision in the metropolitan area since 1996:

Cycle Track Provision in Dublin Metropolitan Region 1994-1999		
Local Authority		
Dublin Corporation	86 km	
Dun Laoghaire Rathdown	38 km	
Fingal County Council	24 km	
South Dublin County Council	41 km	
Others	20 km	
TOTAL	**209 km**	
Total cost	£7.64M.	
DTO funding	£6.875M	(16% of DTO budget of £43.4M).

6. The Need for A Co-ordinating Body:

It could be argued that the best way to implement strategy is to appoint "officers" within the main local authority and transportation agencies. However, there is always the danger that a "nominated person for cycling" will be too busy with regular duties,

or perhaps is not sufficiently senior, or is not actively involved / aware of large projects.

I am of the opinion that a Co-ordinating Body is essential, to ensure that the strategy elements are superimposed on all works undertaken by the various transportation agencies. If the Transportation Strategy is all-embracing, covering all modes,(as it must be) then the co-ordinating body for that strategy is in a position to ensure that major infrastructural programmes (e.g. road widening, new roads, rail station upgrades, park and ride etc.) include for appropriate links to other modes, e.g. cycle provision, at preliminary design stage. The co-ordinating body can then work through nominated channels to ensure that projects are delivered, and opportunities for piggy-backing and integration are exploited.

6a. Dublin's Co-ordinating Body. The Dublin Transportation Office was set up as such a body, to independently co-ordinate and monitor the Strategy, as well as update the strategy from time to time. It has proven useful to have an "honest broker" for reference on progress and quality. The Steering Group for the Office is made up of senior management from all the main transport agencies.

Co-ordination does not happen by accident. For example, recent major upgrades of the city centre rail stations will include cycle parking enhancement, while another DTO programme will provide cycle routes to/ from these rail stations to the main cycle network and destinations. These cycle routes will have to be designed in conjunction with a third DTO programme to improve city centre walking facilities, taking special account of overcrowded footpaths to / from rail stations during peak hours. It is conceivable that each of these projects could have failed to recognise the others, and possibly could have ended up competing for the same road space.

7. Cycling Strategy should be objective-led:

No more than any other mode or infrastructural change, the cycling end of the Strategy (and the subsequent cycle facilities) should be objective-led, and assessed. The objectives can differ. For example, in Dublin the DTO is funding recreational cycle routes in parks, school-centred routes, commuter routes, as well as regional network links. The objective of the recreational routes is to provide safe facilities for children and their parents to enjoy cycling, and to build up a new generation of cyclists. The school routes objective combines enjoyment with exercise, safety and mode shift from car-based "school runs", and so on. (*Aside*: It has not always been so. In some old designs in Dublin, the objective appears to have been to get cyclists "off the road" onto a cycle track, and not necessarily to get cyclists from "A" to "B". This token approach has resulted in cyclists getting off their bikes, and not just off the road).

8. Set realistic Targets:

From the customer's point of view, there is nothing more infuriating than over-ambitious and unrealistic delivery times, which subsequently fail to materialise. Any subsequent delivery is gauged against the original promise, and regardless of the achievement, will always be perceived as "not quite the target". In terms of a delivery

in cycling, the implementation of the plan and full modal shift targets will realistically take 10 years (for a city the size of Dublin). However significant targets and modest modal shift can be achieved in 5 years.

Why does it take so long? Depending on the profile of cycle users, there may be a generation absence, with little or no new / school cyclists coming through the travelling population. In this worst case, there needs to be a new generation of cyclists instructed in cycling, and confident to use the bicycle as a form of transport. There may be a cultural battle to be won, to re-assert the basic right of the cyclist to be on the road.
There may be perceived or actual dangers attached to cycling, due to a cycling-unfriendly environment. There may be the absence of good cycle facilities designers, and the need for specialist advice in provision of facilities.

To a greater or lesser extent, the problems existed (and continue to exist) in Dublin. Design workshops, a design guidelines manual, Safer Routes to School programmes, marketing and monitoring have all being utilised in Dublin to re-balance the scales. But it takes time. The DTO agencies have set targets of doubling cyclists in 5 to 10 years. The process is end-loaded. The 1999 cordon count in the city centre was the first to record an increase (18%) in the numbers of cyclists. But this is 3 years into the programme…

The cycle track provisions have been criticised as not making economic sense. However, there is recognition within the Strategy that the demise of cycling in Dublin occurred over 30 years, and that there is no instant about-turn. Nor was one promised by the DTO.

A Cycle Element of an Integrated Strategy, and Cycle tracks in particular, do not have to pay for themselves ”in year 1”. (It is marvellous if they do, as in the Ranelagh Cycle Route, covered in a separate Velo paper). The overall effect of cycle policy within a Strategy will not be felt until all aspects of the policy are in place, especially those discouraging private car use.