

Proposals for Introducing Public Bike Schemes in Regional Cities – Technical Feasibility Study

National Transport Authority

30 June 2011

Executive Summary

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The Minister of State at the Department of Transport, Tourism and Sport has requested that the National Transport Authority (NTA) examines “*potential means of introducing public bike schemes to other cities*”. As part of this examination, the Minister requested an assessment of the “*potential for partnership with or sponsorship by private sector collaborators to deliver the schemes at the lowest cost to the wider Government system.*”

There has been an exponential increase in the growth of bike-sharing schemes in Europe over the last five years largely due to the ‘big bang’ effect of the hugely successful schemes in Paris and Barcelona. There are now over 50 schemes across Europe, and many more in other continents. This level of activity has resulted in an increasing knowledge-base of the different types of scheme, and the factors which contribute to their success. This study draws heavily on the results of the OBIS bike-sharing research programme which came to an end very recently (June 2011), and has made available a number of research reports as well as an all-encompassing handbook. One of the more relevant key research findings is that the success of bike-sharing schemes in smaller cities has yet to be proven, unlike the schemes in the large cities such as Paris, Barcelona and Lyon.

This study also involved brief site-visits to the four regional cities of Cork, Galway, Limerick and Waterford to gain an understanding of the ‘exogenous’ factors in each city which would influence the success of any bike sharing scheme. These include current levels of cycling, topography, cost of car parking, amount of general traffic congestion, the extent of any cycle-friendly infrastructure, and the distribution of the major trip attractors throughout the city. Discussions were also held with officers at each of the city councils either face-to-face or by telephone.

This study has found that the regional cities have several of the characteristics that tend to result in successful bike sharing schemes such as very low current levels of cycling and cycle-friendly topography across large parts of the urban areas. However, the cities also display characteristics which suggest that the success of any bike-sharing scheme would be limited due largely to the small size of the cities, the relative lack of congestion and the fact that car travel, rather than public transport, tends to be the dominant mode. There is a little less clarity for some issues such as the impact of the climate. The cities featured in the European research were categorised according to temperature, and none of them had similar climates to the relatively mild and wet conditions of the Irish cities. However, the success of the Dublin scheme shows that the Irish climate does not prevent a scheme from being successful although, for the size of the population, the scheme does currently have a relatively small number of bikes and docking stations.

This study found that although the potential exists for successful schemes in each city, it would appear that schemes in Galway and Cork would be most successful partly due to the background levels of traffic congestion and the high price of car parking in both cities.

Estimates are provided on the number of bikes that a scheme in each city would require, the number of subscribers, and the amount of use each bike would receive per day. These are shown in the table below, and are based largely on a review of equivalent data in other European schemes. For a more robust prediction, primary research would need to be carried out in each city to explore the propensity to use a bike-sharing scheme among local residents, commuters, tourists and other visitors.

Summary of Recommendations & Estimates for each Scheme

	Cork	Galway	Limerick	Waterford
Recommended number of bikes	265-235	200-250	135-165	80-100
Recommended number of docking stations (and docking points)	25 (510)	23 (380)	20 (255)	10 (150)
Average number of docking points per station	20	15-20	10-15	15
Estimated number of subscribers	2250	1500	1500	900
Estimated daily rents per bike	3	2	1.5	1.5

Recommendations are made on the complementary measures which would be needed as a new scheme is introduced. Perhaps the most important one would be an increase in permeability for cycle traffic in the city centres through the provision of two-way cycling on one-way streets, and by opening up pedestrianised areas to cycling where conditions allow.

The capital cost (based on outline estimates encompassing; docking stations, bikes, assessment, maintenance vehicles, a national control room and monitoring equipment) in the four cities is an estimated €6.4 million. The bulk of this is assumed to take place within a 1 year delivery period. The total operating cost (including staff, premises, vehicle maintenance, bike replacement and materials) is estimated at €23 million spread evenly over a 14 year period. This level of expenditure assumes bike rental schemes are delivery as one contract within one year. A lower expenditure would be required if schemes are not progressed in all four cities, however the cost for one national control centre would remain necessary.

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