



Potential for a Public Bikes Scheme in Galway

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- Background on the international development of public-bike schemes
- Galway
 - Potential for cycling
 - Demand predictions
 - Possible locations of docking stations
 - Sustainable transport in general
 - Next steps

Three generations of cycle hire schemes

- 1960s Amsterdam
- 1970s to 90s (e.g. Bicyklen, Copenhagen)
- Third (and current) generation – combats vandalism/theft through technology and secure docking stations.
 - Rennes 1998
 - Major schemes in Paris and Barcelona 2007 credited with 'big bang' effect
 - First Ireland scheme: Dublin 2009
 - First UK scheme: London 2010



The world's biggest schemes

- Velib in Paris was the world's largest when introduced in 2006 – over 20,000 bikes and over 100,000 trips per day
- Hangzhou, China (2008), now the largest with over 60,000 bikes
- For comparison, Dublinbikes (2009) has 550 bikes (as of Summer 2011)



The third generation of cycle hire schemes – key characteristics

- Business model includes major advertising firms (JC Decaux in Paris), scheme sponsorship (Barclays), and car-park revenue (Barcelona)
- Bikes are available for a free half hour – beyond this period, prices rise sharply
- Different levels of subscription – daily, weekly and annual



The third generation of cycle hire schemes – key characteristics (2)

- Large city schemes, journeys last 13-17 minutes on average (3km to 4km)
- Density of docking stations (Paris and London) approximately 8/km² or 1 station every 300m. Lower density in smaller places e.g. Calais 1.5/km²
- Bikes have several essential characteristics
 - unique, **robust** parts to deter vandals, minimise maintenance and make visible
 - mudguards and chain-guards to enable use in **normal clothes**
 - permanently illuminated dynamo **lights**
 - easily **adjustable** saddle height suitable for most adults (1.5m -1.9m)





Obstacles to successful schemes

European research project identified the following obstacles to a successful scheme

- **Existing high levels of cycle ownership and mode share**
- **Underestimated demand** causing low availability
- Competition with traditional hire
- **Vandalism/theft** in cities without a cycling culture
- Intensive use leading to **frequent breakdowns** damaging integrity of scheme
- **Empty or full stations** prevent hire or return of bikes - users waste time and lose trust in scheme
- Registration/rental fees don't cover costs
 - external revenues needed



Factors which influence demand

- Topography
- Congestion affecting motorised transport
- Limited availability and/or high cost of car parking
- Climate and weather



Focus on Galway

- Population of approximately 100,000 including 25,000 students
- Cycle commuting mode share is relatively high – around 4%
- Cycle-friendly topography, with just a few relatively short and gentle gradients
- City centre is compact
- Car parking is expensive – second only after Dublin
- City centre has high levels of congestion, even during the inter-peak period
- Many of the one-way streets are single lane – these pose more of a navigational than a safety hazard to cyclists
- The number of pedestrianised streets and one-way streets affect cycling options



Focus on Galway (2)

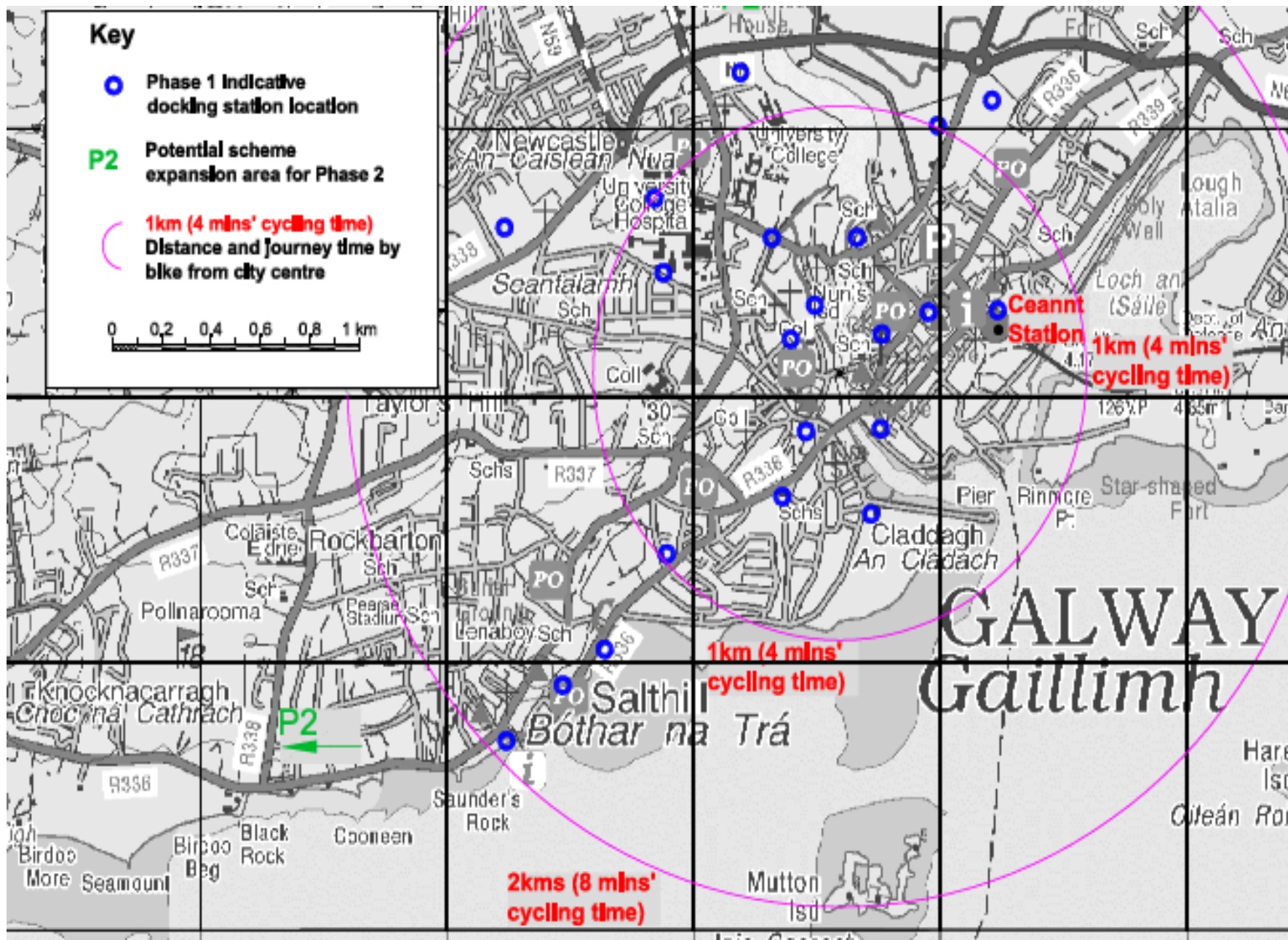
- Cycle parking is plentiful and well used
- Many bikes are also parked informally (e.g. to street furniture)
- Galway appears to be particularly well suited to a bike-sharing scheme so an above average ratio of an average European scheme has been applied



Demand predictions for bike-sharing scheme

- A fleet of **200 to 250** bikes is recommended
- It is predicted that the scheme would attract around **1500** registered members
- Approximately **23** docking stations are recommended
- The proposed deployment area comprises a relatively dense distribution of docking stations in the city centre, with a spine connecting to Salthill, and a less dense distribution to the north and north west

Potential locations for docking stations



Sustainable transport in Galway – a bigger picture

A bike scheme would complement other initiatives

- Traffic management grants supporting
 - Bus priority
 - Walking
 - Cycling
- A national cycle manual to guide best design
 - www.cyclemanual.ie
- Real time passenger information
- Optimisation of bus services

€2.6 million in grant funding to Galway City in 2011

- administered by NTA on behalf of the Department of Transport, Tourism & Sport

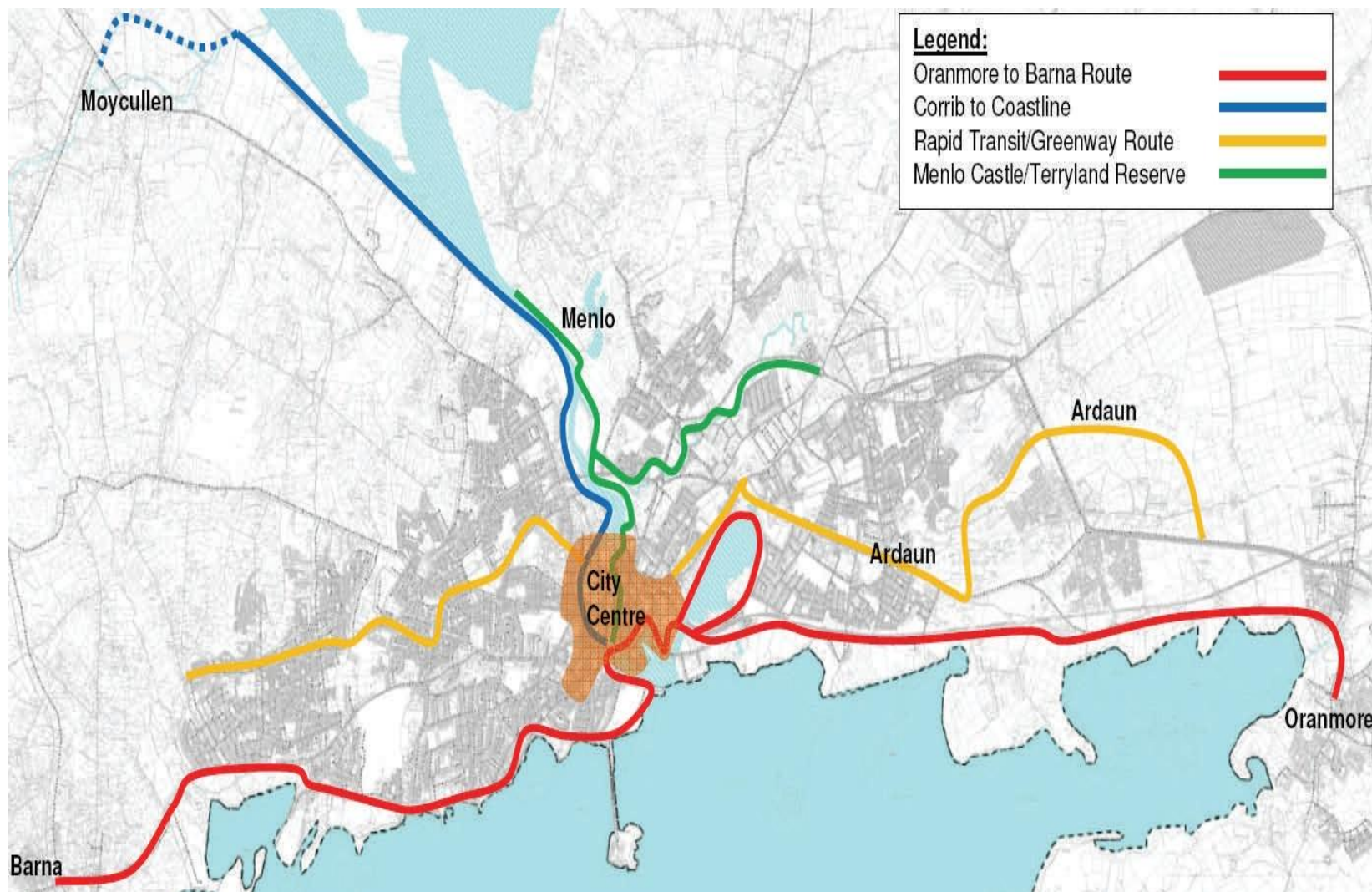
Bus Priority and Park & Ride projects - €2.2 million

1.	€2.0m	Seamus Quirke – Bishop O'Donnell Road Improvement Scheme
2.	€200,000	Galway Transport Unit

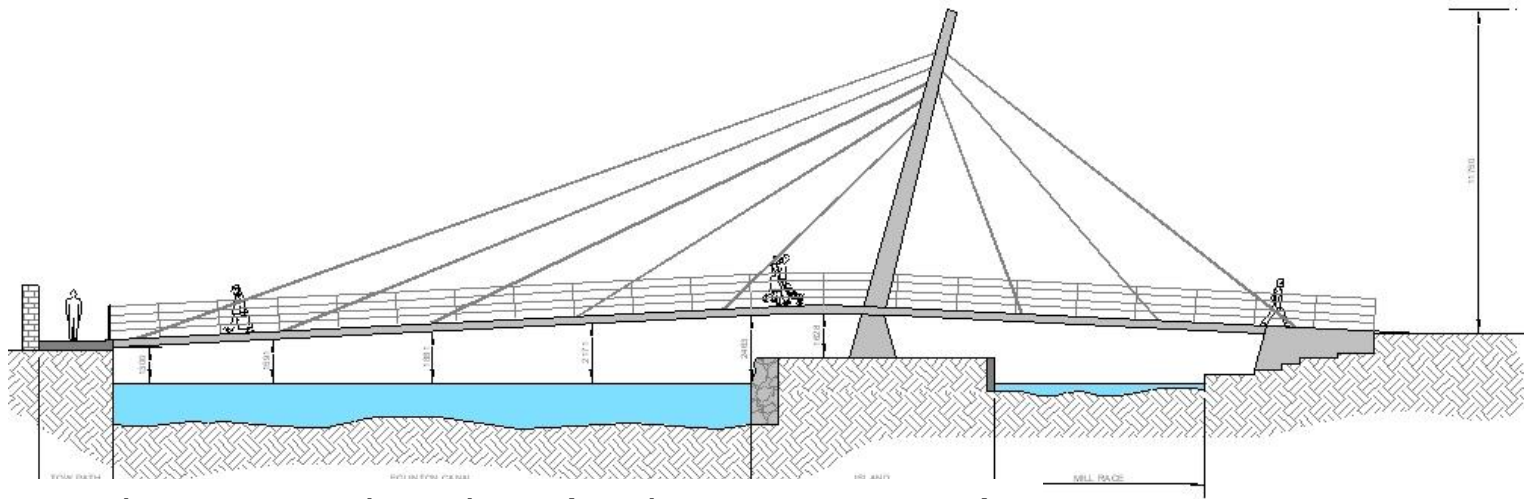
Jobs Initiative Fund - €400,000

1.	€150,000	Integrated Traffic Management Control Centre
2.	€103,000	Urban Traffic Control junction upgrades
3.	€150,000	Variable Message Signs

A number of priority cycle routes have been identified for the Galway Metropolitan Area



High Quality Cycling Infrastructure



Eglinton Canal Bridge (under construction)

Corrib to Coastline Cycle Route –
artist's impression





National Cycle Manual

- 1.0 The Basics**
 - 1.1 Sustainable Safety
 - 1.2 Five Needs of Cyclists
 - 1.3 Conflict and Risks
 - 1.4 Quality of Service
 - 1.5 Width
 - 1.6 Link Types
 - 1.7 Integration and Segregation
 - 1.8 Right of Way
 - 1.9 Pedestrians and Cyclists
- 2.0 Legislation and Policy**
- 3.0 Planning for the Bicycle**
- 4.0 Designing for the Bicycle**
- 5.0 Getting the Details Right**
- 6.0 Maintenance**
- 7.0 Tools and Checklists**

1.1 Sustainable Safety

Cycling is a vulnerable mode in traffic terms. Safety is at the heart of all good design. The designer should ensure that the Principles of Sustainable Safety have been applied to all schemes.

The principles of Sustainable Safety were developed in 1992, and in the following years in the Netherlands. They underpin all road design and the adherence to those principles has contributed to the Netherlands leading record in road safety.

This manual subscribes to the principles of Sustainable Safety and has used them in the determination of content.



There are five principles as follows:

- 1.1.1 Functionality
- 1.1.2 Homogeneity
- 1.1.3 Legibility
- 1.1.4 Forgivingness
- 1.1.5 Self-awareness

Mandatory Lanes, Side Streets



Box Turns



Driveways / Crossover



Left Hand Traffic Pocket



Pedestrian Priority Shared Area

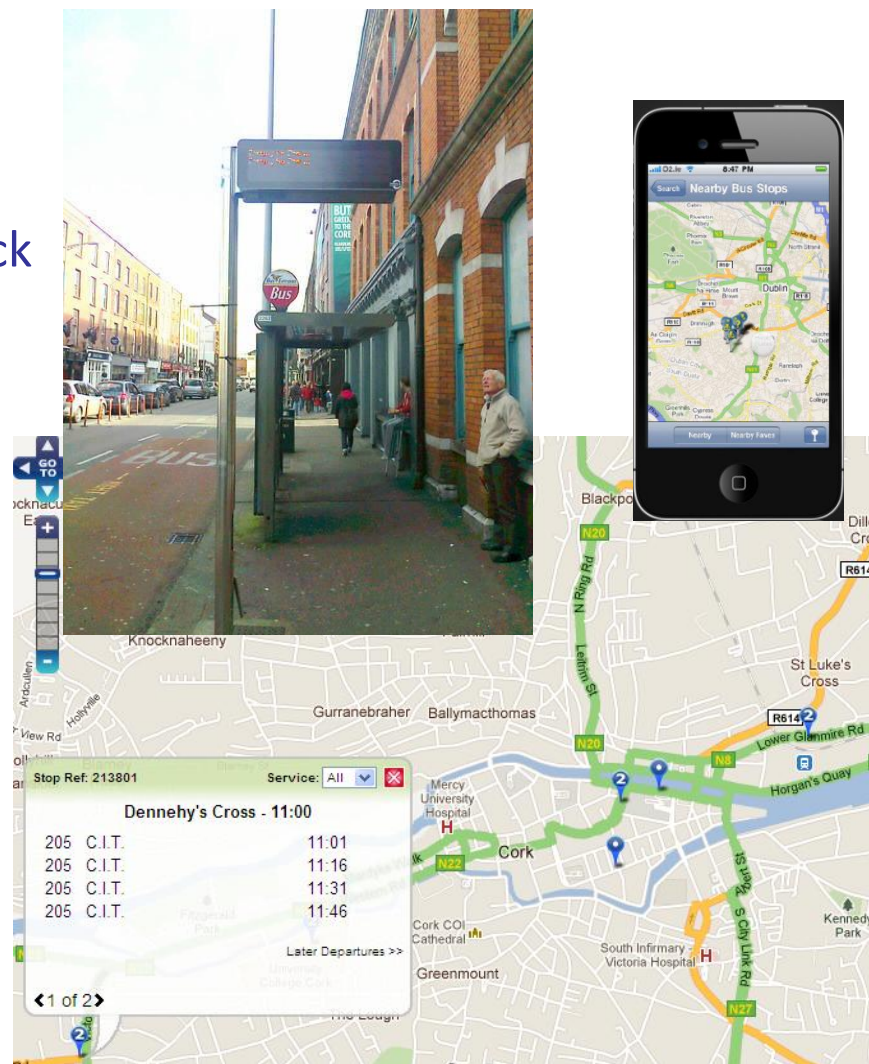


RTPI Galway

- First Bus Éireann Test Sign Up in Cork - Cork is the pilot for Bus Éireann signs
- When data is reliable it will enable a quick roll out to Galway in 2012

When Data is dependable, information will be available for all Bus Éireann stops in Galway via:

- Signs in busy locations (up to 20)
- Website www.TransportforIreland.ie
- Smart Phone Apps
- One SMS number for all real time bus services in the country



Next Bike scheme steps

- Commercial analysis
- More detailed survey work
 - Likely take-up
 - Potential locations of docking stations
- Examine costs more closely and devise best VFM model

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