

CYCLING

FERRARA (IT)

GENERAL ASPECTS

Ferrara, located in northern Italy, spans over 404 km² and numbered a population of 134,000 in 1991. The town was named a UNESCO world heritage site in 1995. The territory is flat and the historical centre is surrounded by ramparts. Expansion takes place along two large perpendicular roads. Residential expansion around the town centre occurred during the past two decades. The dominant industries are the mechanical, agrofood and chemicals industries as well as the shoe industry.



GLOBAL TRAVEL POLICY

Cycling is a very prominent feature in the town of Ferrara. The modal distribution of trips proves this fact: cycling constitutes 30.7% of trips made, 34.7% of trips are made by individual motor vehicles, 14.5% by public transport vehicles and 20.1% by foot. There are 110,000 bicycles for the town's 134,000 inhabitants as well as 31 cycling points of sale or repair in Ferrara.

The town planning policy has favoured town expansion beyond the ramparts of the historical town centre. As a result, housing increased remarkably in the 1980's, which in turn led to an increase in the inflow of cars.

Previously, in the 1960's to 1970's, the town planning policy had been innovative in that it transformed the centre into a pedestrian area with the objective of preserving the town's historical and architectural heritage. This pedestrian area spans a quarter of the historical centre today.

Cycling has been ever-present due to parking difficulties in the centre and because it is simply easier to access town by bicycle.

THE FERRARA (IT) EXPERIENCE

History

Cycling in Ferrara is more due to unconscious inherited practices than a real political effort. In fact, the flat terrain is an advantage for cycling and for people from the farming community who used to come into town (following mechanisation), cycling was the only means of transport within their reach, as other means of transport was too costly.

However, even though these conditions were prominent elsewhere in Italy, the widespread use of bicycles only applied to Ferrara. This is due to a specific policy implemented in Ferrara. In fact, even if this policy's main aim was not to encourage bicycle travel, it contributed to it. The pedestrian areas in the centre at the time of mass

motorisation is a case in point. Next, Ferrara experienced late economic development, which meant that car developments would take place over time. Due to this fact, new developments were able to take pre-existing cycling into account by constructing cycle tracks in the 1960's and 1970's.

Furthermore, cycling is seen as "an extension of the human body", which corresponds well to cyclists' behaviour. They do not see themselves as using a means of transport and consequently do not respect the road code.

The construction of cycle tracks in the 1960's and 1970's did not continue in the 1980's. Therefore, tracks are not connected. These tracks had been built according to criteria that differ from those of today, specifically regarding connection problems. As a result, these tracks are inadequate in terms of current safety requirements.

More recently, in the 1990's, a policy that really aims at improving travelling by bicycle has been implemented.

Planning

An Urban Traffic Plan (UTP) was instituted in 1992 by the new road code. It outlines four objectives:

- Improving traffic flow conditions for all traffic components,
- Improving road safety,
- Reducing air and noise pollution,
- Saving energy.

A project aimed at improving pedestrians and cyclists' mobility is referred to in order to attain these objectives.

Moreover, Ferrara has a bicycle office, one of its kind in Italy, that was set up to co-ordinate the operations for preserving and reviving cycling.

A law (Law 208) aims at financing cycling and pedestrian routes in the urban area. Even if financing was not available, it was nevertheless positive as local managers were led to think about it and to launch projects.

Developments and measures in favour of cycling

Ferrara has so to speak no need for cycle tracks in the town centre, as the current structure provides adequate access for cyclists.

However, access to the town centre from the surrounding areas is dangerous because it relies on main roads.

Various developments were implemented in Ferrara - some were aimed at stepping up security on the outskirts and others were aimed at facilitating traffic flow in the town centre:

- the "case avanzate": allowing cyclists to wait in front of vehicles at traffic lights so that they might turn safely.
- the "carriere": creating one or two flat tracks (depending on the width of the road) on the cobblestones in the historical centre for more convenient cycling. Cyclists will consequently be more likely to use these tracks instead of large roads. This development also means pedestrians and cyclists share the downtown area more optimally. Care should be taken that the distance between two tracks is further than the usual distance between the two wheels of a car so as to discourage cars to use these tracks.





an example of a "carriere"



A "buffer lane" for cyclists

- obstacles like railway lines can be surmounted by underground bridges and passageways for pedestrians and cyclists' exclusive use, without having to create a large detour,
- two-stroke road crossings for large roads allow cyclists to cross the road lane by lane, concentrating on oncoming traffic from one side only; then, they wait between the two lanes, concentrating on oncoming traffic from the other side,
- since cycle tracks are often close to the pavements, it is important to take into account grids and catch basins as bicycle wheels can get stuck if nothing is done; "S" grids provide a solution to this problem.



An "S" catch basin grid



Paint on the road

- cyclists have access to some one-way streets as well as to some pedestrian and limited traffic areas; moreover, in some areas, only bicycles can go beyond dead-end roads.



The Ferrara cycling network is projected as follows: two concentric ring roads would encircle the historical centre, and seven radial roads would link up to these ring roads. The map below illustrates this concept.

Two of the seven radial roads already exist and financing for three other has been obtained. The two concentric tracks are therefore close to the ramparts: the oldest one is situated on the actual ramparts and has been in use for a very long time - it dates back to the Renaissance.

Minor construction has been done: benches have been put up and public lighting has been installed. The circuit is approximately 9 km long and is used by cyclists, walkers, joggers etc. It was completed in 1989 by another circuit, beyond the ramparts, that was built at the time when the walls were restored. It is approximately 1 km long and is mainly intended for cyclists' use. Its path varies according to the positioning of the ramparts and the bastions. It is more or less 2 m wide and it has a stabilised dolomite¹ surface. At night-time it is indirectly lit by the ramparts.



The ramparts circuit



The external circuit



One of the existing radial roads links the northern part of the town up with the Po river, via the urban park, by means of small country roads. The other one links the eastern part of Ferrara up with the Pontegradella residential area. This road is a greenway (that is, a former roadbed converted into a track, open for use by slow, non-motorised means of transport) that runs along the service road of one of the numerous irrigation canals that spans the area. It is tarred, approximately 3 km long, 2.5 m wide and is lit by street lamps that are 15 m apart. It accommodates workers or students from Pontegradella everyday. The canal is crossed by means of two footbridges. The track is separated from the canal by a 2.5 m-wide dirt track used by tractors for canal maintenance. This track is connected to the external concentric track by a pedestrian and cycle passageway under a roundabout, which ensures the network's continuity and pedestrians and cyclists' safety.



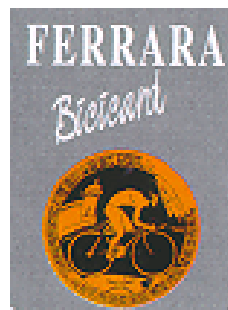
Many measures, besides these developments, promote cycling.

A bicycle-loan experiment is currently underway with a car dealership, which provides the option for customers to borrow a bicycle in order to go into town only one kilometre away, while his/her car is being serviced. The loan-bicycles have the car dealership's details printed on it, which affords it low-cost advertising.

Tourist-oriented bicycle hire also features in Ferrara. It is the fruit of a partnership between public authorities and private enterprise. The municipality provided shop space and set the hiring prices, and public enterprise bought the bicycles and covered the setting-up and management costs. 50 bicycles are up for hire at two sites, one at the station and one at a parking lot, so as to catch a maximum number of tourists. Rates per person in euros (EUR) is as follows:

Duration of hire	Group rate (>10 people) in €	Individual rate in €
1 hour	1.55	2.07
3 hours	4.13	5.16
6 hours	7.23	9.30
Full day	8.26	10.33

The bicicard, set up in 1995, plays a role in this hiring system. It offers bicycle hire for one, two or three days, which respectively costs, 10.33, 19.37 and 28.41 €. The cost includes free entrance to municipal museums and various reductions for a range of services (20% at some hotels, 15% at restaurants etc.)



Bicycle parking forms part and parcel of a pro-cycling policy, especially in terms of theft-prevention. Various parking options are on offer. There are:

- Simple bicycle racks close to shops,
- Covered shelters, with fixed tripods to which bicycles' frames can be attached, for parking bicycles longer than one day.
- Bicycle parking areas, created by converting car parking spaces (12 bicycles fit into one car parking).

Moreover, it is not always necessary to equip a parking area. Sometimes it may be useful to have more flexibility by means of more restrictive signposts, especially when the use of a space is limited to a particular time-slot or a specific day of the week. Furthermore, it is not always possible to build a structure for want of space.

The "bicibus" project was initiated by the bicycle office. "Bicibus" is a bus that can load 7 bicycles onto a bicycle rack. This bus connects Ferrara to the seaside some 70-80 km away. Loading the bicycles is simple and quick and is done under the driver's supervision.



The "bicibus"



A converted parking lot



A bicycle shelter

A public pump system has been set up in various roads in the town centre in partnership with shop owners. Thanks to these pumps, bicycle tires can be pumped up at any hour of the day. They are attached by a chain in order to avoid theft.

Telephone booths for cyclists have been built so that cyclists might phone without getting off their bicycles. The booths have been designed so that the front wheel of the bicycle is blocked, which leaves both hands free to make a telephone call. Moreover, the booths serve as a rain shelter too.



A telephone booth for cyclists



A public bicycle pump

Communication and information

Ferrara is one of two Italian towns whose mayor and municipal deputies get around by bicycle. These bicycles are called the "Bici-Blu". This is an effective way of being on citizens' level and of leading by example. The "bicicard" is a good way of ensuring publicity and rentals. In 1995, with the "bicicard" in use, a profit of 25,822 € was made, whereas in 1996, the year in which the operation was not renewed, a profit of only 20,658 to 23,240 € was made.

Various tourist publications are devoted to cycling:

- a succinct brochure with the map of the town centre, main areas of interest and the ramparts route.
- an extract from a guide-book with maps of Ferrara that covers the various road categories and cycle tracks.

EVALUATION

The cycling network was never thought of in terms of a network, for the intramural district of the town is considered as a unit in which travelling can be done without a network. However, creating cycle tracks between the town centre and the surrounding areas is necessary as proved by numerous accidents recorded each year:

Year	Cycling accidents	Deaths	Injuries
1992	85	6	89
1993	121	6	116
1994	137	5	143
1995	129	0	139
1996	n.a.	12	n.a.

In 1997, an evaluation of operations carried out, had not yet taken place since the priority was rather to have a good representation of the existing network.

PROSPECTS

Two alternative projects are competing for the future of mobility in Ferrara.

The first aims at progressively moving all parking lots outside of the ramparts of the historic centre, while moderating car traffic. Bicycle traffic won the vote for this project called, "a car-free town" that also aims at preserving Ferrara's heritage as in the 1960's and 1970's.

On the other side of the coin, the second project advocates a mid-way solution by which cars have access to the town centre without ignoring cyclists' needs. Space must be created for cyclists by creating an underground car parking lot. This second project is financially-speaking debatable as it requires a new parking lot to be built in the town centre (while there is one on the outskirts, which, as a result, will stand empty) that will increase traffic and therefore make it necessary to construct new cycle tracks.

FOR FURTHER INFORMATION

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