

A wide, grey stone staircase with a white metal handrail on the left side. A bicycle is parked at the bottom left of the stairs. The background is a plain, light-colored wall.

# **CYCLING** ON THE **RISE**

**Public Bicycles and Other European Experiences**









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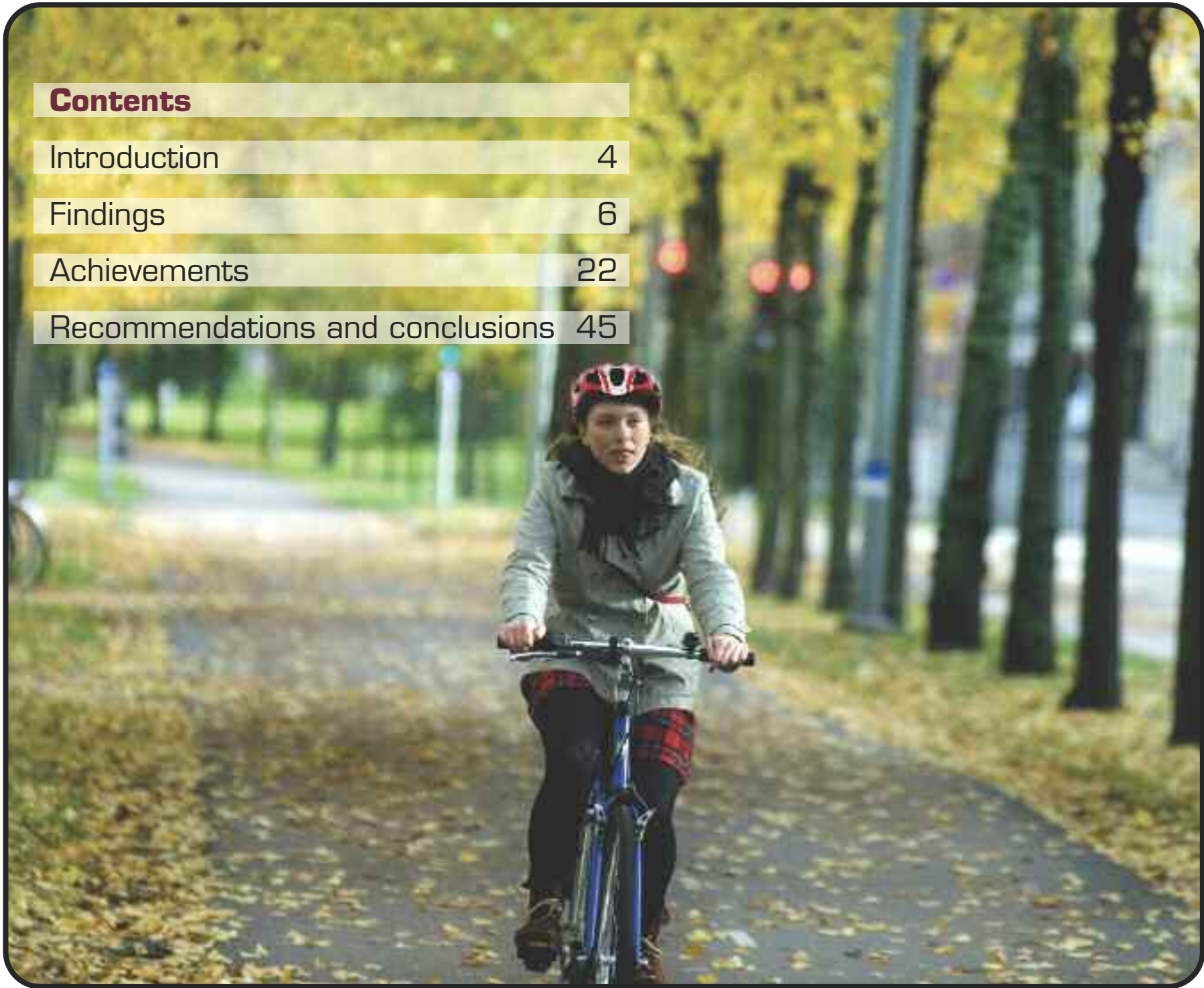
**Contents**

Introduction 4

Findings 6

Achievements 22

Recommendations and conclusions 45



## Introduction

When the Spicycles project was launched in 2006, cycling was not the “hot” mode of transport that it has become today. As project partners, we wanted to gather experience related to specific areas of cycling policy. We were keen to explore how key elements such as communication and awareness raising, and the building of local partnerships, might increase the modal share of cycling. We had big expectations at the beginning of the project regarding cycling planning, but could not have predicted the explosion in the popularity of public bicycle systems that has taken place during Spicycles.

In the course of the project, cycling became increasingly relevant to city policy makers and transport planners, as well as to citizens. This interest was heightened by the looming economic crisis: petrol prices rose dramatically, and economic recession became a reality. Public discussion of issues such as those raised in Al Gore’s documentary “An Inconvenient Truth” began to change people’s way of thinking, and from being regarded as “old-fashioned”, cycling was increasingly perceived as a relevant and contemporary mode of transport.

As the project comes to an end we can conclude that huge strides have been made. All the partner cities have improved their cycling policy. All of them now have a public bicycle system, even though Barcelona and Bucharest had not even planned for these at the start of the project. Berlin has enthused us all with its leadership in cycling planning. Bucharest and Ploiesti have been inspirational — their approach to local partnerships and to communication and awareness-raising programmes has provided a model for cities of a similar size and background, and their experiences are reflected in the brochure “Cycling in Eastern European Cities”, which was produced in Polish, Hungarian, Romanian and Czech. Rome showed us that determination leads to results, even in the most complicated circumstances, and Göteborg has been a trail-

blazer in many areas, with its excellent communication projects, bicycle highways and advanced bike-counting systems.

Spicycles’s results can be seen in the reports and newsletters on the website <spicycles.velo.info>, which also features an innovative interactive map for cycling planning, a benchmarking tool and a pool of consultants. In the future, it is planned to integrate the results with the new EC CIVITAS Plus project, MIMOSA, as well as with “Amsterdam Cycling to Sustainability”, which is planning a data centre annex database on urban transportation and mobility.

### Background indicators: Total number of trips per day per person (various years of survey)

Barcelona	Berlin	Bucharest	Göteborg	Ploiesti	Rome
2.6	3.3	3.0	3.3	2.1	2.2

### Background indicators: Average length of intra-city trips in km (various years of survey)

Mode of transport	Berlin	Bucharest	Göteborg	Rome
Car	—	6.4	9.6	9.0
Public transport	7.5	6.3	8.4	8.0
Walking	—	1.1	—	1.0
Cycling	—	5.4	—	2.5
Other modes	—	7.6	—	—

### Background indicators: Modal split (various years of survey)

Mode of transport	Barcelona	Berlin	Bucharest	Göteborg	Ploiesti	Rome
Car	10.7%	38.0%	28.0%	50.0%	20.0%	55.8%
Public transport	31.3%	27.0%	52.0%	26.0%	26.0%	18.1%
Walking	49.1%	25.0%	15.0%	15.0%	38.0%	25.7%
Cycling	0.6%	10.0%	<5%	9.0%	1.0%	0.4%
Other modes	8.3%	—	—	—	15%	—

**Background indicators: Population and area** (various years of survey)

Indicator	Barcelona	Berlin	Bucharest	Göteborg	Ploiesti	Rome
Area of city (km <sup>2</sup> )	101	892	238	192	58	345
Area of urban agglomeration (km <sup>2</sup> )	3,241	5,332	1,821	450	92	1,285
Population	1,629,537	3,395,500	1,929,615	490,000	231,620	2,810,000
Population/km <sup>2</sup> (city)	16,134	3,807	8,108	2,552	3,963	8,145
Population/km <sup>2</sup> (urban area)	503	641	1,060	1,089	2,515	2,187

**Background indicators: Infrastructure for bicycles**

Indicator	Barcelona	Berlin <sup>7</sup>	Bucharest	Göteborg	Ploiesti	Rome
Kilometers of bicycle paths	128.9	760	1.4	450	7.8	133
Kilometers of roads	1,275	5,343	1,821	1,325	326	5,000
Extension of bicycle path vs. road network	10.1%	14.9%	0.1%	34.0%	2.4%	2.7%

<sup>7</sup> According to legal guidelines in Germany no special cycling infrastructure needs to be provided on streets with a speed limit of 30km/h or less.

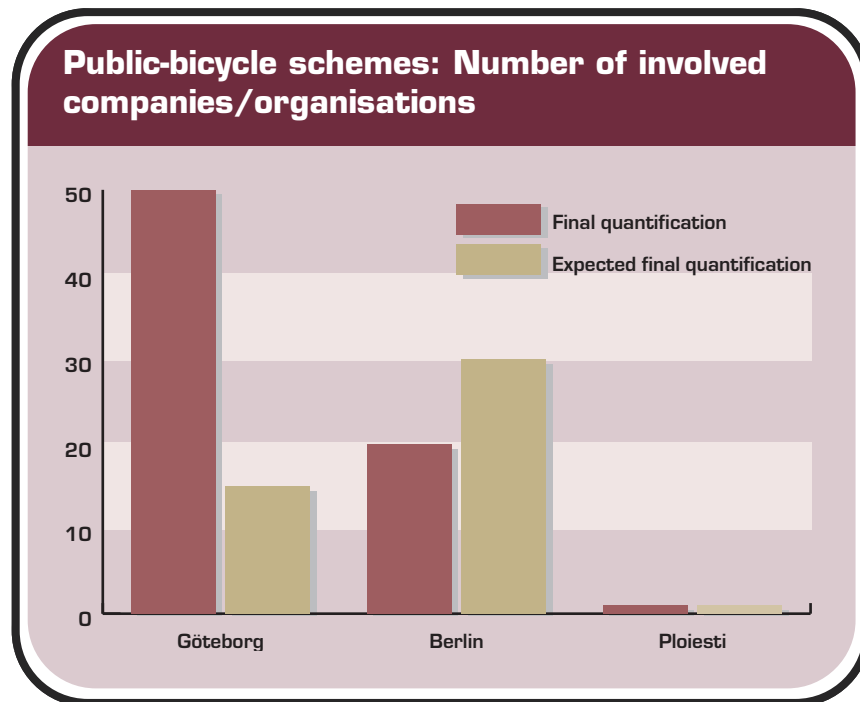
**Background indicators: Safety and security**

Indicator	Barcelona	Berlin	Bucharest	Göteborg	Ploiesti	Rome
Annual road accidents/ 1,000 inhabitants	8.0	35.7	38.3	4.0	1.0	6.8
Annual cyclists injured/ 1,000 inhabitants	0.2	1.4	0.0	0.8	0.1	—
Annual bicycle thefts/ 1,000 inhabitants	—	5.7	—	5.8	0.3	—
Secure bicycle parking spaces	8,802	—	—	0	0	210
Secure bicycle parking spaces/1,000 inhabitants	5.4	—	—	0.0	0.0	0.1

## Findings

### Public bicycles

After a 40-year history and three “generations” of development, the concept of public bicycles exploded in 2007, focusing attention on utility cycling in relation to urban development. Estimates suggest that the number of public-bicycles schemes doubled in 2007, and it seems only a matter of time before the next city launches its own scheme. However, since 2008 the rate of growth has slowed slightly, especially in Central Europe. One explanation might be that the “political” competition has already been won by Paris and Barcelona: these are the schemes that people talk about the most. Cities that follow in their wake will never reach the same level of success and publicity, so they are changing the goalposts and exploring what they can do better than other cities. For example, some cities are trying to reduce the cost of public bicycles, and to develop individualised solutions to their particular problems (e.g. with a greater focus on either commuters or tourists). Such competition is resulting in slower decision-making processes than were seen in 2007. The need for reliable and long-term financing also has an increasingly significant impact.



## Standards

There are certain elements that all European public-bicycles schemes have in common:

- **Automated process for rental and return.** Advanced technology allows for fast, comfortable and secure public-bicycles schemes. No personnel are needed.
- **Easy and fast access.** Registration is possible within minutes, and customers can use bikes in a matter of seconds as a result of innovative technology.
- **Fixed stations.** Customers rent from and must return the bikes to fixed stations.
- **Based on smart cards.** A smart card can be used on many traditional public transport systems. It can now be used to access public-bicycles schemes.
- **Customer registration using deposits, no anonymous use.** Unlike earlier schemes, anonymous use is generally not possible. Customers have to register once. For security reasons, users generally have to pay a deposit in cash or by debit card.
- **One-way capability.** Due to the net density, such schemes allow for one-way trips. For instance, Paris’s Vélib system (1,400 stations) allows about 2 million different routes, while Call a Bike in Berlin, where all intersections are potential drop-off and pick-up points, make about 10 million routes possible.
- **High net density.** Most schemes introduced in the last two years offer a high density of bikes and stations. The standard for station density has been established at between 300 and 400 metres. This corresponds to studies showing that people prefer to walk no further than 400 metres to access public transport.
- **No charge for first 30 minutes.** Customers usually buy base subscriptions for terms lasting a day, week, month or year. This entitles them to ride the bikes free of charge for the first 30 minutes of each trip, after which they pay a per-minute rate.





## Traditions

Public bicycles have existed in various forms for more than 40 years, although they have developed enormously as a means of public transport in the last few years — and in 2007 in particular — at least in Western European cities (e.g. Paris and Barcelona). Although there is clearly an increasing awareness of the environmental benefits of public bicycles, both the development and the acceptance of public bicycles as a crucial component of the transportation system differ significantly among European countries as a result of their different cycling cultures and traditions.

### *Established cycling tradition*

In countries with a longstanding and entrenched cycling tradition, private bicycles are common and public bicycles have received only moderate acceptance (e.g. Norway, Sweden, Germany and the Netherlands). Complex regulations in these countries limit potential contracts. In Germany, for example, a decision by the anti-trust office has disallowed contracts of the Vélip variety, in which the city gives exclusive use of its outdoor advertising space as remuneration to the system operator.

Further obstacles include an unwillingness to spend public money, prejudice against outdoor advertising (see above), and doubts about the sustain-

ability of public bicycles. Decentralised administrative structures limit the possibility of simple contracts: city departments have to coordinate initiatives with numerous boroughs, which are inevitably pursuing their own interests. In these cities, there is usually a big demand for money to be spent on other useful projects. The large number of privately owned bikes and the lower acceptance of cycling during the harsh winters also have a negative impact on the system.

Such cities typically try to strengthen public transport as a complete solution, promote co-modality, and focus on commuters and tourists.

### *Cycling newcomers*

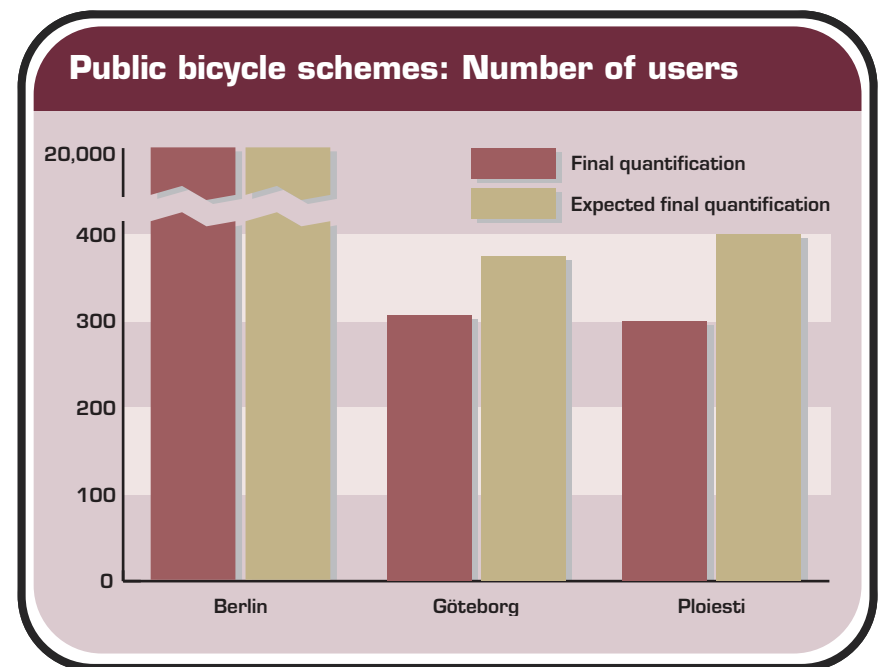
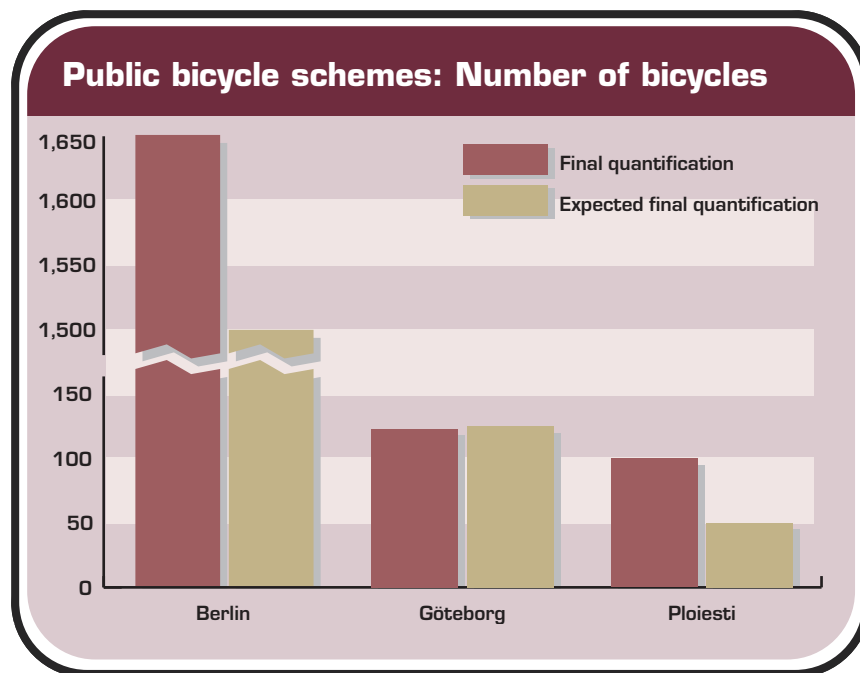
In countries with no cycling tradition, private bicycles are rarely used and public-bicycles schemes have impressive acceptance rates (e.g. France, Spain, Italy).

A feedback system is essential in order to monitor the results and emerging needs in relation to public bicycles. The introduction of public bicycles might lead to an increase in a city's cycling levels and possibly an increased share within the modal split.

A critical question, though, is how sustainable the system will be and whether bike usage will continue to grow in the event the system is cancelled. In all events, if cycling is to be firmly established as a new mode of transport, public-bicycle schemes need to be introduced in conjunction with other measures to enhance safety and convenience for cyclists. Such measures include communications, civic partnerships, planning and, naturally, infrastructure development.

### *New EU member states*

During the economic privations of the Communist era, bikes ruled the road in the former Eastern bloc due to their affordability. After the change of system, the bike lost ground to the car due in no small part to its value as a status symbol. By the beginning of the third millennium, however, the pendulum started swinging the other way: congestion became an issue in larger cities and urban cycling began attracting commuters as sensible means of individual transport. Today, public-bicycles systems are catching on, albeit on a modest scale. Limited financial opportunities mean these countries tend towards more simple schemes that function with a lower level of technology. No feedback exists as to the acceptance of public bicycles in new member states, although, based on their novel status in the region, it can be assumed that







citizens tend to be surprised by such schemes. The lack of financing seems to reduce the attractiveness of public bicycles for street furniture companies such as JC Decaux (operator in Paris and Lyon), Clear Channel Adshel (Barcelona, Stockholm and Oslo) or Cemusa (Pamplona). The challenge is to identify other opportunities. Prague and Krakow have launched the most sophisticated public-bicycles schemes in the region, each comprising a total of 100-200 bicycles and a handful of automated stations. Both are financed exclusively or mainly with municipal financing. In 2008, two Romanian cities (Bucharest and Ploiesti) launched small, low-tech schemes (no automated stations or smart cards) with financial sponsorship from local businesses. Warsaw and Wroclaw were planning to implement public-bicycles systems and Budapest was conducting a feasibility study.

## Driving forces on the public-bicycles market

There are various driving forces that influence the extent of the competition on the public-bicycles market.

### *Sustainability demands*

Growing demands in terms of sustainability and the environment have led to a more widespread interest in public-bicycles schemes, influencing municipalities and urban areas at several levels. Local and national authorities are in a position to support “green” solutions for sustainable traffic, and there are international, European and national guidelines to be observed.



### *Municipalities/urban areas*

Cities such as Paris, London and Hamburg have integrated the setting up of public-bicycles schemes in their long-term transport plans. Supporting bicycle traffic is an attractive strategy: cycling infrastructure is inexpensive compared to other public transport modes; and the promotion of cycling increases the proportion of pollution-free, low-noise traffic. More cyclists in cities also result in safer roads, since car drivers become more aware of pedestrians and cyclists.

### *Companies*

Around 10 years ago, street furniture companies introduced public-bicycles services as an attractive urban solution in order to attain valuable contracts for advertisement rights in cities. Competition for advertisement contracts in relation to public bicycles has become increasingly intensive in the last three years. At the moment, the strongest outdoor-advertising players in the public-bicycles business are JC De-caux, Clear Channel Adshel and Cemusa.

Public transport companies are also involved in public-bicycles schemes. Deutsche Bahn, for example, launched its public-bicycles activities in

2001 and now styles itself not only as a railway company but also as a mobility provider, offering door-to-door mobility chains. Other examples of railway companies that have begun competing on the public-bicycles market are the French railway operator Société Nationale des Chemins de Fer Français (SNCF) along with its subsidiary EFFIA; Véolia, through the takeover of Movimento and Oybike; Transdev, in cooperation with DB Rent; and the Netherlands railway company Nederlandse Spoorwegen as a result of the takeover of OV Fiets.

With the inclusion of public bicycles in advertisement contracts, it seems likely that such services will be introduced into tenders for integrated mobility, probably in connection with urban or regional mobility. However, such contracts can be controversial, as evidenced by the court decision in Germany.

### *Customers*

Without customers keen to use the new schemes, public bicycles cannot and do not work. The main target group for innovative, high-tech services comprises young, highly mobile urban users. However, commuters and tourists are also customer groups with a potential role in the expansion of public-bicycles schemes.



## Integration into planning for cycling

In so far as they are organised by the municipality, public-bicycles schemes should fit in with the general traffic planning for cycling. Experience gained during the Spicycles project shows that there is an important link between public bicycles and cycling planning in general.

There are several possibilities:

- Cities can use public-bicycles schemes to underline their commitment to cycle path networks for main routes, as well as to networks in several districts. By establishing rental stations near new cycle lanes, public bicycles can support the rapid uptake and acceptance of the new infrastructure.
- Public-bicycle schemes can increase pressure on the responsible authorities to begin or complete the creation of cycle path networks and other cycling infrastructure. Cyclists must be treated as participants in the traffic system with respect to safety, infrastructure, legal rights etc.
- Paris, London and Hamburg have already integrated public bicycles into their mid- and/or long-term urban transport strategy. With this in place, cities can consider city-specific solutions.
- Due to pressure to reduce emissions, cities must acknowledge the need to integrate public bicycles into public transport. The aim should be to raise

the attractiveness of the public transport system in general, turning it into a better choice than the private car. Locating public-bicycle stalls next to traditional public transport stops contributes to this. Another way is to issue an access medium for use on all means of transport, including mass transport and individual means of transport such as public bicycles.

## Clear implementation plan

Successful implementation requires the setting of milestones for the creation or expansion of a system. For example, when cities launch a pilot project to test a concept, the criteria for success must be established from the beginning to decide whether to continue to expand the system or abandon it.

## Realistic aims for modal split

Schemes such as Vélib and Bicing achieved a general change in attitude. Estimates suggest that cycling has doubled in both Paris and Barcelona, and both schemes have reached a modal split of at least 1 percent. However, the modal split of cycling was very low in both cities when the projects were launched in 2007, thus an absolute increase of 1 percent of the modal split can already mean that cycling doubled. It should also be borne in mind that huge financing opportunities were available in both cities.





## Planning

Whilst public bicycles can be credited with dramatic results in some cities, our contention is that all the measures implemented in Spicycles, including planning, are necessary to increase cycling levels.

The example of the Bicing scheme in Barcelona is a good example. While the number of Bicing subscribers is still increasing, the scheme will need accompanying activities (communication, monitoring, infrastructure planning etc. — as realised in Spicycles) if cycling is to increase its modal share.

Barcelona City Hall is participating in the EC OBIS project (Optimising Bike Sharing in European Cities) to learn and contribute to best practices for public bike schemes.

## Finances

Berlin's experience points up the challenges of financing. In that city, the contribution of the boroughs has proven difficult due to the lack of financial resources to implement bicycle measures. Available borough budgets tend to be small, although the amounts spent differ considerably from borough to borough and there has been a positive change in the overall situation. Some boroughs are looking for additional financial resources such as special grants and European regional and structural funds (EFRE).

## Implementation of bicycle measures

During the course of the project, more and more measures were implemented each year, with a shift in focus from bike-route networks to parking facilities. The number of measures implemented doubled between 2004 and 2007.

## Future orientation

Regarding the future orientation of bicycle policy, a positive development can be noticed. For example, a 2007 project survey of Berlin's borough administrations found that a majority, but not all, would continue their support of bicycle measures at existing levels. In 2008, 100 percent of the borough administrations answered in the affirmative.

## Institutional cooperation

High numbers of participants, improved communication and the capacity-building elements of the four Berlin workshops all contributed to the improvement of institutional cooperation at all levels.

## Human resources

In order to maintain the pace of change to sustainable urban transportation systems and to reach the objective of becoming a bicycle-friendly city, the existing situation in terms of human resources needs to be improved in order to continue with the analysis, conceptual work and implementation of further bicycle promotion activities.

## Bicycle parking

The buildings department should be informed of the availability of an electronic version of bicycle parking guidelines. Familiarity with the guidelines might help to ensure that user-friendly and high-standard parking solutions are applied.

## Users' acceptance and preferences

Spicycles promotional activities addressed common excuses among potential users for not cycling.

While studies show that cars are used for many short trips that could be made by bicycle, most people do not consider cycling as an alternative to driving. One of the main impediments is a lack of facilities and low levels of safety and security. Ignorance of self-protection measures leads to higher numbers of accidents.

When bicycle transportation issues are not integrated into master plans, the development of cycling facilities is more difficult.

Importantly, users and potential users have expressed a preference for bicycle lanes on roads (flow and counter-flow) rather than along pavements.

While recent studies reflect increased potential for cycling among city inhabitants, transport strategies must give greater consideration to the development of sustainable transportation.



25 . JAN . 07

15 : 21

Du är cyklist nummer

351

idag

av sammanlagt

448 102

cyklister i år på  
denna sträcka







## Communications and awareness

Public information should be readily *available*: A local project website is an easily established tool for spreading information and knowledge, and for calling actors' attention to bicycle-promotion topics. The permanent availability of information facilitates the flow of communication.

It should be made *accessible*: Responsibility for bicycle planning activities within the administration still needs to be made more transparent to citizens and businesspeople in order to facilitate accessibility to expertise.

Information should be of *high quality*: Organisers should disseminate a rich mix of information and have a good command of cutting-edge issues. Their ability to keep abreast of developments is key.

The following elements are particularly important within the framework of communications and awareness:

- Maps, pamphlets and brochures
- Information meetings — on the street or in schools
- Planning and construction projects
- Campaigns, bike weeks
- Bike-use studies
- Reference group of cyclists reporting to the city
- Public bicycles

### Barcelona

Events included:

- Bike Week
- 1st Catalonian Cycling Congress (2006)
- 1st Spanish Public Bikes Conference (2007)
- Sustainable Mobility Week (2008)

#### *Marketing with schools*

An awareness-raising and communication campaign was developed with 12 schools, and trainings given in 12 schools, for an average of 872 pupils per year.

The *Bicycle Guide* has become the main publication for cycling promotion.

### Berlin

In most cases cooperative help was given in a timely manner and focused on single topics or occasional events:

- Maps of cycling infrastructure were distributed widely. Some were published by the city administration and given out free of charge.
- Newspapers published articles on recreational cycling tours.
- Various “green” interest groups have been involved in communicating the advantages of cycling.
- Local and national health insurance companies have instituted “Cycle to Work and University” weeks.
- Commercial bike rental providers conduct their own marketing campaigns.
- Campaigns and events can bring together various environmental associations. During European Mobility Week, September 16-22, 2008, an opening session was held at DB Rent's branch of the public-bicycle service Call a Bike in order to give mobility experts and media representatives a look behind the scenes of mobility operators. Call a Bike and Velotaxi operate in close cooperation in Berlin.
- The Berlin bike rally has become a tradition.
- The FIFA World Championships occasioned the “Berlin Changes Transport Modes” campaign.

### Bucharest

A bike-usage study was carried out by:

- conducting an opinion poll among citizens (not only cyclists but all traffic participants and potential cyclists) on the current status of the specific infrastructure;
- outlining the profile of current bike users (income, education, age, gender, acceptance of public-bicycles schemes, etc.); and
- identifying barriers and incentives to bike usage in Bucharest.

A communication campaign included:

- awareness raising in order to stress the advantages of bike usage; and
- on-street distribution of promotional and information materials.



The study was carried out by Bucharest's public transport operator RATB. From this basis, some specific proposals and measures for the further development of cycling in Bucharest were drawn up. At the same time, the study provided the grounds for a marketing and awareness-raising campaign, defining target groups, ways to approach target groups, an action plan, etc. As part of the communication campaign, promotional materials (backpacks, water bottles, fluorescent safety vests, reflective bands and ball-point pens bearing the logos of RATB and Spicycles) were distributed to cyclists. Target groups reacted positively to the campaign's messages.

## Göteborg

The marketing project "Test bikers for new cycle lights" began in 2006, and the project evaluation was completed during spring 2008. The project trialed a steady-beam light, powered by a dynamo and permanently fixed to the bike to prevent theft. The purpose was to see if this promising new product would increase lamp usage among cyclists. The results were reported to the national road administration and shared with other interested stakeholders. The main conclusions were that it would increase lamp usage and that the risk of confusion with other vehicles is very small. The project website was updated with these conclusions and a letter was sent to participants thanking them for their input and informing them of the latest developments.

An updated bicycle map was printed in January 2008.

A bicycle-facts folder was produced, containing information about cycling regulations and fines, sources of further bicycling facts, numbers of bicycle trips per day, and statistics for the use of lights and helmets, etc.

During Bicycle Week in 2007 there were two events for the general public and five for municipality employers. The goal of Bicycle Week is to raise the status of cycling, and to increase awareness and visibility. It is also a chance to thank the city's existing cyclists. Information was distributed by the municipality, cycling associations and suppliers of bicycle equipment. A bicycle repair service was also available. Instead of a Bicycle Week in 2008, around 15 small-scale events were held on the outskirts of Göteborg in April and May with the aim of reaching potential cyclists — that is, people using cars for short distances without considering alternatives. The events were organised in cooperation with local city authorities. On one Saturday in April a bigger event took place in the



city district of Lundby, the pilot area, featuring information from the municipality, cycling associations and suppliers of bicycle equipment, as well as a bicycle repair service.

Many women immigrants have never learnt to ride a bike. Courses on traffic safety were therefore arranged to train at least 10 bicycle instructors per year. Each bicycle instructor then led a course for around 10 women. The project evaluation highlighted the tendency of traffic and public transport authorities to develop and test interesting concepts but then not necessarily to implement them on a large scale. This led to the decision not to continue with the classes but rather to develop concept material to be used by other stakeholders who wish to provide cycling courses for a wide range of target groups.

## Ploiesti

The city of Ploiesti focused on:

- innovation in the Romanian context, typical for medium-sized cities located in ex-communist states in southern Europe;
- changing the poor image of cycling in comparison to car ownership;
- promoting the use of bicycles not only for recreation but also for commuting;
- the benefits of cycling in terms of personal and social health;
- the integration of mobility information systems;
- the setting up of a cycling reference group;
- the involvement of NGOs in the communication strategy;
- the prevention of theft and vandalism;
- involving local authorities in the communication strategy (local police, schools, university, environmental institutions);
- analysing the impact of each stage of the communication campaign; and
- the active character of the communication campaign.

The communication strategy contained:

- a mix of dedicated channels (radio, local television, newspapers) in order to reach the target groups of decision makers and citizens;
- regular press releases;





- local meetings with targeted members of the public;
- dissemination of a project leaflet via the Ploiesti website, via direct mailing to interested organisations, and via the on-street communication campaign;
- a clear focus on the communication strategy channels;
- meetings with pupils and students at schools and university;
- a city website featuring a brief summary of the project and notices of events;
- two online Spicycles questionnaires for members of the public.

## Rome

- Existing bicycle-path databases were analysed, both at Rome's mobility agency ATAC and at the municipality technical offices.
- All bicycle paths surveyed "on paper" by the municipality and not yet included in the GIS of ATAC were analysed.
- A procedure was implemented for the collection of data, data exchange, the integration of information and the consequent computerisation of bicycle-path information from the municipality and ATAC.
- ATAC has provided on-the-job training for municipality employees on using the GIS data model.
- By working in synergy with the municipality, ATAC has concluded that the initial cycling database structure must be readapted to include new information fields, such as the existence within the network of bicycle stands at interchanges with public transport.
- The design and implementation of procedures for data exchange between ATAC and the municipality were implemented and the GIS layer of the cycling pathways network was created.
- A map of cycling network pathways "Roma a pedali" (Rome by bike) was created. It can be downloaded from the ATAC website at [www.atac.roma.it](http://www.atac.roma.it).
- The cycling map was disseminated to members of the public during an event on "Green Sunday" in February 2008.



## Local partnerships

### Barcelona

It took Barcelona longer to agree on its cycling master plan than it did to build the first 100 km of the cycle lanes network. The lesson here is that if the city has a strong urban planning procedure, then the adoption of cycling planning within the urban planning process is the most important thing for getting a network of route facilities implemented (and more important than approving a cycling master plan).

Intelligence regarding the intensity of cycle traffic is useful in order to determine which parts of the cycling network are being heavily used and which parts are underused, and hence to facilitate the design of connecting sections to improve overall traffic levels. Other indicators (accidents, pedestrian complaints) have also been used to plan the cycling network.

Barcelona has shown that it is possible to implement a public-bike scheme within months if the political will (and a ready source of financing) exists. One might talk of a virtuous circle, since the surplus revenue from the Green Area parking scheme not only finances cycling measures, but this also enables the provision of cycle routes on certain sections of road where (previously uncontrolled) on-street car parking has been removed.

### Berlin

The high level of attendance at the Berlin workshops and borough roundtables illustrated the increasing popularity of cycling. On the other hand, certain stakeholder groups, such as retailers and housing managers, were not as well integrated as had been intended.

The high number of expert participants from all levels of administration, improved communication and the capacity-building aspect of the four Berlin workshops contributed to improving institutional cooperation at all levels. The successful experience of these thematic workshops has laid the groundwork for continued strengthening of institutional cooperation.

In order to maintain the pace of change to sustainable urban transportation systems and to achieve the objective of becoming a bicycle-friendly city, the existing situation in terms of human resources needs to be improved, since the analysis, conceptual work and implementation of further bicycle promotion activities needs to be continued.

A steering group is a useful tool to strengthen coordination and cooperation and the monitoring of funded projects with a variety of actors.

#### Building local partnerships process indicators: Number of periodical roundtables

	Barcelona	Berlin	Bucharest	Göteborg	Ploiesti	Rome
Final quantification	3/year	3	Not specified	Not specified	Not specified	2
Expected final quantification	About 6/year	Not specified	Not specified	About 4/year	Not specified	Not specified

#### Building local partnerships process indicators: Number of annual meetings

	Barcelona	Berlin	Bucharest	Göteborg	Ploiesti	Rome
Final quantification	Not specified	2 (total of 6)	Not specified	Not specified	1.67	2
Expected final quantification	2	2	Not specified	2	2	2



However, special attention should be paid to the following:

- commitment to participate in the meetings;
- active communication of project requests; and
- the involvement of external actors.

## Bucharest

In Bucharest, at the beginning of the Spicycles project there was no communication between the bodies involved in cycling development. Administrative authorities did not take into consideration the full potential of bicycles within the transport strategy. It was civil society that first suggested that cycling could be part of the solution to Bucharest's transport problems.

As a partner in Spicycles, RATB supported the involvement of the main actors in promoting cycling as a means of transportation (as opposed to recreation). RATB also endeavoured to improve the poor image of bike users. In order to lobby for the integration of cycling with other modes of

public transport (e.g. the acceptance of bicycles on subways, trams, trains, buses, parking zones, etc. and the creation of parking facilities at transport stops), RATB contacted local authorities and politicians for their support.

Cycling initiatives in Bucharest are starting to become more visible to citizens and local actors. Political support and a strong media campaign have resulted in cycling gaining acceptance as a mode of transport that can help to solve traffic and environmental problems, rather than merely a recreational activity. Although the first steps have been implemented, there are still communication issues to be solved. The inclusion of a cycling master plan within the general transport master plan is vital in order to ensure an integrated approach to Bucharest's traffic problems.

## Göteborg

Partnership with other actors and contacts with citizens have been acknowledged as vital in the future activities of the city. Communications have improved within the Traffic and Public Transport Authority and





with other public bodies, for example the National Road Administration and the Swedish Association of Local Authorities.

The internal cycling network has enabled a coordinated approach to future priorities and actions.

Public opinion is now taken into account in a structured fashion and communicated to the departments responsible for the planning, construction and maintenance of cycle lanes, parking places etc.

In the autumn of 2009, the state of cycle lanes will be assessed, giving a complete and up-to-date overview of the quality of the cycle-lane network. This will be communicated to the public during future activities and events.

As a result of the activities, staff at the Traffic and Public Transport Authority have gained a valuable awareness of the opinions of cyclists. However, in the future a more structured approach to the activities is being considered in order further to improve dialogue with citizens and to create better conditions for cycling.

## Ploiesti

In cooperation with partners, citizens were awakened to the important part that cycling can play in their lives.

Cooperation among various urban actors, such as authorities, private investors and members of the public, has proved beneficial. Ploiestie participants found that sharing of knowledge, experience and good practices by the partners is a good way to avoid mistakes. In a city where urban utility cycling is a novel idea, working with young people proved to be the best way to promote cycling.

It was important to initiate and strengthen public-private partnerships as proponents of social responsibility and environmental protection by the active involvement of private companies (e.g. Timisoreana, Unilever).

## Rome

The existing trend of following European politics contributes to synergy.

The creation of local partnerships during 2006, the first year of the Spicycles project, was remarkably successful and strengthened relationships among public institutions and associations. Local experience has shown how, once created, these relationships grow, enabling the sharing of procedures and routines during the planning and project phases of cycling initiatives.

Although the close collaboration during the preliminary phase of the project was not always straightforward, this advance work meant that obstacles could be avoided during implementation. Good collaboration ensures the effectiveness and reliability of the administration and enables full compliance with the expectations of final users.

In Rome, it also meant that the cumbersome routines and administrative procedures typical of large city administrations could be significantly curtailed.

While cooperation is vital to the success of any initiative, a change of administration highlights how objectives can only be achieved within a steady political and administrative framework. Uncertainties and weaknesses on the part of those involved in a process, particularly where political or administrative changeovers are taking place, slow down the process of decision making and make interventions less effective.

Connections between bicycles and public transport are vital, thus projects to improve intermodality must be fostered in the future and the awareness of both decision makers and public transport operators must be raised.



## Achievements

The ultimate aim of cycling promotion is to increase cycling levels. On this score, most of the Spicycles partner cities reported progress, although precise measurements were not available in every case.

**Barcelona** showed an increase in modal share of 135 percent (from 0.75 percent in 2005 to 1.76 percent in 2007).

Surveys carried out in **Berlin** show that the number of bicycle users increased by 20 percent between 2005 and 2008.

**Bucharest** reported that the 1 percent modal share of cycling expected by the end of the project was almost achieved.

The modal share of cycling in **Rome** and **Ploiesti** increased, and **Göteborg**, which already has a reasonably high cycling modal share (9 percent) was the only city to report no change in modal split.

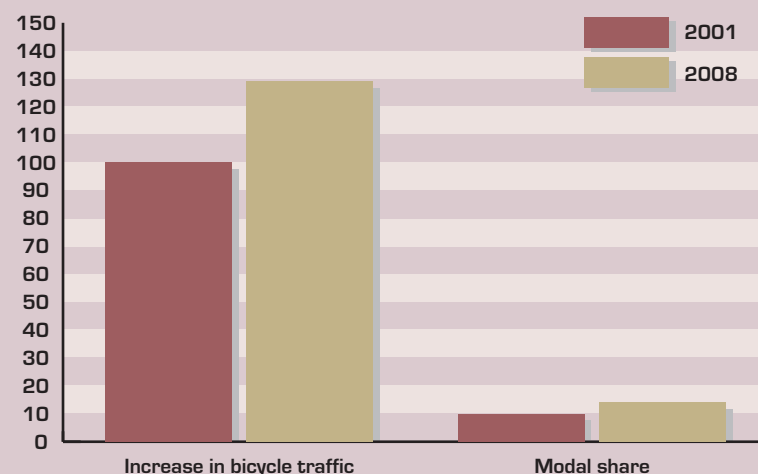
## Public bicycles

### Ploiesti

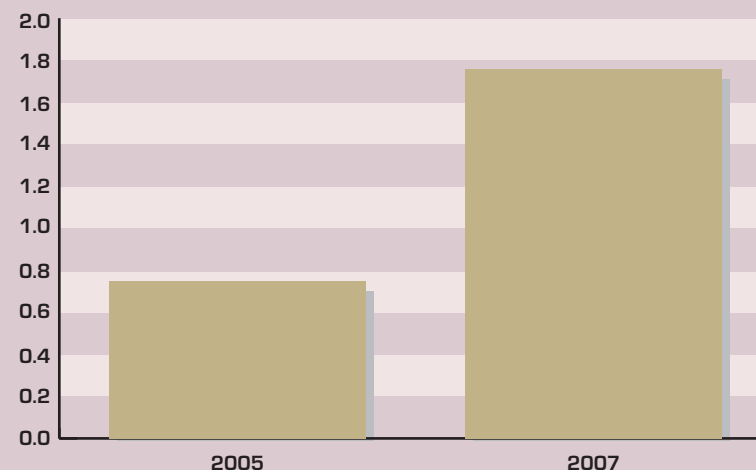
The city of Ploiesti considered public bicycles an interesting option and used Spicycles to carry out studies, develop strategies and a pilot scheme, and acquire know-how from the other partner cities. The aim was to enable the city to create and launch a public-bicycles scheme tailored to the needs of the city. The main tasks were to:

- collect and analyse traffic data to assess the potential demand;
- develop a pilot scheme with a fleet of 50 bicycles;
- design and administer a communication and promotion campaign to stimulate positive behaviour and a change of attitude towards cycling;
- increase the number of bicycles in the pilot fleet in order to maintain the promotion campaign and to involve more local investors;
- identify citizens' needs through questionnaires at public events; and
- analyse the results of the pilot scheme and questionnaires in order to develop a public-bicycles scheme tailored to the needs of Ploiesti.

### Change in mobility in Berlin (%)



### Change in Barcelona's cycling modal share (%)









### *Starting from square one*

As public bicycles were a new concept for Ploiesti, some basic work was needed to establish a foundation:

- promoting bicycle use for commuting and other utilitarian purposes;
- raising awareness of cycling as a means to promote a healthy lifestyle;
- raising awareness among drivers and cyclists of each other's needs and fears;
- integrating mobility information systems, including on-street electronic information;
- setting up a cycling reference group;
- establishing specific methods of communication and facilities aimed at cyclists; and
- launching a free-of-charge, promotional public-bicycles pilot scheme.

### *Communications*

The public-bicycles pilot scheme was launched in combination with a communication and promotion campaign aimed at changing the image of cycling in Ploiesti and making public bicycles more attractive. The work started with the analysis of experiences and know-how, and with the collection and analysis of traffic data to determine potential demand.

The communication and promotion campaign was designed to change general attitudes towards cycling. It comprised the on-street dissemination of promotional and information materials and the promotion of the scheme via local newspapers, television and radio, at local events and at regular meetings with students, schoolchildren and other interested parties. Some schools set up "Cycling Movements."

### *Sponsorships*

Local businesses, including Timisoreana and Unilever Ploiesti, were involved in the development of infrastructure during the pilot scheme (parking for bicycles in schools, the university and private and public companies). These two companies also funded the purchase of the bikes for the pilot fleet. In addition, meetings were set up with representatives from private companies such as Coca-Cola Ploiesti, Petrom and Distrigaz in order to raise interest in the public-bicycles scheme among their employees. The project also led to cooperation with local police officers in

order to establish regulations for local cycling traffic and to set up special cycling zones. The pilot scheme was finally launched on September 22 during "Mobility Week." It was set up with 50 bicycles available to pupils, students, teachers, the local police and City Hall (PMP) employees. Citizens were able to use the system for six months free of charge and were responsible for maintaining the bikes in good condition. These trial users were asked to complete questionnaires on May 9 (Europe Day) and June 5 (Environment Day).

### *Rome*

A feasibility study was completed in Rome, within Spicycles, for the setting up of a public-bicycles system and a survey was carried out in order to estimate potential demand. The scheme was to be geographically restricted to the city centre where traffic restrictions are in place. This helped determine the extent of the system in terms of number of bikes, stations, etc. Existing commercial public-bicycles models were analysed with a view to selecting the most suitable for the city of Rome. The most innovative aspect of the system was the possible inclusion of cycling in public transport by introducing systematic shifts and the relevant upgrading of infrastructure and optimisation of links.

### *Feasibility study*

The preliminary step towards the implementation of a public-bicycles service was the feasibility study to estimate potential demand and identify the system's main features and target users.

The feasibility study highlighted the following:

- remarkable public interest;
- a preference among tourists and residents outside the local target zone for traditional bicycles;
- a preference for a diffuse service in easily recognisable areas;
- a preference for being able to pick up bicycles at different spots with an electronic card enabling lock and release and payment of tariff;
- the service must be operational all year/day long;
- fares must be integrated with public transport;
- contracts with shops/commercial centres, with the possibility of "bonus" collection;

- courtesy bikes at shops; and
- reduced-fee entrance tickets to museums.

Main features of the implementation of the public-bicycles service:

- Duration of the pilot scheme: 6 months
- Number of public bicycles: 200
- Number of locations: 19
- Number of racks: 270
- Start-up of the service: June 2008.

Bicycle rental is available between 7 a.m. and 11 p.m. and is free of charge for the first 30 minutes. The necessary smart card can be obtained at tourist information centres in Rome.

The fee is one euro for the second half hour, two euros for the third half hour, and four euros for any subsequent half hours. The public-bicycles portal is at <[www.roma-n-bike.com](http://www.roma-n-bike.com)>.

### Results

Just four months after the launch of the pilot scheme in Rome, the following data were recorded over an area of 4 km<sup>2</sup>: 2,000 subscribers, 34,000 trips, and over 6,000 enquiries to the dedicated contact centre. User categories included employees, self-employed and students. Ages ranged between 30 and 50 years; 62 percent of users were men and 38 percent women.

## Göteborg

### Pilot project

The objective of the city of Göteborg was to implement a public-bicycles pilot scheme for companies, with the intention of scaling up the system to the city as a whole. The point-to-point public-bicycle system launched in 2006 is the first in Göteborg. The high-tech system, which featured 11 stations and 125 bikes, is based on a smart card and is targeted at employees of various companies in the Lundby area and their short-distance trips during working hours. During the course of the pilot scheme in Lundby, the mobility management test-site of Göteborg, suitable areas for the expansion of the scheme have been identified and contacts established with authorities and partners.

### Context

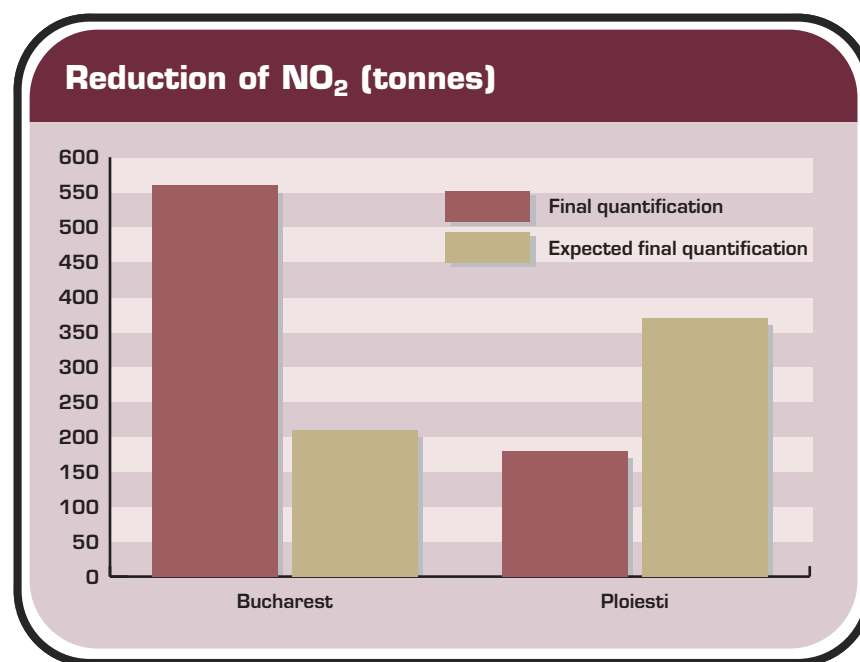
Göteborg is a sprawling city and many areas lack good public transport connections. As a consequence, half of all journeys undertaken in Göteborg are made by car, 25 percent by public transport, 11 percent by bicycle, and the remaining 14 percent on foot. Almost 50 percent of the journeys made by bicycle in Göteborg are between home and work, and a further 20 percent are between home and school.

Before Spicycles, the total number of journeys undertaken in Göteborg was already steadily increasing. Thanks to the implementation of a number of traffic control measures both in the city centre and in residential areas, traffic distribution now indicates an increase in the use of major roads and highways and a reduction in the use of smaller streets in the amount of traffic in the city centre.

### Steps

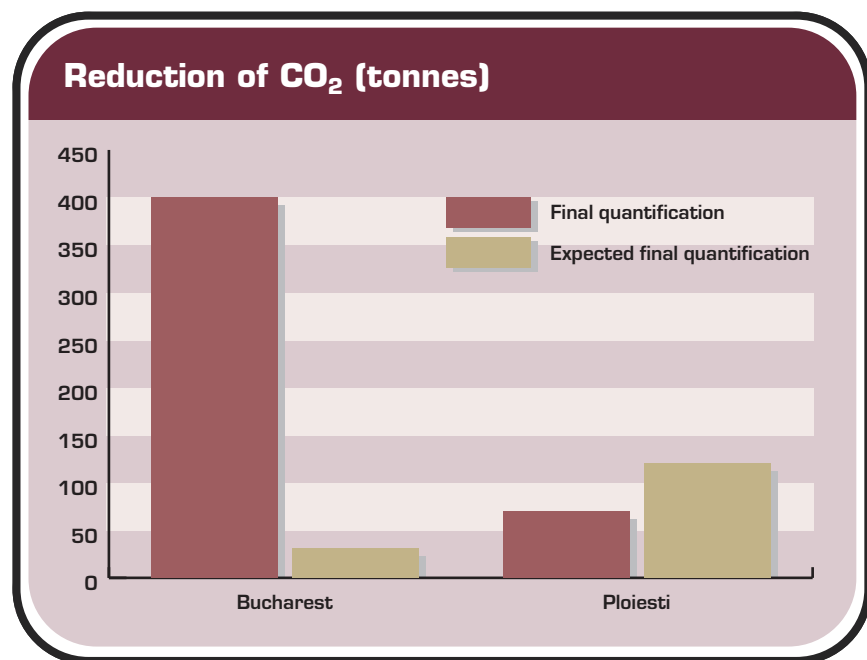
The following steps were taken:

1. The promotion of a pilot public-bicycles system targeting companies (selection of new stakeholders).
2. The improvement of public-bicycles technology.



3. Minor follow-up of the public-bicycles scheme.
4. The expansion of the system to private persons in the Lundby area.
5. Planning for a city-wide public-bicycles system open to all.
6. The investigation of potential expansion areas for the public-bicycle system.
7. The evaluation of the pilot public-bicycles scheme.
8. A decision on possible expansion.
9. Planning for (possible) procurement.

During 2007, the pilot project continued to attract existing and new companies to the public-bicycles system. By May 2007, around 310 cards had been sold. An evaluation was completed in December. During 2008, marketing campaigns were carried out to attract companies to the public-bicycle system. The statistical reporting system, which enables a closer and more accurate follow-up and evaluation, was also improved. An investigation has been carried out to see whether it was possible to expand the public-bicycles system to private persons in the district of Lundby. In mid-May 2008, the public-bicycles system was opened up to private persons. A new website for private users went online in May, with a public launch in June.







### Full-scale roll out

The pilot in Lundby has been a valuable experience and there is a readiness within the city to continue. Building on know-how from other public-bicycle systems in Europe, the full roll out is expected to be a success and contribute to sustainable mobility in Göteborg. On January 22, 2009, the Traffic Committee elected to continue with a full-scale system in Göteborg. The first phase — comprising 1,000 bicycles and 50-60 stations in the centre of the city — would come on line as early as the summer of 2010.

The pilot scheme has now been in operation in Lundby for several years and the city of Göteborg has been able to draw some definitive conclusions. The system has mainly been targeted towards companies in the area and on the whole they have responded to it positively. The stations were considered functional and the bikes practical. Occasional technical problems have not deterred companies from participating. A public-bicycle scheme is a service that suits certain companies extremely well whilst others, due to their geographical location or business activities, do not consider themselves as having any use for the bikes.

### Berlin

By offering environmentally friendly services before and after a train journey, Deutsche Bahn has met its ambitious goal of being a provider of sustainable mobility services. Within Spicycles, DB Rent — as the responsible subsidiary for intermodal services — aimed to strengthen the Call a Bike scheme in Berlin, improving the acceptance of the existing scheme as well as optimising its sustainability. DB Rent, with almost six years' experience in the field of public bicycles, also made important contributions to the setting up of public-bicycles schemes in the other participating cities. Since Call a Bike was launched in Berlin in 2002, activities within Spicycles focused on the further development and optimisation of public bicycles.

### Profiling stolen bikes

A manual database analysis was carried out on statistics for stolen bikes. To obtain relevant mid-term data, several years, especially 2005 to 2007, were analysed. A change in the background system resulted in delays, since data

sets from the old database had to be adjusted. Available information for each bike was analysed in order to identify possible connections to other urban factors such as general theft rates, social index, city structural factors, etc. Available tables and data for Berlin were also taken into consideration.

The analysis of stolen bikes led to three important conclusions.

- There is a higher risk of bike loss in locations close to water bodies (rivers, canals etc.). While elsewhere bikes disappear temporarily, it seems that some people enjoy throwing bikes into the water, and these bikes are lost for good. Bikes left in backyards are likely to be found within days and are reintegrated into the fleet. As a consequence, the service level in areas near water has been increased.
- There are no significant linkages to urban indicators such as employment rate or income demographic factors. However, there is one link to the overall social index. It seems that districts with a lower social index face a

**General performance process indicators: Number of most dangerous intersections reconstructed (safety)**

	Berlin	Ploiesti
Final quantification	In progress	22
Expected final quantification	5	15

**General performance process indicators: Introduction of parking spaces at key interchange points (intermodality)**

	Barcelona	Berlin	Göteborg	Ploiesti	Rome
Final quantification	3,218	10,500	294	In progress	450
Expected final quantification	200	9,000	Not specified	25	Not specified





slightly higher theft rate. Furthermore, the bike theft rate seems to be linked to the overall rates of theft. As a consequence, the service level in these areas was increased.

- Experience showed that there are normally higher rates of theft and vandalism at the beginning. After about half a year the rate decreases to a steady level.

#### *Integration of Call a Bike into location-based services*

Deutsche Bahn was one of the first operators to integrate location-based services into its routing system. The technology, which enables customers to use their mobile phones to locate their nearest Call a Bike, was installed as a prototype in 2006. After the first positive results, the system was rolled out. Location-based services (LBS) provides information on a city or region, such as weather forecasts, film trailers and a teletext guide. With the integration of Call a Bike, customers can not only locate bikes but also obtain general information about the service's customers.

#### *Integration of Call a Bike into "event platforms"*

In 2006, Call a Bike took part in an initiative to promote cycling as a favoured means of transport during the FIFA World Championships. As a



consequence, availability increased especially around the "fan mile," the busiest gathering point for sports fans, as well as other public viewing spots and the inner city in general. In 2006 and 2007, more bicycles were placed at bigger sporting events such as national football cup finals, as well as during the opening of a major new sports arena.

#### *Specification of new locks*

DB Rent completed the specifications of a new-generation lock that should improve access for customers and lead to a further fall in the amount of vandalism and the number of stolen bikes.

A prototype was expected by the end of 2008. Due to new approaches (in collaboration with the city of Berlin), the specification will be revised and prototyped. Since no new-generation bike could be tested, DB Rent enlarged the fleet by a further 200 bikes in 2008. The first results indicate an increase in trips of over 33 percent.

#### *Analysis of customer acceptance*

Call a Bike is well known (especially as a service of the Deutsche Bahn Group) and has a positive image. Most users are between 19 and 39 years old. The cost is quite reasonable, particularly for those who take advantage of



the rebate card from Deutsche Bahn AG or new tariff options such as bonus packages and flat-rate tariffs. However, these offers must be better promoted. Many Call a Bike customers also have public transport passes and use the services in combination. Customers are generally satisfied with the Call a Bike service, and with the availability and quality of the bikes. The customer care service also earned positive feedback. The study showed that better communication is needed to inform existing and potential customers about all aspects of the service. Expectations are increasing — for example, many customers want the service expanded to a larger area with more bikes.

## Barcelona

The Bicing scheme had not been envisaged when the Spicycles work programme was drawn up. It was launched in early 2007 with service concentrated downtown and it is now being extended all over the city apart from areas with steeply sloping streets (and the university area, where the scheme could lead an over-concentration of bicycles). Bicing is financed by income from the Green Area on-street parking scheme. It was conceived as a form of individualised public transport that could provide faster access to the train and metro networks. By the end of 2008, a total of 400 stations had been set up with no more than 300 metres between each one.

Within 11 months, political will, financial investment and technical cooperation had led to:

- a 200-bike pilot scheme that went city-wide with 6,000 bikes and 400 stations;
- 135,000 subscribers;
- 6 million journeys (28 percent connecting with other modes); and
- the boosting of cycling infrastructure planning.

## Bucharest

Prompted by rising congestion and pollution leading to public health problems, the 100-bike Ciclotèque scheme was launched on July 31, 2008 by the NGO MaiMultVerde. Financial support came from UniCredit Tiriatic Bank, and the University of Bucharest hosts the scheme's single depot. The bikes conform to European standards and modern cycle routes have been created along the city's main streets. The charges are 2 lei per hour, 10 lei for 12 hours, 20 lei for 24 hours, 60 lei for six months, and 100 lei per year. Students, schoolchildren and senior citizens pay half price for all but the hourly rate.



## Planning

### Barcelona

The development of a cycling master plan is vital to the coordinated promotion of cycling. Barcelona successfully drew up a master plan during the first year of the project.

#### *Cycling infrastructure (lanes and parking places)*

With the creation of 7,000 bike parking places in 2007, the city now has a total of 14,646 spaces, more than trebling the spaces available at the beginning of the Spicycles project. A further 10,000 spaces are now planned for 2009 onwards.

Some 28 km of new cycle lanes were put into operation between 2007-2008, expanding the network from 127 km to a total of 155 km. This cycle network does not include the calm zones developed by the municipality (streets with a 30 km/h speed limit). Since the start of Spicycles, the first four “30 zones” have been created.

#### *Cycle counts and monitoring*

The first count sites were designated in June 2006. By the end of the year, counts registered at 16 permanent sites had been processed. The total recorded volume of average daily cycle traffic was 27,111 units in 2006 and 36,917 units in 2007. Data obtained via the monitoring system were used to produce a cycle traffic map for use by planners in identifying those areas with the heaviest traffic, and needs for new connecting links.

### Berlin

The first module of activities in Berlin focused on the exploration of framework conditions and on the planning of a secondary-level bicycle route network for one of Berlin’s boroughs. The second module included the assessment of bicycle parking needs and the subsequent planning of bicycle parking infrastructure in general, and in commercial and housing areas in particular.

The outcome of both modules is a manual on planning a secondary-level bicycle route network and improving bicycle parking infrastructure.

One Berlin borough (Pankow) was selected for the development and test-

ing of the conceptual approach and planning process. The manual describes the steps to be taken, the support available to boroughs from the city administration, financial support options and the legal background, and provides other relevant information and planning details.

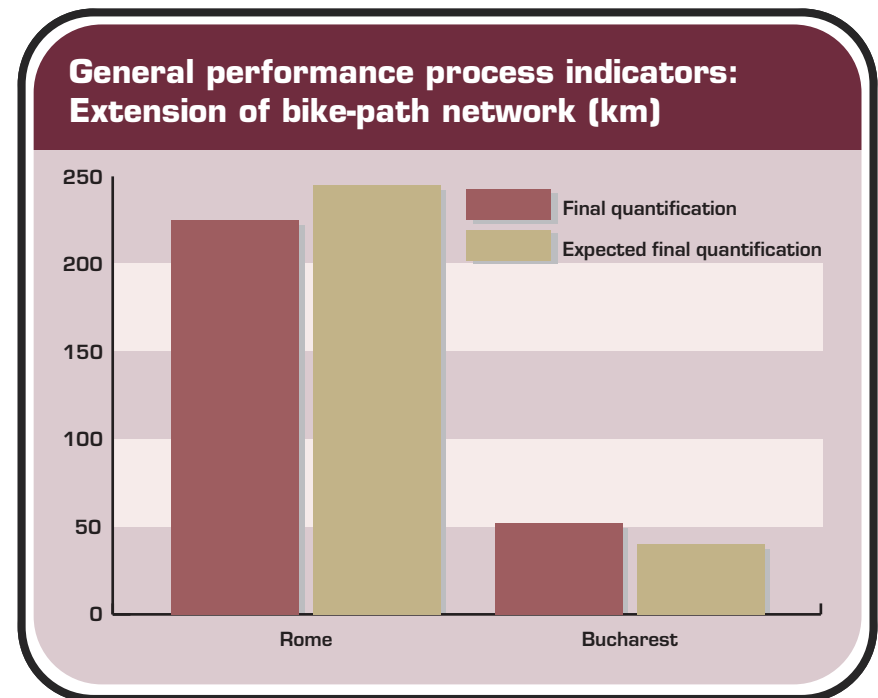
### Bucharest

#### *Needs survey*

In the first months of the project, RATB worked on creating a structure for the technical studies that were intended to form part of the guide to improving biking conditions in the city.

A questionnaire on the subject of cyclists’ needs was distributed with the help of six local bicycle retailers and RATB ticket sales points. Approximately 400 questionnaires were filled in by regular and occasional cyclists as well as potential users.

The average distance travelled by bike users is between two and five kilometres. Some 43 percent of cyclists do not use any protection equipment, 21 percent use only light reflectors and 25.6 percent said they had been involved in traffic accidents.





About 70 percent stated a preference for curbside cycle lanes, with contra-flow cycle lanes, marked lanes on shared pavements and paths through parks following in popularity. More than 50 percent of those interviewed would use public transport if cycle racks were available at stops/stations, and if on-board bike transportation facilities were provided. The questionnaire responses showed huge potential for public bicycles, with 47 percent of interviewees favouring the introduction of a system.

A report on user needs was drawn up and formed the basis of the two studies carried out within this package: a technical study for the development of cycling infrastructure and a study on the integration of cycling and public transport. Data analysis revealed that 70 percent of cyclists would like racks to be available at their destination; 67 percent would like lockers; and 54 percent showers. Reasons for not using bicycles more often were safety concerns and the lack of dedicated lanes (more than 60 percent), and lack of parking places (more than 55 percent). Some 18 percent had been involved in traffic accidents. Of these, 44 percent blamed drivers and 25 percent themselves. The study also revealed that the majority of cyclists (56 percent) do not use any kind of protective equipment.





*Path development*

On the basis of the questionnaire responses, a map of cycle routes was created to establish the starting point for the development of the city's bicycle network. Representatives of the Street Administration Department of Bucharest cooperated in the effort. The possibility of developing facilities at selected interchanges (railway stations, suburban bus terminals, universities, leisure areas etc.) was also discussed.

Over 50 km of dedicated lanes have been built in Bucharest to date, and more are under construction. Most shopping centres have established facilities for cyclists and a centre for bike rental has recently opened.

## Ploiesti

The city's vision for an intermodal urban transport system was defined according to Ploiesti's General Urban Plan. Barriers to cycling were identified, as were the principal actors relevant to cycling, including police, public services companies, businesses and representatives of schools and the university. The most frequently used public transport routes were identified as potential cycling routes, where possible. Public expectations in terms of travel modes and the possibility of increasing bike use among users of public transport were studied and areas in which cyclists might be given higher priority were examined. The minimum conditions for making cycling a viable transport option for citizens were formulated and measures were defined to integrate cycling as an everyday means of transport.

Other types of services that could be offered in combination with public bicycles were identified, and the locations for bicycle parking were established. Ploiesti created cycling facilities in the downtown area through access-control measures (via the CIVITAS-SUCCESS project), involving stakeholders, users, companies and officials. Meetings were held with some local businesses — Reiffeisen Bank, Petrom, Unilever and Timisoreana — in order to set up a public-private partnership.

## Göteborg

The city of Göteborg intended to encourage cycling by integrating cycling planning within the broader framework of spatial and transport planning and providing adequate infrastructure.





Göteborg focused on:

- bicycle highways as an infrastructure development project; and
- a cycle centre as a service project.

### *Bicycle highways*

The first stage in the development of bicycle highways was to identify four bicycle lanes suitable for promotion as “highways.” Firstly, the necessary improvements in the safety and accessibility of the bicycle lanes were identified. As a second step, cooperation was established between the relevant departments at the traffic and public transport authority.

The bicycle highways work included initial studies and conceptualisation. These activities were to contribute to more detailed feasibility studies in early 2008, and ultimately to the construction of the bicycle lanes. There is a clear distinction between these measures, even though they ran in parallel during 2008. Although not included in the project, it is worth describing the implementation activities developed within the Spicycles project.

During 2008, blueprints were finalised for those sections of the planned bicycle highways that required major construction work. Work was also started on plans for part of a new cycle path. Tenders were then issued and the construction begun. On the political side there were very high expectations regarding the impact of the bicycle highways on cycling: the city is keen to be among the first in Sweden to implement such a concept and thus provide a model for others.

### *Cycle centre*

The existing travel centre at the central station provides regional and local bus and train services. Car parking is available, but there is currently no focus on cycling. The plan is to establish a modern cycle centre here to complement the rent-a-bike system. The cycle centre would be staffed, thus bicycles could be left there securely at any time. The centre would also provide a variety of services for citizens and tourists such as rental, repairs, air stations and cycling information. A business plan has been developed for the cycle centre, covering financial aspects together with concrete location, scale, type of services to be provided, etc.



## Rome

Planning activities in Rome included the following.

- The creation of the Bicycling Office for the planning, implementation and maintenance of cycling infrastructure and services.
- The design and development of new bicycle lanes. The municipality of Rome has been planning new bicycle lanes since 2000, but the task is made more difficult due to the prohibitive narrowness of many city roads.
- The designing of a local capillary network of bicycle lanes connecting all 19 districts. Following the recent election of a new town council and mayor, there have been delays in obtaining approval for the municipal cycling action plan (Piano Quadro della Ciclabilità). Rome will forward the action plan to the city council and will follow the approval procedure, incorporating any amendments and additions requested by the agency in charge.
- The development of properly equipped public transport exchange nodes.
- The promotion of bicycle use for the initial part of commuting — between home and public transport node.
- The integration of the municipal cycling action plan with a geographic information system programme. A technical document has been written describing the general planning of cycling in Rome and specifying all the measures that need to be developed in the future.
- A public-bicycle service, which started in June 2008 (six-month trial).
- The implementation of parking switches (31 interchange nodes in use) and racks with 450 parking spaces.
- The completion of intermodal nodes in peripheral areas.
- The designing of a new map of the cycling and pedestrian network (“Roma a pedali”).
- The extension and strengthening of the two existing metro lines and the construction of a new line to connect local and main networks.

## Communications and awareness raising

The choice of marketing and communication methods depends on the city’s standing in terms of cycling promotion. Barcelona and Göteborg, for example, both have well-established city cycling systems, with bike lanes, maps, and pro-biking city officials. These cities also boast high numbers of cyclists, although more could be encouraged. By contrast, Ploiesti and Bucharest do not enjoy the support of the city administration in relation to cycling planning.

Planners in Berlin focus on improving mutual acceptance among car drivers and cyclists. Cycling planners have support within the city, and safety is regarded as an important issue. Bicycle planners in Rome have the support of city officials but are trying to increase the number of cyclists by improving web-based information systems and via the media, since the level of use of the existing network of bike lanes is not satisfactory.

Within the framework of communications and awareness raising, the following activities have been particularly important:

- production of maps, pamphlets and brochures;
- information dissemination on the streets and in schools;
- planning and construction projects;
- campaigns, bike weeks;
- bike-use study;
- establishment of a reference group of cyclists reporting to the city; and
- public bicycles.

## Barcelona

### *Bike guide*

Promotional activities focused on the dissemination of practical information about cycling, including the publication of a map of the city’s 120-km bike lane network.

In 2008, a city bike guide was published, updating the cycle network information provided in the “Barna Bici” pocket guide. More importantly, it presents the cycling network as part of an integrated public transport system that includes the Bicing public-bicycle service. The new guide also

highlights the cycling network in relation to the first four 30 km/h zones (or calm traffic zones). Secure off-street parking places for cycles (in public car parks) are also marked.

The bike guide replaces various earlier initiatives and some 30,000 copies of the map were distributed during 2008.

*Bike Week*

The format of this annual event in May/June has changed very little since its inception. The 2008 Bike Week was promoted by means of 25,000 leaflets featuring the Spicycles project logo. The event offered:

- an information point;

- cycling courses;
- repair courses;
- free reflective safety items;
- free bike loans and bike rides for companies;
- kids' bike circuit, mass rides, etc.; and
- 650 free tickets for registration and bike marking.

An awareness-raising and communication programme has been developed in cooperation with 12 schools and realised in collaboration with users' associations. The programme comprises demonstrations, workshop and street rides. From the 12 schools, 781 pupils participated in 2008; 876 in 2007; and 959 in 2006, making a total of 2,616 pupils over three years.







## Berlin

Communication activities include:

- the creation of a map of city cycle lanes, designed by children for children;
- an investigation and comparison of the different modes of transport used to get to school;
- the presentation of the European “YOUTH” project;
- the teaching of mobility patterns in school; and
- a cycle tour including the presentation of examples reflecting cycling planning measures in recent years to improve the safety of cycling in Berlin.

The annual Berlin Bike Rally attracts up to 100,000 cyclists each year. The event starts early in the morning at various locations outside the city. Groups of cyclists ride to the city centre, some on temporarily closed highways, and the event ends with a festival and exhibitions by various mobility providers.

## Bucharest

Highlights include:

- the construction of more than 50 km of bike paths by the end of Spicycles as a result of the municipality’s decision to create a network of cycling routes;
- the creation of NGOs promoting sustainable transport and a cleaner environment;
- the opening and successful operation of the first bike rental centre with a fleet of 100 bicycles; and
- the increased focus on cycling as a result of traffic congestion. (The number of shops selling bicycles and cycling accessories, and their turnover, have increased.)

## Göteborg

### *Map*

In March 2007, 60,000 copies of an updated bicycle map were printed. One side of the pocket-sized map covers the entire city, while the other side features a more detailed map of the city centre. The bicycle map, also available online, was reprinted in January 2008.





### *Facts folder*

A bicycle facts folder was produced in March 2007 and printed in 10,000 copies. Planning continues regarding the expansion of the folder with additional information for cyclists, the location of air stations and bike repair services, etc.

### *Bicycle Week*

Bicycle Week 2007 featured two events for the general public and five events for municipal employees.

### *Bicycle instruction*

In 2006, around 120 women immigrants took part in a cycling course, and around half of them learned to ride a bike. Many of the women felt uncomfortable practising in public. In 2007, the project was expanded and a new training method was introduced. An indoor sports centre was rented for eight two-hour sessions over the course of two weeks. Around 65 women participated and over 90 percent of them learned to cycle.

- A course to train 10 bicycle instructors was organised in 2006.
- A refresher course for instructors from the 2006 course was organised.





## Ploiesti

- A Romanian version of the project newsletter was distributed to interested local stakeholders and to school and university students.
- The project leaflet was translated into Romanian.
- Local and national events were held targeting public groups.
- A mobility week was organised in September 2007.
- The workshop “Streets for the people” was held within the CIVITAS – SUCCESS project on September 21.
- The workshop “Planning for cycling” took place during the 5th Consortium Meeting on November 29-30, 2007.
- The voluntary environmental organisation Zapodia ONG was involved in order to maintain the on-street and schools communication campaign.
- Other departments of the City Hall were involved in order to maintain and facilitate the project implementation.
- Dissemination of information about the Spicycles project by the Romanian Cycling Organisation.
- An inter-ministerial seminar and public debate on the EU Green Paper on Urban Transport and Urban Mobility Development in Romania.
- The City Hall website provided information about the Spicycles project and the launch of the public-bicycles scheme during Mobility Week.
- Articles were published in the local media about the public-bicycle system.
- A questionnaire was posted on the City Hall website to survey public opinion.
- Cycling questionnaires were distributed to citizens by Zapodia ONG and the students council.
- Meetings were organised with private companies in order to promote bicycle use among their employees and to encourage contributions from investors.
- The City Hall website featured information about the Spicycles project and a link to the Spicycles website in order to benefit from the experience of other partners.

## Rome

### *Public bicycles*

Public-bicycle schemes yield the best results when integrated into traditional public transport. The use of all means of public transport by one access medium (for instance, a universal smart card) will ingrain cycling into people’s daily travel habits. Adapting a public-bicycle system so that it can be accessed with traditional public transport tickets and passes may seem ambitious, but it is realistic. Co-modality will be strengthened while the use of both public bicycles and traditional public transport will be easier. The integration of the public-bicycle service with public transport was an unexpected achievement.

The databases of Rome’s transport company, ATAC, and its journey planner, Infopoint, have been integrated with electronic information on the public-bicycle scheme. Thus, without modifying the Infopoint algorithm, a new public-bicycle data set has been created and integrated with that of local public transport.

## Local partnerships

### Barcelona

#### *Cycle registration*

For both the preliminary trial (five days) and the pilot project (during February and March 2006), three bicycle retailers participated with the municipality and a subcontractor engaged by Barcelona’s Safety and Mobility Department offering to register citizens’ cycles. More than 200 users with

235 bicycles were registered and a waiting list was created for 1,224 people interested in a future trial. All 200 participants opted for the whole marking system, which included having their bikes marked with a metallic identifier.

Following the pilot, four of the registered bicycles were reported stolen. As a result of positive acceptance by citizens and cycling associations, the municipality involved the Safety and Mobility Department and the Informatics Department, in collaboration with the municipal parking operator BSM, in the implementation of a web-based cycle registration service. By September 2008, a total of 1,227 bikes had been registered, and 20 cases of bike theft had been reported.



### *Cooperation for Bicing*

In regard to the 28 km of new cycle lanes that were planned for 2008 (6 km more than proposed in the cycling master plan approved in early 2007), close cooperation among municipal departments and other members of the Barcelona Chamber of Commerce had enabled the municipality to respond to the surge in cycle usage following the launch of the Bicing service.

### Berlin

A motivation and image campaign was developed to increase mutual respect and consideration between cyclists and drivers. Subcontractors developed the concept in conjunction with two main NGOs representing cyclists and car drivers, emphasising their common interest in improving transport safety.

In order to strengthen cooperation between various stakeholders and coordinate the different components of the Spicycles project. Berlin established a Spicycles steering committee comprising representatives of the Berlin Senate, the Bicycle Consultation Group, and local members of the Spicycles team. The steering committee met periodically and assisted, promoted and guided Spicycles activities.

Emphasis was given to rallying the support of all relevant stakeholders in the Spicycles project. Several workshops were held for the city of Berlin and a number of roundtables were held in the boroughs. The ongoing participation process was intended to make them all aware of the recently introduced planning aids and requirements.

The Berlin Senate Department for Urban Development (SenStadt) convened a cycling council (FahrRat) composed of officials from various city government units concerned with biking (the Department of Urban Development; the Department of Education, Youth and Sport; the police; traffic authorities; and borough street and road construction departments), environmental and transportation interest groups, metropolitan transit companies, external experts, a representative of the bicycle trade and the Senate cycling coordinator.

Issues discussed with the SenStadt have included road and bicycle path construction, bike conveyance in public transport systems, mobility education, public relations and traffic safety. The cycling council meets once a year. During the meetings in 2006, 2007 and 2008, the objectives of the Spicycles project, progress made and outcomes were presented.

### Bucharest

There was collaboration with local actors involved in cycling throughout the project period. Debates were organised by RATB with representatives of the municipality and civil society to discuss activities relating to the promotion of the bicycle as a transport mode. These debates led to an increased interest among local authorities in cycling projects, and bicycles have begun to be regarded as a transport mode.

RATB acted as a link between the municipality and stakeholders interested in the development of bicycle transportation (for example other transport operators, bicycle associations and other actors/cities interested in the development of cycling). The partnerships team supported and promoted the work of the awareness and marketing team, as well as the planning team towards designing a network.

Local partnership provided support for the distribution of more than 400 Spicycles questionnaires regarding cyclists' needs using six local bicycle retailers and sales points for RATB tickets. The questionnaire was also uploaded onto the website of a cyclists' association, where cycling enthusiasts had the opportunity to express their opinions about cycling in Bucharest.

During 2008, RATB attended various events organised by cycling-related NGOs and provided participants with a snapshot of the cycling studies developed under Spicycles.

A meeting was organised with local stakeholders and the cycle route map (the result of the cycling study developed by RATB) was presented to all local actors involved in cycling. There were some discussions between cyclists' representatives and local authorities involved in the development of the cycle routes regarding the position of lanes. It was generally agreed that the cycle route map produced by the municipality of Bucharest met the expectations of respondents to the RATB.

### Göteborg

Since 2008, internal cooperation within the Traffic and Public Transport Authority has been formalised. Representatives from all departments meet to discuss the existing conditions for cycling and future plans for the development of cycling in the city.

The National Road Administration is involved in on-going dialogue with neighbouring municipalities, exchanging ideas on all aspects of cycling.









The work of the Traffic and Public Transport Authority is focused on offering the public an effective, safe and sustainable transportation system, an essential element of which is the increased use of bicycles. On their own, marketing and a working infrastructure are not enough to change travel habits. It is vital to listen to cyclists' wishes and opinions and to facilitate cycling by delivering an adequate level of service and secure parking.

The bike lighting test was another example of stakeholder cooperation. While testing the new lamps, cyclists were also given the opportunity to act as the Traffic and Public Transport Authority's cycle observer team. They reported their observations on-line through the "New travel habits" website <[www.nyavagvanor.se](http://www.nyavagvanor.se)>. They reported holes in the road surface, faulty street lighting, obscured visibility, broken glass, etc.

During 2007, a cycle journey planner was tested by a reference group of 1,500 cyclists, who provided feedback and suggestions for improvements.

## Ploiesti

The principal target groups identified at the start of the project were:

- students of the Petroleum and Gas University
- high-school pupils;
- big local companies (Timken Company, British American Tobacco Ploiesti, Coca-Cola, HBC Ploiesti, Unilever Buc.-Dero Lever Ploiesti)
- the cyclists of sports associations; and
- the NGOs.

During the project implementation period, meetings were organised with the local council, which has a role in promoting and supporting project decisions among local stakeholders; the Oil and Gas University and high schools; and the local police. The meetings aimed to promote and maintain cycling in the city and to teach children traffic regulations. Police co-ordinated cycling clubs set up in several schools.



## Rome

Strong cooperation between ATAC and the Municipality Cycling Office led to the creation of a map of cycling network pathways, “Roma a pedali” (Rome by bike), which was presented to citizens and cycling associations during an event on a “Green Sunday” in February 2008). The map can be downloaded from the ATAC website. Cooperation between the two technical offices also meant that an updated interactive map, with improved and expanded content, could be posted on the ATAC website.

In order to test the prototype map a meeting was held in October 2008 by ATAC, Dipartimento X, and the cycle associations. A questionnaire drawn up by ATAC to evaluate the pilot system was distributed and 30 cyclists belonging to various organisations were selected. At the end of the testing phase, ATAC organised a meeting with the associations in order to gather together all the data collected during this phase with the aim of improving the service.

## Recommendations and conclusions

### Public bicycles

#### Integrate scheme into long-term transport plans

As demonstrated by cities such as Paris, London and Hamburg, it is essential to integrate the introduction of a public-bicycles scheme into the long-term transport plan. This ensures the transparency of the overall aim and provides encouragement to people involved in the implementation process.

#### Integrate with traditional public transport

Public-bicycle schemes can readily be integrated into traditional public transport. Introducing a single ticket or smart card that works for both public bicycles and other public transport, for example, will make it easier for people to include cycling in their travels. Although an ambitious goal, the use of traditional public transport tickets for public bicycles appears to be realistic.

#### Integrate public bicycles into the public transport revenue-sharing agreement

Once a public-bicycle scheme operates with existing public transport tickets, it should be integrated into revenue-sharing agreements. This way, it will receive a share from overall public transport revenues. This will provide an opportunity to establish a previously unused valid financing model that can solve the problem of long-term financing.

#### Do not put out combined-service tenders

It is clear that a combination of very different modules within one tender leads to less than optimal results. Two tenders will lead to greater efficiency than one tender for two different services. Tenders should be issued for public bicycles as a stand-alone service or, at the most, combined with other mobility-related services such as an integrated public transport tender. If public bicycles are combined with other sources of revenue for cities, the public can lose control.

#### Spend time on tender preparation

Cities should prepare tenders carefully by:

- defining real goals



- identifying steps of implementation
- attracting and inviting as many operators as possible.

Cities should talk with potential operators in order to obtain information about realistic conditions and then publish attractive tenders.

### Identify milestones to reach if there are several implementation steps

Some cities have tested public bicycles with a pilot system. After the test phase, problems can surface if no criteria were defined as to whether and how to continue. Indicators are needed to gauge acceptance, user behaviour, performance, robustness, etc. Without these, the status and efficiency of the project might be in doubt and there is a threat of stagnation. Transparency is important.

### Make systems interoperable

Along with promoting intermodality, cities should work together to allow cross-usage of their public-bicycle schemes. This can help to establish cycling as part of the travel chain and can even help to change mobility habits in the long term.

### Examine regulations about allocation of public spaces

Bearing in mind future competition for public spaces, cities should reach a general agreement about the use and allocation of public space. As public-bicycle initiatives also need public space, lack of space will probably become the biggest bottleneck.

### Create incentives for greater efficiency

Like other means of public transport, public bicycles need subsidies. Nevertheless, cities should give incentives to operators who improve their financial performance to lower the amount of subsidies required.

### Use innovative communication technologies

Since Internet, Smartphone, etc. are established media, cities should use

them as information platforms to promote public-bicycle schemes (as well as public transport in general). Experience shows that location-based service (LBS) providers often search for valuable content to promote new developments. Public bicycles are known to be one of the most valuable contents for such services. Making use of this potential also means involving more stakeholders in public bicycles.

### Create links with other marketing campaigns

Since cities are in competition, it is essential to integrate services such as public bicycles into the marketing of the city as a destination. Cities should use their “customer contact” to promote it permanently. For example, cities can provide mobility packages that include other services. New citizens could receive a “welcome package” that includes a public-bicycle voucher.

### Promote image

The huge success of public bicycles mean such schemes have a positive image. Some cities have established themselves as national frontrunners, showcasing their modern cycling policies. Countries with no, or very few, public-bicycle schemes should exploit the image of public bicycles to attract financial support or patronage. The examples of Nokia in Vienna and UniCredit Tiriac Bank in Romania have shown that it may be worthwhile even for companies that do not work in the mobility field to sponsor public bicycles.

## Planning

In the Spicycles project, activities were organised in such a way as to define the logical process of cycling planning in urban areas. Depending on the level of cycling development before the launch of Spicycles, partner cities planned measures that both fitted the project and built on existing local activities and infrastructure.

The research indicates that the cities that lagged farthest behind in terms of urban cycling (Bucharest and Ploiesti) focused on transport surveys and studies in order to plan the introduction of bicycling among the means of transport already in use.

The mid-position cities, such as Barcelona and Rome, focused on the plan-



ning theme of the previous European Spicycles project. This was done through a logical framework of drawing up a cycling master plan, which outlines future activities.

Since Barcelona and Rome are rationalising and formalising their plans, they have been able to commit to developing infrastructure and services for cycling, such as lanes, paths and parking facilities.

The cities with the highest levels of urban cycling were able to focus on the integration and development of what they had already accomplished, thanks to bicycle-demand monitoring. Göteborg focused on bicycle stations and highways and Berlin concentrated on improving the diversification of public bicycles.

In conclusion, the typical transport-planning process has proved effective in the following:

- analysis of needs (potential demand);
- planning of single actions;

- planning of total strategy, rationalisation of activities and drafting of a cycling master plan;
- infrastructure and services development;
- analysis of existing demand (monitoring and calculation); and
- integration and improvement of pre-existing services (infrastructure and public bicycles).

In the Spicycles project, the characteristics of each partner city's urban context influenced the measures they took. In fact, large cities such as Berlin and Rome focused on bicycle planning in relation to public transport — by developing journey planning (and the necessary infrastructure) either using the cycle from journey origin towards interchange nodes (and then continuing on public transport), or using public transport from interchange nodes as far as the final destination (and then public bicycles).

By contrast, smaller cities such as Ploiesti developed the planning of bicycle use (and the related infrastructure) from journey origin to final destination.



The high level of stakeholder participation indicates a high level of interest in cycling as urban transport, helping to meet the objectives of cleaner, calmer and healthier towns and cities while providing citizens with a better quality of life. The project initiated a process of rethinking transport planning, with greater consideration given to cycling. The chosen approach to involve stakeholders on a permanent basis proved successful. However, this can only be regarded as a start, since the publication of the guidelines on bicycle grid planning and parking will only lead to change when they are regularly applied in the daily planning process.

## Communications and awareness

The six cities chose a variety of approaches to increasing bicycle use by means of communication and awareness-raising programmes.

Different marketing approaches were employed depending on each city's experience with cycling promotion. In both Barcelona and Göteborg, cycling is well established and the cities have bike lanes, cycling maps and pro-cycling officials. There are also high numbers of cyclists in these cities, although of course there could be more. Ploiesti and Bucharest do not receive satisfactory support from the cities' administrations with respect to cycling planning.

In Berlin, the planners' focus is on improving mutual acceptance among car drivers and cyclists. Bicycle planners have support in the city administration and safety is given high priority. Bicycle planners in Rome have the support of city officials and are trying to increase the number of cyclists by improving web-based information systems and by using media to increase the use of the existing bike lane network.

### Clear communication begins with sound project planning

Planning procedures within city administrations tend to be lengthy. Since it is difficult to obtain the support of city officials, it is essential to compile a good project description at the outset, covering rationale, location, potential users, costs, expected benefits etc. Having a clear picture of the financial aspects of the project will facilitate the process: with political support and sound financial planning, the project can be implemented with a minimum of delay.

### Identify target groups

Target groups should be well defined and the information aimed at them should be relevant to their needs and expectations. Speakers at public meetings must be well informed and well prepared. Follow-up is also essential once the project has been launched.

### Communication with the public

Bike studies and the data they produce help give planners and the public a true picture of the existing status of cycling. Communicating proposals and plans to the public can also increase public support and understanding. Individual canvassing on the streets and local political support are of greater value than communication via large-scale events.

### Local partnerships

The involvement of stakeholders has been key in achieving almost all the specific measures of the project. Stakeholders also helped to establish plans and platforms so that work can continue beyond the project period.

It is clear that no single action can achieve a significant increase in a city's cycling modal share. Instead, the collective interests of the various stakeholders must be managed within a package of measures and integrated actions.

Making cycling visible by practical actions is one way of developing the stakeholder platform. The Spicycles experience suggests that this is best carried out in a step-by-step manner rather than trying to develop an all-encompassing master plan in one go. As partnership building progresses, the ambitions and level of integration can be increased. Once the platform is functioning for key actions such as infrastructure planning and communication, a master plan can help to improve the integration of specific actions.

The Spicycles experience suggests that cities with active stakeholders get better results from their cycling measures. It is therefore recommended that partnership building form a key element of any city's cycling action plan — whatever the city's stage of development in terms of cycling promotion.

In terms of city-specific findings, the Barcelona experience demonstrates the value of involving cycling outlets in the piloting of cycle registration schemes. (The cooperation of three outlets helped overcome the resistance initially shown by the association of cycling vendors.) The scheme already forms part of the municipality's web services offered to citizens, although it is clear that, without the framework of the Civic Commission for the Bicycle, the positive results of the registration pilot would not have been so rapidly exploited.







### Project coordinator

#### ISIS

Rome, Italy  
 Tel: +39.06.3212655; Fax: +39.06.321.3049  
 Email: mgualdi@isis-it.com,  
 sproietti@isis-it.com

### Spicycles partners

#### CITY OF BARCELONA

Tel: +34.93.4023974  
 Email: Eepla@bcn.cat

#### CITY OF BERLIN

Senate Department for Urban Development  
 Tel: +49.30.90251512  
 Email: hermann.bluemel@senstadt.verwalt-berlin.de

#### CITY OF BUCHAREST

RATB  
 Tel: +40.21.3074202  
 Email: florin.dragomir@ratb.ro

#### CITY OF GÖTEBORG

Traffic and Public Transport Authority  
 Tel: +46.31.3682539  
 Email: Hakan.Perslow@trafikkontoret.goteborg.se

#### CITY OF PLOIESTI

Tel: +40.244.591256  
 Email: al21@ploiesti.ro

#### CITY OF ROME

ATAC and Department for the Environment  
 Tel: +39.06.46959469  
 Email: fabio.nussio@atac.roma.it,  
 marco.contadini@atac.roma.it

#### ALTRAN DSD

Barcelona, Spain  
 Tel: +34.93.2724620  
 Email: shayes@altrandsd.com

#### CPI PROGETTI

Rome, Italy  
 Tel: +39.06.22405277  
 Email: l.mancini@cpiprogetti.it

#### DB RENT

Berlin, Germany  
 Tel: +49.30.231491227  
 Email: Hendrik.Mlasowsky@dbrent.de

#### DITS

University of Rome, Italy  
 Tel: +39.06.44585131  
 Email: luca.persia@uniroma1.it

#### GOUDAPPEL COFFENG BV

Deventer, Netherlands  
 Tel: +31.570.666818  
 Email: mstemering@goudappel.nl

#### VELO MONDIAL

Amsterdam, Netherlands  
 Tel: +31.20.6270675  
 Email: spicycles@velomondial.net



<http://spicycles.velo.info>

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