

# Urban Transport Benchmarking Initiative



**Annex A4**

**Cycling**

**Working Group Report**

**July 2004**



# Annex A4

## Cycling Working Group

### Final Report

Prepared for

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by



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## **0. EXECUTIVE SUMMARY**

The aim of the Urban Transport Benchmarking Initiative working groups was to try and identify interesting practices through the use of both quantitative data and qualitative analysis in order that the participants in the group may learn from each other's approaches to urban transport. This working group chose the theme which is reflected in the working group title "Cycling" and focuses upon cycling in urban areas and the range of policies and promotional measures that have been adopted by cities seeking to encourage cycling.

The working group was made up of representatives from Brescia, Copenhagen, Lyon and Oxfordshire. The small number of participants in this group can partially be attributed to the fact that the working group started much later than the others in the Urban Transport Benchmarking Initiative. The time pressure that the group encountered meant that there was only time for two site visits; to Copenhagen and Lyon, although these visits provided an excellent opportunity for the working group members to learn about the interesting practices displayed in other cities.

The cycling working group pursued two research questions, which were developed during the Lyon site visits:

***"To what extent has cycling become mainstreamed in each city as far as both policy and practise is concerned?"***

***"What part have infrastructure and marketing played in achieving current levels of cycle usage, and what part is it expected they will play in the future?"***

Due to the short timescale a set of indicators were drawn up based upon existing definitions used for data collection by other cycling networks. Data corresponding to these indicators were then collected by the working group and analysed by the working group's rapporteur and expert. The following conclusions were drawn from the process of analysis:

- Most cities are collecting information on cycle trips made but methods of data collection vary.
- Copenhagen and Oxford have similarly high modal splits for cycle trips under 5 km as a proportion of all trips made under 5 km.
- All cities currently integrate cycling policy with wider policy documents. The degree to which policy is put into practice seems to vary though according to various factors, with Copenhagen setting the trend for the provision of services for cycling.
- Most cities back this policy up by providing targets for improving cycle uptake and safety.
- There was no real consensus between cities in terms of the changing policy issues encountered. Issues seemed to be specific to the city according to prevailing political interests, physical environment or culture.
- Cities stated parking issues and the development of cycle infrastructure as the most prominent barriers to improving cycling at present.

- The level of cyclists killed and seriously injured (KSI) varied amongst cities and it is not possible to give specific reasons for this variation. Copenhagen are studying a link between the degree of cycle safety and cycling speed. Safety is also a key study area for Brescia with the University carrying out specific research.
- Copenhagen has set a benchmark for the amount of cycle use with the other cities experiencing much lower levels. Data collection methods vary however and not all trips are included in calculations such as for Oxford.
- Cycling is being integrated with public transport modes to different degrees. More integration is apparent on trains.
- None of the cities stated that they had overly sufficient capacity for cycle parking at public transport interchanges.
- Where cities had either a cycle network or recommended routes (or both), these seemed to be promoted fairly well overall with the use of signage, maps and even websites.
- Most expenditure within cities was on infrastructure measures, with Copenhagen again setting the precedence.
- Most cities deployed measures at traffic junctions to assist cyclists, with road markings being the most popular.
- Most cities had cycle space which represented only a limited proportion of the total road network (about 5%), except for Copenhagen which led the way with about 45%.
- Internal promotion of cycling within authorities was mixed and was not consistent with Oxford which employed all of the options (including financial) for encouraging cycling.
- All cities except Brescia ensured that parking provision for cycling was integrated within the planning process.
- All cities are promoting the concept of 'Safe Routes to Schools'.

The following recommendations were made by the working group:

- The perception of the group was that many of the examples of physical infrastructure demonstrated by Copenhagen, although representing good practice, would be difficult to actually implement in other cities. This was because of the historic nature of the way road networks had developed and therefore a lack of space available to implement such drastic change. An issue of resource availability and also the cultural change required to accept such measures (as well as a demonstrated need for such measures), was something that also had to be proved in order to make such changes.
- On the other hand, the possibility of developing a similar tool to the 'Bicycle Account' within cities was considered a lot more realistic. With further information being gathered on cycling needs and performance, there might be hard data to recommend allocation of resources and guide future policy. The collection of time-series data would also be welcomed.

- Lessons learned in Lyon have promoted the need to include cycling measures more prominently in recreational developments. By integrating cyclists with walkers and other activities, this not only improves the feeling of spaces for all but encourages people to spend more time outdoors with respective improvements in their health and well-being.
- The first year of the Urban Transport Benchmarking Initiative has barely started the debate over which measures implemented by cities are the best and which could possibly be transferred to other cities as a standard of good practice. The barrier to the transfer of good practice is often the inability of authorities to convince colleagues of their benefits and why they should commit to them. By collecting more data on the benefits of implementing measures within cities, further understanding and a basis for approaching key decision-makers can be made.
- Unfortunately, due to the tight time-scale of the group, the submission of results and best practice to the ELTIS project was suppressed in year one. This is an area which has the potential to be revisited once cities have had a chance to carry out further benchmarking to a more relaxed schedule. In theory, submission is not an onerous task but with Copenhagen already having submitted a case study recently (even though unrelated to the Urban Transport Benchmarking Initiative) and there having been only two site visits, there was limited potential on this occasion.
- The cycling working group was set up much later than the other working groups in the project. The group has however, been able to achieve a significant amount of work in a short space of time.
- A third site visit would have helped to demonstrate more good practice and would have broadened the scope for applying measures to other cities within the group.
- The list of research questions needs to undergo further development so that a greater sense of ownership is experienced by the group and the benefits of the research are more clearly understood. This will also encourage other cities to participate.
- The list of thematic (and common) indicators needs to be refined so that the group can focus on key areas of interest and the amount of work is reduced.
- Recruitment of more cities is required to share information and learn of other good practice.

## **1. INTRODUCTION**

### **1.1 Project Background**

The Urban Transport Benchmarking Initiative has sought to apply the concept of benchmarking to the urban transport systems present in cities across the EU, including the New Member States. This is in keeping with the European Union's policy approach which places considerable importance upon the role attractive, efficient local and regional transport systems can play in the economic development and social cohesion of the EU. In the field of urban transport the exchange and promotion of best practices is one of the main policy tools that the European Commission possesses. The Urban Transport Benchmarking Initiative has therefore compared the differences between the participating cities' transport systems in order to identify and promote interesting practices in urban transport.

The benchmarking concept has great potential when applied to urban transport systems. A range of previous initiatives have provided this project with the opportunity to deepen the focus of the benchmarking process and, by learning from previous experiences, provide more comparable results. The development of more practical data indicators has aided the learning process for the organisations involved in the project and this has greatly helped to improve the robustness of the data collected for the project.

The Urban Transport Benchmarking Initiative has adhered to the European Commission's subsidiarity principle by including as many urban transport stakeholders as possible. The process of the Urban Transport Benchmarking Initiative has been a fluid one, responding to the issues which were raised by participants in the project, rather than following a rigid, predetermined process. In this way the subsidiarity principle has been fulfilled, because the recommendations of interesting practices are coming from a network of urban transport operators, user groups, local authorities and municipalities, rather than a single centralised institution. It is therefore hoped that the project's findings will provide a useful resource for other urban transport stakeholders and help them to implement innovative solutions to commonly experienced urban transport problems.

The Urban Transport Benchmarking Initiative has been based around five themes, for which data has been collected by the participating cities. These themes have been organised as working groups and these are listed below:

- Behavioural and Social Issues in Public Transport
- City Logistics
- Cycling
- Demand Management
- Public Transport Organisation and Policy

This report presents the findings of the cycling working group, outlining the methodology used by the working group, the data collected and analysed and the recommendations emanating from the analysis. The Urban Transport Benchmarking Initiative will be re-launched for a second year in September 2004 and it is hoped that more cities will become involved in the working group in order to benefit from the benchmarking process. The recommendations at the end of this report illustrate the ideas currently being developed for year two of the Urban Transport Benchmarking Initiative.

## 1.2 Methodology of the working group

The organisation; Vélo Mondial was approached for assistance with setting up a cycling working group for the project. The central instrument Vélo Mondial is developing for wider use is Cycling Master Planning, a planning strategy that uses integration of cycling planning in other planning procedures. Vélo Mondial offers cities and countries support in this through educational programs, applied databases and adapted strategies. Oliver Hatch (Executive Director Programs) and Pascal van den Noort (Executive Director Operations) are the two representatives of Vélo Mondial who were asked to be the experts for the Cycling Group for Urban Transport Benchmarking Initiative.

The working group cities originated from initial contacts with co-ordinators of various cycling initiatives and networks across Europe. This dialogue was started at the Vélo Info Cycling conference which took place in February 2004 in Bologna. Co-ordinators were asked if they could recommend suitable cities to take part in the Urban Transport Benchmarking Initiative so that the project team at TTR could follow these up. The result of this dialogue was a list of cities to contact and ultimately a number of cities either expressed an interest or decided to participate in the project. The following cities have actually participated in the working group since its inauguration (also see Plates 1.1 and Figure 1.1 below):

- Chiara Bresciani                      University of Brescia
- Niels Jensen                            Copenhagen Parks and Roads Department
- Florence Larcher                      Grand Lyon Urban Administration
- Craig Rossington                      Oxfordshire County Council

**Plate 1.1: (left to right) Florence Larcher, Pascal van den Noort, Niels Jensen, Oliver Hatch, Craig Rossington, Chiara Bresciani.**



Other organisations involved in the group, either in an advisory role or to support city members included:

- Pamelin Venin                            Grand Lyon (Public Relations – language support)
- Genevieve Laferrere                    CERTU (Research body supporting Grand Lyon)
- Thomas Krag                              Independent consultant on mobility issues (Copenhagen)
- Radimira Pliscova                      CDV (Research body liaising with Czech cities)

Neil Smith of TTR undertook the role of rapporteur for the group, facilitating communication between the group, organising data collection and analysis tasks, as well as providing assistance with presentation content and compilation of all reporting.

**Figure 1.1: Cities represented in the working group**



### 1.3 Working group schedule

The working group has broadly followed the timetable that has been adhered to by the other Urban Transport Benchmarking Initiative working groups (see Table 1.1 overleaf), albeit within a tighter time-scale due to its later initiation. The project team and working group used the time at the initiation meeting in Bologna and each of the two subsequent site visits to discuss each stage of the benchmarking process. As a result of this process it has been possible to collect the necessary quantitative data to enable analysis of performance across cities and identify interesting practices from qualitative data and exposure to practical examples. In this way, the participants in the group have learnt from each other's experience and different approaches to urban transport. Because there was only time for the group to hold two site visits, the analysis and interpretation of results was performed remotely by the working group experts and rapporteur, with input from the participants.

**Table 1.1: Working group progress**

<b>Event</b>	<b>Date</b>	<b>Progress</b>
Launch Conference	November 6 <sup>th</sup> 2003	The working group was not formed at this point.
Induction Meeting	February 5 <sup>th</sup> -6 <sup>th</sup> 2004	Recruitment of cities to take part in the working group.
Site Visit 1	March 18 <sup>th</sup> -19 <sup>th</sup> 2004	Discussion of themes and indicators. Ratification of indicators and definition of research questions.
Site Visit 2	May 4 <sup>th</sup> -5 <sup>th</sup> 2004	Collation of data and identification of any problems / barriers to data collection. Discussion of analysis to be carried out.
Final Conference	June 15 <sup>th</sup> 2004	Presentation of final results.

#### **1.4 Definition of the working group theme**

At the start of the Urban Transport Benchmarking Initiative, five working group themes were originally conceived. One of these was the “Energy and Environment” working group. Unfortunately this group failed to progress due to the lack of support for it from the launch conference attendees. Consequently, the project team suggested that a suitable alternative might be the formation of a “Cycling and Walking” working group, an area which had not been focused on in any particular detail by the other groups thus far. As mentioned in section 1.2, the initiation of the group was then triggered by communication with a number of cycling initiative co-ordinators at the Vélo Info conference in Bologna.

After the first site visit of the “Cycling and Walking” working group in Copenhagen, it was quickly realised that the main theme of the group would only focus on cycling issues. This was due to the shorter timescale with which the working group were running and the complexity of including walking indicators and their respective data availability, collation and analysis within the project.

The next stage involved the group refining their scope further by thinking of some keywords upon which possible research questions could be based. Table 1.2 shows a list of keywords suggested at the Copenhagen site visit:

**Table 1.2: Identifying keywords to refine the scope of the group and to influence research questions.**

<b>Keyword</b>	<b>Rationale</b>
Infrastructure	Different types, what is possible and what works?
Culture (who – staff / users?) and Mainstreaming of cycling	Measuring the social acceptance of cycling in people’s everyday lives. Poverty as an influential factor determining acceptance.
Topography and Weather	Measurement of whether these issues influence cycling overall in a positive or negative way.
Potential / Barriers	How can potential cycling best be ‘unlocked’ and what are the underlying barriers which prevent the uptake of ‘new’ cycling?
Marketing	What are the most effective marketing techniques to employ for encouraging cycling?
Policy	The existence of policy that deals specifically with cycling and the extent to which this is integrated with other policy types?
Fiscal	What levels of expenditure are found for different areas of cycling facilitation and promotion?

Further information on the development and definition of the specific research questions of the group can be found in Section 3 of this report.

## **1.5 Site Visits**

As described above, the working group attended a total of two site visits over the course of the first year of the Urban Transport Benchmarking Initiative. The venues for the visits were:

1. Copenhagen
2. Lyon

These visits provided a very useful insight into the practices used to encourage cycling in different cities. Full details of these site visits have been presented as case studies of the interesting practices the group experienced and are available in Annex A4.2, which accompanies this report. A summary of these visits is also available on the project website [www.transportbenchmarks.org](http://www.transportbenchmarks.org)

## **1.6 Learning from the Citizens Network Benchmarking Initiative**

The aim of the Urban Transport Benchmarking Initiative has been to try and continue the work of the Citizens Network project, rather than repeat what has already been achieved and this reflection

upon previous work was an important initial stage of the project undertaken by TTR. The topic of cycling was not specifically covered by one of the themed groups in the Citizens' Network Benchmarking Initiative. Several common indicators<sup>1</sup> were collected regarding the topic of cycling and these included:

- Modal share of cycling
- Modal share of school trips made by bicycle
- Provision of cycle paths
- Provision of bicycle parking spaces

Where relevant, comparisons have been made in this report with the indicators from the Citizens' Network Benchmarking Initiative, in order to add context to the results and deepen the scope of comparisons.

### **1.7 Contents and purpose of this report**

This report is Annex A4 of the Urban Transport Benchmarking Initiative final report and describes the approach taken by the cycling working group to the benchmarking process. In addition the findings from the thematic data indicators collected are presented and analysed in order to present the recommendations of the working group.

The remainder of the report consists of a description of the cities that participated in the working group accompanied by relevant background statistics derived from the common indicators (Section 2). Section 3 of the report outlines the methodology for defining the thematic indicators and the process of data collection. Section 4 of the report contains the analysis of the thematic indicators and draws some basic comparisons to the data collected for the Citizen's Network Benchmarking Initiative. The final section of the report outlines the key findings and recommendations established by the cycling working group. In addition a range of suggested "next steps", which set out how the theme of the group could be advanced into year two of the initiative, have been included in this concluding section of the report.

Two annexes support this document. Annex A4.1 contains the full list of indicators collected by the working group participants and Annex A4.2 details in full the site visits attended by the working group and the case studies of interesting practice each city has submitted.

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<sup>1</sup> Indicators listed are from The Citizen's Network Benchmarking Initiative (2002) Results of the Common Indicators. European Commission DG Energy and Transport, p13, 16, 19, 40 and 41.

## 2. WORKING GROUP PARTICIPANTS

### 2.1 Working group members

Four cities and four other members (advisors / supporters) were represented in the cycling working group. Table 2.1 outlines these participants, the organisations they work for and the cities and regions they represented / supported in the project.

**Table 2.1: Summary of working group participants**

Area	Organisation	Status	Country	Participant
Brescia	University of Brescia	Research for the local authority	Italy	Chiara Bresiani
Copenhagen	Parks and Roads Department	Local authority	Denmark	Niels Jensen
Lyon	Grand Lyon urban administration (representing 55 towns)	Regional authority	France	Florence Larcher
Oxford	Oxfordshire County Council	Regional authority	UK	Craig Rossington
Advice to the WG and support to Copenhagen	Thomas Krag Mobility Advice	Independent Consultant	Denmark	Thomas Krag
Advice to the WG and support to Lyon	CERTU	National research body supporting Grand Lyon	France	Genevieve Laferrere
Advice to the WG and support to Lyon	Grand Lyon (Public Relations)	Local authority – language support	France	Pamelin Vennin
Contact for participation of Czech cities	CDV	Research body liaising with Czech cities	Czech Republic	Radimira Pliscova

The cities and advisors represented in the working group were distributed over a fairly wide geographical area and offered a range of varying practices and experiences drawn from differing cultural, organisational and historic backgrounds. All members were keen to learn of good practices or simply ‘different’ methods employed for various aspects of urban transport. Sharing good quality information was a goal of the working group and the challenge was to actually achieve this.

## **2.2 Further information about city members and advisors**

### **Brescia (Chiara Bresiani)**

Chiara works for the University of Brescia alongside Prof. Maurizio Tira. The University has close links with the Municipality of Brescia and are working to assess transport in the area, especially data on safety and accidents. Chiara is studying for a PhD at present which concerns further investigation of these issues.

### **Copenhagen (Niels Jensen)**

Niels Jensen was the host for the first site visit in Copenhagen. Niels started off as a volunteer working on cycling promotion. His experience is mostly concerned with cycling and 'green' planning. He has been in the Copenhagen Roads and Parks Department for six years now and is involved in producing the annual 'Bicycle Account' - a survey of cycling performance. Other work includes the implementation of infrastructure along major streets. Cycling policy is integrated at all levels with the administration. Niels also helped to co-ordinate the Vélo Cycling Conference in Copenhagen in 1989.

### **Lyon (Florence Larcher)**

Florence Larcher is a Project Manager for the promotion of 'soft modes' within the Road Planning and Maintenance Division of Grand Lyon. Grand Lyon is an urban administrative area comprising of 55 towns and has a population of about 1.2 million people. The urban centre of Lyon has a population of 450,000. The administration employs about 4,500 staff and deals with such services as water, roads and urban planning. Public transport is contracted out to a private company.

### **Oxford (Craig Rossington)**

Craig works as a Senior Transport Planner for Oxfordshire County Council. This includes consideration of cycling with respect to the city of Oxford. Although he mainly works with rural areas, it has been the requirement to link rural towns with the city. Craig has also had experience of managing consultants both internally and externally who are contracted to carry out major project work. Oxfordshire have produced a Transport Strategy and have drafted a Walking Strategy.

### **Mobility Advice (Thomas Krag)**

Tomas Krag working as an independent consultant on mobility issues, and with local knowledge of Copenhagen, attended both site visits. Thomas started off as a volunteer promoting bicycle use and went on to be a mobility consultant who is also now working on the BYPAD benchmarking initiative for cycling in Europe. Thomas provided further information on existing cycle initiatives in Europe which fed into the discussion involving choice of indicators for the group.

### **CERTU (Genevieve Laferrere)**

Genevieve Laferrere works for CERTU, a transport and urban planning research organisation which provides assistance to towns throughout France on this subject. She attended the Lyon site visit meeting with in mind to observe the developments and requests made for data in readiness for Lyon submitting their data (i.e. assistance to Florence).

## Grand Lyon Public Relations (Pamela Vennin)

Pamela who spoke fluent English, assisted Florence at the Lyon site visit meeting from a communications point of view.

## CDV (Radimira Pliscova)

The rapportuer has maintained contact with Radimira Pliscova regarding the possible future participation of Czech cities. Unfortunately she was not able to attend the Copenhagen site visit but was at the Lyon visit because of her involvement in a BYPAD meeting that ran in parallel. Even though Czech participation was not possible for year one of the Urban Transport benchmarking Initiative, the results of the first site visit (indicator choice etc) were still circulated to Radimira in case Czech cities were to join later. These results were also forwarded to Andrea Leverano, a contact for the city of Bolzano in Italy – another city that had expressed interest but had not been able to participate during year one.

### 2.3 Background data from the common indicators

In order to make comparisons between the interesting practices applied in cities it is essential to display an awareness of the background of each participating city. The remainder of this section summarises the geographical and urban transport situations in each of the participating cities and utilises some background statistics from the ‘common’ indicators that were collected for the project to provide some context for further comparisons.

Table 2.2 below outlines some of the key statistics for each of the cities in the working group and Table 2.3 gives further information on mode split.

**Table 2.2: Background statistics for cities in the working group.**

Statistics (2002)	Brescia	Copenhagen	Lyon	Oxford
Area of city km <sup>2</sup>	91	90	62	45
Population of city	187,865	501,000	580,000	134,248
Population density (people per km <sup>2</sup> )	2,064	5,567	9,355	2,983
Area of region km <sup>2</sup>	N/A	2871	500*	2600
Population of region	N/A	1,800,000	1,167,086	607,500
GDP per capita in €	-	59,000**	30,204***	21,200
Employment (%)	-	74	55.7	97.64

\* Grand Lyon (55 towns). \*\* 2001 figure. \*\*\* Rhône region.

**Table 2.3: Mode split data for the cities.**

Mode split	Brescia	Copenhagen (2001 data)	Lyon (1995 data)	Oxford (2002 data)*
Walk	-	17%	31.47%	12.63%
Cycle	-	25%	0.69%	10.53%
Public transport	-	24%	14.12%	38.95% (buses)
Taxi	-	-	-	-
Car	-	34%	53.15%	36.84% (incl taxis)
Motorcycle	-	-	0.56%	1.05%

\* Person trips 7am to 7pm. Data refer to the total number of daily one-way journeys in the urban administrative area

The four cities compared throughout this report (Brescia, Copenhagen, Lyon and Oxford) range widely in terms of size, population and income levels. The following key observations can be made in order to bring some context to any comparisons that are made later in the report:

- The city geographical areas range between Brescia and Copenhagen with about 90 km<sup>2</sup>, down to Oxford with just 45 km<sup>2</sup>. When considering certain indicators, the extent to which certain measures are deployed might be affected by the degree of land they are intended to cover or serve. It is also not always easy to specify results for certain indicators within the city boundary. Some indicators such as those with regard to public transport activity or information on trips by other modes are difficult to accurately define for the city context because cross-boundary activity is commonplace. Oxford for example monitors cycling and walking trips that begin outside of the city. When the organisation that collects the data, e.g. for public transport, is concerned with a regional basis, it is similarly difficult to extrapolate data for the city. Examples of this include the provision of public transport data in Copenhagen.
- Population sizes for cities vary and are not relative to geographical area. By examining the population densities though, it can be seen that Lyon has by far the highest population density. Brescia and Lyon have much lower densities with Copenhagen falling in between. It should be remembered that although the density for Lyon is high when looking at the 'city' of Lyon, statistics often refer to the regional administration of 'Grand (Greater) Lyon' which has a density similar to that of Brescia and Oxford. Population density is likely to influence the level of demand on an urban transport network.
- As previously mentioned, the regional context of cities needs to be considered in order to understand the administrative system and various arrangements in place for provision of services. Brescia is the only city that does not sit within a regional area. Both Copenhagen and Lyon have large regional areas with similarly large populations.
- GDP per capita varies between Copenhagen with a relatively high value of €59,000 and Oxford with €21,200. One theory for the Copenhagen value is that a large proportion of high-profile businesses may exist in the central area of the city, thus skewing the level of GDP for the whole

population. All cities have values which are above the 2002 EU15 average level of GDP per capita. Comparisons with GDP are interesting when considering the resources available for certain measures and services within cities, e.g. investment in cycling infrastructure per 1,000 population, etc.

- Employment rates again vary between the cities, with Oxford showing a very high rate of nearly 98% and Lyon in contrast with only 55%. Employment may contribute significantly when considering the demand imposed on certain urban transport systems.

### **3. DEFINITION OF THEMATIC INDICATORS**

This section describes the process undertaken by the group to define its research principles and in doing so provide a logical and meaningful approach to the task of data collection and analysis. The ultimate aim was to achieve answers to the defined research questions (to a greater or lesser extent), thus ensuring the process had come ‘full circle’.

#### **3.1 Research questions / working group focus**

Due to the later start of the cycling working group, the tasks of defining research questions and carrying out an assessment of indicator choice had to follow in quick succession, i.e. there was no time delay between defining the research questions and choosing the appropriate thematic indicators. Both of these tasks were initiated at the Copenhagen site visit. It was not possible to complete the tasks entirely within the time available at the site visit, but the process of defining research questions was prompted by first identifying a set of keywords that were of importance to the group. These were described further in Section 1.4. These keywords led to the first stage of actual question development and resulted in a first set of questions that would underpin the research. These questions then underwent further development throughout the first year of the project.

The group had decided on two research questions by the end of the Lyon site visit. These are given below:

***To what extent has cycling become mainstreamed in each city as far as both policy and practise is concerned?***

[B1 / B2 / D1 / E1 / E4 / E5]

***What part have infrastructure and marketing played in achieving current levels of cycle usage, and what part is it expected they will play in the future?***

[D2 / D3 / D4 / D5 / D6 / D7 / D8 / D9 / D10 / E5 / E6 / E7]

The reference number for each thematic indicator that relates to each question is written in the square brackets underneath each question. More information on the chosen thematic indicators is available in Section 3.2.

As well as the above questions, the group started to develop a third question but was not able to complete this within the time-scale of year one. The following examples demonstrate the other issues the group were discussing and represent suggestions for further work in year two.

***Which barriers are most responsible for inhibiting the ‘new’ uptake of cycling?***

[B5 / B6 / C4 / D1 / D2 / D3 / D4 / D6 / D7 / D8 / D9 / D10]

***Which of the following themes are most responsible for inhibiting the ‘new’ uptake of cycling: Natural phenomena or Cultural differences?***

[B5 / B6 / C4]

***To what extent does culture act as a barrier to encouraging ‘new’ uptake of cycling?***

[B5 / B6 / C4]

### **3.2 Methodology for indicator definition**

The consideration of thematic indicator selection was started at the induction meeting held in Bologna in so far as the co-ordinators were asked to suggest existing initiatives that involved collection of indicators so that they could be included within the selection for UTB. This resulted in the project team compiling a spreadsheet prior to the Copenhagen site visit of all indicators contained in various other benchmarking and monitoring initiatives/exercises. The spreadsheet proved as a useful tool to aid the selection process and enable quick comparison between the different initiatives and 'like' indicators contained within each. The various initiatives that were analysed are summarised below:

#### **League of American Cyclists**

This is based on an award scheme that is used to assess a cities performance according to set criteria, i.e. Gold, Silver and Bronze awards.

#### **BYPAD**

This is an EU and locally-funded benchmarking program which uses a questionnaire to rate a city's performance towards cycling. It contains nine modules and involves external consultants working with the cities to establish performance.

#### **Club des Villes Cyclables**

This represents a large collection of small villages and towns in France which use a questionnaire to assess performance. It is however not a benchmarking exercise as such.

#### **CTC**

This is a UK benchmarking initiative that uses questionnaires and site visits to assess performance.

#### **Copenhagen Bicycle Account**

This is an annual survey carried out in order to measure the performance of achieving various cycling measures and monitoring these against targets. Niels Jensen provided each member of the working group with a copy of the 2002 survey report to demonstrate.

#### **NATCYP**

This was an EU-funded initiative two years ago that involved six EU states in the comparison of various criteria for cycling performance.

#### **Netherlands – Cycle Balance**

The Cycle Balance is a benchmarking project designed by the Dutch Cyclists Union and assesses ten different dimensions (and 24 sub-dimensions) of local conditions for cyclists.

#### **Switzerland – cycling policy of villages and small towns**

This benchmarking exercise is supported by the Federal Highways Office and was launched by the Swiss Society of Transport Engineers to establish the characteristic indicators of a "cycle town".

Having reviewed the indicators from existing initiatives listed above, the group decided that in the timescale available and the already complex process of defining cycling indicators, it was unrealistic to include 'walking' as an additional component of the working group. The extent to which walking information was available was also limited in many respects. The group decided therefore to focus on cycling issues and indicators only.

The fact that the project is being extended into year two provides an opportunity to include 'walking' in the next year of benchmarking. The group agreed that this was an acceptable compromise. It was suggested that previous walking projects could be consulted on this and information could possibly be drawn from more general strategies rather than bespoke strategies.

By following the approach of considering existing / previous cycling initiatives, an attempt has been made by the Urban Transport Benchmarking Initiative to bring unity and a consistent approach across many of the other existing initiatives mentioned above.

The group thought that in the time-scale available it was necessary to accept that fewer indicators rather than more would help to ensure that the quality of data was maintained. Otherwise, resources might be stretched too far during data collection and indicators would be too unclear to enable any meaningful comparison.

It was suggested that from the full list of existing indicators (nearly 90), the group should try to reach a balance by using some basic indicators that for example describe how many parking spaces exist for bicycles, followed by more advanced indicators that describe how this bicycle parking is integrated with public transport facilities for example. The latter would help to address wider policy issues.

The final list of indicators is outlined in full in Annex A4.1 and they were based around five key themes:

- Common Indicators
- Background Indicators
- Bicycle Utilisation
- Cycling Infrastructure
- Cycling Initiatives/Promotion

The indicators include a mix of quantitative and qualitative information, with an emphasis on simple questions to obtain a straightforward benchmark, followed by more advanced questions for those that could respond accordingly. From the initial review of 90 indicators the group selected the indicators which were most relevant, which could be collected in the time period, which represented a good distribution of issues and covered the broad spectrum of indicators included in the initial lists of existing benchmarking exercises.

### **3.3 Data collection and analysis**

This section presents some of the issues encountered during the data collection process and explains some of the refinements that were made to ensure good quality data were obtained.

#### **Data Collection**

##### **General points**

The group suggested that geographical area should be defined appropriately, especially when combining it with other indicators during the analysis. For example, a city might have data referring to a geographical area which is significantly different to another city, therefore possibly

distorting the analysis of that data. Regional considerations were discussed in Section 2.3 of this report.

It was accepted that some cities might not collect certain indicators which are considered 'key' by others. It might be the case that a city simply collects this data in a slightly different way. It was however decided that by choosing certain indicators (e.g. modal split) for the Urban Transport Benchmarking Initiative which were not collected by certain cities at present, this very process might encourage cities to start collecting this data or to consider collecting the data. It may be possible for a city to substitute a specific indicator with data from a more general source such as a Transport Strategy. This could provide the starting point for considering a more detailed data gathering exercise such as deployment of a 'household survey'.

### **Section A – common indicators**

Although walking was not included in the mode split indicator (A.2) and indeed any of the thematic indicators, it was thought that it would eventually need to be incorporated and was normal practice to do so in modal split analyses (as it was in the common indicators). It was highlighted by the group that walking data was difficult to collect and it was for this reason (in relation to effort / timescale) that it had not been included in this round of benchmarking.

### **Section B – background indicators**

In discussions over the introduction of cycling policy in cities, it was highlighted that although Copenhagen had only launched their official cycling policy in July 2002, the city had been doing much work to promote cycling before this date and this should be borne in mind when looking at other data / results and comparisons with other cities.

Further investigation was needed into whether KSI data was collected by authorities in a similar way and whether therefore the data collected for the Urban Transport Benchmarking Initiative was consistent. The way accidents are termed seems to vary in different countries.

### **Section C – bicycle utilisation indicators**

In terms of cycle use, Lyon had experienced variation during the 7 day week and most cycling occurred at the weekend. This would not be highlighted adequately in the current set of the Urban Transport Benchmarking Initiative indicators. In contrast most cycling in Oxford was done for work / commuting purposes and as a result these cyclists were the primary audience at which resources were targeted.

The group thought that in future it would be necessary to design separate indicators for work (weekday) and leisure (weekend) trips in order to observe weekly variation between cities. The amount of resources targeted at different users accordingly should be considered. This might prove problematic for Oxford in the short-term however as they only collect data for work trips.

The group thought that trip data was far more useful as a means of measuring the amount (and therefore performance) of cycling alongside other modes.

## Section D – cycling infrastructure indicators

In order to put financial expenditure into better context (in an attempt to remove the differences between geography, etc), it was suggested that indicator D.5 be expressed in terms of ‘budget per 1,000 head of population’. The definition of ‘infrastructure’ also needed to be clarified so that it was clear what types of infrastructure / measure cities were including in the calculation (e.g. cycling-specific or general road measures that are also beneficial to cyclists such as extra traffic calming measures, home zones, 30mph/neighbourhood measures).

There was much debate over the definition to describe cycling road space (D.10). It was agreed that the main difference between on-going definitions concerned the middle component ‘tracks’. A combined definition was therefore adopted which maintained the other road space types (lanes and routes) but included and integrated the two definitions for tracks:

- Lanes (on-road, mixed with other traffic).
- Tracks (off-road but immediately next to the carriageway).
- Tracks (on-road, not mixed with other traffic, segregated).
- Routes (off-road and away from the carriageway, i.e. like the green routes promoted in Copenhagen).

## Section E – cycling initiatives / promotion indicators

For the ‘bicycles for use’ element of indicator number E.3, more detail was required to indicate the total number of people the pool bicycles were available to, as well as the department type and population within separate departments (also whether bikes were strictly for the administration or other user groups too). Stating the number of bikes available would enable calculation of the ratio of people versus resources.

### Data analysis

Following the Lyon site visit, the experts and rapporteur were responsible for suggesting suitable analyses that reflected the work the group had done, i.e. demonstrating the variety of situations present amongst cities and the good practice identified. Obviously this was dictated by the availability of data and therefore, the indicators for which a full set of data had been collected were considered for analysis immediately. Similarly, those indicators that were thought to provide answers to the research questions were considered for analysis (even if only partly completed). Finally, those indicators that showed interesting differences or trends were selected in order to provide the ‘discovery’ element of the work.

The group broadly agreed with the core analysis suggested by the project team (more details of which can be found in Section 4 of this report). In addition, an interesting and useful analysis suggested by the group was to calculate the separate road space results given in thematic indicator D.10 as a proportion of the total road network length given in the Urban Transport Benchmarking Initiative common indicator 2.1. This was approved and included in the subsequent analysis.

There was only limited time for the group to discuss the detailed nature of possible data analysis (for both the final report and presentations at the final conference), so cities were asked to forward further ideas to the rapporteur after the Lyon site visit. On leaving Lyon, the following questions were posed to the group by the project team:

- Is there any specific data that you think will be useful to analyse in detail or in comparison to other data sets?
- How would you like this data to be analysed?
- Do you envisage any problems with the data analysis process?
- What do you hope to achieve from your working group's findings?
- Thinking about the group's research questions, which data indicators do you think will be most important?

The rapporteur had also prepared a note on the suggested general format of analysis to be carried out. It included the compilation of:

- Frequencies
- Simple graphs / charts
- Qualitative explanation of results
- Case study examples of good practice

It was clarified that outputs should be of a high quality in order to enhance the impact of presentations.

An idea suggested by Chiara Bresciani and of possible relevance to future benchmarking was to classify the thematic indicators using the following system:

- Descriptive (background)
- Input
- Response (process / output)

This system for classification may help to give a better structure within particular 'subject' areas.

### **3.4 Definition of interesting practice**

The process of data analysis adopted by the Citizen's Network Initiative has greatly influenced the approach to this project. The aims of the Urban Transport Benchmarking Initiative data analysis were clearly defined at the outset and these remain unchanged now:

- To look for best practices and try to establish reasons for variations between indicators that data are collected for.
- To encourage all participants to take part in this process in order that we end up with a set of findings that are supported by reasoned analysis rather than a collection of statistics.

The term "best practice" has been heavily debated over the course of previous benchmarking projects. The major problem is that there is no all-encompassing definition which clearly states what a best practice actually is. In the case of this benchmarking initiative the term "best practice" is applied more loosely to include interesting practices that are displayed in the operations of the urban transport systems of participating cities.

From the outset it has not been the goal of the Urban Transport Benchmarking Initiative to create a competitive atmosphere among the participants and at the launch conference it was clearly stated that this is not a competition with "winners" and "losers". Promoting interesting practices, through

the use of benchmarking, so that a wide audience of cities, operators and local authorities may benefit from them is a concept with huge potential. Creating a set of “winners” and “losers” does not help to achieve this, because it may dishearten those perceived to have “bad practices”, yet these groups of participants probably have the most to gain from this type of project.

The aim of the project is therefore to try and offer the participants the chance to get the most out of the project by presenting a set of findings that will interest all of the participants. Disseminating a range of interesting practices is also likely to be of wider interest beyond those participating in the project.

### **3.5 Data limitations and barriers to data collection**

#### **Regional data and definitions**

As mentioned in Section 2.3, data concerned with cross-boundary activity (such as public transport journeys) was inherently difficult to collect. This was worsened by the fact that authorities had only limited resources available to carry out this collection.

The consensus from the group was that in future benchmarking exercises, confirmation would be required as to how ‘useful’ data would be if it referred to areas / definitions that were fundamentally different between the cities. This obviously also had more relevance to this working group which comprised fewer cities than the other groups in the project.

It was suggested that an indicator that showed ‘total investment’ in a particular measure / initiative could be calculated in relation to per head of population – thus bypassing the conflict between geographic definitions and therefore enabling comparison between cities on a fairly robust basis.

#### **Resources required to collect data**

Proposals for streamlining the thematic indicators for future benchmarking were certainly welcomed by the group but were not considered as important as the need to streamline the list of Urban Transport Benchmarking Initiative common indicators. The latter list was considered too long and required substantial time to collect. The public transport element of the common indicators was also thought to represent a particular bias to those groups interested in this subject area. Public transport to this level of detail was not an area that interested the cycling group.

The group felt that the excessive time and effort required to collect the current level of data would act as a barrier to new cities taking part in the initiative. Some of the cities in the current group might even reassess the feasibility of continuing their own involvement in the initiative. Local authorities do not tend to have dedicated departments where statistics are managed centrally.

It should be borne in mind that due to circumstances out of the control of the project team, the cycling working group started later than the other working groups and had to operate under a much tighter timescale. If the group had had more time they at least might not have encountered the same amount of pressure on resources.

## **Explanation and guidance on indicators**

Better explanation of the common and thematic indicators was requested in order help / guide cities when collecting data. Suggestions of data sources to consult or formats in which data should be collected / presented would also be useful.

## **Other issues**

Consideration of when cycling policies were introduced by individual cities and timescales of spending associated with these was important. Otherwise, the necessary background understanding required to determine a performance by cities would be missing.

The group thought that a car parking indicator showing the car parking capacity within an administrative area would be useful. Park & Ride capacity would also be of interest but this may go beyond the boundaries of the administrative area. Of primary importance would be the number of spaces and the cost to the user.

## 4. ANALYSIS OF FINDINGS FROM THE THEMATIC INDICATORS

### 4.1 Analysis of results from data indicators

As described in Section 3.3, the choice of data analyses was determined by three factors. Indicators that fulfilled the following three criteria were selected for analysis;

- Would provide some degree of answer to the group's research questions
- Showed interesting differences or trends
- Possessed a full set of data

The analysis has been broken down into five key topic areas for clarity of presentation and analysis of data. These make up the remainder of this section and include:

- **Common** - This section includes indicators that relate to, or give further definition of, certain indicators to be found in the common list of indicators.
- **Background** - This section provides useful background information on cities in order to contextualise some of the other more detailed information. Examples here include approach to policy and related targets.
- **Bicycle Use** - This section attempts to display the levels of usage undertaken in cities.
- **Infrastructure** - This section deals with the level and types of infrastructure deployed in cities.
- **Cycling Initiatives** - The final section outlines the efforts being made to encourage cycling through varied promotion and different types of initiative.

In reviewing the following detailed sections, it is useful to bear in mind the population figures represented by the cities involved. These help to view indicators in the appropriate context of population served and some of the indicators refer to varied levels of population in each city. For example, some of the data provided by Lyon is with regard to the city and some refers to Grand Lyon (a collection of 55 towns in the region). Table 4.1 below summarises the populations used.

**Table 4.1: City populations of the cycling working group**

City	Population
Brescia	187,865
Copenhagen	501,000
City of Lyon	580,000
Grand Lyon (55 towns)	1,167,000
Oxford	134,248

## 4.2 Common Indicators

The common indicators were intended to compliment some of the Urban Transport Benchmarking Initiative common indicators by providing slightly more detail on cycling.

### A.1 does the city measure modal share in terms of cycle trips made - YES/NO?

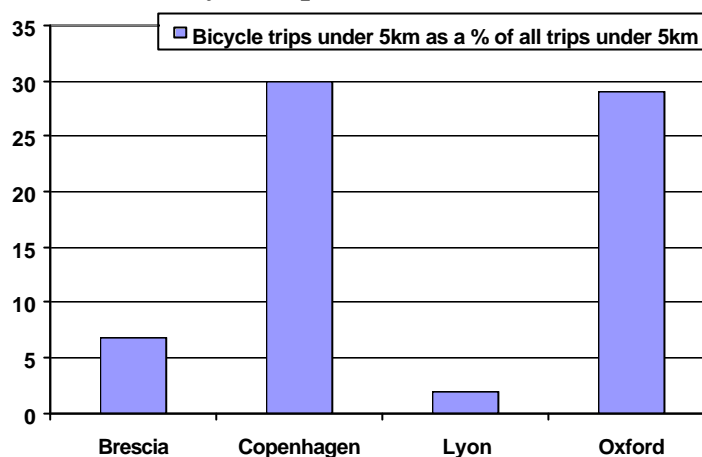
- All of the cities measured modal share in terms of trips made, except for Brescia which tended to collect data on a regional basis (although according to the common indicators the city does not sit within a formal region as such).
- Collection methods and therefore data sources for mode split varied across the cities and included:
  - **Brescia** - Data is collected through phone interviews for trips above 20 minutes.
  - **Copenhagen** - Statistics Denmark – monthly, it is possible to add months together to represent a year.
  - **Lyon** - Household survey in 1995, IPSOS survey of 400 telephone interviews in 2002 – obviously these studies are not the same and so only limited comparison is possible.
  - **Oxford** - National Census every 10 years – only measures trips for ‘work’ purposes and the last survey was in 2001. Cycling is also measured as part of 12-hour manual classified counts on two days in May each year at the inner cordon points close to Oxford City centre, together with all other routes (not on main roads) leading to the city centre.

### A.2 Modal share in terms of number of bicycle trips under 5km as a % of all trips under 5km ('all trips' should include bicycle and motorised transport, but NOT walking).

Copenhagen and Oxford display high levels of mode split for cycling in contrast to Lyon which only has a 2% share. This seems to concur with the cycling culture that exists in these cities.

Figure 4.1 shows that the cities in the cycling working group compare favourably with the cities that submitted data for cycling modal share when participating in the Citizens' Network Benchmarking Initiative. Indicator B1c of the Citizen's Network data set indicated that Oulu was the best performing city in terms of the percentage of trips made by cycling (26.1%), although this data related to 1994. The data collected for the Urban Transport Benchmarking Initiative common indicators suggests that Oulu still has a very high cycling modal share of 26% as do the cities of Rotterdam (20%), The Hague (15%) and Aalborg (17%). These cities may be interesting cities to visit over the course of year two of the initiative, in order to learn more about the interesting practices used to promote cycling.

**Figure 4.1: Modal share (bicycle trips under 5km as a % of all trips under 5km).**



### 4.3 Background

The following background indicators attempted to build wider understanding of the cycling policy apparent in cities and where this sits within other strategies and drivers that are behind the improvement / integration of cycling in cities.

#### B.1 To what extent is cycling policy integrated with transport planning policy and overall city planning?

- All cities demonstrated good integration of specific cycling policy within overall transport policy.
- Brescia has a Cycling Plan which is developed as part of a wider Mobility Plan. The Cycling Plan is also adopted by an Urban Master Plan.
- Copenhagen has a specific Cycling Policy which is integrated at all levels of policy.
- Lyon has a Cycling Policy which is integrated within a Transport Planning Policy. This latter policy is part of the second phase of PDU (Plan de déplacements urbains). Since 1996, all cities with over 100,000 inhabitants had to organise a general transport planning policy in order to decrease car trips.
- Oxford has a County Cycling Strategy (which includes Oxford City). The strategy is a daughter document of the Oxfordshire Local Transport Plan (LTP), a policy document which sets out transport policies and programmes for the County every five years. Transport policy for Oxford is dictated by an agreed Oxford Transport Strategy (OTS) which also sits within the LTP. This is a continuation of the balanced transport policy agreed by the City Council in 1973. Transport

is also covered in a dedicated chapter of the Oxford City Local Plan (a statutory land-use planning document).

### **B.3 (i) Does the city have targets to increase use?**

- All cities had targets to increase use except Brescia.
- Cities with targets tended to base them on a 10-year timescale.
- Lyon in particular want to increase use within the working week as less cycling takes place here than at the weekend.

### **B.3 (ii) Does the city have targets to improve safety?**

- All cities had targets in place to improve safety except Brescia.
- Timescales again seemed to be based on a 10-year period.
- Copenhagen intends to reduce the number of accidents, plus the element of 'risk' involved in cycling (a factor developed by the city to indicate safety). They also wish to improve the feeling of safety in traffic.
- Lyon includes cycling safety as part of their Walking Policy.

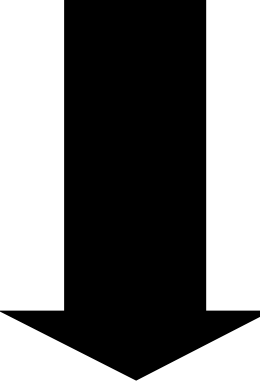

### **B.3 (iii) Does the city have targets for other areas (explain)?**

- A variety of other targets were mentioned by cities.
- Brescia – Increasing the length of the cycling network (10-year time-scale).
- Copenhagen – Improve travelling speed and improve comfort (10-year time-scale).
- Oxford – Reductions in the number of reported cycle thefts and to provide new bicycle parking spaces (year-on-year time-scale).

### **B.5 What have been / are the changing policy issues in your city since the policy was introduced?**

Table 4.2 below displays the changing policy issues amongst cities for cycling. Even though cycling infrastructure still seems important (especially in Copenhagen), a shift towards trialling promotional initiatives such as 'Safe Routes to Schools' was evident from discussions by the group, especially where infrastructure improvement was not possible.

**Table 4.2: Changing policy issues for cities.**

Brescia	Copenhagen	Lyon	Oxford
<p>Use of space for bicycles versus motor vehicles.</p> <p>Infrastructure measures.</p>  <p>Experimentation with 'Safe Routes to Schools'.</p> <p>Information and involvement of personnel in developing cycling policy.</p>	<p>Relatively unchanged:</p> <p>Cycle tracks and reinforced cycle lanes.</p> <p>Green cycle routes.</p> <p>Improved cycling conditions in the City Centre.</p> <p>Combining cycling and public transport.</p> <p>Bicycle parking.</p> <p>Improved signal intersections.</p> <p>Better cycle track maintenance.</p> <p>Better cycle track cleaning.</p> <p>Campaigns and information.</p>	<p>No data.</p>	<p>Changing policy issues are similar to barriers to cycling:</p> <p>Restricting access to private motorised vehicles along the busiest street in the city.</p>  <p>Buses are now travelling faster because they are less impeded – this is more dangerous and intimidating to cyclists.</p> <p>Insufficient funds.</p> <p>Space constraints of the highway network.</p> <p>Lack of political consensus on certain schemes.</p>

**B.6 What are the main obstacles to more cycling in your city?**

The main obstacles to increased levels of cycling, as displayed in Table 4.3 below, included parking issues with motorised vehicles and trying to establish a seamless cycle network.

**Table 4.3: Obstacles to cycling.**

Brescia	Copenhagen	Lyon	Oxford
<p>Illegal <b>parking</b>.</p> <p>Fragmentation of the <b>cycling network</b>.</p> <p>Illegal <b>speed</b> of motorised vehicles.</p>	<p>Lack of <b>infrastructure</b>.</p> <p>Some potential cyclists feel <b>insecure</b> when cycling.</p>	<p>Illegal <b>parking</b>.</p> <p>Policy regarding motor vehicles – <b>parking</b> along the River Rhône and a lot of underground parking in the city centre.</p> <p>Fragmented and insufficient <b>cycling network</b>.</p> <p>Highway in city centre.</p> <p>Insufficient promotion and information about cycling and walking modes.</p>	<p>Insufficient funds.</p> <p>Lack of political consensus on certain schemes.</p> <p>Constraints of the <b>highway network</b> (as a medieval city, Oxford has a road network which offers limited space for dedicated cycle provision).</p>

**B.7 Cyclists killed / injured per total population?**

In Table 4.4, Brescia displays the highest level of KSI amongst cyclists when considered within the total population of a city (2.24 KSI per 1,000 population). Unfortunately there is insufficient data on cycle use within Brescia to investigate why this figure is higher. For Copenhagen with proven high levels of cycle use, the figures for KSI could be expected to be higher also. In fact due to the improvement in cycle speeds, it is possible that cyclists are more likely to have an accident.

**Table 4.4: Cyclists KSI per total population.**

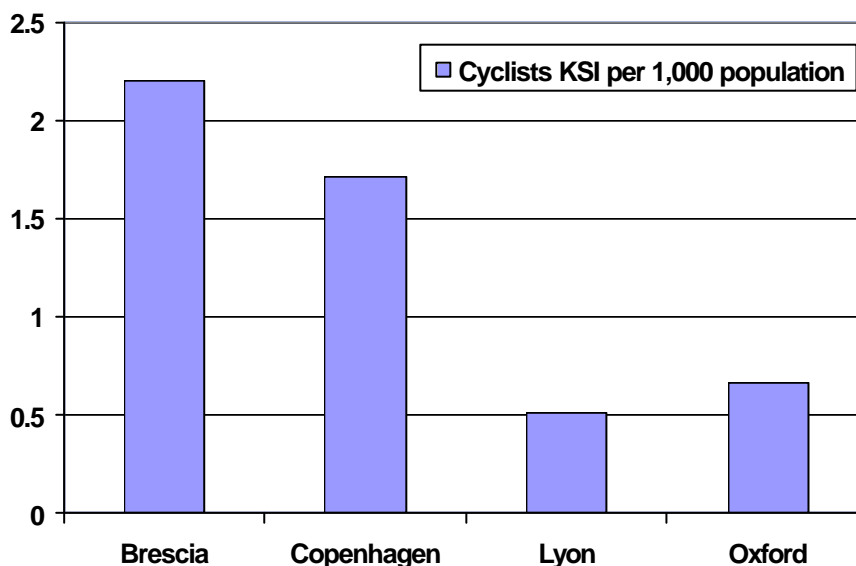
Brescia	Copenhagen	Lyon	Oxford
<b><u>0.00224</u></b> (420 KSI* / 187,865 population)	<b><u>0.00171</u></b> (855** KSI / 501,000 population)	<b><u>0.00051</u></b> (297 KSI*** / 580,000 population)	<b><u>0.00067</u></b> (90 KSI* / 134,248 population)
<b><u>2.24</u></b> (per 1,000 pop.)	<b><u>1.71</u></b> (per 1,000 pop.)	<b><u>0.51</u></b> (per 1,000 pop.)	<b><u>0.67</u></b> (per 1,000 pop.)
Period in which KSI total calculated:			
1997-2001 (years absolute)	2002 figure multiplied by 5 (year absolute)	1998-2002 (years absolute)	1999-2004 (years intersected)

\* Sum of KSI taken over a 5-year period.

\*\* Figure for 2002 (i.e. 171 for cyclists KSI) multiplied by 5 to give approximate 5-year total KSI.

\*\*\* Sum of KSI taken over a 5-year period and KSI figure represents City of Lyon.

**Figure 4.2: Cyclists KSI per 1,000 population.**



\* Figure for Lyon represents City of Lyon.

## B.7 Cyclists killed / injured per total number of KSI from all road accidents?

If KSI for cyclists is measured as a proportion of KSI from all road accidents, it can be seen that Copenhagen now leads the group. Brescia in contrast goes to join Lyon with lower values for KSI.

**Table 4.5: Cyclists KSI as a proportion of KSI from all road accidents.**

<b>Brescia</b>	<b>Copenhagen</b>	<b>Lyon</b>	<b>Oxford</b>
<p><b><u>0.0445</u></b> (420 KSI* / 9,438 KSI from all road accidents)</p> <p><b><u>44.50</u></b> (per 1,000 KSI from all road accidents)</p>	<p><b><u>0.3623</u></b> (855** KSI / 2360** KSI from all road accidents)</p> <p><b><u>362.29</u></b> (per 1,000 KSI from all road accidents)</p>	<p><b><u>0.0337</u></b> (297*** KSI / 8819**** KSI from all road accidents)</p> <p><b><u>33.68</u></b> (per 1,000 KSI from all road accidents)</p>	<p><b><u>0.2500</u></b> (90 KSI* / 360 KSI from all road accidents)</p> <p><b><u>250.00</u></b> (per 1,000 KSI from all road accidents)</p>
Period in which KSI total calculated:			
1997-2001 (years absolute)	2002 figures multiplied by 5 (year absolute)	1998-2002 (years absolute)	1999-2004 (years intersected)

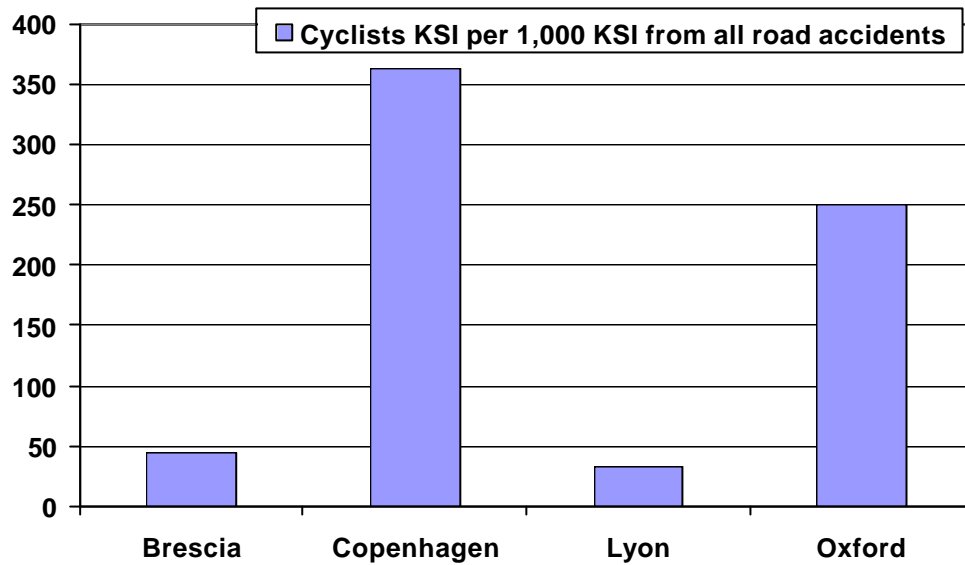
\* KSI taken over a 5-year period.

\*\* Figures for 2002 (i.e. 171 for cyclists KSI, and 472 KSI from all road accidents) each multiplied by 5 to give approximate 5-year totals.

\*\*\* Sum of KSI taken over a 5-year period and KSI figure represents City of Lyon.

\*\*\*\* Sum of KSI from all road accidents represents cars, pedestrians, cycles, mopeds, motorbikes, but not any other road vehicles such as trucks and buses.

**Figure 4.3: Cyclists KSI per 1,000 KSI from all road accidents.**



\* Figure for Lyon represents City of Lyon.

\*\* Sum of KSI from all road accidents for City of Lyon represents cars, pedestrians, cycles, mopeds, motorbikes, but not any other road vehicles such as trucks and buses.

#### 4.4 Bicycle Use

Indicators that describe cycling activity within the cities are included in the following section and provide very useful information on the current levels of uptake in the light of any continuing policy measures.

##### C.1 Cycle use (km / person / day) for all inhabitants.

Table 4.6 displays an impressive value of 2.4 km / person / day cycled in Copenhagen. This reflects the high number of cyclists, infrastructure and actual bicycles that seem to exist in this city. Lyon and Oxford are relatively far behind this level of utilisation, demonstrating the significant gap in profiles between these cities.

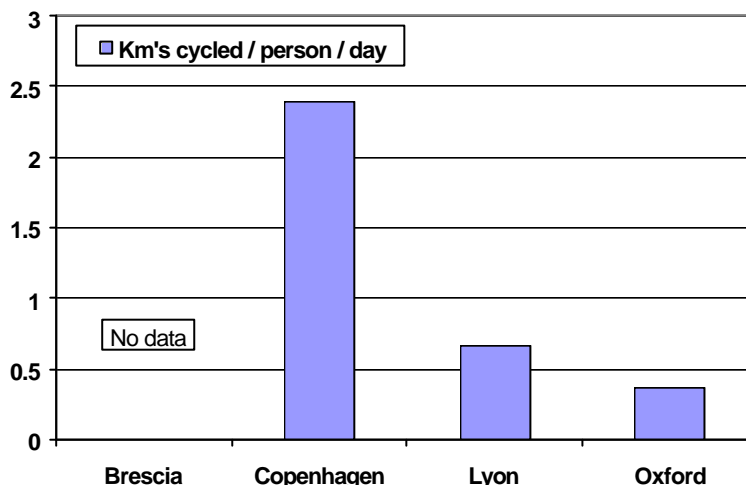
**Table 4.6: Cycle use in terms of km / person / day.**

Brescia	Copenhagen	Lyon	Oxford
No data.	2.4 km / person / day	0.66 km / person / day* 0.12 km / person / day (weekday)* 2 km / person / day (weekend)*	0.37 km / person / day**

\* Figures for Lyon represent all inhabitants in Greater Lyon (55 towns).

\*\* Figure for Oxford represents 'journey to/from work' data only.

**Figure 4.4: Cycle use in terms of km / person / day.**



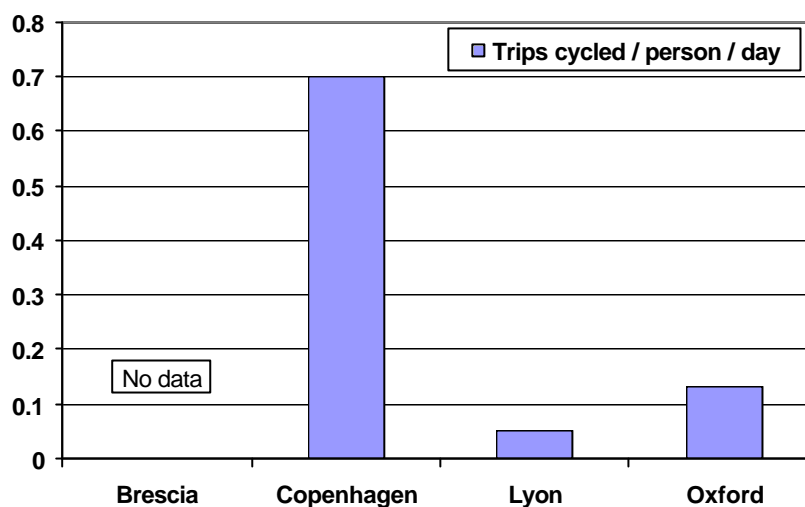
\* Figure for Lyon represents all inhabitants in Greater Lyon (55 towns).

\*\* Figure for Oxford represents 'journey to/from work' data only.

**C.2 Cycle use (trips) for all inhabitants.**

The group felt that consideration of trips was a better indicator to use when considering cycle use. The figures displayed in Figure 4.5 replicate the profiles given earlier in C.1 in that Copenhagen lead with an average of 0.7 trips / person / day.

**Figure 4.5: Cycle use in terms of trips / person / day.**



\* Figure for Lyon represents all inhabitants in Greater Lyon (55 towns).

\*\* Figure for Oxford represents 'journey to/from work' data only.

### C.3 Number of bicycle repair workshops.

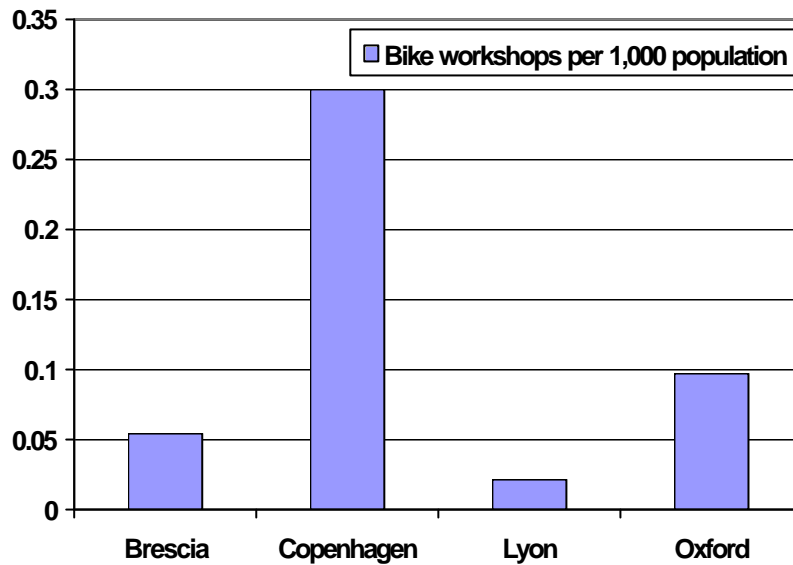
The number of bicycle repair workshops only goes to further support the claim that Copenhagen has a significantly higher level of facilities for maintaining bicycles in support of the high level of use.

**Table 4.7: Number of bicycle repair workshops.**

Brescia	Copenhagen	Lyon	Oxford
<b><u>10</u></b> (absolute)	<b><u>150</u></b> (absolute)	<b><u>12*</u></b> (absolute)	<b><u>13</u></b> (absolute)
<b><u>0.053</u></b> (per 1,000 pop.)	<b><u>0.299</u></b> (per 1,000 pop.)	<b><u>0.021</u></b> (per 1,000 pop.)	<b><u>0.097</u></b> (per 1,000 pop.)

\* Assumed to represent the number of workshops within the city of Lyon, not Greater Lyon (55 towns).

**Figure 4.6: Number of bicycle repair workshops.**

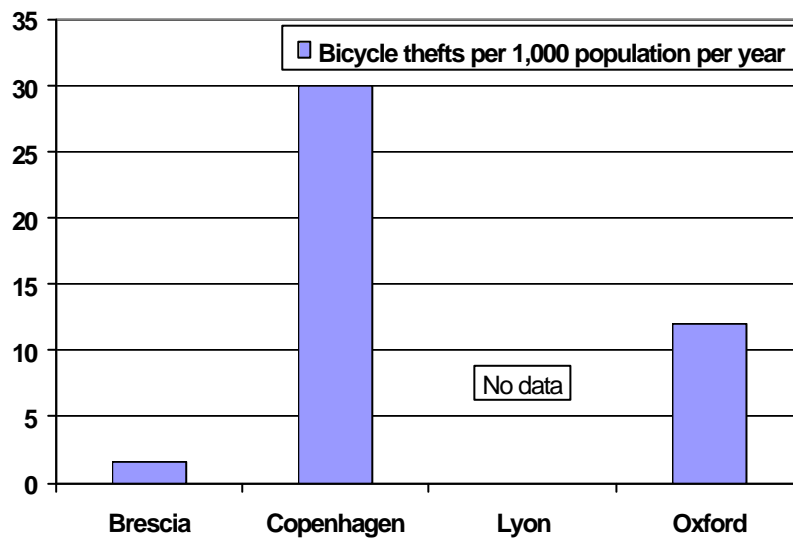


\* Assumed to represent the number of workshops within the city of Lyon, not Greater Lyon (55 towns).

**C.4 Number of bicycle thefts.**

Copenhagen has the highest level of bicycle theft. This can often be attributed to the sheer volume of cycles left on the street for which there is not always sufficient parking.

**Figure 4.7: Number of bicycle thefts.**



\* Data for Brescia is estimated.

## 4.5 Infrastructure

The level of infrastructure available to cyclists gives a good indication of the commitment to providing facilities and services for cyclists, but may also confirm why progress has not been possible due to lack of space or political consensus for example. Its integration with other facilities such as public transport interchanges and to what extent infrastructure is promoted is also covered in the following section.

### D.1 Can cycles be taken with you on public transport - YES/NO? If YES, which modes?

- All cities acknowledged some degree of integration of bicycles with public transport modes.
- All cities stated there was opportunity to take bicycles on trains, but most said only at periods outside of the ‘rush-hour’, or in Brescia, not on trains operating within the main city. Oxford stated access was possible at anytime.
- Copenhagen and Lyon acknowledged integration with their metro networks but in Copenhagen this was only at the weekends.
- Oxford was the only city that stated bicycles could be taken on buses (albeit folding bikes), but it might be necessary to investigate this further with the other cities.

### D.2 Sufficiency of bicycle parking at public transport interchanges.

Copenhagen was not satisfied with the level of parking available at public transport interchanges (Table 4.8). Arguably this is a result of the high volumes of bicycles needing to be accommodated but it is uncertain why the city has not ensured that this ‘extra’ volume has been catered for.

**Table 4.8: Sufficient bicycle parking at public transport interchanges.**

<b><u>Scoring System</u></b>	<b>Brescia</b>	<b>Copenhagen</b>	<b>Lyon</b>	<b>Oxford</b>
No parking				
Limited or less than sufficient parking		?	?	
Sufficient parking	?			?
Sufficient parking with some spare capacity				
Surplus parking				

For common indicator F2 the participants in the Citizen’s Network Benchmarking Initiative were asked to provide data for the number of bicycle parking spaces per 10,000 inhabitants. As stated in

the Citizens' Network Common Indicator Report<sup>2</sup> the figures were not very comparable due to a range of different measures used to collect the data. This initiative used qualitative information, which revealed that sufficient parking was deemed to be found in Brescia and Oxford, while limited parking exists in Copenhagen and Lyon. This may be because the demand for cycle parking is higher, but it is difficult to tell from the data that was available to the working group.

**D.3 & D.4 Does the city have a 'cycling network' - YES/NO? Does the city have 'recommended routes' - YES/NO?**

It is encouraging to see that all cities had produced maps to promote their cycling networks. Brescia and Oxford have also developed websites for the promotion of both their networks and recommended routes. Signage was commonplace amongst the cities but Brescia was the only city to incorporate all the forms of promotion for both types of infrastructure.

**Table 4. 9: Promotion of cycling networks and recommended routes.**

<b>Cycling Network</b>	<b>Brescia</b>	<b>Copenhagen</b>	<b>Lyon</b>	<b>Oxford</b>
Signage	?	?	×	?
Maps	?	?	?	?
Website	?	×	?	?

<b>Recommended Routes</b>	<b>Brescia</b>	<b>Copenhagen</b>	<b>Lyon</b>	<b>Oxford</b>
Signage	?	N/A	?	?
Maps	?	N/A	?	?
Website	?	N/A	×	?

<sup>2</sup> The Citizen's Network Benchmarking Initiative (2002) Results of the Common Indicators. European Commission DG Energy and Transport, pp41.

### D.5 What is the total annual budget (Euros spent in 2002) specifically for cycling in terms of the following:

Figures 4.8 - 4.10 display the levels of expenditure (in absolute terms) on cycling infrastructure within cities. Figures 4.11 - 4.14 display the expenditure in terms of per 1,000 population. With reference to Figure 4.11 in particular, it can be seen that infrastructure and maintenance entail far higher cost than that for promotion. Similar trends are shown for infrastructure and maintenance in that Copenhagen in both cases displays the highest levels. Oxford for its comparable population and length of cycle network also spends considerably on infrastructure, as does Brescia. Brescia spends more on maintenance than Oxford however. Figures 4.12 - 4.14 break down the combined split of expenditure shown in Figure 4.11 in order to observe individual indicators more closely.

**Table 4.10: Absolute expenditure on cycling.**

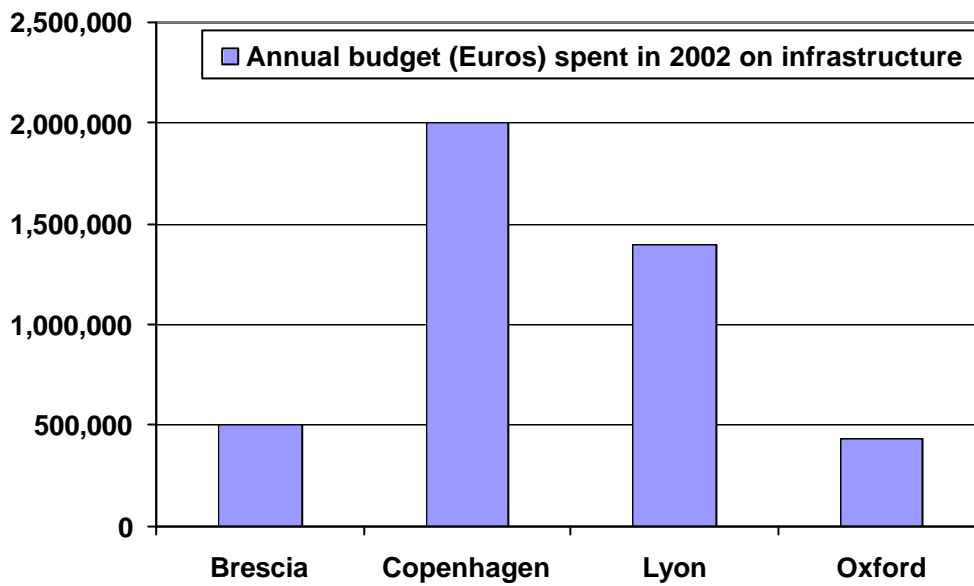
<b>Annual budget spent in 2002 on:</b>	<b>Brescia</b>	<b>Copenhagen</b>	<b>Lyon</b>	<b>Oxford</b>
Infrastructure	500,000	2,000,000	1,400,000**	435,000
Maintenance	200,000	800,000*	600,000**	95,000**
Promotion	5,000	25,000	35,000	No data

\* Not including cleaning.

\*\* Figures for Lyon represent a total shared expenditure of €2 million between infrastructure and maintenance. As estimate has been made in line with the apparent trend shown by other cities when breaking this total down into separate values for infrastructure and maintenance. Figures also represent expenditure for Greater Lyon (55 towns), not the City of Lyon.

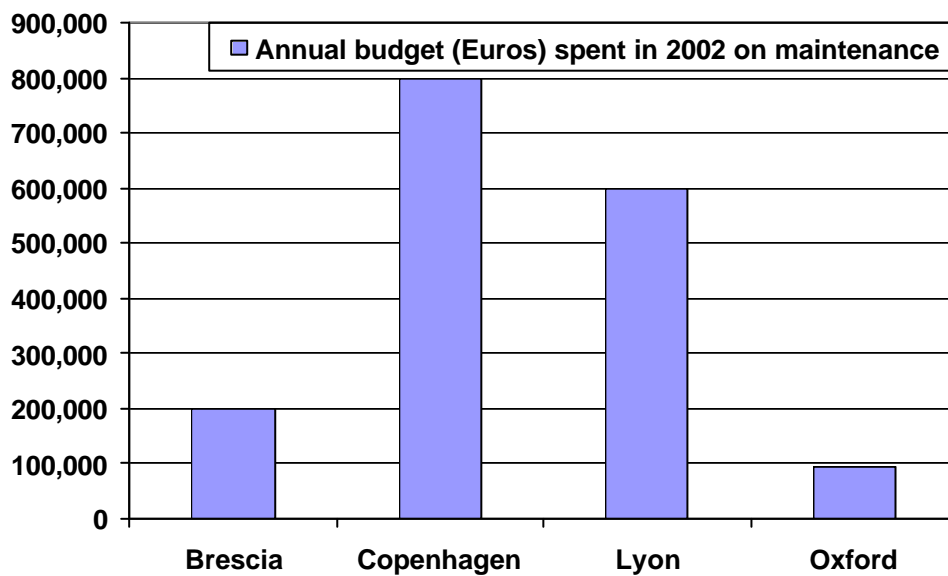
\*\*\* Estimate relates to structural maintenance, minor safety schemes and surface dressing work (includes surfacing work to the road network which is used by bicycles).

**Figure 4.8: Absolute expenditure on infrastructure in 2002.**



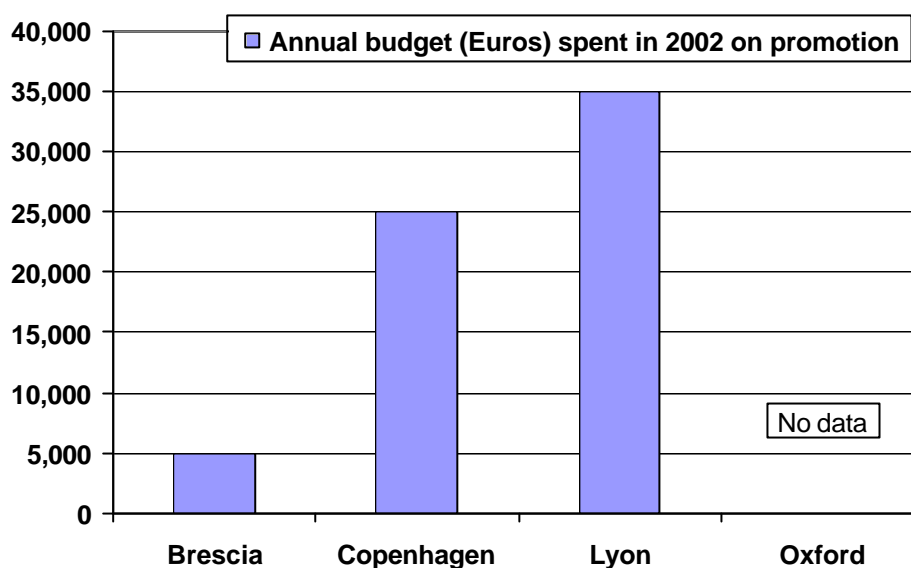
\* Figure for Lyon represents a total shared expenditure of €2 million between infrastructure and maintenance. As estimate has been made in line with the apparent trend shown by other cities when breaking this total down into separate values for infrastructure and maintenance. Figure also represents expenditure for Greater Lyon (55 towns), not the City of Lyon.

**Figure 4.9: Absolute expenditure on maintenance in 2002.**



\* Figure for Lyon represents a total shared expenditure of €2 million between infrastructure and maintenance. As estimate has been made in line with the apparent trend shown by other cities when breaking this total down into separate values for infrastructure and maintenance. Figure also represents expenditure for Greater Lyon (55 towns), not the City of Lyon.

**Figure 4.10: Absolute expenditure on promotion in 2002.**



\* Figure for Lyon represents expenditure for Greater Lyon (55 towns), not the City of Lyon.

**Table 4.11: Expenditure on cycling (per 1,000 population).**

Annual budget spent in 2002 on:	Brescia	Copenhagen	Lyon	Oxford
Infrastructure	2661.49	3992.02	1199.66**	3240.27
Maintenance	1064.59	1596.81*	514.14**	707.65***
Promotion	26.61	49.90	29.99****	No data

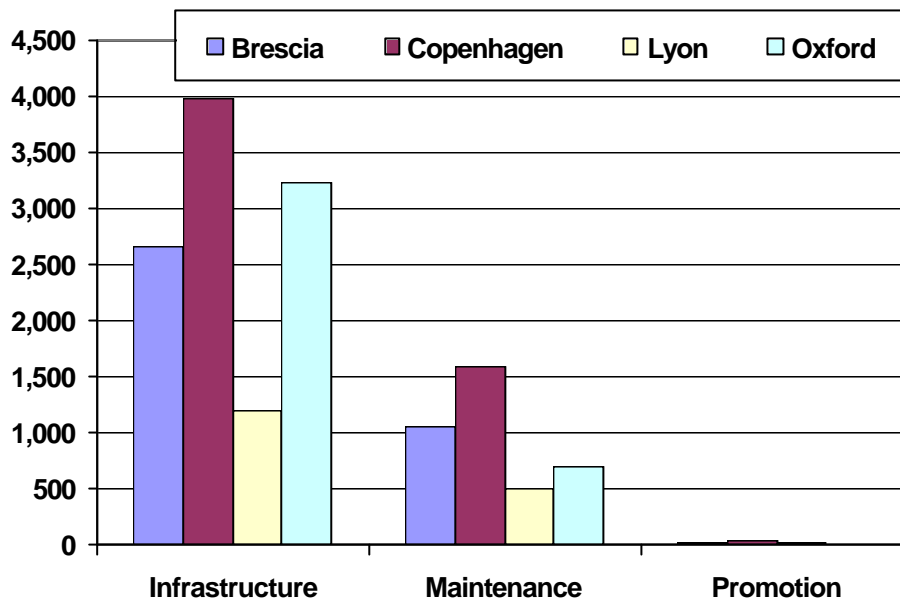
\* Not including cleaning.

\*\* Figures for Lyon represent a total shared expenditure of €2 million between infrastructure and maintenance. As estimate has been made in line with the apparent trend shown by other cities when breaking this total down into separate values for infrastructure and maintenance. Figures also represent expenditure for Greater Lyon (55 towns), not the City of Lyon.

\*\*\* Estimate relates to structural maintenance, minor safety schemes and surface dressing work (includes surfacing work to the road network which is used by bicycles).

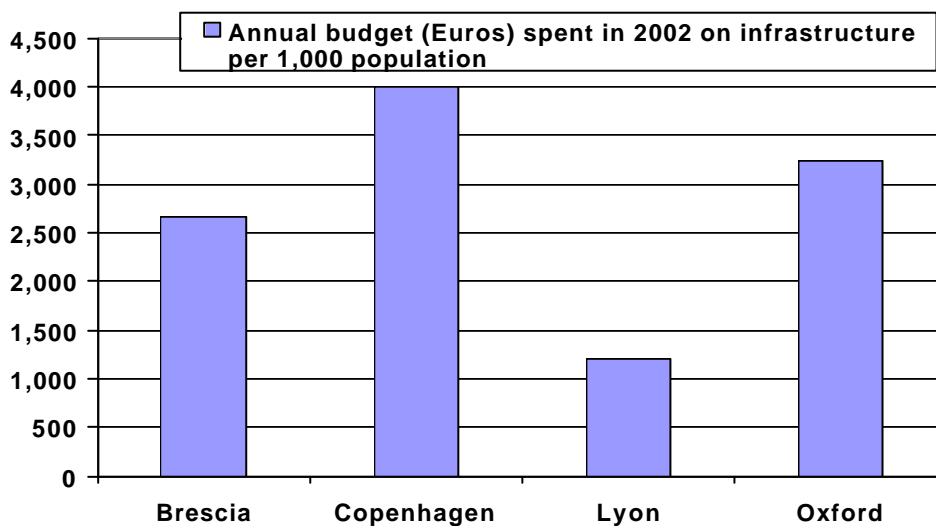
\*\*\*\* Expenditure is for Greater Lyon (55 towns).

**Figure 4.11: Expenditure (in Euros) per 1,000 population in 2002.**



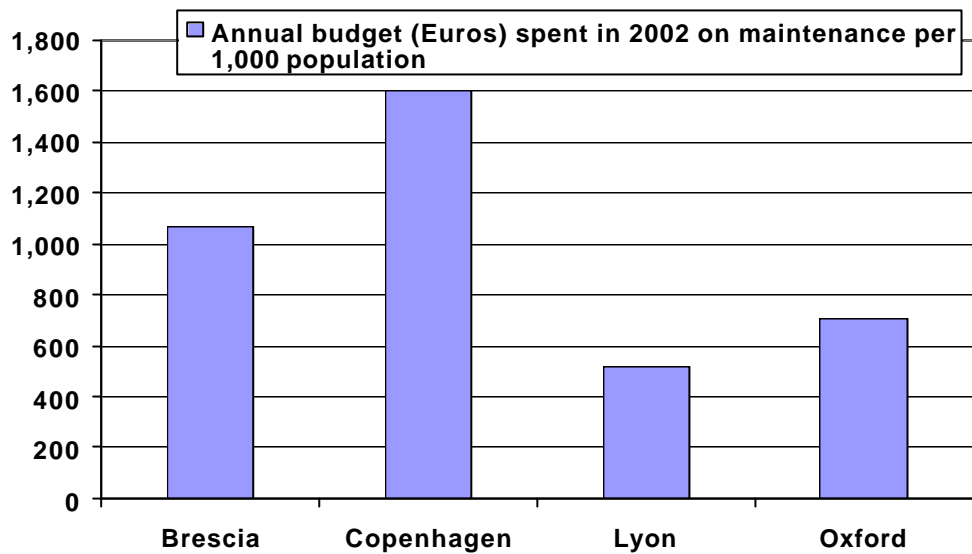
\* Figures for Lyon represent a total shared expenditure of €2 million between infrastructure and maintenance. As estimate has been made in line with the apparent trend shown by other cities when breaking this total down into separate values for infrastructure and maintenance. Figures also represent expenditure for Greater Lyon (55 towns), not the City of Lyon.

**Figure 4.12: Expenditure per 1,000 population on infrastructure in 2002.**



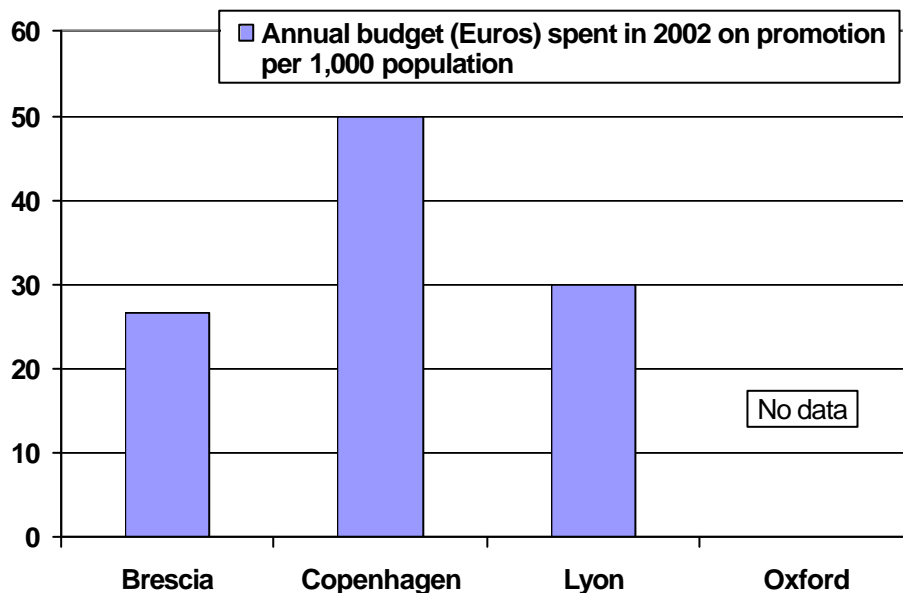
\* Figure for Lyon represents a total shared expenditure of €2 million between infrastructure and maintenance. As estimate has been made in line with the apparent trend shown by other cities when breaking this total down into separate values for infrastructure and maintenance. Figures also represent expenditure for Greater Lyon (55 towns), not the City of Lyon.

**Figure 4.13: Expenditure per 1,000 population on maintenance in 2002.**



\* Figure for Lyon represents a total shared expenditure of €2 million between infrastructure and maintenance. As estimate has been made in line with the apparent trend shown by other cities when breaking this total down into separate values for infrastructure and maintenance. Figures also represent expenditure for Greater Lyon (55 towns), not the City of Lyon.

**Figure 4.14: Expenditure per 1,000 population on promotion in 2002.**



\* Figure for Lyon represents expenditure for Greater Lyon (55 towns), not the City of Lyon.

**D.6 Can bicycles use bus lanes - YES/NO?**

- All cities except Brescia stated that bicycles could use bus lanes to some degree.
- Two cities placed conditions on their use – for example cycling was allowed only where there was no specific provision for cycling already (Copenhagen), or where the bus lane was wide enough to accommodate a bicycle (Lyon).
- Oxford was the only city that stated bicycles could be used freely in any bus lane.

**D.7 Does the city allow cycle use of one-way streets in both directions - YES/NO?**

- All cities except Brescia have allowed bicycles to use one-way streets in both directions to some degree. Brescia has no plans at present to allow one-way streets to be used in this way.
- Oxford admitted that the extent to which one-way streets were used in this way was restricted by the particular road layout design evident.
- Lyon is experimenting at present with 2 or 3 roads for this purpose.
- Copenhagen have enabled about a third of all one-way streets to be used in this way.

**D.9 Are there specific measures to assist cyclists at traffic junctions - YES/NO?**

All cities had measures to assist cyclists at traffic junctions. The most common (for all cities) included some form of road marking to give priority to cyclists (e.g. advanced stop lines or routes to navigate across junctions). Traffic signals were also used to good affect such as in Copenhagen and Oxford.

**Table 4.12: Measures to assist cyclists at traffic junctions.**

Brescia	Copenhagen	Lyon	Oxford
	Withdrawn <b><u>stop lines</u></b> for cars.	Advanced <b><u>stop lines</u></b> (SAS).	Advanced <b><u>stop lines</u></b> .
	Pre-green <b><u>traffic signals</u></b> .		Dedicated crossing phases in <b><u>traffic signals</u></b> .
Crossing area sometimes <b><u>coloured in red</u></b> to attract the road-user's attention.	<b><u>Blue marked crossings</u></b> .		Off-road tracks raised and continued across side roads.
Crossing marks (white squares painted on the <b><u>pavement</u></b> ).			On-road cycle lanes continued across <b><u>side road junctions</u></b> .

### D.10 Total length in km of the following types of cycling space:

Figures 4.15 - 4.19 display the absolute lengths of different types of cycling space within cities. It can be observed that where cities appear to have a similar type of cycle space, the values given are broadly in the same range. The exception to this is the figure given by Copenhagen for its cycle tracks which is much larger than any other type of cycle space given by the other cities.

Figures 4.20 - 4.24 display the cycle space as a proportion of the total road network length and therefore attempt to rate the infrastructure in a more meaningful context. Brescia and Oxford appear to have cycling space types which individually amount to about 5% of the total road network, but once again Copenhagen demonstrates an overwhelming proportion with its tracks on-road (i.e. they follow the road network anyway) representing a value of 44%. Figures 4.21 - 4.24 break down the combined split of cycle space types shown in Figure 4.20 in order to observe individual indicators more closely.

**Table 4.13: Absolute figures for different types of cycling space.**

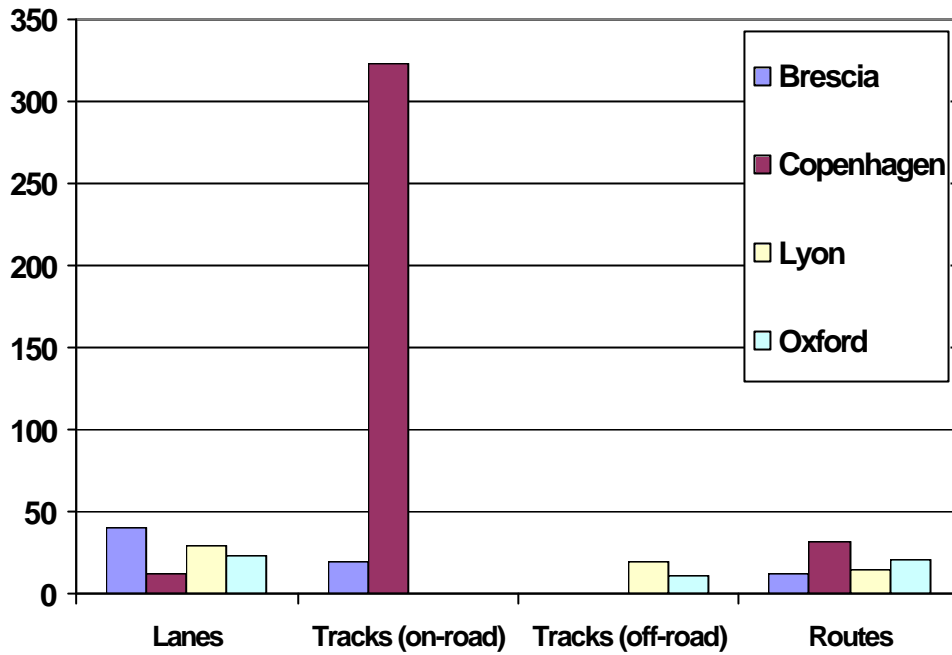
<b>Cycling Space* (km)</b>	<b>Brescia</b>	<b>Copenhagen</b>	<b>Lyon</b>	<b>Oxford</b>
Lanes	40	12	30**	23
Tracks (on-road)	20	323		
Tracks (off-road)			20**	10.9
Routes	12	32	15**	20.9

\* Definition of cycling space:

- Lanes (on-road, immediately next to the carriageway, segregated by painted lines).
- Tracks (on-road, immediately next to the carriageway, segregated using separate pavement).
- Tracks (off-road but immediately next to the carriageway, using existing pavement).
- Routes (off-road and away from the carriageway, i.e. like the green routes promoted in Copenhagen).

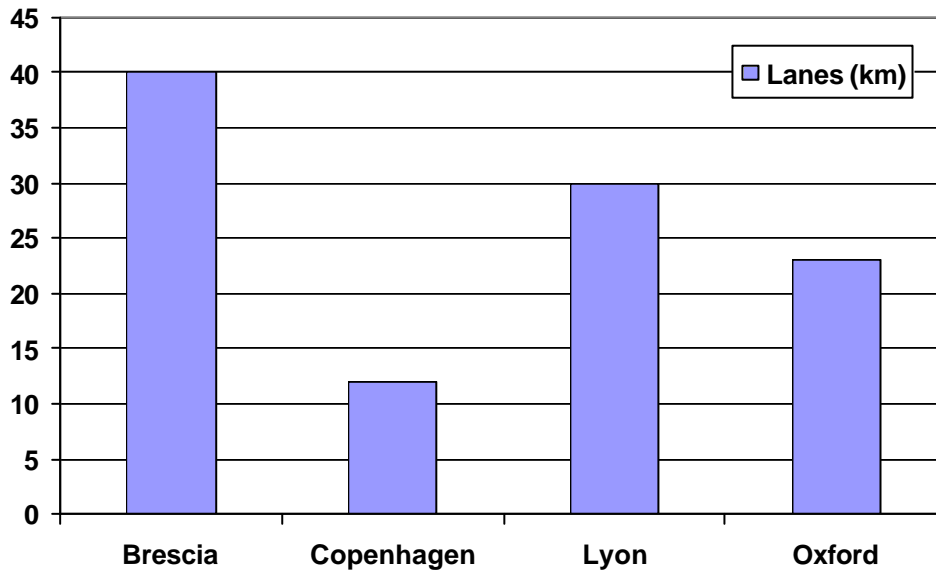
\*\* Figures for Lyon represent the inner city (Lyon + Villeurbanne).

**Figure 4.15: Absolute figures for different types of cycling space.**



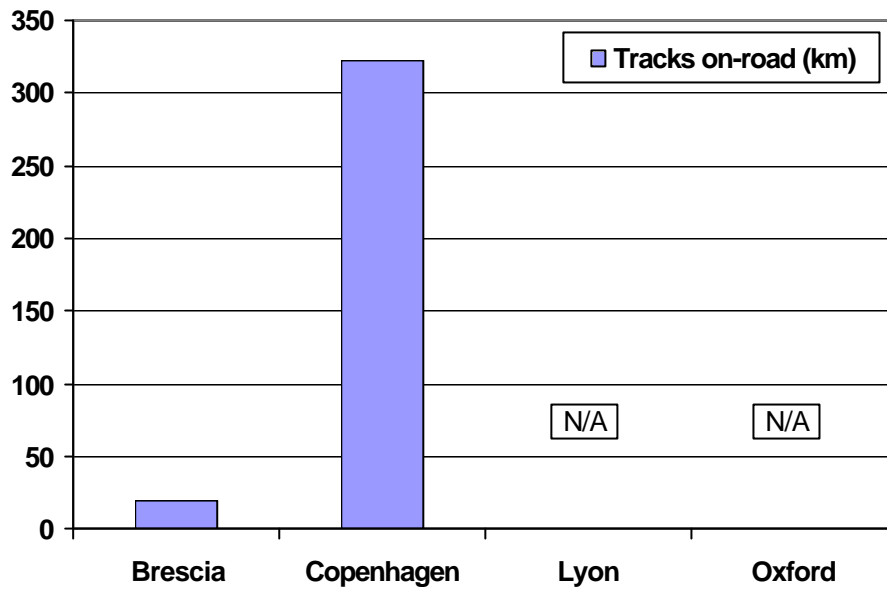
\* Figures for Lyon represent the inner city (Lyon + Villeurbanne).

**Figure 4.16: Cycle space attributable to lanes (km).**

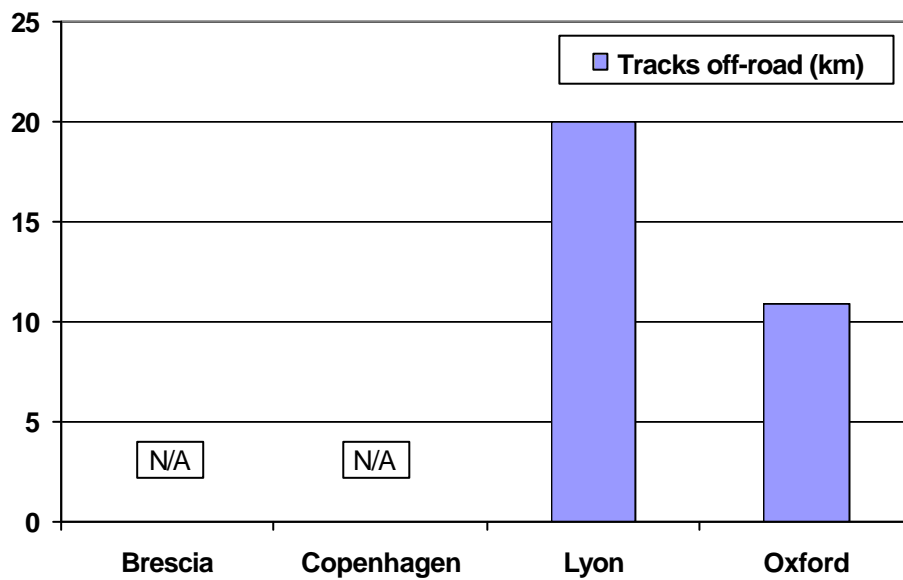


\* Figure for Lyon represents the inner city (Lyon + Villeurbanne).

**Figure 4.17: Cycle space attributable to tracks on-road (km).**

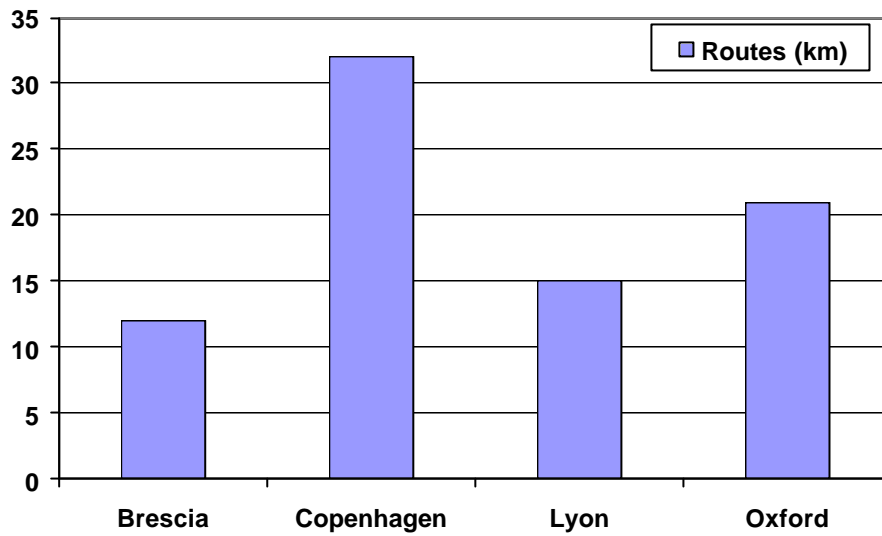


**Figure 4.18: Cycle space attributable to tracks off-road (km).**



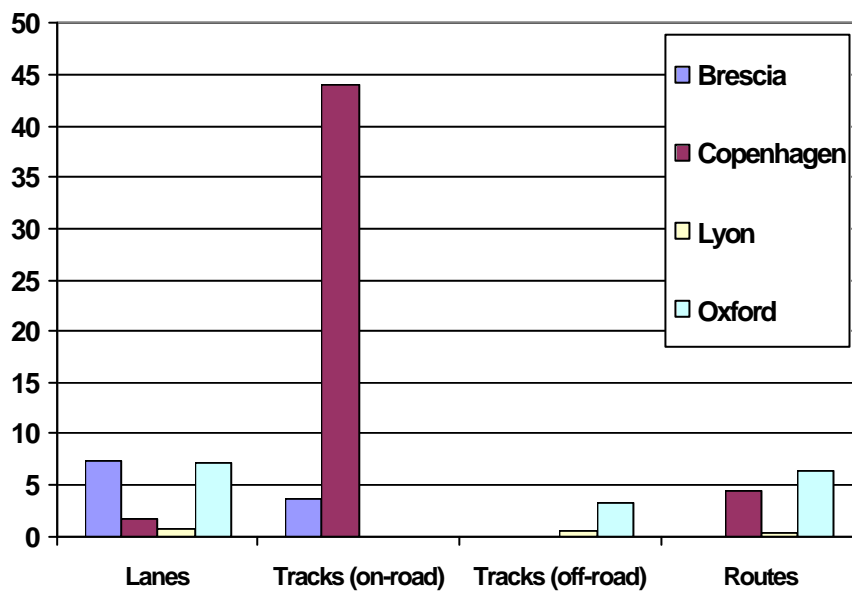
\* Figure for Lyon represents the inner city (Lyon + Villeurbanne).

**Figure 4.19: Cycle space attributable to routes (km).**



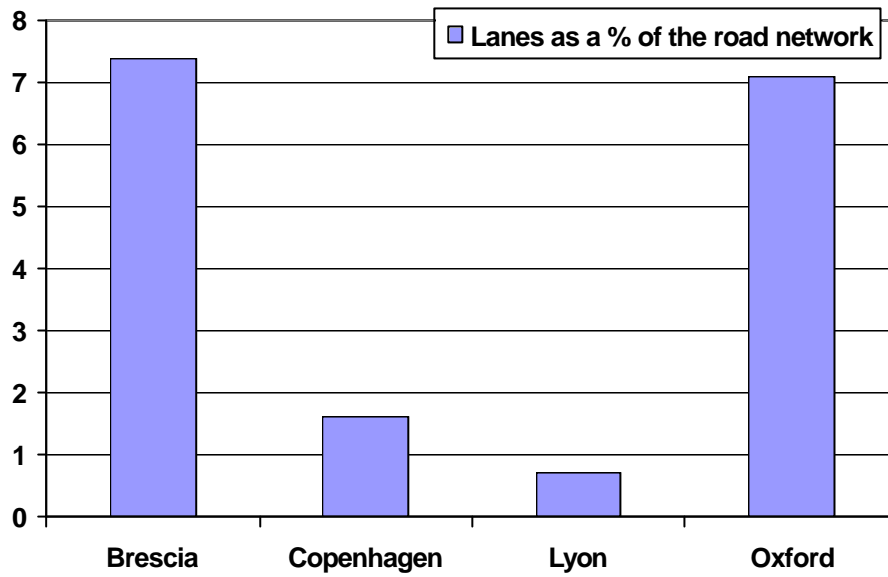
\* Figure for Lyon represents the inner city (Lyon + Villeurbanne).

**Figure 4.20: Cycling space as a proportion of the total road network length (%).**



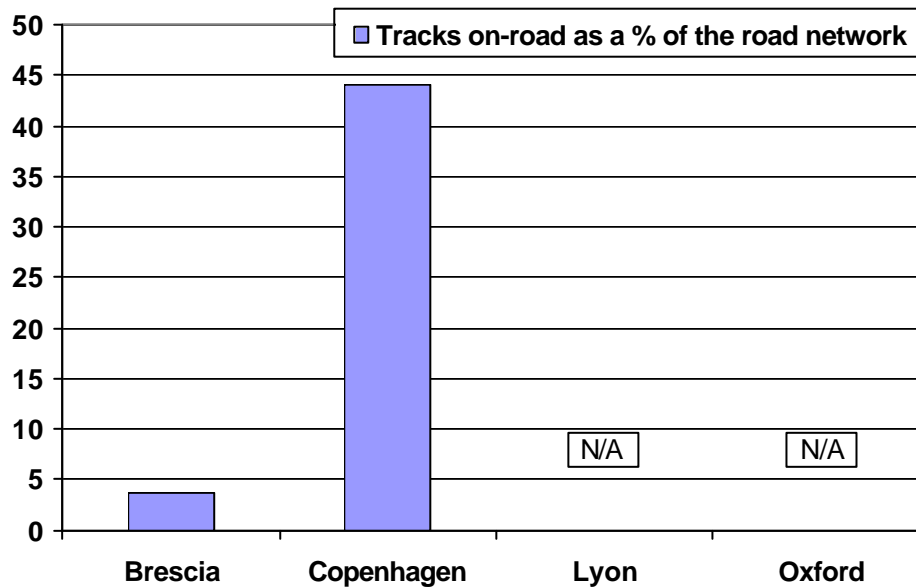
\* Figures for Lyon use the total road network length for Greater Lyon (55 towns), not just the inner city.

**Figure 4.21: Lanes as a % of the road network.**

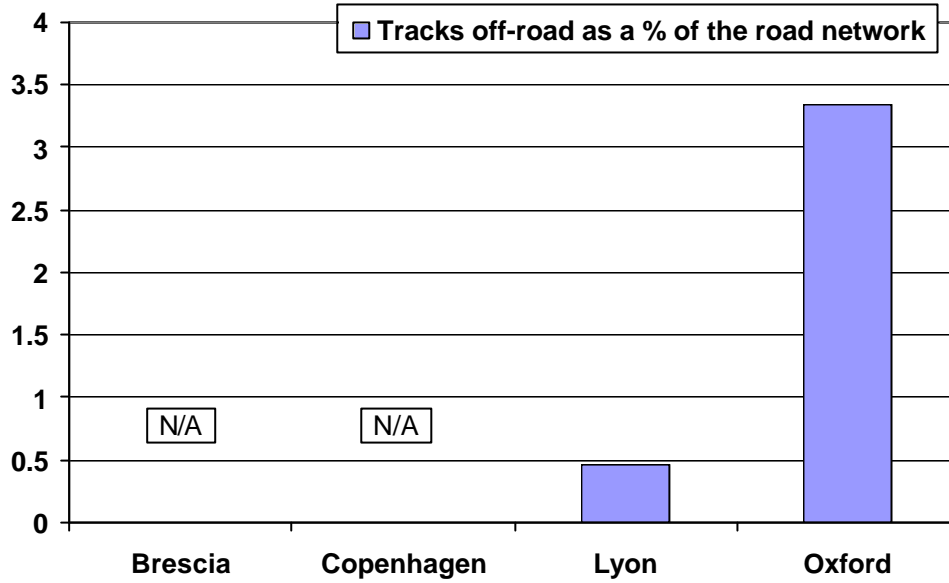


\* Figure for Lyon uses the total road network length for Greater Lyon (55 towns), not just the inner city.

**Figure 4.22: Tracks on-road as a % of the road network.**

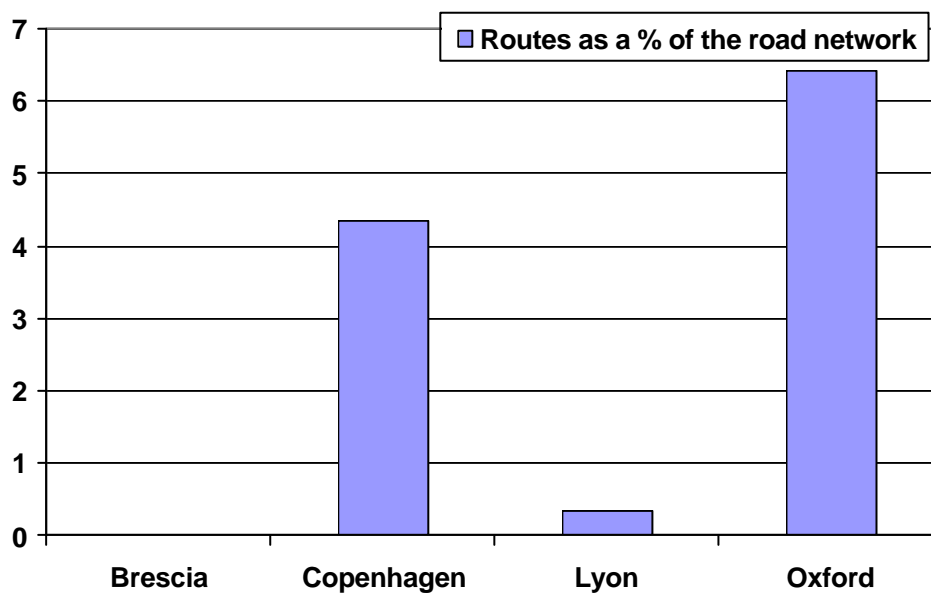


**Figure 4.23: Tracks off-road as a % of the road network.**



\* Figure for Lyon uses the total road network length for Greater Lyon (55 towns), not just the inner city.

**Figure 4.24: Routes as a % of the road network.**



\* Figure for Lyon uses the total road network length for Greater Lyon (55 towns), not just the inner city.

## 4.6 Cycling initiatives

The following indicators attempt to show the efforts being made by cities to actively promote the concept of cycling, internally and externally through national or international schemes.

### E.3 Are the following given to the city administration to promote cycling:

Table 4.14 below shows that Oxford is the only city to fulfil each of the options relating to internal promotion. The options that include providing a financial incentive have still to be adopted by at least half the group.

**Table 4.14: Promotion of cycling internally.**

Internal promotion of cycling	Brescia	Copenhagen	Lyon	Oxford
Bicycles for use	?	?	×	?
Distance allowance	×	?	?	?
Other financial incentives	×	×	?	?

### E.4 Is cycle parking required/requested to permit the following types of new development taking place:

It is encouraging to see that almost all the cities already incorporate parking provision for cycling as part of new developments and so within the planning process (Table 4.15). Brescia however do not seem to have adopted this area of promotion at present.

**Table 4.15: Integration of cycling within development planning.**

Cycling as part of new developments	Brescia	Copenhagen	Lyon	Oxford
Office	×	?	?	?
Retail	×	?	?	?
Housing	×	?	?	?

**E.5 Does the city have a program to actively promote 'new' cycle use?**

- Brescia and Lyon both have specific programs which promote 'new' cycle use.
- Copenhagen has a yearly 'cycle to work' campaign which attempts to reinvigorate numbers.
- Oxford does not have such a program which tackles a wide audience.

**E.6 Does the city promote safe routes to schools - YES/NO?**

- All cities promote the concept of safe routes to schools.
- Brescia establishes promotion through forming partnerships with schools and related associations. They also use a cycling newspaper as a tool to aid promotion.
- Copenhagen focuses on implementing physical measures to improve conditions. The budget is targeted at those locations most in need and solutions are discussed with the schools, parents and the police.
- Lyon has a programme called 'Pedibus' which is used to drive the safe routes to schools concept forward – 5 schools in Lyon currently participate.
- Oxford similar to Lyon has a specific programme to tackle the concept, entitled 'Better Ways to School'. The programme attempts to influence children, parents and teachers using a range of physical measures both on and off-site. School Travel Plans are also encouraged as part of this.

**E.7 Is your city a member of national or international networks promoting cycling?**

- All cities except Oxford were members of national or international networks promoting cycling.

**E.8 Would it assist your work if cycling was given greater priority at the EC level?**

- All cities except Copenhagen thought that it would assist their work if cycling was given greater priority at the EC level.

**5. CONCLUSIONS****5.1 Introduction**

This section of the cycling working group report outlines the key findings from the quantitative aspect of the working group benchmarking exercise. The qualitative information from the three site visits attended and sample case studies from the working group are documented in Annex A4.2.

Section 5.2 is a review of general conclusions from the data collected by the working group. These conclusions are applied, in section 5.3, to suggest a series of general recommendations for cities seeking to learn from the outcomes of the research. In addition recommendations have been made regarding the process of benchmarking, based upon the group's collective experiences after one year of the project.

Section 5.4 draws upon the findings of the Citizen's Network Benchmarking Initiative's relevant common indicators to make some comparisons between the two groups. The final section (5.5) outlines the next stage of the benchmarking process and the future intentions of the cycling working group.

## 5.2 Conclusions

Summarised below are some of the key findings identified from the data collection of thematic indicators:

- Most cities are collecting information on cycle trips made but methods of data collection vary.
- Copenhagen and Oxford have similarly high modal split for cycle trips below 5 km as a proportion of all trips made under 5 km.
- All cities currently integrate cycling policy with wider policy documents. The degree to which policy is put into practice seems to vary though according to various factors, with Copenhagen setting the trend for provision of services for cycling.
- Most cities back this policy up by providing targets for improving cycle uptake and safety.
- There was no real consensus between cities in terms of the changing policy issues encountered. Issues seemed to be specific to the city according to prevailing political interests, physical environment or culture.
- Cities stated parking issues and the development of cycle infrastructure as the most prominent barriers to improving cycling at present.
- The level of cyclists KSI varied amongst cities and it is not possible to give specific reasons for this variation. Copenhagen are studying a link between the degree of cycle safety and cycling speed. Safety is also a key study area for Brescia with the University carrying out specific research.
- Copenhagen has set a benchmark for the amount of cycle use with the other cities experiencing much lower levels. Data collection methods vary however and not all trips are included in calculations such as for Oxford.
- Cycling is being integrated with public transport modes to different degrees. More integration is apparent on trains.
- None of the cities stated they had overly sufficient capacity for cycle parking at public transport interchanges.
- Where cities had either a cycle network or recommended routes (or both), these seemed to be promoted pretty well overall with the use of signage, maps and even websites.
- Most expenditure within cities was on infrastructure measures, with Copenhagen again setting the precedent.
- Most cities deployed measures at traffic junctions to assist cyclists with road markings being the most popular.
- Most cities had cycle space which represented only a limited proportion of the total road network (about 5%), except for Copenhagen which led the way with about 45%.
- Internal promotion of cycling within authorities was mixed and was not consistent with Oxford which employed all of the options (including financial) for encouraging cycling.
- All cities except Brescia ensured that parking provision for cycling was integrated within the planning process.
- All cities are promoting the concept of 'Safe Routes to Schools'.

In assessing the extent to which the group have started to answer the identified research questions from Section 3.1, the following observations can be made:

**To what extent has cycling become mainstreamed in each city as far as both policy and practise is concerned?**

Most cities have begun the process of mainstreaming cycling through formulation of specific cycling policy and integrating cycling with wider policy. Some have gone further through the implementation of significant levels of infrastructure and research efforts to understand the drivers behind cycling – e.g. Copenhagen Bicycle Account or attempts to integrate cycling with public transport. More effort is required regarding direct contact with cycle users and other groups to establish their views. Integration of cycle parking within the planning process is another example of where cities are attempting to mainstream cycling.

**What part have infrastructure and marketing played in achieving current levels of cycle usage, and what part is it expected they will play in the future?**

There is a clear link between the levels of expenditure of Copenhagen on infrastructure measures and the degree of actual cycling clearing the city. More work is needed however to provide additional parking facilities at public transport interchanges. Cities obviously believe that by having a cycle network or recommended routes this can only encourage further uptake of cycling as a more ‘joined up’ way of thinking is pursued. Indications that infrastructure is being utilised to allow more cycling (such as within bus lanes, contra one-way streets, or across junctions) is clear, but the quantifiable extent to which these are actually having a positive effect on cycling is not. More research is needed to establish the link between infrastructure and ‘new’ cycle use.

It is inherently difficult to measure the role that marketing plays in influencing any audience, but in this context attempts are being made through the use of maps and websites to communicate cycle routes and specific programmes to encourage more cycling. Promotion of cycling receives much less expenditure than infrastructure and maintenance. More research is needed to establish which marketing tools are the most effective in order to justify increased expenditure.

**5.3 Recommendations**

The perception of the group was that many of the examples of physical infrastructure demonstrated by Copenhagen, although representing good practice, would be difficult to actually implement in other cities. This was because of the historic nature of the way road networks had developed and therefore a lack of space available to implement such drastic change. An issue of resource availability and also the cultural change required to accept such measures was something that also had to be proved in order to make such changes.

On the other hand, the possibility of developing a similar tool to the ‘Bicycle Account’ within cities was considered to be more realistic. With further information being gathered on cycling needs and performance, there might be hard data to recommend allocation of resources and guide future policy. The collection of time-series data would also be welcomed.

Lessons learned in Lyon have promoted the need to include cycling measures more prominently in recreational developments. By integrating cyclists with walkers and other activities, this not only improves the feeling of spaces for all but encourages people to spend more time outdoors with respective improvements in their health and well-being.

The first year of the Urban Transport Benchmarking Initiative has barely started the debate over which measures implemented by cities are the best and which could possibly be transferred to other cities as a standard of good practice. The barrier to the transfer of good practice is often the inability of authorities to convince colleagues of their benefits and why they should commit to them. By collecting more data on the benefits of implementing measures within cities, further understanding and a basis for approaching key decision-makers can be made.

Unfortunately, due to the tight timescale of the group, the submission of results and best practice to the ELTIS project was suppressed in year one. This is an area which has the potential to be revisited once cities have had a chance to carry out further benchmarking to a more relaxed schedule. In theory, submission is not an onerous task but with Copenhagen already having submitted a case study recently (even though unrelated to the Urban Transport Benchmarking Initiative) and there having been only two site visits, there was limited potential on this occasion.

The cycling working group was set up much later than the other working groups in the project. The group have however been able to achieve a significant amount of work in a short space of time.

A third site visit would have helped to demonstrate more good practice and would have broadened the scope for applying measures to other cities within the group.

The list of research questions needs to undergo further development so that a greater sense of ownership is experienced by the group and the benefits of the research are more clearly understood. This will also encourage other cities to participate.

The list of thematic (and common) indicators needs to be refined so that the group can focus on key areas of interest and the amount of work is reduced.

Recruitment of more cities is required to share information and learn of other good practice.

#### **5.4 Comparisons with the previous project**

Comparisons with the Citizens Network Benchmarking Initiative are somewhat limited for two main reasons:

1. The cycling working group started late in comparison to the other working groups and therefore less time was available to ensure the comparability of data with the Citizen's Network Benchmarking Initiative.
2. The Citizen's Network Benchmarking Initiative did not have a working group focusing upon cycling as a theme and therefore the in-depth data that has been collected by the cycling group is not directly comparable with the previous research.

One correlation between the two initiatives is that cities in Scandinavia appear to lead the way in the promotion and development of cycling. A finding from the Citizen's Network reporting was that in Oulu, despite an inhospitable winter climate for cycling, a large proportion of people cycle throughout the year. This sentiment was echoed by the demand management working group following their site visit to Oulu during year one.

The common indicator data collected in year one of this project also backs up this finding, with 3 of the top 5 cities in terms of cycling modal share (Oxford, Rotterdam, Copenhagen, Aalborg and

Oulu) being from Scandinavia. In year two of the Urban Transport Benchmarking Initiative it may therefore be prudent for the cycling working group consider the practices applied in Scandinavia in order to try and identify what is being done differently to promote cycling.

## 5.5 Next steps and future intentions for the working group

It is important to remember that the cycling working group was set up much later than the other working groups in the project. The group have, nonetheless, been able to achieve a significant amount of work in a short space of time. A third site visit would have helped to demonstrate more good practice and would have broadened the scope for applying measures to other cities within the group.

The list of research questions needs to undergo further development so that the group can adopt a greater sense of ownership for the project. In addition to emphasising the benefits of the research, this will encourage other cities to participate.

The group have discussed (in part) the required emphasis on future work within the Urban Transport Benchmarking Initiative. It is possible to summarise the key points that will allow the group to continue and develop in the best interests of the initiative as follows:

- Identification of good practice is just as important as indicator data.
- More site visits should take place to learn of good practice.
- Capitalising on good practices studied in the first year. Thought will be given as to how this knowledge can be transferred to other cities and the best methods identified for how to achieve implementation.
- The intention is not to simply repeat precisely the same process that has been undertaken in the first year of the benchmarking initiative.
- The list of indicators should be refined – keeping the best ones, eliminating the rest (compatibility of indicators).
- The group should attempt to study one particular aspect in more detail, thus narrowing the focus of the research.
- It should be confirmed which cities are interested in continuing participation.
- It should be considered which new cities could/should join the working group.
- The theme of 'walking' could be included in the working group for year two.
- The working group could also try to incorporate the health impacts of cycling in future benchmarking.