



Bicycle Account 2002

Foreword

Copenhagen's image as a city for cyclists is excellent. Nearly 80% of Copenhagen cyclists think that Copenhagen is a fine city to cycle in – better than other cities.

Since the City of Copenhagen started publishing a Bicycle Account the number of cyclists has grown. Since the last Bicycle Account (2000) the number of cyclists entering and leaving the city centre has increased by 6% and the figure for those crossing the municipal boundary has increased by 2%.

The City of Copenhagen is delighted that so many people ride bicycles as a means of transport. It is essential that the City continue to work hard to improve cycling conditions – both in order to ensure good conditions for those who already cycle and to get even more people to cycle.

In 2002 Copenhagen published its first Cycle Policy. Nine focus areas are defined, intended to ensure that cycling will become safer, that cyclists will feel more secure, that cyclists will be able to reach their destinations more quickly and that cycling comfort shall be improved. The City of Copenhagen is also drafting a Traffic and Environment Plan one of whose primary focus areas is the improvement of cycling conditions. A great deal of attention is thus being paid to the fact that bicycles are an excellent means of transport with a positive impact on the urban environment as well as the health of the individual cyclist.

The Bicycle Account shows whether cyclists are satisfied and it takes stock of the work being done. The Bicycle Account is an instrument for Copenhagen politicians to keep an eye on whether the measures taken are satisfactory in relation to the political objectives and whether the focus areas set forth in the Cycle Policy should be adjusted.

The explicit goal is that 40% of commuters to workplaces in Copenhagen shall bike to work by 2012. This will require a great deal of work, but I consider it so essential that I will place great emphasis on its implementation in the next few years. Happy cycling!



Søren Pind, Mayor for traffic

BICYCLE ACCOUNT 2002

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Roads and Parks Department
Njalsgade 13,5.
DK-2300 Copenhagen S
Denmark
Tel. +45 33 66 35 00
email: vp-publikationer@btf.kk.dk
www.vejpark.kk.dk/CityOfCyclists

Summary

Purpose

The Bicycle Account is an account for cyclists and the City of Copenhagen, showing the City's record in the field of cycling. The cyclist section of the account consists of a survey in which Copenhagen cyclists describe how they feel about cycling in town. The City section of the account is a kind of stocktaking in which a number of key figures are used to depict conditions which are vital to cyclists. In addition, the target figures indicate the extent to which the Cycle Policy's objectives are being achieved. The Bicycle Account also provides information about the City's current projects and initiatives within the field of cycling.

The Bicycle Account covers a two year period and is published in Danish and English. The next Bicycle Account is due for publication in the spring of 2005.

What cyclists think

The first section of the Bicycle Account presents cyclist attitudes and opinions. As in the previous Bicycle Accounts cyclist attitudes and opinions are gauged by means of survey interviews. The results are presented in the section entitled "What cyclists think" and are also listed under the relevant topic in the account. Cyclist ratings are expressed in a point system depicted graphically as 10 little cyclists – the more cyclists the better!

Compared with the previous Bicycle Account certain shifts have occurred. In five cases the changes registered in 2002 have been so significant that they have affected the number of "little cyclists":

- 🚲 Copenhagen as a city for cyclists: 8
Rating unchanged.
- 🚲 Cyclist sense of security: 6
Rating unchanged.
- 🚲 Amount and width of cycle tracks: 5
Lower rating.
- 🚲 Cycle track maintenance: 5
Higher rating.
- 🚲 Road maintenance: 3
Higher rating.
- 🚲 Feasibility of combining cycling with public transport: 5
Rating unchanged.
- 🚲 Bicycle parking: 3
Lower rating.
- 🚲 City information on traffic planning: 4
Higher rating.

Key figures

The second part of the Bicycle Account consists of a number of key figures which were defined as essential by cyclists in connection with the first Bicycle Account. A few key figures have been discontinued over the course of time while a few new ones have been added.

- Bicycle traffic has increased by 6% so that 1 million km are now cycled in Copenhagen every day.
- Motor traffic has only increased by 1%.
- The number of km of cycle track has increased by 16 km and is now 323 km.
- The number of km of cycle lane has increased by 2 km and is now 12 km.
- The length of green cycle routes has increased by 1 km and is now 32 km.
- In 2000 DKK 9.1 million was spent on cycle track maintenance while in 2002 only DKK 6.8 million was spent.
- The figure for serious cyclist casualties has risen by 4 so that in 2002 172 cyclists were seriously injured.
- Signal intersections with measures for cyclists have increased from 28% of intersections to 36% of intersections in 2002.

Cycle Policy target figures

A new feature of the present Bicycle Account is the introduction of five target figures which relate directly to the goals set forth in Cycle Policy 2002–2012. The target figures indicate to what extent the City is achieving Cycle Policy goals:

- The proportion of the workforce that cycle to workplaces in Copenhagen is now 32%. This is a slight decrease in relation to the previous Bicycle Account. The target goal is that 40% shall bike to work.
- Cyclist risk is now 0.46 serious casualties per 1 million cycle kilometres. The trend that took place throughout the 1990s, already reducing cyclist risk by half, continues although the decrease is a only minor one (4%). The target goal is a 50% reduction by 2012.
- 56% of cyclists feel secure cycling in Copenhagen traffic. There was no apparent change for the better. Work is being done to ensure that a full 80% feel secure by 2012.
- Cycling speed on trips of over 5 km shall be improved by 10% by 2012. This objective can not be evaluated yet as a method of registration has to be devised first.
- The target goal that unsatisfactory cycle track surfaces shall not exceed 5% was attained in 2002.

What Cyclists Think

Since 1995 an independent consultancy has carried out five representative surveys of Copenhagen cyclists for the City of Copenhagen's Bicycle Account. The most recent survey – in which close to 400 cyclists participated – was done in the autumn of 2002. The cyclists involved cycle at least once a week and the majority almost every day.

10 little cyclists

Cyclists' attitudes are depicted graphically in a rating system of up to 10 little cyclists. A rating of 10% satisfied cyclists is expressed graphically as one little cyclist and the full 10 cyclists are only awarded if all or virtually all cyclists are satisfied. Shifts in the Bicycle Account since 2000 are summed up on the following pages.

The system of rating cyclist sense of security has been altered in relation to previous years. Formerly the number of cyclists was calculated on the basis of how many answered "Completely" or "Partially" to the question whether they feel secure. Now only those who unambiguously answer "Completely" are included. This is intended to bring the assessment in line with the goal for cyclist sense of security set forth in the City of Copenhagen Cycle Policy.

Who cycles in Copenhagen?

According to the survey, Copenhagen cyclists are young, two thirds of them being under 40. More women than men cycle in Copenhagen – 63% of those questioned are women. When it comes to occupation most cyclists belong to the categories salaried or white-collar workers (42%) and students (27%). Men cycle greater distances than women. One man out of five states that he cycles over 100 km a week.

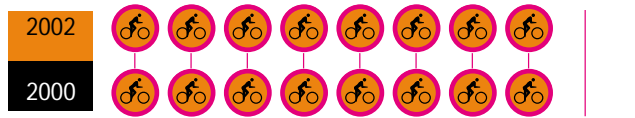
Why cycle?

The survey shows that the bicycle is most often used to get to and from work, for excursions, visits, etc. and for shopping and other errands. The most important reason for choosing to cycle is that it is faster and easier – or for the exercise. There has been a fall in the proportion of cyclists who say they cycle because it's easier. Financial reasons plus the fact that cycling is convenient play a role for many cyclists. When die-hard cyclists occasionally do not cycle, almost half say that this is due to poor weather conditions.

The bad road manners of other road users has become a serious nuisance

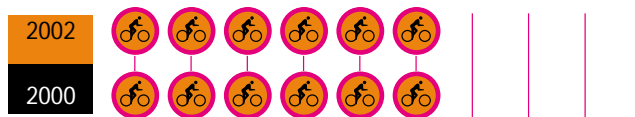
A new aspect is the fact that the bad road manners of other road users has become the greatest nuisance – 34% of cyclists cite this as a particularly bothersome factor. Other significant nuisances are "too many cars" (31%), "too many cyclists" (22%), "not enough cycle tracks" (15%), and "too narrow cycle tracks"(12%).

Copenhagen as a city of cyclists



Nearly four out of five cyclists think that Copenhagen is excellent, good or fair to cycle in. Compared to 2000 cyclists have become somewhat less satisfied, a shift having occurred from good to fair. Men are more satisfied cycling in Copenhagen than women.

Cyclist sense of security



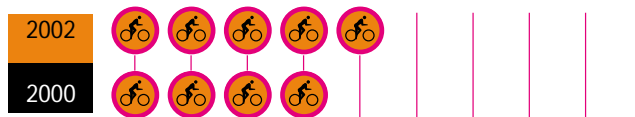
Cyclist sense of security when cycling in Copenhagen has not changed significantly since the last Bicycle Account. 56% of cyclists feel safe cycling in town and approximately one fourth (24%) partially safe. Men feel slightly safer than women. The main reasons for cyclists to feel unsafe are cars (64%), other cyclists (43%) and buses (26%).

Amount and width of cycle tracks



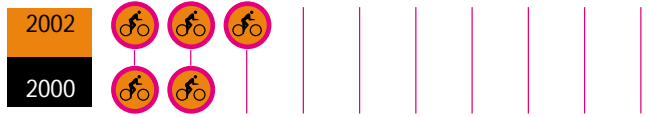
58% of cyclists are satisfied or very satisfied with the length of the cycle track network whereas only 45% are satisfied or very satisfied with cycle track width. The latter figure is much lower than in 2000. More than one out of three cyclists are dissatisfied or very dissatisfied with cycle track width. Men are more satisfied than women with both amount and width.

Cycle track maintenance



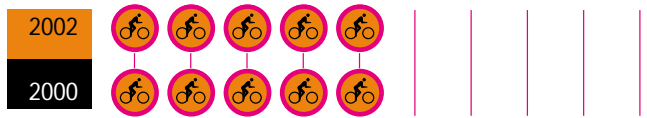
45% of cyclists are satisfied or very satisfied with cycle track maintenance. This is slightly more than in 2000.

Road maintenance



The proportion of cyclists (28%) who are satisfied with the maintenance of roads without cycle tracks has increased slightly since 2000.

Feasibility of combining cycling with public transport



Roughly half of the cyclists (51%) are satisfied with the feasibility of combining cycling and public transport, which is more or less unchanged since 2000. Slightly fewer (46%) report that they actually combine cycling with public transport – of these, half state that this only occurs rarely. Women combine cycling with public transport more often than men.

Bicycle parking



Satisfaction with bicycle parking facilities in town has fallen compared to 2000 so that 27% are satisfied now and 55% are dissatisfied. This corresponds more or less to the degree of satisfaction with bicycle parking facilities at train stations.

City information on traffic planning



As in 2000, roughly one quarter of the cyclists do not answer the question as to how they assess the traffic planning information provided by the City of Copenhagen. However, more now tend to think that the information is good or fair. 10% answer that they know or have heard of the City of Copenhagen's Cycle Policy. In the cyclist sector, half believe the City will listen when presented with proposals whereas in the category of motorists and users of public transport only one quarter and one third respectively think that this serves any purpose.

Road User Profile

The survey of Copenhagen road users makes it possible to paint a portrait of the people who choose to cycle, drive or take the bus or train in Copenhagen.

The road user group to which the interviewee belongs is defined on the basis of which the means of transport that he or she considers the primary one.

Children in the household

The majority of road users interviewed in Copenhagen have no children. Motorists are the road user group with the largest number of children per household. Whereas 45% of motorists have children, this is only true of 19% of those who take the bus or train and 29% of cyclists.

Household income and occupation

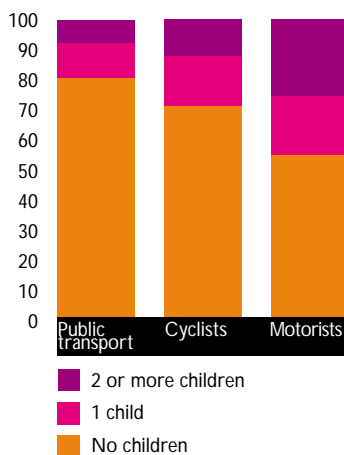
Motorists generally have high incomes. Cyclists on the other hand are characterized by being evenly distributed throughout all income brackets. The bicycle is thus a means of transport which appeals to rich and poor alike. Public transport is not attractive to the well-to-do, and only 18% of users of public transport have a household income of over DKK 400,000.

Both motorists and cyclists typically have a higher education and most are salaried or white-collar workers or civil servants. In the cyclist group there are also many students, school children or apprentices. Almost half of the people using public transport have the equivalent of a primary school level education.

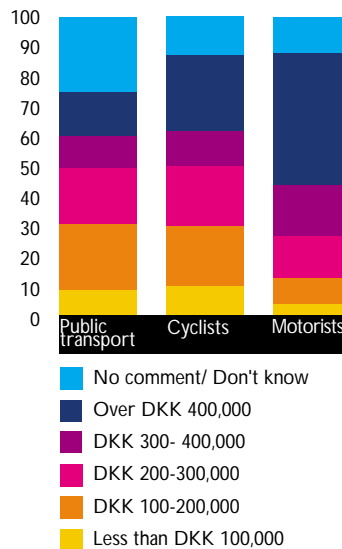
Age

Half the users of public transport are over 50, which is only the case for 29% of motorists and 19% of cyclists. 67% of cyclists are under 40.

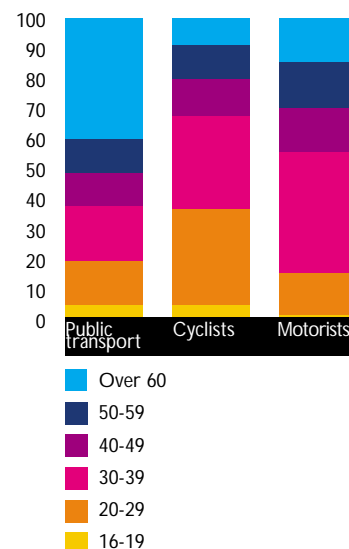
Children in the household



Household income



Age



Other Road Users and the Bicycle

When asked "What could get you to cycle or cycle more, rather than drive or use public transport?", 38% replied "Absolutely nothing!". This is a higher figure than in 2000 when this was the answer of only 32%. An additional 15% of motorists and users of public transport answered "Undecided".

However, half of those who drive or use public transport do have an opinion on what can get them to cycle (or cycle more). In this category, most motorists cite more cycle tracks (26%) or better cycle tracks (20%). Many (20%) also cite shorter distance between home and work, although this answer was not a specified option in the interview. When it comes to users of public transport most cite better road manners (18%) and fewer cars in Copenhagen (14%). As with motorists, many users of public transport also cite more cycle tracks (14%) and better cycle tracks (12%). There are quite a few motorists and users of public transport (approx. 10%) who say that better weather conditions is the main factor!

Copenhageners prioritize improved cycling conditions

In connection with the City of Copenhagen's Traffic and Environment Plan 2003 an analysis was made of Copenhageners' attitudes to various traffic measures. The study revealed a markedly positive attitude to more cycle tracks, wider cycle tracks, better maintenance of cycle tracks, better bicycle parking facilities at suburban train stations and better bicycle parking facilities in the city centre. In addition, it should be noted that many people expressed a marked desire for better enforcement of traffic regulations as well as improved cycling conditions at signal crossings.

How to get other road users to cycle?

As indicated above, certain motorists and users of public transport would cycle more if there were more and better cycle tracks and other improvements for cyclists. Better road manners (including enforcement of the traffic regulations) would also be helpful in this regard. However, a large group of motorists and users of public transport are highly resistant to the idea of cycling. Mobility planning at businesses providing assistance to employees in mapping out transport routes between home and workplace might convince more people that cycling is an option – at least for part of their journey. Better conditions for cyclists at workplaces (such as bathing facilities) would effect people's attitudes as to how far and in what weather conditions cycling to work is an option.

What other road users think of cyclists

In the Bicycle Account motorists and users of public transport were questioned about their attitude to cyclist road manners. Half of them agreed or partially agreed that they were often bothered by cyclists. Approx. 70% thought that cyclists rarely obey the traffic regulations and approx. 65% thought that cyclists are often the cause of dangerous situations.

More and More Cyclists

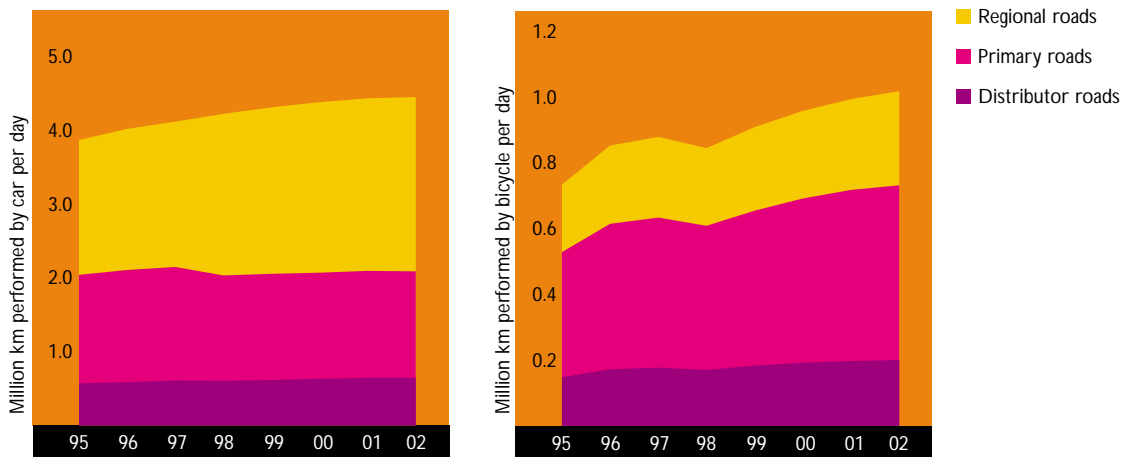
Since the last Bicycle Account, Copenhagen bicycle traffic has continued to grow. The number of cyclists crossing the municipal boundary on a weekday has increased by almost 2%, while the number crossing the ring around the inner city has increased by almost 6%. The greatest growth has thus occurred in the inner section of Copenhagen.

Motor traffic only increased by 1.5% since 2000 both at the municipal boundary and at the ring around the inner city.

Increase in number of kilometres cycled

The number of kilometres cycled or driven is calculated on the basis of figures for the major road network (regional roads, primary roads and distributor roads). The number of kilometres cycled has increased by 6% since the last Bicycle Account while there has only been a 1% rise in the number of kilometres driven. Since the first Bicycle Account of 1995 the number of kilometres cycled has increased by a full 40% whereas the number of kilometres driven has increased by 16%.

Local streets – i.e. all streets which are not included in the major road network mentioned above – are not yet included in calculations of number of kilometres travelled. The octopus shaped figure on the following page illustrates where cyclists travel on the major road network.



KEY FIGURES

Bicycle traffic

2002	1.02 million km per day
2000	0.96 million km per day

Motor traffic

2002	4.54 million km per day
2000	4.43 million km per day

Cycle to work

2002	32%
2000	34%

78% think that Copenhagen is excellent, good or fair to cycle in (unchanged since 2000) whereas 22% think it is poor or very poor. About 25%, mostly men, have tried cycling in cities abroad, 81% of whom think that Copenhagen is better for cycling than the cities abroad.



One third still bike to work

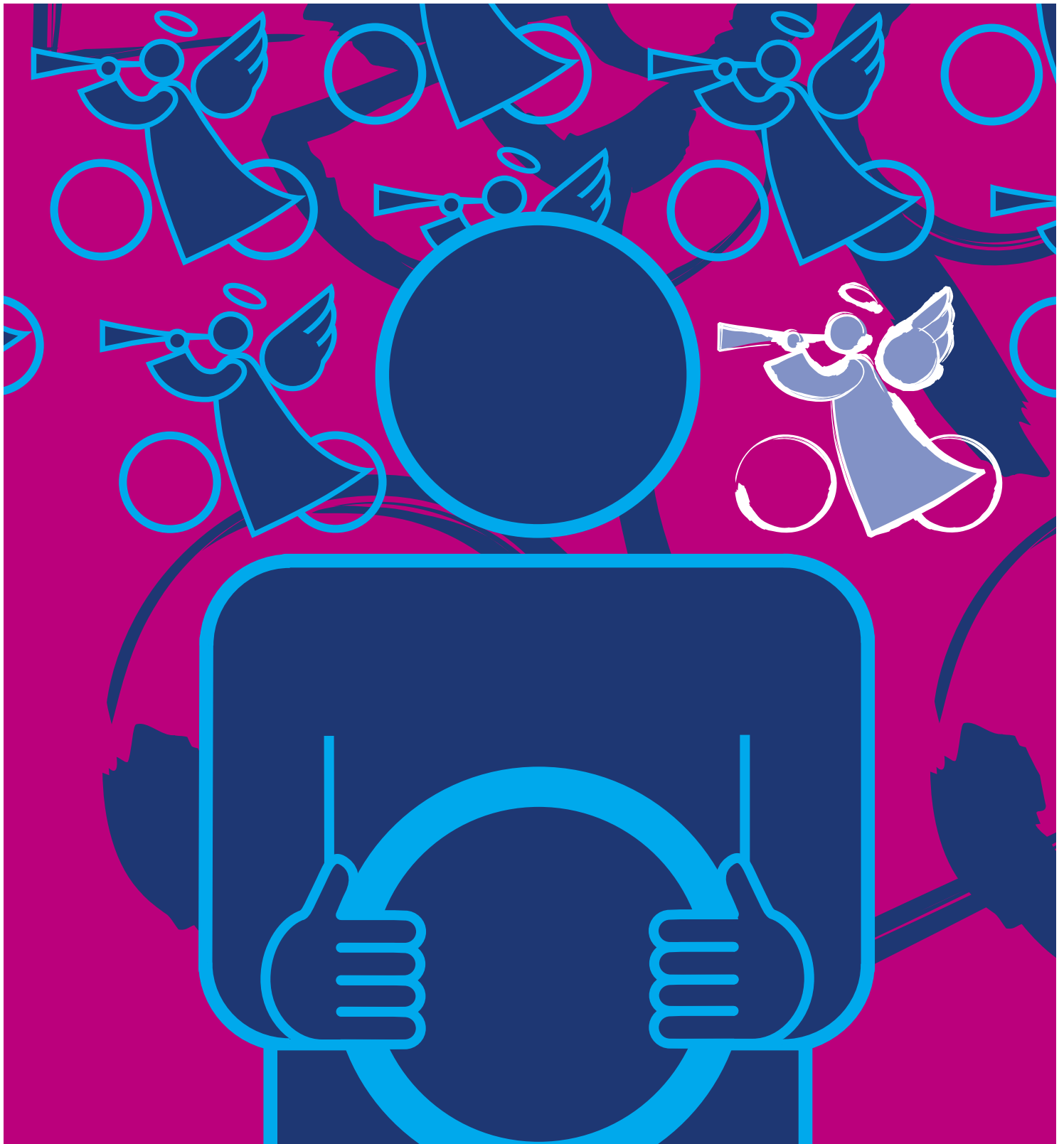
Since the Bicycle Account 2000 the proportion of those who cycle to and from work fell slightly from 34% (1999) to 32% (2001). This is despite the fact that bicycle traffic in the city has generally increased. One explanation could be that the total number of journeys to and from workplaces in Copenhagen has increased. The increase in the total number of home-workplace trips is primarily due to the fact that more people have begun to go by train (train traffic in the greater Copenhagen area rose, particularly in 2000). Although the number of those who cycle to and from work is unchanged, the proportion has fallen slightly.

It is the explicit goal of the Cycle Policy that the proportion of people cycling to workplaces in Copenhagen shall increase to 40% by 2012. This is an ambitious objective seen in relation to how things have developed since the first Bicycle Account of 1995 when 31% cycled to work, and sustained and serious efforts will be required to achieve it.

New bicycles as part of the street scene

Bicycle messengers have been part of the Copenhagen street scene for a long time and play an important role for the Copenhagen traffic environment because their numerous trips are primarily carried out in the most densely populated sections of town, trips which would otherwise most likely have been carried out by taxi or van. In previous Bicycle Accounts there used to be a key figure for the number of trips carried out by bicycle messengers. This key figure has been discontinued in the present Bicycle Account partly because it is difficult to get reliable figures and partly to make room for other, more topical key figures.

In 2001 a new alternative to taxis was launched and there are now bicycle rickshaws on the roads and cycle tracks of Copenhagen. Bicycle rickshaws serve as ordinary taxis for passengers as well as delivery vans, thereby contributing to a better environment. They do, however, create problems in certain areas due to their size as it can be difficult to pass them on narrow cycle track sections.



Cycle tracks and reinforced cycle lanes built in 2001 and 2002:

Classensgade

H.C. Andersens Boulevard near Town Hall Square and Tivoli

Jernbane Allé

Lygten

Tietgensgade

Toftegårds Allé

Vindebrogade

Islands Brygge

Østrigsgade

Ørestads Boulevard

Grønjørdsvej

Arne Jacobsens Allé

Klaksvigsgade

Weidekampsgade

Better Cycling Infrastructure

Length of the cycle track network

Cyclists are quite satisfied with the length of the cycle track network, but there is still work to be done. The City of Copenhagen's cycle tracks, which were built in the course of 100 years, provide ample opportunity for mapping out safe and secure routes, to work, for example. More cycle tracks and cycle lanes are in the planning stage. The Cycle Track Priority Plan 2002-2016 was passed in 2001. The plan calls for 51 km of new cycle tracks, reinforced cycle lanes, etc. The aim of the plan is to establish the comparatively cheaper reinforced cycle lanes as a temporary measure as quickly as possible wherever feasible. Proper cycle tracks are to be established as quickly as possible on the most difficult sections. Short sections linking together the rest of the cycle track network have high priority, as do sections travelled by many cyclists.

Since 2000 nearly 2 km of reinforced cycle lanes and 16 km of cycle tracks have been built. A large portion of the new cycle tracks are in the areas of new urban development (Ørestad and the Ny Tøjhus site). Cycle tracks in these two areas are not included in the Cycle Track Priority Plan.

Some of the sections which have been built in the rest of the city are quite short. They have, however, addressed essential issues for cyclists and have served to link the other sections more effectively. This applies to a short section of cycle track on H.C. Andersens Boulevard near the central Town Hall Square, for example.

In 2003-2004 a number of new cycle tracks and reinforced cycle lanes are projected, primarily in the city centre: Slotsholmen, Vindebrogade, Gothersgade, Enghavevej, Backersvej and Vermlandsgade.

Cycle track width

Queues on certain cycle tracks during rush hours may be the reason why cyclists in the Bicycle Account survey express their dissatisfaction with the width of cycle tracks. The increase in bicycle traffic is especially marked in the densely populated urban areas of Copenhagen and a first analysis indicates that during the rush hour there are capacity issues on 2-3 km of cycle track in these areas, i.e. the inner sections of Nørrebrogade and Østerbrogade, Frederiksborggade, Torvegade and possibly a few other places. The problems are due to the fact that a "two lane" cycle track (2.2 m in width) can only handle approximately 2,000 cyclists per hour. In the innermost sections of Nørrebrogade there are roughly 2,300 cyclists in the morning rush hour – the capacity limit is thus exceeded resulting in queues or very low speeds. A "three lane" cycle track (which is approx. 3 metres wide) would be able to handle 3,500 cyclists during peak hours, which presumably would provide sufficient capacity several years ahead.

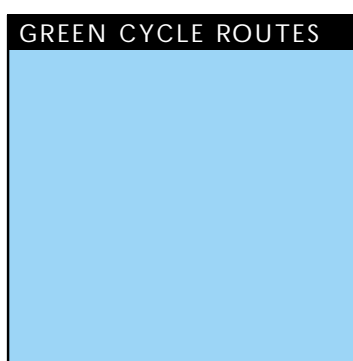
Green cycle routes

Green cycle routes are intended as a new option for cyclists, allowing them to cycle in more peaceful surroundings both when it comes to Sunday excursions and the daily trip to and from work. The plan for green cycle routes, which calls for 100 km, is intended in the long run to ensure that the cycle routes can be established.

The length of the green cycle route network has increased since 2000 by slightly more than 1 kilometre since the Nørrebro route has continued to be extended. In 2002 there are thus 32 km of green cycle routes.

The Nørrebro route will be extended in accordance with the politically approved phase plan. It is proposed in the Cycle Policy that a similar phase plan should be drawn up for the Amager route. One section of the Amager route is currently being built in connection with construction of the Ny Tøjhus site at Islands Brygge.

Several of the links across the harbour included in the Cycle Route Plan have become topical in connection with the Opera House, Teglværkshavnen and the Fisketorvet shopping mall. It appears that it may be possible to finance these links in connection with the urban development taking place in these areas. Work is being done to implement the Christianshavns route, the Kastrup Fort route and the University route, which include the above-mentioned cross harbour links.



Green cycle routes are a new key figure in the Bicycle Account, as the key figure has hitherto merely included the length of the green cycle track network generally. From now on the key figure will show the City's total green cycle route network in kilometres.

KEY FIGURES

Length of cycle tracks:

2002	323 km
2000	307 km

Length of cycle lanes:

2002	12 km
2000	10 km

Length of green cycle routes:

2002	32 km
2000	31 km

Most of the new cycle tracks are in areas of new urban development, Ørestad and the Ny Tøjhus site. The roads in these areas are private until further notice, but the major roads – including cycle tracks – will later become public.

Better conditions for cyclists in the City Centre

The historic city centre is a Cycle Policy focus area. This is due to the fact that a large number of cyclists travel there, all of whom would benefit from improvements, such as cycle tracks, cycle link-ups, cycling against traffic in one way streets, bicycle parking facilities, etc.

Several of the cycle tracks that have been built since 2000 are in the city centre. Nevertheless, there are a number of difficult sections left in the area, for example Stormgade, where there is no immediate space for cycle tracks.

The simple cycle lanes which were established on an experimental basis along six streets in the city centre are to be upgraded into reinforced cycle lanes in accordance with the Cycle Track Priority Plan. The first of these sections, Tietgensgade, was provided with proper cycle tracks in 2002. The cycle lane in Store Kongensgade is due to be reinforced within a couple of years by establishing short sections of cycle track at bus stops. In Gothersgade and Lille Kongensgade, in an attempt to extend and improve cycling link-ups in the city centre, plans have been drawn up for allowing cyclists to cycle against the one-way traffic.

In the historic city centre cyclists are now allowed to cycle against the traffic in a number of small streets. In Farvergade, for example, which is included in a future two-way cycle link-up between Town Hall Square and Kgs. Nytorv, a cycle lane has been established against the one-way traffic.

There are now 3,300 bicycle parking spaces in the historic city centre, 400 new spaces having been established within the past year or so. In the rest of the City Centre and the densely populated areas around it an additional 850 new spaces have been established.

Cyclists have become less satisfied with the amount and width of cycle tracks. 58% of cyclists are presently satisfied with the amount of cycle tracks compared to 66% in 2000. 24% are presently dissatisfied. The degree of satisfaction with cycle track width has markedly decreased. Only 45% are currently satisfied with the width of cycle tracks compared to 62% in 2000. 37% are dissatisfied – compared to 24% who were dissatisfied in 2000. This change is most likely due to the cycle track congestion discussed above.

In the survey interviews the various road user groups were asked whether they had noticed that special efforts have been made for cyclists in the City Centre over the past couple of years. Almost half noticed that work has been done – two thirds noticed that more cycle tracks have been established, while fewer (under 10%) noticed that more bicycle parking facilities have been set up and that cyclists are now allowed to cycle against the traffic at certain points.

Cycle Track Maintenance

In Copenhagen there has been a great deal of focus on maintenance of roads and cycle tracks. It is essential that cycle tracks are well maintained if cyclists are to feel like cycling. The criticism of poor cycle track maintenance in the previous Bicycle Accounts has resulted in systematic efforts. This time the cyclists express their appreciation of the City's efforts since the number of cyclists who are satisfied with cycle track maintenance has increased since 2000.

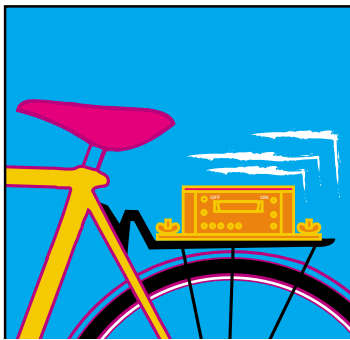
Cycling comfort

In the summer of 2000 an inspector cycled up and down all cycle tracks assessing them in terms of road surface cycling comfort. The cycle tracks were assessed again in 2002 and the result of the City's initiatives appears in the chart below:

	Summer 2000	Winter 2002
Completely new or flawless surface	57%	79%
Uneven but acceptable surface	23%	16%
Unsatisfactory surface - extremely unpleasant	10%	5%

The Cycle Policy states that one of the City's goals is to improve cycling comfort to such a degree that no more than 5% at most of the cycle track network will have an unsatisfactory surface. This objective has been achieved in 2002, but will require continuous work to maintain the proportion of poor cycle tracks at under 5%.

There are plans for reducing the number of very poor sections in 2003. However, there are no funds for improving the sections which are not yet completely unacceptable (although well on the way) – in other words no preventive measures are provided for. In 2003 slightly over DKK 6.8 m have been earmarked for cycle track maintenance. Preventive measures would annually cost an extra DKK 2.7 m.



The "comfortometer"

Previous years' assessments of the standard of cycle track surfaces were based on comprehensive reconnaissance, which is of course subjective to a certain degree. The City has now purchased a "comfortometer", developed in the Netherlands, which in future will register cycle track comfort more objectively. The first measurements will take place in 2003.

The comfortometer is attached to the bicycle's baggage rack in a small box. When the bicycle is being ridden, the comfortometer can register the vertical accelerations that a bicycle undergoes when in motion and thereby the comfort of the cyclist during the journey. A more objective and more easily comparable description of the individual cycle tracks is hereby ensured.



KEY FIGURES

Maintenance:

2002	DKK 6.8 m
2000	DKK 9.1 m

Cycling comfort:

(cycle tracks with an unsatisfactory surface)

2002	5%
2000	10%

Cyclists have become more satisfied with the level of comfort. Only 6% of cyclists say they are disturbed by uneven cycle tracks whereas 7% are disturbed by uneven road surfaces. In 2000 the corresponding figures were 13% and 9%. 45% are satisfied with cycle track maintenance compared to 40% in 2000 – whereas 36% say they are dissatisfied. On roads without cycle tracks only 28% of cyclists are satisfied with maintenance which, however, is better than in 2000 when only 23% were satisfied.

Cycling Saves Many Lives

There are significant health benefits to be derived from moderate exercise, such as cycling to work. From a social point of view the health benefits derived from cycling in the form of enhanced quality of life and lives saved vastly exceeds the risk of being injured or killed in traffic. For the individual, too, health and well-being are a significant argument for cycling. Naturally everything possible must be done to reduce the number of casualties. The best way to do this is to define objectives that are both ambitious and realistic.

Aims

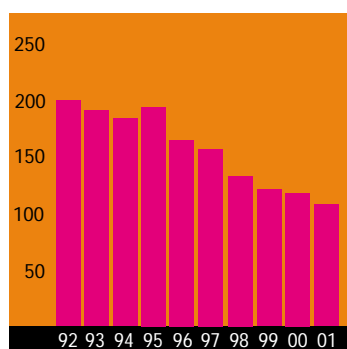
The City of Copenhagen has two explicit target goals for reducing cyclist casualties:

- The number of seriously injured cyclists shall be reduced by 40% in the period 2001-2012, in accordance with the Road Safety Plan for Copenhagen.
- Cyclist risk (measured per cycled kilometre) shall be reduced by half by 2012, in accordance with the Cycle Policy.

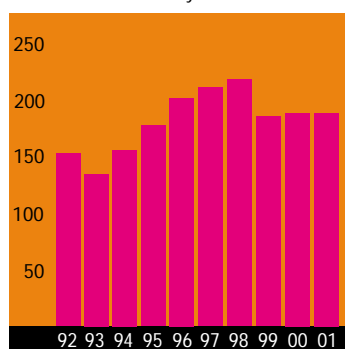
Serious casualties

In the course of the past 10 years the number of seriously injured cyclists was reduced by 25%. In 2002 the police registered 172 serious cyclist casualties (the figure is adjusted). 4 cyclists were killed in Copenhagen traffic in 2002. A 4% reduction in cyclist risk occurred between 2000 and 2002.

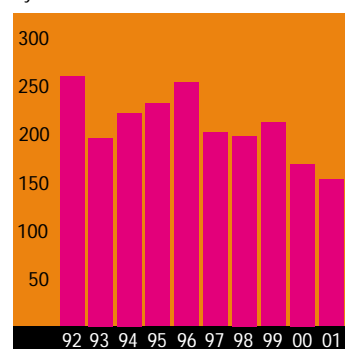
Pedestrians



Motorists and motorcyclists



Cyclists



KEY FIGURES

Serious cyclist casualties

2002	172
2000	168

Intersections with measures for cyclists:

2002	36%
2000	28%

The key figure for signal intersections shows the percentage of signal intersections at which measures have been taken to regulate cyclist safety, security and ease of passage. The key figure no longer provides an adequate picture of cycling improvements at signal intersections.

Cyclists are the focus of special attention in the City's Road Safety Plan since reduction of the number of cyclist casualties is defined as an area of special focus (see the above-mentioned aims).

Roughly two thirds of all serious cyclist casualties occur at intersections, which is why a great deal of effort is being put into intersection improvements. In 2002 the situation is that safety measures have been taken at 36% of city intersections. In 2001 and 2002 a great many blue marked crossings were established. One of the challenges at intersections is to improve cyclist safety and sense of security without reducing ease of passage for cyclists. Alterations in the key figure are under consideration for the next Bicycle Account so as to cast more light on this issue.

The risk of injury

For a Copenhagen cyclist the risk of being injured or killed in traffic has been reduced by almost half during the course of the past 10 years. Part of this is doubtless due to improvements for cyclists in the traffic environment, but it may also be due to the fact that when the number of cyclists increases, the risk to the individual cyclist is significantly reduced.

Sense of security

Security is the cyclist's subjective sense of the risk of being run over. This perception can be based on actual experience in dangerous traffic situations or merely a feeling. The more one cycles, the safer one feels. Only half of the road users who are primarily motorists or users of public transport, or who only cycle rarely, feel secure while cycling. This feeling of insecurity may be a factor in their decision not to cycle.

Campaigns such as "We bike to work" may help provide new personal experiences and change attitudes so that even more people will dare cycle in Copenhagen.

Risk of injury: Number of serious cyclist casualties per 1 m km.



KEY FIGURES

Risk:
(serious cyclist casualties per 1 million cycle kilometres)

2002	0.46
2000	0.48

Security:

2002	56%
2000	57%

56% of cyclists feel secure cycling in Copenhagen while another 26% feel partially secure. Only 18% feel insecure. This corresponds more or less to the last Bicycle Account for 2000.

The primary reason for cyclists to feel insecure or partially insecure is cars (64%), but other cyclists (43%) and buses (26%) also play a role. 13% of cyclists say that they have been injured in a traffic accident within the past two years.

Will we Achieve our Goals?

In 2002 for the first time the City of Copenhagen published a Cycle Policy including objectives and focus areas. The City is also drafting a Traffic and Environment Plan. The Bicycle Account evaluates the Cycle Policy's target figures and provides a basis for making adjustments in the work being done.

Cycle Policy

The Cycle Policy 2002-2012 draws attention to cycling as an environmentally desirable and effective means of transport and coordinates initiatives for improving cycling conditions. Quantitative objectives have been formulated to the effect that more people shall cycle, risk shall be cut in half, sense of security improved, travelling speed and comfort increased. Systematic efforts will be made in nine focus areas.

Drafting the Cycle Policy has provided an excellent opportunity for considering cycling conditions in a broader perspective. Establishing cycle tracks along the roads is not enough – a continuous cycling network must be provided for cyclists based on transport quality including safety, security, travelling speed, health, comfort and cycling pleasure.

Follow-up on the Cycle Policy's goals and initiatives

The Bicycle Account is used to keep an eye on the work being done to achieve the Cycle Policy goals. Activities have to be adjusted along the way so as to create optimal cycling conditions within the limits of the allocated resources.

The Cycle Policy target figures are followed in the Bicycle Account to monitor how well Cycle Policy goals are being achieved.

- The proportion of people cycling to workplaces in Copenhagen was 32% in 2002. This is a slight fall compared to the last Bicycle Account when the figure was 34% (1999) and unfortunately a change for the worse.
- In 2002 cyclist risk was 0.46 serious cyclist casualties per 1 million cycle kilometres. Taking the year 2000 as the starting point for risk, a 4% risk reduction occurred in 2002. This is a continuation of the 1990s trend, which reduced cyclist risk by half.

THE CYCLE POLICY'S FIVE GOALS

- The proportion of people cycling to workplaces in Copenhagen shall increase from 34% to 40%.
- Cyclist risk of serious injury or death shall decrease by 50%. This is the equivalent of 84 serious cyclist casualties.
- The proportion of Copenhagen cyclists who feel safe cycling in town shall increase from 57% to 80%.
- Cyclist travelling speed on trips of over 5 km shall increase by 10%.
- Cycling comfort shall be improved so that cycle track surfaces deemed unsatisfactory shall not exceed 5%.

- In 2002 56% of cyclists said they feel safe cycling in Copenhagen traffic. This is not a positive shift in relation to 57% in 2000.
- Cyclist travelling speeds for trips of over 5 km shall be improved by 10% by 2012. This goal can not yet be assessed as a registration technique must first be developed.
- The goal that sections of unsatisfactory cycle track surfaces shall not exceed 5% was achieved in 2002.

The Traffic and Environment Plan 2003 focuses on cycling

It is easy to forget on a daily basis that Copenhagen bicycle traffic contributes significantly to the relatively excellent state of the city's environment and its traffic situation. While bicycle traffic has fallen in the rest of the country, Copenhagen (along with other cities making a concentrated effort for bicycle traffic) has experienced a rise.

It has become apparent that the citizens of Copenhagen place a high priority on good cycling conditions. The proposal for the Traffic and Environment Plan 2003 is expected to recommend:

- Building more cycle tracks and reinforced cycle lanes
- Widening 2-3 km of cycle tracks
- Building more cycle routes
- Improving bicycle parking facilities
- Allocating more resources for cycle track maintenance

A proposal for the Traffic and Environment Plan is expected to be submitted for public hearing in August 2003.

THE CYCLE POLICY'S NINE FOCUS AREAS:

- Cycle tracks and reinforced cycle lanes
- More green cycle routes
- Improved cycling conditions in the city centre
- Improved feasibility of combining cycling and public transport
- More and better bicycle parking facilities
- Better signal intersections
- Better cycle track maintenance
- Better cycle track cleaning
- Campaigns and information

Looking ahead to the Bicycle Account for 2004 – initiatives in the field of cycling

A more rapid extension of the cycle track and reinforced cycle lane network would make it possible to achieve the Cycle Policy objective that 80% of Copenhageners are to feel safe cycling in Copenhagen. If no more facilities are provided, most of the Copenhageners who do not cycle at all will continue to feel insecure at the thought of cycling in Copenhagen. Widening the cycle tracks that are congested would also remove a source of irritation for many cyclists.

More green cycle routes will enhance the perception that cycling is recognized as an independent means of transport in Copenhagen. In time cycle routes will provide commuters and weekend cyclists with an opportunity to travel around Copenhagen in peaceful, green surroundings.









Campaigns such as the Environmental Transportation week (during which traffic solutions are tested in practice and there is a focus on transport habits) and "We bike to work" campaigns can provide more people with the opportunity of seeing for themselves how delightful cycling in Copenhagen can be. Mobility planning in collaboration with businesses would also encourage people to cycle to work – in certain cases combined with trains or buses.

After systematic efforts were made to provide smoother asphalt surfaces on the cycle tracks cyclists have become more satisfied with cycle track surfaces. Although cycle track maintenance for the time being does live up to the Bicycle Policy goals, it will prove difficult to maintain the excellent result in the future if financial resources are not increased.

Cyclists are far from satisfied with bicycle parking facilities. This emphasizes the need for drawing up the action plan for bicycle parking announced in the Cycle Policy.

Cyclist road manners and cyclist infringement of traffic regulations are becoming a greater and greater issue for other cyclists, pedestrians and motorists. Campaigns aimed at cyclists could help improve road manners in future.

Results 1995-2002

What cyclists think	2002	2000	1998	1996	1995
 Copenhagen as a city for cyclists	8	8	8	7	6
 Cyclist sense of security	6	6	6	6	5
 Amount and width of cycle tracks	5	6	6	6	6
 Cycle track maintenance	5	4	5	5	–
 Road maintenance	3	2	3	2	–
 Feasibility of combining cycling and public transport	5	5	4	5	4
 Bicycle parking	3	4	3	4	4
 City information on traffic planning	4	3	3	3	2
Key figures	2002	2000	1998	1996	1995
Kilometres cycled on major roads (m km per day)	1.02	0.96	0.84	0.85	0.73
Kilometres driven by car on major roads (m km per day)	4.54	4.43	4.28	4.05	3.92
Cycle track length (km)	323	307	302	294	293
Cycle lane length (km)	12	10	6	–	–
Green cycle route length (km)	32	31	30	29	29
Cycle track maintenance (DKK m)	6.8	9.1	5.3	4.7	3.9
Serious cyclist casualties (number)	172	168	197	252	231
Signal intersections with measures for cyclists	36%	28%	26%	24%	23%
Cycle Policy target figures	2002	2000	1998	1996	1995
Cycle to work (´ = 2001)	32%	34%	30%	30%	31%
Cyclist risk (serious casualties per 1 m km)	0.46	0.48	0.64	0.81	0.87
Cycling comfort (cycle tracks with unsatisfactory surface)	5%	10%	–	–	–
Cyclist travelling speed	–	–	–	–	–
Cyclist security	56%	57%	58%	60%	51%

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City of Copenhagen
Building and Construction Administration
Roads & Parks Department