## ACTION PLAN FOR GREEN MOBILITY SHORT VERSION





Today the motorized traffic in Copenhagen creates problems with congestion, pollution and  $CO_2$ -emmissions. Consequently, we must focus on the modes of transport that makes it quick and easy to get around Copenhagen while also reducing pollution and  $CO_2$ -emissions. This means, among other things, that we will urge more people to cycle and use public transport.

**Ayfer Baykal** Mayor of Technical and Environmental Administration

In Copenhagen we rely on green sustainable mobility. We aim to make it easier, quicker and more sustainable to move from A to B. Green mobility plays an important role in Copenhagen's plan to be the world's first carbon neutral capital as well as it simplifies the everyday life of citizens and businesses in Copenhagen

**Frank Jensen** Lord Mayor of Copenhagen

# **VISION AND GOALS**

MOBILITY IN COPENHAGEN MUST BE GREENER AND MORE EFFICIENT IN ORDER TO STIMULATE GROWTH, CONTRIBUTE TO A CARBON -NEUTRAL CITY AND TO A GOOD LIFE FOR COPENHAGENERS.

Green mobility is about making it easier, healthier and more efficient to get around in Copenhagen – and to ensure that choosing a green means of transport is an option for everybody. It is important to create the best possible conditions for the individual road user to get to their activities, for businesses to attract employees and for goods delivery in the city to work smoothly. All this in the most efficient and environmentally friendly way.

Green mobility is an essential part of the City of Copenhagen's vision for green growth and quality of life. Copenhagen must remain one of the world's best cities to live in, and it must be a safe and inspiring city with its unique blend of old and new buildings, green oases and people in open spaces.

Improved mobility is a prerequisite for growth, and at the same time developments in the field of transport may constitute a growth factor in their own right in terms of new technology and new, innovative solutions.

Extensive measures are needed to ensure improved mobility and growth conditions for the business sector, while also improving the environment and reducing CO<sub>2</sub> emission.

#### ACHIEVING THE VISION WILL BE BASED ON:

- Developing Copenhagen to further strengthen the conditions for green mobility.
- Improving green means of transport.
- Adapting the entire transport system to a more sustainable traffic flow.
- Using information and incentives to increase the use of green means of transport.

# **OVERALL APPROACH**



The vision of efficient and green mobility which provides growth and increased quality of life can only be achieved through extensive, joint efforts. In Copenhagen that means that we want to be the world's best cycling city, while also extending public transport with more metro, light rail and fast, comfortable buses.

The many new citizens of Copenhagen will be able to live in new urban development areas, which will increasingly be designed for cyclists and with good public transport connections from the start. A new, large city district such as Nordhavn will be serviced by a metro from the start, and will also have access to the overall road network, potentially via a tunnel. At the same time, the existing city districts will be redesigned to reduce traffic volume.

These measures are extensive and investment-intensive, and to ensure optimum coherence and increased use of green means of transport, the overall investments in mobility in Copenhagen are now supplemented by a green mobility package containing 25 specific initiatives.

#### MOBILITY WILL BE CHALLENGED TOWARDS 2025:

- There will be more than 100,000 new citizens and 20,000 new workplaces.
- Congestion on roads, paths and rails is already a problem.
- Economic growth requires good mobility.
- Copenhageners must have cleaner air, less noise and better opportunities for moving around.
- Copenhagen must be carbon -neutral.

Metro, A-buses and light rail + Regional cycling networks and a main cycling network in the city

Tunnel at Nordhavn and reduced traffic in city districts and high streets

Green mobility package

Increased growth and mobility, better environment and reduced climate effect

# THE GREEN MOBILITY PACKAGE

For many years the City of Copenhagen has been working to ensure a better environment and good traffic conditions in the city through a broad range of measures. The Action Plan for Green Mobility is based on this extensive work, and accounts for the investments in infrastructure and overall measures that are already on their way to Copenhageners.

The action plan also introduces a package of new, concrete initiatives which can be implemented within the next five to ten years to further increase green mobility.

## THE GREEN MOBILITY PACKAGE IS BASED ON FIVE THEMES THAT BUILD UPON EACH OTHER:

#### URBAN DEVELOPMENT

The city is developed and designed in a way that makes green means of transport the first choice

#### **2** GREEN MEANS OF TRANSPORT

The green transport systems are extended

#### TRANSPORT SYSTEM

The road network is adapted to smooth traffic flow

#### 

The green means of transport are made more attractive by better information and incentives for choosing them

#### 5 INNOVATION

Development of transport technology and new concepts makes green growth possible.

Each theme has specific priority areas which contain concrete initiatives.



The initiatives have been selected on the basis of existing planning, the main challenges of the coming years and on an extensive involvement process with workshops, meetings and conferences for a number of stakeholders such as interest groups, transport authorities, local councils, local environment centres, businesses, researchers, children and young people.

### THE CRITERIA FOR THE SELECTION OF THE INITIATIVES ARE THAT THEY:

- increase the use of green transport.
- improve green means of transport.
- incorporate proposals from the involvement process.
- build on and support existing plans, strategies and initiatives.
- have not been started within other frameworks.

#### **25 INITIATIVES**

Action Plan for Green Mobility includes 25 selected initiatives to support the goals for efficient and green mobility in Copenhagen. The following lookups outline the content in 10 of the 25 initiatives.

## THEMES, MEASURES AND INITIATIVES – AN OVERVIEW

Overall the green mobility package includes 25 initiatives with investments of between DKK 0.8 and 1.2 billion (€110 to €161 mio.). Not included in these investments are potential costs of further extensions of metro, light rail, the Nordhavn tunnel, parking garages or high street reconstructions . It must be emphasized that the initiatives have a criss-cross effect on each other, and that there is no single solution to the city's mobility issues. A number of the initiatives can be financed within the existing framework, while other initiatives require further financing. An overview of the financial aspects of the initiatives can be found in the complete version of the Action Plan for Green Mobility.

#### **URBAN DEVELOPMENT**

Municipal plan Parking

#### **GREEN MEANS OF TRANSPORT**

#### WORLD'S BEST CYCLING CITY

- 1. PLUSnet
- 2. Shortcuts for cyclists
- 3. Cycle super highways
- 4. Cycling services

#### **PUBLIC TRANSPORT**

- 5. Bus priority and bus stop conditions
- 6. High-level traffic hubs
- 7. Buses on alternative fuels

#### PEDESTRIANS

8. Pedestrian networks

#### **GREEN TRANSPORT SYSTEMS**

- 9. Infrastructure for electric and hydrogen cars
- 10. Car sharing

#### **COHERENCE - THE ENTIRE JOURNEY**

- 10. City bikes
- 11. Bike and ride

#### TRANSPORT SYSTEM

#### **USING URBAN SPACES AND ROADS**

- 12. Road network plan
- 13. High streets
- 14. Smart and safe traffic management
- 15. Flexible street areas

#### **OPTIMIZED TRANSPORT SYSTEMS**

- 16. City logistics green goods delivery
- 17. Mobile application for car pooling

#### INCENTIVES

#### **MOBILITY MANAGEMENT**

- 18. Smart (IT) information
- 19. The road users of the future
- 20. Local collaborations

#### INNOVATION

#### **GREEN MOBILITY TECHNOLOGY**

- 21. Laboratory for green technology
- 22. E-mobility
- 23. Environmental zones

#### **IDEA DEVELOPMENT**

24. Innovation workshop.



# URBAN DEVELOPMENT

### GREEN MOBILITY MUST BE INCORPORATED INTO URBAN PLANNING IN COPENHAGEN.

Copenhagen must become the metropolis for green growth and by 2025 be the world's first carbon -neutral capital. Sustainable urban development and green mobility are central elements of that development. The coherence between mobility and the city's development is essential for Copenhageners and the city's guests to choose green means of transport.

This is why green mobility is incorporated into urban planning and green mobility is prioritized when developing municipal planning.

The City of Copenhagen strives to incorporate green mobility solutions from the start when new urban areas are planned and extended. The actual physical design of new as well as existing urban areas must support the use of green means of transport.

To promote that development the City of Copenhagen has developed a sustainability tool, which is used to assess the extent to which a planning project meets the City's objectives of promoting sustainability.

### THE MEASURES FOR THE CITY'S DEVELOPMENT INCLUDE:

- New urban areas are provided with good public transport and good conditions for cyclists.
- Density in existing and new urban areas.
- Proximity to functions.
- Proximity to train stations.
- Parking-strategy and parking standards.

### GOAL

#### THE MUNICIPAL PLAN FOR THE CITY OF COPENHAGEN STATES THAT:

The City of Copenhagen's overall vision for transport is that the share of running transport is made up of a minimum of one third by bicycle, a minimum of one third by public transport and a maximum of one third by car.

## SUSTAINABLE AND DENSE URBAN DEVELOPMENT IN NORDHAVN



EXAMPLE

More citizens and more workplaces are moving to Copenhagen, which is why a number of new urban areas are being developed. One of the largest new urban areas is Nordhavn, which will be the sustainable city district of the future. Nordhavn will be a dense city district with good access to the existing city, with a subsidiary line of the Metro City Ring providing a metro connection to the inner city areas and Frederiksberg.

Green mobility must be incorporated from the start, and the vision is that Nordhavn will be a city district where well-planned paths, cycling bridges and the metro make sustainable means of transport the obvious choice. At the same time Nordhavn will be a city district where the testing of new solutions and new technology can strengthen Copenhagen's position as a laboratory for green growth.

### POTENTIAL

Good accessibility, proximity to activities and density around public transport are crucial if green means of transport are to become the most attractive.

## PARKING STANDARDS



Parking standards in Copenhagen have been determined in consideration of both the citizens and the environment in the city. Citizens and the business sector must be able to park close to their residence and business respectively, while also reducing car commuter traffic to workplaces in Copenhagen.

The municipal plan contains the city's standards for car and bicycle parking, providing appropriate parking by places of residence and commercial buildings.

### GREEN MOBILITY HAS BEEN INCORPORATED INTO THE PARKING STANDARDS THROUGH:

- Minimum specifications for bicycle parking, including requirements for cargo bikes by places of residence and shops. As a starting point, half of the cycle parking spaces should be roofed.
- Lower car parking standards in the dense city districts which have good public transport service and in the new urban development areas, where focus is on dense, mixedfunctional and sustainable development.

- Car parking standards which set a maximum level for the number of spaces rather than a minimum requirement.
  For instance, a maximum of one space per 200 m<sup>2</sup> can be established by residential buildings in the dense city districts.
- The possibility that local plans can require that a share of the parking spaces are prepared for or are provided with electricity for the recharging of electric cars.

### POTENTIAL

In areas with housing only, there must be a minimum of one car parking space per  $200 \text{ m}^2$  and a maximum of 1 per  $100 \text{ m}^2$ , and there must be 2.5 cycle parking spaces per $100 \text{ m}^2$ .



# GREEN MEANS OF TRANSPORT

EVERYBODY IN OPENHAGEN – INCLUDING CITIZENS, BUSINESSES, COMMUTERS AND GUESTS – SHOULD BE ABLE TO MAKE GREEN AND HEALTHY TRANSPORT CHOICES.

Green means of transport are about bicycles, public transport, pedestrians, car-sharing and electrical and hydrogen cars. To make it more popular to use them they need to be improved and expanded – and cohesion must be created so that they complement each other.

It is Copenhagen's goal to become the world's best bicycle city and for half of commuters to cycle to their place of work or education. That means that whereas today we see three cyclists, in the future we will see four. It will take an extensive effort to reach that goal, which is why bicycles must be incorporated into all planning and all solutions in the city.

The City of Copenhagen aims for fast, high-class public transport in the form of underground metro in the dense city districts – linked with high-priority bus solutions and modern light rails outside the dense city districts. A good and flexible network between buses, light rails, metro and trains is a high priority, just as the interaction between cycling and public transport is an important contribution to creating better alternatives to cars, especially for longer journeys.

The conditions for pedestrians are particularly important for green mobility. Both to support public transport but also as its own – healthy and green – means of transport. Walking is a popular means of transport which must be considered on equal terms with other means of transport.

\* Apart from these goals, a number of the City of Copenhagen's goals for green transport have been set in the Eco-Metropolis, the Cycle Strategy "Good, Better, Best" and the CPH 2025 Climate Plan.

## GOALS\*

#### BICYCLES

- The share of the PLUS network which has three lanes will be 40% by 2015 and 60% by 2020.
- Cyclists' travel time will be reduced by 5% by 2015 and 10% by 2020 as compared to 2010.
- The share of cyclists in Copenhagen who find the cycle tracks well maintained will be 70% by 2015 and 75% by 2020.
- The share of Copenhageners who find that bicycle culture affects the city life positively will constitute 70% by 2015 and 75% by 2020.

#### **PUBLIC TRANSPORT**

- 2% more passengers on public transport by 2015 and 20% more in 2025 as compared to 2011.
- The travel time of buses will be reduced by 10% from 2011 to 2025.
- The regularity of buses will be improved by 20% from 2011 to 2025.
- In 2025 public transport will be carbon-neutral.

#### PEDESTRIANS

- In 2025 public transport will be carbon-neutral.
- In 2015 there will be a high-priority pedestrian network.

#### **GREENER CARS**

- There will be 5,000 electric charging points and four hydrogen filling stations by 2020.
- There will be double the amount of shared cars in 2020 as compared to 2012. Electric cars will make up at least 10% of these.

#### **COHERENCE - THROUGHOUT THE ENTIRE JOURNEY**

- City bikes will be part of the public transport system.
- The interaction between bicycles and public transport will be strengthened through physical improvements at train stations and bus terminals.

## THE WORLD'S BEST BICYCLE CITY THE PLUS NETWORK AND SHORTCUTS



Surveys show that Copenhageners choose the bicycle because it is the easiest and fastest. If the share of cyclists is to be further increased, the bicycle must be made to be the easiest and fastest for even more people than today. This could be done by establishing a direct, coherent and comfortable network of bike paths and cycling routes.

Therefore a PLUS network will be selected, consisting of green cycling routes, cycle super highways and the most congested bicycle routes. In this network the cycle tracks will be extra wide, so that many cyclists at the same time can ride securely and comfortably at the speed which suits the individual cyclist.

As travel time is a key parameter there is high priority on establishing missing links, e.g. in the form of bridges and tunnels, on creating shortcuts in junctions, across squares and on allowing cyclists to cycle against the one-way direction.

### POTENTIAL

More cyclists in Copenhagen will improve the environment, reduce congestion and give socio-economic benefits.

Every person who chooses cycling contributes a net profit for society of DKK 1.22 ( $\in$  0.16). Taking a car results in a net loss for society of DKK 1,13 ( $\in$  0.15).

# CAR-SHARING



Shared cars as a replacement for everybody owning their own car mean fewer cars and less driving. Car-sharing can meet the transport needs of those who have chosen not to buy a car or those who choose to sell their car. As experience shows that people who are part of a car-sharing programme both cycle and take trains and buses more, access to shared cars supports green transport. Shared cars are also green mobility because members of a car-sharing programmes drive significantly fewer kilometres by car than ordinary drivers, and because they can choose the exact size of car that suits their needs.

For these reasons the City of Copenhagen wants to promote the use of shared cars. This is already on the way by providing reserved parking spaces for shared cars and by allowing free parking for car-sharing in the payment zones. To make the use of car-sharing even more widespread the City of Copenhagen is looking into other options such as cooperating with relevant partners.

Options further include a requirement for car-sharing spaces by new buildings, company membership of car-sharing programmes, more visible marking of street areas and targeted campaigns followed by pilot projects.

### POTENTIAL

Typically a shared car will replace between four and ten private cars, and experience shows that previous car owners drive significantly less than before.



# **TRANSPORT SYSTEM**

### HIGH MOBILITY AND ACCESSIBILITY ARE ENSURED THROUGH AN INTELLIGENT AND SUSTAINABLE TRANSPORT SYSTEM.

The entire transport system must be optimized so that Copenhagen's streets are used in the best possible way, and so that road users can get around in the city in the most effective, smooth and environmentally friendly way.

Today the modes of transport in Copenhagen are very mixed. Practically all roads are used by all types of road users. But there is not enough space for everybody everywhere. To take green transport into account, to get traffic to flow and to reduce pollution it is necessary to prioritize the use of public roads and urban spaces.

More optimized use of the existing road transport systems will also contribute to reducing the number of vehicles. The roads could be utilized better by e.g. each vehicle transporting more people or more goods.

### GOALS

#### **USE OF ROADS AND URBAN AREAS**

- By 2014 a new road network plan with clear prioritization of roads will form the basis for operation, planning and administration of roads and urban spaces.
- IT solutions will improve traffic management by favouring green mobility and providing a smooth traffic flow.
- By 2020 the number of fatalities and seriously injured in traffic must be reduced by 50% as compared to 2007-2009.

#### **OPTIMIZED TRANSPORT SYSTEMS**

- System for optimized goods delivery will have been tested and developed before 2015.
- 5% of car commuters will use car pooling to travel to work by 2020.



#### **CAPACITY OF VARIOUS TRANSPORT SYSTEMS**

The city's infrastructure is congested and in general there is a struggle for urban space. That is why it is important to make the best use of the space.

The green means of transport take less space per person and thus they ensure better use of the scarce urban space. The figure shows how many persons one track of each transport mode can carry per hour. E.g. the same space can carry 7-10 times as many cyclists as cars.

## HIGH STREETS – AMAGERBROGADE



Copenhagen's high streets are important traffic arteries which the main bus and cycling routes run through. They are also central shopping and pedestrian streets and important meeting places. The coexistence of all these functions is the special quality of high streets, but it also poses a number of challenges and a need for initiatives to tie the functions together.

The first major reconstruction of a high street was Nørrebrogade, and work has now started on Amagerbrogade.

The reconstruction of Amagerbrogade will make the commercial environment more attractive, provide better facilities for people to stay in the street and ensure better conditions for pedestrians and cyclists. High priority will also be given to passability for buses and the comfort of bus passengers.

There will still be car traffic on the new Amagerbrogade. But the amount and speed of passing car traffic will be reduced and the lanes will be narrowed, without affecting goods delivery to shops and with a minimum of inconvenience for the adjoining residential streets.

### POTENTIAL

The reconstruction of Nørrebrogade has increased the number of cyclists by 11% on the outer part and by 20% on the inner part. It has also resulted in 45% fewer accidents, 10% shorter travel time for buses and 45% less car traffic, a significantly lower noise level as well as more people staying in the street.

## SMART AND SAFE TRAFFIC MANAGEMENT



Car traffic in the city must be managed in the most intelligent, safe and environmentally friendly manner. Intelligent transport systems (ITS) are an important tool for this purpose.

A new, central unit which monitors Copenhagen's 360 traffic lights will contribute to a smoother flow of traffic, and thereby reduce fuel consumption. It could be combined with instructions on eco-driving, so that not only the system but also the drivers are aware of optimizing the driving.

In addition it is essential that the system can give priority for buses and bicycles, helping them to get through the city smoothly.

In the long term it must be possible to adjust the system to a suddenly occurring incident, e.g. an accident or a special arrangement in the city. And the system must be able to interact with mobile applications for updated information.

### **POTENTIAL**

Optimizing traffic signal control, traffic management and eco-driving may reduce delays in traffic and lead to a more appropriate prioritization of modes of transport.



# INCENTIVES

### THE GREEN MEANS OF TRANSPORT IN COPENHAGEN MUST BE MORE ATTRACTIVE, EFFECTIVE AND VISIBLE.

The daily choise of transport depends on a number of factors for the individual. Generally time and price are important factors, but better, direct and easily accessible knowledge and information can also make the green means of transport more attractive. A coordinated effort through mobility management can optimize use of the infrastructure by combining traditional transport planning with tools such as information, campaigns and visibility. The approach takes the perspective of the users and focuses on influencing the journey before it begins, influencing the choice of transport mode and making transport more efficient. This can be done by working to change attitudes, by more information, campaigns and technical measures.

Mobility management can be developed further by cooperating with local partners, who can also help to target the measures.

### GOALS

#### MOBILITY MANAGEMENT

- Relevant data on mobility will be available in an open format by 2015.
- Transport will be incorporated into businesses' environmental management systems or will be part of their transport and HR strategies by 2015.
- There will be at least two cooperation fora for the promotion of green mobility.
- By 2015 all schools will have a transport policy which includes green mobility and road safety.

## THE ROAD USERS OF THE FUTURE



EXAMPLE

Children and young people are the road users of the future, and the transport habits they develop now will have great impact on their transport behaviour later in life. At the same time children can influence their parents' choice of transport. Many children prefer to walk or cycle, particularly because of the social aspect of talking or meeting up with their friends along the way. Parents are often the ones to choose the car for practical reasons.

Children should be involved in traffic solutions in their local area, through their schools or daycare and through the Children's Traffic Council. This will be done in cooperation with the programme "Safe Roads to School" and by involving ByX, which is the City of Copenhagen's competence centre for the involvement of children and young people in the sustainable development of the city.

Cooperation with schools and parents is supported by teaching materials and information on possible ways to advise on transport to and from school.

It is also important that the City incorporates the impact on children and young people into city planning. To this purpose a tool for child impact analysis is being developed. The tool will subsequently be used as a planning tool.

### POTENTIAL

Cooperating with schools may lead to car journeys to schools being reduced by up to 40%.

## LOCAL PARTNERSHIPS



The City of Copenhagen wishes to influence the individual citizen, commuter and visitor to choose green transport as often as possible. The best way to reach and influence the individual through partnerships with local actors who have proximity and knowledge of the local area. That will enable better conditions for concrete solutions that meet the needs of the individual.

To coordinate, target and make the effort visible a mobility programme is being established. The programme will promote green means of transport and make them visible in cooperation with local authorities, local environment centres, businesses, schools, transport authorities etc. This will ensure consistent efforts e.g. towards new citizens and in connection with first days of school.

The City of Copenhagen has already started a campaign targeted at businesses on Amager. Under the framework of the project "Formel M", a business network which works to influence the employees' transport habits has been initiated. The City is also cooperating with Bispebjerg Hospital on current and future transport, with the purpose of reducing the extent of parking and congestion issues around the hospital.

### POTENTIAL

Information targeted directly to car drivers has resulted in 11% less car trips in the UK.

Experiences from Sweden and UK point out that company travel plans can reduce the number of car trips to the company by 15-20%.



# INNOVATION

## COPENHAGEN AS THE LABORATORY FOR GREEN MOBILITY SOLUTIONS.

Climate solutions and green technology will be some of the essential competition parameters of the future. Copenhagen is working to create the solutions which other cities are looking for – also within transport. Therefore Copenhagen will be the place where green mobility solutions are tested in real life, and where there is room to invent completely new solutions. This will create solutions which the city itself will benefit from, and it will strengthen Copenhagen's role as the centre for cleantech businesses and research. It will also maintain and enhance the city's role as a laboratory for new cycling products and cycling concepts.

The City of Copenhagen has already taken the lead by supporting the development of electric and hydrogen technology through specifications for the procurement of municipal vehicles, by developing traffic signals with green waves for cyclists, and by laying LED lighting in bike paths, warning truck drivers of cyclists.

With the Action Plan for Green Mobility the City of Copenhagen wants to extend the options for transport technological development through regional and international cooperation across the business sector, research institutions, regions and municipalities.

### GOALS

#### **GREEN MOBILITY TECHNOLOGY**

- Copenhagen will function as a showcase for development, testing and use of green technologies and new solutions within transport.
- The City will participate in three research and development projects before 2015.
- The requirements of the environmental zones in Copenhagen will be made stricter and will cover more types of vehicles.

#### **IDEA DEVELOPMENT**

• There must be made room for innovative thinking and for testing of new ideas.

# E-MOBILITY



E-mobility covers a broad effort to ensure a larger share of electric vehicles in Copenhagen. Both in terms of public transport, cars, mopeds and bicycles, and if new types of transport arise in the market.

The City of Copenhagen has already been striving to increase the share of electric and hydrogen cars for several years, e.g. by changing the City's vehicle fleet. The promotion of electric vehicles and the interaction between charging and electricity production are developed under the framework of the CPH 2025 Climate Plan.

For this reason the Action Plan for Green Mobility focuses on electric bicycles and electrical cargo bikes. Electric bicycles increase the range of bicycle rides, they can help cycling with a heavy load, and they prevent cyclists from getting overly sweaty on their rides. Copenhagen's role as a laboratory for new cycling solutions will also be supported by new electric bicycle concepts.

The first step is to purchase electric bicycles which will be lent or leased to businesses, and organizations, associations, environmental centres and others can borrow the bicycles to show and test them and to investigate the possibilities for goods delivery by electric bicycle.

### CYCLING CONTRIBUTES TO GREEN GROWTH

In Greater Copenhagen 309 businesses are registered as selling, repairing or producing bicycles. These businesses generate around 650 full-time jobs and an estimated turnover of DKK1.3 billion. On top of this, there are other businesses such as bicycle rental businesses, bicycle taxis and bicycle couriers.

# ENVIRONMENTAL ZONES



EXAMPLE

Environmental zones in which vehicles are restricted based on their emissions can limit air pollution, and at the same time they support the technological development of cleaner vehicles.

Copenhagen already has an environmental zone, but the restrictions only cover heavy vehicles and particle pollution. The City wishes to extend the scheme to also include cars and delivery vans, and to expand the restrictions to also include other types of pollution, such as  $CO_2$  emission and particularly NOx.

However with the current legislation it is not possible to carry out these changes. The City of Copenhagen has entered into a dialogue with the Ministry of the Environment to change the legislation, in terms of types of vehicles as well as types of pollution.

Concurrently possible restrictions and designs and their potential for reducing air pollution are being assessed. The costs for car owners, businesses, the business sector and other stakeholders are considered in the assessments.

### POTENTIAL

The environmental zone for heavy vehicles has reduced the emission of particles on H.C. Andersen's Boulevard by 16% and the NOx emission by 8%.

In Berlin, where the environmental zone also includes cars, particle emission has been reduced by more than 58% and NOx by approx. 20%.

# OVERALL PLAN AND FOLLOW-UP

Copenhagen already has a wide range of green mobility – e.g. in the form of cycle tracks, cycling routes, pedestrian streets, S-trains, metro and bus lanes, and they are constantly being extended. The action plan places extra emphasis on an increased supply of green mobility, also when it comes to alternatives such as electric cars, city bikes, better information and new transport solutions.

The Action Plan for Green Mobility extends the transport concept to also include mobility. When we travel we usually do it to get from A to B, not for the journey in its own right. This is why mobility both is about Copenhageners having the functions that they use in their everyday lives within reach, and about being able to get around easily and fast. Therefore it is essential that urban planning and transport planning through the action plan are integrated to a larger extent.

More focus on the design of the city and the interaction with transport also opens the possibility for a journey being an experience in itself, providing exercise and the chance to meet others in the city's spaces.

The design and use of urban spaces are crucial to mobility and quality of life. The green mobility package includes a number of initiatives which affect the design of urban spaces; for instance high streets, pedestrian networks, flexible urban spaces and priority. Better use of the roads will be aided by traffic signal control and intelligent transport systems (ITS).

To follow up on the action plan, key figures and indicators in terms of green mobility are incorporated into the City's existing annual environmental accounts. Furthermore an annual follow-up on the 25 initiatives of the action plan will be carried out.

### SHARING

Better use of space and resources is the essence of many future solutions. We can use the city's spaces better, we can share more –also cars and bicycles–and we can use the space inside the vehicles better.

## TRANSPORTMODES FOR ALL TRIPS IN THE CITY OF COPENHAGEN





"It is about creating the best conditions for that each of us can transport us wherever we want to go, and it's about that a company can deliver goods to a certain place in the most efficient and environmentally friendly way."

Frank Jensen og Ayfer Baykal



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**CITY OF COPENHAGEN** The Technical and Environmental Administration



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