

# CONSIDERATIONS ON URBAN MOBILITY

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Can we design a transport system without knowing what kind of city we want?

Before we decide what transport system we want we need to know what kind of city we want.

Do we want one a city such as Amsterdam or one like Houston?





But we cannot design a city unless we know how we  
want to live.

What is a good city?

Danish urbanist Jan Gehl says a good city is one where we want to be out in public space...not at home, not in a shopping mall, but in sidewalks, parks, plazas...





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We are pedestrians: walking beings

We need to walk...not to survive, but to be happy...

...just as deer need to run, or birds to fly.



Much more than a technical or even an economic issue,  
mobility is a political and ideological issue

The main issue related to transport is how should we distribute that most valuable urban resource which is road space, between:

- pedestrians
- bicyclists
- public transport
- private cars



WATERLOO

LK08 BYF

RIGHT →





The quantity and quality of public pedestrian spaces is probably the most important measure of a good city

A measure for anything to be done in a city:

Does it make the place and its surroundings more, or less pleasant for people to walk, to talk, to play, to BE there?



Since communism failed, can we forget about equality?

Today we all believe private property and the market is the best way to manage most of society's resources...

Therefore it is not possible to have income equality...

What kind of equality is possible today?

Equality of quality of life...especially for children

(That all children should have equal access to health, education, music lessons, sports facilities, green areas, music lessons...

## Democratic Equality:

A citizen on a bicycle or a pedestrian has the same right to road space as one in a car

A bus with 100 passengers has a right to 100 times more space than a car with one.

¿What is wrong with our cities today?

Human life is permanently threatened by cars...

Human environments where our children grow in fear of getting killed cannot be right.



Tell a 3 year old: “Watch out! A car!” And the child will jump in terror.

What is most disturbing is how we got used to our children growing up threatened with being killed by a car.

We think it is normal...





Spaten-Coënaç  
Brauerei  
Pilsener

Hotel des Indes de la Gare





Rue Rambuteau

When cars appeared we should have build a parallel road network in cities: half the streets for cars, half for pedestrians only...

...but we just made bigger roads

In 1900 no automobile fatalities in US; in 1907, 500...

“In the 1920s, motor vehicle accidents in the United States killed more than 200.000 people.

In 1925 in the United States, cars and trucks killed about 7.000 children- about one third of the total motor death toll

From: Fighting Traffic by Peter Norton

Towards the end of 20<sup>th</sup> Century it was realized we had made a big mistake making cities for cars and began to redress it















Sidewalks are part of transport systems...

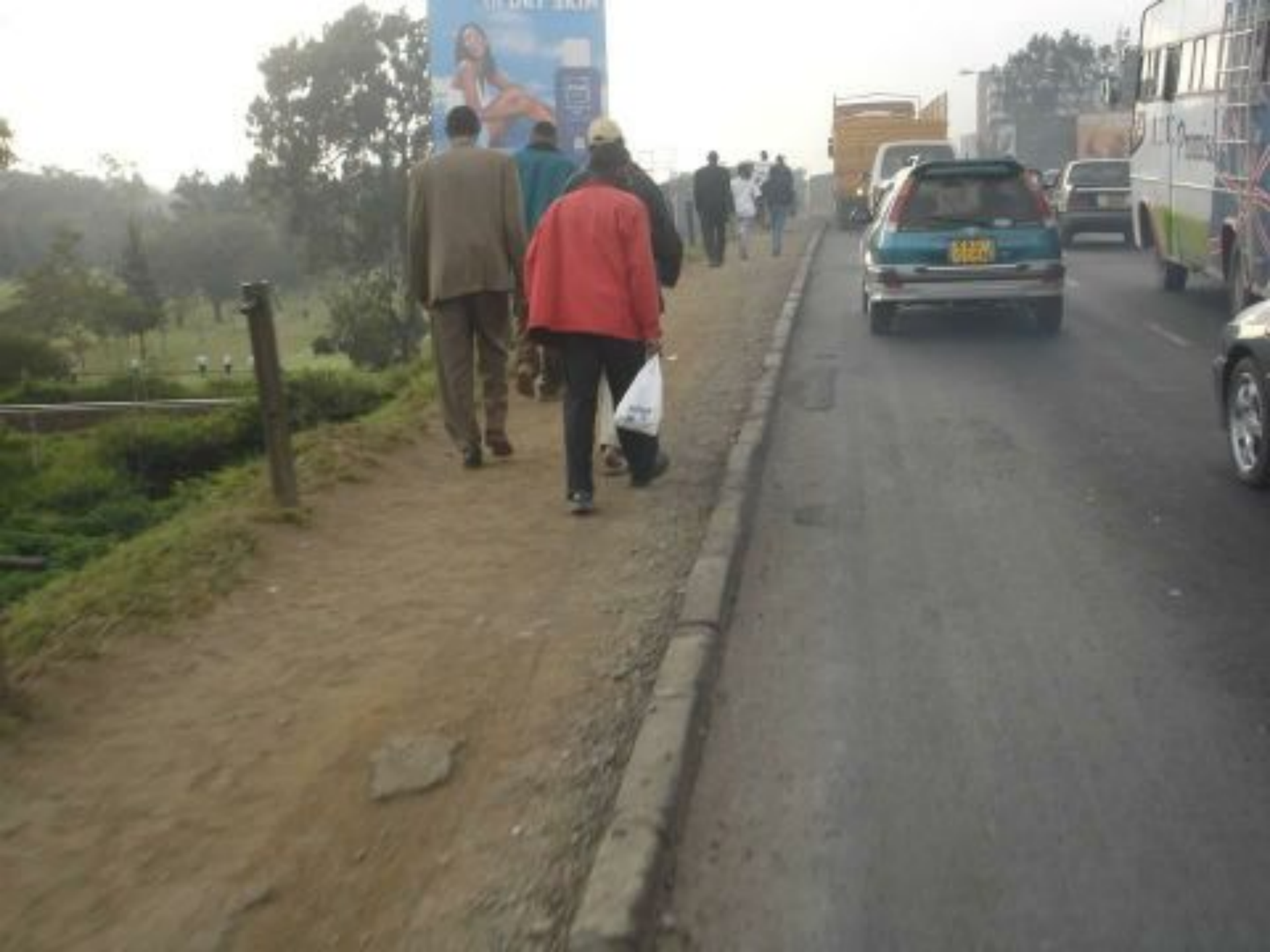
...and the most important infrastructure in a democratic city

BARCLAYS



In terms of infrastructure what makes a difference between advanced and backward cities are not highways or subways, but quality footpaths.

















NOVAS COCTEL ALQUILER

LINEA LIBRE

MAYOR DE CANTON







Sidewalks are not relatives of streets but of parks



November 1998

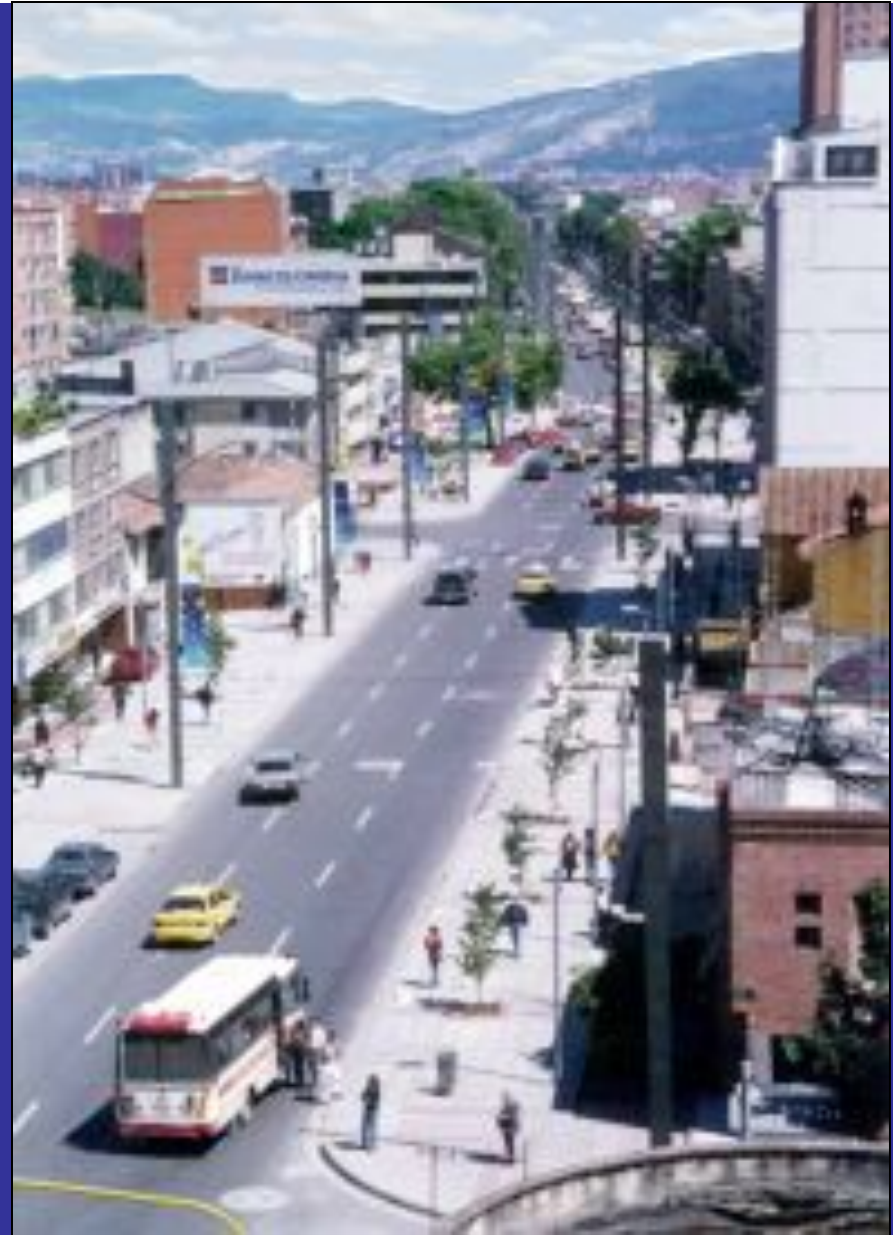
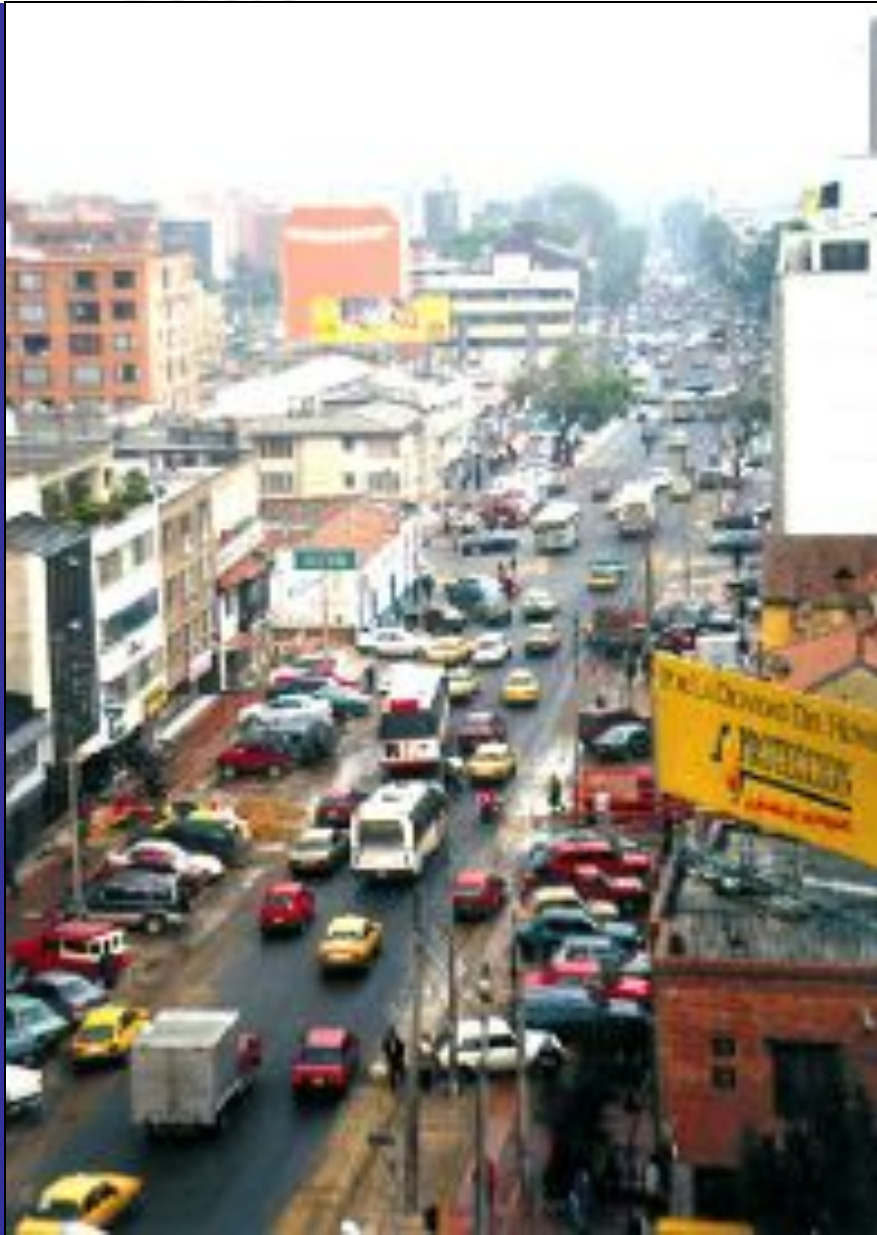


November 2008





Before











1000 - AWAY  
**NO STOPPING**  
**ANY TIME**  
UNLAWFUL

1002  
SUBWAY

ADVERTISING  
SCHEDULE  
FOR THE  
MONTH OF  
MAY 2014





While cars are a means of social differentiation and exclusion,  
bicycles integrate people as equals...















Bicycles are a serious matter and need serious investment in infrastructure.







In Bogotá there was not one meter of bike-ways and rider-ship was insignificant. Today while 19% use of the population uses a car 7% of the population bikes daily...





A protected bicycle way is a symbol of democracy:

It shows that a citizen on a \$ 30 bicycle is equally important as one on a \$ 30,000 car.





A bikeway which is not safe for an 8 year old is not a bikeway.

























Bogotá Ciclovía and Sunday Streets: A ritual











Ciclovía is a ritual, a ceremony reminding us that the city belongs to people, more than to cars...

# Bogotá Experience: Christmas Ciclovía





# Bogotá: CAR FREE DAY



# Bogotá: CAR FREE DAY



During 13 hours all citizens meet as equals in public transport, bicycles or walking. It builds community

# Bogotá : REFERENDUM

Car Free Day was approved with a referendum in October 2000: nearly 64% of voters approved establishing it the first Thursday of February every year.



Urban highways are like poisonous rivers: people cannot be near them. They lower property values around them.



Is there a democratic or technical justification not to have exclusive lanes for buses on urban and suburban highways?







Much better than urban highways, are avenues, or  
boulevards







Who decided we should give space to parked cars?  
(often more than to people)



Parking is not a constitutional right in any country

More parking, more traffic

Most cities would improve if curbside street parking is eliminated in order to make space for wider sidewalks and bicycle ways....



BANK OF NEW YORK



Wherever there is space for curbside parking there is space for wider sidewalks and bicycle ways....





For several decades new buildings in central London have not been allowed to have parking beyond a few for the handicapped.



Public transport is the solution...but, which public transport?



Buses are not glamorous, but...

...if buses are giving priority in the use of road space, mobility could be rapidly solved anywhere.

What does a tram or light rail do that a bus does not?

(it costs more and cannot leave the rail and go onto the road network)

Buses will soon be electricity powered and driverless



Sometimes inequality is before our noses and we do not see it.

Less than 100 years ago women could not vote and it seemed normal.

...just as today it seems normal to see a bus in traffic.







Is there democratically justifiable not giving buses exclusive lanes in highways?

Is it technically justifiable?

It does not take Ph.Ds:

A committee of 12 year olds would rapidly conclude that the most efficient way to use scarce road space is with buses on exclusive lanes.

Underground metros cost more than US \$ 200 million per kilometer...metro's operational costs are very high too

A full fledged BRT costs 20 times less.





Guangzhou's BRT moves more people per hour per direction than all subway lines in China except for Beijing # 2 line

A BRT lane moves up to 40 times more people than a car lane





Enormous cities such as Rio and Sao Paulo have metros and are building hundreds of kilometers of BRT





But beyond cost, buses have many advantages.

Subways are wonderful, but ¿why put public transport users underground?

Public transport users are exemplary citizens: they should be rewarded with priority use of surface roads, with natural sunlight and views of the city...















LOW CLEARANCE  
3.4m



ONLY  
BUS





As buses zoom by expensive cars stuck in traffic, BRTs are a powerful symbol: almost a picture of democracy at work

# TRANSMILENIO





Bogotá's TransMilenio moves up to 47,000 people per hour per direction, more pphpd than most of the world's subway lines.

Rio is building a BRT line with more than 60,000 pphpd design capacity

Buses can use ordinary roads, collect passengers in their neighborhoods and then enter the BRT corridor...like in Guangzhou

...subways cannot do that



Trips can take less time in BRT than metro:

- Buses change lines. Passengers do not have to get off, walk and wait for the next train...

Trips can take less time in BRT than subway:

- Buses can have express routes, overpassing some stations





Trips can take less time in BRT than subway:

- For the same amount of passengers, buses have higher frequencies

Trips can take less time in BRT than subway:

- Bus stations are closer to each other, thus people have shorter walks to and from stations

BRT is politically difficult

Subways are always well done.

BRT almost never is.



Technologically buses will soon be sophisticated machines:  
they will be battery powered and driverless.

If there was fuel for only 5% of vehicles in your city:

Would you allocate it to cars?

And if it was space that was scarce?







If an important road is very narrow...there should be no cars in it.



In 200 years will they say: How could people live in those horrible 2014 cities?

Why not a city with hundreds of kilometers of bus-only roads or greenways with bus lanes?







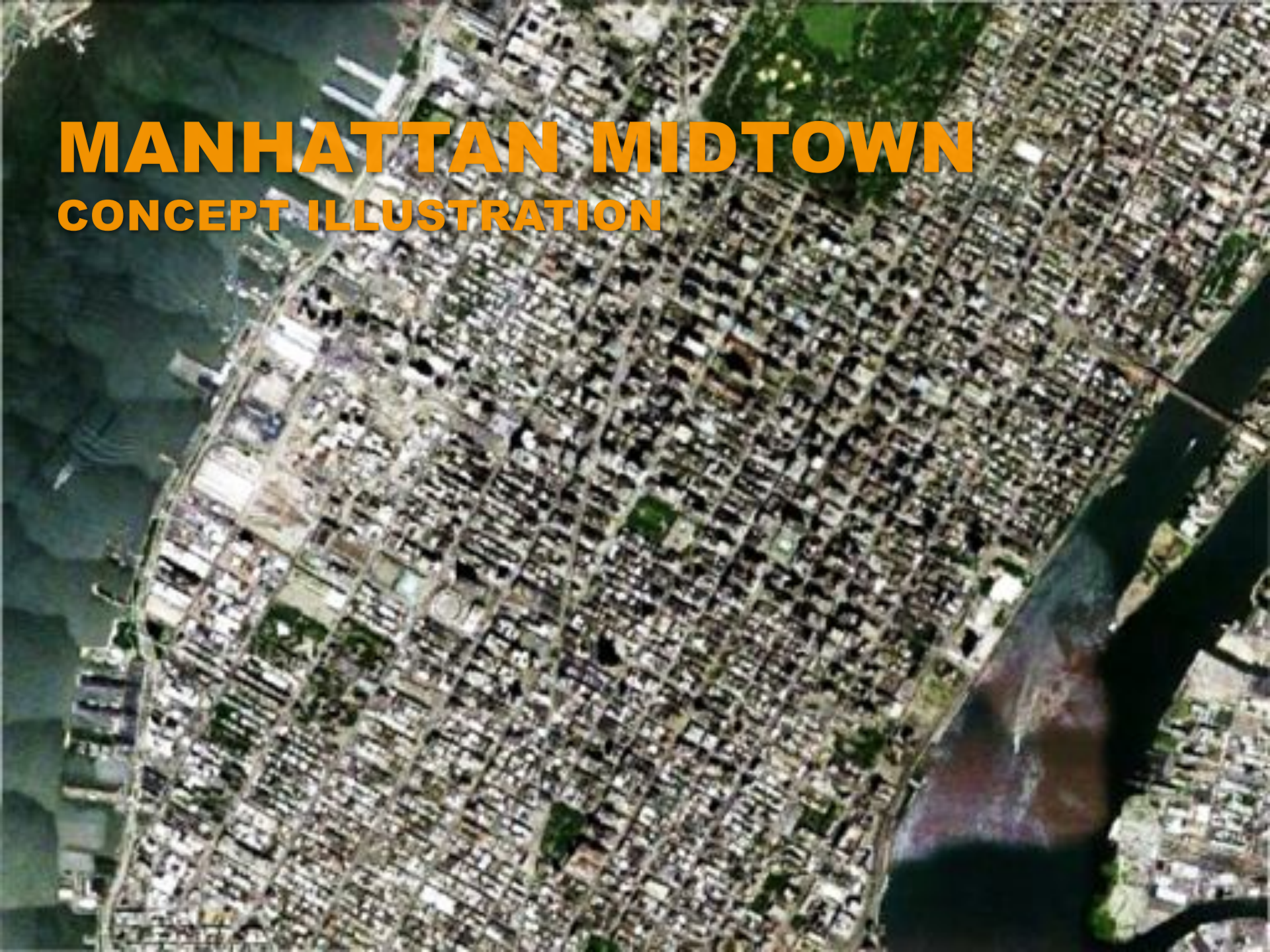


Why not a city with a network greenways and bicycle highways  
hundreds of kilometers?



# MANHATTAN MIDTOWN

## CONCEPT ILLUSTRATION





# **TRANSVERSAL PARKS**

## **FULL WIDTH**



A stylized map of a city grid. The background is a solid blue color. Overlaid on this is a grid of thin black lines representing streets. A subset of these streets is highlighted in a vibrant green color, forming a pattern of wide, diagonal and horizontal corridors. The blocks between these green streets are shaded in a darker blue. The overall effect is a visual representation of a city plan designed for pedestrian and cyclist safety and comfort.

# WALKING + CYCLING STREETS

every other block

NO CARS. TREE SHADED. LANDSCAPED.























