No cyclists, just people
– cycling as a tool to create liveable cities

Andreas Røhl
Associate, Gehl
Tartu, May 2017
Gehl Architects, founder: Professor Jan Gehl, architect
The "Brasilia syndrome": planning from above!
Gehl Architects Urban Quality Consultants

Design of cities affect our behavior
Traditional planning process

buildings

traffic

life
Goal: Cities for people
Approach: Life, Space, Buildings

Life

Space

Buildings
Make people visible in the design of cities
Public life studies in Copenhagen

“...and we decided that cycling is also public life. That was an important decision for us”
Jan Gehl
Andreas

City of Copenhagen
• Director of the bicycle programme 2007-2015
• Director of Mobility & Urban Space 2014-2015

Urban Systems, Vancouver 2012
(On leave from the City of Copenhagen)

Now with Gehl
Introduction

The “why cycling”

The “how cycling”

If Copenhagen had to start all over again...
Average Monthly Temperature

- Tartu
- Copenhagen
Days of precipitation

- Tartu
- Copenhagen
Trips (to, from and internal)

Share of car trips to work or education

Jobs

Copenhageners

Copenhagen 1995-2013

17%

19%

25%

-38%
Primary mode of transport for trips to work or education in the City of Copenhagen
(notice 2004-2006 is not included)
Bicycle lanes were introduced in 1982.
Nørrebrogade has 6,000 vehicles per weekday as of 2013.
Copenhagen, car and cycle traffic to the inner city 1970-2016
Why?
Lessons:

- “Never miss a good crisis”
- Listen to the citizens
Why cycling?
Too good to be true – or just boring...

Less congestion
Better local environment
Less CO2 emission
Improved health
Urban life
Equal access to mobility
Better learning ability

A mean to an end, not a goal in it self
The bottom line

In Copenhagen:

€ 0,37: Gain to society per cycled kilometre.

€ 0,54: Gain to society per kilometre transferred from car to bicycle in rush hour traffic

− Cowi A/S / Incentive & City of Copenhagen, 2009/2015 (2014 prices)
CONTRIBUTION TO GREEN GROWTH

The large proportion of bicycle traffic in Copenhagen does not merely constitute a direct socio-economic benefit; there are secondary benefits as well. Many businesses are engaged in selling and producing bicycles and many firms enjoy increased staff mobility due to cycling.

**BICYCLE SALES**

There are 305 businesses selling and repairing bicycles registered in Greater Copenhagen, including 267 bicycle shops, 22 wholesale bicycle dealers and 20 firms that design and sell bicycles. These firms generate 650 full-time jobs and a total estimated annual turnover of DKK 1.3 billion.

Add to this other firms such as bicycle rental firms, pedicabs, bike messengers and firms whose employees cycle during working hours such as postmen, police and home care. Finally, an increasing number of firms are purchasing staff bicycles for use on the job.

Cycling infrastructure investments are the basis of Copenhagen cycling and the reason that Copenhagen citizens and businesses can enjoy all the benefits of urban cycling. Commuters save time, bike messengers, mobile coffee bicyclists, Post Danmark, and many others save on costs thereby making it possible to give their customers a better product, and employees can get to and from external meetings without having to worry about traffic.

**COPENHAGEN, CITY OF CYCLISTS - A VALUABLE BRAND**

Copenhagen is not the world’s best cycling city yet, but it ranks among the world’s best. Our excellent cycling conditions have generated attention abroad and are an effective tool for marketing Copenhagen as a modern, healthy and attractive metropolis. Time Magazine, for example, rated Copenhagen as the world’s fifth most attractive tourist attraction in 2010 partly due to excellent cycling conditions. Similarly, in both 2009 and 2010 the American lifestyle magazine Monocle elected Copenhagen as the world’s second most livable city, citing the city’s bicycle culture as one of the reasons.

It is difficult to assign a precise economic value to Copenhagen’s leading position when it comes to cycling, but it is estimated that the city’s strong branding as a bicycle-friendly city has a positive impact on attracting international conferences, highly educated now arrivals and hotel guests.
When only looking at shops at street level in Copenhagen, customers arriving by bicycle spend 2 billion €/year. More than any other mode of transport.

Total revenue per year, Billion DKK (malls excluded)

Figures / numbers done by Incentive on behalf of City of Copenhagen
Cycling and Shopping

Bremerholm Street

Before: One way traffic for cars and bikes.
After: Two way traffic for bikes, one way traffic for cars
Result: More than 3,500,000 potential extra customers through the street since July 2013

Yet no shop owner ever asked for it to be 2-way for bikes...
“We saw the numbers from the City on how much people on bikes do spend when shopping. That made us start improving our cycling facilities”

“Good cycling facilities also matches our green profile”

Arjang Farhadpour, project developer, Lidl, Copenhagen
“In automobile-dependent communities, chauffeuring costs often exceed congestion costs...”

- 25% of the people that potentially can travel on their own DON’T have access to cars.
- 9-15% of U.S. peak period vehicle travel consist of parents chauffeuring young children to school.

- And not everybody knows a driver...

Source: Evaluating Household Chauffeuring Costs, Todd Litman, 2015
Denver: Attracting investments

“The number one thing they [companies] want is bikelanes. 10 years ago we newer would have thought that walkability or bikelanes would be economic development tools”

Tami Door, President, Downtown Denver Partnership inc. in “Denver Business Journal”
register now
bluetreehomes.ca

Your friendly neighbourhood

NOW SELLING
BURLEIGHWALK.COM
604.464.5856

Gehl Architects
Melbourne: cycling as an integrated part of an urban renewal strategy

4% -> 17%

Bicycles as a percentage of vehicles coming into the central city in the morning peak has grown from 4 per cent in 2006, to 17 per cent in 2015.
Cycling as the first step towards a (more) liveable city

+20%  -20%  20 mio. 4 years
Cycling as the first step towards a (more) liveable city
And more important, change is possible
Fun and convenient
most of the time...
Potential angles in Tartu?

- Tourism (Hotels, cycle tourists etc.)
- Climate change
- Encourage shopping locally
- Attracting talent
- Improve quality of life
- Reducing congestion
- Etc.

The role of cycling?
– mainstream or a nice-to option?
How?

Infrastructure
Other stuff
Why do Copenhageners cycle?

“Quick, easy, convenient”  56%
“Exercise”  21%
“Cheap”  12%
“Environmentally friendly”  1%

City of Copenhagen, 2006
Bicycle Account
Copenhagen approach:

Nothing special

- Just a means of transport in its own right
Infrastructure
- Copenhagen approach

• Comfortable
• Complete
• Convenient
• Pragmatism
• Part of overall planning

“We are making a new and better cycle track. Sorry for the inconvenience”
In the end it is all about...

Access to destinations
Pragmatism at work in Copenhagen. Cycle track narrowed to aprx 1,6 m for short section.
Kristiansand, Norway

Separation where it matters

7% - 10%
Modal split 2005-2014
19%
In Centre
And...

Links to the suburbs + Respect for the detail
Bern

Traffic calming

11%
Mix of facilities

42% Modal share of local trips

Oldenburg
Something has to give...

“Strædet” before
“Strædet”

After
Or in other words prioritizing...

Odense, Denmark:
Kids kids kids – now 78% of kids cycle or walk to school

Courage to prioritize; why should fit adults and kids be driven around in a bus financed by tax money...
Measure and design for ‘synergy effects’

- Reduced cycling on pavements
- Fewer surprises for motorists
- Climate adaptation
- Etc.
Short cuts. Works.

4000→6000→17000
12%
Part of overall planning - developers...
...and density

Trips to work in Copenhagen – Mode of transport by distance

[Bar chart showing trips to work by distance and mode of transport, with categories for 0-2 km, 2-4.9 km, 5-9.9 km, 10-14.9 km, and >15 km, and modes including Walk, Bicycle, Car, and Bus and Train.]
Other stuff...
- Copenhagen approach
The perception of cycling

The perception of "a cyclist"

- carbon everything
- 'too cool' attitude
- spandex
- ridiculous shoes

I HATE CARS.
I DON'T HAVE A JOB.
I DON'T HAVE A GIRLFRIEND

HATRED
ANNOYANCE

CAR

I'M DRIVING

Bike
When you invest, just as well maximize the effect

Not all projects have a good cost benefit ratio

And not all types of good projects are equally good
<table>
<thead>
<tr>
<th>Type of bicycle promotion</th>
<th>Increase in number of bike journeys on the facility</th>
<th>Overall increase in bicycle traffic in the corridor</th>
<th>Overall decrease in car journeys in the corridor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extensive bicycle traffic Programme (bike lanes, parking, campaigns, etc)</td>
<td>Medium (10-35%)</td>
<td>Medium (10-35%)</td>
<td>Substantial (5-20%)</td>
</tr>
<tr>
<td>Individual separated facility (cycle track or cycle lane)</td>
<td>Significant/Huge (10-300%)</td>
<td>Small (1-5%)</td>
<td>Hardly any (0-2%)</td>
</tr>
<tr>
<td>Individual cycle lane, no buffer</td>
<td>Small (5%)</td>
<td>Hardly any (0-2%)</td>
<td>Hardly any (0-2%)</td>
</tr>
<tr>
<td>Information about bicycle routes</td>
<td>Large (100%)</td>
<td>Small (1-5%)</td>
<td>Hardly any (0-1%)</td>
</tr>
<tr>
<td>Road sign / road markings</td>
<td>Large (100%)</td>
<td>Small (0-2%)</td>
<td>Hardly any (0-2%)</td>
</tr>
</tbody>
</table>
Measure and design for creating strategic partnerships

- Health sector
- Schools/education
- Retail sector
- Tourism
- Public Transport
- etc.

Ask like John F. Kennedy...
And stay on message...
Whether pictures...

Picture: The Danish Crownprince taking his son to kindergarden
<table>
<thead>
<tr>
<th></th>
<th>Cycling (16 km/h)</th>
<th>For reference: Car (50 km/h) in city</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Internal</td>
<td>External</td>
</tr>
<tr>
<td>Time costs (travel time, non-work)</td>
<td>5.00</td>
<td>0</td>
</tr>
<tr>
<td>Vehicle operating costs</td>
<td>0.33</td>
<td>0</td>
</tr>
<tr>
<td>Prolonged life</td>
<td>-2.66</td>
<td>0.06</td>
</tr>
<tr>
<td>Health</td>
<td>-1.11</td>
<td>-1.80</td>
</tr>
<tr>
<td>Accidents</td>
<td>0.25</td>
<td>0.54</td>
</tr>
<tr>
<td>Perceived safety</td>
<td>+ (?)</td>
<td>0</td>
</tr>
<tr>
<td>Discomfort</td>
<td>?</td>
<td>0</td>
</tr>
<tr>
<td>Branding/tourism</td>
<td>0</td>
<td>-0.02</td>
</tr>
<tr>
<td>Air pollution</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Climate changes</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Noise</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Road deterioration</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Congestion</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1.81</strong></td>
<td><strong>-1.22</strong></td>
</tr>
</tbody>
</table>

Source: The unit prices for cars are from the Ministry of Transportation’s official unit price catalogue (Transportøkonomiske Enhedspriser). The external values for cars are reported for gasoline cars in the city during off-peak hours.

Note: Note that the table displays the cost of cycling. A negative number can thus be interpreted as being a benefit of cycling. When splitting the health benefits into internal and external benefits, it is assumed that 50% of the production gain is own consumption and thus internalized. The rest is taxes etc.
Infrastructure...
Or campaigns

'Good karma' raids
www.vimeo.com/ibikecph

And remember:
Plan the documentation early
No cyclists, just people
You can tell me
Cycling
Cycling
Walking
Public transport
Public space
Is the city “walking the talk”?  

Test 1: Through-access for cycling and walking also during construction work?
Is the city “walking the talk”?

Test 2: Good maintenance and snow removal for cycling and walking?
Is the city “walking the talk”?

Test 3: Timing of the traffic lights. Short phases and set for the speed of buses, walking and cycling?

Sign says: Green wave set for 20 km/t
A cycling city - 5 things to remember

If Copenhagen had to start all over again...
The organization
Remember the organization

Program management:
The overall management of a series of related, ongoing projects within an organization. Taken together, those related projects make up a program.

If your company is launching a new product, for example, a series of projects are likely occurring in different areas of the company, including engineering, sales, marketing, and distribution, to name a few. Managing all of those projects effectively toward a common goal or business objective is program management. A team [...] may be set up to manage the overall program.

http://www.pcubed.com/services/glossary.program#sthash.7jjiD4ZU.dpuf
Target the effort
Target the effort

- Demographics
- Partners
- Corridors/streets/spaces
All the way from A to B - even where it hurts
All the way from A to B
- even where it hurts

Cycle track Stormgade
Quotes from the evaluation:
“Fantastic with the cycle track. Without it I could not cycle back and forth.”
“Very satisfied with the cycle track in Stormgade. Please more:0) ”
“Cycle tracks ARE necessary!”
Test – learn – refine
Temporary Quick Cheap
from NIMBY to IOBY
It can be done
– find the data, tell the story
It can be done

Find the data, tell the story

The walking street “Strøget”, Copenhagen

Average number of people engaged in stationary activities throughout the city center at any time between 12° and 16° on summer days in 1968, 1986 and 1995.
They said it cannot be done
Cph walking street “Strøget” before 1962

The shops will die!
The climate is wrong!
It is not our culture!
"Strøget" today

The shops had a great time!

80,000 people per 24 hours in the summer
The climate is not such a great problem
To summarize:

• Remember the organization
• Target the effort
• All the way from A to B – even where it hurts
• Test – learn - refine
• It can be done – find the data, tell the story
Thank you

andreas@gehlpeople.com
And tell the story again and again

– people have lots of other things to do

Sign says:

Sorry for the mess!
We are building a better cycling connection. Done October 2015