

A woman is riding a bicycle on a waterfront path at sunset. The sun is low on the horizon, creating a bright glow and reflecting off the water. In the background, there are modern buildings on the left and industrial structures with smokestacks on the right. The woman is in the foreground, seen from the side, wearing a dark jacket and a headband.

Emerging cycling cities – trends and learnings

Andreas Røhl
Associate, Gehl Architects,
Lucerne, November 2016

Andreas

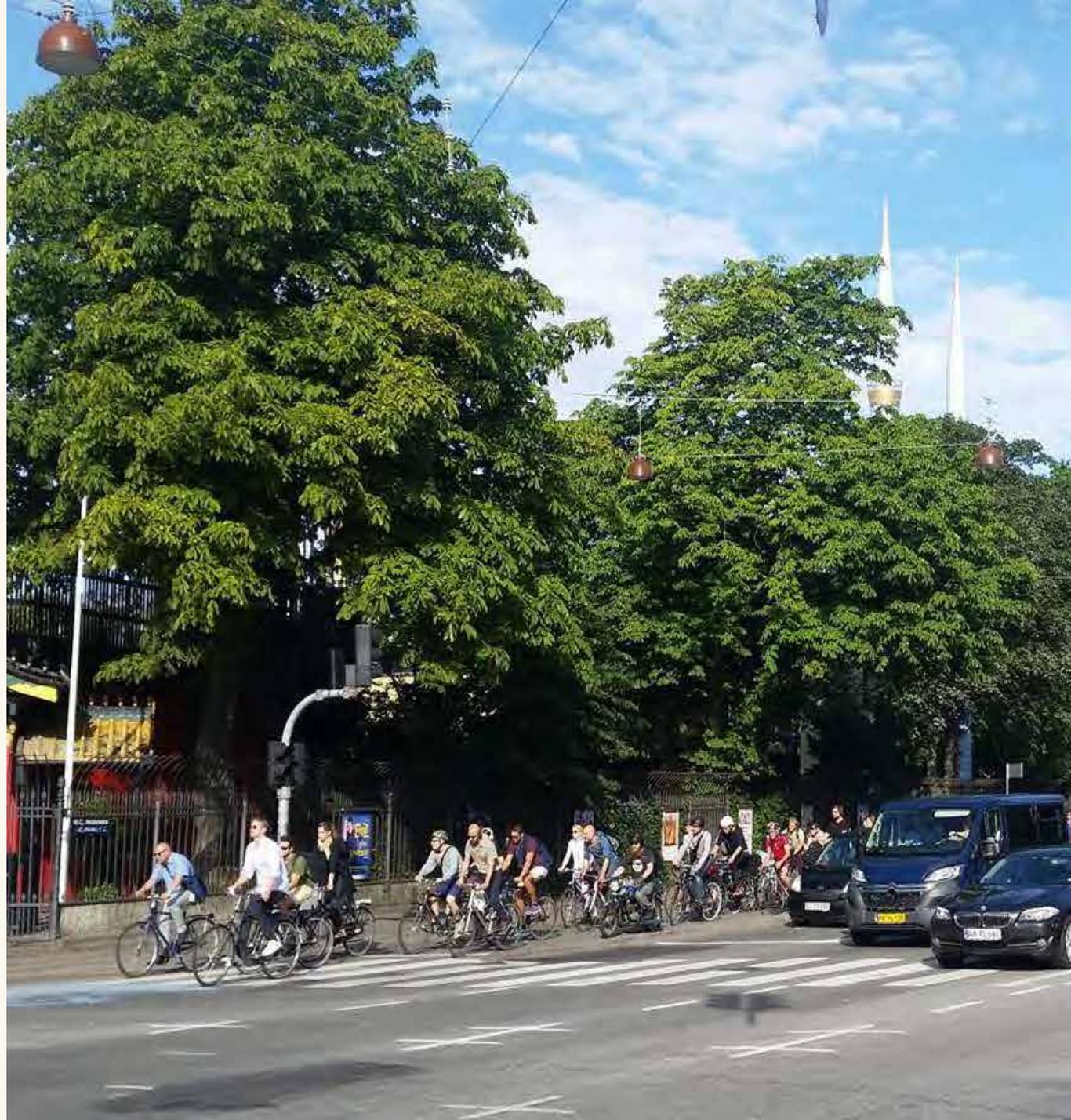
City of Copenhagen

- 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 Architects



Switzerland and Denmark, this we have in common :

- Political ambition on taking cycling to a new level
- Influx of projects
- Influx of attention
- Cities with a lot of cycling, cities with less cycling
- Not everything is perfect...



Content:

- Introduction
- Emerging cycling cities
 - Examples
 - Literature
- Trends
- Learnings
- Q & A



Emerging Cycling Cities

Pieces in the puzzle...

- Kristiansand, Norway
- Randers, Denmark
- Bern, Switzerland
- Odense, Denmark
- Victoria, Canada
- Melbourne, Australia
- Seville, Spain
- Oldenburg, Germany
- Santiago, Chile



Oldenburg

Mix of facilities

42%
Modal share of local trips





Kristiansand

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%



Coherent network

Seville, biketrips on a workday:

- From just over 6,000 to now more than 70,000.

Modal split:

- Approximately 1% a decade ago, before the cycling network was implemented.
- Now (2013) 6% of all trips made by bike (9% if walking trips not included).

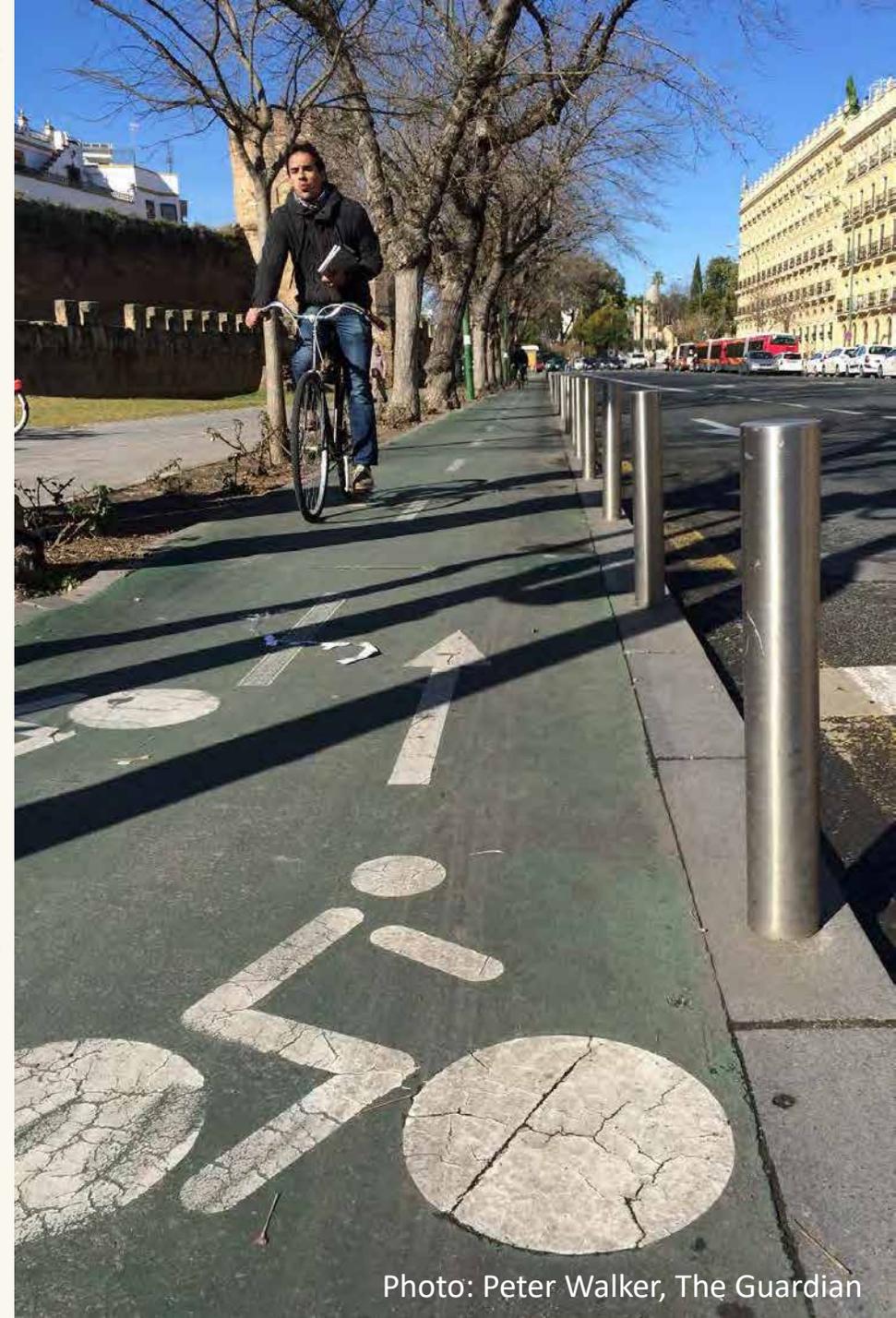


Photo: Peter Walker, The Guardian

Randers

Documentation

+20%
in short trips 2009-2014



Cykelregnskab
2015

Randers Bicycle Account 2015



Randers Cykelby



Odense

Multimodal & Short cuts

+20% -20% 20 mio.
4 years



Consistent focus

Melbourne: cycling as part of urban renewal

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.



Swanston St. , photo: www.bicyclenetwork.com.au

Melbourne, 1994:
Known as
"the donut-city"

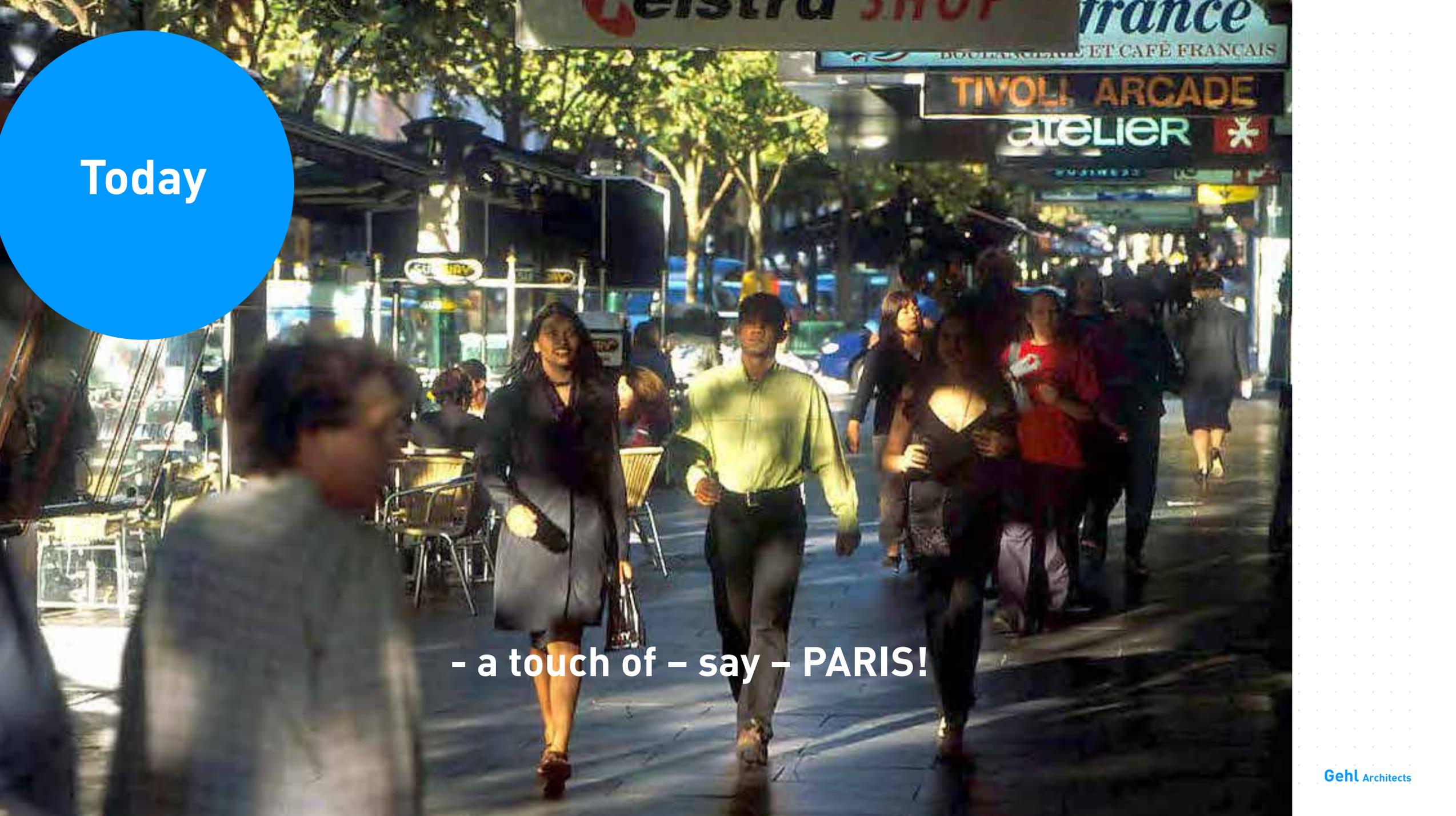


Swanston Street- before



Swanston Street- after

Today



- a touch of - say - PARIS!

Litterature

So much
Easy peasy...

Estimated change in cycle traffic volumes for different actions

(Trivector 2009)

Type of bicycle promotion	Increase in number of bike journeys on the facility	Overall increase in bicycle traffic in the corridor	Overall decrease in car journeys in the corridor
Extensive Bicycle Programme (cycle tracks, parking, campaigns, etc)	Medium (10-35%)	Medium (10-35%)	Substantial (5-20%)
Individual separated facility (cycle track or cycle lane)	Significant/Huge (10-300%)	Small (1-5%)	Hardly any (0-2%)
Individual cycle lane, no buffer	Small (5%)	Hardly any (0-2%)	Hardly any (0-2%)
Information about bicycle routes	Large (100%)	Small (1-5%)	Hardly any (0-1%)
Road sign / road markings	Large (100%)	Small (0-2%)	Hardly any (0-2%)

INTERNATIONAL CYCLING INFRASTRUCTURE BEST PRACTICE STUDY



"COMMON CONDITIONS

Drilling down from these high-level factors, we found a range of conditions to be common in most cities with mature cycling cultures, recent significant growth in cycling, or a commitment to growing cycling. Together, these conditions comprise what could be considered an ideal basis for growing cycling.

1. There is strong, clear political and technical pro-cycling leadership which is supported through all parts of the lead organisation.
2. Cycling is considered an entirely legitimate, desirable, everyday, 'grown up' mode of transport, worthy of investment, even if current cycling levels are comparatively low.
3. Increasing cycle mode share is part of an integrated approach to decreasing car mode share. There is no intended overall abstraction from walking and public transport; and improving cycle safety and convenience is not intended to diminish pedestrian safety and convenience.
4. Loss of traffic capacity or parking to create better cycling facilities, while often a considerable challenge, is not a veto on such action.
5. There is dedicated, fit-for-purpose space for cycling, generally free of intrusion by heavy and fast motor vehicle traffic. In cities where the aim is to grow cycling rapidly, simple, cheap and effective means of securing this space have been used as first steps, with more permanent solutions following in due course.
6. There is clarity about the overall cycling network (including planned future development), with connectedness, continuity, directness and legibility all being key attributes.
7. There is no differential cycle route branding, simply three principal types of cycle facility that make up well-planned and designed cycle networks:
 - a. Paths/tracks/lanes on busier streets which provide a degree of separation from motor vehicles and are designed to accommodate motor traffic flows/speeds and the demand for cycling.
 - b. Quiet streets/'bicycle streets' with 30kph/20mph or lower speed limits and often restricted access to motor vehicles, particularly for through movements.
 - c. Cycleways/'greenways' away from the main highway (e.g. bicycle-only streets, paths in parks, along rivers, canals), but still well connected to the rest of the network at frequent intervals.
8. There is clear, widely-accepted and routinely-used guidance on the design of cycling infrastructure.
9. The frequency of occasions when cyclists need to give way or stop is minimised. This allows cyclists to make steady progress at a comfortable speed.
10. At least subjectively, where the cycle mode share is greater, the driving culture (and in some cases the driving laws) is more respectful of the needs of cyclists. Local traffic laws often play a part in this.
11. Making better provision for cycling, even in the most well-cycled cities, is an ongoing challenge for governments and of city populations as a whole, requiring clear forward planning."

A 12 person
project
team



Cycling Heroes
Advancing
sustainable Mobility
Practice

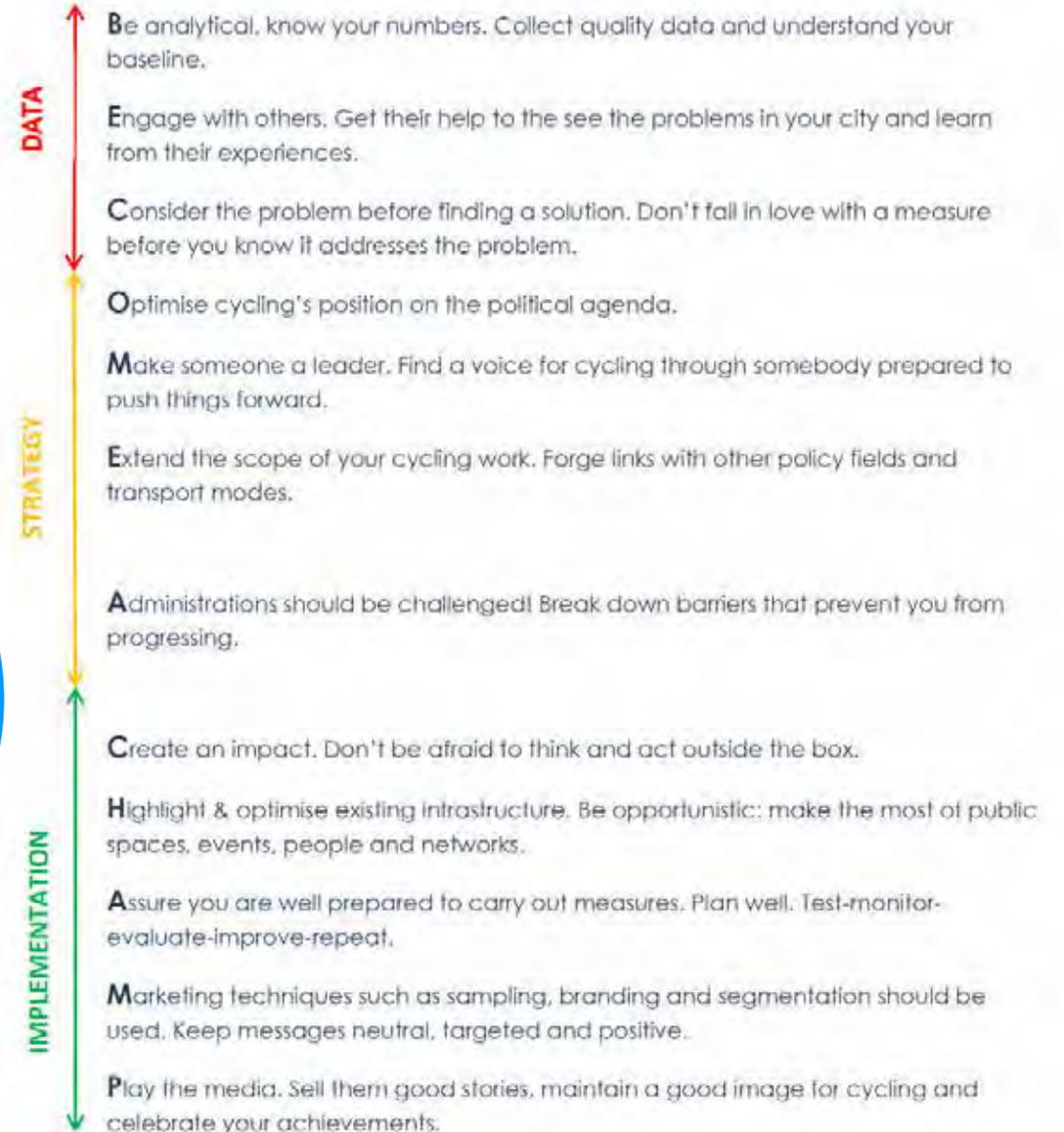


**Bolzano (29%),
Örebro (25%),
Ljubljana (12%)
and other case
cities**

CHAMP-CATALOGUE

do's & don'ts for successful implementation
of cycling policies

The CHAMP Cycling Commandments



Kristiansand



Lucerne



Population - City

87.000

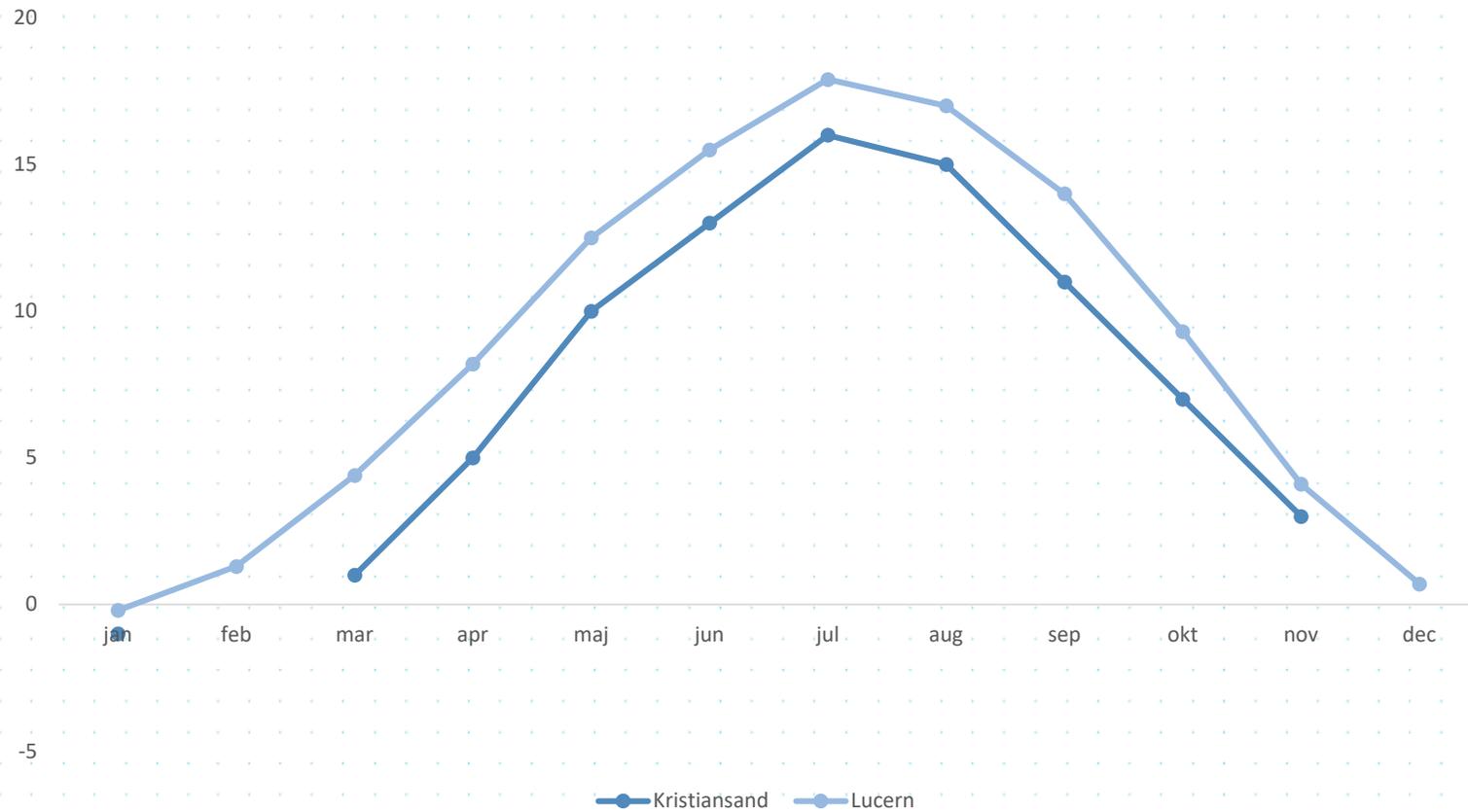
81.000

Population - Region

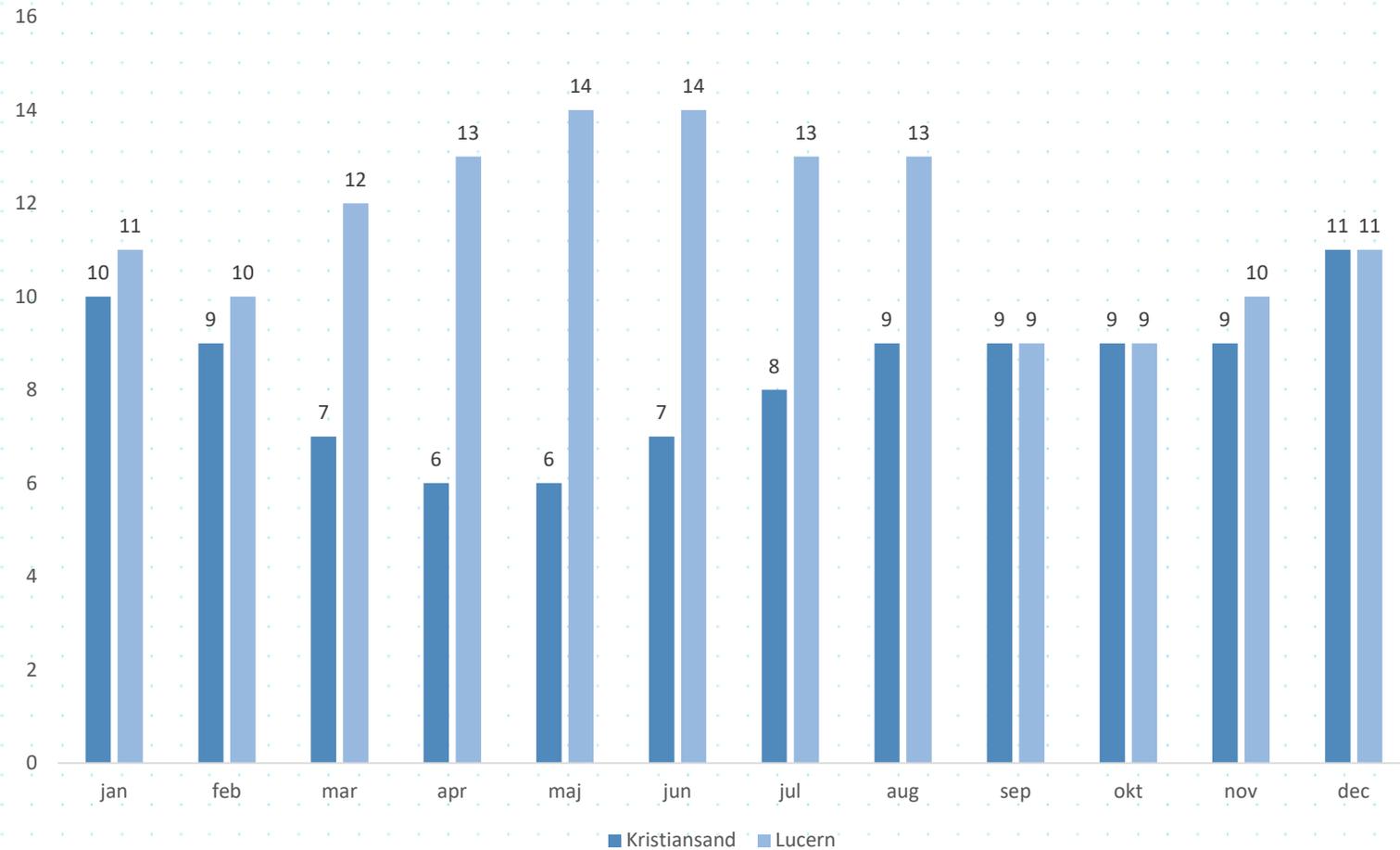
155.000

177.000

Average Monthly Temperature



Days of precipitation



Less easy – but it works

Prioritazion...

Odense, Denmark:

Kids kids kids – now 78 % of kids cycle or walk to school

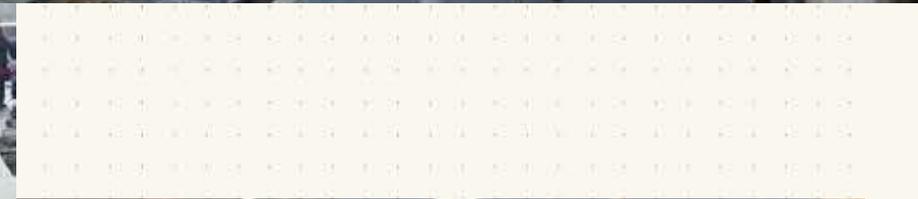
Courage to prioritize; why should fit adults and kids be driven around in a bus financed by tax money...



It's the parking, stupid!



- or other ways to reduce the competition



**The Swiss challenge.
A positive problem...**

Another similarity



**The Top
manager**
(Jens Rørbech)



**The Programme manager / Bicycle
coordinator**
(Christen Egeland)



Photo by: Andrew Dodd Clippingdale

The Mayor
(Lisa Helps)

*= It is not happening
by it self. You can
make a difference*

5 Trends



Stakeholder strategy

BIKE SATURDAYS

CLASSES + WORKSHOPS

MAPS + RIDES

MULTIMEDIA

BIKE SATURDAYS | Discover great deals and delicious discounts at local shops and eateries when you bicycle to shop and dine on Saturdays! Every Saturday, more than [170 businesses in Long Beach](#) offer deals to customers that opt to bicycle instead of drive. Click on the Bike Saturdays bar to your right and see what's in store for you!

Want to be a Bike Saturdays business?

This is the perfect time to sign up! *For a limited time*, Bike Saturdays will be featured in a multi-media advertising campaign throughout Long Beach, absolutely **FREE** for participating businesses! So don't delay, sign up and become a Bike Saturday business today.

Ask Like John F. Kennedy:
Do not ask what they can do for cycling, but ask what cycling can do for them...



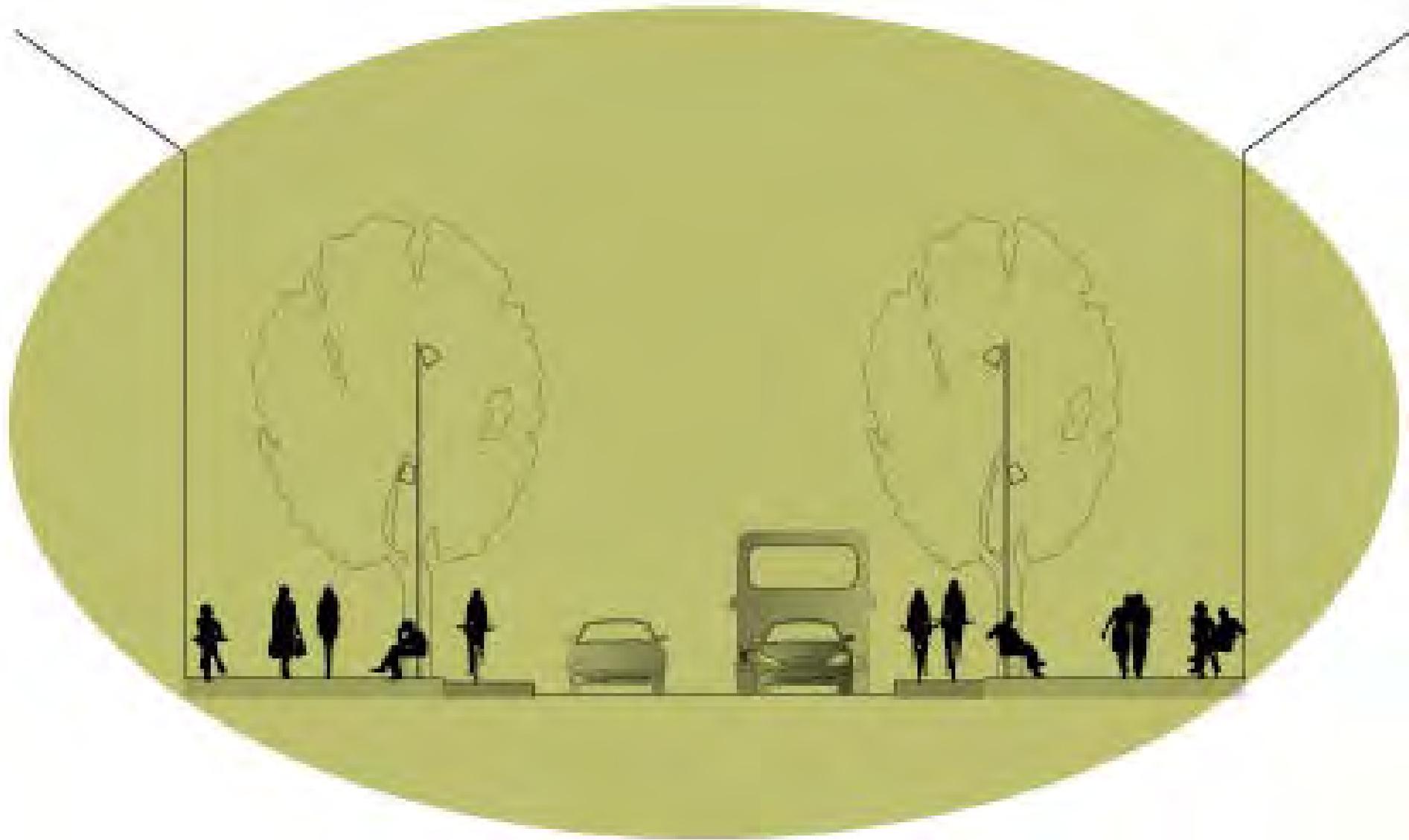
Kiddicalmass.org

bikeitwalkit.org

Gehl Architects

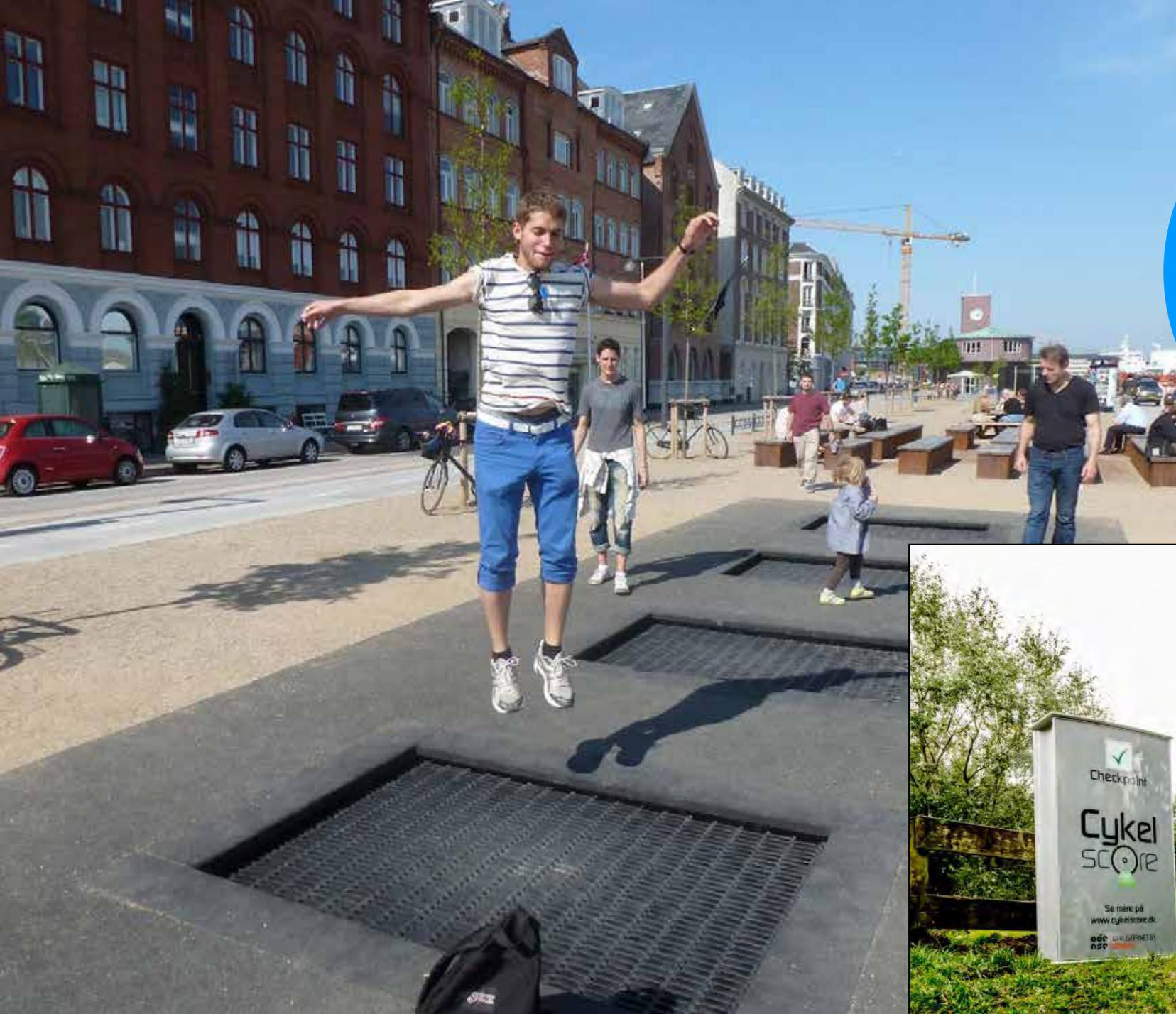


From silos...



towards a more holistic planning

- Including cycling on recept...



Gaming –
PokemonGo
with a cycling
twist...





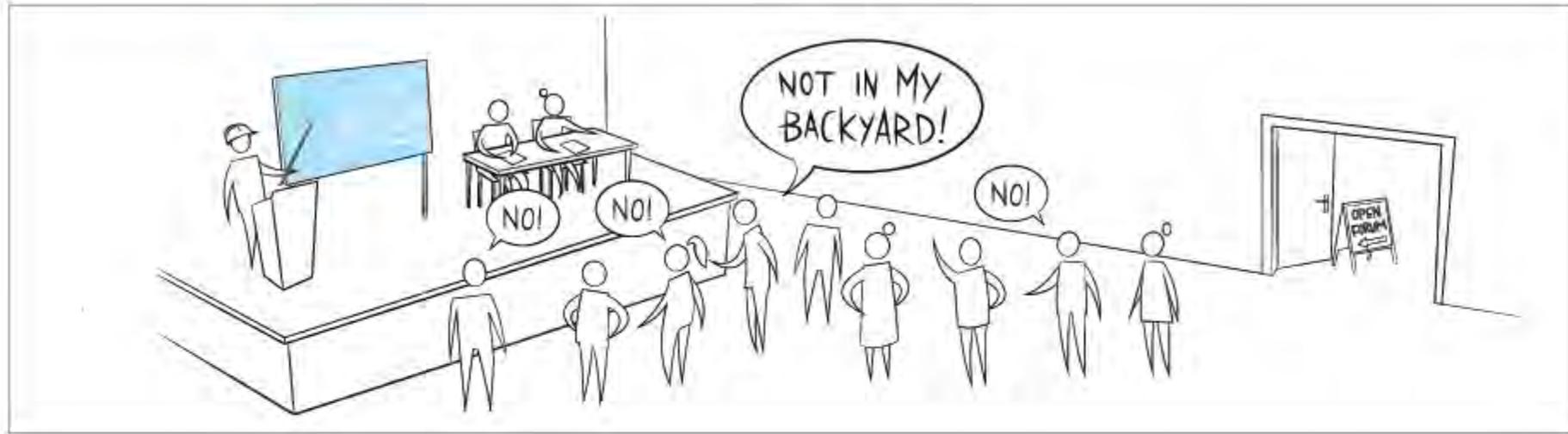
**Temporary
Quick
Cheap**





Co-create

from NIMBY to IOBY



3 lessons

I was looking for it, but...

No quick fix

- Be patient, be consistent

Seville – Fast flexible imperfection

- City-wide cycling network implemented 2003-2005 (80 km)
- Combined with bikeshare system

Great work – but
Effect levelled out,
and no consistent
political support



Photo: Peter Walker, The Guardian

New York: Great work, but also a low hanging fruit: "We would never had done it so stupid"
(Anonymous Swiss planner when told about the "before-situation" during visit to Gehl Architects)

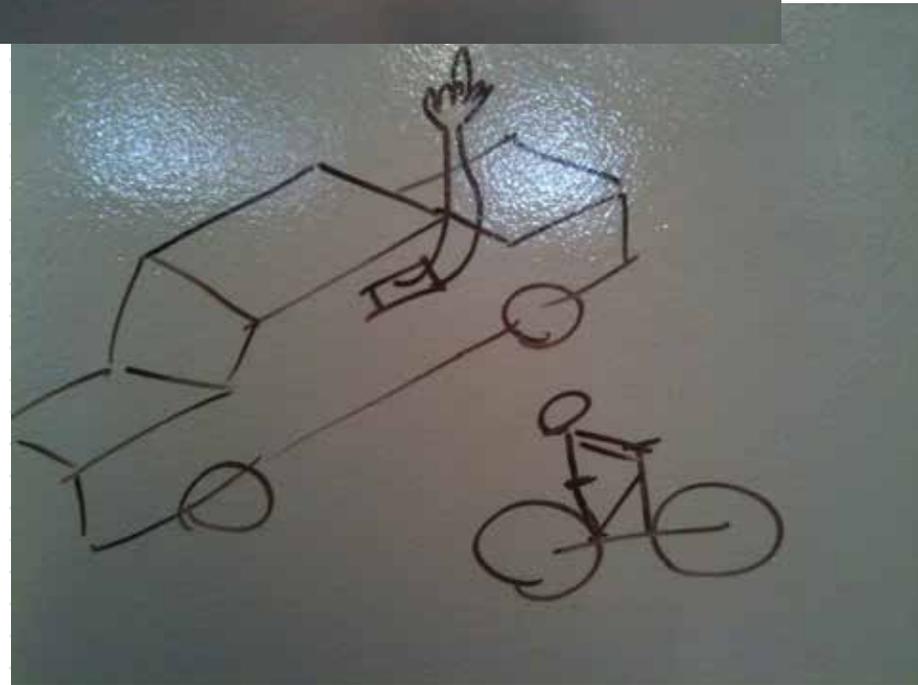
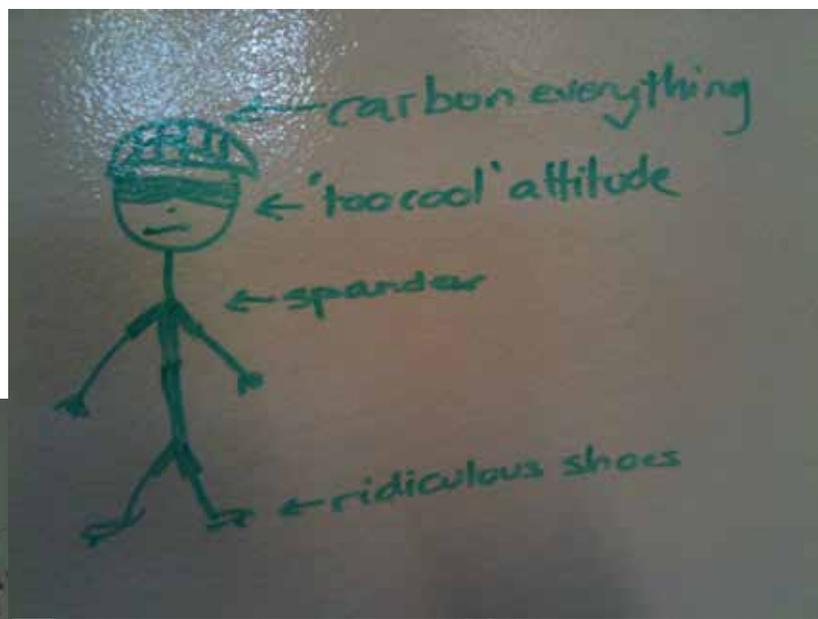


You can do less in one year than you think, but...

You can do more in four years than you think.

And you can transform a city in 20-25 years

No cyclists, just people











Blue directional sign with white text and arrows.



Green directional sign with white text and arrows.



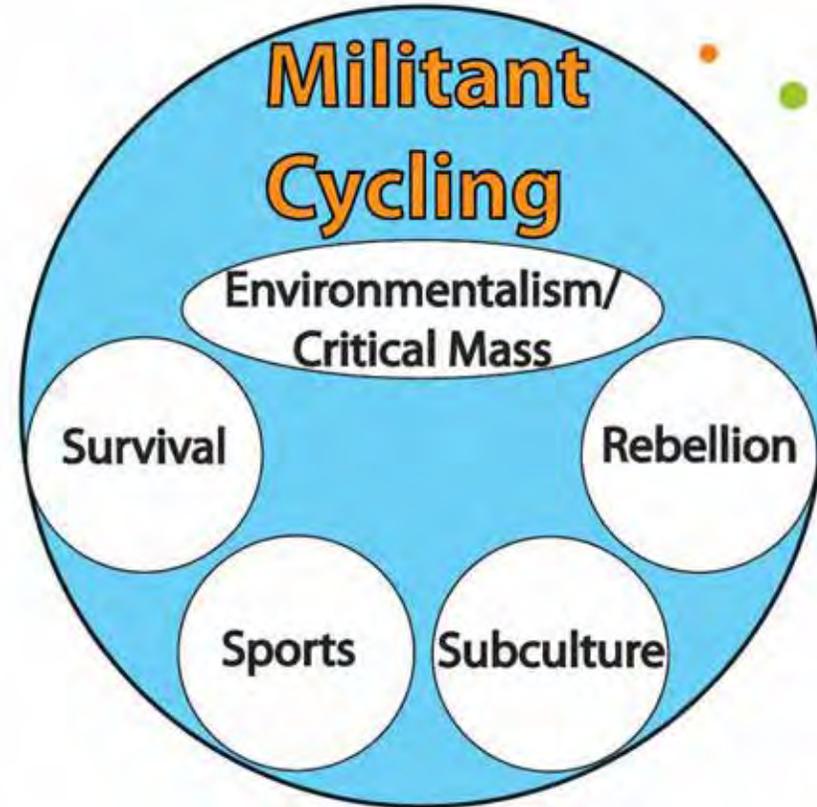
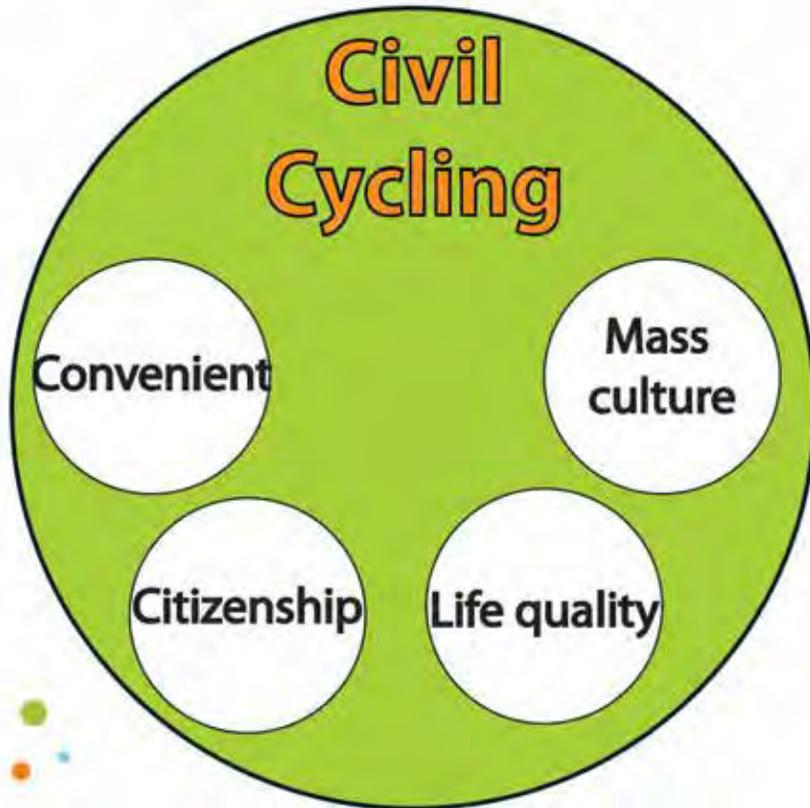
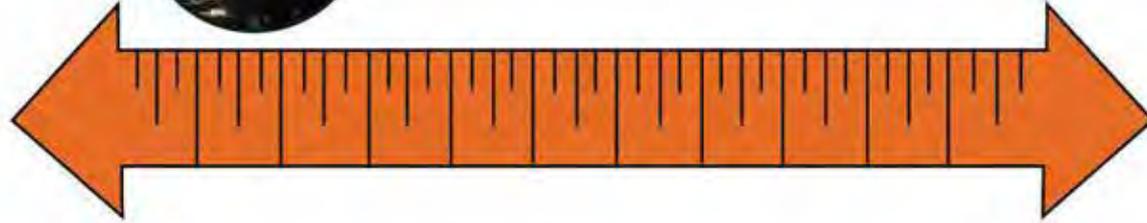
Länggä



Jetzt Prämien tieferlegen!



'You can tell me'





Sykkelpikene.no

“The cyclegirls
bicycle shop”
A sign and a tool

Stay on
message...
Whether pictures...



Working paper

Economic evaluation of cycle projects - methodology and unit prices

Summary



Numbers...

Average costs per kilometer for cycling, DKK, 2008 prices

	Cycling (16 km/h)			For reference: Car (50 km/h) in city			
	Internalized	External	Total	Internalized	External	Duties	Total
Time costs (travel time, non-work)	5.00	0	5.00	1.60	0	0	1.60
Vehicle operating costs	0.33	0	0.33	2.20	0	-1.18	1.02
Prolonged life	-2.66	0.06	-2.59	0	0	0	0
Health	-1.11	-1.80	-2.91	0	0	0	0
Accidents	0.25	0.54	0.78	0	0.22	0	0.22
Perceived safety	+ (?)	0	+ (?)	?	?	0	?
Discomfort	?	0	?	?	?	0	?
Branding/tourism	0	-0.02	-0.02	?	?	0	?
Air pollution	0	0	0	0	0.03	0	0.03
Climate changes	0	0	0	0	0.04	0	0.04
Noise	0	0	0	0	0.36	0	0.36
Road deterioration	0	0	0	0	0.01	0	0.01
Congestion	0	0	0	0	0.46	0	0.46
Total	1.81	-1.22	0.60	3.80	1.13	-1.18	3.74

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...



Campaigns...

CYCLING
WITHOUT
AGE



A human face:

BUILDING BETTER LIVES WITH CYCLING WITHOUT AGE

THE RIGHT TO WIND IN YOUR HAIR

THORKILD





RECONNECTING WITH SOCIETY



Or technical documents

Capacity use on roads



Fig. 3.8. Trafiksituation ved belastningsgrad ca. 0,6



Fig. 3.9. Trafiksituation ved belastningsgrad ca. 0,8



Fig. 3.10. Trafiksituation ved belastningsgrad ca. 0,9



Fig. 3.11. Trafiksituation ved belastningsgrad ca. 1,0

Capacity use on cycle tracks

B=0,6





Amagerbrogade Corridor 2015, Zoom

Everything we do communicates – so just as well think about it

- Visuals
- Numbers
- Infrastructure
- Wording

no cyclists, just people...



**Too cheap for its own
good...**





Holland:

1.000.000 e-bikes

15.000 e-cars



Sweden:

1.533 e-cars
1.500 articles

15.000 e-bikes
261 articles



Copenhagen, transport investments:

- 2006-2015 in cycling, total: 1.200.000.000 DKR
- 2006-2015 in bus transport, total: 3.500.000.000 DKR
- One road for cars to new urban development (Nordhavnen): 2.000.000.000 DKR
- New Metrocity Ring: 15.000.000.000 DKR

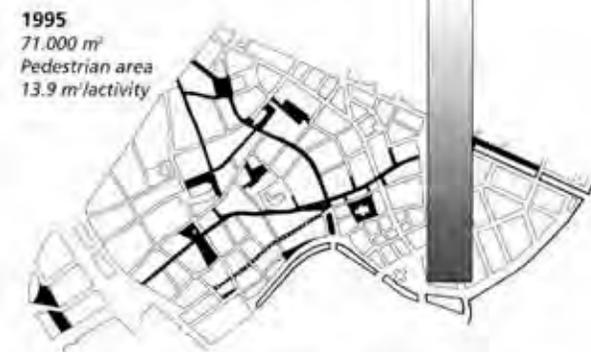
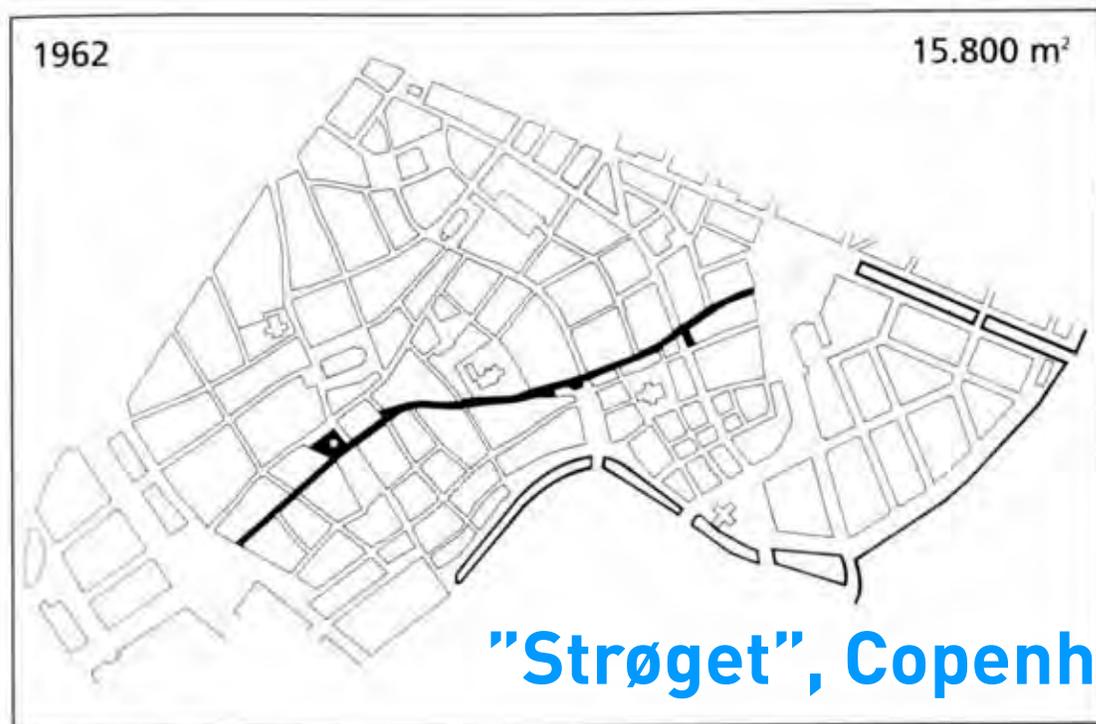
The good news:

- value for money.

and

- we are still looking forward to see a city with investments levels truly matching effect

And remember:
It can be done
- find the data, tell the story...



Average number of people engaged in stationary activities throughout the city center at any time between 12th and 16th on summer days in 1968, 1986 and 1995.

They said it cannot be done

“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



Thank you

Andreas@gehlpeople.com