

Lessons from Copenhagen

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2013

Bicycle Strategy

- Official municipal policy
- Goals for the next 15 years
- Updated after 5-10 years
- 32 page glossy brochure



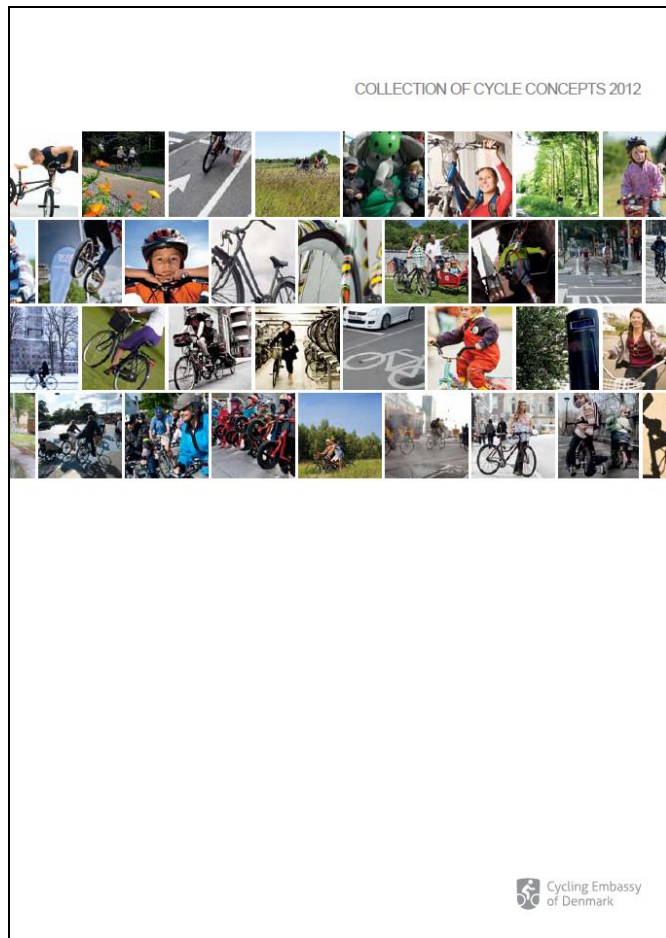
Bicycle Account

- Every two years
- Survey 1000 cyclists to understand
 - Behavior
 - Satisfaction
 - Needs
- Analyze other data
- Evaluate progress toward long term goals
- 24 page brochure/report



Collection of Cycle Concepts 2012

“...to provide inspiration and motivation ... in Denmark as well as the rest of the world.” Troels Andersen, Chairman, Cycling Embassy of Denmark



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People of all types cycle year round for every purpose.



75% of Copenhageners cycle throughout the year

Source: Copenhagen City of Cyclists: Bicycle Account 2012

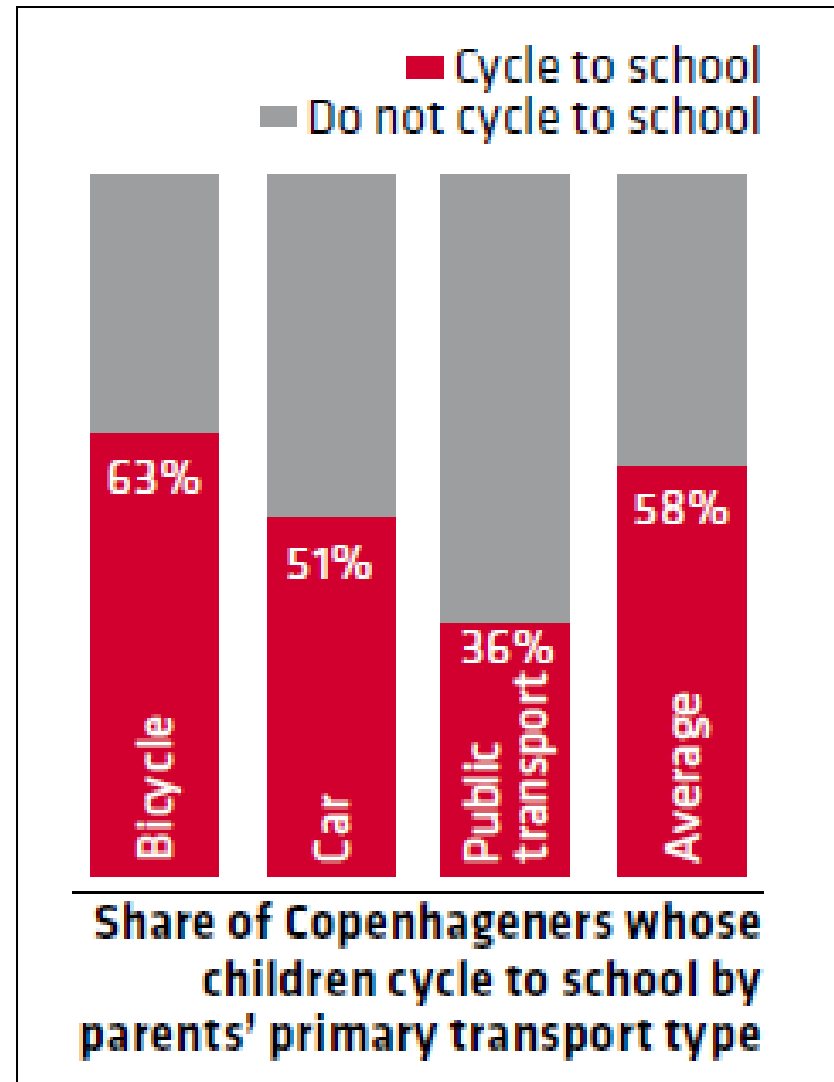
35% of commute trips are by bicycle.

COPENHAGEN'S BICYCLE STRATEGY 2011-2025

	'96	'98	'00	'02	'04	'06	'08	'10	'12	'15	'20	'25
Percentage that cycle to work or education (%)*	30	30	34	32	36	36	37	35	36	50	50	50
Percentage of cyclists that feel safe (%)*	60	58	57	56	58	53	51	67	76	80	85	90
Seriously injured cyclists (number per year)*	252	173	146	152	125	97	121	92	102	56	45	34
Share of the PLUS net that has three lanes (%)**									17	40	60	80
Reduction in cyclists' travel time (%)**									0	5	10	15
Satisfaction with the condition of cycle tracks (%)	48	51	40	45	50	48	54	50	61	70	75	80
Satisfaction with bicycle culture's benefit to city life (%)								67	73	70	75	80

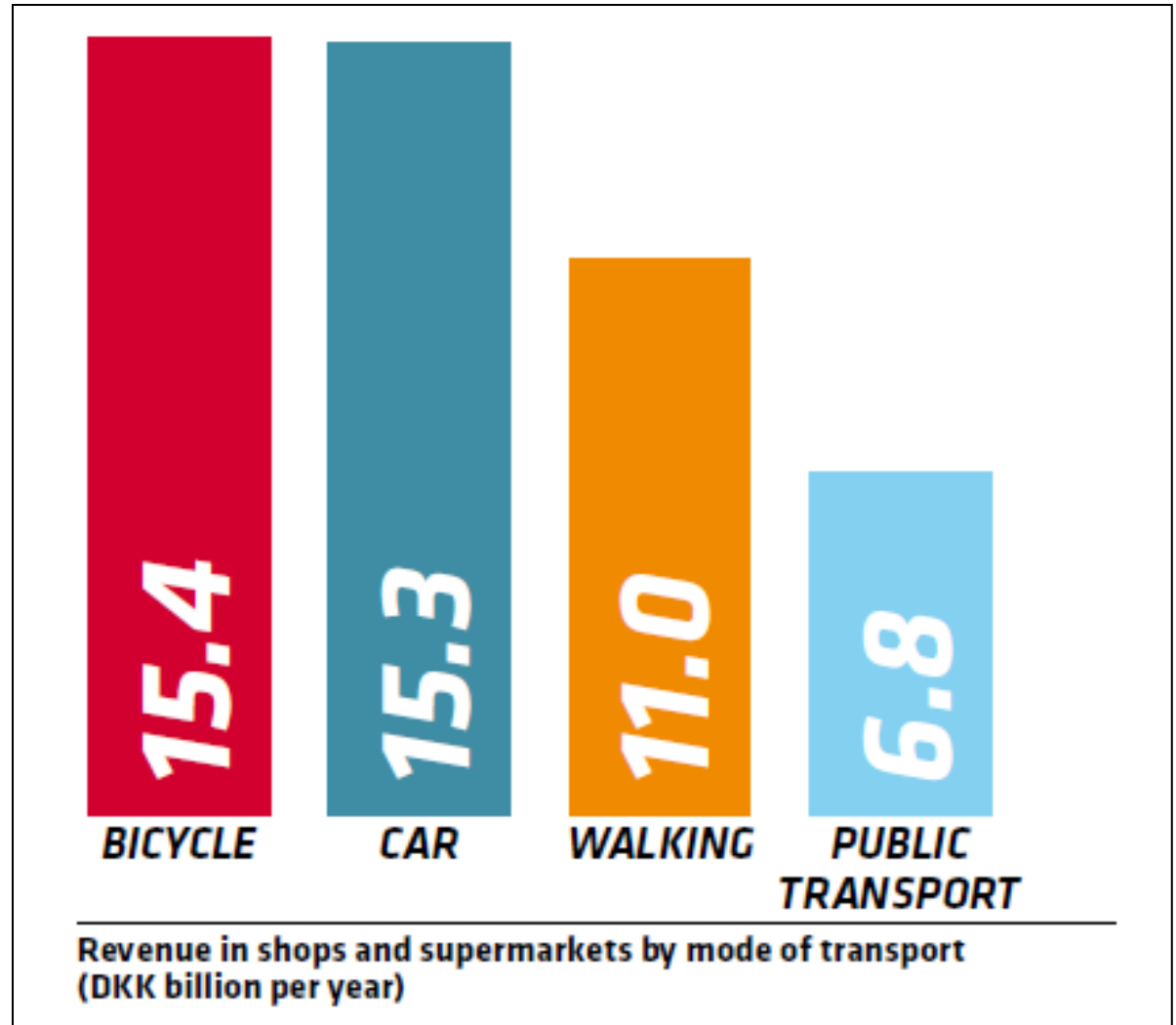
Source: Copenhagen City of Cyclists: Bicycle Account 2012

58% of
children cycle
to school



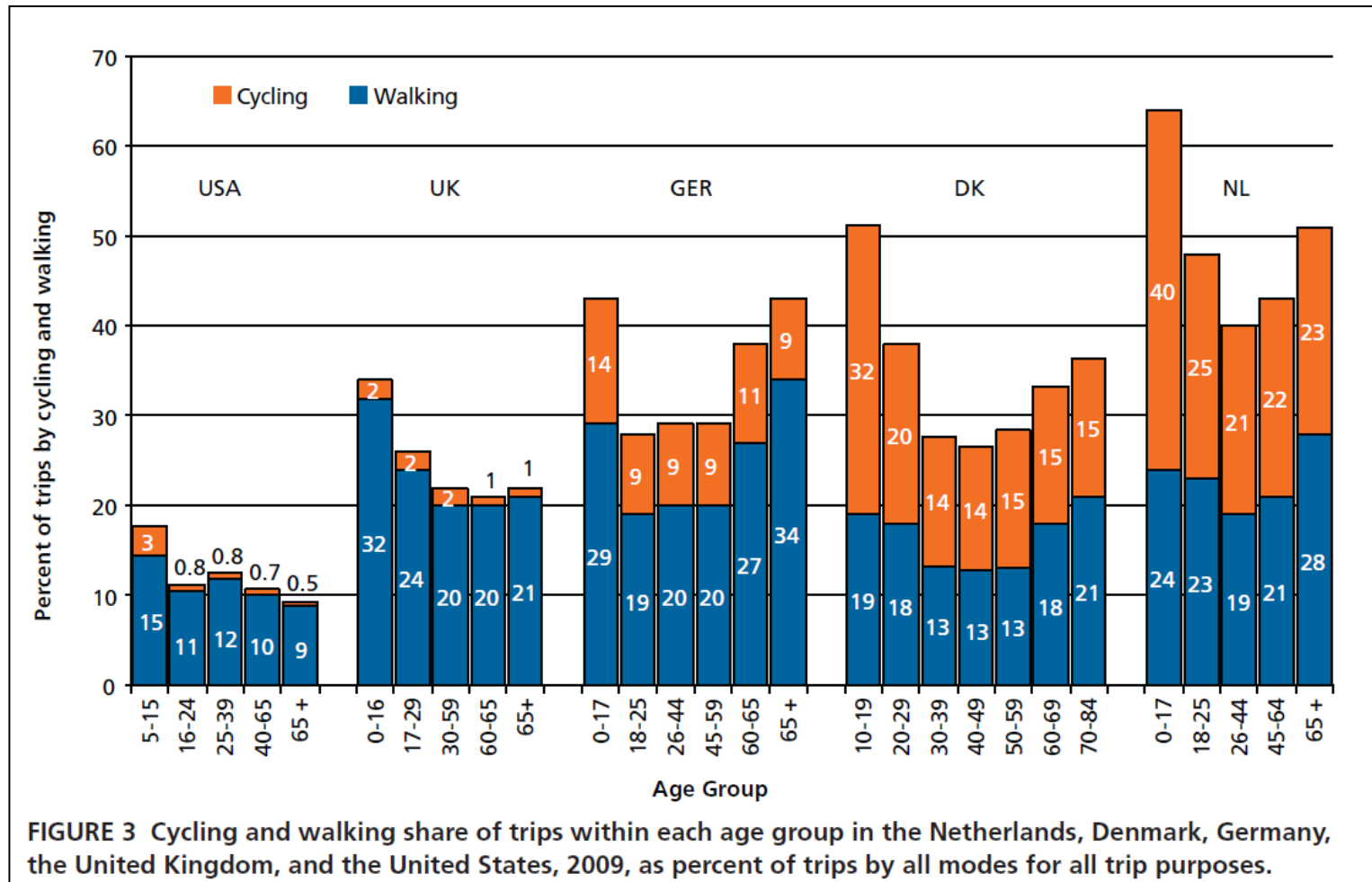
Source: Copenhagen City of Cyclists: Bicycle Account 2012

As much shopping is done by bicycle as by car



Source: Copenhagen City of Cyclists: Bicycle Account 2012

People bike at all ages



Source: Buehler and Pucher, Walking and Cycling in Western Europe and the United States: Trends, Policies and Lessons, TR News 280, May-June 2012

Over 50% of cyclists in Copenhagen are female

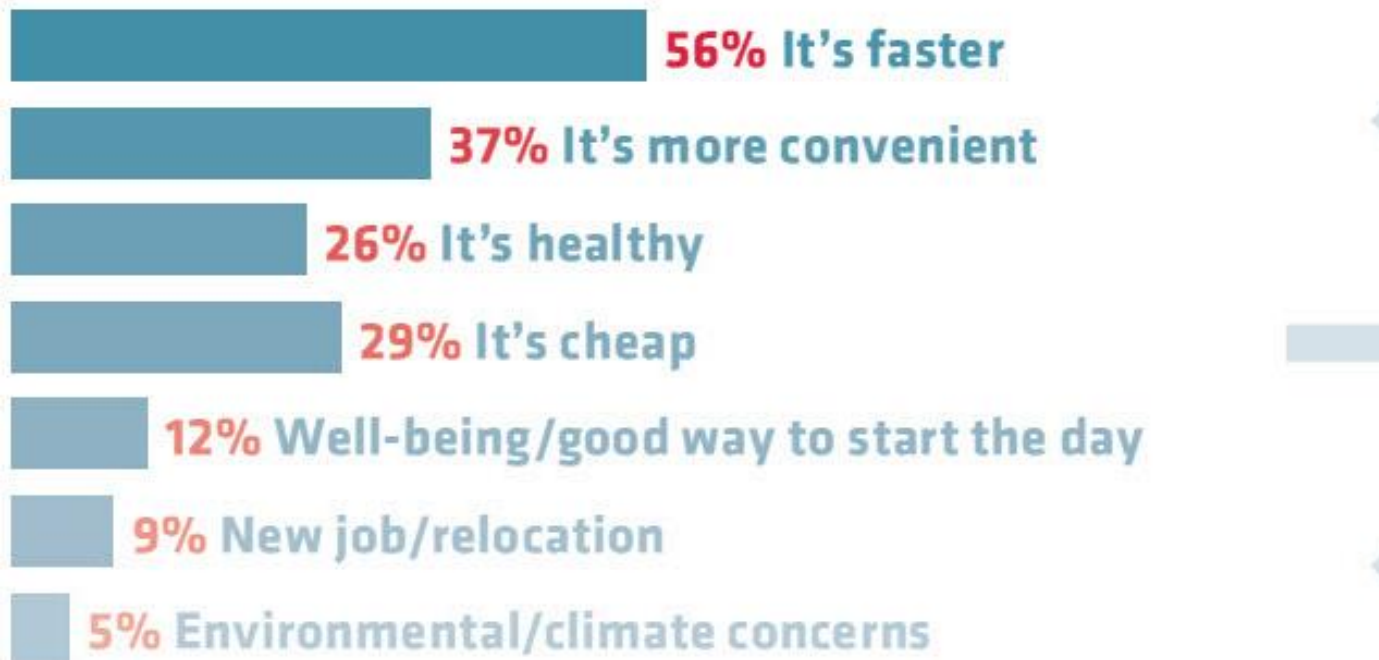
Source: Garrard, J, S Handy and J Dill, Women and Cycling, page 215 in City Cycling, Pucher, John and Ralph Buehler, editors, MIT Press, 2012.

People of all types cycle year round for every purpose.



People bike because it is faster and more convenient.

THE BICYCLE IS EASY AND FAST



Copenhagensers' reasons for cycling to and from work/education (%)

Source: Copenhagen City of Cyclists: Bicycle Account 2012

Copenhageners feel safe

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Source: Copenhagen City of Cyclists: Bicycle Account 2012

Copenhageners are safe

One serious casualty for every 4.2 million
km cycled

Source: Copenhagen City of Cyclists: Bicycle Account 2012

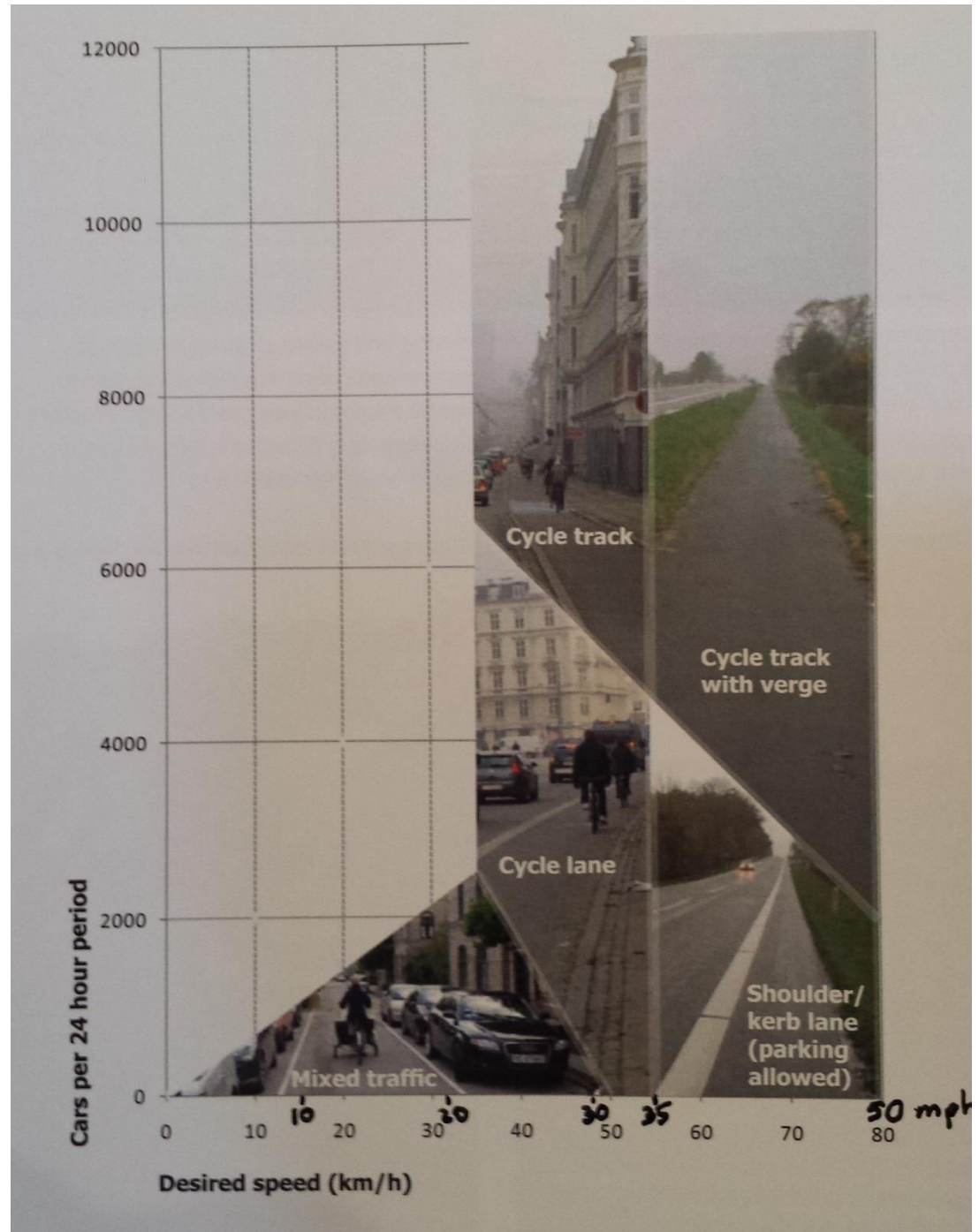
Bicycle infrastructure is ubiquitous

Motor vehicle volume and speed determine bicycle facility type.

Copenhagen relies almost exclusively on cycle tracks and mixed traffic.

Source: Collection of Cycle Concepts 2012 (Cycling Embassy of Denmark)

BAC December 2, 2013



On most low volume local streets, speed limit is 30 kph (18 mph) with no cycle track or lane.



Bicycle contra-
flow without
cycle track is
common,
marked only
at
intersections.



Almost all busy streets have cycle tracks

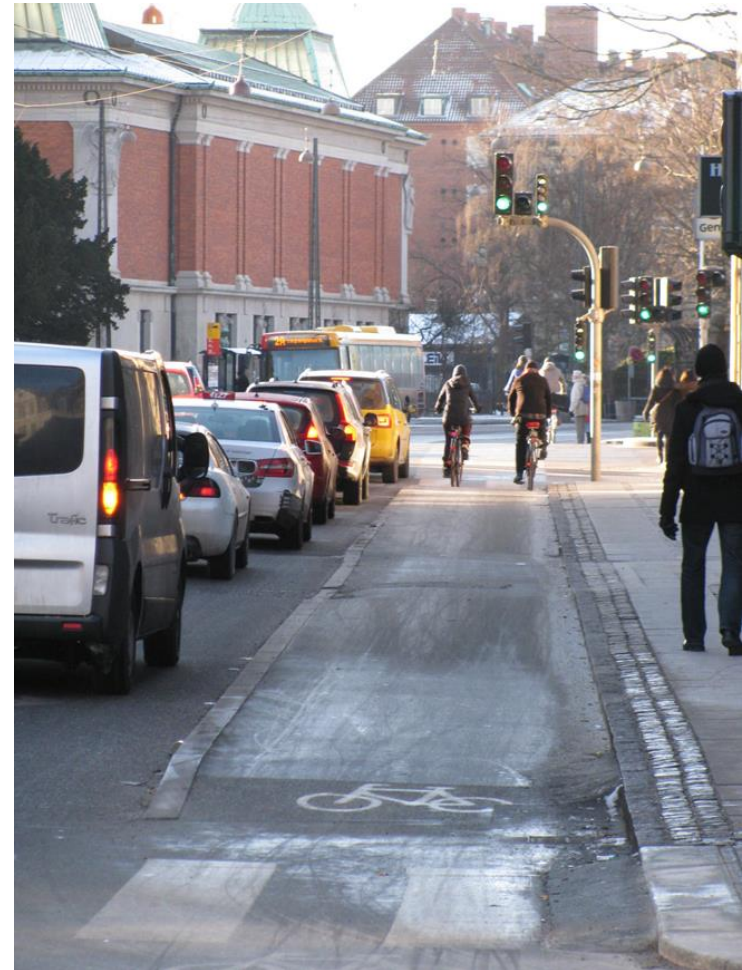
ØVRIGE NØGLETAL	'96	'98	'00	'02	'04	'06	'08	'10	'12
Cycled kilometers (mil. km per weekday)	0.93	0.92	1.05	1.11	1.13	1.15	1.17	1.21	1.27
Cycled km between serious casualties (mil. km)	1.2	1.8	2.4	2.4	3.0	4.0	3.2	4.4	4.2
Cycling speed (km/h)					15.3	16.0	16.2	15.8	15.5
Cycle tracks (km)	294	302	307	323	329	332	338	346	359
Cycle lanes (km)		6	10	12	14	17	18	23	24
Green cycle routes (km)	29	30	31	32	37	39	41	42	43
Cycle super highways (km)*									17.5
Cycle parking spaces on roads and pavements (1000s)						42	47	48	49

* Total for the Capital Region

Source: Copenhagen City of Cyclists: Bicycle Account 2012

Cycle tracks

- Easy for all to recognize
- curb separated from pedestrians
- curb separated from cars
- one way flow
- wide enough for at least two cyclists
- fine powder asphalt



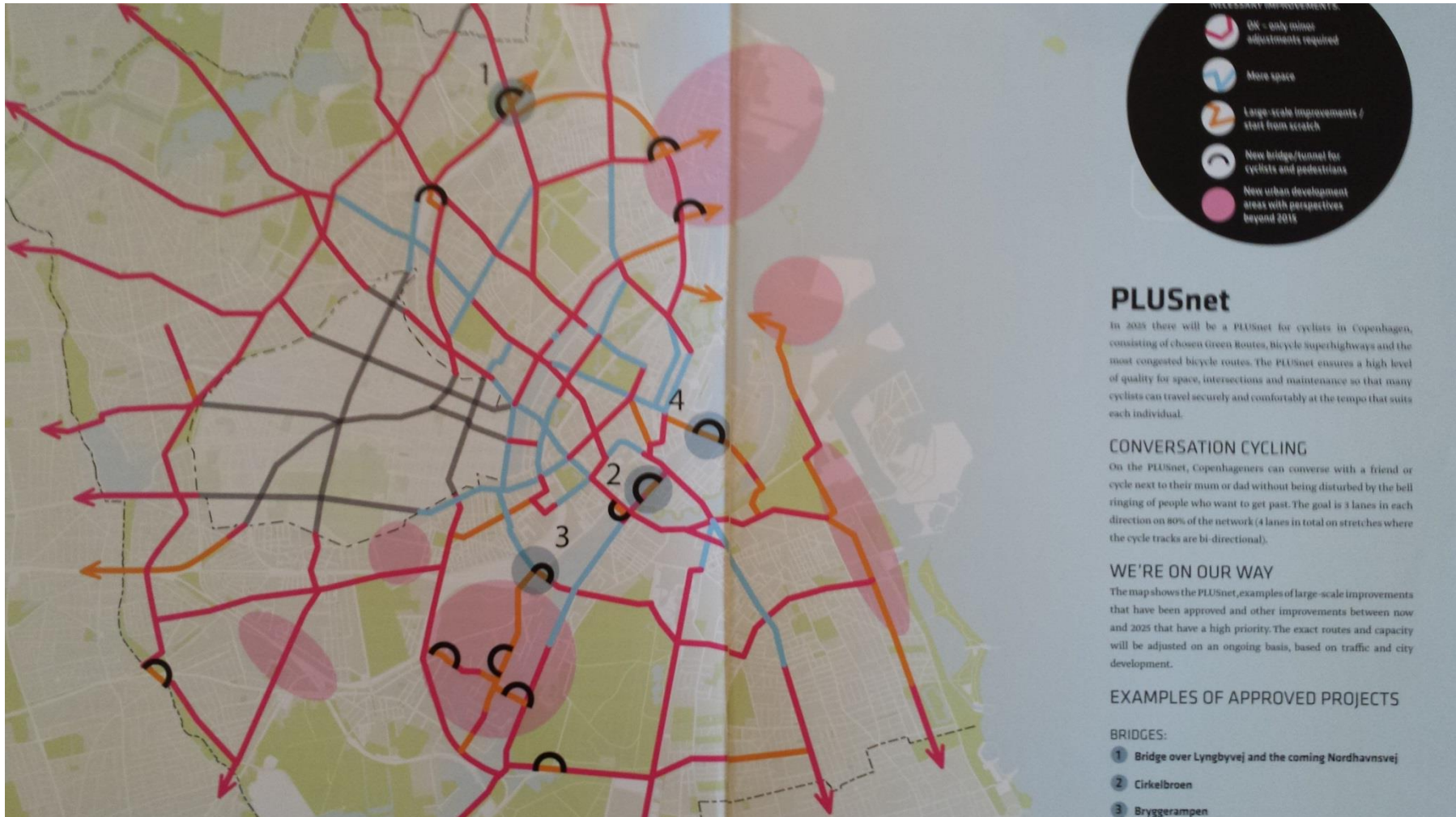
One way street for cars and motorcycles.
Two way “contra-flow” with cycle track for bicycles.



Cycle track on high volume street is wide enough for three or four cyclists



PLUSNet is the high volume network



Goal is 3+ lanes each direction on PLUSNet:
 allow two people to converse side-by-side while
 a faster rider passes them

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Source: Copenhagen City of Cyclists: Bicycle Account 2012

Copenhagen has 50,000 parking spaces on streets and sidewalks

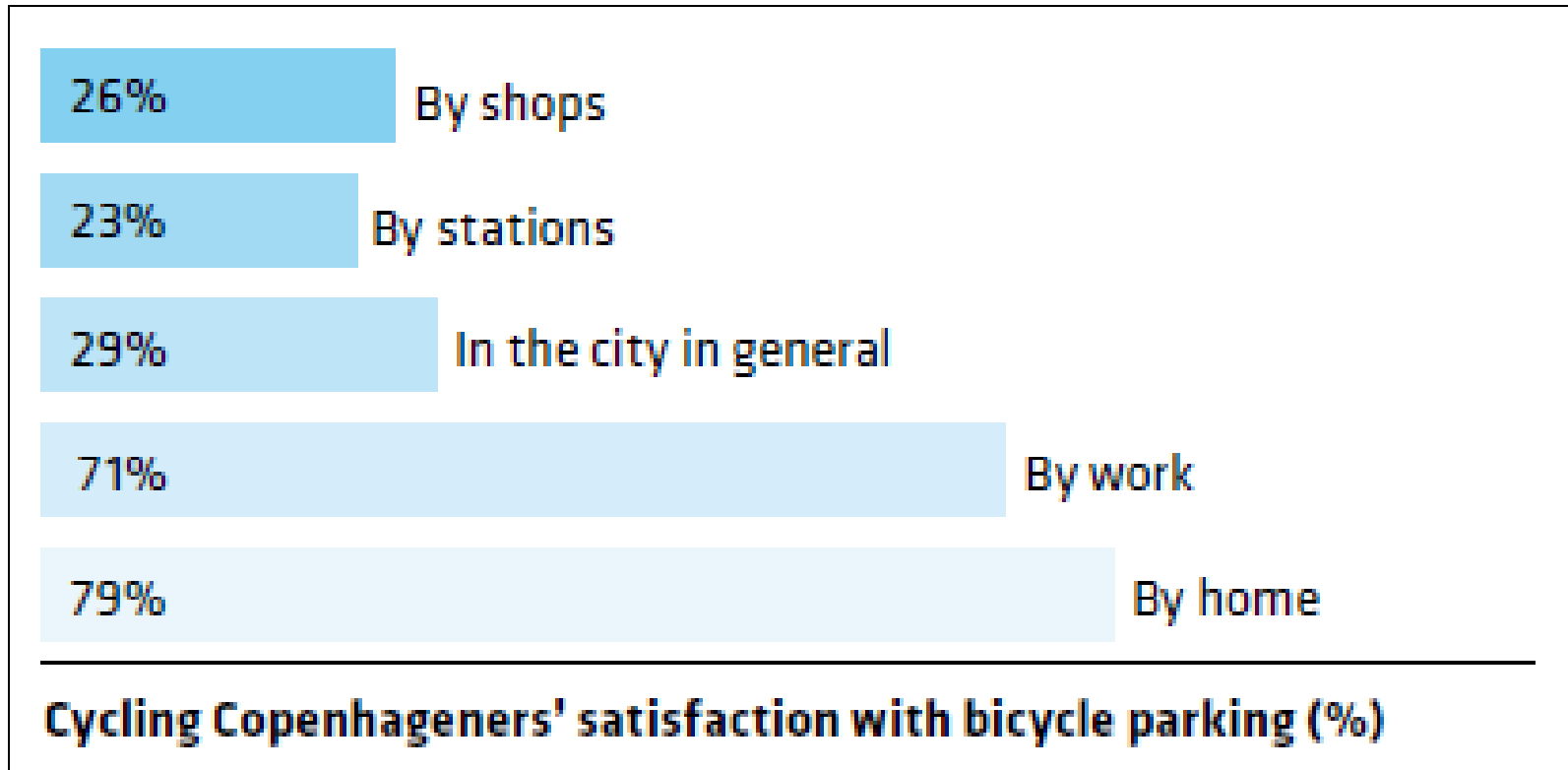
Parking at stations



Parking near shops



But inadequate parking is a problem near shops and train stations



Source: Copenhagen City of Cyclists: Bicycle Account 2012

Annual investment in bicycle infrastructure, 2007 through 2012:

Copenhagen: \$31 per capita

Amsterdam: \$30 per capita

Source: Copenhagen City of Cyclists: Bicycle Account 2012

In Copenhagen, the rules are clear and most motorists and bicyclists follow them

- Cyclists
 - Yield to pedestrians
 - Ride in the cycle tracks
 - stop and wait for lights
 - Turn left from the right lane by crossing intersection and queuing in front of crossing traffic
- Motorists
 - Yield to cyclists
 - ALWAYS look for cyclists (and yield) when turning

Source: John Bowman, field observations, 2013

Brookline needs to set its sights on a 25 year vision

- We are a bicycling and walking town.
- People of all types bicycle year round for every purpose:
 - young and old; male and female; singles, couples and families
 - work and school; shopping and errands; recreation and leisure
- Bicycling is a major mode of transport:
 - Over 35% of all trips involve bicycle
 - 90% of children walk or cycle to school
 - faster and more convenient than car for trips under three miles
- Everybody feels safe and is safe bicycling and walking.
- Bicycle infrastructure is ubiquitous, with:
 - cycle tracks on all busy or high speed streets,
 - mixed traffic under 20 mph everywhere else,
 - safe, secure and attractive parking where it is needed, and
 - annual bicycle infrastructure investment has increased to exceed \$30 per capita (2010 dollars).
- Drivers, bicyclists and pedestrians follow the rules and treat each other with respect.

Suggestions for the short term

- Articulate a 25 year vision based on what is desirable, not limited by what seems possible today
 - Consider coordinating the vision with Cambridge and Boston
 - Get buy in from the transportation department and board
 - Get a town meeting resolution passed
- Enter discussions with Boston and Cambridge to co-sponsor a periodic Bicycle Account
- Promote a steadily increasing bicycle infrastructure budget
- **And most urgently:** Get bicycling and walking provisions integrated into the upcoming school building projects. This is an important opportunity with long range implications
 - Parking facilities
 - Traffic management plan that gives priority to walking and cycling and discourages car drop-offs
 - Safe routes to the expanded schools, with infrastructure investment built into the project budgets
 - Bike, walk and transit incentives, and reduced parking subsidies, for staff
 - Bicycle education and promotion program leading up to the opening dates