

Sustainable transport in Stockholm



Gustaf Landahl
City of Stockholm

The Capital of Scandinavia

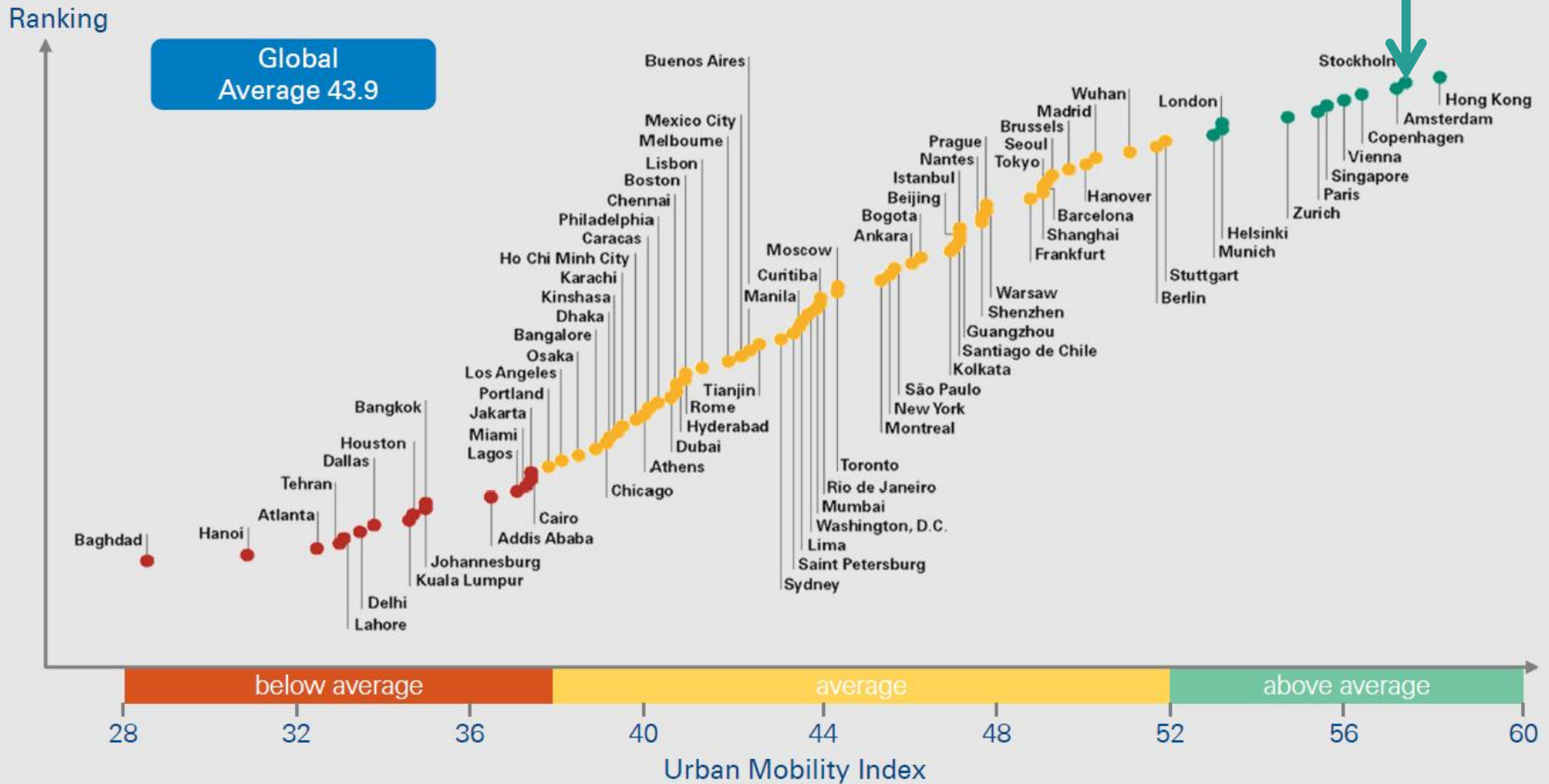
Outline

- Is Stockholms transport sustainable?
- Stockholm grows fast
- Carrots and sticks
- Conclusions



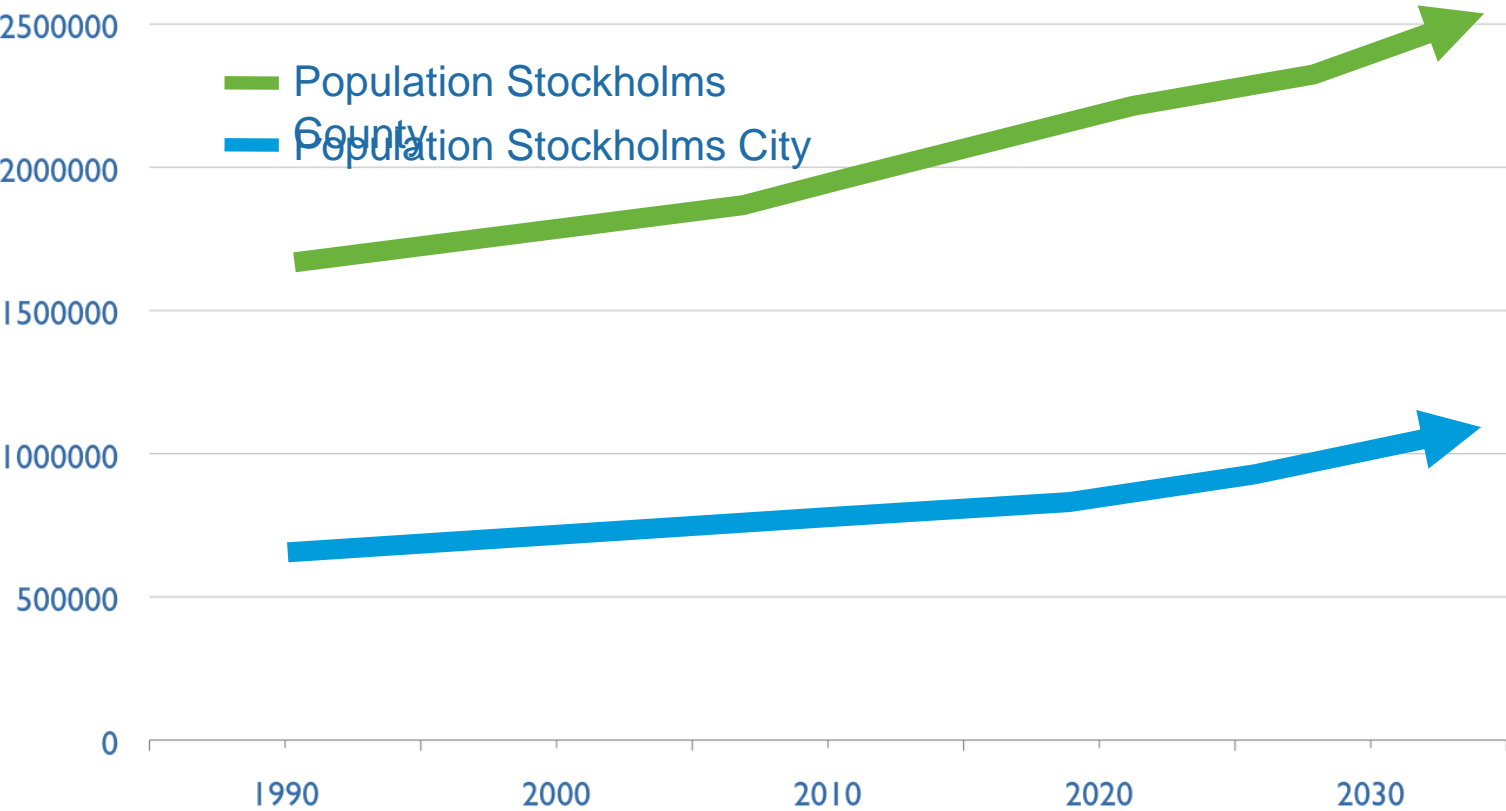
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Urban Mobility Index 2.0



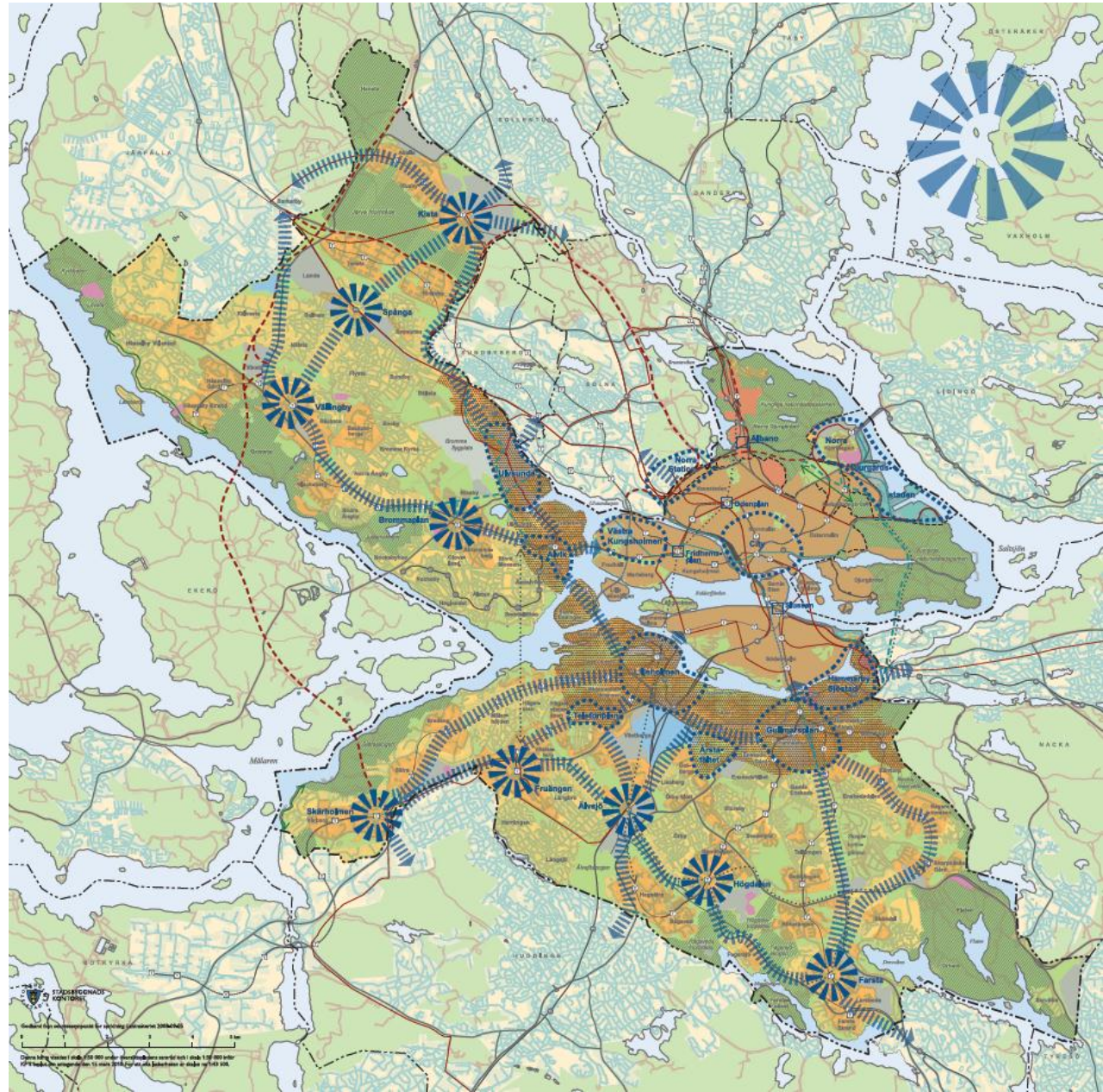
Source: Arthur D. Little Urban Mobility Index 2.0; UITP is independent of this index, which does not necessarily reflect its opinion'; 100 index points for city that would achieve best performance on each criteria.

Stockholm grows more rapidly than ever



The Structure Plan - *the walkable city* -

- Build along existing infrastructure and new PT
- Increase densities supports PT
- Mixed use development for cycling and walking
- 140.000 new dwellings to 2030



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Sustainable transport by Carrots & Sticks!

Sticks

- Parking fees
- Congestion taxation

Carrots

- Improved cycle lanes
- Increased public transport use
- New ways of transport
 - Car-sharing clubs
 - Better information
 - Adaptive traffic signals
- Goods logistics
- Clean vehicles



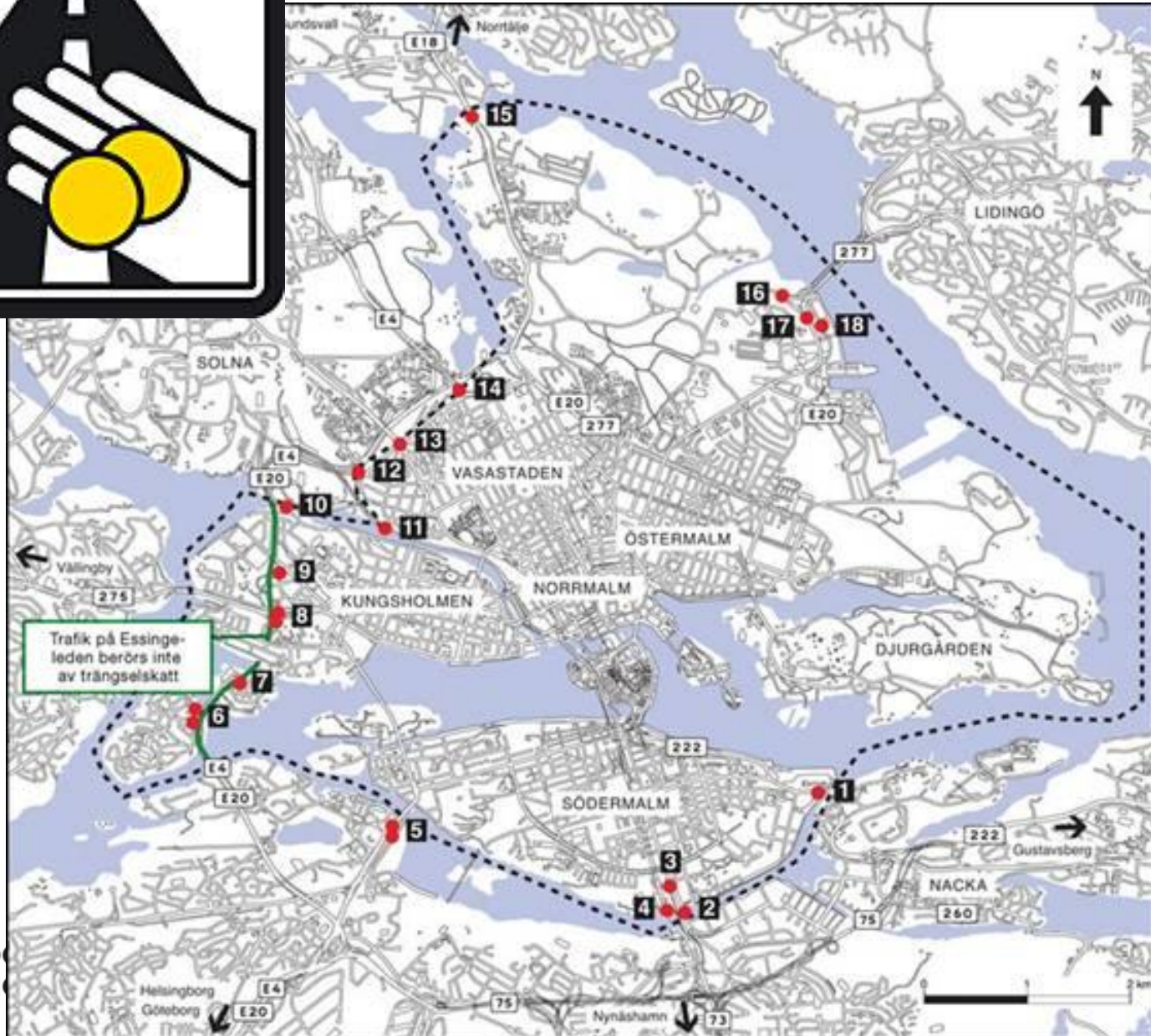
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Urban Mobility Strategy

- A. Encourage high capacity transport modes
- B. Faster journey times for the high capacity modes
- C. Develop streets and roads as attractive urban for walking
- D. Private cars only where they are the most effective transport mode

24/11/2014

Congestion-charging zone



Sto
sta

Parking

RÖD BILJETT:

26 kr/tim
kl. 9-17



26 kr/tim
kl. (9-16)

15 kr/tim
övrig tid

Work in progress for
the outer city



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Cyclists and pedestrians





Facilitate for cyclists and pedestrians

Safety

- cycle paths
- Good crossings
- B&R, parking, rain shelters
- Free air compressors
- City-bikes



Attractive public-transportation

Marketing

- free tickets for special groups i:e new citizens
- trip-guarantees
- smart-cards
- real time information
- 79 % market share in rush-hour

Vehicles

- Metro and commuter trains run on green electricity
- Fossil fuel free busses (Biodiesel ,Biogas & ED95)
 - 50% 2011
 - 100 % by 2020



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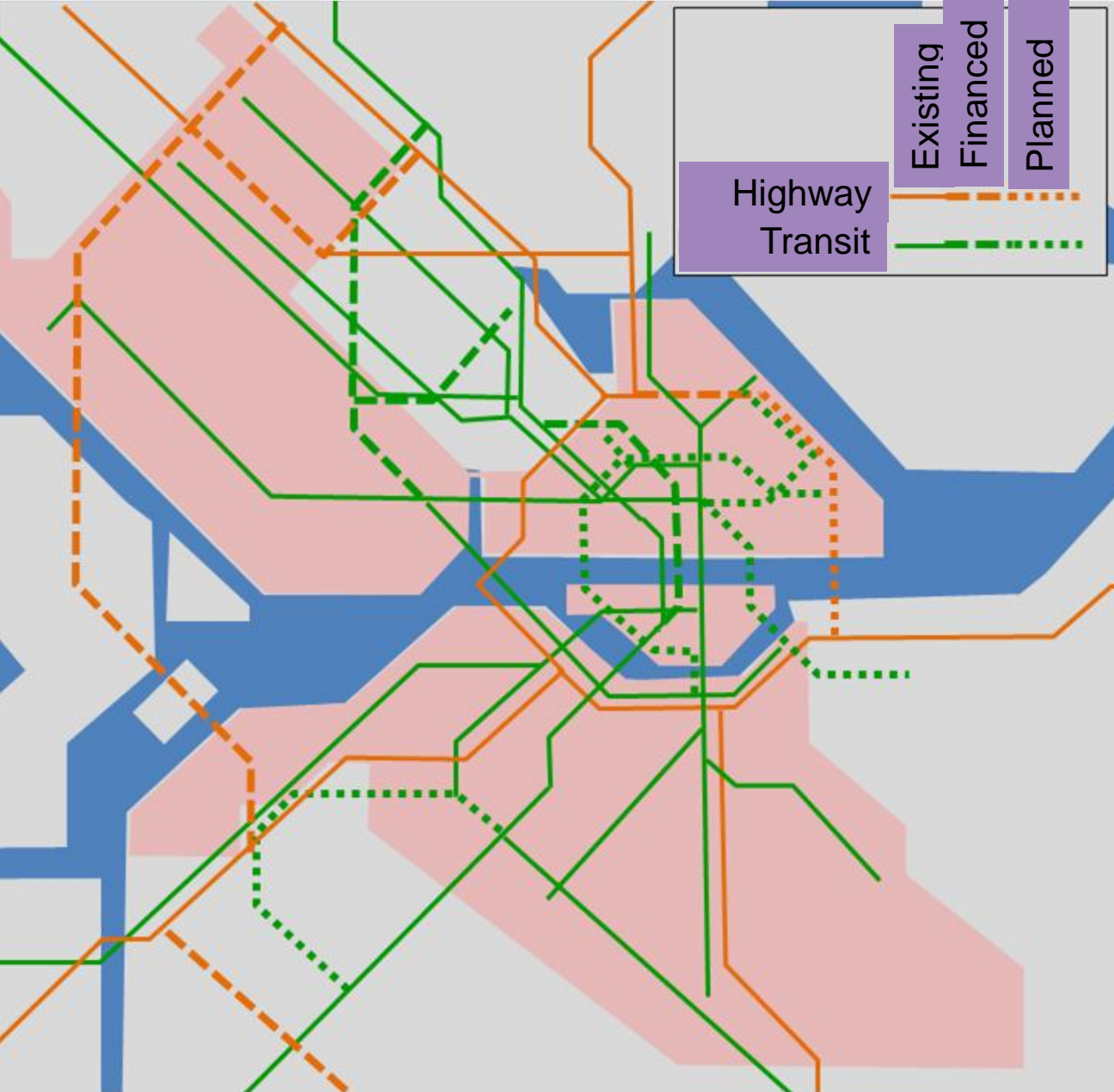


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len ska
måste
ort.
vs mer

socialdemokraterna
sammans för en bättre sjukvård





The Stockholm Agreement

- SEK100 billion
 - 1/4 from congestion tax
 - ✓ Expand coverage and capacity of the public transport network
 - ✓ Lead heavy road traffic flows away from city streets (mainly in tunnels)

The new Metro Agreement

- SEK 27 billion
 - 1/3 from congestion tax

Freight transport





Goods distribution O-central old town

win-win-win

- Better accessibility
- Better city environment
- Better for the customers

Increased ambitions

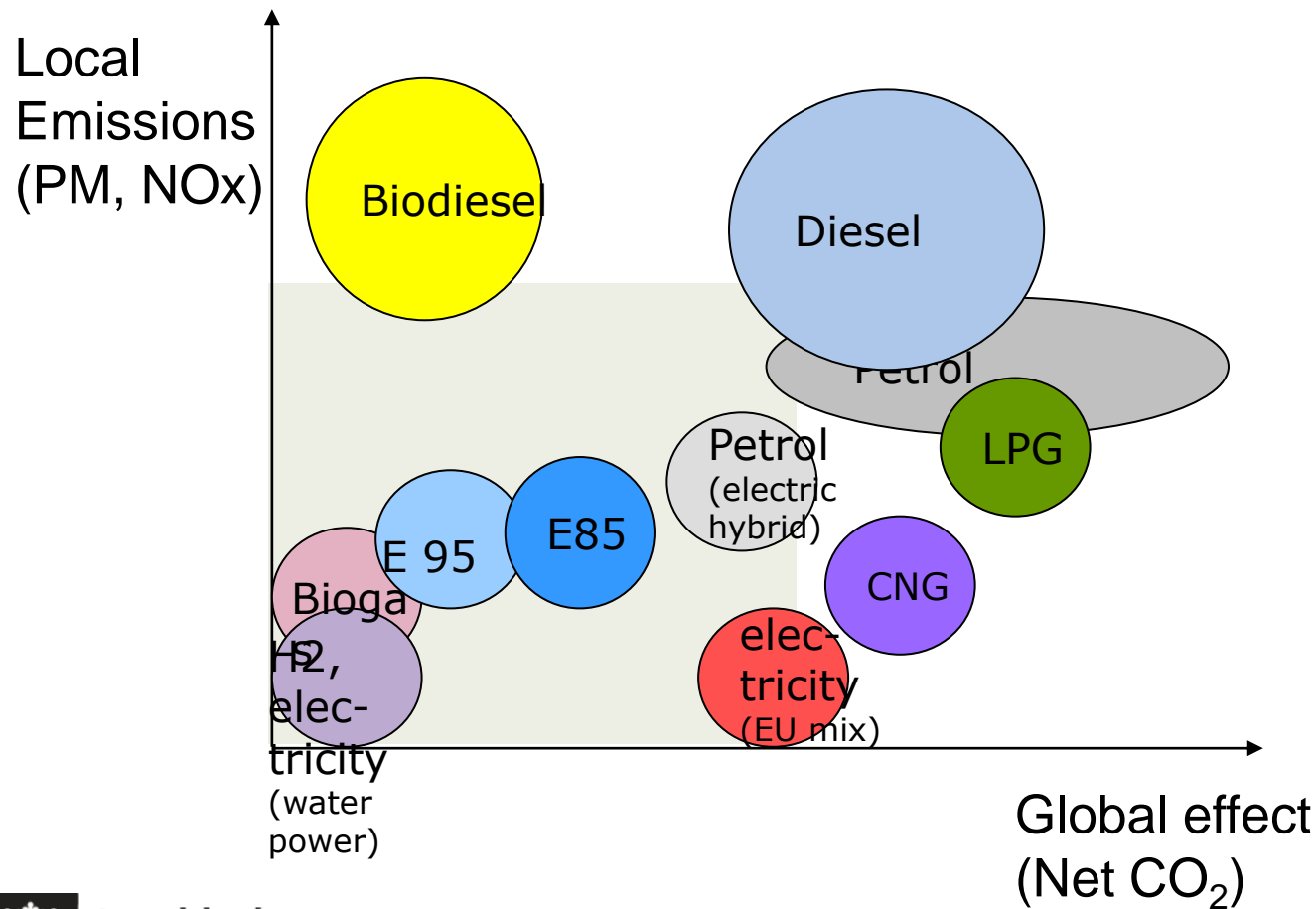
- Pilot for off peak deliveries
- More consolidation projects
- Improved enforcement of landing bays
- Land use planning for distribution centres





Clean vehicles?

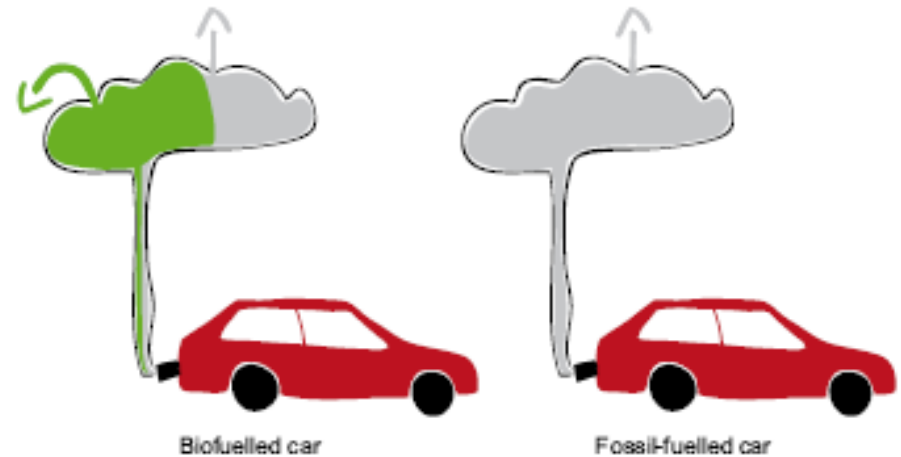
A technology neutral definition for: local emissions and *Net* climate gas emissions



First Swedish definition of Clean Cars

Definition of clean car:

- Diesel /petrol < 120 g CO₂/km
- Biogas < 9,7 Nm³/l
- Ethanol < 9,2 l/100 km
- Electric, > 37 kWh/100 km
- (the average car in Sweden
- Emitted > 160 g CO₂/km tailpipe



The first phase

Market introduction phase 1995-2004

- establish definition
- vehicle and fuel supply
- identify and remove legal barriers & tax disadvantages.
- Solve safety issues



Public fleets to start the market

Common vehicle procurements

- Citroën Berlingo Electric 1998
- **Ford focus FFV 2001**
- VW Caddy Ecoflex 2007
- Ethanol buss-buyers consortium 2008
- Swedish common EV procurment 2010

Agreements with filling stations to provide alternative fuels

- **E85**
- Biogas
- EV



Change legislative barriers!

- 1999 Councillors meet Minister of the Environment
 - 📄 Reduce company car tax to conventional car equivalent (in 2001 extended to a 20-40 % discount for clean vehicles)
- 2003 Councillors meet Minister of Finance
 - 📄 The need for more financial incentives for clean cars (introduced 2006)
 - 📄 The need for long-term tax exemptions for clean fuels *This resulted that ethanol and biogas were exempted from fuel taxes for 5+5 years.*
 - 📄 The need for harmonized and simplified regulations for clean cars (a common definition was adopted in 2006)



Lägre skatt på miljöbilar och förnybara drivmedel var ett par av kraven till finansminister Bosse Ringholm när han uppvaktades av storstäderna genom Alf T Samuelsson, miljöborgarråd i Stockholm, Bernt Sabel, ledamot av trafiknämnden i Göteborg och Emmanuel Morfiadakis, ordförande i tekniska nämnden i Malmö.

Kommuner kräver sänkt skatt på miljöfordon

Lägre skatt på miljöbilar och förnybara drivmedel. Det var ett par av önskemålen när Stockholm, Göteborg och Malmö uppvaktade finansminister Bosse Ringholm i slutet av april.

Städerna överlämnade en gemensam skrivelse med krav på att regelverk och skatter ändras så att miljöbilar gynnas

anställda och företag delar på bilarna. Då kan anställda täcka sitt bilbehov utan att skaffa en egen bil. På så sätt skulle bilarna utnyttjas mer effektivt, säger Emmanuel Morfiadakis, ordförande i tekniska nämnden i Malmö.

Reglerna för miljöfordon har inte hängt med i teknisk utvecklingen och behöver anpassas. Ett exempel är att kra-

Solve safety issues!

- Fire from E85 filling dispensers
- E85 spills at filling stations
- Pressure tank in methane vehicles



The second phase

- Developing market phase 2004-
 - monetary incentives for end users
 - reliable information
 - Satisfied drivers



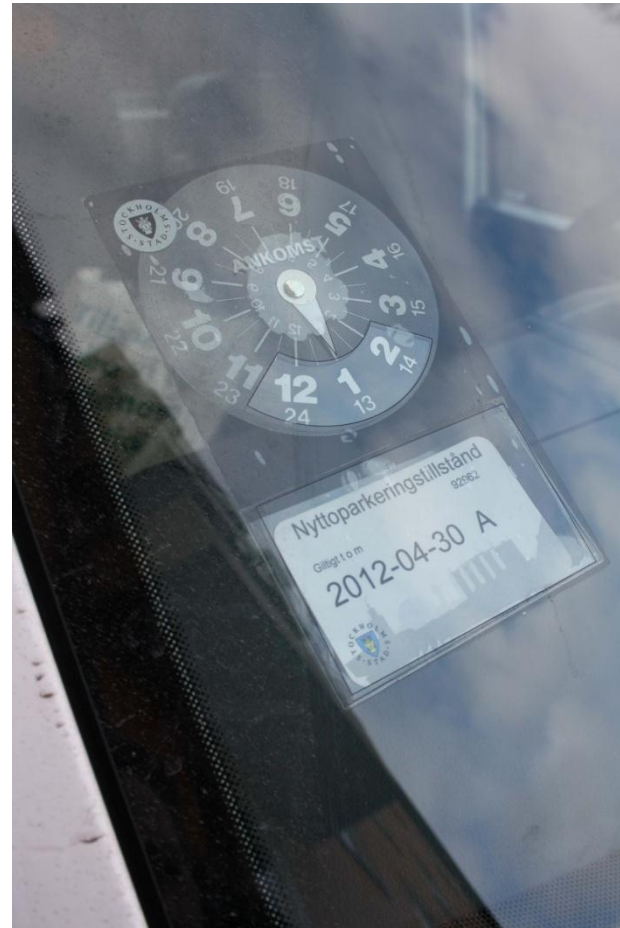
Financial incentives

Local

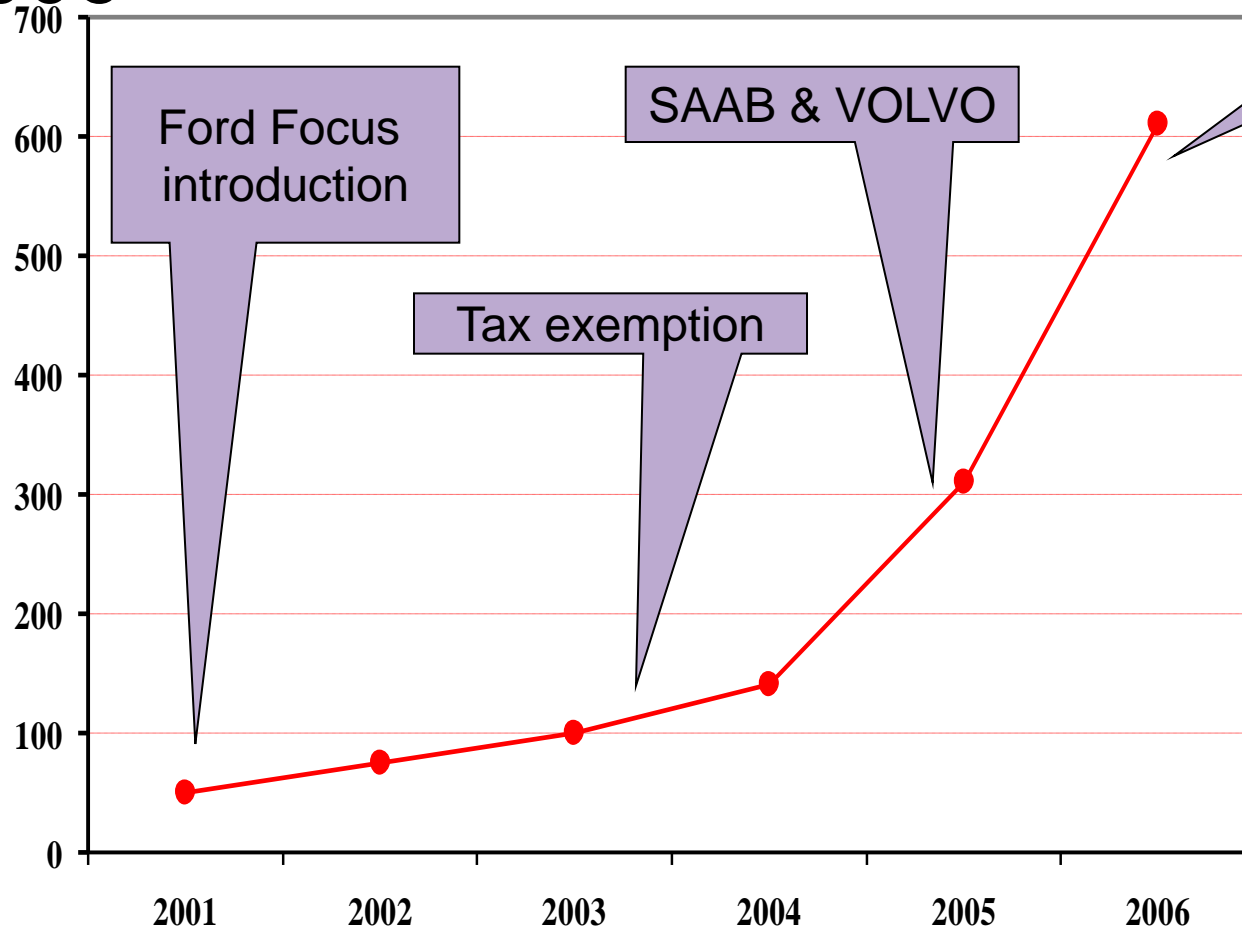
- Free residential parking 2005-2008
- Free commercial parking 2005-2008

National

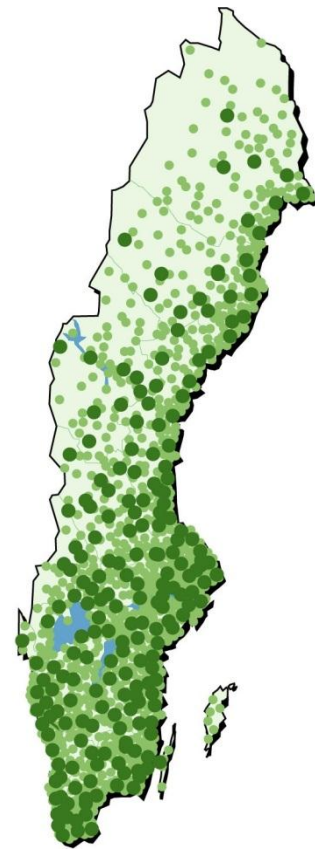
- Reduced fringe-benefit tax 1999-
- Reduced fuel tax for biogas & bioethanol 2003-
- Congestion tax exemption 2006-2008
- Clean car premium 2007-2009
- Reduced vehicle tax 2010-
- Super clean car premium 2012-



Filling stations for E85 in Sweden 2001-2006



Law on renewables at stations



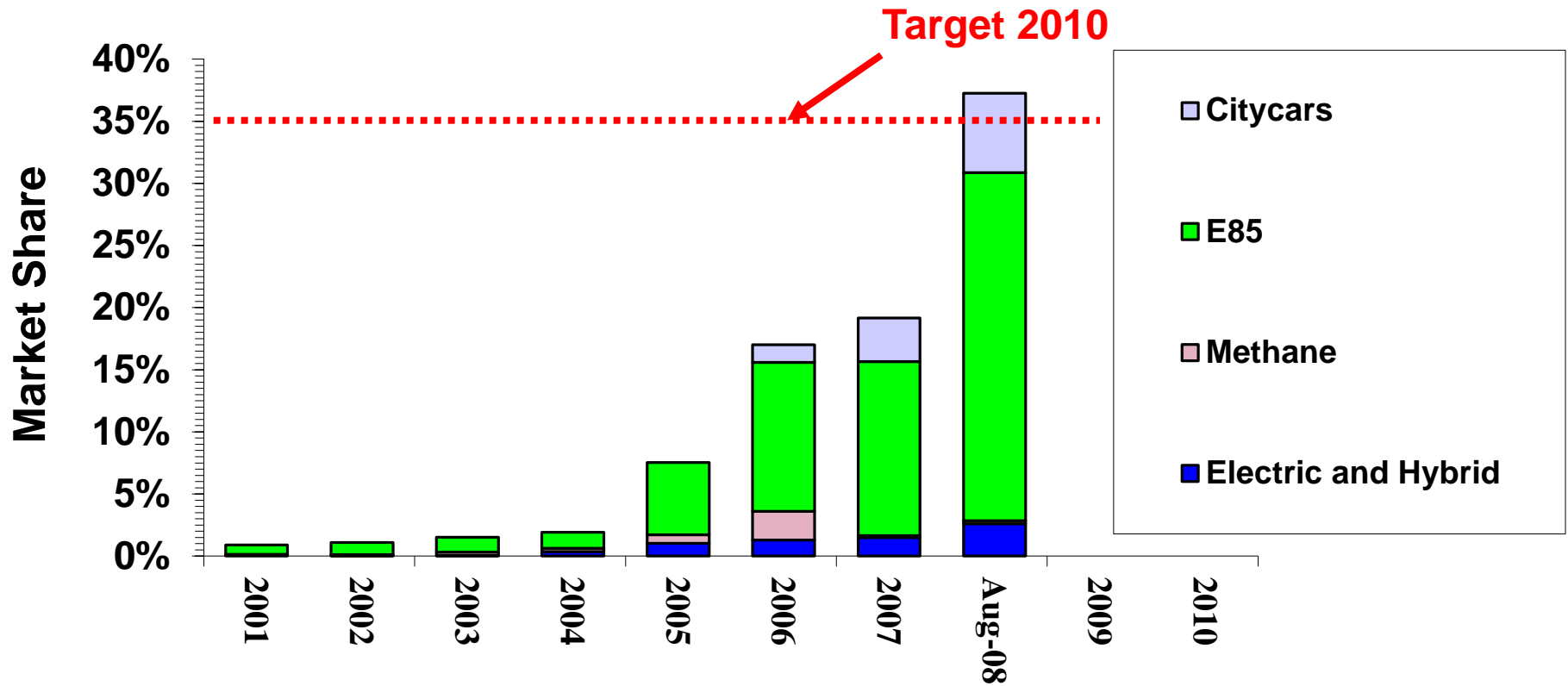
Promoting clean vehicles and fuels

- Increasing clean vehicle use in private company fleets
 - Market study
 - Information campaign
 - Test fleet for companies
- Web-portal for clean drivers
 - Information
 - Decision support

The screenshot shows the homepage of MILJÖfordon.se, a Swedish portal for clean vehicles and fuels. The header includes navigation links for 'STARTSIDAN', 'WEBBKARTA', 'ANPASSA SIDAN', and 'IN ENGLISH'. Below the header is a search bar and a menu with categories: 'FORDON', 'TUNGA LASTBILAR', 'BRÄNSLE', 'EKONOMI', 'MILJÖASPEKTER', 'AKTUELLT', and 'OM MILJÖFORDON.SE'. The main content area is divided into several sections:

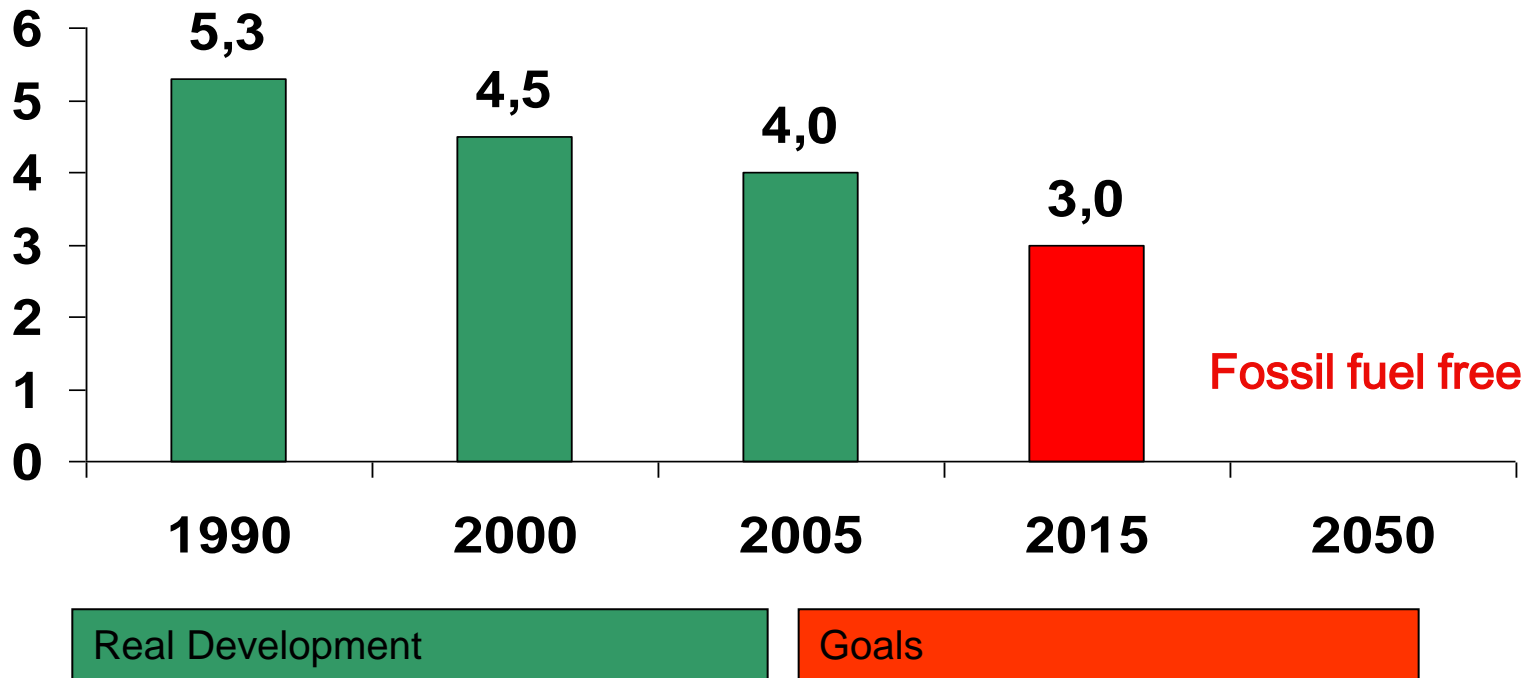
- Detta är miljöfordon.se:** A brief introduction to the portal's purpose as a national information service for clean vehicles and fuels.
- Just nu:** A list of recent news items, including 'Gröna Bilister - nyheter september', 'OK för trängselskatt i Göteborg', 'Nu 100 tankställen för fordonsgas', 'Här kan du beräkna din miljöbesparing', and 'Uppdaterad "Guide elbilar och laddhybrider"'. There is also a 'Nytt i media' section with links to various articles.
- Sök miljöbilar:** A search interface with filters for 'Personbilar' and 'Transportfordon', and dropdown menus for 'Bränsle', 'Märke', and 'Definition'. A 'Sök fordon' button is present.
- Sök tankställen:** A section for finding refueling stations, with a 'Tankställen' button.
- Miljöjämförelse:** A section for comparing different vehicles, with a 'Gör miljöjämförelse' button.
- Ekonomijämförelse:** A section for economic comparisons.
- Jämför:** A section for comparing vehicles, with a 'Gör jämförelser mellan fordon, ekonomi, miljöprestanda m.m.' button.
- Miljöbilar i Sverige:** A section for clean vehicles in Sweden, with a 'Försäljningen av miljöbilar och alternativa bränslen' button.
- Seminarier & konferenser:** A section for seminars and conferences, with a '16 - 18 sep 2009 - "World Bioenergy - Clean Vehicles & Fuels 2009", Stockholm' button.

Market share of brand new passenger cars in Stockholm County 2001-2008



Goals and achievements

Tonnes CO₂-ekv per capita



Fossil fuel free by 2040



THANK YOU !



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stad

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