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EUROPEAN CYCLISTS' FEDERATION

Congestion charges and cycling measures, a winning team for urban air quality

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Moscow International Cycling Congress

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Air Quality – EU context

400 000 premature deaths in Europe each year (WHO)

40 million citizens are exposed to high pollution levels

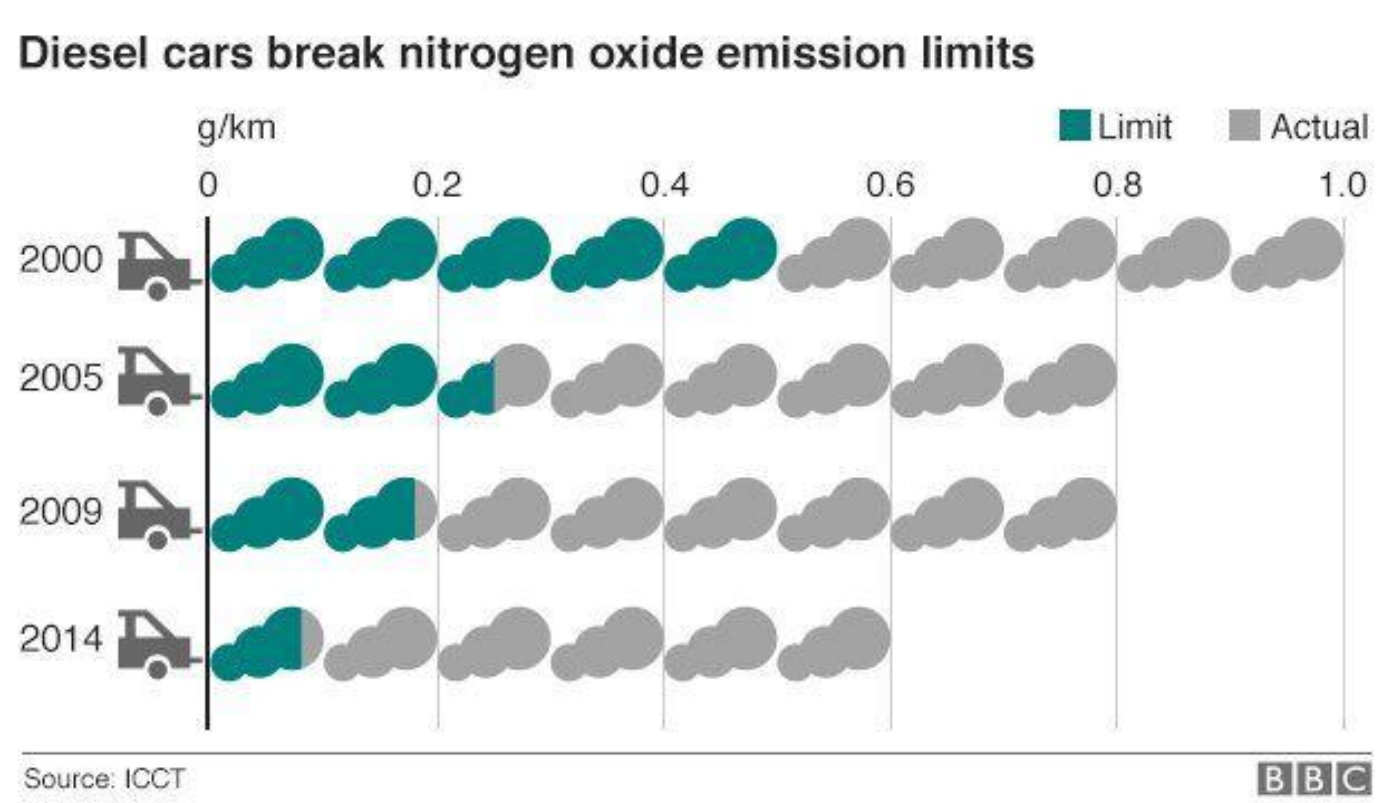
Air pollution?

Transport: major source of air pollution in cities

- **40% of NOx**: damage to lung tissue, reduction lung function
- **64% of NO2**: poisonous gas, irritation of airways
- **34% of PM10**: particles, increased risk on lung cancer
- PM2,5 – CO – SO2 – Lead – …

Solution: cleaner cars

- EU National Emission Ceilings
- Standards for car emissions
- Real Driving Emissions



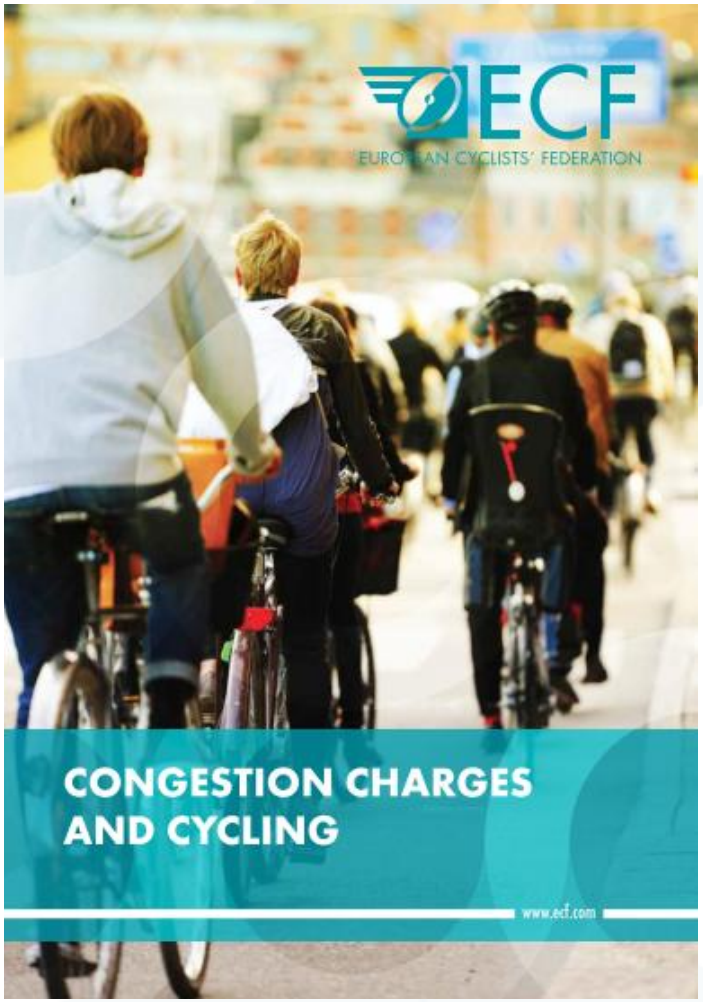
Solution: cleaner cars

Vehicle emissions in theory:
- 64% g/km Nox

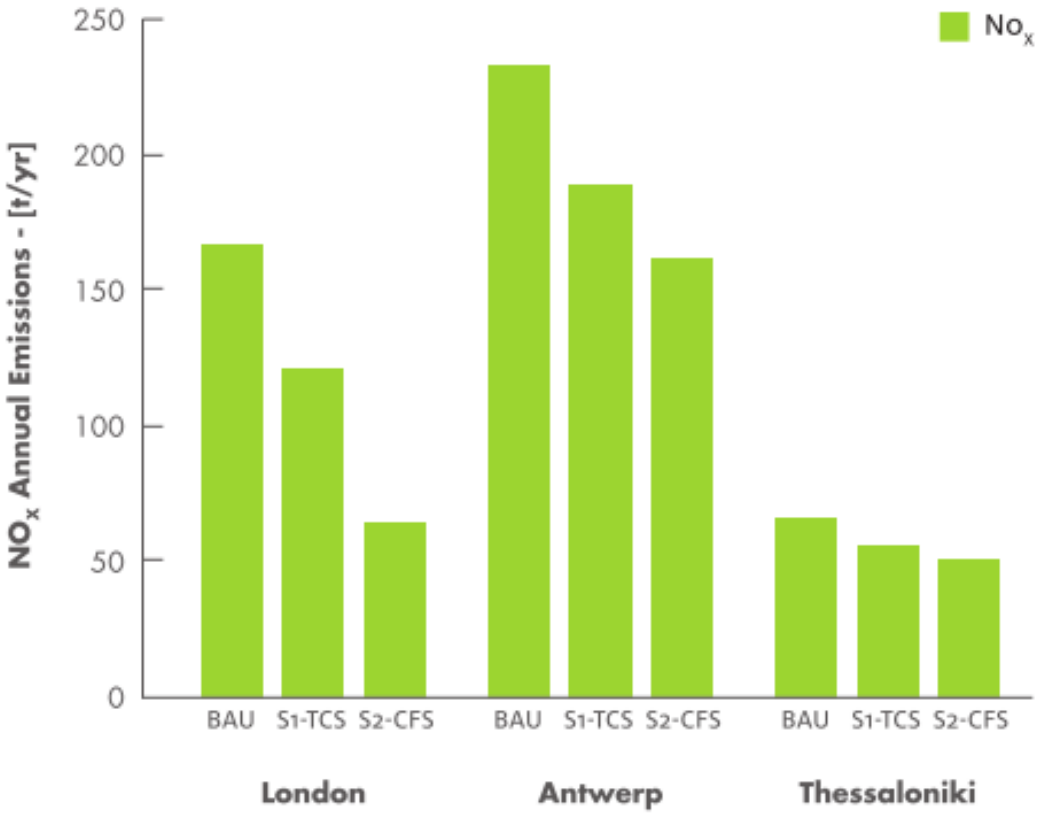
in reality…
- 20% g/km Nox

More (diesel) cars
More traffic
More km driven

ECF's idea: cleaner cities, fewer cars



Impacts of cycling on emission reductions



NOx

(S1) +23% cycling

- London: -27%
- Antwerp: -18%
- Thessaloniki: -16%

(S2) Car-free street

- London: -61%
- Antwerp: -19%
- Thessaloniki: -15%

ECF's idea: cleaner cities (fewer cars)

Cycling measures

- Low-Emission-Zones
- Parking restrictions
- Space reallocation
- Cycling infrastructure
- Bike Share
- …

→ Modal shift

Best Practice: Sevilla

- ✓ 40 million €
  cycling investments
- ✓ Measures:
  - ✓ Separate cycling infra
  - ✓ Restriction private cars
  - ✓ New car-free zones
  - ✓ Promotion active mobility
  - ✓ Improve public transport
- ✓ Cycling modal share
  - 2006: 0.5%
  - 2012: 7%
- ✓ - 33% motorized transport

Best Practice: Sevilla

Good results for EU Limit values in 2012

Air Quality Metric[a]	2006	2012	Limit Value
NO_2 annual mean – [µg/m³]	34	24	40 µg/m³
NO_2 hourly exceedances – [hours]	3	3	18h >200 µg/m³
PM_{10} annual mean – [µg/m³]	41	33	40 µg/m³
PM_{10} daily exceedances – [days]	152	40	35d > 50 µg/m³

NO2: - 30% in 6 years
PM10: - 20% in 6 years

Future ambitions: goal 2020
reduce more air pollution
with non-technical measures acting on road traffic

Best Practice: Antwerp

- ✓ 60 million €
  cycling investments
- ✓ Measures:
  - ✓ Regional cycling infra
  - ✓ Road pricing
  - ✓ Parking management
  - ✓ Promotion active mobility
  - ✓ Improve public transport
- ✓ Cycling modal share
  - 2008: 16%
  - 2010: 23%
- ✓ - 20% motorized transport

Best Practice: Antwerp

ANTWERP				
Air Quality Metric[a]	2008*	2010	2012	Limit Value
NO_2 annual mean – [µg/m³]	38	36	35	40 µg/m³
NO_2 hourly exceedances – [hours]	2	0	6	18h >200 µg/m³
PM_{10} annual mean – [µg/m³]	23	27	27	40 µg/m³
PM_{10} daily exceedances – [days]	27	25	27	35d > 50 µg/m³

Future ambitions (2014-2018):

- Low emission zone
- Traffic calming 30km/h
- More measuring stations
- Spatial planning in function of pollution

Best Practice: London & Milan

- ✓ Congestion charges invested in cycling
- ✓ London:
  - ✓ Cycling infra
  - ✓ 66% increase in cycling
  - ✓ -12% of NOx and PM10 (2002 to 2003)
- ✓ Milan
  - ✓ Bike share
  - ✓ 100% more trips (3.000 trips/day to 6.800 trips/day)
  - ✓ -38% of PM (2010 to 2014)

Conclusion

ECF calls for a dramatic transformation of the transport system for cleaner air

- Large scale cycling investments
- Large car-free areas
- Congestion charges invested in cycling
- Cycling ensures access to vibrant city

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Thank you for your attention !

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