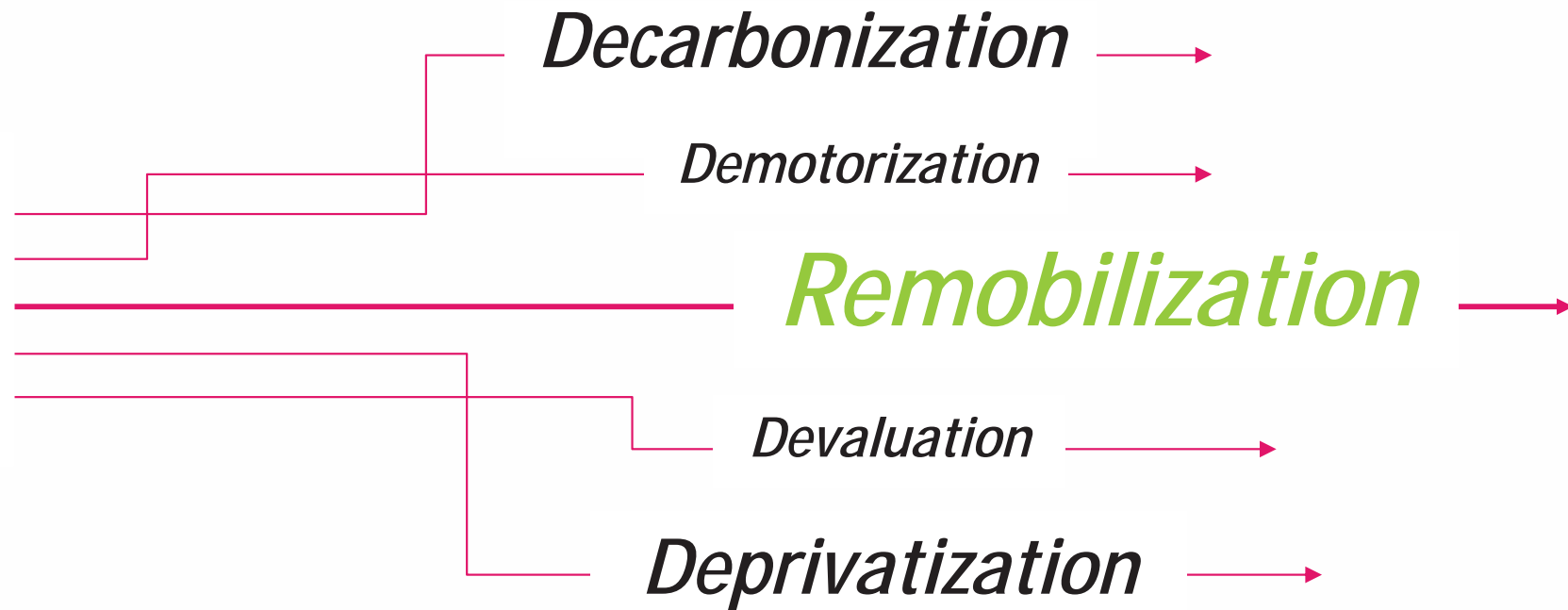


A FUTURE
OF INDIVIDUAL URBAN MOBILITY:
FROM THE EGO- TOWARDS E.CO-MOBILE

Jörg Beckmann, Mobility Academy

4+1 PATHWAYS TO THE FUTURE

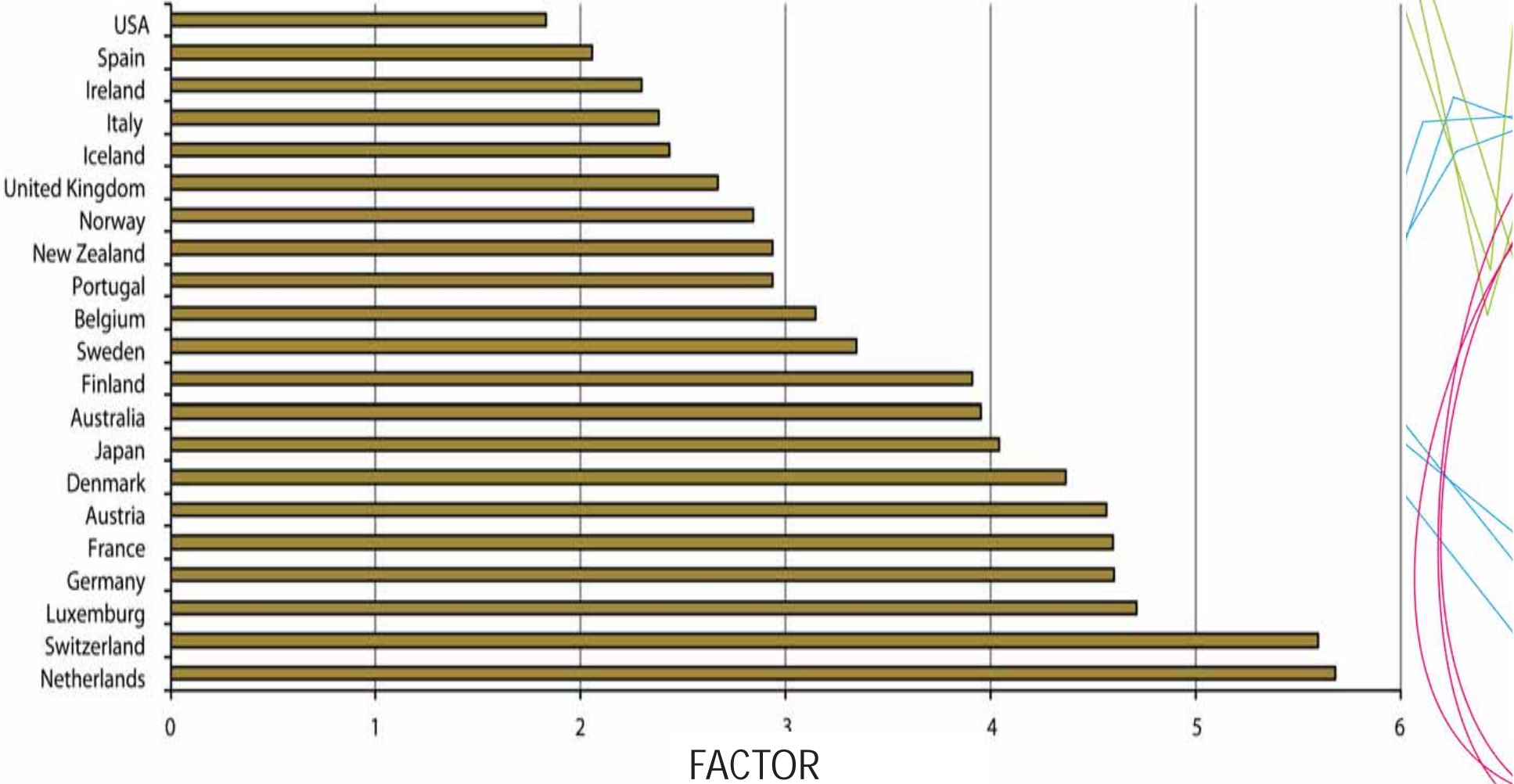


WHOSE FUTURE DO WE WANT?



PEAK DEATH

Reduction since Maximum [Killed per 100.000 Population]



WHAT FUTURE DO WE WANT?

«Currently, 1.2 million individuals die in traffic accidents annually. Volvo Cars has a vision of **no serious injuries or deaths in or by a Volvo car by the year 2020**, in line with a long tradition focusing on safety.»

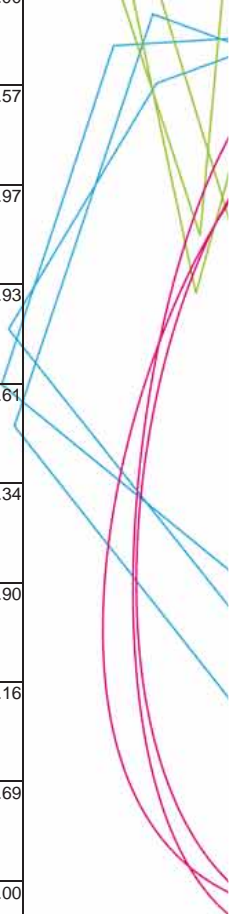
Volvo Car Corporation , Corporate Report 2008/09

- I. In **Germany**, between 2009 and 2012, 100 cities with + **50.000 inhabitants** (total 181) reached at least once ZERO DEATHS. Six cities had no deaths at all.
- II. Amongst cities with +**100.000 inhabitants**, 12 reached at least once ZERO DEATHS and 5 cities twice.
- III. 3 cities with +**200.000 inhabitants** achieved once ZERO DEATHS: Aachen, Oberhausen und Mönchengladbach.

DECARBONISATION

TIME	PE	Process	Fuel	Powertrain	Car	WTT g CO2 eq / km	TTW g CO2 eq / km	WTW g CO2 eq / km	SE g CO2 eq/MJ fuel	Rel. DISI %	Red. Pot. (WTW) %
2010	Sun	Electricity generation (photovoltaic), grid	Electricity	Electric Vehicle with Li-Ion Battery	EUCAR reference car (compact)	0.00	0.00	0.00	0.00	0.00	-100.00
2010	Water	Electricity generation (water turbine), grid	Electricity	Electric Vehicle with Li-Ion Battery	EUCAR reference car (compact)	0.00	0.00	0.00	0.00	0.00	-100.00
2010	CH-Mix for Electricity	Electricity generation (CH-Mix of production), grid	Electricity	Electric Vehicle with Li-Ion Battery	EUCAR reference car (compact)	5.57	0.00	5.57	9.56	3.43	-96.57
2010	CH-Mix for Electricity	Electricity generation (CH-Mix of consumption), grid	Electricity	Electric Vehicle with Li-Ion Battery	EUCAR reference car (compact)	16.30	0.00	16.30	27.94	10.03	-89.97
2010	Natural Gas	Natural gas pipeline 4000 km, electricity generation (CCGT), grid	Electricity	Electric Vehicle with Li-Ion Battery	EUCAR reference car (compact)	73.20	0.00	73.20	125.51	45.07	-54.93
2010	EU-Mix for Electricity	Electricity generation (EU-Mix), grid	Electricity	Electric Vehicle with Li-Ion Battery	EUCAR reference car (compact)	75.34	0.00	75.34	129.19	46.39	-53.61
2010	Oil	Oil drilling, ship, diesel refining, land	Diesel	Hybrid: Diesel Dir. Inj. Part. Fil. (advanced DICI)	EUCAR reference car (compact)	18.91	99.10	118.01	88.73	72.66	-27.34
2010	Oil	Oil drilling, ship, gasoline refining, land	Gasoline	Hybrid: Otto Engine (advanced DISI)	EUCAR reference car (compact)	19.34	114.00	133.34	86.53	82.10	-17.90
2010	Coal	Coal-EU-Mix, electricity generation (coal, integrated gasification combined cycle), grid	Electricity	Electric Vehicle with Li-Ion Battery	EUCAR reference car (compact)	139.41	0.00	139.41	239.05	85.84	-14.16
2010	Oil	Oil drilling, ship, diesel refining, land	Diesel	Diesel Direct Inj. Particul. Filter (DICI)	EUCAR reference car (compact)	23.56	123.10	146.66	88.51	90.31	-9.69
2010	Oil	Oil drilling, ship, gasoline refining, land	Gasoline	Otto Direct Injection (DISI)	EUCAR reference car (compact)	23.58	138.82	162.40	86.42	100.00	0.00

gCO₂/pkm



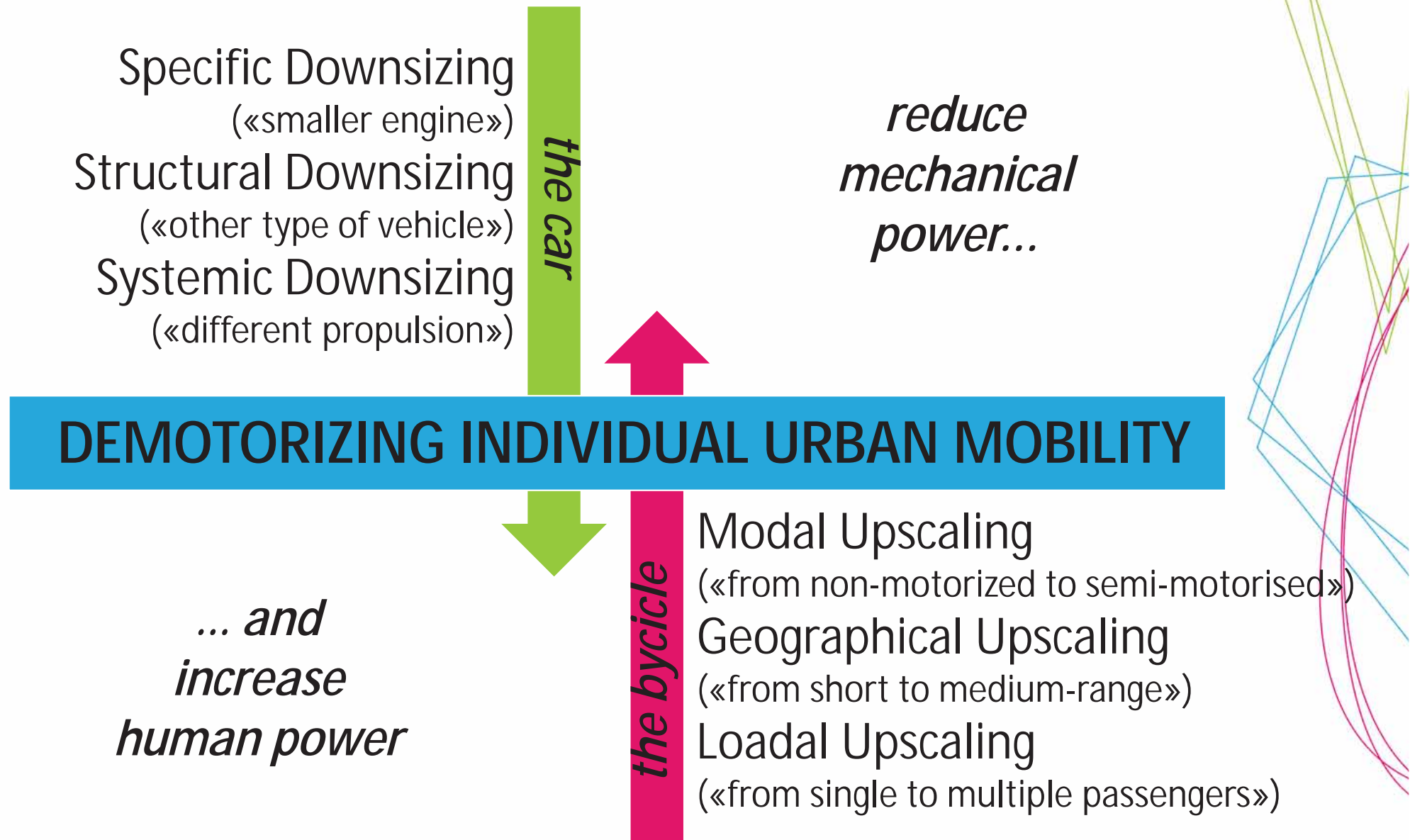
DECARBONIZING THE URBAN CAR

«Unlike the ICE-Car, the E-Car has an enabling element for urban transport policy-makers: it allows for more **locally-based measures** to curb and eventually zeroise carbon-emissions from individual transport.»



- I. **Invent!** «Give the car a plug– no matter what.»
- II. **Incentify!** «Do not tax the plug!»
- III. **Integrate!** «The electric car is both a vital part of an urban transport system and a city's electricity-grid.»

WHAT IS DEMOTORIZATION?



THE UNIVERSAL BICYCLE

Hyper-Mobility

«the average speeds of bicycles in inner urban areas exceed those of passenger cars»

NON-REFLEXIVE

Pseudo-Mobility

« you get more lovely looks & respect by cruising with a cool vintage-racer, than in a heavy SUV »

RATIONAL

EMOTIONAL

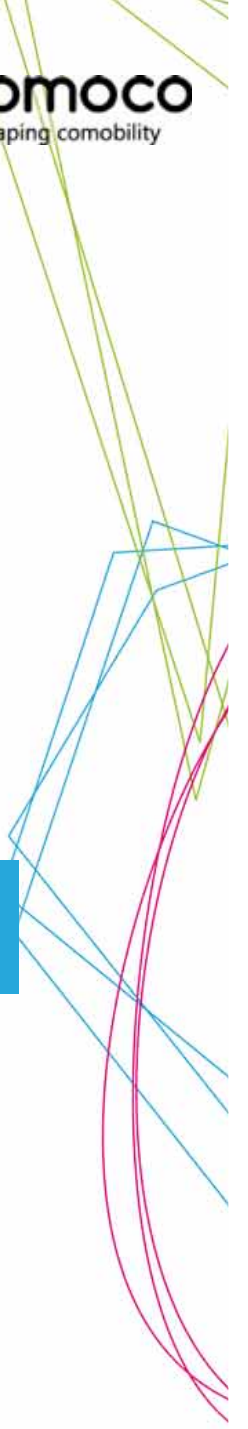
Multi-Mobility

«connecting needs and combining modes is so easy with a folding-bike »

REFLEXIVE

Retro-Mobility

«doing less with more and not more with less, is one urban Zeitgeist, that you best meet with a non-electrified cargo-bike»



DEVALUTION

«In urban areas, the «*EGO-MOBILE*» has lost both its value-propositions: the practical and the symbolic one .»

- The car is no longer «the private»
- Connected cars and
- Cellular networks
- Traffic management and
- Maintenance as are
- Multimodal mobility no other
- Urban artefacts are replaced by
- Virtual mobility matters more: "how" is substituted by "how often"



DEPRIVATISATION



- I. **Invent!** «finding the perfect fit for a particular city»
- II. **Incentify!** «...both users and suppliers»
- III. **Integrate!** «in all urban policy-areas»

REMOBILIZATION: A NEW URBAN COLLABORATIVE MOBILITY PARADIGM

