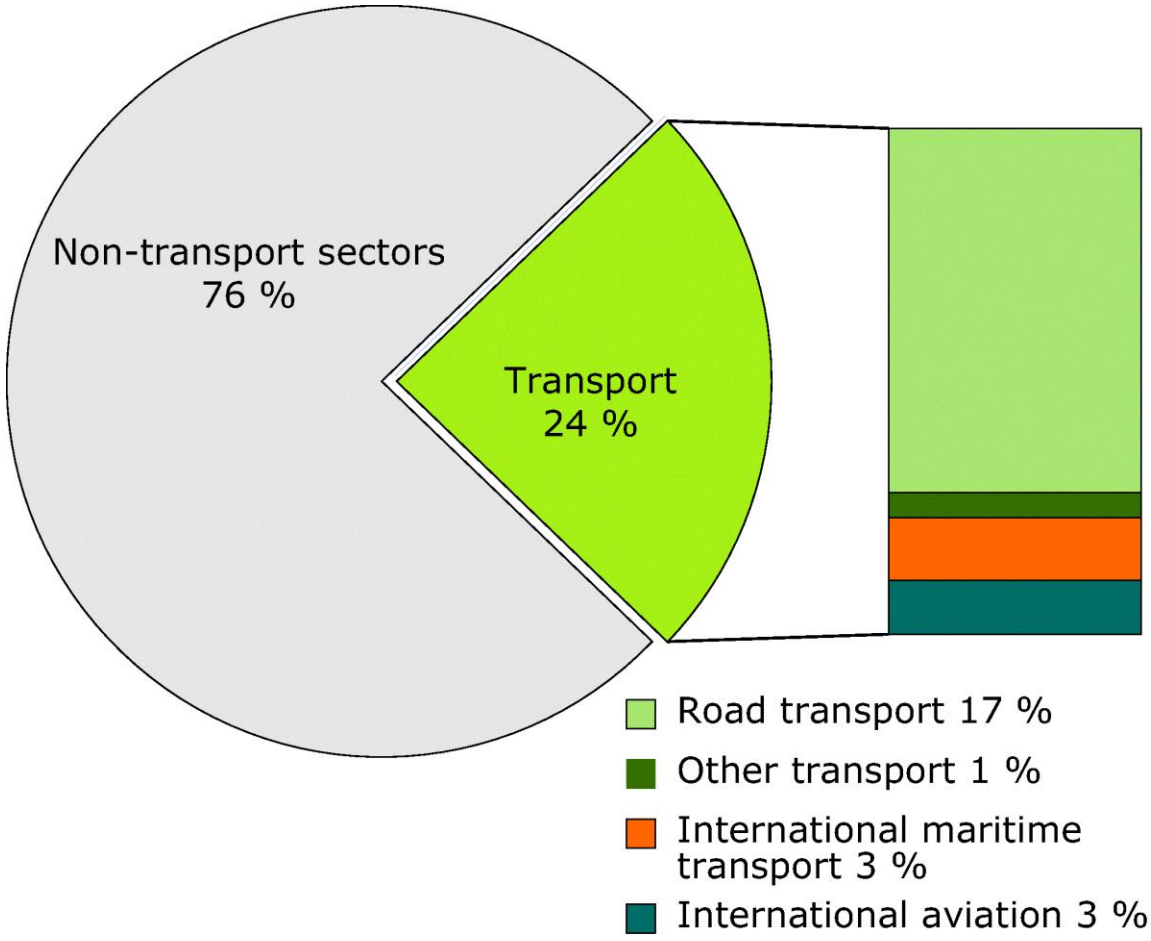
TRANSPORT

Frances Sprei

Fysisk resursteori, Chalmers

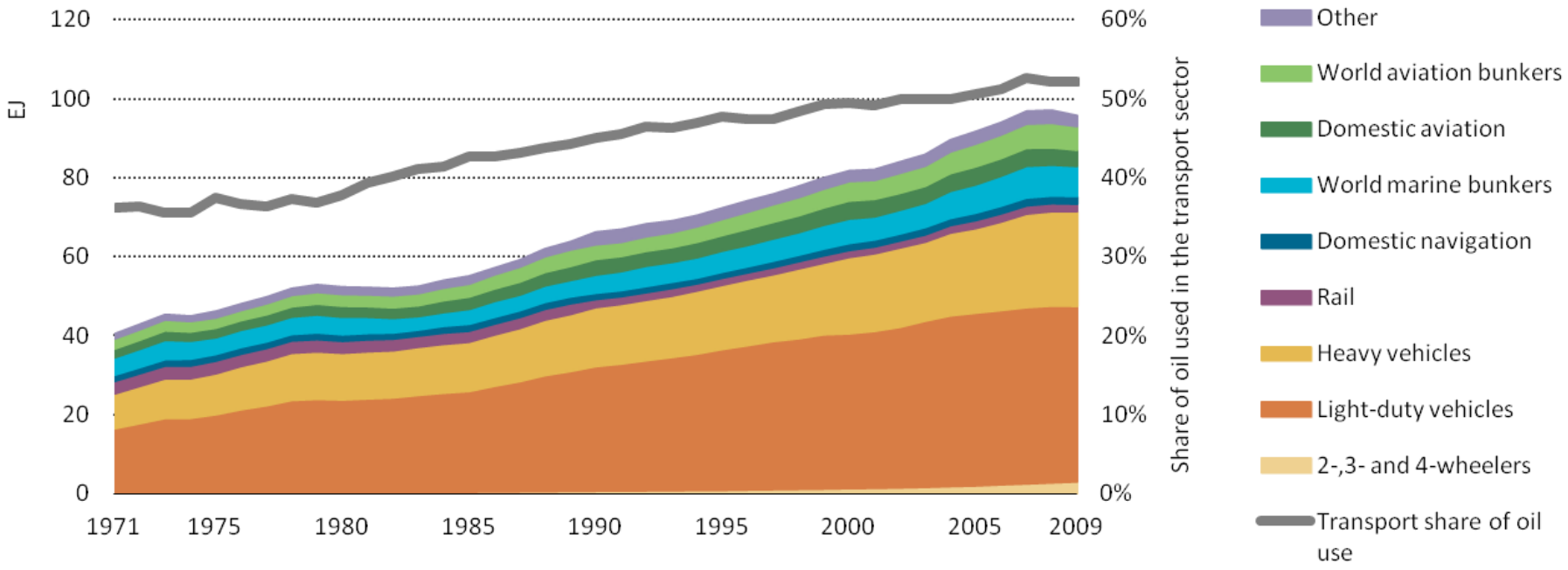
Transportsektorns bidrag till växthusgaser i Europa



Source: EEA

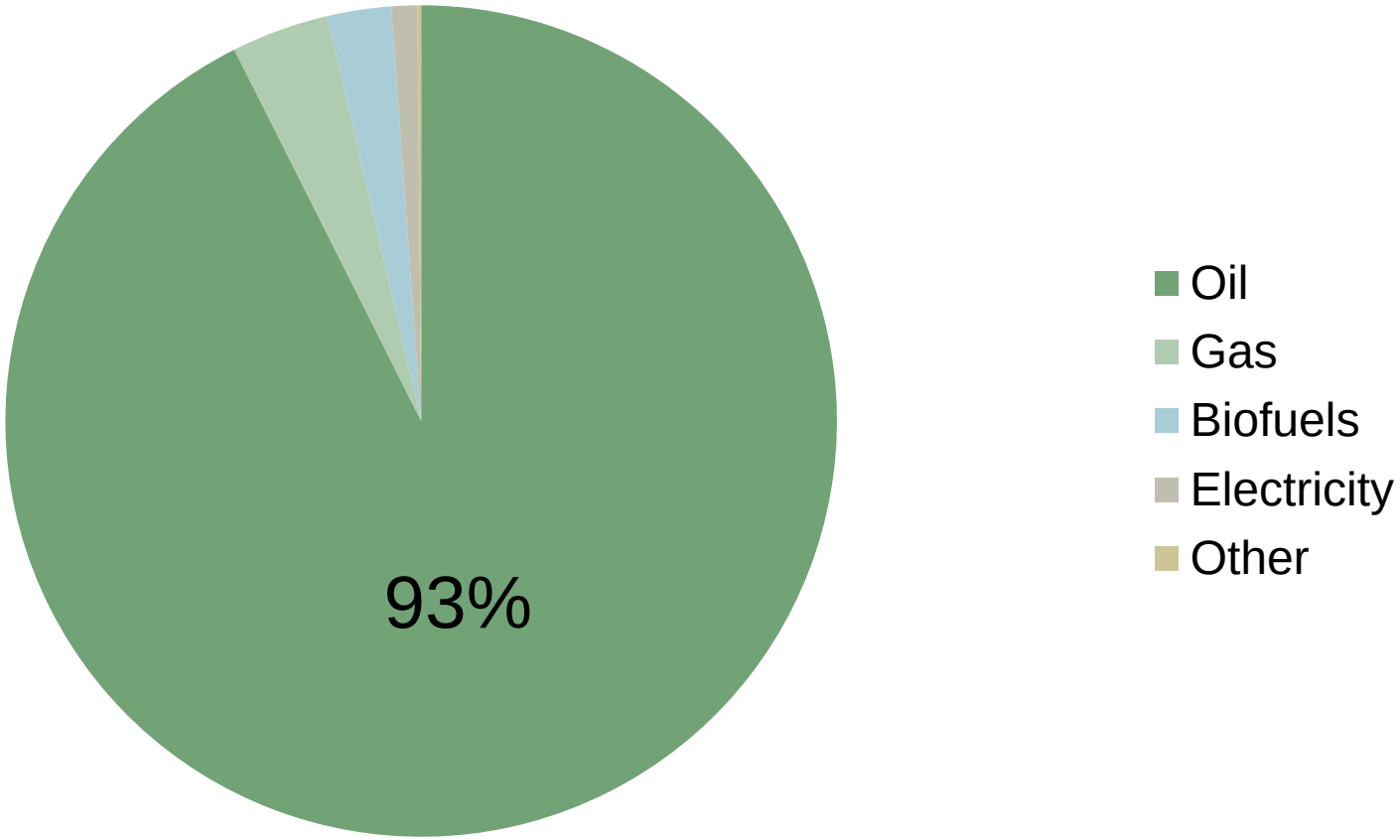
Ökad andel av oljeanvändningen

- Energianvändning för transport fördubblades under dom senaste 30 åren
- Andra sektorer inte ökat med samma takt



Source: IEA, ETP 2012.

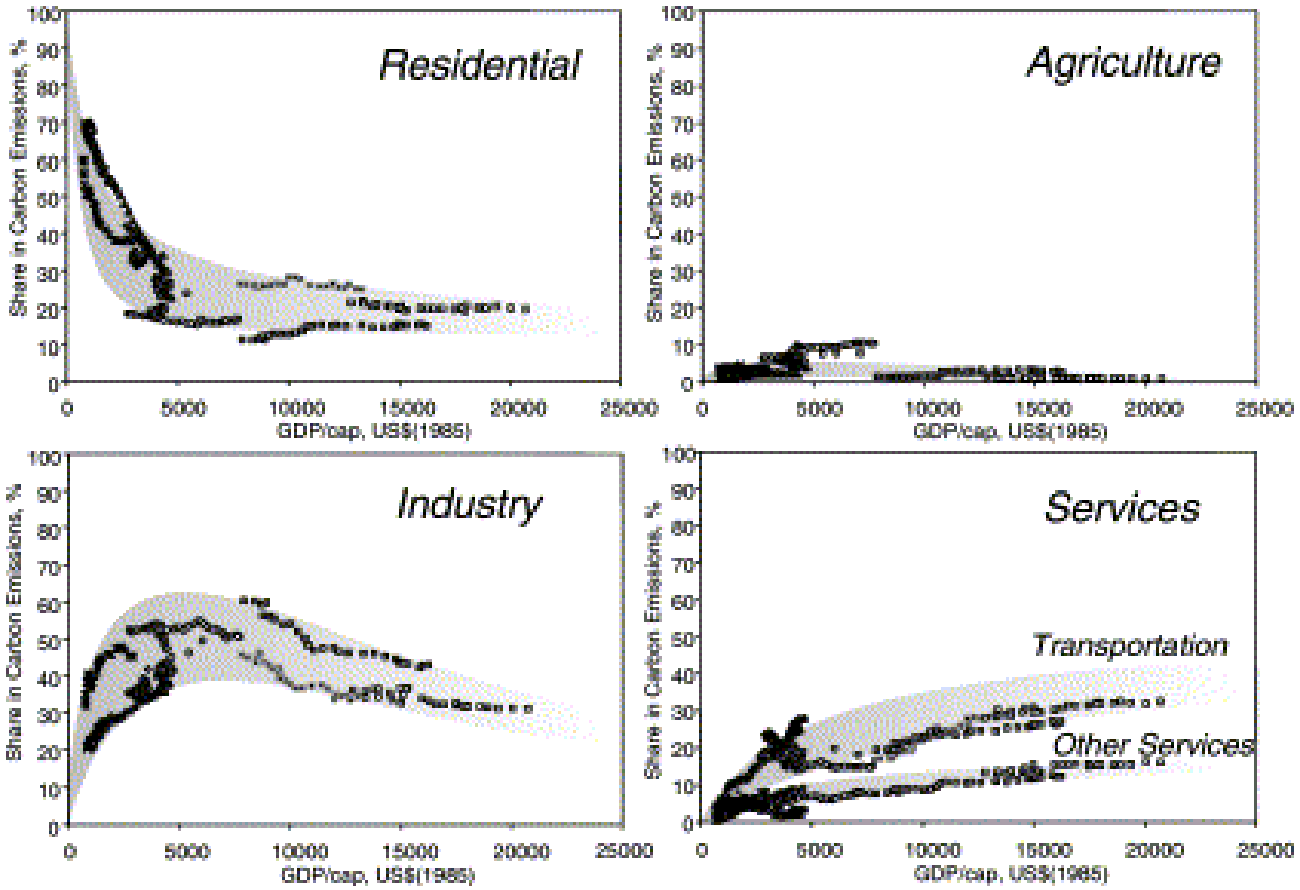
Globala energiefterfrågan för transport uppdelat per bränsle (2010)



Source: IEA, World energy outlook, 2012

Trenderna skiljer sig från andra sektorer

Share in Carbon Emissions %



Income USD

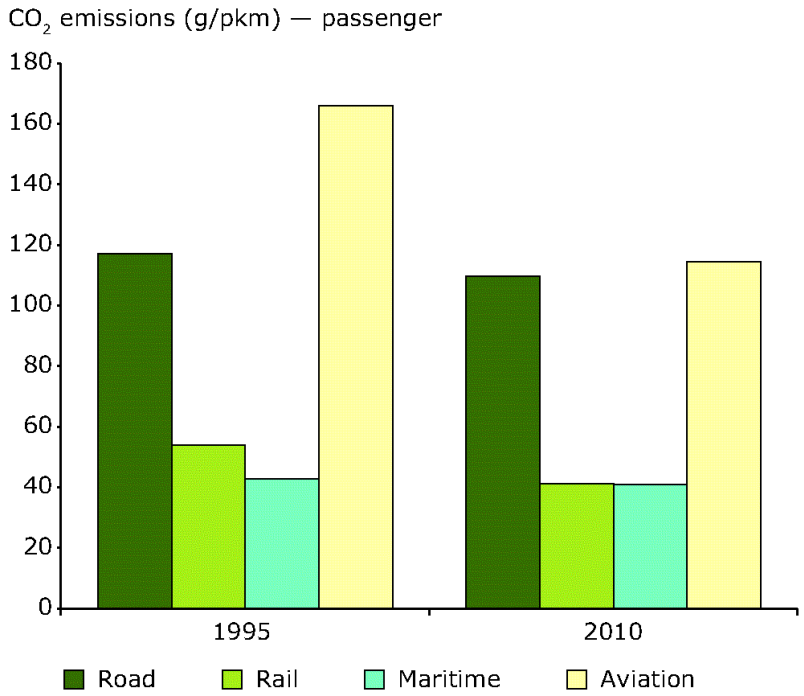
Schäfer, 2005

Hur kan man minska utsläppen?

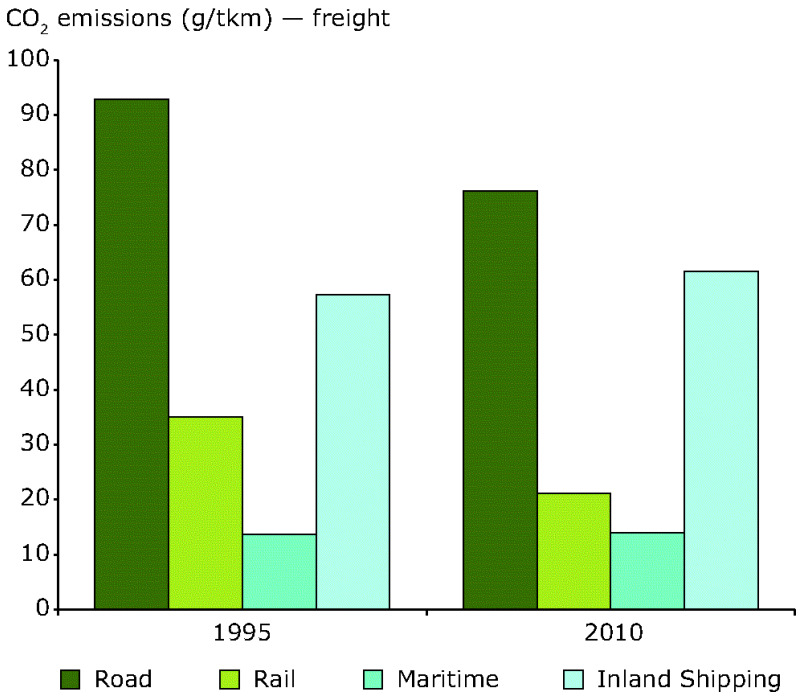
- Ökad effektivitet
- Byta bränslen
- Minska efterfrågan

Ökad effektivisering genom skifte av transportsätt

Persontransport

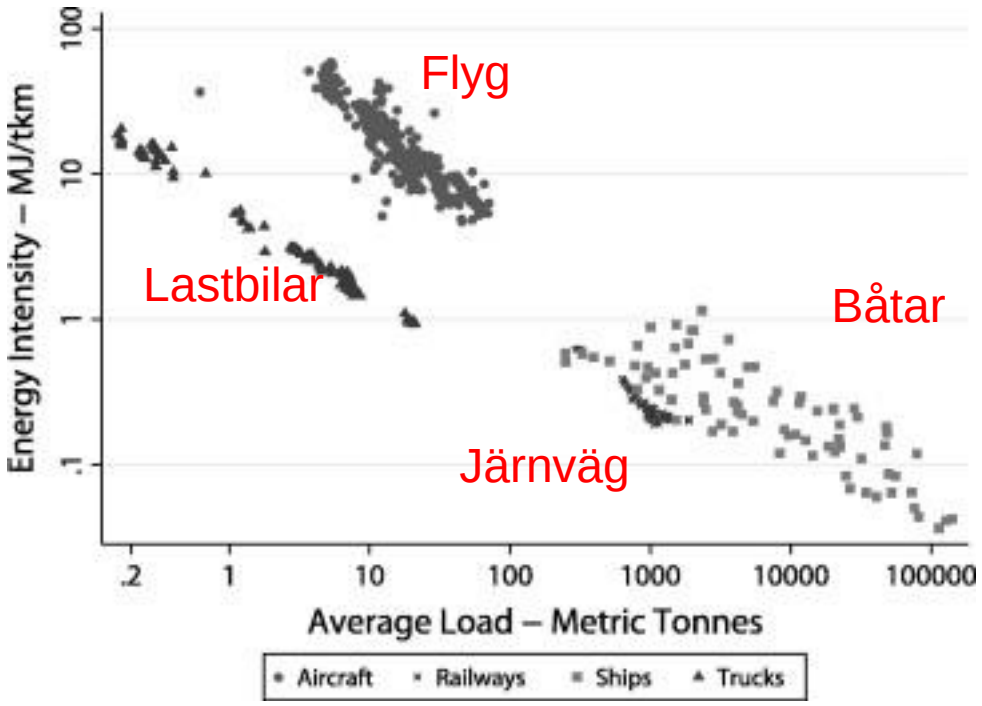


Godstransport



Source: EEA

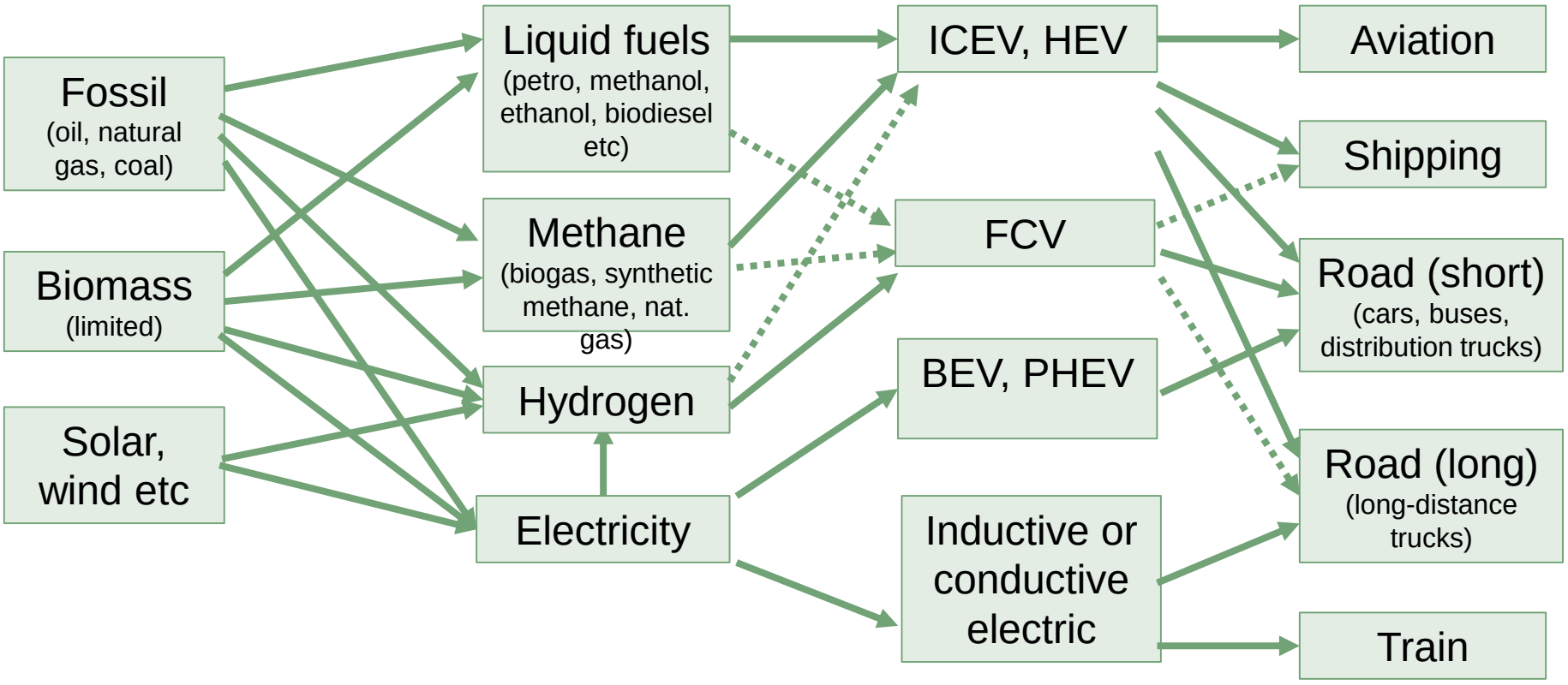
Energi intensitet av olika godstransporter



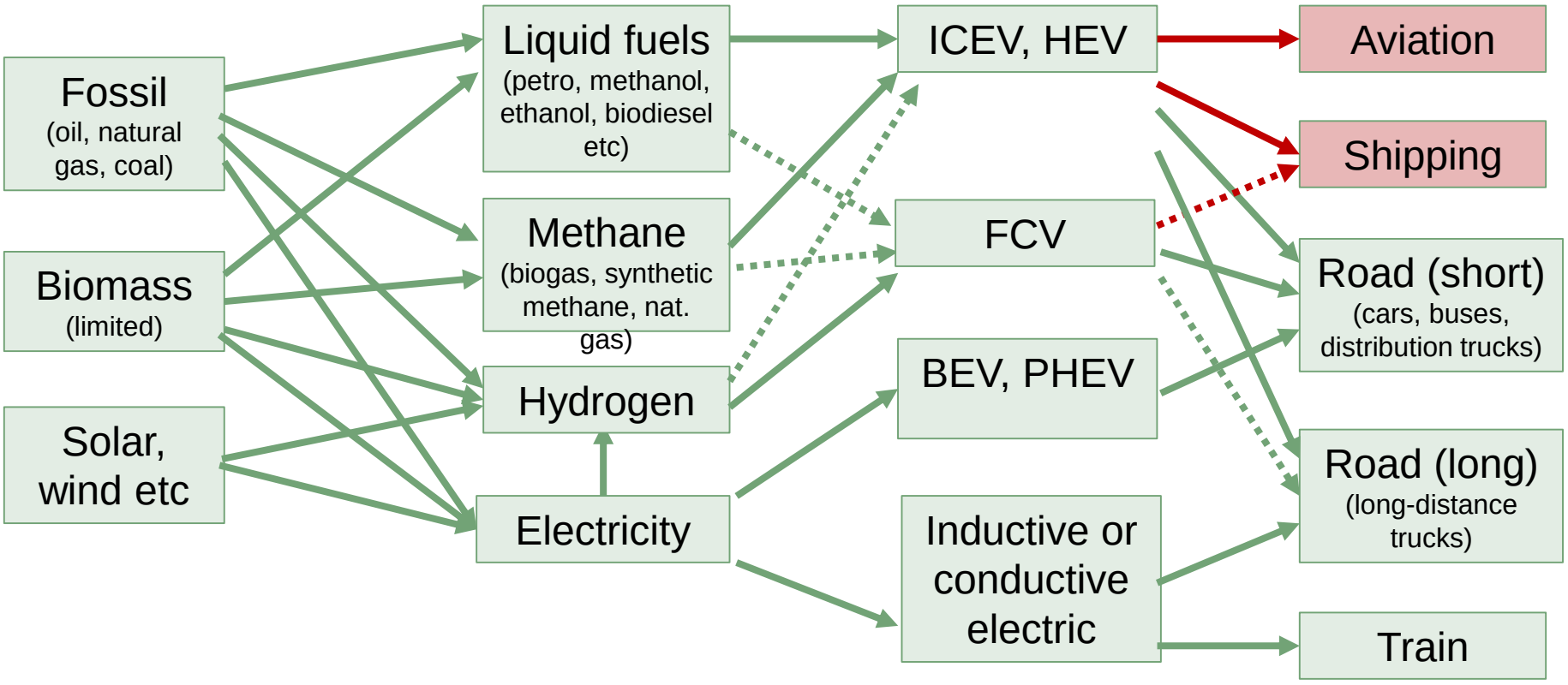
Energy intensity of freight transportation modes over the average carried load per vehicle.

Source: Gucwa M, Schäfer, A. 2013, **The impact of scale on energy intensity in freight transportation**

Different fuels and vehicle technologies in different transport modes?



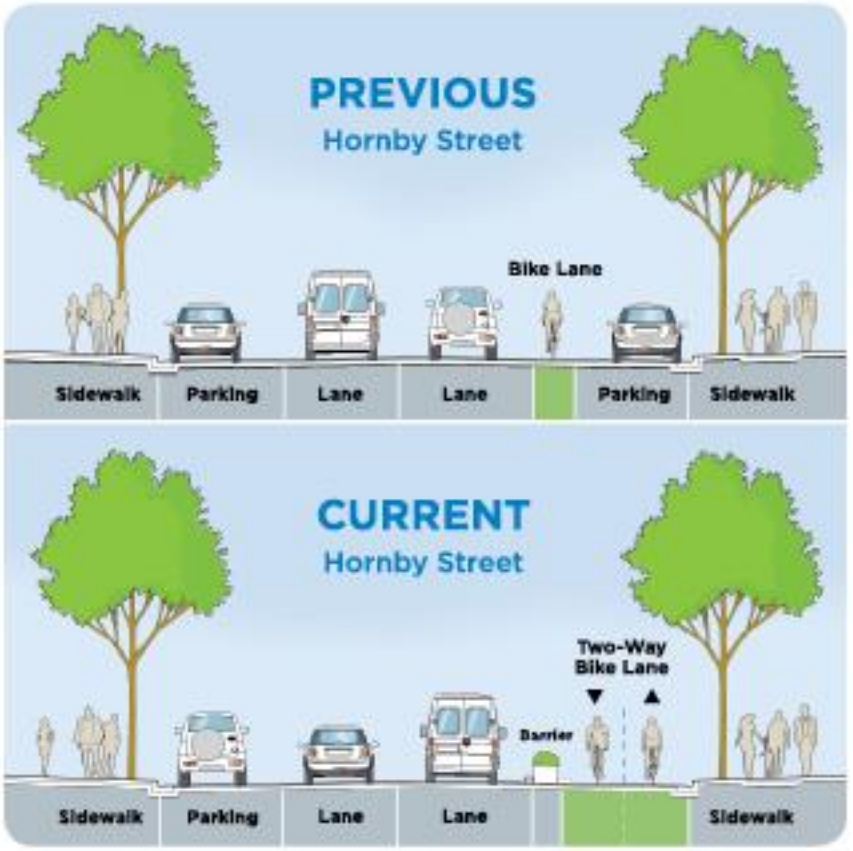
Different fuels and vehicle technologies in different transport modes?



Minska efterfrågan

Cykelbanor

San Francisco



Vancouver

IT exempel: effektivisering

- Parkeringsappar : Streetline i bl a San Francisco

IT-exempel

- Trafikledningsystem: Ruttoptimering och lastoptimering
- Kollektivtrafik: ruttplanering, biljettsystem, reseplanerare

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Where Can I Use It?

Transportation

- Buses
- Coaches
- Ferries
- Peak Tram
- Public light buses
- Railways
- Taxis
- Tramways

Retail

- Apparel shops
- Bookstores
- Cake shops
- Convenience stores
- Department stores
- Entertainment
- Fast-food outlets
- Household shops
- Personal care stores
- Photo-finishing shops
- Supermarkets
- Telecommunications shops
- Wet markets
- And more!

Parking

- Car parks
- On-street parking

Online Payment

- Make Octopus Online Payment by tapping Octopus on NFC-enabled Android mobile device
- Make Octopus Online Payment by PC Reader on supported online merchants

Self-service

- Photocopiers
- Vending machines/Self-service kiosks

Leisure facilities

- Cinemas
- Private club houses
- Racecourses
- Sports facilities
- Swimming pools
- Theme parks

Access control

- Commercial and residential buildings

Miscellaneous

IT-exempel

- Trafikledningsystem: Ruttoptimering och lastoptimering
- Kollektivtrafik: ruttplanering, biljettsystem, reseplanerare…
- Cykelpooler

Minska efterfråga

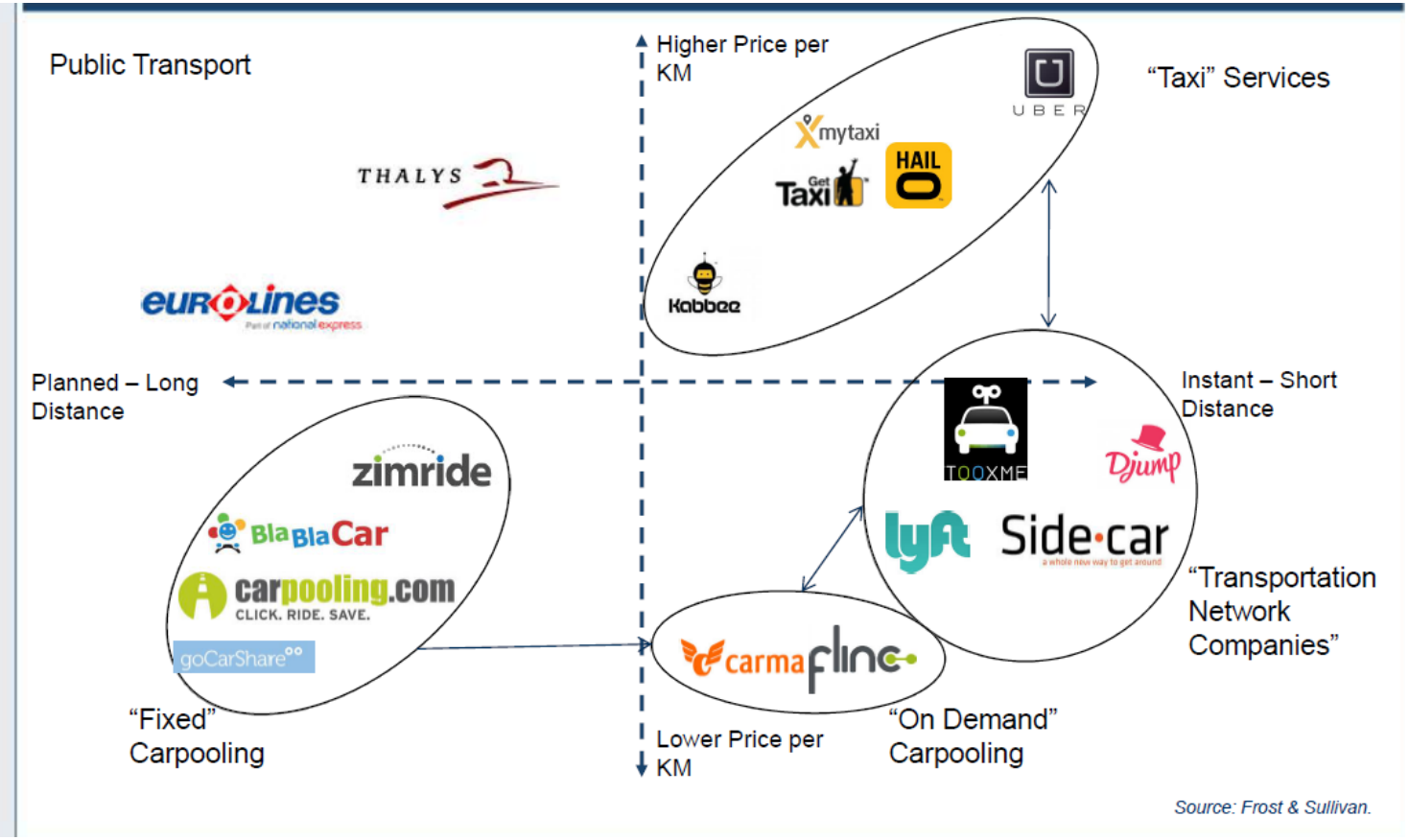
- Virtuella möten

  “TeliaSonera koldioxidbantar med virtuella möten”

  minskat CO2 utsläpp med 76% och minskade kostnader med 220 miljoner kr

Nya mobilitetslösningar

- Olika former av samåkning




When you ride ALONE
you ride with Hitler !
Join a
Car-Sharing Club
TODAY !

Influence of New Technology - Smartphones is the key integrator in mobility services: *Vehicle access - Consumer convenience – Process efficiency*

Virtual Keys facilitated through smartphone

Telematic Services by OEMs

Virtual Kiosk to facilitate virtual Customer Care

Integrated EV charging solutions

Autonomous technology

Mobile Apps

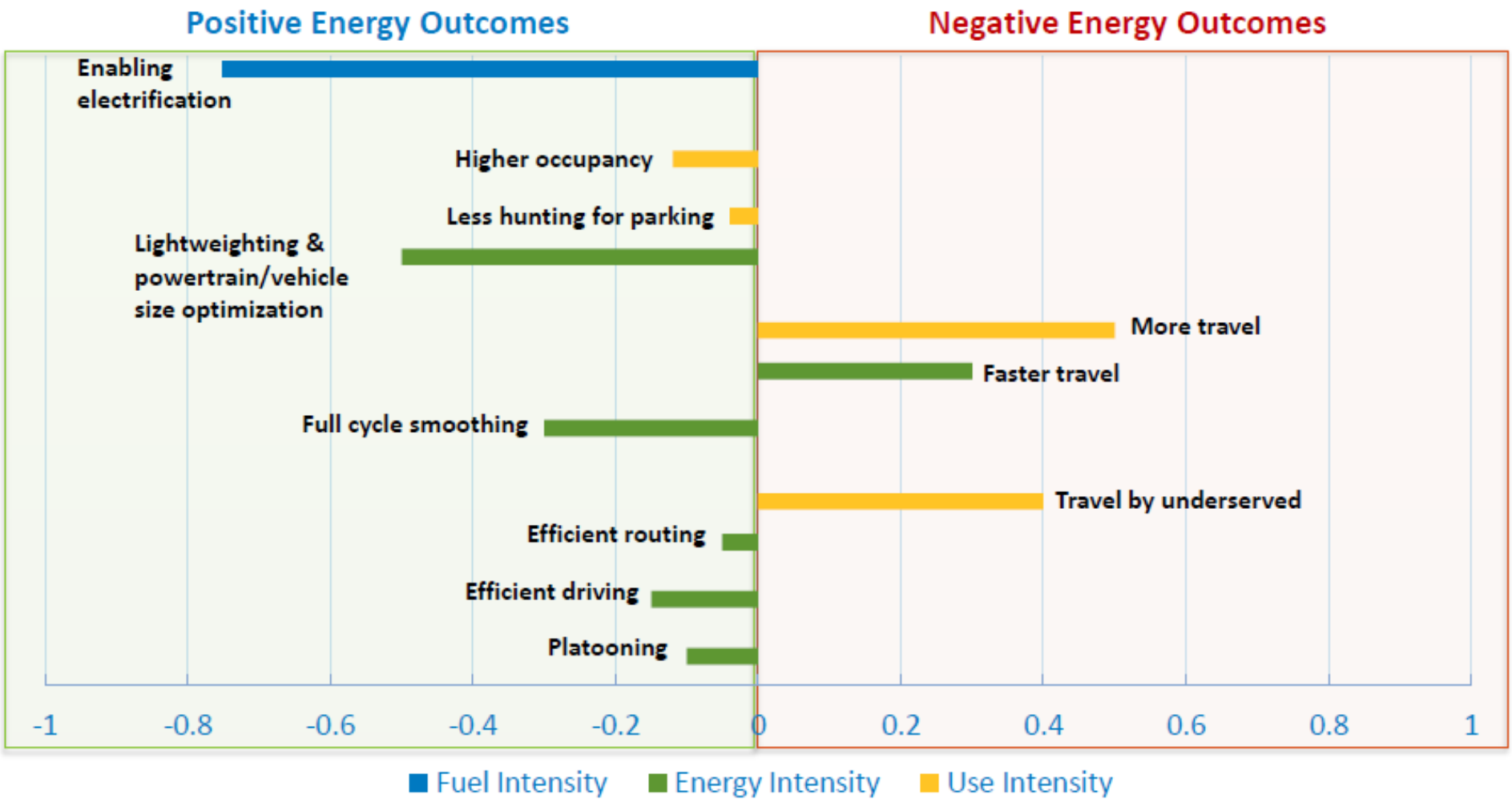
Source: Frost & Sullivan analysis,

UbiGo

- www.ubigo.me

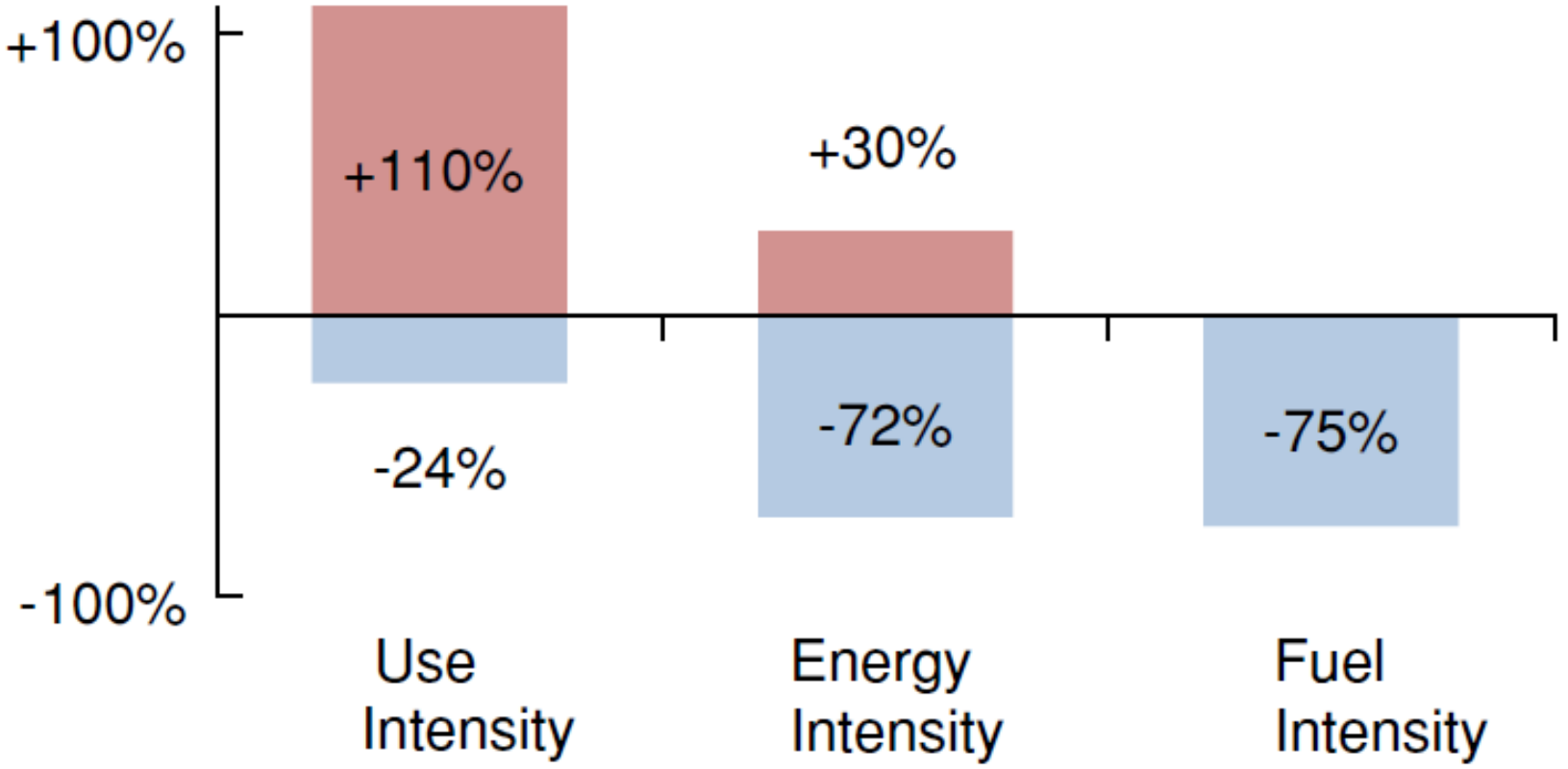
Självkörande bilar

Estimated energy effects



Source: Brown et al 2014; via US DOE

Summing the effects up



Source: Brown et al (2014)

Aug 2016: Volvo och Uber samarbetar

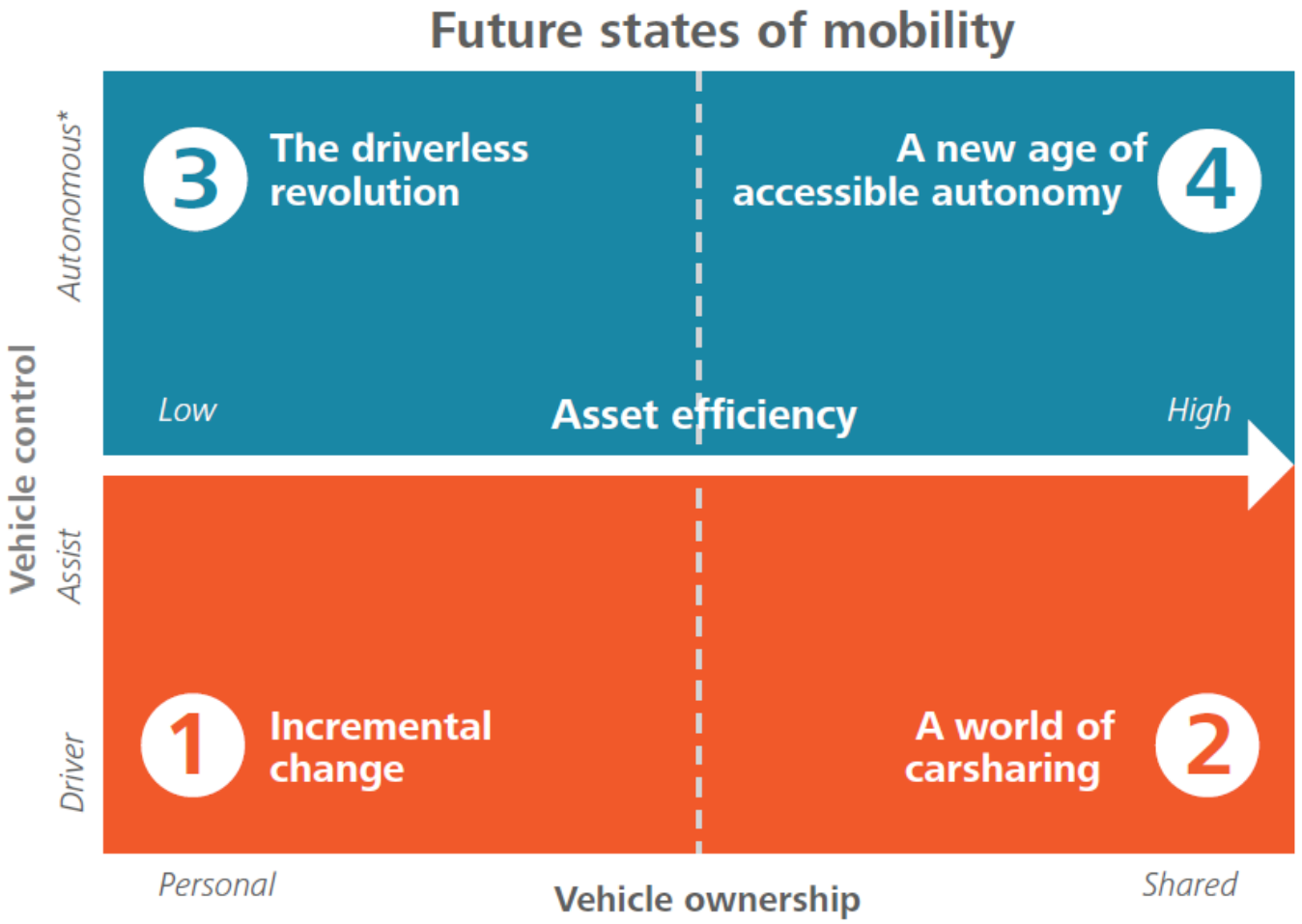
Håkan Samuelsson:
”Samarbetet placerar Volvo mitt i den pågående teknikrevolutionen för bilindustrin.”

Källa: www.media.volvocars.com

Figure 4. Four potential future states

Extent to which autonomous vehicle technologies become pervasive:

- Depends upon several key factors as catalysts or deterrents—e.g., technology, regulation, social acceptance
- Vehicle technologies will increasingly become "smart"; the human-machine interface shifts toward greater machine control



Extent to which vehicles are personally owned or shared:

- Depends upon personal preferences and economics
- Higher degree of shared ownership increases system-wide asset efficiency

Framtiden svår att förutspå