NORTH SEA CONFERENCE 2016

BUILDING BLOCKS FOR THE FUTURE

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#NSRbuildingblocks

SHARE North

Interreg North Sea Region SHARE-North

Automated transport between increase of car use and new fleet models

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Have you heard about autonomous transport before?

Yes

No

Have you already done a ride on automated transport?

Yes

No

Do you think it will be in frequent practical use in 10 years time?

Yes

No

Do you think it will be in frequent practical use in 20 years time?

Yes

No

Do you think the benefits outweigh the risks?

Yes

undecided

No

Have you considered the impacts of autonomous transport in your transport plans?

Yes

not relevant for my job

No

CARE-North plus

Autonomous vehicles – impacts on mobility of the future

A few years ago, the idea of driverless transport systems still seemed like part of a science fiction film. Now, as the technology begins to emerge and receive more media attention it no long seems like such a futuristic notion. Nearly every automanufacturer is currently working on prototypes for autonomous vehicles and plans to introduce market ready solutions within the next few years. Investors and innovators outside of the traditional automobile industry are also hard at work: Google, for instance, has exceeded 1.1 million km of test drives with its driverless car, announcing its possible market release date between 2017 and 2020. Many autonomous technologies are also already in operation in some areas, such as autonomous vehicles in segregated areas (e.g. in harbours with automated van carriers or underground rail systems) or as features of conventional cars (such as a self-parking modus for private cars). As technological developments advance at exponential rates, it is easy for governmental policy, urban and transport planning to fall behind the times. Therefore, it is necessary to begin a debate about changing infrastructure requirements and social and economic impacts of autonomous vehicles now rather than when they become a part of daily transport on the road. How will the available technology be used? What kind of political decision making is necessary to take advantage of the positive potential? How can unwelcome side effects be avoided?

Today, transport planners and decision makers regard the technology without having a clear picture about what it may mean for the mobility of the future. That is why a dialog was begun in the CARE-North plus project about the questions above. Representatives from urban and transportation planning, research institutes, NGOs and the private sector came together at a workshop at the North Sea in January 2015 to explore the potential impacts of autonomous vehicles on urban, rural and freight transport. This paper summarises some of the outcomes of this scenario building workshop and highlights some of the input received from external experts on autonomous transport in the Case Study sections of the paper.

CARE-North plus | The Interreg IVB North Sea Region Programme | European Union | The European Regional Development Fund

Workshop ‚autonomous transport systems‘
Wremen (DE) 01/2015

A dream comes true….(?)


Concorde
529
Concorde
today


12
Ziegelstein


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VÉHICULES
CityMobil2
STO


EZ10
EASY MILE
W-846-HD
DRIVERLESS VEHICLE
CityMobil2


CityMobil2

…the car: smarter than the driver…

Source: Volvo cars

You can‘ thave your eyes everywhere…
but your car can!

Der neue Passat Variant. Mit Fußgängererkennung.
So souverän wie Sie.

Die optionale Fußgängererkennung warnt vor Personen auf der Fahrbahn und bremst im Ernstfall dank City-Notbremsfunktion sogar bis zum Stillstand ab. So werden nicht nur Sie, sondern auch andere Verkehrsteilnehmer vor möglichen Unfällen geschützt.

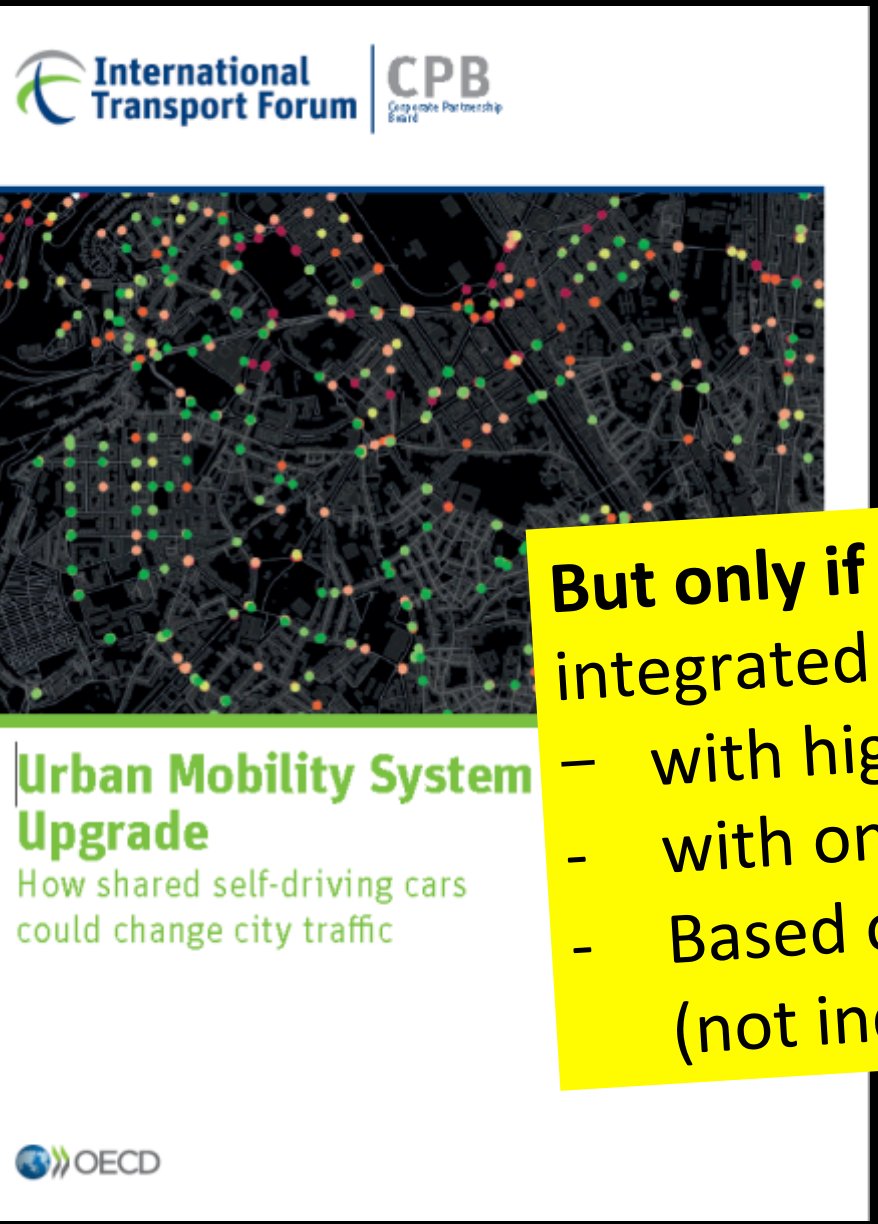
Das Auto.

Kraftstoffverbrauch des abgebildeten Passat Variant TDI BiTurbo in l/100 km: 6,5 innerorts, 4,7 außerorts, 5,4 kombiniert. CO_2-Emissionen in g/km: 140 kombiniert. Kraftstoffverbrauch des Passat Variant in l/100 km: kombiniert 5,4–4,1. CO_2-Emissionen in g/km: kombiniert 140–102. Abb. zeigt optionale Sonderausstattung.


Just making car trips more convenient and attractive?
F 015 Luxury in Motion
World Premiere
The New GLE Coupe

Fleet based instead of individually owned

Picture: google



- Up to 90% of road vehicles can be replaced

But only if

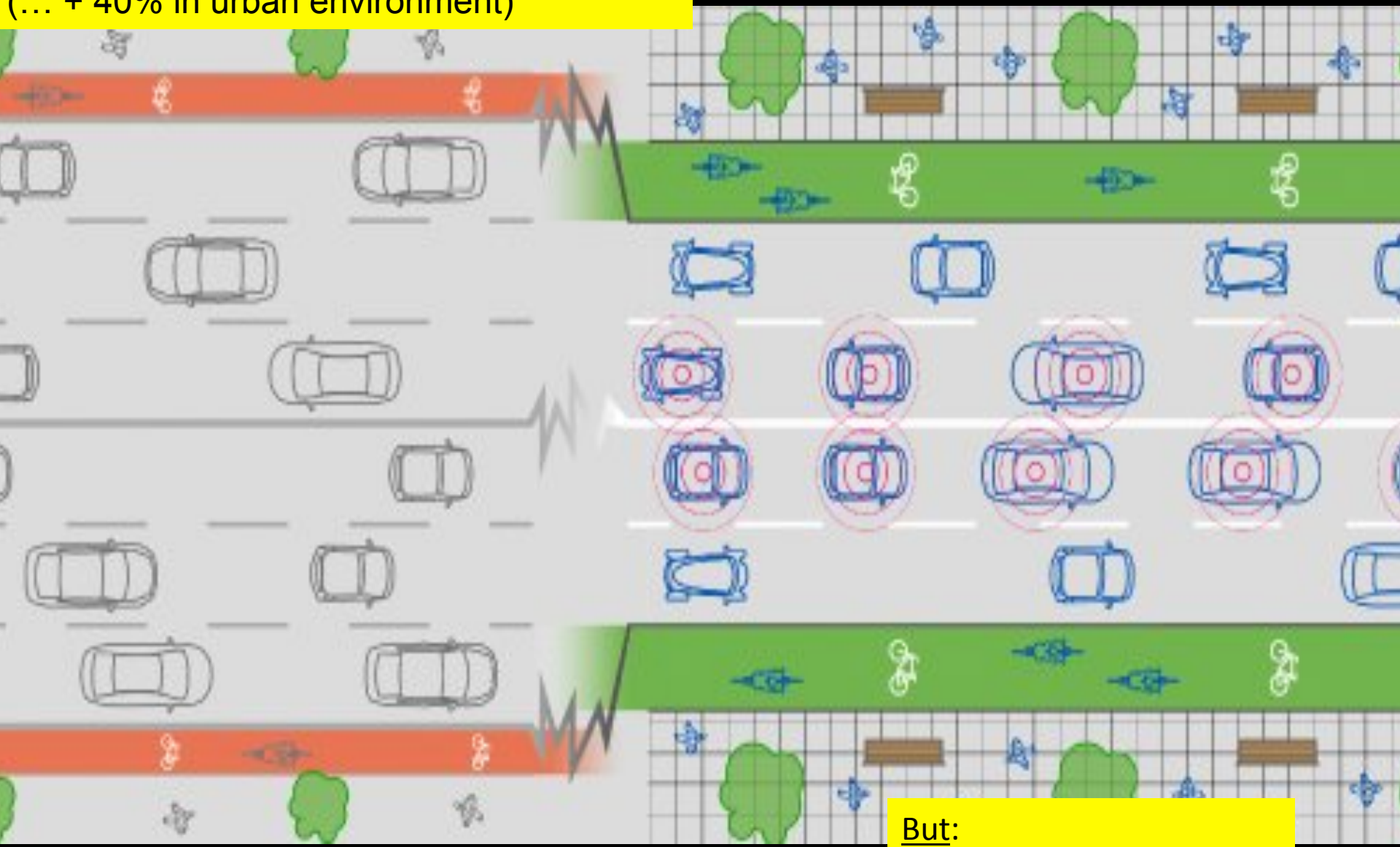
integrated in a wider transport concept

– with high capacity collective modes

- with on-demand modes

- Based on fleet services (not individually owned cars)

More efficient operation of traffic
(… + 40% in urban environment)



But:
Increase of traffic volumes
(… +40 - + 80+ %)

rafik: ARGUS in http://www.spiegel.de/auto/aktuell/autonomes-fahren-chance-fuer-die-stadt-a-997393.html


But:
Increase of traffic volumes
(… +40 - + 80+ %)

Fleet based (service) scenario

Reduction number of cars

Increase of kilometres driven

Individual car ownership

Increase of kilometres driven

No reduction number of cars

Potential to use long-distance infrastructure more efficiently?

Do you think the benefits outweigh the risks?

Yes

undecided

No

Can you imagine a world without individual car ownership?

Yes

No

will you consider the impacts of autonomous transport in your transport plans?

Yes

not relevant for my job

No

Have you learned anything in this session?

Yes

No

Mange tak for Deres opmærksomhed!

Thank you for your attention!

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http://www.share-north.eu

tige tank foar lústerje

dank u voor uw aandacht

Vielen Dank für Ihre Aufmerksamkeit

tack för uppmärksamheten