

Agenda on Pedelecs for Maintaining Mobility in Old Age



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Pedelec* a dangerous vehicle for elderly?

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A silver agers' new greenways destination

* „Pedelec = Pedal Electric Cycle“

Risk and fun in a society growing grey

Threats of growing very old:

- **Vulnerability**
- **Dependency on others**
- **Solitude and boredom**



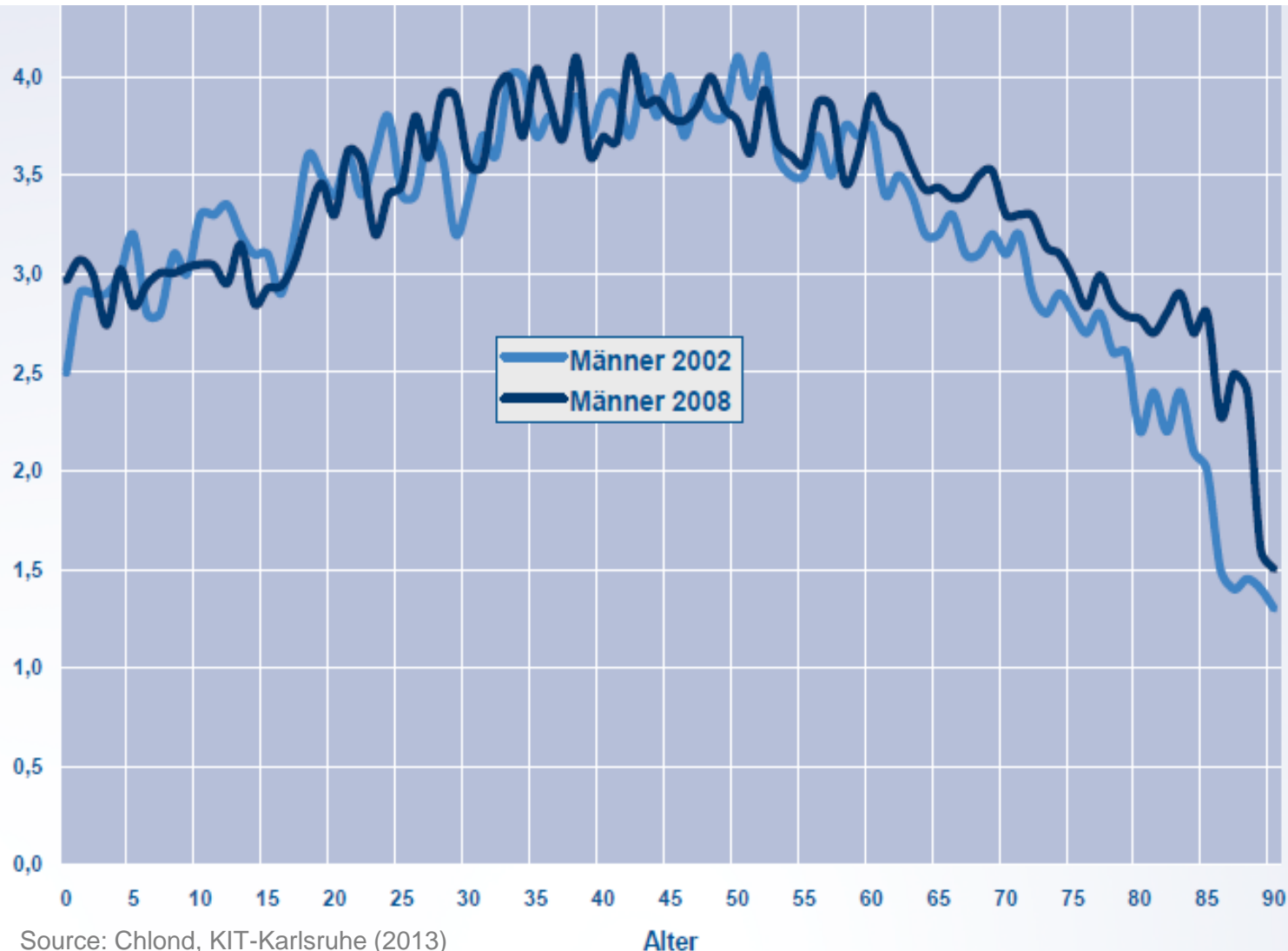
Happyness in old age if...

- **Sense of self-determination and autonomy**
- **Competence to keep personal lifestyle**
- **Connectedness**



More activity today than in the cohort before:

Number of trips (male, all modes) in the same ages 2002 and 2008



Source: Chlond, KIT-Karlsruhe (2013)

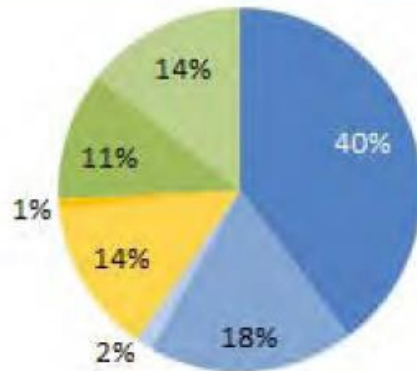


„When I am very old in 2030 I will be as mobile as today.“ >> really??

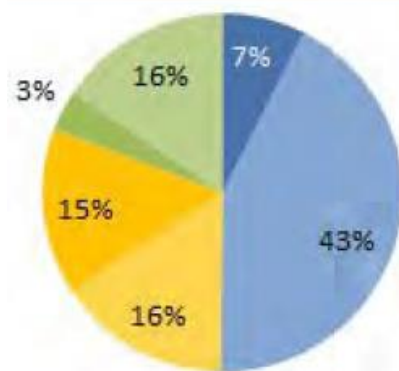
Rural elderly in Germany to travel to the doctor

Travel mode to the doctor

55 - 64 years old

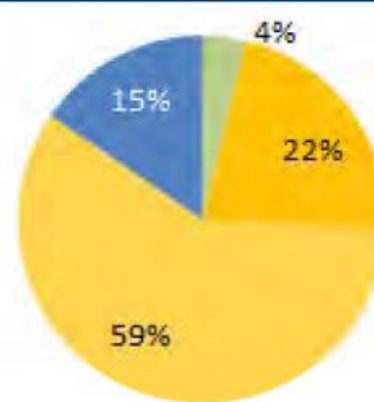
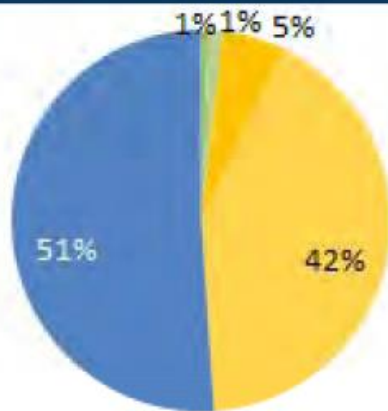


more than 75 years old



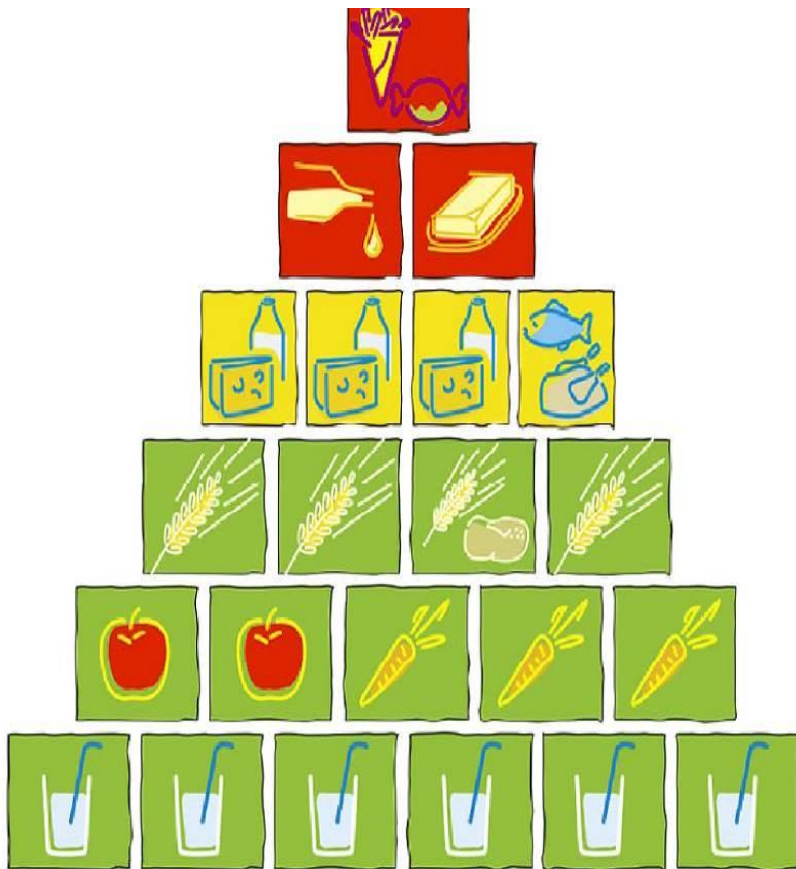
- Car (driver)
- Car (passenger)
- Motor bike
- Bus & railway
- Taxi
- Bicycle
- Walking

Frequency of travel to the doctor

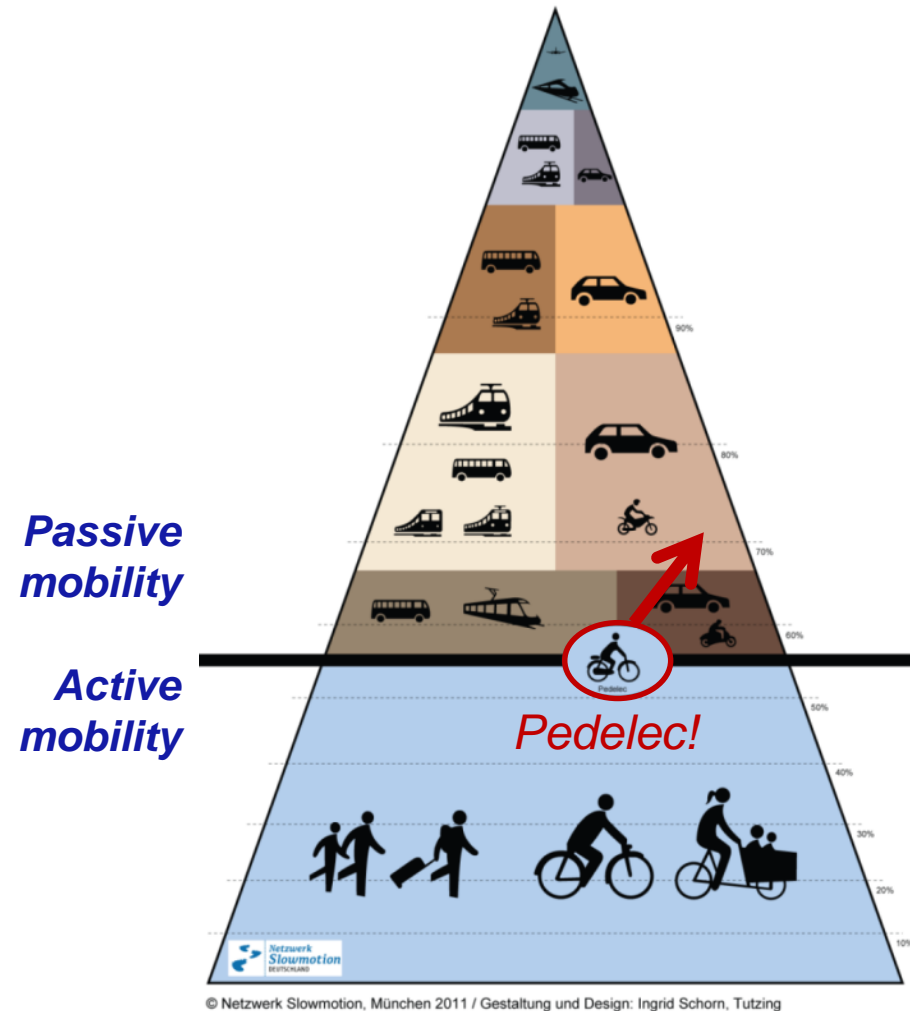


- Daily
- 3-4 / week
- 1-2 / week
- 1-2 / month
- Never or rare

Healthy food pyramid → sustainable mobility pyramid



Source: BZfE.de



Source: Evangelische Akademy Tutzing 2013

Electric power to substitute shrinking physical power

- **To keep the former travel horizon and daily mobility patterns**
(after the doctor prohibited to steer a car)
- **To cycle at inclination and head wind**
without exertion
- **To have harmonized riding speed**
and fun in group bicycle tours
- **To respond to spatial concentration**
of rural shops, to longer distances,
when there is no adequate bus service
- **To carry heavy goods** from shops
in order to maintain the own household
- **To feel wind in the hair and autonomy**
from „family taxi services“



Wonderful idea from Denmark for old & young

www.cyclingwithoutage.org



Source: Screenshot

The Right To Wind In Your Hair

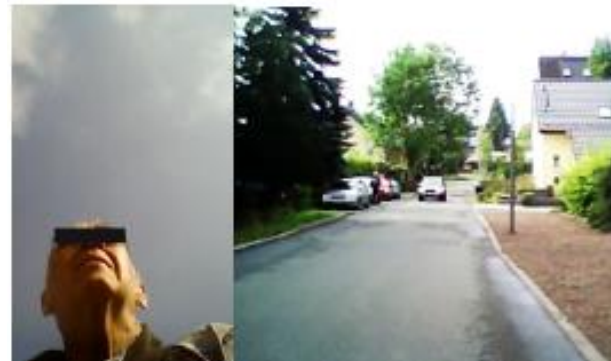
„Are pedelecs a dangerous vehicle for elderly?“

Dispute of bicycle manufacturers vs. traffic insurances >> objectification:

Naturalistic study: Observation by video of daily pedelec riding behaviour (by Technical University Chemnitz on behalf of GDV insurances national association)

- **Pedelec users have no higher risk** to be involved in critical situation, compared to other cyclists.
- **Pedelecs do not ride at 25 km/h**, but only insignificant faster than other cyclists – but at lower physical workload.
- **It is therefore not the vehicle** that effects the rising injury numbers, but a more frequent use of the elderly – on regard of their **vulnerability**.

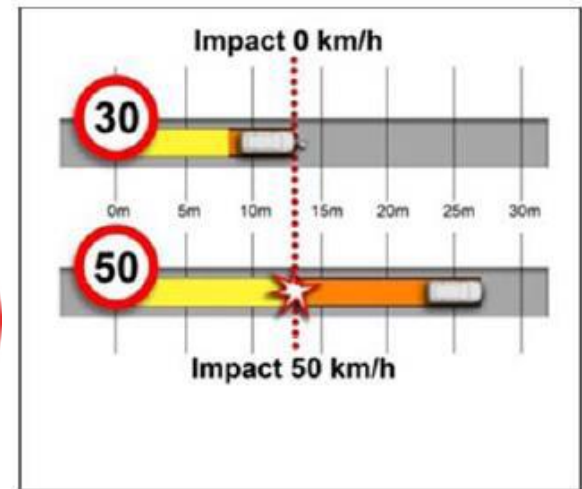
Nevertheless the health effects of cycling may over-compensate those road traffic safety risks.



Source: GDV/TU Chemnitz

Road safety risks for elderly– pedelec specific?

- **Driven speed of cars,** to react slower in old age, more seriously injured by crash
- **Balance deficits -** to stumble while starting (slip off the pedal) or when dismounting the pedelec
- **Slippery ground or gravel** in narrow curves; also kerb stones and pot-holes
- **Missing side markings,** risks to ride off the path
- **Obstacles in the cycle path** while cycling in a group

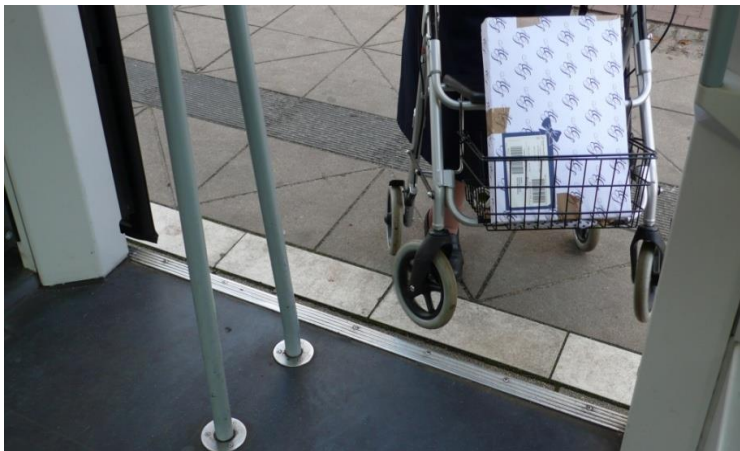


Source. Certu (FR)



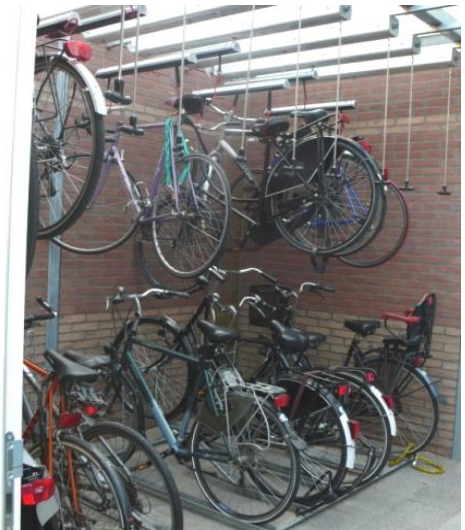
Photo: Provinzial/ZNM

Cyclists' profit from barrier free environment, legislation in public transport, accompanied bicycle critical



Parking a challenge for architects and planners

- **Expensive vehicles need safe parking** over night at the homes.
- **No steep ramps, stairs for barrier free access;**
pedelecs only in lower level of multilevel bicycle parkings.
- **Dense housing areas are the issue** (also for baby buggies, push chairs, ...) >> to integrate accessible space into parking norms of construction permits.
- **Set-up a programme of neighbourhood parkings** if no space in the house. Also to use abandoned shops? Funded by municipal car parking revenues?



Pedelec training for elderly in Westphalia region



Sicher unterwegs auf dem Elektrofahrrad!

Ein Schulungskonzept für ältere Pedelec-Fahrer

Das Netzwerk „Verkehrssicheres Nordrhein-Westfalen“

Verknüpfung des Radverkehrs mit öffentlichen Verkehrsangeboten wie Bus und Bahn an Bedeutung. Insbesondere in der Seniorenmobilität findet das Pedelec eine große Akzeptanz. Doch wie sicher sind gerade

Pedelec training event for elderly – combining: technical interest, safety & traffic law knowledge, exercise, sociability



Photo: Provinzial/ZNM



The training afternoon course by suitcase for loan to local groups

- **A balance exercise first**
- **Presentation by local bicycle retailer (technical) and police officer / transport planner (safety)**
- **To explain more technical details at the real (rental) pedelecs displayed on site**
- **Exercise on pedelecs in protected area e.g. to learn heavy braking**
- **Real life pedelec tour with police officers to critical traffic spots nearby**
- **Finally having exchange of experience and fun with coffee and cake together ...**



Greenways on former railway tracks (Rhineland)

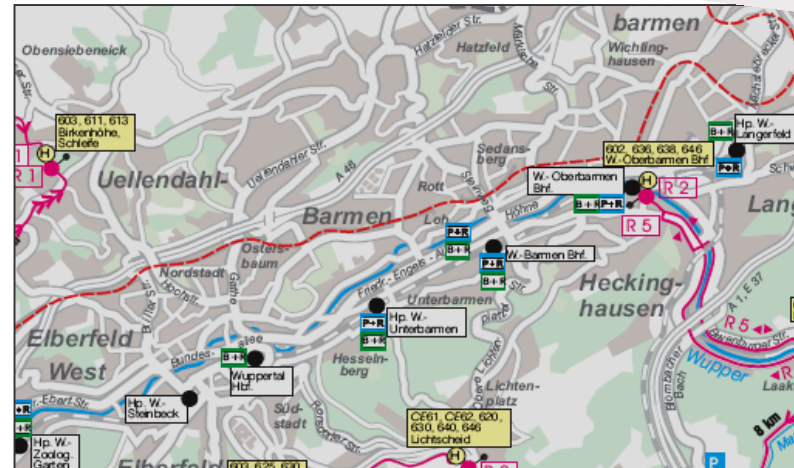
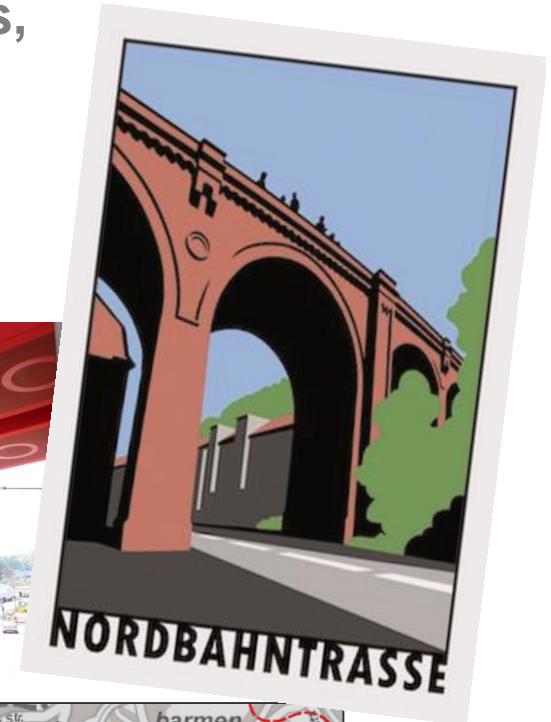
(advertise at railway station „recreation near by“)



Source: Bartoschek, bahnrassenradeln.de



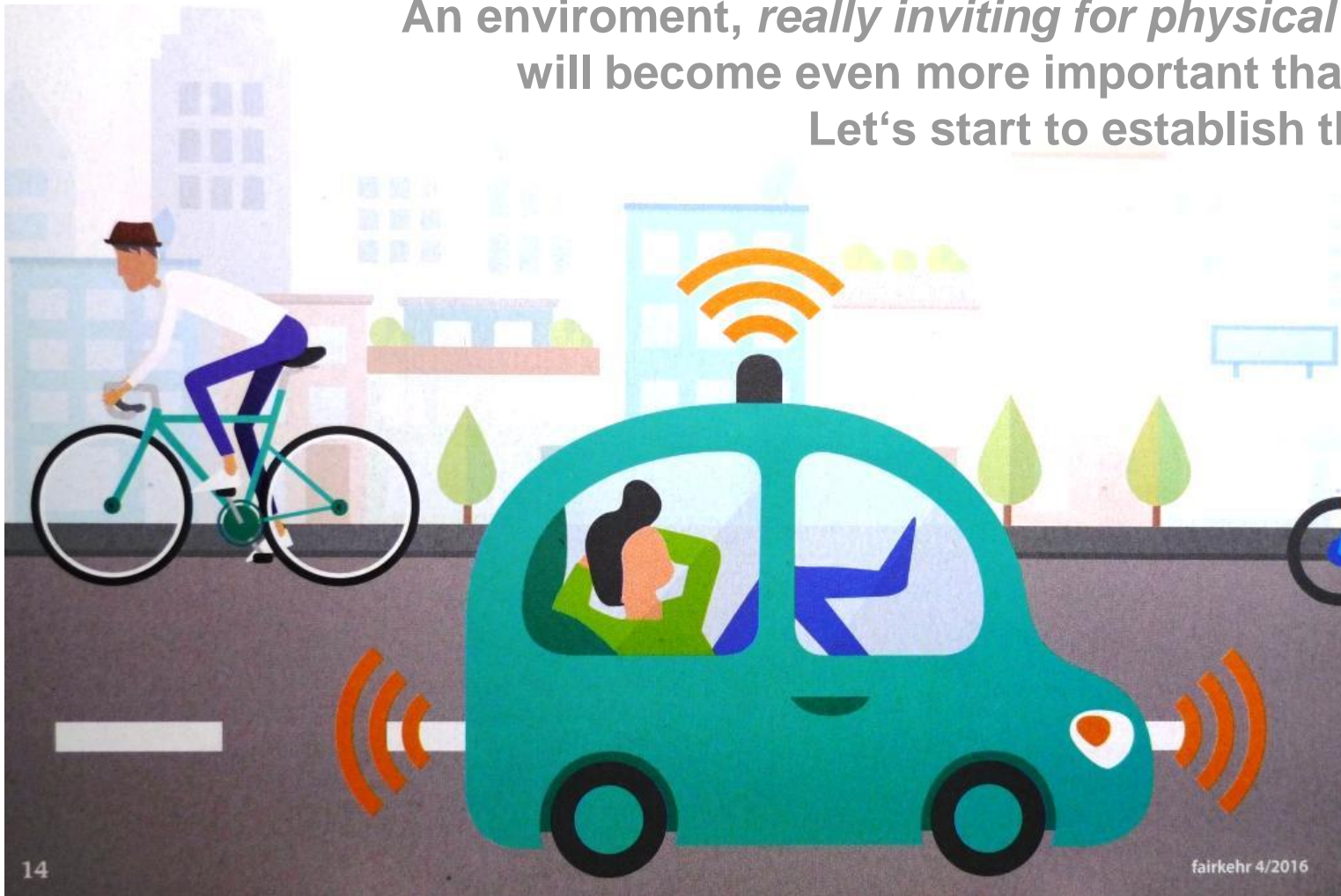
„Nordbahntrasse“ and other destinations, over the roofs of Wuppertal – riding car free up to 100 km through Ruhrgebiet agglomeration



Source. Stadt Wuppertal

More sedentary lifestyle by autonomous driving?

An environment, *really inviting for physical activity*, will become even more important than today.
Let's start to establish this now.



Some Conclusions

- **Ageing society has discovered the pedelec** to keep having part in public life also at old age; not in entire Europe like in the Netherlands yet.
- **Regarding the injury risks:** the vehicle pedelec is not the issue, but the vulnerability of the elderly.
- **Training courses** combine road safety awareness and skills in riding, „well wrapped“ into technical fascination, practical user hints and having fun together.
- **Elderly do not like to be adressed as seniors,** they are adults in joint action with the youngsters.
- **Elderly on pedelecs means tourism potential** and added economic value for the region (if for example easy access to platforms and trains with the heavy bicycles is guaranteed during the tour).

A practical municipal agenda – what to do first?

- **Start consulting the old cyclists.** They are the experts on their specific needs, wishes, ideas.
- **Identify a local partner for a training course,** an educational institution or civil society group, also a bicycle retailer at his/her own interest.
- **Check the cycling facilities to become „pedeles-suitable“:** remove obstacles, paint the edges of greenways well visible, improve winter cleaning, avoid narrow curves in street design.
- **Initiate local legislation on bicycle parking and accessibility standards** in new housing's construction permits, if legally possible.
- **Contact tourism and public health officials,** in what way more cycling of the elderly means added value according to their goals in future.



Thank you
for listening.

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All photos by presenter if not indicated