

'The automobile as a **social** being'

C.C.M. van Renswouw
M. Visbeek

Car of the Future

- Intelligent Car
- Social Car

The Social Car

- ... makes the driver feel **safe** and **comfortable**
- ... **influences** the driver's actions
- ... **assists** the driver in making the **right decisions**
- ... creates a **consequence-awareness**

Car of the Future

- Efficient
- Comfortable
- Environmentally friendly
- Safe

Car of the future

- Efficient



Efficient.

Car of the future

- Comfortable



Convenience, comfort, ease

Car of the future

- Sustainable



Car of the future

- Protection and safety



Social Car Technology

- User Preference Awareness
- Mobility on Demand (MOB) / Flexible Carpooling
- Intelligent Navigation
- SSPV system (Smart Social Personal Vehicle)
- Advanced costs system

Persona

- Simone (38)
- Marcel (38)
- Miloe (5)
- Jur (6)
- Lies (62)
- Ben (64)



C,mm,n Garage

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Friday November 7th, 2008

Simone



Lifestyle mother
Busy life
Well educated
Modern
Quality of importance
Careful
Responsible

Marcel



Lifestyle father
Busy life
Well educated
Make a career
Quality of importance
Travel
Well-ordered

Children



Lifestyle children
Happy
Cheerful
Playing with friends
Tinkering
Imaginative

Grandparents



Lifestyle grandparents
Love to cook
Love to baby-sit
Enjoy nature
Sportily and vital
Friendly and careful
Patient

Goals car of the future

Simone

- Short distances
- Comfortable in city areas
- Environmentally friendly

Marcel

- Comfortable
- Lifestyle
- Autonomous
- Long distances

Children

- Playing games

Grandparents

- Good navigation
- Assist in some driving tasks

- Safe
- Low costs

Scenario

- A daily use scenario

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1 Wake up



2 Plan route



3 Bring kids to school



4 Drive to work (carpooling)



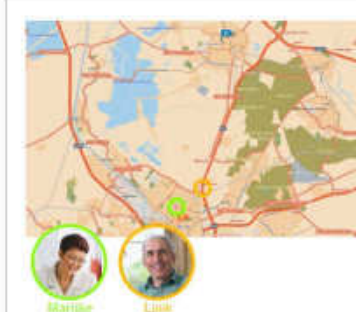
5 Drive to work (take over driving tasks)



6 Parking



7 Charging car

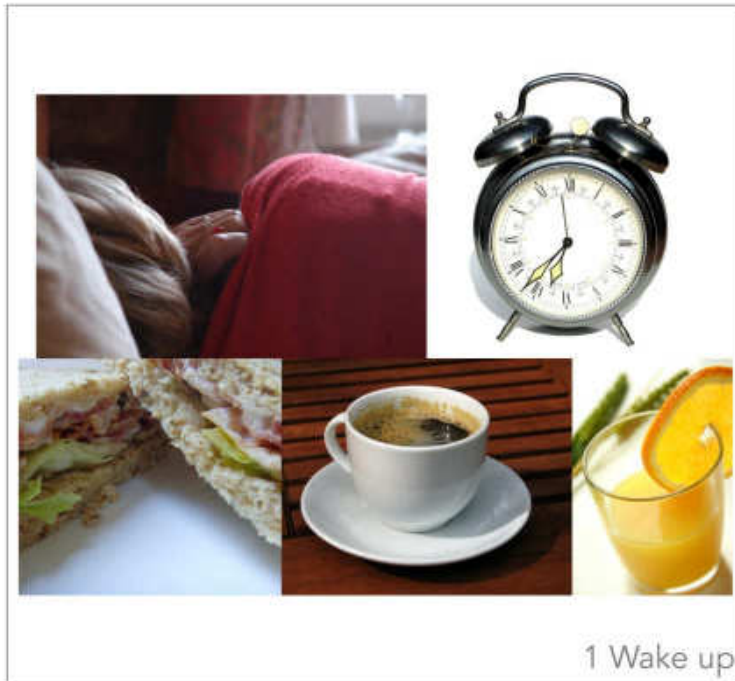


8 Drive back home



9 Home

Scenario



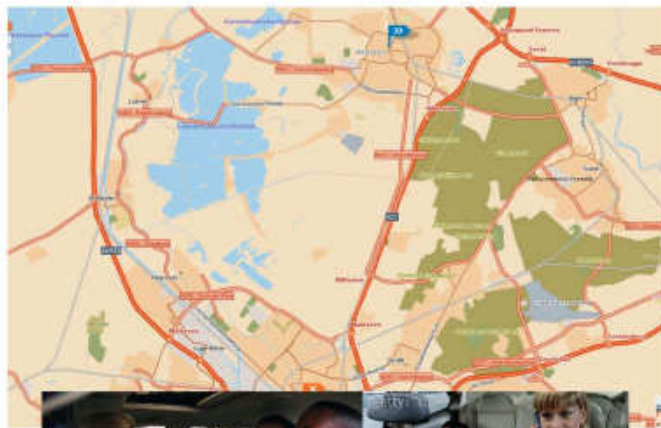
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Scenario



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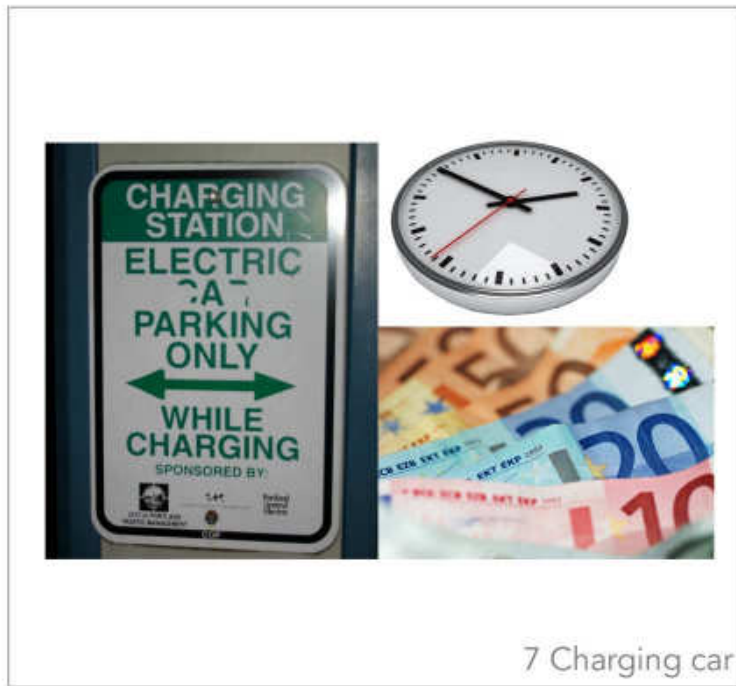
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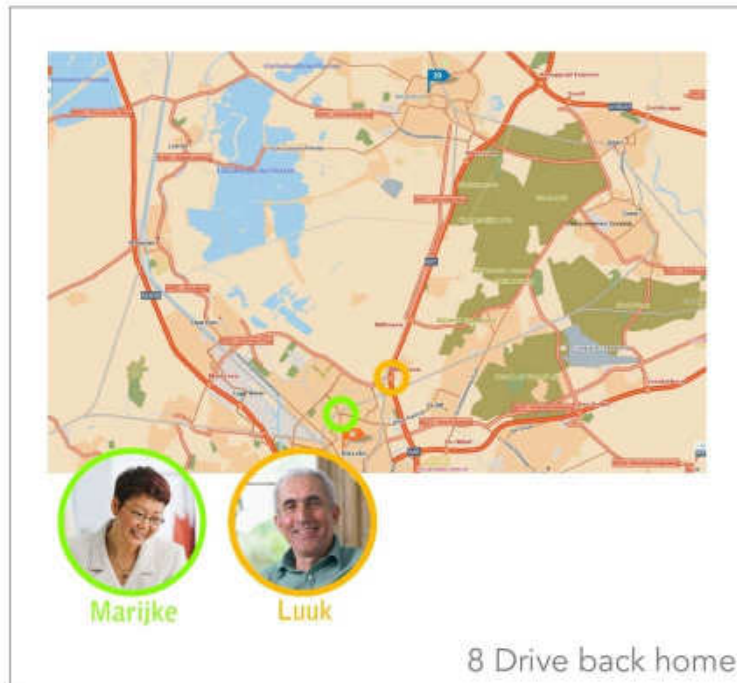
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9 Home

Conclusion

User Preference Awareness

- Remember per-user preferences

*“As Simone steps into the car, the mirrors, seats and radio **automatically adjust** to her preferred settings.”*

*“Since the car **detects the kids**, the rear seat passenger-displays turn on and load the kids’ favourite game.”*

Conclusion

- Preferences based on public profiles

*“As the **carpooling passenger** enters the car, the seat moves to a more upright position and the individual cooling switches on.”*

*“Simone confirms ‘**carpool passengers home address**’ as the new destination in her navigation system.”*

Conclusion

Intelligent Navigation

- ... is **aware of traffic situations**
- ... informs the driver of the travel **time** and travel **costs**
- ... provides several **alternative routes**, varying time/costs

Conclusion

Advanced costs system

- Routes that avoid busy roads are **cheaper**
- Traveling outside of peak hours is **cheaper**
- Driving on more polluting roads is **more expensive**
- Driving past dangerous points is **more expensive**

Conclusion

Flexible carpooling

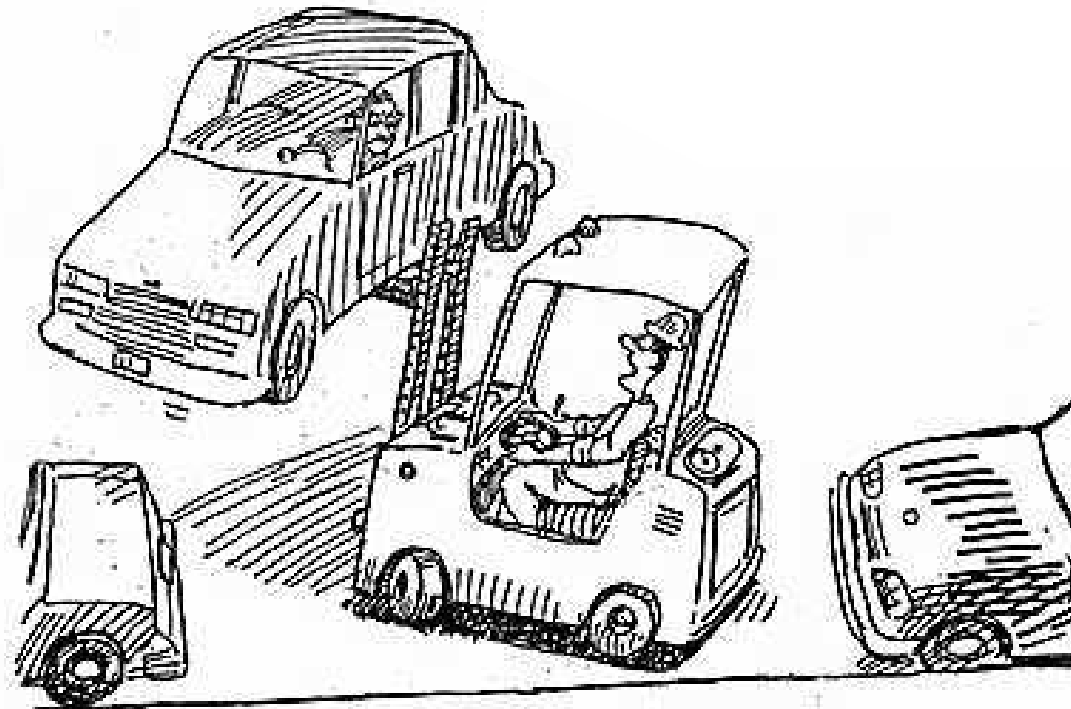
- After entering the route, the driver gets carpooling requests from **people on the same route**.
- Carpooling credits can be **earned** by taking people
- Carpooling credits can be **spent** on riding with others
- There is a **profile** of carpool passengers

Conclusion

SSPV system

- The SSPV is the **interface** between **user** and **technology**
- The SSPV provides information on the **dashboard** and **HUD**
- The amount of information on the HUD is **minimal**
- The SSPV can be used as a communication device

The Social Car



VFRDS

" I'M NOT STEALING YOUR PARKING SPACE WE'RE SHARING."

Discussion and brainstorm

- Intelligent navigation
- Autonomous driving
- Parking
- Costs
- Flexible carpooling

Intelligent navigation

- Op welke manieren zou intelligente navigatie de doorstroom kunnen verbeteren?
- Wat is de ideale balans tussen de keuze aan de gebruiker laten en keuzes opleggen?
- Waar kan de voertuig-voertuig-communicatie nog meer voor gebruikt worden?
- Kan intelligente navigatie bijdragen aan de vermindering van het fileprobleem?

Autonomous driving

- Welke taken kunnen worden overgenomen zonder dat het ten koste gaat van de oplettendheid van de bestuurder?
- Is het wenselijk om de gebruiker constant op de hoogte te houden van alles wat het systeem doet?

Parking

- Zouden parkeerplekken ook gebonden kunnen zijn aan variabele kosten? Zodat parkeerplekken duurder worden naarmate er minder vrij zijn?
- Zou een automatisch inparkeersysteem kunnen bijdragen aan het kleiner worden van parkeerplaatsen, en daarmee het vergroten van de capaciteit?

Costs

- Denk je dat mensen bereid zijn een omweg te nemen als de kosten hiervan lager zijn?
- Denk je dat mensen bereid zijn om meer te betalen voor het sneller opladen van de accu?

Flexible carpooling (1/2)

- Zou je losse credits kunnen kopen of verkopen? (Als een soort strippenkaart)
- Wat gebeurt er met het geld dat voor losse credits is betaald?
- Is het voor chauffeurs met een hoge waardering mogelijk om hun prijs te verhogen?

Flexible carpooling (2/2)

- Hoe ver van tevoren zou je de route moeten inplannen om een goede aansluiting te verkrijgen?
- Hoe kun je het beste de betrouwbaarheid van carpoolers in kaart brengen?
- Zal flexibel carpoolen bijdragen aan de vermindering van het fileprobleem?

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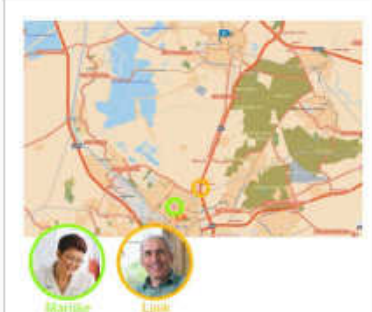
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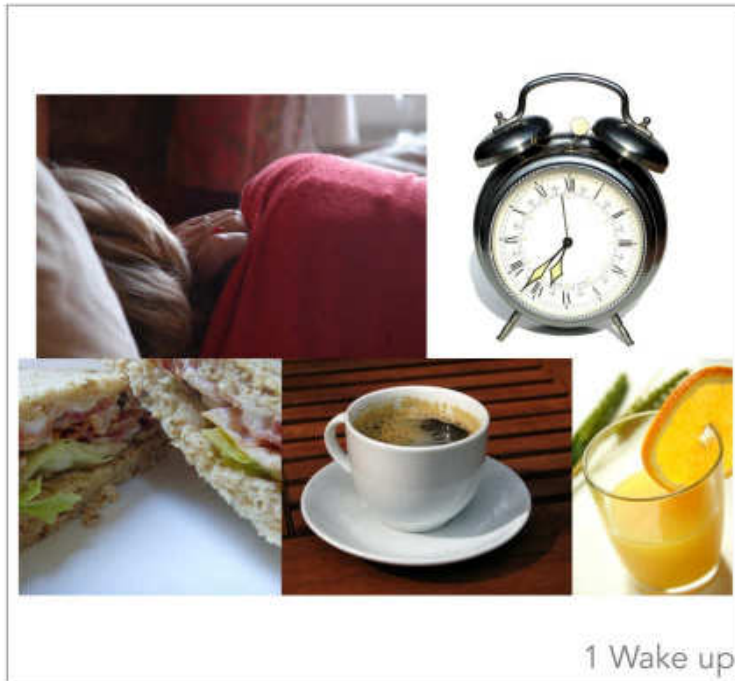


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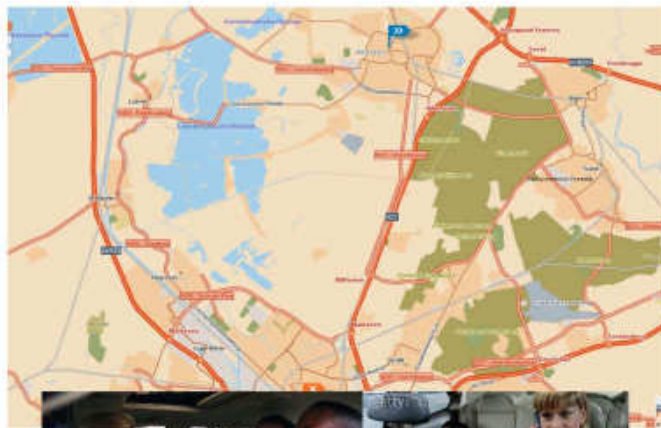
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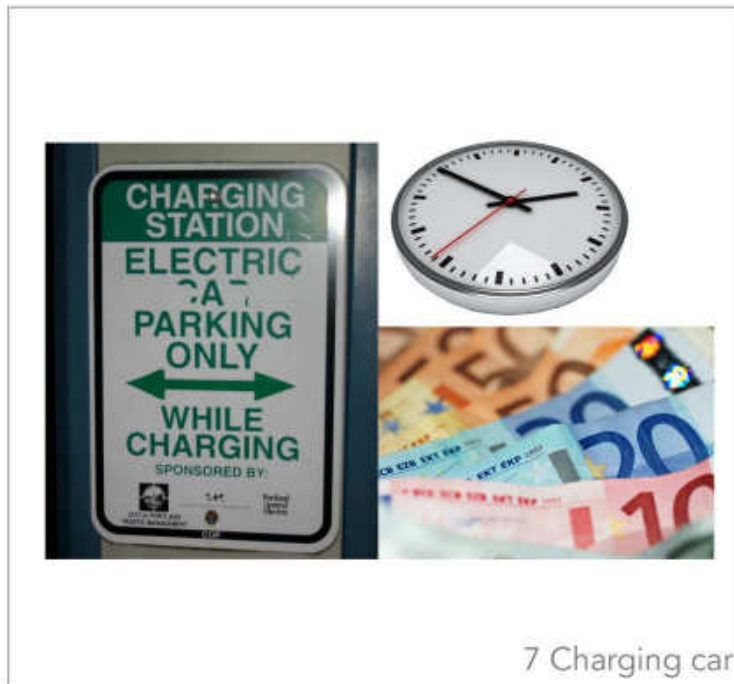
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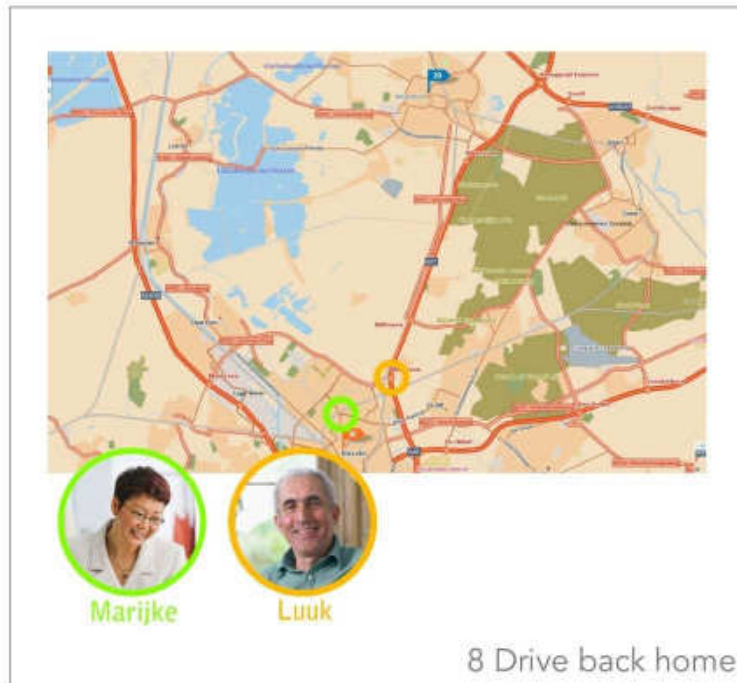
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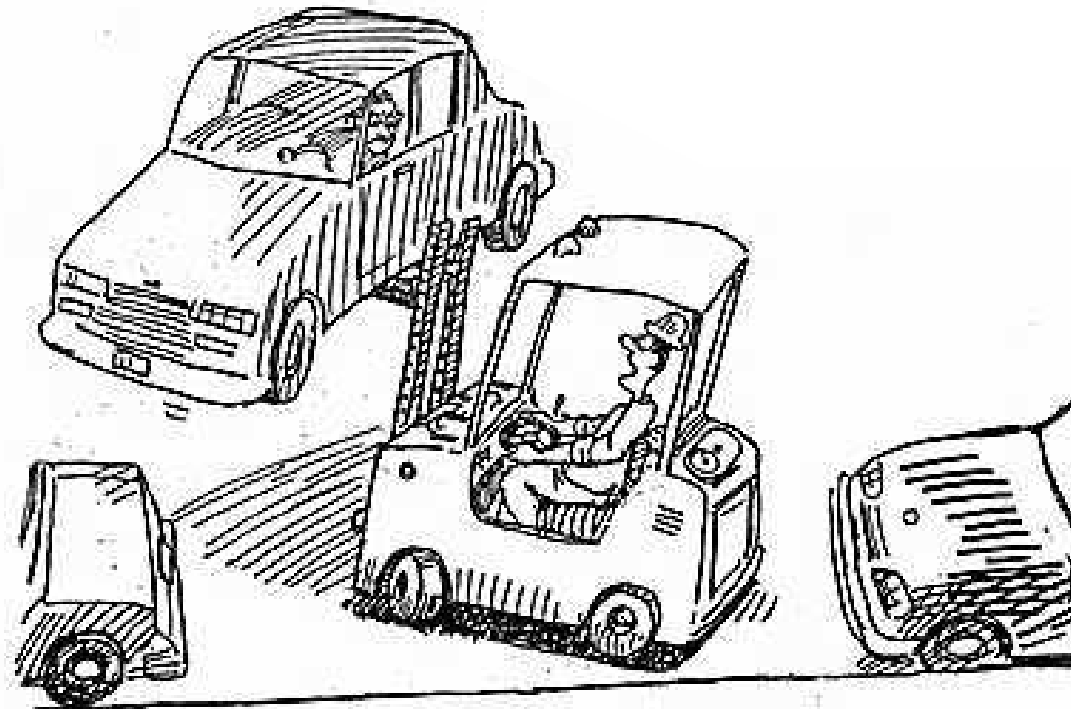
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