The social dimensions of EVs

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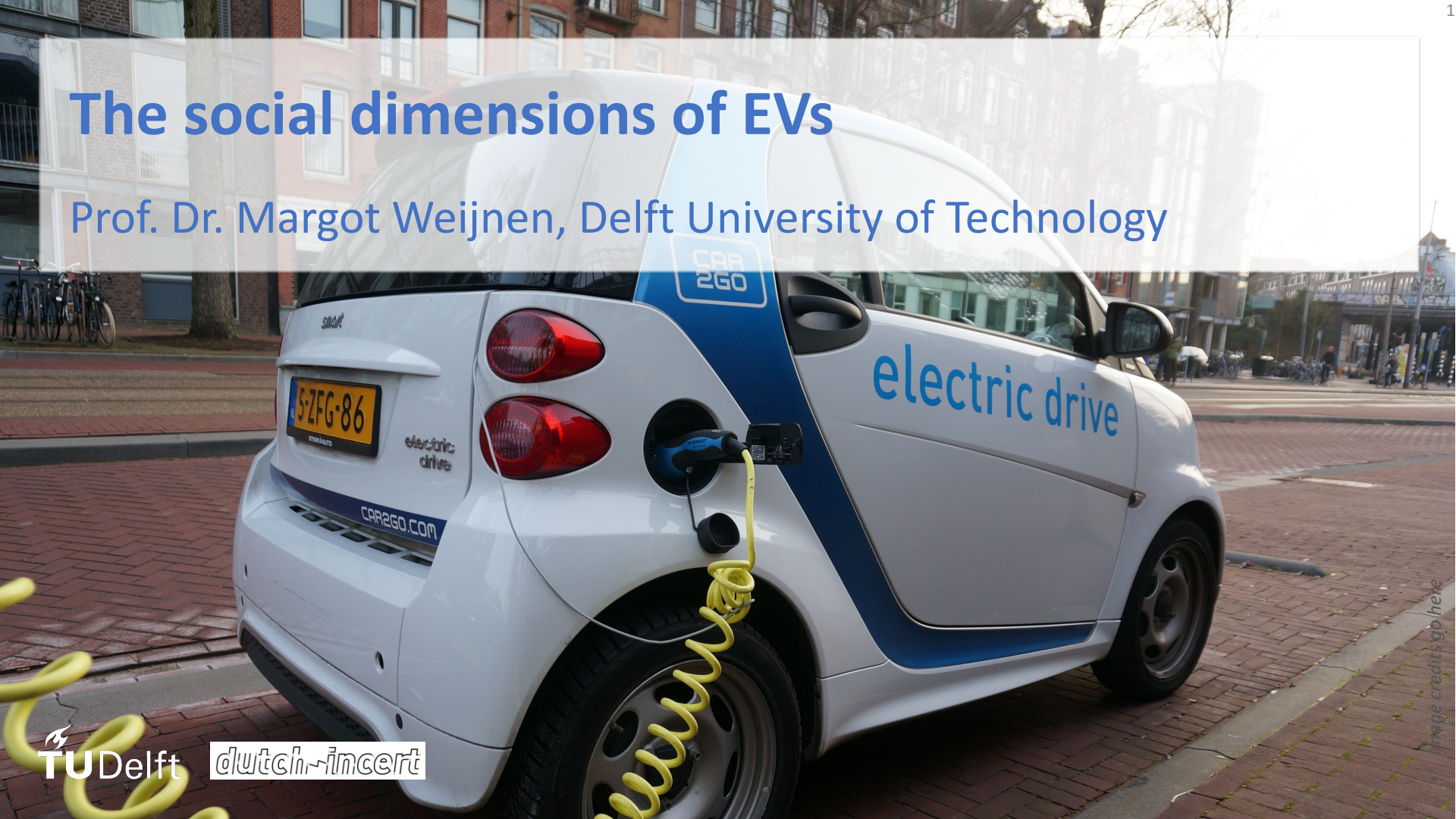

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Safeguarding public values & interests

- In provision of essential services, government bound to ensure:
  - Universal access
  - Availability/reliability of service
  - Affordability
  - Social and environmental acceptability
- Organization of services: public monopoly or competitive market

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Mobility as an essential service

What does this mean ??

Private vehicles

Roads

Public transport

Solution : Autonomous + electric vehicles

- Rural areas: lower frequency public transport service
- Solution: robotaxis?
- Robotaxis vs traditional public transport: better service (on demand) and cheaper mobility

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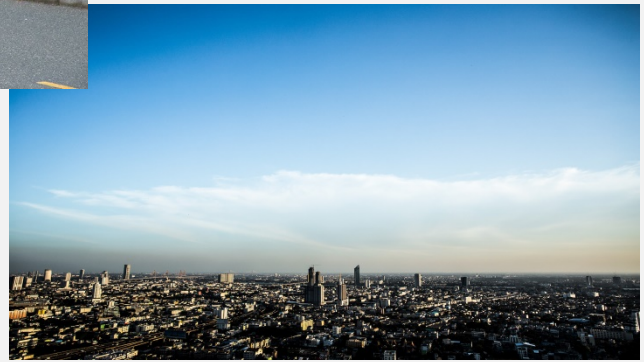
Consequences: Too good to be true … ??



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Challenges for government e.g.,

- Cyber-security risks
- Privacy invasion

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What can governments do ?

- Public charging infrastructure
- User protection: safety, cybersecurity and privacy
- Stimulation schemes (account for distributional effects)

Distributional effects

- Early adopters → highly educated, high income group
- Rest may feel left out
- Design incentive schemes with:
  - Limited extent of income transfer
  - Limited duration (but long enough to help technology mature)

How does the user decide ?

- Costs
  - cost of EV
  - privacy and cyber-security risks, range anxiety, …
- Benefits
  - clean conscience, social status, comfort, …
  - cost savings (total cost of ownership)
- Costs vs benefits: balance influenced by peer group behavior

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