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E-bikes

Learning from the European boom

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Presentation Contents

• Policy Context
• Why e-bikes are a success
• Conclusions
Global policy context

Policy concerns

• Climate change commitments needed
  • Avoid, shift, improve

• Development concerns
  • Urbanisation – mobility that addresses greater urban scale
  • Access and exclusion – affordable mobility

Policy response

• United Nations Urban Electric Mobility Initiative
  • boost the share of electric vehicles in annual sales to 30% (inc. 2-3 wheelers and light duty vehicles)
  • integrate electric mobility into urban transport
  • Release $billions from multinational development banks
  • 30 % reduction GHG emissions in urban areas
EU Policy context

• Halve the use of ‘conventionally-fuelled’ cars in urban transport by 2030

• ECF New Technology Study showed
  • 8 connected policy areas, 32 specific initiatives/directives/work plans could benefit from new cycling technologies
  • Transport, innovation, air quality, environment, low carbon development, health, economic growth & cohesion, industry
The world’s most livable cities are already choosing cycling

• For trips under 8 km the solutions are clear
  • Walking and cycling must be the answer
  • 50% or more share for cycling
    • Car free city centres, local centres
    • Quality public spaces, walking spaces
    • Cycle paths
    • 30 km/h speed limits
Going to the next level: Cycling as a new technology
E-bikes: Key consumer benefits

- Keep cycling benefits:
  - Health
  - Reliability
  - Congestion busting
  - Cost
  - Storage
  - Environment
  - Combined mobility
  - No licence
  - Use cycle infrastructure
  - Bike sharing

- Remove/reduce some cycling barriers:
  - Range
    - Now 10-20km as standard
  - Hills
  - Heat
  - Strength concerns
    - Age, gender, disability
  - Perception of Safety
    - Safe start
  - Slowness
    - 25km/h – 45km/h
  - Loads/goods / passengers
Case Study

- Applying the Dutch experience with bikes and e-bikes to a high car use country (UK)
E-bikes supporting new infrastructure

Niederlande
- snelfietsroute
- fietsneltweg
- snelle fietsverbinding
- regionale snelfietsroute
- fietsstraat
- Snellbinder
- Velostrada
- Slowlane
- ZOEFL
- F35

Belgien
- non-stop-fietsroutes
- fietscorridors
- bovenlokale functionele fietsroutes
- fiets-o-strade

Norwegen
- sykkelstamveg

Dänemark
- cykelpenderruter

Deutschland
- Veloroute
- Radschnellweg

UK/London
- cycle superhighways

Source: Ursala Lehner Lierz, velo:consult
Cycling as a public-transport feeder...

Dramatically increases the catchment area of public transport

- 800 m for a pedestrian
- 3.3 km for a cyclist
- Catchment area 35 km² instead of 2 km²
- E-bike takes catchment up to 10km
EU Electric Bike Regulations

- **Classic Pedelec**
  - ≤25 kph
  - ≤250 watts

- **L1eA Powered Cycle**
  - ≤ 25 kph
  - 250-1000 Watts

- **L1eB Speed Pedelec**
  - ≤ 45 kph
  - ≤ 4000 watts

- **L- Category E-motorbike**
  - Motorised only

- **Pedal Assisted Electric Bikes**
  - Type approved

- **Powered Cycle**
  - CEN regs

- **E-moped**
  - Motorbikes

- **E-bikes**
Conclusions: What e-bikes offer policy makers now

- The only electro-mobility capable of 30% market share
  - Affordable, accessible
  - Proven consumer take up
  - Demand from cities
  - Industrial scale & innovation
  - Globally available solution

- Can help other e-mobility solutions
  - Development e-mobility skills/workforce
  - Complement to public transport, logistics
  - Established bike sharing technology

- Proven, costed co-benefits
- Highest cost-benefit ratios
To maximise deployment

• Consistent regulation of e-bikes
• Toughened restrictions on other polluting vehicles
• Higher status & support in e-mobility research and deployment (10% target)
• E-bike sharing in a range of economies and urban forms
• Development of infrastructure standards
• Collaboration and research on legal frameworks & technologies  Eg. Batteries, speed limits, infrastructure
Thank you

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