

SolaRoad

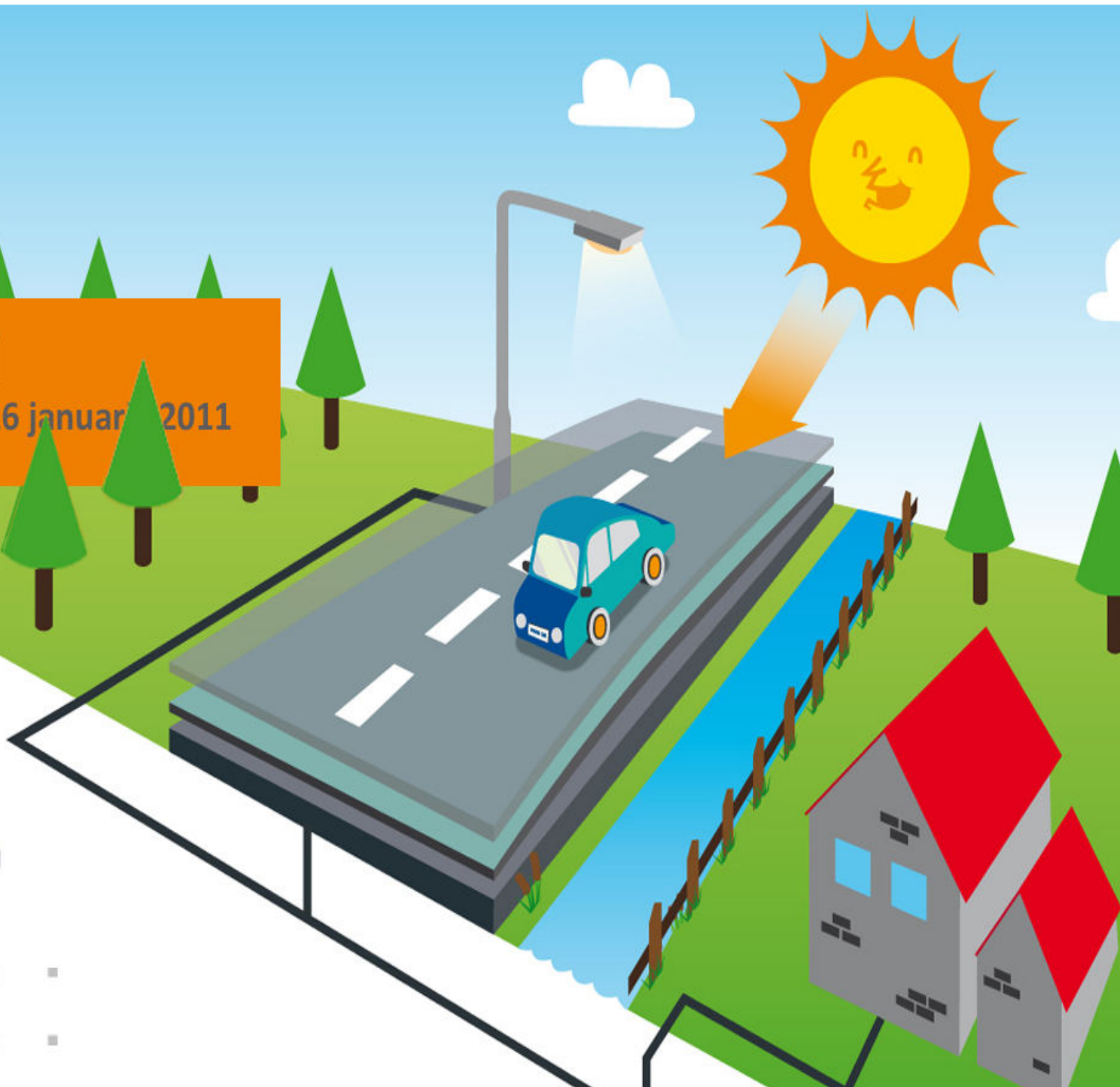
Amsterdam, 26 januari 2011

TNO

 Provincie
Noord-Holland

 **Ooms**
Avenhorn Groep

Imtech



TNO: 7 themes

- › Healthy Living
- › Industrial Innovation
- › Defence, Safety and Security
- › **Energy**
- › Mobility
- › Built Environment
- › Information Society

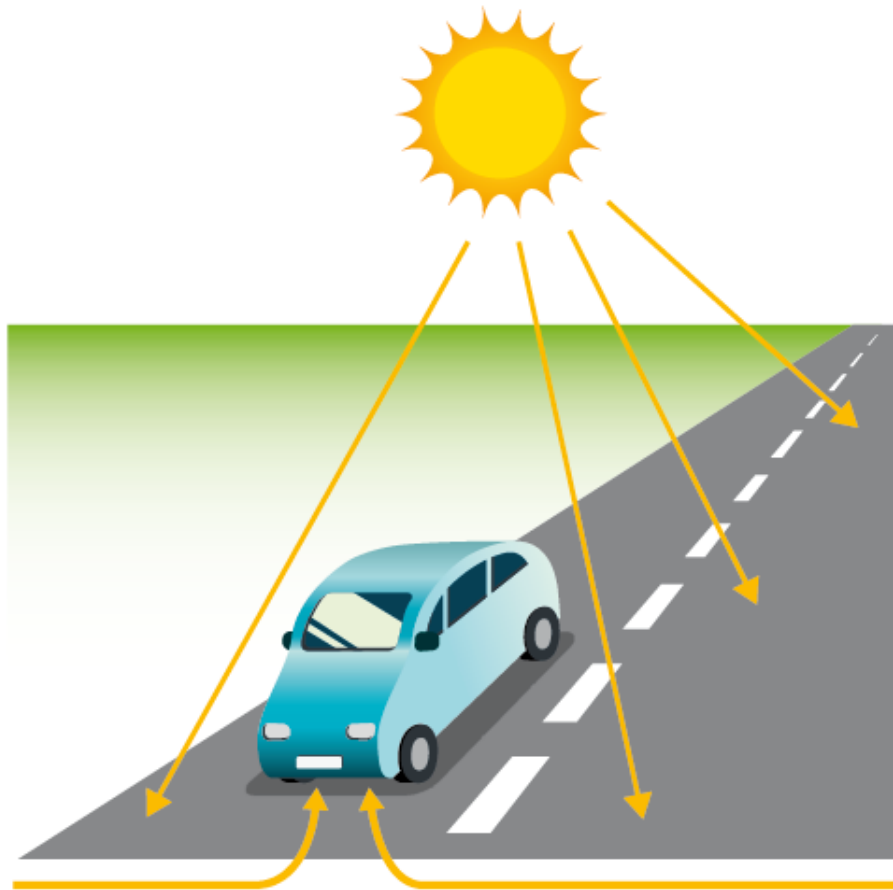


Focal areas

- › Energy transition
- › Reduction of energy consumption
- › Generation/storage/transport
- › Decentralised supply
- › Sustainable sources

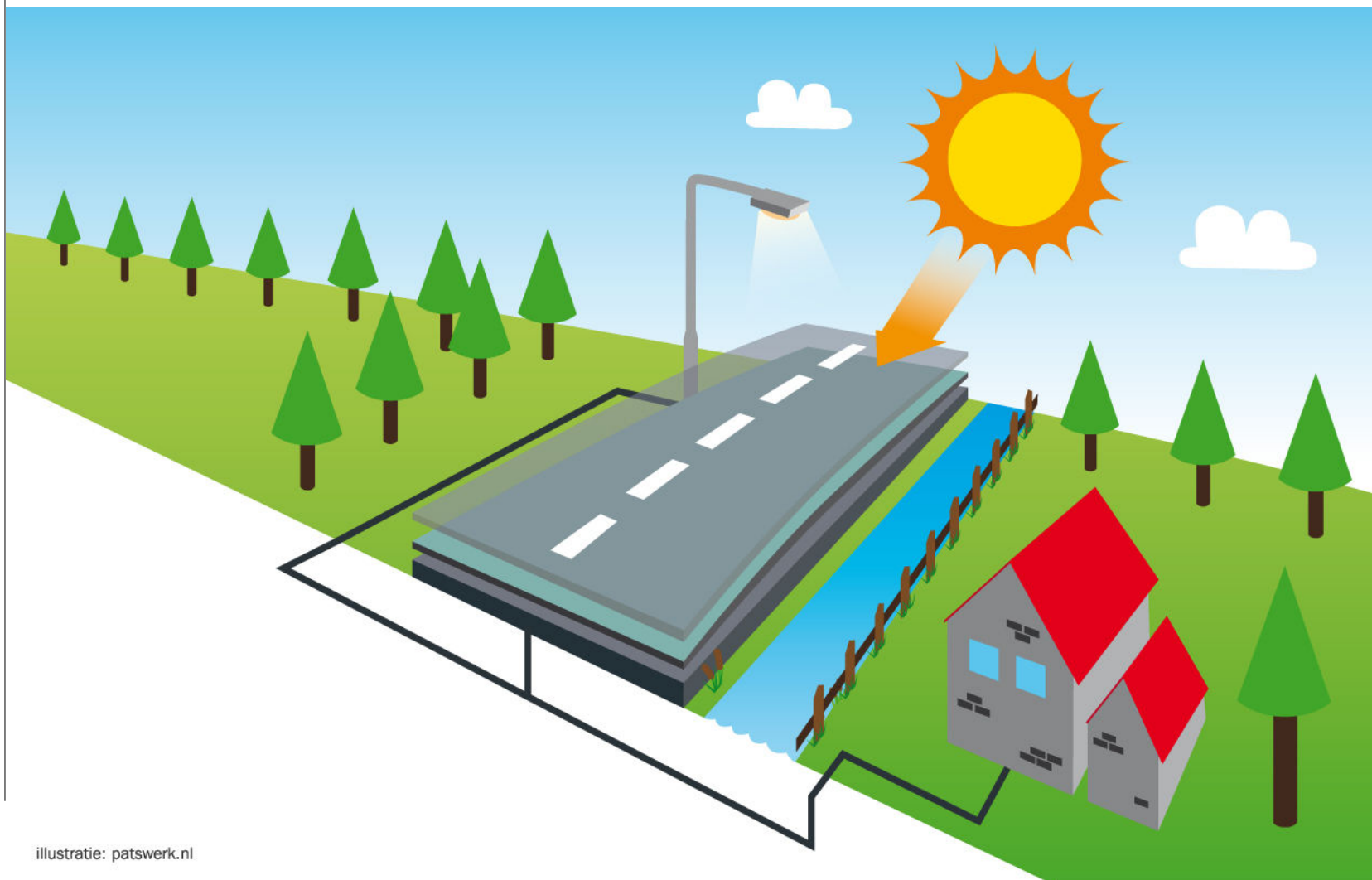


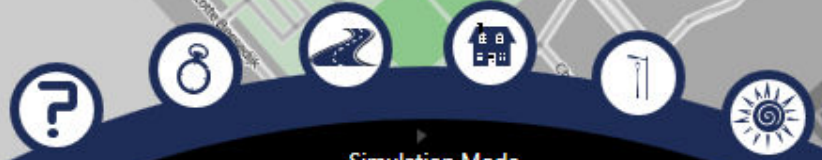
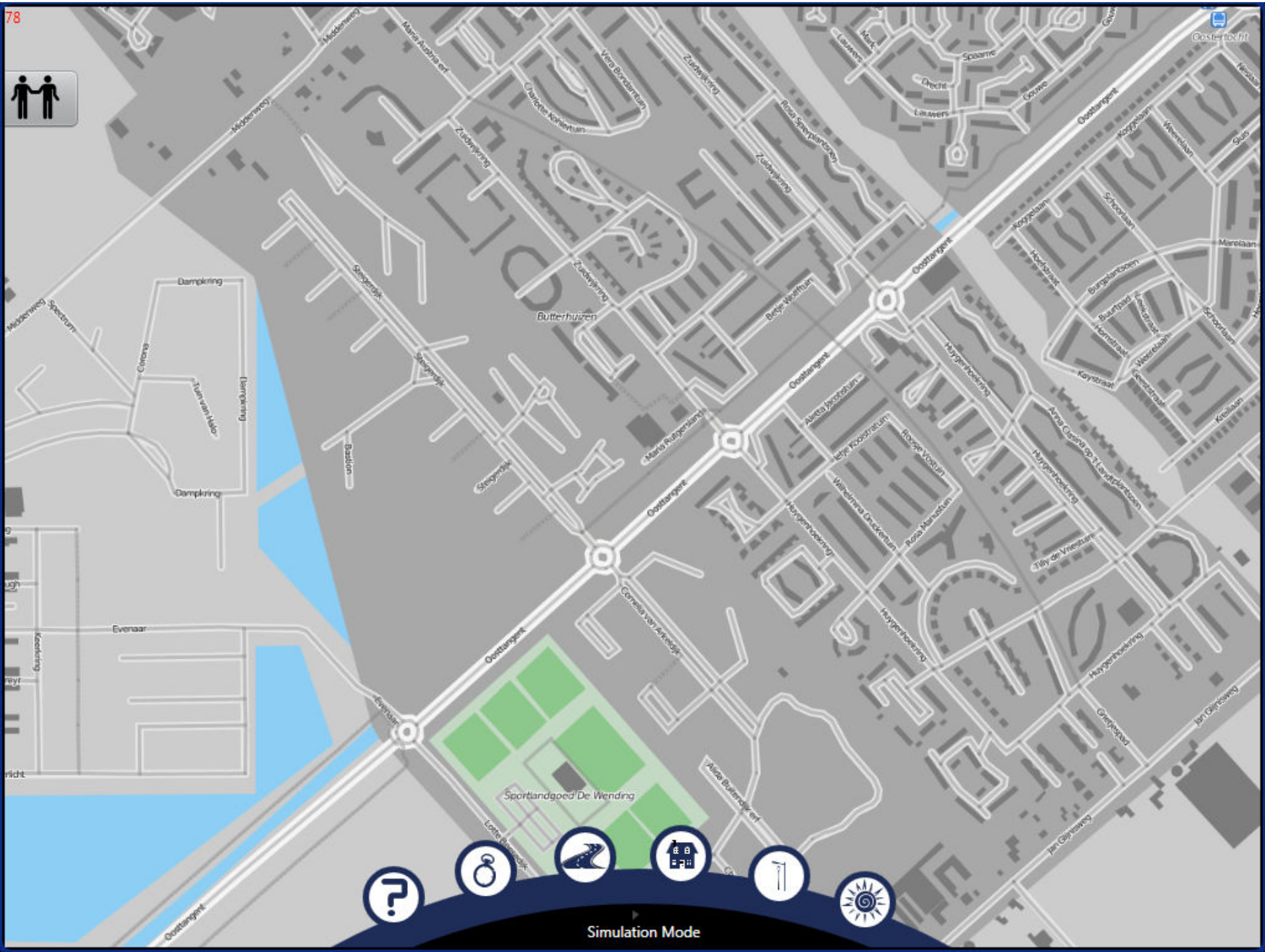
Dream: wouldn't it be nice if ...



Sustainable
Energy-neutral
Clean
CO₂-low

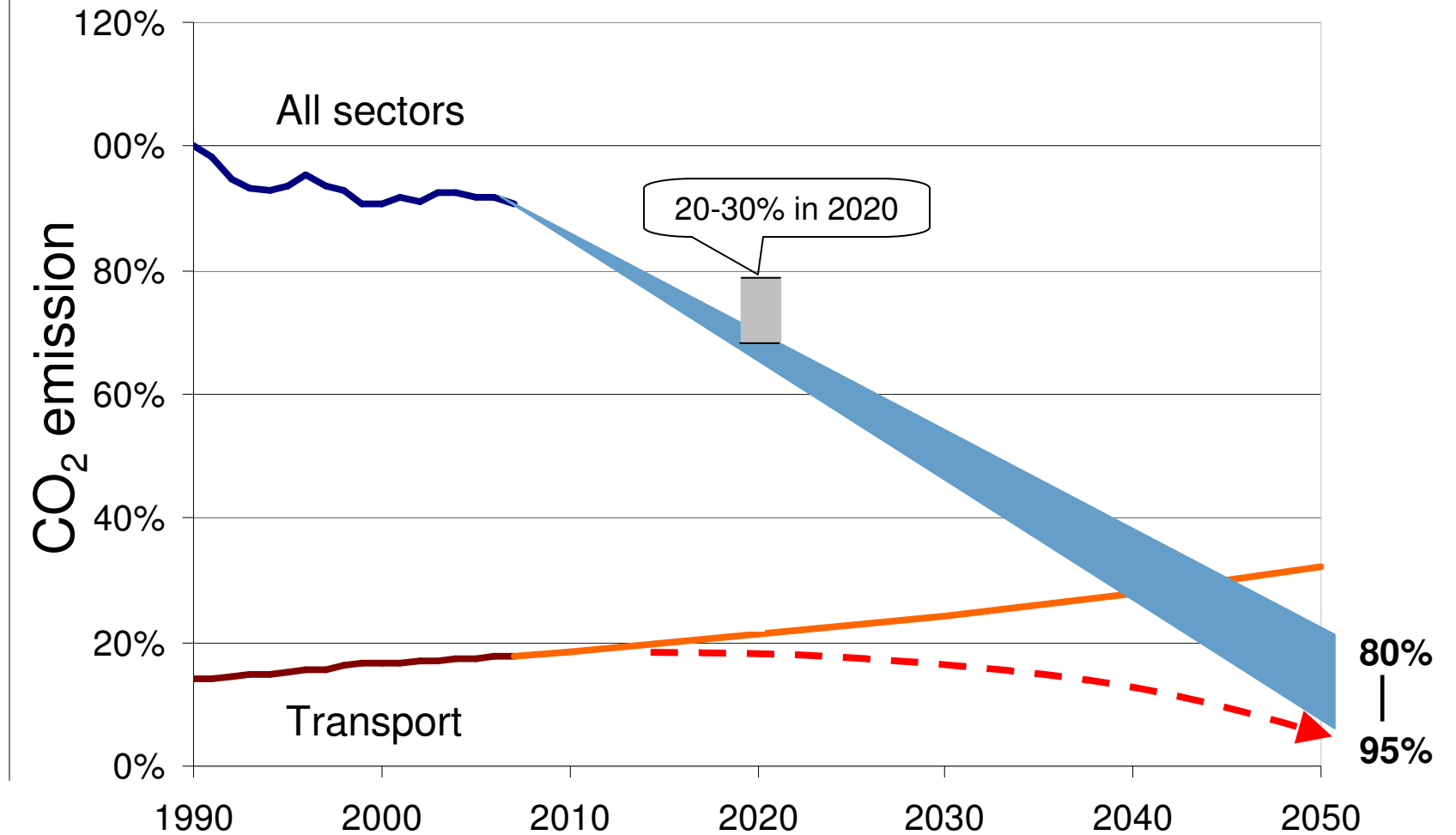
SolaRoad



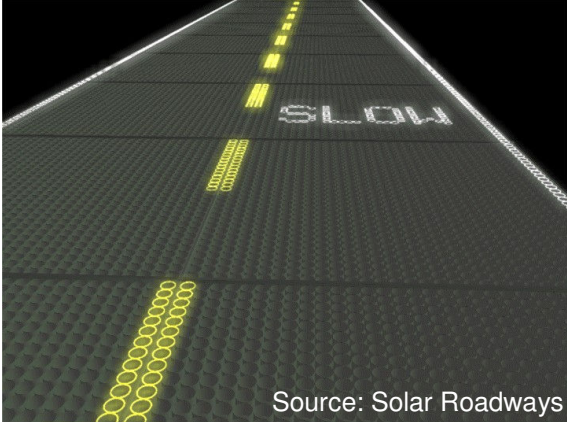
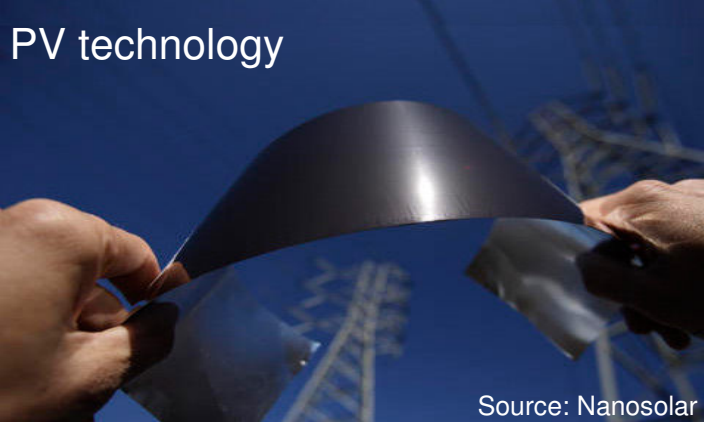


Simulation Mode

Need: to reach 2°C target



Trends



Motivation summed up:

Generation of sustainable electricity

- › Large-scale
- › No additional need for space
- › No landscape pollution

With mobility e-link:

- › Generate energy where needed
- › Clean
- › Low CO₂ emission

Began with cycle path

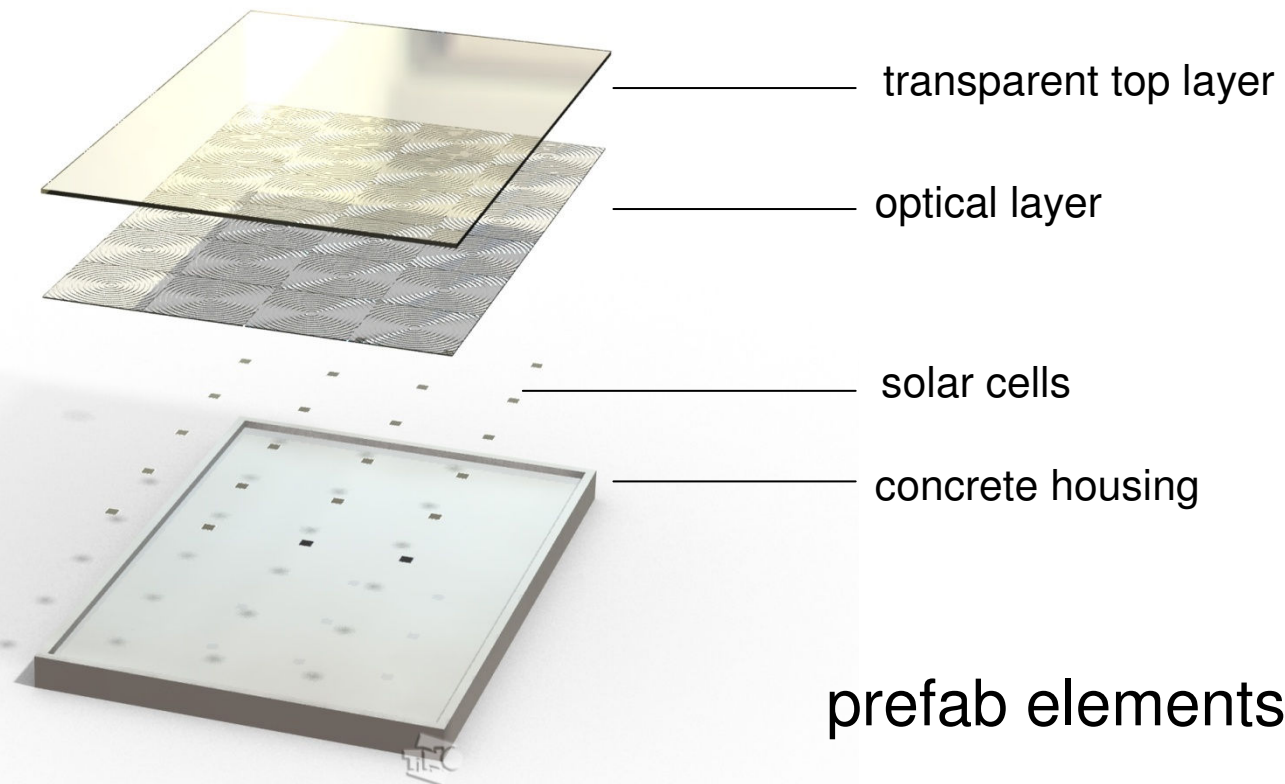


- › lower traffic load
- › fewer (strict) requirements

- › NL cycle paths total ca. 15,000 km
- › many new cycle paths being built
- › cycling is sustainable

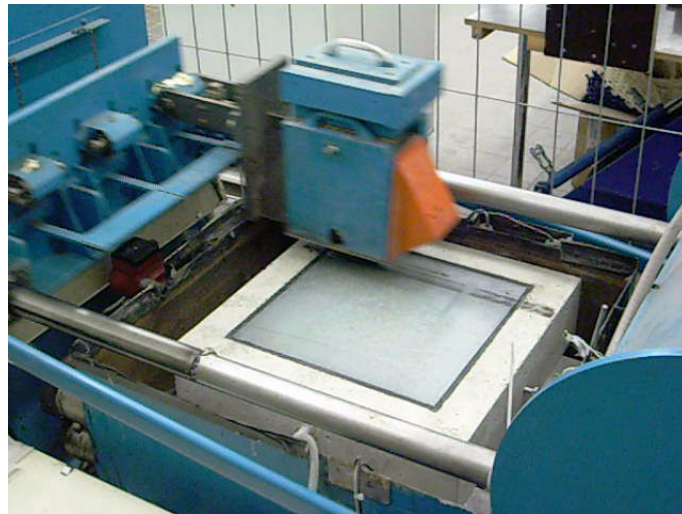
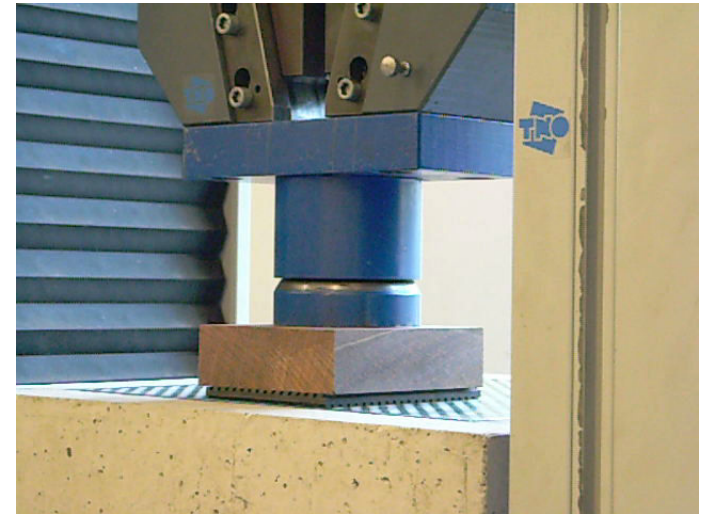


Technical specification



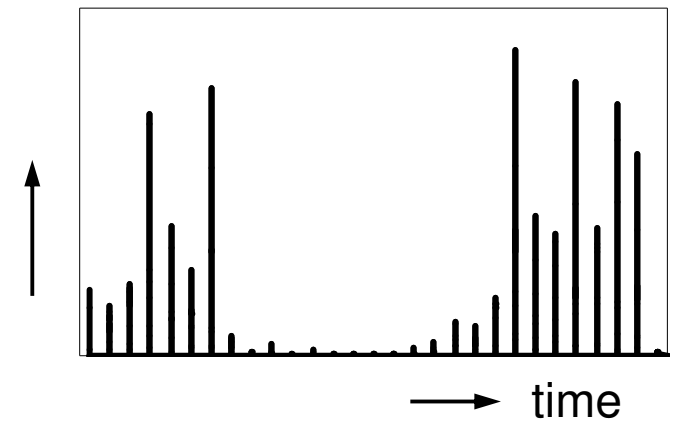
Tests

strength

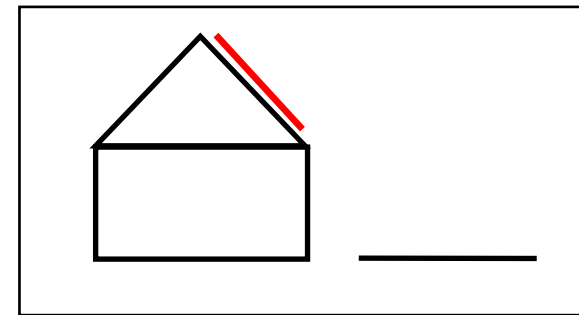
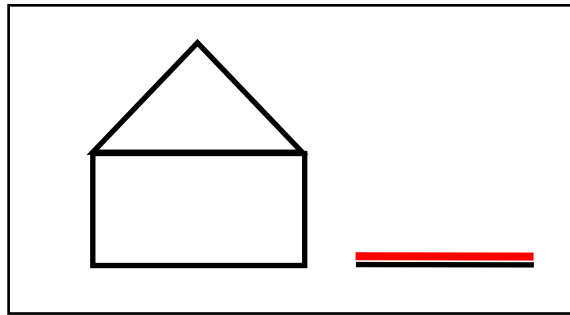


stiffness

light yield



Comparison with other solar cell application



Energy



=



Costs

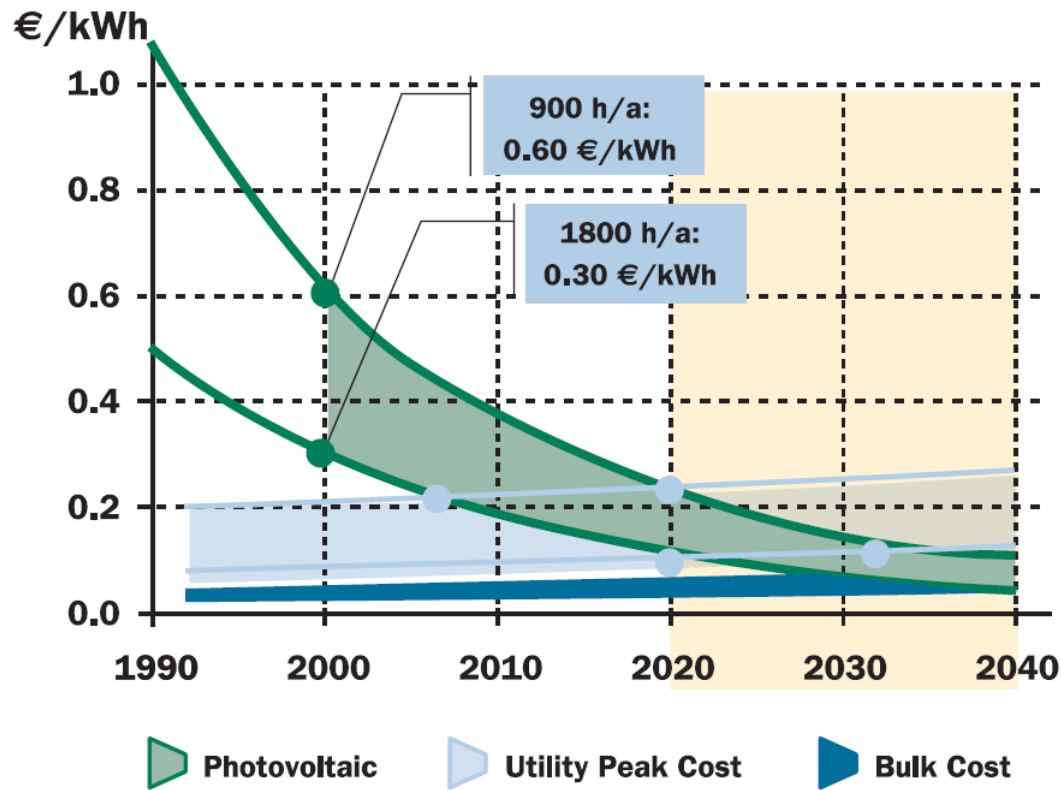


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Is SolaRoad profitable in the long term?

Question applies to all solar energy applications



South Europe: 4-5 yrs

NL: 5 - 8 yrs

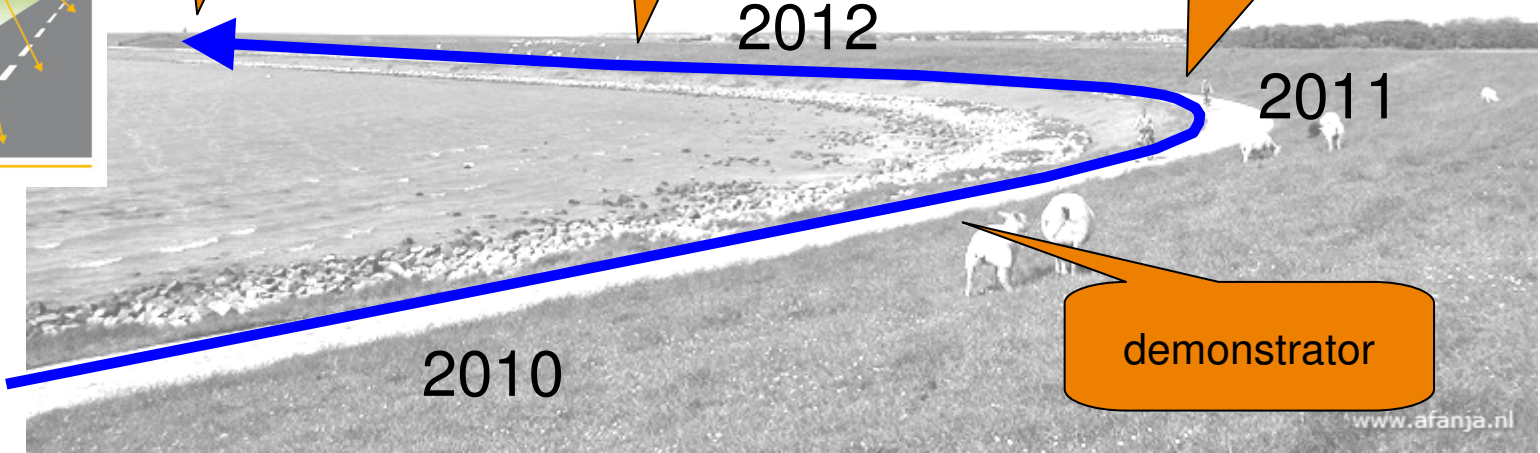
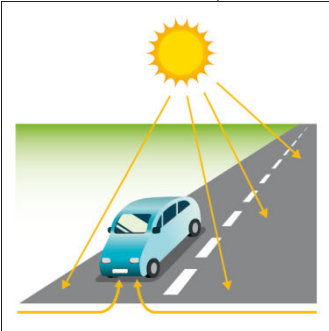
Source: European Commission, A vision for photovoltaic technology

Timeline

From 2015:
Mature products

Summer/autumn 2012:
Realisation 1st pilot

January 2011:
Presentation in NEMO



2012

2011

demonstrator

Pilot in Noord-Holland

- › Ca. 100 m SolaRoad cycle path
- › Location: N203 at Krommenie
- › Targeted realisation date in summer 2012
- › Duration of pilot: 5 years
- › Working and safe but experimental
- › Core consortium: TNO, Ooms, Imtech, PNH



Call for action

- › SolaRoad is a realistic option
- › Pilot cycle path in 2012 in Noord-Holland
- › Consortium can be expanded (conditional)
 - Additional knowledge and expertise
 - Resources (money, material)
- › Interested in discussing the possibilities? Contact:
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