

## › TNO AND ELECTRIC DRIVING

TNO is a supplier of knowledge and advisor to Dutch and European government bodies and companies in the field of sustainable mobility. Electric mobility is one of our focal areas. Our knowledge and expertise includes technology development, behavioral factors, mobility effects, environmental and sustainability aspects as well as knowledge of innovation systems. TNO is active in many national and international projects. Examples from our track record are:

### Physical exercise on an electric bicycle (2009)

TNO researched the effect of electric bicycles on health. Conclusion: despite the assist cyclists on an electric bicycle still exceed the exercise norm.

### Safety of electric scooters (2012)

Together with TNO Dutch electric scooter manufacturers improved the safety of their product.

### Electric scooters for pizza delivery (2012)

TNO advised Domino's Pizza Netherlands on how to implement electric scooters in their business.

### FR\_EVUE – Validating Freight Electric Vehicles in Urban Europe (2013)

A large demonstration project with 124 vehicles for city distribution in 8 of Europe's largest cities. Goal is to gain experience with EV's in city distribution.

### SAFEBAT – safety and standardization of EV batteries

Together with KEMA, NXP, AweFlex, Heliox, ARN, TTAI, TASS and Rups TNO developed guidelines and knowledge bank on aging and testing of batteries.

### One year monitoring of 26 EV's (2012)

TNO advised the Dutch Highway authority on how to implement electric driving in their organization. For this 26 electric cars were monitored during one year in real life. Not only the range was measured but also human behavior and acceptance.

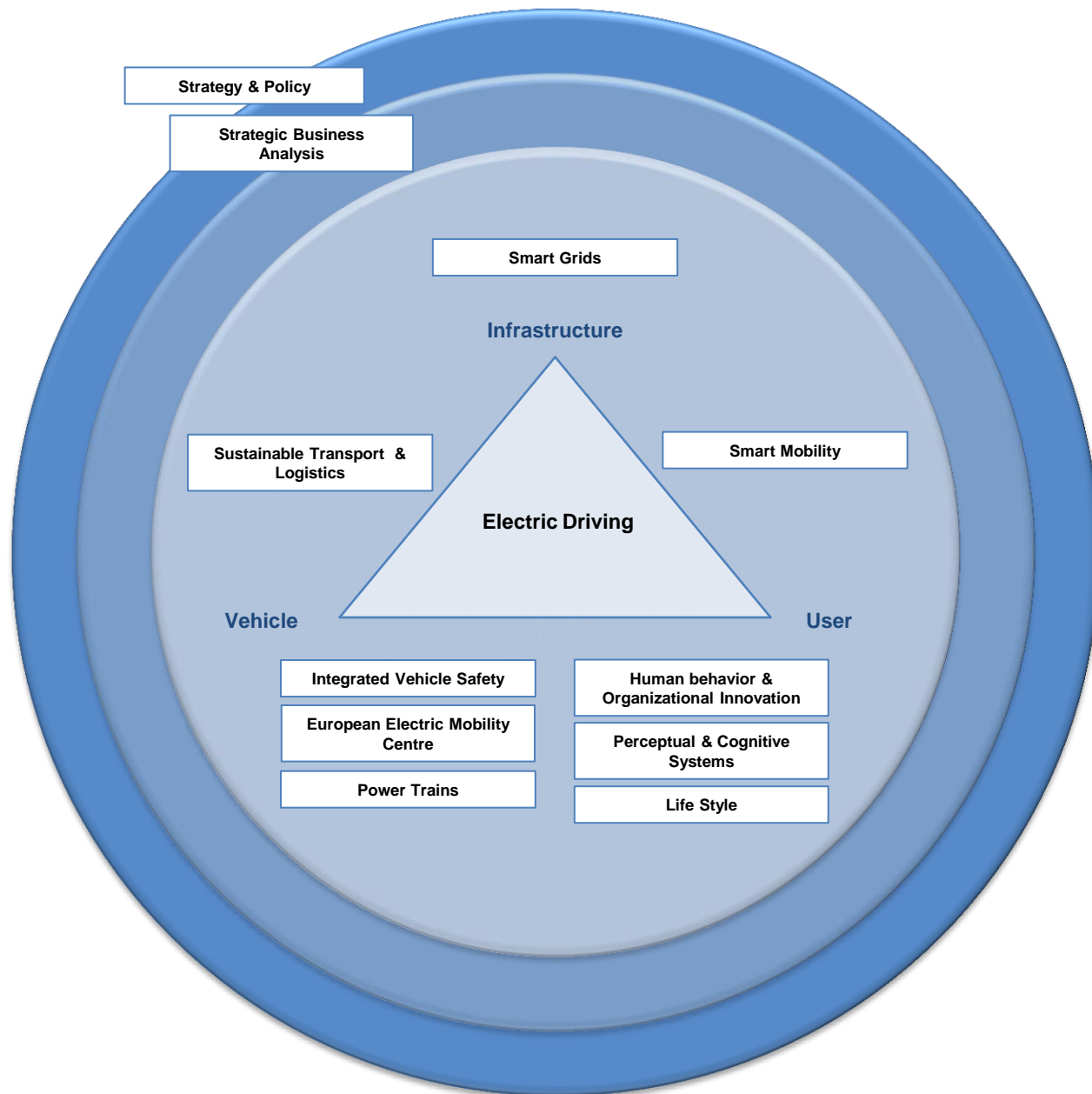
### Smart range estimation (2010)

Development of an intelligent navigation system for electric vehicles together with TomTom, Qipment and e-Laad. Accurate range prediction and locations of charging infrastructure included.

For more examples of projects please download our complete track record.

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› TNO expertise areas on electric driving