# Electric cars: Introduction Glossary of Terms for module 3 ต์ในนัยโกะที่เกียยศนี



### **Automated driving system**

An automated driving system is a complex combinations of various components that can be defined as systems where perception, decision making, and operation of the automobile are performed by electronics and machinery instead of a human driver, and as introduction of automation into road traffic.

## Automated Guided Vehicle (AGV)

An unmanned, self-propelled vehicle in the nature of a mobile robot that has an onboard computer that stores path and machine function instructions and activates the drive and steering systems so as to cause the machine to follow a desired path.

#### **Automation**

Use of control systems, such as computers or robots, and information technologies for handling different processes and machineries to replace a human being.

#### **Autosteer**

Autosteer, a feature in Tesla Autopilot, steers the car to remain in whatever lane it is in (known as lane-keeping). With Hardware1, it is also able to safely change lanes as directed by a tap of the turn signal. As of May 2017, Hardware2 is limited to 90 mph (145 km/h) on highway roads and the former 35 mph (56 km/h) speed limit on non-highway roads was removed, instead limiting to five over the speed limit or 45 mph (72 km/h) if no speed limit is detected.





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### **Car sharing**

The practice of sharing a car for regular travelling, especially for commuting. Car sharing is part of a larger trend of shared mobility. Shared mobility includes all modes of travel that offer short-term access to transportation on an on-needed basis either for personal transportation or goods delivery.

## Connectivity

A generic term for connecting devices to each other in order to transfer data back and forth.

# **Electric mobility**

Comprises all street vehicles that are powered by an electric motor and primarily get their energy from the power grid – in other words: can be recharged externally. This includes purely electric vehicles, vehicles with a combination of electric motor and a small combustion engine (range extended electric vehicles – REEV) and hybrid vehicles that can be recharge via the power grid (plug-in hybrid electric vehicles – PHEV).

#### Electrification

It is the process of powering by electricity and, in many contexts, the introduction of such power by changing over from an earlier power source.

#### **Emissions**

Pollution (including noise, heat, and radiation) discharged into the atmosphere by residential, commercial, and industrial facilities.





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### **Gartner hype-cycles**

The hype cycle is a branded graphical presentation developed and used by the American research, advisory and information technology firm Gartner, for representing the maturity, adoption and social application of specific technologies.

#### **Green Deals**

The Green Deal approach in the Netherlands is an accessible way for companies, other stakeholder organizations, local and regional government and interest groups to work with the central government on green growth and social issues. The aim is to remove barriers in order to help sustainable initiatives get off the ground and to accelerate this process where possible. The central government plays a key role in this area. Initiatives often start from the bottom up, in response to societal dynamics.

# **Internet of Things (IoT)**

The Internet of Things (IoT) is the network of physical devices, vehicles, home appliances and other items embedded with electronics, software, sensors, actuators, and connectivity which enables these objects to connect and exchange data.

## Interoperability

It is a characteristic of a product or system, whose interfaces are completely understood, to work with other products or systems, at present or future, in either implementation or access, without any restrictions.





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## **Open Charge Alliance (OCA)**

OCA is a global consortium of public and private electric vehicle (EV) infrastructure leaders that have come together to promote open standards. They provide powerful, open and interoperable communication protocols for the EV charging infrastructure. Protocols which support all the functionality needed by today's advanced charge management systems.

## Municipality

A town or district that has local government.

#### Range anxiety

Worry on the part of a person driving an electric car that the battery will run out of power before the destination or a suitable charging point is reached.

#### Regenerative braking

In a battery-powered electric vehicle, regenerative braking (also called regen) is the conversion of the vehicle's kinetic energy into chemical energy stored in the battery, where it can be used later to drive the vehicle.

## **Smart logistics**

Logistics can be defined as efficient and cost-effective managerial decisions related to the design, planning and control of the supply chain processes. Smart Logistics approaches this in a smart way, which means that planning and scheduling, ICT infrastructure, people and governmental policymaking need to be efficiently and effectively aligned. Smart Logistics equals 3P+I (i.e. Planning, People, Policy and





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Infrastructure), and is the synchronized interplay of these four key domains.

# **Traffic Congestion**

It is a condition on transport networks that occurs as use increases, and is characterized by slower speeds, longer trip times, and increased vehicular queueing.

## **Tesla Supercharger network**

It is a system of 480-volt DC fast-charging stations built by American vehicle manufacturer Tesla Inc. to allow longer journeys for their all-electric manufactured vehicles (Model S, 3 and X), through quick charging of the vehicle's battery packs.

# **Total Cost of Ownership (TCO)**

TCO is a financial estimate intended to help buyers and owners determine the direct and indirect costs of a product or system. It is a management accounting concept that can be used in full cost accounting or even ecological economics where it includes social costs.



