



## Internet of things and services

### A new development affecting many people's everyday lives

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In the near future, more and more devices and systems will be capable of sending and receiving data automatically via the internet. This will give rise to completely new services, which will change people's everyday lives. When referring to this development, we speak of the "internet of things and services." Today, we can only guess what this new technology will mean, just as we could only guess what the worldwide web would mean when it was launched, or how cellphones would change our lives when they began to be used en masse in the 1990s. In just a few years from now, it is expected that countless billions of devices and systems will be able to exchange data independently. Elevators and air-conditioning systems, for example, will communicate via the web with their maintenance centers, which will then coordinate repairs. Cars will communicate with traffic guidance systems to provide an up-to-the-minute overview of the traffic situation, and containers will be able to transmit their position in real time to a logistics center, which will then automatically direct a truck to the pick-up point and make warehouse space available. When talking about this increasingly intense link between physical and computational elements, experts speak about "cyber-physical systems," or CPS. By contrast, the term "machine to machine," or M2M, is used to refer to the wireless interconnection of devices.

Bosch has already come up with some initial practical applications in connection with the internet of things and services. At the company's Homburg plant, crates are equipped with RFID transmitters, allowing materials flows in production to be tracked in real time. And as a subsequent development, it is planned that products will automatically transmit their position to the plant's logistics center. In Singapore, Bosch is currently setting up a complete e-mobility system. It will direct drivers to the nearest vacant charge spot and take care of billing procedures with the utility company. But this software platform can do much more. Car rental companies, park garage operators, and retailers can also use this platform,

which has deliberately been designed to allow competing companies to use it. The example of Singapore shows how completely new business models can emerge for the most diverse market players.