SmartCityCase

作業要求：Study 一個國外智慧城市的例子

題目：Vehicle2Vrid

網址：<https://amsterdamsmartcity.com/projects/vehicle2grid>

**Five partners established two well performing Vehicle to Home installations and did lots of research on potential**

Vehicle-to-grid (V2G) technology enables electric cars to be used as (temporary) batteries, for example to power households

* **What is the goal of the project?**

Vehicle to Grid, a concept developed to use electrical cars as back-up power during outages, also provides solutions for storage of renewable electricity in the Netherlands. 一個在電力中斷時使用電動汽車作為備用電源的概念，也為荷蘭的可再生電力儲存提供了解決方案。

As we are stepping away from coal and gas, the share of renewable electricity from sun and wind is growing. But demand and supply of this energy does not always match. By storing this energy it becomes available for later use. And that is exactly what Vehicle to Grid does: it uses the car as a battery on wheels.

* **What is the result of the project?**

In this project, running from 2014-2017, 2 well working Vehicle 2 Home installations were installed at peoples’ homes, right at their driveway.

Furthermore, research was done to investigate which business models (Vehicle to Home, Vehicle to Office and Vehicle to Community) have the most potential. For Vehicle to Community several value models were researched. We clearly saw that the Green Electricity Club model, including gamification elements, is most attractive. Right now, Vehicle to Office seems really promising. To allow for further upscaling, the project also provided an overview of regulatory barriers to RVO.

* **Who initiated the project and which organizations are involved?**

Partners cooperating in this projet: Engie, Alliander, Mitsubishi Motors, Amsterdam Smart City and Amsterdam University of Applied Sciences. RVO provided a subsidy via TKI Switch 2 Smart Grids.

* **What is the next step?**

Already many other Vehicle to Grid projects are emerging such as Seev4City, including demonstrations at the Amsterdam Arena and Borneo Eiland and City-zen installing Vehicle to Office and public charging poles in Amsterdam New-West. Engie and Mitsubishi installed the first Vehicle 2 Office installation in Zaanstad.

* **What can other cities learn from your project?**

There is a clear view on the current (2017-2018) state of the art, shared in a long read and several video's. (see below). To get Vehicle to Grid to the next level, it is important that projects and cities keep the conversation going and work together towards standardization and uptake.