Elektrische infrastructuur als een kans

Hoe kan het Nederlandse automotive ecosysteem de kans rondom de elektrische infrastructuur optimaal benutten

Opleiding:	Fontys Hogeschool Bedrijfsmanagement, Educatie en Techniek Automotive Management in het kader van afstuderen.
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Datum:	15 Juni 2020
Plaats van uitgaven:	Kaatsheuvel

Geschreven in het kader van BMKB/Automotive management afstuderen

Management summary

In the next couple years there will be four big chances for the Dutch automotive industry, the construction of EV infrastructure, the provision of fleet services, mobility as a service and the development of new energy sources. For ACE it will be important to know how they need to prepare their partners for the upcoming opportunities. However, every opportunity for the Dutch automotive industry requires its own approach. This report provides more insight about the opportunities regarding to the construction of the EV infrastructure.

Around 11.5 million vehicles were driving on the Dutch roads these days, approximately 270,000 of these vehicles were (semi) electric. In 2030, which is an important benchmark for the Netherlands based on the environmental agreements made, more than 1.9 million passenger cars and 200,000 trucks need to be electrified. These electric vehicles all need to be supplied with electricity; this huge demand of electricity requires a good EV-infrastructure. The demand of charging points in this Dutch EV-infrastructure is estimated at 1.9 million. The construction of this enormous infrastructure cannot be done by one party and good cooperation is desirable for an efficient roll-out of the EV infrastructure. The stakeholders from the roll-out of the EV infrastructure are the national government, the local government, the universities of applied sciences, the private automotive companies, the corporate automotive companies and the energy providers. These parties will each provide added value in the construction of the EV infrastructure in their own way, in order to jointly ensure that CO2 emissions will be reduced and to meet the demand from electric cars. Figure 1 shows the added value each stakeholder provides to achieve the common value proposition.

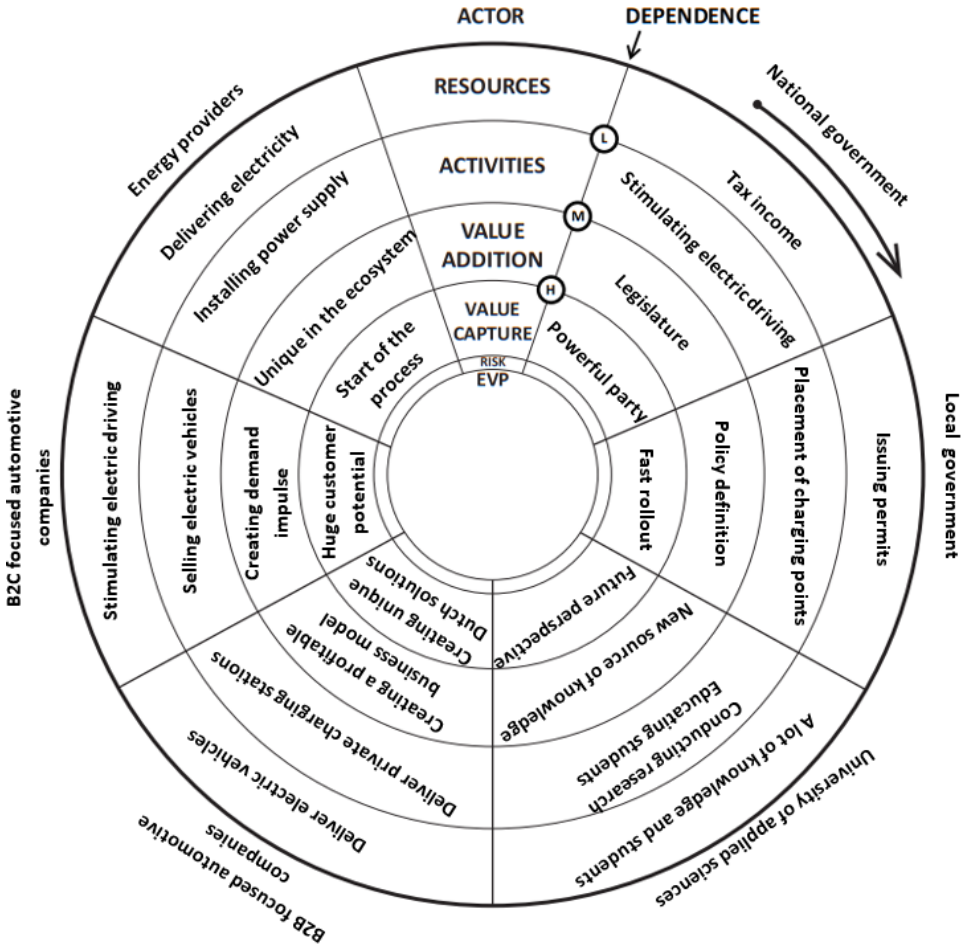

Figure 1; The strengths of the stakeholders

The strengths of each stakeholder bring with it a number of opportunities to roll out the intended 1.9 million charging stations in 2030 more easily. The first major opportunity for the created ecosystem is one focused on the colleges. This socially innovative opportunity is based on the fact that there are many complex issues at companies where universities of applied sciences can play an important role in answering. However, these issues require the

knowledge of more than one study program to enable a complete answer. In order to easily combine the knowledge of different study programs, universities of applied sciences have an opportunity to develop a central location where companies can submit their issues. In this way, the various study programs can easily find good issues and combine their knowledge to help the business community.

The second major opportunity for the Dutch automotive industry arises from a technological aspect, because this opportunity has to do with alternative charging options. An opportunity where electricity is provided in the vehicles in a different way. The alternative charging of vehicles can have the advantages that it is faster or easier, such as wireless charging via an induction technique. Alternative loading options such as solar loading can also ensure that vehicles have a greater range, which means that the ability to develop will be broadened. The development of alternative charging options requires good cooperation between energy providers, companies and universities of applied sciences, but it certainly offers an important opportunity for the Netherlands.

The last major opportunity for the Dutch automotive industry with regard to electric charging is an ICT opportunity. This opportunity, which has to do with the efficient use of the available electricity, requires cooperation between ICT knowledge from the universities of applied sciences and the energy providers. Together, these parties will work towards a smart charging platform where the electric car could be charged according to the customer's needs and when the electricity network permits this. This will relieve the burden on the power grid at peak times and thus reduce the pressure on the energy providers.

ACE can play an important role in giving the various opportunities a greater chance of success. ACE's strengths lie in connecting different parties and this can be used to make the most of the opportunities regarding the construction of the EV infrastructure. For example, it is important for ACE to build links with the various stakeholders of the ecosystem so that they can play an important role in creating partnerships. Because many opportunities from the construction of the EV infrastructure have to do with knowledge and product development, ACE and its research team can play a second important role in the construction of the EV infrastructure. This research team could help with the research that needs to be done and by training modules in the TALCOM project, train current employees in the automotive industry to provide them with the required knowledge.