

The first workshop “Differences in worldwide regulations for SEV: problems and options for improvements” (Focus L7) was held in Rüsselsheim (Germany) on December 1st, 2016 at the Opel Training Centre. Experts from OEM and research institutions from Germany, Switzerland, Belgium, United Kingdom and South Korea joined the Workshop. Topics presented and discussed at the Workshop were:

- EU regulations relevant for small 4-wheeled road vehicles
- RAK e - concept presentation from Opel
- Kyburz - company and concept presentation
- Twike - company and concept presentation
- Safety aspects of SEV
- Homologation of L7 in South Korea

Participants discussed and exchanged knowledge in a workshop session on the main difficulties in homologation and options for improvement. The second workshop “Market Conditions and Mobility Concepts” took place in Brussels, Belgium, on September 18th, 2017 at the German Aerospace Centre (DLR) Brussels Office. The main topic of the workshop was the exchange on common interests and future activities of SEV lobby organisations and key stakeholders.

The third workshop “Accelerating SEV uptake, is present diversification in regulatory requirements in different markets a positive attribute or is harmonisation required?” was held in Rotterdam, The Netherlands, on November 20th, 2017. The workshop focused on vehicle manufacturers from six European countries and one from the United States. Topics were regulatory framework, safety and policy activities with identification of needs for action. Amongst the main conclusions, especially on ultra-lightweight vehicles, were:

- The regulation was the primary focus as well as the in-use phase.
- There was consensus that there is limited consolidation in this area, which is detrimental.
- Attendees are looking for support to understand how the regulatory landscape will develop.
- There is a requirement for a comprehensive assessment of the regulatory landscape.

ROUND TABLE

An international Round Table was held at the Micromobility Expo in May 2019 in Hannover (Germany) with the participation of Task 32. The aim was to share best practices from different countries and talk about challenges within each country. Sharing schemes were seen as a viable option for passenger transport. For commercial transport, opportunities were seen especially in postal (newspaper) delivery because the deployment of SEVs can cut down overall costs in comparison to e.g. vans.



Figure 1 Round Table at the Micromobility Expo in Hanover, 2nd May 2019

INTERNATIONAL SURVEY

From March to October 2018 a survey combining interviews and an online questionnaire were conducted, acquiring qualitative and quantitative data about the following main topics:

- Knowledge about SEVs
- Target Groups and Usage Concepts
- Obstacles and Chances

The survey collects assessments of international experts from municipalities, research institutes, consultants, associations and manufacturers. We held 32 interviews and received answers from a total of 90 participants from Asia, USA and Europe in the online questionnaire. Taking into account the barriers to market acceptance, the lack of a dedicated transport infrastructure is the most critical aspect. An appeal can only be made by measures such as separate lanes or access to restricted traffic zones in order to create an advantage over cars. Furthermore, the lack of knowledge about SEVs within the urban population is a major factor to overcome and may be a result of the small variety of models to choose from, when compared to cars. Another important aspect is safety, as the requirements for type approval are low and no crash tests are required.

Overall, there are a number of hurdles that stand in the way of a wider market acceptance. However, they indicate that there are measures to foster SEVs in municipalities especially with the help of public bodies. Therefore, charging and transport infrastructure including parking management are seen as the most effective ways to achieve good results. In addition to incentives, however, restrictions on the use of larger vehicles must also be created (see Figure 2). Ultimately, only a combination of various measures leads to a promising outcome.

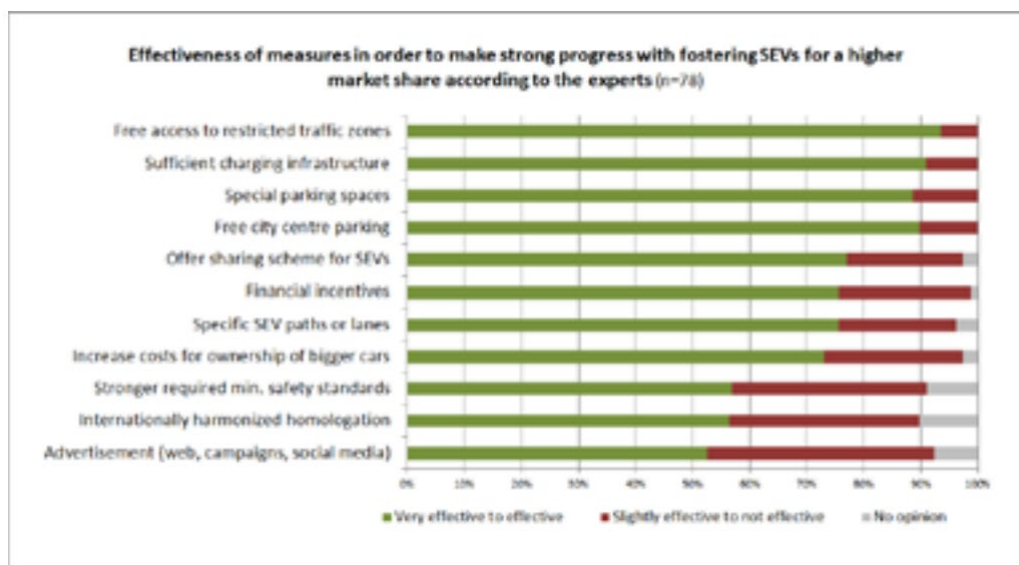


Figure 2 Measures to foster SEV, Online survey

DISSEMINATION ACTIVITIES

Journal Paper

Ewert, A., M. Brost and S. Schmid (2020): Framework Conditions and Potential Measures for Small Electric Vehicles on a Municipal Level. World Electric Vehicle Journal, 11 (1). Multidisciplinary Digital Publishing Institute (MDPI). ISSN 2032- 6653

Presentation & Conference Paper

Ewert, A., M. Brost and S. Schmid (2019): Fostering small electric vehicles on a municipal level, 32nd Electric Vehicle Symposium (EVS32), Lyon, France, May 19- 22, 2019.

This contribution was awarded best paper in the category dialogue paper out of 224 submitted papers.

Presentation

Ewert, A. (2018): Prospects for Small Electric Vehicles (SEVs) in the Transition of Urban Mobility Concepts, AEC 2018 - Avere E-Mobility Conference, Brussels, Belgium, October 17-18, 2018.

Presentation

Davies, H., L. Vinckx, S. Gloger, M. Brost and C. Bastien (2018): Challenges and Opportunities for Improving the Safety of Occupants in Small Electric Vehicles (SEVs), Low Carbon Vehicle 2018, Millbrook, United Kingdom, 12-13 September, 2018.

Presentation & Conference Paper

Schmid, S., M. Brost, U. Muntwyler und O. Lim (2016): "Small Electric Vehicles" – A new Taskforce by IEA Hybrid & Electric Vehicle TCP, 1st World Light Electric Vehicle Summit, Barcelona, Spain, September, 2016.

NEXT STEPS

Currently an edited book is prepared with authors from science, industry, public institutions and similar. The book aims for a comprehensive international view on chances and obstacles for SEVs as well as new research and developments in the area. Topics comprise an interdisciplinary view on the subject in the areas of:

- Policy and regulations
- Environmental effects and impact studies
- Case studies and applications
- Vehicle concepts and technological aspects