EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR MOBILITY AND TRANSPORT

Directorate B - Investment, Innovative & Sustainable Transport
B4 - Sustainable & Intelligent Transport

Sustainable Transport Forum
sub-group on governance and standards for communication exchange in the electromobility ecosystem

Working Programme 2022

1. Activities

- **Activity 2: Development of a governance structure and implementation strategy for the operation of a PKI.**

  The aim of this activity is to reach a consensus between the members of the sub-group on the choice of a governance framework and Public Key Architecture (PKI) architecture for vehicle-to-grid communication, defining its ownership model as well as the roles and responsibilities (i.e., market rules) of every stakeholder.

  This activity will be developed considering the conclusions and recommendations gathered in *Activity 1 - Mapping of the current discussion concerning standards and protocols for communication exchange in the electromobility ecosystem*. To this respect, the members of the sub-group shall elaborate the characteristics[1] of the existing projects current under development by the industry for electric vehicle charging Public Key Infrastructure (PKI) and their specific features, such as Plug and Change (PnC).

  As part of this activity, the members shall conclude on the need to adopt the standard ISO 15118 as the preferred EU option for the communication between the EV and the CP as part of a PKI governance framework. In the event that ISO 15118 would not be the preferred option, the sub-group shall equally define an alternative solution explaining its architecture, scalability, interoperability and adaptability. In the case that members are not capable of agreeing in one single PKI model under a common architecture and governance framework for the EU, relevant competing projects and corresponding members shall define the necessary interoperability and market requirements to cooperate and avoid the disruption, segmentation and loss of confidence of the EU electric vehicle market.

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[1] All necessary technical elements shall be presented and shared in order to allow an accurate and transparent assessment by other members of the sub-group and the Commission. Relevant confidentiality principles apply in line with the Rules of Procedure (RoP) of the sub-group, particularly where it is deemed that disclosure of a document would undermine the protection of a public or private interest as defined in Article 4 of Regulation (EU) 1049/2001.

➔ **Deliverable**: The sub-group shall produce a document[2] concluding and recommending to the Commission the preferred option for a governance framework and PKI architecture under the standard ISO 15118 or other alternative solution, in line with the preliminary details gather in Activity 1. In particular, the following aspects shall be specifically addressed:

- The document shall describe the possible governance and architectural options proposed by the members based on current industry projects under development. Members shall detail the technical characteristics of each option, finding an optimum solution. The document shall gather a recommendation on the preferred solution that duly consider the needs of the different market players and feature quantifiable arguments, why to be chosen.

- The document shall outline an implementation scheme for the proposed PKI architecture, including the timeline for its execution and entry into operation.

- The document shall elaborate the future ownership model of the PKI and its associated costs (e.g., operating costs, fees, etc.).

- The document shall address and conclude on vehicle and infrastructure hardware readiness, standard(s) and compliance dates in relation to communication exchange and PKI functioning, building on the conclusions and recommendations of Activity 1. Likewise, the document shall address any relevant gap and limitations that could preclude an open and fair e-mobility ecosystem[3].

- The document shall elaborate the added value of an electric vehicle charging Public Key Infrastructure (PKI) and their specific features, such as Plug and Change (PnC), from a user perspective. Members shall reflect the impact on payment options, including e-roaming, smart and bidirectional charging, dynamic tariffs, price transparency and infrastructure quality.

- The document shall identify specific regulatory (policy) needs in support of the preferred governance and PKI architecture model. Members shall identify and recommended concrete actions, considering both vehicle and infrastructure needs, for the relevant legal instrument(s) (e.g., AFIR, vehicle type approval, etc.).

➔ **Timeline**: 2 December 2022

2. Working Programme 2022 as part of the Sub-group's objectives.

The activity and tasks included under the Working Programme 2022 correspond to the fulfilling of the 3-year mission stated in the Terms of Reference (ToR) for the sub-group.

- **1st year (2021):** Mapping of the discussion concerning standards and protocols for communication exchange in the electromobility ecosystem.

- **2nd year (2022):** Continuation of the activities for the description and conclusion of a governance structure and implementation strategy for the operation of a PKI in Europe. Identification, definition and recommendation of the necessary

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[2] The length will be determined by the Commission and the members during the development of the activity. The final deliverable shall provide a clear overview for a non-technical audience. Concrete technical elements shall be gathered and reflected in annexes to the main document as necessary.

[3] Specific gaps, limitations and risks will be detailed and elaborated by the members in the document.

elements to assist the Commission in the preparation of secondary legislation under the new AFID proposal supporting the preferred governance framework.

- **3rd year (2023):** Conclusion of the required elements assisting the Commission with the preparation of secondary legislation. Discussion and development of any other action identified by the sub-group to ensure the continuity of the PKI system over the time.