Factors Affecting the Market Adoption and Evolution of PoDiUM

Definition of Criteria and Sub-Criteria

In the following table, the list of Criteria and Sub-Criteria used to prioritize the factors that will affect the market adoption and evolution of PoDiUM are shown along with the definition/description.

(sub-)Criterion	Explanation
Cr1: Features and Mechanisms for enhanced system performance/capabilities	Aspects associated with the performance/quality of service of PoDiUM such as low latency, reliability etc.
SCr1.1: Near real-time communications (Low latency)	<10ms latency between the transmission of a message from a transmitter and the successful reception of the message at the receiver
SCr1.2: Reliable Communications	Ensure that data connectivity is constantly available and data are properly transferredi.e., transmitted complete and uncorrupted to the intended recipient
SCr1.3: Support heterogeneity of road users and comm channels	The ability of the system to support different kinds of road users (e.g. Connected and Autonomous Vehicles (CAVs) and Vulnerable Road Users (VRUs)) and their respective communication channels
SCr1.4: Trustworthiness of messages (authenticity and integrity)	Ensure that a message has not been tampered or altered by malicious actions and that it comes from a trusted source. Take into account the reliability of the different data sources (Data truthfulness).
Cr2: CCAM Service Management Features	Features of the system that manage the operation of Connected Vehicles (CVs), CAVs and other connected road users, especially VRUs.
SCr2.1: Optimized traffic management	It indicates the optimal traffic management strategies leading to optimized operation, lower congestion, environmental impact etc.
SCr2.2: RU detection and protection	RUs will be detected through Artificial Intelligence devices (cameras) and, potentially, a RU APP. Affected RUs and vehicles are informed in order to avoid risks.
SCr2.3: Enhanced situational awareness	Ability to identify the surrounding environment and/or "objects" based on the cooperation

	between systems, vehicles and road users as well as on a common time-space reference
SCr2.4: Dynamic and cooperative risk assessment	Innovative system that provides accurate and real-time information about the risk level based on the exchange of the needed information between systems, CVs, CAVs and VRUs.
SCr2.5: Dynamic and cooperative planner	A system capable of solving in real-time sophisticated traffic situations with blockages and occlusions based on the exchange of the needed information between systems, CVs, CAVs and VRUs.
Cr3: Business and Strategy	Aspects related to the business perspectives such as new market opportunities, cost and new business model
SCr3.1: Cost	Induced Cost related to hardware, software, installation and maintenance
SCr3.2: Compliance to Standards and Specifications	The system must follow requirements imposed by the standardization bodies and fora. In addition, the system, meets the listed acceptance criteria. It also includes compatibility of Equipment with legacy systems.
SCr3.3: New business models	New players entering the market andtraditional roles will be changed. Advanced applications/services will emerge changing the current revenue streams
SCr3.4: New market opportunities	New value propositions. Advanced Connected, Cooperative and Automated Mobility (CCAM) solutions can be a means for market growth
Cr4: Acceptance / Flexibility	It refers to the overall usability of the system and incorporates many user-related concerns
SCr4.1: Security and Privacy	Share sensitive information of connected vehicles in a secure way, while ensuring compliance with data protection regulations.
SCr4.2: Regulatory issues	Regulation issues include information exchange, traffic management policies, emergency services as well as directives setting out minimum safety requirements for tunnels on TEN-T
SCr4.3: Scalability	Ability of the system to continue functioning properly when changed in size or volume