

**SAFESPOT INTEGRATED PROJECT - IST-4-026963-IP****DELIVERABLE****SP5 – COSSIB****Cooperative Safety Systems Infrastructure Based****Definition of use case and user requirements**

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## Executive Summary

The CoSSIB sub-project (SP5) of the SAFESPOT project aims to specify and develop a set of co-operative system applications based on the support of roadside equipment with infrastructure-based sensing and processing.

This deliverable presents the list of most important use cases where the infrastructure is a key element for improving road safety in cooperative applications. It also presents user needs and high-level functional and context requirements directly derived from the use cases. Use cases presented in this document are issued from accident data analysis and it then provides the relevant information for the specification of CoSSIB applications from the user of the system point of view.

Non-functional requirements and more detailed functional requirements are specified in the deliverables D5.2.2 & D5.2.3 (i.e. “Common architecture and communication network” and “Area specific needs and requirements and application scenario”). SP7 provides a consolidated version of all requirements issued from different SPs.

The guideline adopted by the working group to define the use cases, user needs and requirements is as follows:

- The deliverable D5.2.4 (i.e. “Accident data analysis and impact of each function”) analysis of the accident data in order to identify a set of high safety-risk scenarios, i.e. accident black spots and safety-critical circumstances. This takes into consideration different road users (trucks, cars, motorbikes, bicycles and pedestrians), and conditions that may be specific for particular parts of Europe (risk of snow, ice, fog, etc). The aim is to describe in a clear way the combination of factors which lead to safety risk, and a classification in terms of priority of the applications and use cases.
- Then, on the basis of statistical analysis of accident data and expert experience the user needs and identification of the most important use cases in the present document has been defined;
- It also provides high level functional and context requirements related to use cases and user needs.

The feasibility of applications issued from the use cases presented in this document will be studied in cooperation with innovative sensors subprojects of SAFESPOT: SP2 (“INFRASENS”), SP3 (“SINTECH”) and SP1 (“SAFEPROBE”). Convergence with vehicles to vehicles applications will also be studied in cooperation with the SP4 subproject (SCOVA).

The results of this task allow providing the first step of the reference framework, from a user point of view, in order to ensure the development of the specifications in the SP5 WP5.3.

The document is structured in a form of four chapters and annexes:

- Chapter 1 introduces the document, its role and objectives;
- Chapter 2 describes the actors and entities used in the definition of use cases;
- Chapter 3 shows the most relevant SAFESPOT use cases classified in five groups: obstacles, misjudgement, rule violation, critical environment conditions and safety improving driver assistance;
- Chapters 4 demonstrates the elementary user needs and requirements based on the CONVERGE methodology [3] for the Development and Assessment of Intelligent Transport System Architectures.