

SAFESPOT INTEGRATED PROJECT - IST-4-026963-IP**DELIVERABLE 4.3.2****SP4 – SCOVA – Cooperative Systems Applications
Vehicle Based****SP4 Applications Functional Specifications**

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Authors (per company, if more than one company provide it together)		Giulio Vivo - CRF	
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EXECUTIVE SUMMARY

This document describes the reference model adopted to sustain the cooperative approach that is at the basis of the SCOVA applications, together with the content of the functional specification of the SAFESPOT vehicle based applications themselves.

During the production of these specifications a significant horizontal activity consisted in the cross checks, common analyses and harmonization activities with other subprojects of SAFESPOT (especially with the technical oriented ones, i.e. SP1-SAFEPROBE, SP3-SINTECH, SP5-COSSIB and SP7-SCORE). An additional External Message Application was added to the SP4 set of application consequently to the harmonization work.

The SCOVA functional specifications have been produced by means of an ad-hoc methodology, specifically developed within this work in order to make these specifications directly consequent – and consistent – with the collection of the User Needs and the System Requirements, performed in the previous steps of the project. Adopted methodology is compliant with the general architecture development process followed to produce the European ITS Framework Architecture (FRAME).

Following this procedure, which is described in depth in the first part of the document, the System Requirements are firstly grouped to form the main system functionalities. These “main functional blocks” are then used as the basis for the description of the SP4 applications through the UML (Unified Modelling Language) Data Flow Diagrams (DFD), with the purpose to show what functionalities each application makes use of and how these functionalities are linked to each other, within the single applications, in terms of data exchange.

The result of the work is represented by the diagrams for the various applications Use Cases; four diagrams are produced for every Use Case (UC), in compliance with the reference model of the SAFESPOT applications, including the four applicative blocks named Application Manager (AM), Driver Assistance Application (DAA), Message Manager (MM) and Cooperative Support Application (CSA). As a result of the performed analysis, integrated and global schemes of the Application Manager and Message Manager applicative blocks have been synthesised. Due to the complexity and size of the performed activities (more than 30 Use Cases, generating each one a relevant set of documents) the tables and diagrams composing the SCOVA functional specifications are reported as a separate annex.

Besides the consistency with the FRAME methodology, this approach allowed to provide a structured description of the vehicle platform use cases, dealing with the system as a whole and creating a set of system functions that are shared between the SP4 applications, thus building the basis for an integrated system development.