

# SAFESPOT INTEGRATED PROJECT - IST-4-026963-IP

## DELIVERABLE



### SP2 INFRASENS–SAFESPOT Infrastructure Platform

Final Report: Implementation and prototypes for infrastructure-based components			
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## EXECUTIVE SUMMARY

This report presents the prototype Infrastructure Platform developed and implemented by INFRASENS as part of the SAFESPOT cooperative system. It describes the hardware and the software modules making up the platform, as well as the physical and functional architectures providing the underlying framework.

The report begins by providing a general introduction, describing the main characteristics of the Platform and highlighting the most innovative aspects. This is followed by detailed technical information of interest to those wishing to set up any of the components of the Platform, e.g. in the SAFESPOT Test Sites.

Descriptions are provided for:

- the physical equipment which needs to be installed on the roadside, including the roadside unit (RSU) and the sensing systems.
- the Data Receiver, which is the common interface to the data sources.
- the SW modules which are part of the Data Fusion process.

Among the main achievements underlined in the report are:

- the integration within the Platform of the common components developed by the SINTECH subproject for both the Infrastructure and Vehicle Platforms (i.e. the LDM and the routing software for the Ad Hoc Vehicle Network – referred to as the VANET);
- the 'Data Fusion logic which is the 'core' of the Platform. This undertakes the complex data fusion processes which fall into two categories: the Object Refinement and the Situation Refinement, each consisting of a number of separate modules. It can deal with data of many different types and relevant for road safety – dangerous vehicle manoeuvres, slippery roads, fog and icy weather conditions, the presence of obstacles on the roadway, etc.
- the open architecture which makes it possible to interface a wide range of sensing systems and also other data sources, including SAFESPOT vehicles and external traffic systems, with the Data Fusion block.

The Platform is able, as a result of the fusion process, to made available all the necessary information for the COoSSIB applications.

Details of the planned implementations of SP2 components in the SAFESPOT Test Sites can be found in the Annex.