

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



## Annex1 – High Level User Needs

<b>SubProject No.</b>	<b>SP7</b>	<b>SubProject Title</b>	<b>SCORE</b>
<b>Workpackage No.</b>	<b>WP2</b>	<b>Workpackage Title</b>	<b>Requirements Convergence</b>
<b>Task No.</b>	<b>-</b>	<b>Task Title</b>	<b>-</b>
<b>Authors (per company, if more than one company provide it together)</b>	<b>Abdel Kader Mokaddem, Renault et al.</b>		
<b>Status (F: final; D: draft; RD: revised draft):</b>	<b>F</b>		
<b>Version No:</b>	<b>1.9</b>		
<b>File Name:</b>	<b>SF_D7.2.1_ Annex1.doc</b>		
<b>Issue Date:</b>	<b>8/5/2010</b>		
<b>Project start date and duration</b>	<b>01 February 2006, 48 Months</b>		



1.01.5	The Safespot Architecture shall be technology independent.								
1.01.6	The Safespot Architecture shall facilitate the creation of modular and flexible designs, so that manufacturers can produce their own versions of equipment.								
1.01.7	The Safespot Architecture shall allow equipment performing the same service to be provided by various suppliers.								
1.01.8.01	The Safespot Architecture shall allow the same function to be provided by various function providers.								
1.01.10	The Safespot Architecture shall support interaction between services provided by private and public bodies.								
1.01.11	The Safespot Architecture shall allow current organisational responsibilities and legal liabilities to be retained.								
1.01.12	The Safespot Architecture shall, where possible, describe migration path(s) that can be followed to enable architectures defined for existing traffic and transport management, as well as other ITS control and information systems, to become compliant.								
1.01.13	The Safespot Architecture shall allow the use of existing and emerging communication infrastructures, or describe possible migration paths to explain how they can become compliant.								
1.02.01	The Safespot Architecture shall provide a high level description of the message sets and data communication protocols to be used in data transfers.			y	y	y	y		
1.02.02	The Safespot Architecture shall provide a high level description of data stores and data flows, and shall have a single data dictionary.			y	y		y		
1.02.03	Systems that conform to the Safespot Architecture shall exchange information in a manner that permits a given geographic location to be understood by all parties.			y	y		y		
1.02.04	Systems that conform to the Safespot Architecture shall exchange information in a manner that permits road and traffic conditions to be understood by all parties.	y	y	y	y		y	y	
1.02.05	The Safespot Architecture shall provide a high level description of the message sets used to exchange data with external interfaces.			y	y	y	y	y	
1.02.06	The Safespot Architecture shall support the use of seamless communications. This shall mean that the use of different communication networks is transparent i.e. switches are made without the intervention of the final user.			y	y		y	y	
1.03.01	Systems that conform to the Safespot Architecture shall be able to provide facilities that accommodate the needs of disabled and elderly persons, when relevant.	y	y		y	y			
1.03.02	Systems that conform to the Safespot Architecture shall be able to provide facilities to enable data about the travel network to be entered and updated.				y	y	y	y	
1.03.03	The Safespot Architecture shall not constrain its functionality to be implemented in a single topographical domain, be it urban, inter-urban or rural.				y	y	y		
1.03.04	The Safespot Architecture shall not constrain its functionality to be implemented by specific local organisations.				y	y	y		

1.03.05	The Safespot Architecture shall not constrain user interfaces to be of a particular type, or from a particular manufacturer.	y	y	y	y		y	y	
1.03.06	The Safespot Architecture shall not require that each of its user interfaces must operate on a specific item of equipment, unless it is for safety reasons.							y	
1.04.01	The Safespot Architecture shall require all systems developed from it to comply with current European and National laws concerning data security, user anonymity and the protection of individual privacy.	y	y	y	y	y	y	y	
1.04.02	The Safespot Architecture shall require all systems developed from it to comply with the traffic laws and regulations that apply in Europe.	y	y		y	y	y	y	
1.04.03	The Safespot Architecture shall conform to relevant MoU, European directives and guidelines, and European (de facto-) standards.			y	y		y		
1.05.01	The Safespot Architecture shall provide functionality such that the quality of information content is continuous and consistent, both in time and space (i.e. as the traveller moves).	y	y	y	y	y	y		
1.05.02	The Safespot Architecture shall provide functionality that can accommodate environmental stress and infrastructure failures.	y	y	y	y	y	y		
1.06.01	Whenever possible and practical, the Safespot Architecture shall use the same data as input to several parts of its functionality.				y	y	y		
1.06.02	The Safespot Architecture shall avoid the need for unnecessary multiple data sources or redundant data management.	y	y	y	y	y	y		
1.06.03	The Safespot Architecture shall require all systems developed from it to be able to use the most cost-effective means of communication available.			y			y	y	
1.06.04.01	The Safespot Architecture should require all systems developed from it to enable operating costs to be reduced whenever possible, when compared with the systems that they replace.								
1.07.01	The Safespot Architecture shall allow systems developed from it to have an evolutionary development strategy that enables their continuous upgrading.	y	y	y	y	y	y	y	
1.07.02	The Safespot Architecture shall provide services that are not constrained to operate in a particular geographic region.			y	y	y	y	y	
1.08.01	The Safespot Architecture shall require all systems developed from it to be capable of being repaired.							y	
1.08.02	The Safespot Architecture shall require all systems developed from it to be easily maintainable with minimum disturbance.	y	y	y	y	y	y	y	
1.09.01	The Safespot Architecture shall enable all information systems developed from it to provide data with a stated accuracy, either as additional information or as part of the documentation, at all times.	y	y	y	y		y	y	
1.09.02	The Safespot Architecture shall require all systems developed from it to check all input data for validity, whenever possible, and to report failures.			y	y		y		
1.09.03	The Safespot Architecture shall enable all systems developed from it to check data values by comparing different sources, when available, so as to ensure high-accuracy and completeness.			y	y		y		

1.09.04	The Safespot Architecture shall require all systems developed from it to manage local/regional/national databases in a consistent way.			y	y		y		
1.10.01	The Safespot Architecture shall allow all systems developed from it to be able to detect errors in operation, when higher integrity is required, e.g. for financial, security or safety reasons.							y	
1.10.02	Systems that conform to the Safespot Architecture shall be able to monitor each safety-related component (including software), warn the user in case of problems, and disable it, or reduce it to a safe state.	y	y					y	
1.10.04	The Safespot Architecture shall require all systems developed from it to be reliable with respect to the legal and/or quality requirements necessary for each application.	y	y	y	y	y	y	y	
1.10.05	The Safespot Architecture shall require all systems developed from it to be able to operate in all potential climatic and traffic conditions.	y	y	y	y	y	y	y	
1.11.01	The Safespot Architecture shall provide functionality that operates in a manner that does not generate a safety hazard for its users.				y	y	y	y	
1.11.02	The Safespot Architecture shall provide functionality that operates in a manner that does not encourage unsafe behaviour.							y	
1.11.03	The Safespot Architecture shall provide functionality that operates in a safe manner during degraded modes of operation.				y	y	y	y	
1.11.04	The Safespot Architecture shall provide functionality that is ultimately under the control of the human operator.				y	y	y	y	
1.12.01	The Safespot Architecture shall require that systems developed from it are capable of surviving accidental and intentional attacks on their integrity.	y	y	y	y	y	y		
1.12.02	The Safespot Architecture shall require systems developed from it to provide protection against unauthorised access.	y	y	y	y	y	y	y	
1.13.01	The Safespot Architecture shall require all systems developed from it to have user interfaces with similar "look and feel" and similar end user assistance.	y	y	y				y	
1.13.02	The Safespot Architecture shall require all systems developed from it to be simple and efficient for travellers to use, and easy to understand.	y	y	y	y	y	y	y	
1.13.03	The Safespot Architecture shall require all interactive systems developed from it to have a user interface syntax that is easy to learn and to remember (especially for users with specific needs).	y	y						
1.13.04	Systems developed from the Safespot Architecture shall produce their output within a time that is sufficient to be useful, and within normal expectations,	y	y					y	
1.13.06	The Safespot Architecture shall ensure that the safety and security of systems developed from it are not compromised by their ease of use.							y	
1.14.01	The Safespot Architecture shall require systems developed from it to accommodate those users with one or more impairments (e.g. of upper/lower limbs/body, stature, coordination or power, vision, hearing, speech, cognition, epilepsy, etc.) where relevant.	y	y	y	y	y	y	y	

1.14.03	The Safespot Architecture shall require systems developed from it to be able to take their input from a variety of alternative devices (e.g. keys, voice, buttons, touch-screen, smart card, etc.) to suit travellers with special needs, where relevant.	y	y						y	
1.14.04	The Safespot Architecture shall require systems developed from it to be able to provide output in a variety of alternative modes (e.g. (enlarged) text, symbols, graphics, speech, tactile, HUD, etc.) to suit travellers with special needs, where relevant.	y	y						y	
1.14.05	The Safespot Architecture shall require systems developed from it to be able to repeat information on request, in particular for those with special needs, where relevant.	y	y						y	
1.14.07	The Safespot Architecture shall require systems developed from it to be able to have adaptable user interfaces that may be customised by the traveller, in particular those with special needs, where relevant.	y	y	y					y	y

## Group2: INFRASTRUCTURE PLANNING AND MAINTENANCE

Activities associated with long term planning, modeling and reporting as well as the maintenance of the infrastructure. These User Needs have links with Groups 6-10.

LIST OF USER NEEDS FROM THE EUROPEAN ITS FRAMEWORK ARCHITECTURE V3.0 Groups 1-10		Private: Drivers, Motorbikers	Commercial: Freight transport (hazardous goods)	Companies using ITS: Road Operators, Info providers	Local Authorities: City/District Transport Agencies	High level: Transport Ministries	Exploitation: Service Providers	Industry: System Developers	Similar Userneeds
ID	Description								
	<b>Group 2. INFRASTRUCTURE PLANNING AND MAINTENANCE</b>								
	<b>Activities associated with long term planning, modelling and reporting as well as the maintenance of the infrastructure. These User Needs have links with Groups 6-10.</b>								
2.1.1.3	The system shall be able to collect traffic data for road network use analysis and prediction calculations.			y	y		y		
2.2.2.1	The system shall be able to receive infrastructure equipment status data remotely.				y		y		
2.2.2.2	The system shall be able to monitor the structural integrity of roads, bridges, tunnels, gantries, etc.				y		y		
2.2.2.3	The system shall be able to support a database of the road network, infrastructure and road-side equipment.				y		y		

### Group3: LAW ENFORCEMENT

Activities associated with the enforcement of traffic laws and regulations, and the collection of evidence. These User Needs have links with Groups 6-10.

LIST OF USER NEEDS FROM THE EUROPEAN ITS FRAMEWORK ARCHITECTURE V3.0 Groups 1-10		Private: <b>Drivers, Motorbikers</b>	Commercial: Freight transport (hazardous goods)	Companies using ITS: <b>Road Operators, Info providers</b>	Local Authorities: City/District Transport Agencies	High level: <b>Transport Ministries</b>	Exploitation: <b>Service Providers</b>	Industry: <b>System Developers</b>	Similar Userneeds
ID	Description								
	<b>Group 3. LAW ENFORCEMENT</b>								
	<b>Activities associated with the enforcement of traffic laws and regulations, and the collection of evidence. These User Needs have links with Groups 6-10.</b>								
3.1.0.4	The system shall not obstruct or slow down traffic in any way, except when it is part of access control.				y		y		
3.1.1.3	The system shall be able to measure the characteristics, e.g. length, weight etc., of a vehicle automatically, whilst the vehicle is in motion ("Weigh in Motion").				y		y	y	9.3.0.2



#### Group4: EMERGENCY SERVICES

This group contains 'May Day' and stolen vehicle management (for any vehicle), the prioritizing of emergency vehicles, and hazardous goods (i.e. goods that need to be tracked) incident management. These User Needs have links with Groups 6-10.

LIST OF USER NEEDS FROM THE EUROPEAN ITS FRAMEWORK ARCHITECTURE V3.0 Groups 1-10		Private: Drivers, Motorbikers	Commercial: Freight transport (hazardous goods)	Companies using ITS: Road Operators, Info providers	Local Authorities: City/District Transport Agencies	High level: Transport Ministries	Exploitation: Service Providers	Industry: System Developers	Similar Userneeds
ID	Description								
<b>Group 4. EMERGENCY SERVICES</b>									
<b>This group contains 'May Day' and stolen vehicle management (for any vehicle), the prioritising of emergency vehicles, and hazardous goods (i.e. goods that need to be tracked)incident management. These User Needs have links with Groups 6-10.</b>									
4.1.0.2	The system shall be able to detect that the vehicle has been involved in an accident, identify its location, and initiate a 'May Day' call automatically.	y	y	y				y	5.3.1.1 8.5.1.2.
4.1.0.3	The system shall be able to identify the vehicle location, and make a 'May Day' call on the command of a vehicle occupant.	y	y	y				y	5.3.1.2 8.5.1.3
4.1.0.6	The system shall be able to provide two-way data and/or voice communications between the vehicle and the emergency control centre.	y	y	y	y		y	y	
4.2.0.3	The system shall provide the identity of each traffic signal at which priority is needed, and the 'timing window' in which priority is to be given.				y		y		
4.2.0.4	The system shall receive an indication from the emergency vehicle of its need to be given priority at each set of traffic signals before its arrival in the immediate vicinity.				y		y		
4.2.0.5	The system shall enable emergency vehicles to pass through the road network without any priority at signalised junctions, e.g. during a return from an incident.				y		y		
4.3.1.4	The system shall be able to provide relevant information to the emergency services on the type of hazardous good(s) involved in an incident.		y		y	y	y		

## Group5: TRAVEL INFORMATION AND GUIDANCE

Activities concerned with the handling of pre-trip and on-trip information, including mode choice and change, and route guidance.

LIST OF USER NEEDS FROM THE EUROPEAN ITS FRAMEWORK ARCHITECTURE V3.0 Groups 1-10		Private: Drivers, Motorbikers	Commercial: Freight transport (hazardous goods)	Companies using ITS: Road Operators, Info providers	Local Authorities: City/District Transport Agencies	High level: Transport Ministries	Exploitation: Service Providers	Industry: System Developers	Similar Userneeds
ID	Description								
	<b>Group 5. TRAVEL INFORMATION AND GUIDANCE</b>								
	<b>Activities concerned with the handling of pre-trip and on-trip information, including mode choice and change, and route guidance.</b>								
5.1.0.1	The system shall provide emergency, or urgent, information to all road users free of charge.	y	y	y	y	y			
5.1.0.2	The system shall be able to require payment for non-emergency, or non-urgent, information.			y			y		
5.1.0.3	The system shall be able to provide accurate, credible, timely, and easy to comprehend traffic and travel information where it may be of benefit to the user.	y	y	y	y	y	y	y	
5.1.1.4	The system shall be able to provide extensive multi-modal trip information, e.g. prices, fares, routes, forecast & current traffic situations, traffic control, demand mgt measures, local warnings, special events, weather conditions, hotels etc.	y	y	y			y		10.1.4.2
5.1.2.3	The system shall be able to provide information to all drivers including route restrictions, travel times, etc.		y	y	y		y		
5.1.2.7	The system shall provide information using graphical representation or text. Graphical form shall include the use of maps as well as text.	y	y	y				y	6.2.3.1
5.1.2.8	The system shall provide information in the native language at the output location, and/or from a user selected choice of other appropriate foreign languages.	y	y	y	y		y		6.2.3.3 10.4.2.2
5.1.2.9	The system shall provide Information Management tools for the operator.			y	y	y	y	y	6.2.2.12
5.1.3.9	The system shall communicate with other information systems using "open" standard protocols.			y	y		y		

5.1.3.10	The system shall provide information for fixed and mobile terminals using "open" standard communication protocols.	y	y	y	y		y	y	6.2.3.4
5.2.2.4	The system shall provide road and traffic safety advice based on current weather and traffic conditions.	y	y	y	y		y		
5.2.2.8	The system shall be able to provide road information according to different geographic scales, e.g. local, regional, national, international.	y	y	y	y		y		
5.2.3.1	The system within the vehicle, or in the centre, shall support various types of presentation to the user, e.g.text, graphics,symbols, speech,etc.	y	y	y				y	6.1.2.7
5.2.3.2	The system shall normally provide messages from a finite set of well defined message texts.			y	y		y		7.2.5.2
5.2.3.3	The system shall provide information in the native language at the output location, and/or from a user selected choice of other appropriate foreign languages, when applicable.	y	y	y	y		y		6.1.2.8 10.4.2.2
5.2.3.4	The system shall provide information using "open" standard communication protocols.			y	y		y	y	6.1.3.10
5.2.3.8	The system shall be able to provide road and traffic information using road-side equipment, e.g. VMS.	y	y	y	y		y	y	
5.2.3.9	The system shall be able to provide in-vehicle road, traffic, route guidance and parking information via locally sited equipment, e.g. beacon.	y	y	y	y		y	y	
5.4.0.3	The system shall know where it is within the road network.	y	y					y	9.5.2.13 10.1.2.1
5.4.1.6	The system shall provide information which is consistent with any other information being presented about the road.	y	y	y	y		y	y	
5.4.2.2	The system shall contain menus which are structured in a logical manner and oriented towards the requirements of the driver (e.g. the most frequently used function shall be the easiest to select).	y	y					y	

**Group6: TRAFFIC, INCIDENTS AND DEMAND MANAGEMENT**

Activities associated with traffic control, incident management and demand management, including monitoring, planning, flow control, exceptions management, speed management, lane and parking management, High Occupancy Vehicle (HOV), road pricing and zoning

LIST OF USER NEEDS FROM THE EUROPEAN ITS FRAMEWORK ARCHITECTURE V3.0 Groups 1-10		Private: <b>Drivers, Motorbikers</b>	Commercial: Freight transport (hazardous goods)	Companies using ITS: <b>Road Operators, Info providers</b>	Local Authorities: City/District Transport Agencies	High level: <b>Transport Ministries</b>	Exploitation: <b>Service Providers</b>	Industry: <b>System Developers</b>	Similar Userneeds
ID	Description								
<b>Group 6. TRAFFIC, INCIDENTS AND DEMAND MANAGEMENT</b>									
<b>Activities associated with traffic control, incident management and demand management, including monitoring, planning, flow control, exceptions management, speed management, lane and parking management, High Occupancy Vehicle (HOV), road pricing and zoning</b>									
6.1.0.2	The system shall be able to implement identified control strategies that conform with specified policy.				y	y	y		
6.1.0.3	The system shall not do anything to reduce road safety.				y	y	y		7.2.0.2
6.1.1.1	The system shall be able to monitor sections of the road network to provide the current traffic conditions (e.g. flows, occupancies, speed and travel times etc.) as real time data.			y	y	y	y		
6.1.1.2	The system shall monitor urban roads and traffic.	y	y		y	y	y		
6.1.1.3	The system shall monitor inter-urban roads and traffic.	y	y		y	y	y		
6.1.1.4	The system shall be able to monitor traffic flow at, and the operation of, the road intersections of the network over which it has the control.			y	y	y	y		
6.1.1.6	The system shall be able to monitor and record weather conditions (wind, fog, rain level, ice, etc.).			y	y	y	y		
6.1.1.8	The system shall be able to measure the range of visibility and detect reductions caused by adverse weather and pollution conditions (but not darkness).	y	y		y		y		8.1.0.1

6.1.2.1	The system shall be able to use consistent historical data to complement real-time data, when necessary.				y	y	y		
6.1.2.4	The system shall be able to analyse road and traffic data to predict possible critical situations.				y	y	y		
6.1.3.2.01	The system shall enable a TCC operator to log all significant events.								
6.1.3.4	The system shall be able to activate control devices (e.g. traffic lights, VMS), either individually or in groups.				y		y		
6.1.4.6	The system shall be able to provide control measures for bridges so that warnings of weather conditions, vehicle restrictions and closure can be provided.				y	y	y		
6.1.4.7	The system shall be able to provide control measures for "tunnel" environments i.e. vehicle restrictions, fire detection, atmospheric pollution and closure.				y	y	y		
6.1.4.9	The system shall be able to provide specific traffic management for exceptional vehicles (e.g. very dangerous cargo, wide loads, etc.).		y		y		y		5.3.2.1 9.5.2.9
6.1.5.1	The system shall be able to provide control measures to protect road maintenance work and workers.				y		y		
6.1.5.2.01	The system shall be able to command drivers to change lanes on multi-lane roads to avoid accidents.								
6.1.7.2	The system shall be able to set variable speed limits on parts of the road network.				y	y	y		3.1.1.2
6.1.7.3	The system shall be able to calculate recommended speed limits for given traffic and weather conditions, and road network characteristics.				y		y		
6.1.7.4	The system shall transmit recommended speed limits to equipped vehicles.				y			y	7.1.7.6 8.2.5.2
6.1.7.6	The system shall be able to support an in-vehicle database of road network data (e.g. speed limits, road hazards, junctions etc.).	y	y	y	y	y		y	7.1.7.4 8.2.5.3
6.1.12.1.01	The system shall be able to control pedestrian and cycle crossings in order to guarantee safe conditions for pedestrian and cycles .				y		y		
6.2.0.1	The system shall detect and respond to various incidents on the road network.	y	y		y	y	y	y	5.3.1 10.1.3.2
6.2.0.2	The system shall not do anything to reduce road safety.				y	y	y		7.1.0.3
6.2.0.3	The system shall not do anything that might aggravate, or cause, an incident.	y	y		y	y	y		
6.2.0.6	The system shall minimise the time between the occurrence of an incident and its detection.	y	y		y	y	y		5.1.0.8
6.2.0.7	The system shall be able to validate that an incident has occurred in order to minimise false alarms.	y	y		y		y	y	
6.2.0.8	The system shall be able to suggest one or more responses for dealing with an incident.				y		y		
6.2.1.1	The system shall be able to locate and identify emergency vehicles on the road network.				y		y		

6.2.2.3	The system shall be able to provide information on each incident to TICs for onward transmission to travellers.	y	y	y	y	y	y		
6.2.4.1	The system shall be able to minimise the consequences of an incident on the road network for those travellers who are not involved.	y	y	y	y	y	y		
6.2.5.1	The system shall be able to detect "non-vehicle" incidents before they can escalate into traffic accidents, e.g. bad weather conditions, objects on the road, ghost drivers, etc.	y	y	y	y		y		
6.2.5.2	The system shall be able to provide local warnings on dangerous sections of the road network.	y	y	y	y	y	y		6.2.3.2
6.2.6.1	The system shall be able to advise the emergency services on any hazardous goods that have been involved in an incident.		y		y		y		5.3.1.3

## Group7: INTELLIGENT VEHICLE SYSTEMS

Functions found within a vehicle, including vision enhancement, longitudinal and lateral collision avoidance, lane keeping, platooning, speed control, driver alertness, 'May Day', etc.

LIST OF USER NEEDS FROM THE EUROPEAN ITS FRAMEWORK ARCHITECTURE V3.0 Groups 1-10		Private: Drivers, Motorbikers	Commercial: Freight transport (hazardous goods)	Companies using ITS: Road Operators, Info providers	Local Authorities: City/District Transport Agencies	High level: Transport Ministries	Exploitation: Service Providers	Industry: System Developers	Similar Userneeds
ID	Description								
	<b>Group 7. INTELLIGENT VEHICLE SYSTEMS</b>								
	<b>Functions found within a vehicle, including vision enhancement, longitudinal and lateral collision avoidance, lane keeping, platooning, speed control, driver alertness, 'May Day', etc.</b>								
7.1.0.1	The system shall be able to measure the visibility distance and detect reductions caused by adverse weather and pollution conditions( but not darkness) of the view seen by driver	y	y		y		y		7.1.1.8
7.2.0.1	The system shall provide support for direct or indirect assistance for the driving task.	y	y					y	
7.2.1.1	The system shall be able to inform another vehicle when the host vehicle has detected that a collision is imminent.	y	y					y	
7.2.2.2	The system shall be able to provide support to the driver with information, or active steering support, to assist him/her to keep within the current lane of the carriageway.	y	y					y	8.4.2.2
7.2.4.1.01	The system shall be able to communicate with other equipped vehicles, and/or the infrastructure, to exchange data.								
7.2.5.2	The system shall be able to receive mandatory speed limits from outside the vehicle (and store them within the vehicle).	y	y		y	y	y	y	7.1.7.4
7.2.5.3	The system shall be able to provide information about various aspects of the road network, e.g. default speed limits, road hazards, junctions etc.	y	y	y				y	7.1.7.5 7.1.7.6

7.2.5.4	The system shall be able to display continuously to the driver the current mandatory speed limit.	y	y		y		y	y	
7.2.6.3	The system shall be able to monitor the road and the vehicles in the immediate vicinity	y	y					y	8.3.2.1 8.4.3.1
7.2.6.4	The system shall be able to monitor the course of the host vehicle	y	y					y	
7.2.6.6	The system shall be able to measure the distance to the vehicle in front	y	y					y	8.3.2.2
7.3.0.1	The system shall be able to provide the driver with assistance in longitudinal separation from other vehicles in, or entering, the host vehicle's lane.	y	y		y			y	
7.3.0.2	The system shall be able to monitor the conflict zone and predict the trajectory of other vehicles relative to the host vehicle, or the vehicle's movement relative to adjacent stationary objects.	y	y					y	8.4.0.2 8.6.0.1
7.3.0.3	The system shall be able to support a database of safety margins for distances between the vehicle and all other adjacent objects	y	y					y	8.4.1.2
7.3.1.2	The system shall be able to provide support to warn the driver when the vehicle in front is too close.	y	y					y	
7.3.1.3	The system shall be able to determine a safe vehicle trajectory relative to the lane/road boundaries.	y	y					y	8.4.1.3
7.3.1.4	The system shall be able to warn the driver of possible critical situations using audible, visual or haptic (physical feedback to the driver) methods	y	y					y	
7.3.2.1	The system shall be able to detect the position of neighbouring vehicles (and objects).	y	y					y	8.2.6.3 8.4.3.1
7.3.2.2	The system shall be able to measure the distance to the vehicle in front	y	y					y	8.2.6.6
7.4.0.2	The system shall be able to monitor the conflict zone and predict the trajectory of other vehicles relative to the host vehicle, or the vehicle's movement relative to adjacent stationary objects.	y	y					y	8.3.0.2 8.6.0.2
7.4.1.1	The system shall be able to provide support to warn the driver if the host vehicle moves towards a volume of road space that is about to be occupied, or already occupied, by another road user.	y	y					y	
7.4.1.2	The system shall be able to support a database of safety margins for distances between the vehicle and all other adjacent objects	y	y					y	8.3.0.3
7.4.1.3	The system shall be able to provide support to determine a safe vehicle trajectory relative to the lane/road boundaries.	y	y					y	8.3.1.3
7.4.2.1	The system shall be able to provide support to detect the position of the vehicle relative to lane boundaries and/or roadway shoulders.	y	y		y		y	y	8.2.2.1
7.4.2.2	The system shall be able to provide support to warn the driver when the vehicle approaches or exceeds the lane boundaries.	y	y					y	8.2.2.2
7.4.3.1	The system shall be able to detect the position of neighbouring vehicles (and objects).	y	y					y	8.2.6.3 8.3.2.1



7.5.3.1	The system shall be able to measure and analyse the road surface (e.g. for black ice) together with the vehicle dynamic characteristics, and alert the driver ( and/or control the dynamics of the vehicle automatically when necessary)	y	y						y	
7.5.3.2	The system shall be able to provide information on the current range of visibility, and to recommend an appropriate speed	y	y						y	
7.5.3.3	The system shall be able to detect the presence of vulnerable road users (VRU), e.g. pedestrians,cyclists, animals, etc	y	y						y	
7.5.5.1	The system shall provide “copies” of the traffic signs that are relevant to the current section of the road (e.g. speed limit, road hazards, junctions) to the driver at all times.									
7.5.5.2	The system shall be able to send to following vehicles “copies” of the traffic signs, or information about the local traffic (e.g. sudden congestion), that it may be of useful to receive in advance.									
7.6.0.1	The system shall be able to detect the imminence of a longitudinal collision	y	y						y	8.3.0.2
7.6.0.2	The system shall be able to detect the imminence of a lateral collision	y	y						y	8.4.0.2

**Group8: FREIGHT AND FLEET MANAGEMENT**

All activities associated with FFM, including statutory data collection and reporting; orders and document mgt; planning, scheduling, monitoring, reporting & operations mgt; vehicle and cargo safety; mgt of inter-modal interfaces.

LIST OF USER NEEDS FROM THE EUROPEAN ITS FRAMEWORK ARCHITECTURE V3.0 Groups 1-10		Private: Drivers, Motorbikers	Commercial: Freight transport (hazardous goods)	Companies using ITS: Road Operators, Info providers	Local Authorities: City/District Transport Agencies	High level: Transport Ministries	Exploitation: Service Providers	Industry: System Developers	Similar Userneeds
ID	Description								
	<b>Group 8. FREIGHT AND FLEET MANAGEMENT</b>								
	<b>All activities associated with FFM, including statutory data collection and reporting; orders and document mgt; planning, scheduling, monitoring, reporting &amp; operations mgt; vehicle and cargo safety; mgt of inter-modal interfaces.</b>								
8.1.0.3	The system shall be able to communicate with road-side equipment whilst the vehicle is travelling at normal speed.		y		y	y			
8.3.0.1	The system shall be able to transfer safety-related information (e.g. brakes status, driving time etc.) from the vehicle to the road-side whilst the vehicle is travelling at normal speed.		y		y	y			
8.3.0.2	The system shall enable the weight of a commercial vehicle to be measured whilst the vehicle is travelling (weigh-in-motion).				y	y		y	3.1.1.3