

The SafeTRIP project

An integrated system for road safety



Guy Frémont - Sanef



What is SafeTRIP ?

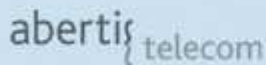
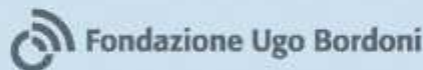
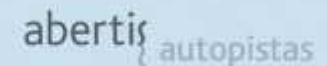
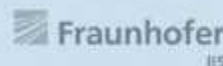
Satellite Applications For Emergency handling, Traffic alerts, Road safety and Incident Prevention

- An integrated project (IP)
 - From user requirements to development, integration, demonstration and evaluation
 - Integration and reuse of emerging technologies developed in other European initiatives
- To improve road safety, mobility and environment protection
 - For passenger vehicles
- Using satellite 2-way communications and positioning
 - Data communication
 - DVB-SH broadcasting
 - GNSS positioning



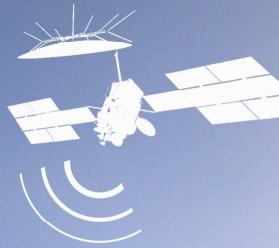
Project key figures

- Project Start: 01/10/2009
- Project End: 30/09/2012
- Duration: 36 months
- Budget: M € 11,25
- EC-contribution: M € 7.90
- 20 partners of 7 countries
- Coordinated by Sanef





Satellite Applications
For Emergency handling,
Traffic alerts, Road safety
and Incident Prevention



www.safetrip.eu



SafeTRIP concept

- Providing a bidirectional communication platform that will allow any third party company to develop applications for the road market
 - Accurate satellite positioning (GPS / EGNOS / GALILEO)
 - 2 way data communication via satellite (SMS like or real time)
 - Digital broadcast via satellite

To enable the communicating car thanks to S-band opportunity



Some words about the S-Band

- Eutelsat W2A designed to include first European S-band payload
 - launched in April 2009
 - ramp up for commercial services
 - broadcast and unicast (bi-directional) services
- Bandwidth: 2 x 30MHz
 - Uplink: 1.98 – 2.01 GHz
 - Downlink: 2.17 – 2.20 GHz
- Exclusive use for Mobile Satellite Services (MSS)
- Pan European authorization granted in May 2009
- 2 way data communication system available from 2010/2011
- Ability to use small omni-directional antennas on the mobile unit



System architecture

EGNOS/Galileo

S-band satellite



3G/4G



Greenbox



App1

App2

AppN

DVB SH

HUB/NOC :
DVB-SH hub facilities,
CDMA hub,
A/V interfaces,
Interface to service center

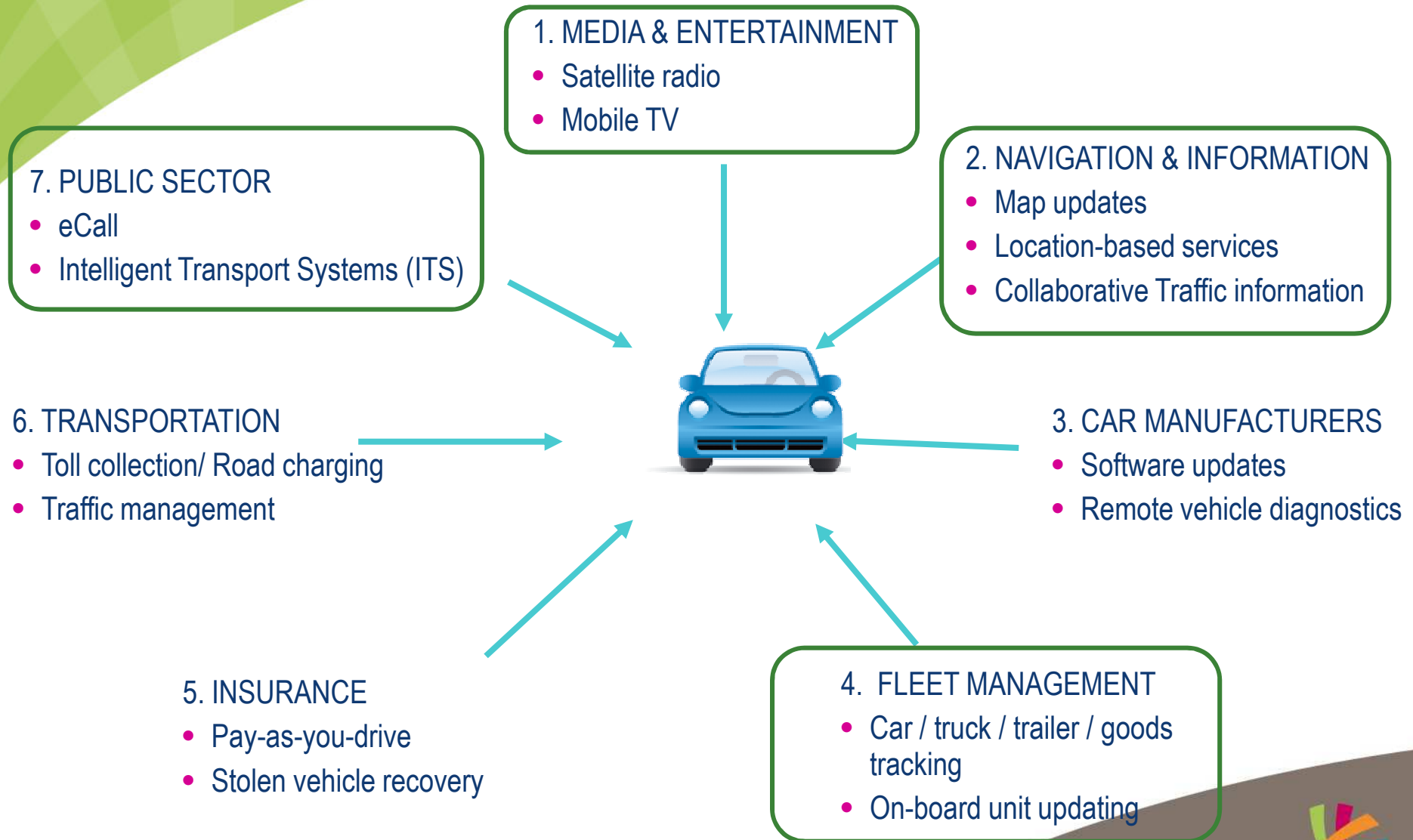


SafeTRIP objectives

- To develop and demonstrate an integrated system based on a 2-way satellite communication
- To demonstrate the concept using a set of safety related applications involving 2 terminal manufacturers and 2 transportation modes
 - Passenger cars
 - Bus / coaches
- ... and 2 types of end users
 - Drivers
 - Passengers
- To evaluate the impact of the SafeTRIP system and services on safety, security and environment



Services implemented in SafeTRIP



The keys to success

- Global coverage
 - Fundamental for safety applications all over Europe
 - Independent of terrestrial network (in case of disaster)
- Quick and easy deployment
 - Ensure full coverage as soon as the system is launched
 - Avoid economical problem concerning low populated areas
- Ecologic oriented
 - Ability to mix business oriented applications with institutional research
 - Satellite communication is more energy-efficient than terrestrial repeaters
- Industrial support of broadcast applications (e.g. Satellite Digital TV & Radio)
 - Increase the popularity of the system
 - Increase the manufacturers' interest



SafeTRIP consortium

- Service operators
 - Masternaut (fleet management), IMA, MAIF, MACIF (Insurance and assistance), Eurolines (long distance coaches operator)
- Road operators
 - Abertis autopistas, Acesa, Sanef
- Telecommunication providers
 - Eutelsat, Retevision (Abertis Telecom)
- Technical partners
 - DLR, Fraunhofer, Fondazione Ugo Bordoni, Indra Espacio, MBI, Quantum, Masternaut
- Academia
 - University of Budapest (BME), University College London (UCL), PIAP Warsaw
- Project management
 - Sanef, Algoé consultants



Current progress status (M8)

- Users requirements, completed
- Legal issues - Personal data protection, completed
- System / Network requirements on-going, will be completed in June
- Service definition on-going
- System architecture just started
- Tight cooperation with on-going S-band technology R&D, in particular ESA-funded projects :
 - DENISE, J-ORTIJIA, MiRESYS



More information ?

- Visit our website
 - <http://www.safetrip.eu>
- Project coordinator
 - Guy Frémont
 - contact@safetrip.eu

