FOTsis project successfully tests emergency services in Spain and Greece

a. Spanish Test

After months of numerous tests on the M-12 motorway (Madrid), the FOTsis Emergency Service (S1) has been successfully tested with the participation of the Madrid Emergency Service (SAMUR).

The participation of the Emergency Services is essential for the deployment of the FOTsis Emergency Service. During the last two years, SAMUR (Madrid Municipal Assistance Service of Emergency and Rescue) has been collaborating with the FOTsis team, providing their feedback and helping to improve FOTsis Emergency Service. In addition to the requirements gathered for the services, many details concerning the emergency protocols were also discussed. The collaboration with SAMUR included many visits to the SAMUR headquarters and to the Madrid 112 PSAP, one of the biggest and most advanced 112 PSAP Centres in Europe.

On 17th December 2013, tests of the FOTsis S1 Emergency Service were conducted at the Control Centre of the M-12 motorway (Madrid airport axis) operated by OHL Concesiones in Spain. Firstly, laboratory tests were performed in order to check the basic functionality. After these first tests, complete usage cases were tested with the participation of concessionaire operators, patrollers and emergency vehicles.

The tests started with the simulation of an incident/accident (by stopping a vehicle in the hard shoulder of the road), followed by the launch of the emergency call (including data and voice communication channel). The operators in both Control Centres (motorway and SAMUR Control Centres) assigned the incident to the concessionaire and emergency fleets respectively. Emergency and concessionaire vehicles arrived at the incident location guided by a mobile application. Control Centre operators monitored them and shared real-time information collected by the agents (pictures, reports, etc.)

The results of the tests have been positive, improving the current emergency protocols.

b. Greek test

On 19th February 2014, the FOTsis project performed tests of the FOTsis Emergency Service (S1) together with Nea Odos (PATHE Motorway operator) and the traffic police department of Viotia, responsible for the part of PATHE were the tests were performed. Nea Odos contributed with a motorway patrol car, and an additional car in order to simulate the vehicle that generated the e-call. Terna Energy contributed by arranging the tests with police department, and by providing technical assistance to police driver using the service. Traffic police department of Viotia contributed by assigning a police officer with a vehicle for the test.

Execution of the demonstration

- New e-call was generated and was assigned after a few seconds to Nea Odos patrol car.
- The e-call was forwarder to emergency services centre and was assigned to the traffic police car.
- After few minutes, Nea Odos patrol car arrived to the e-call destination, stopped a few meters before the incident and begun to set the traffic cones in order to create a deviation.
- In the meanwhile, traffic police car also arrived at the incident location and stopped just in front of the incident.
- The results of the tests have been positive, improving the current emergency protocols.

FOTsis begins impact assessment of services
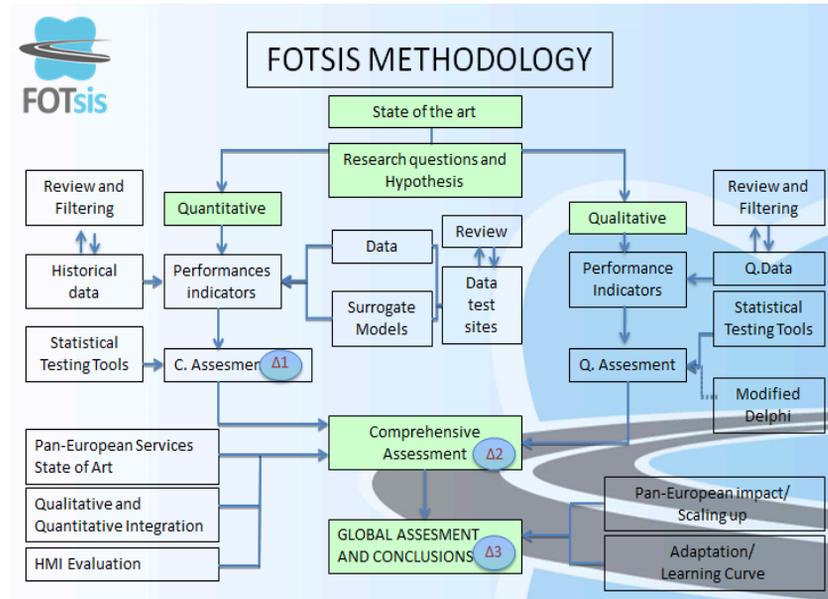
The FOTsis project aims to evaluate the impact on the areas of road safety, traffic efficiency and environmental sustainability of 7 close to market applications.

Nowadays, road transport oriented applications and services have reached significant maturity. As the focus on these solutions shifts from the purely technological challenge to the actual deployment, there is an increasing need to evaluate the impact of the proposed services in terms of different objectives.

The starting point of the FOTsis project was the realisation that a major source of information that may in fact have a significant impact on the drivers' behaviour was not fully utilised in Cooperative ITS developments: the infrastructure-based data.

The FESTA methodology proposes two basic evaluation strategies: one based on impact areas and another based on the systems under test themselves. Both strategies have their own limitations and that is the reason why several projects, including FOTsis, have opted instead for a combination of both, specifying a test design that results from considering both relevant impact areas (typically road safety, traffic efficiency and environmental sustainability) and the actual implementations of the applications to be tested. Another relevant aspect is the fact that even though the FESTA methodology considers both objective and subjective data collection, the FOTsis evaluation methodology relies more heavily on objective data statistical analysis, which may not be sufficient for certain low-occurrence events such as road accidents, which are critical for road safety assessment.

The FOTsis project's particularities have required a special adapted methodology: the preliminary impact assessment considers separately a quantitative assessment and a qualitative assessment. The quantitative assessment is based on the calculation of performance indicators from two different data sources: historical data as a reference and the test execution data; and a qualitative assessment which is based on the calculation of performance indicators obtained from the evaluation of the questionnaires answered by the service users, which must also be filtered and process before they can be used in evaluation.

Afterwards, in the FOTsis comprehensive assessment, results from the preliminary assessment are further analysed. Three main aspects are considered in this stage: establishment of a broader reference line in terms of similar European efforts, the integration of qualitative and quantitative analysis results, and the evaluation of the services' HMI.

The final result of the comprehensive assessment is expected to be an overall image on what the impact of the FOTsis services is on the road environment from different points of view and taking into account different reference baselines.

Pending final validation (which will only be possible once data from all the services is available), the proposed methodology represents several novel aspects that could be applied to other initiatives addressing similar problems.

Business Exploitation Models

Given the FOTsis aims to develop market the competitive services, the development of a business exploitation models is a sine qua non.

A business model first of all, describes the value that an organisation offers to various customers; secondly, it defines the capabilities and partners necessary for creating, marketing, and delivering this value; thirdly, it assesses the relationship to capital with the goal of generating profitable and sustainable revenue streams.
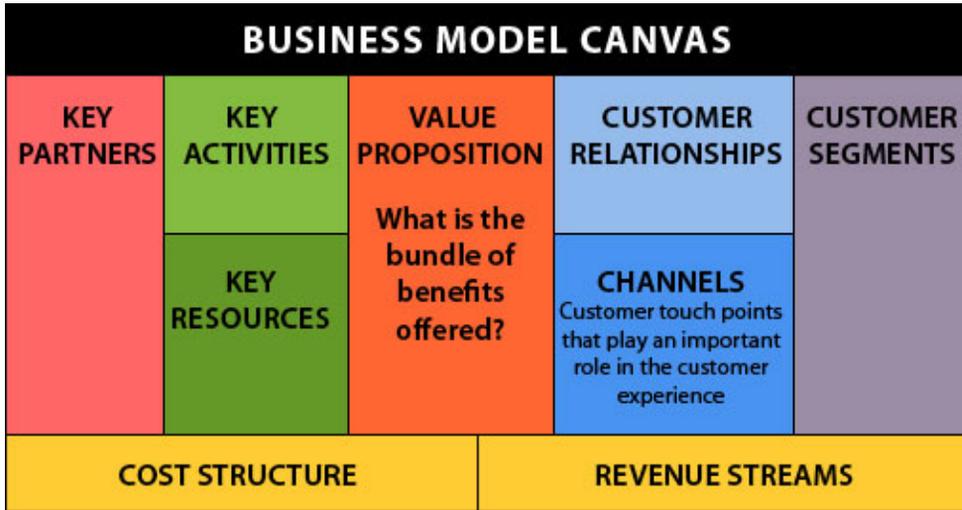
To elaborate business model recommendations for the FOTsis Services, the business models canvas proposed by A. Osterwalder has been applied. As can see below, the business model canvas consists of nine building blocks that show the logic of how a company intends to make money via delivering concrete value to customers. The nine blocks cover the four main areas of business: customer, offer (value delivered), infrastructure, and financial viability. In the project, the 7 FOTsis Services will be described using the business model canvas starting from the definition of two building blocks: the Customer Segments and/or the Value Proposition (offer), which determine the logic of shaping the whole business model. Subsequently, and in order to build a working business model, the FOTsis Services will be translated into the language of benefits (value proposition) for consumers (customer segments).

A further step in shaping business models will be the identification of the most important stakeholders (MIS), as it is connected with the value chain proposition and looking at the system of mutual relationships between its actors. Identifying the MIS and the relative role of various parties in the value chain makes it possible to take a clear choice of the parties that have a distinctive and decisive role in an effective implementation of C-ITS. According to the information gathered within fieldwork, the most important customers to whom FOTsis values are delivered are first, road users and, second, road operators. Road operators might act at the same time as recipients and on the other hand as suppliers of 7 FOTsis Services - they are located in the middle of the whole business chain -. The group of road users – car drivers is always in the end of the whole value chain as they are the final beneficiaries of 7 FOTsis Services. This is the group which will shape the future ITS solutions by stating its own needs and acceptance of offered services and products. Last but not least, national responsible authorities have been also mentioned amongst the most important stakeholders.

The elaborated business recommendations will prove of great value to the MIS as they will identify the specific profits and costs that these new services can create for each unique stakeholder group. In addition, the potential benefits by increasing collaboration, improving performance and fostering a better understanding of organisational risks will be assessed.

FOTsis Cub

On 29th April 2014, the FOTsis project held its 2nd Club meeting in Madrid at the premises of OHL Concesiones, the project coordinator.

Held under the themes 'Successful business models for Cooperative ITS (C-ITS)', the event attracted approximately 50 high level experts who had the opportunity to see the latest development in the field of C-ITS, as well as to reflect on the next steps needed in order to make the Pan-European deployment of cooperative systems a reality.

The next and final meeting of the FOTsis Club will take place at the end of the project in Brussels, where the impact of the services on safety and mobility will be presented.

Chinese Ministry visit to FOT Test Site

On 26 June 2014, officials from the Chinese Ministry of Transport and researchers from the Chinese Research Institute of Highways and TRL visited the M-12 test-site in Madrid.
The visit was focused on the FOTsis services "Emergency Management" and "Safety Incident Management" due to the interest of the Chinese delegation in cooperative ITS for motorways safety.
The visit started with a meeting in OHL headquarters where the FOTsis coordinators (OHL Concesiones and UPM) presented the project.
Afterwards, the Chinese delegation and some members of the project moved to the M-12 Toll Road test-site, where OHL Concesiones gave an overview of the Control Centre facilities and toll road equipment, and SICE described in detail the services "Emergency Management" and "Safety Incident Management".
Finally, the visit concluded with a successful demonstration of the FOTsis safety-related cooperative services.

FOTsis on social media networks

FOTsis in the Press

Read more about FOTsis in the following publications:

Carreteras: SmartMobility monographic – May 2014

Where have you seen FOTsis project

12-13 February 2014: 6th ETSI Workshop on Intelligent Transport Systems, Berlin

18-19 March 2014: FOT-Net Final Event and FOT-Net Data 1st Stakeholders meeting, Amsterdam

25-28 March 2014: Intertraffic 2014, Amsterdam

4 April 2014: i-Mobility Forum Meeting on Implementation Roadmaps, Brussels

6-7 May 2014: Nordic Traffic Safety Academy, Oslo

8-9 May 2014: European Road Safety Days, Athens

13 May 2014: Amsterdam Group plenary meeting, Amsterdam

26-28 May 2014: 42nd Annual ASECAP Days, Athens

5-6 June 2014: 4th European Conference on Human Centered Design for Intelligent Transportation Systems, Vienna

9-11 June 2014: CIT 2014 11th Transport Engineering Conference, Santander (Spain)

16-19 June 2014: 10th ITS European Congress, Helsinki

18 June 2014: ERF Annual Symposium, Brussels

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