Executive summary:

Going to and from school is a daily journey for millions of children around Europe. The crash statistics is lacking information about the exact number of child causalities during those trips, but available sources identify the most dangerous situation as the way to and from school buses, situations when the children are unprotected road users. In addition there are several proofs for the need of a door to door perspective in order to improve the safety for the children. SAFEWAY2SCHOOL aimed to design, develop, integrate and evaluate technologies for providing a holistic and safe transportation service for children, from their door to the school door and vice versa, encompassing tools, services and training for all key actors in the chain.

The project has a user-oriented approach and the European Union (EU) FRAME approach has been used for a stepwise process with a starting point in user wishes, moving on to identification of those in relation to the system being developed, formalisation of them into user needs and combine them into use cases. This is the ground for the definition of the system requirements. The requirements were grouped into blocks of functions.

The functional blocks identified based on system requirements were:

- safe route planning;
- information and warning;
- bus driver information;
- notification;
- training and education.
For each identified block data in and out were identified and finally the system architecture was put together. The main tool developed were HW and SW for localisation, route planning, navigation, communication between vehicle and road, vehicle-based system supporting bus drivers, bus stops, bus stop inventory tool, Vulnerable road users (VRU) unit, mobile applications and training schemes for all involved stakeholders. Tools, technology and software were developed, put together and evaluated from both a technical point of view, safety and security point of view and from an a user oriented point of view. Evaluation of the system (total system or parts of it) has been done at five different pilot sites (Sweden, Poland and Austria, but also a simulator experiment in Germany).

The results are positive, showing cost effective solutions with high acceptance for the holistic approach but also for most of the sub systems behind. However, no chain is stronger than the weakest link and this is true also when it comes to school transportation. Based on a very extensive work to identify future work with standardisations and policy the most essential improvements identified were related to school travel plans, sign at all bus stops and improved driver education.

List of websites: http://www.safeway2school-eu.org

Related documents

File: 138235171-8_en.zip

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