Advanced measures to reduce cyclists' fatalities and increase comfort in the interaction with motorised vehicles

From 2015-06-01 to 2018-11-30, closed project | XCYCLE Website

Objective

Cyclists suffer a disproportionate share of serious injuries and fatalities, and indeed in recent years that disadvantage has been growing. At the same time they often are not treated equally by traffic systems (e.g. traffic signals frequently fail to register their approach or presence). XCYCLE has the aim of developing the means to equalise the treatment of cyclists in traffic and thus both encourage cycling and make cycling safer. XCYCLE will develop: technologies aimed at improving active and passive detection of cyclists; systems informing both drivers and cyclists of a hazard at junctions; effective methods of presenting information in vehicles and on-site; cooperation systems aimed at reducing collisions with cyclists. Two relevant use cases would be bicycle interaction with large vehicles and cars at intersections and the provision of an immediate or extended green traffic light for cyclists approaching traffic signals. An in-vehicle detection system and a system of threat mitigation and risk avoidance by traffic signals will be developed. The components developed and built up will be systematically integrated, implemented and verified. A new large-scale research infrastructure in the city of Braunschweig (DE) and a second test mobile platform will be used as test site. A demo bicycle with a cooperative technology will be developed and tested as well. A user-centred approach will be adopted. Behavioural evaluation will part of the whole process: attentional responses using eye tracking data; evaluation of human-machine interface; acceptance and willingness to pay. In the Cost-Benefit Analysis behavioural changes will be translated into estimated crashes and casualties saved per system. The project will contribute to innovative and efficient advanced safety measures to reduce the number of accidents, often of high severity, involving cyclists in interaction with motorised vehicles.

Related information

Result In Brief

Periodic Reporting for period 2 - XCYCLE (Advanced measures to reduce cyclists' fatalities and increase comfort in the interaction with motorised vehicles)

Events

The registration for PROSPECT, InDeV, XCYCLE projects final event on 12th of October has been closed!

Systems for safer cycling
**Coordinator**

ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA
VIA ZAMBONI 33
40126 BOLOGNA
Italy

**EU contribution:** EUR 836 396

**Activity type:** Higher or Secondary Education Establishments

**Contact the organisation**

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**Participants**

UNIVERSITY OF LEEDS
WOODHOUSE LANE
LS2 9JT LEEDS
United Kingdom

**EU contribution:** EUR 785 073

**Activity type:** Higher or Secondary Education Establishments

**Contact the organisation**

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VOLVO TECHNOLOGY AB
GOTAVERKSGATAN 10
405 08 GOTEBOURG
Sweden

**EU contribution:** EUR 611 800

**Activity type:** Other

**Contact the organisation**

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DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV
Linder Hoehe
51147 KOELN
Germany

**EU contribution:** EUR 605 781

**Activity type:** Higher or Secondary Education Establishments

**Contact the organisation**
RIJKSUNIVERSITEIT GRONINGEN
Broerstraat 5
9712CP GRONINGEN
Netherlands

**Activity type:** Higher or Secondary Education Establishments

Contact the organisation

STATENS VAG- OCH TRANSPORTFORSKNINGSINSTITUT
Olaus Magnus Vaeg 35
58195 LINKOEPING
Sweden

**Activity type:** Research Organisations

Contact the organisation

DYNNIQ NEDERLAND BV
BASICWEG 16
3821BR AMERSFOORT
Netherlands

**Activity type:** Other

Contact the organisation

KITE SOLUTIONS SRL
CONTRADA COSTA 9
21034 COCQUIO TREVISAGO VA
Italy

**Activity type:** Other

Contact the organisation

JENOPTIK ROBOT GMBH
OPLADENER STRASSE 202
40789 MONHEIM AM RHEIN
Germany

**Activity type:** Other

Contact the organisation

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