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

From 2015-06-01 to 2018-11-30, ongoing 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

Report Summaries

Periodic Reporting for period 1 - 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 now opened!
**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

**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

VOLVO TECHNOLOGY AB  
GOTAVERKSGATAN 10  
405 08 GOTEBOURG  
Sweden  
EU contribution: EUR 611 800

**Activity type:** Private for-profit entities (excluding Higher or Secondary Education Establishments)  
Contact the organisation

DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV  
Linder Hohe  
51147 KOELN  
Germany  
EU contribution: EUR 605 781

**Activity type:** Research Organisations  
Contact the organisation

RIJKSUNIVERSITEIT GRONINGEN  
Broerstraat 5  
9712CP GRONINGEN  
Netherlands  
EU contribution: EUR 350 625

**Activity type:** Higher or Secondary Education Establishments  
Contact the organisation
STATENS VAG- OCH TRANSPORTFORSKNINGSINSTITUT
Olaus Magnus Væg 35
58195 LINKÖPING
Sweden
See on map

**Activity type:** Research Organisations

Contact the organisation

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DYNNIQ NEDERLAND BV
HARDWAREWEG 11
3821 BL AMERSFOORT
Netherlands
See on map

**Activity type:** Private for-profit entities (excluding Higher or Secondary Education Establishments)

Contact the organisation

---

KITE SOLUTIONS SRL
CONTRADA COSTA 9
21034 COCQUIO TREVISAGO VA
Italy
See on map

**Activity type:** Private for-profit entities (excluding Higher or Secondary Education Establishments)

Contact the organisation

---

JENOPTIK ROBOT GMBH
OPLADENER STRASSE 202
40789 MONHEIM AM RHEIN
Germany
See on map

**Activity type:** Private for-profit entities (excluding Higher or Secondary Education Establishments)

Contact the organisation

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