

PROJECT

XCYCLE

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

Funding: European (Horizon 2020)

Duration: Jun 2015 - Nov 2018

Status: Complete

Total project cost: €5,009,333

EU contribution: €5,009,330



Call for proposal: H2020-MG-2014_TwoStages

[CORDIS RCN : 193364](#)

Objectives:

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.

Parent Programmes:

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Lead Organisation:

Alma Mater Studiorum - Universita Di Bologna

Address:

Via Zamboni 33
40126 Bologna
Italy

Organisation Website:

<http://www.unibo.it>

EU Contribution: €836,396

Partner Organisations:

Kite

Address:

Contrada Costa 9
21034 COCQUIO TREVISAGIO
Italy

Organisation Website:

<http://www.kitesolutions.it>

EU Contribution: €341,875

Volvo Bus Corporation

Address:

Fästningsvägen 1
40508 Gothenburg
Sweden

Organisation Website:

http://www.volvo.com/bus/global/en-gb/home_new.htm

EU Contribution: €611,800

Dynniq Nederland Bv

Address:

BASICWEG 16
3821BR AMERSFOORT
Netherlands

EU Contribution: €347,187

Statens Geotekniska Institut

Address:

Olaus Magnus Vag 35
58193 Linkoping
Sweden

Organisation Website:

<http://www.vti.se>

EU Contribution: €499,250

University Of Leeds

Address:

Institute For Transport Studies, University Of Leeds, 41 University Road
Leeds
LS2 9JT
United Kingdom

Organisation Website:

<http://www.leeds.ac.uk>

EU Contribution: €785,073

Deutsches Zentrum Fr Luft Und Raumfahrt E.v

Address:

Linder Hoehe
51147 KOELN
Germany

Organisation Website:

<http://www.dlr.de>

EU Contribution: €605,781

Rijksuniversiteit Groningen

Address:

Broerstraat 5
9712CP GRONINGEN
Netherlands

Organisation Website:

<http://www.rug.nl>

EU Contribution: €350,625

Jenoptik Robot GmbH

Address:

OPLADENER STRASSE 202
40789 MONHEIM AM RHEIN
Germany

EU Contribution: €631,343

Technologies:

Safety systems
In-vehicle technologies for navigation and
safety

Development phase: Research/Invention

STRIA Roadmaps: Smart mobility and services

Transport mode: Road transport

Transport sectors: Passenger transport

Transport policies: Safety/Security

Geo-spatial type: Urban