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

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.

**Fields of science**

natural sciences > computer and information sciences > databases

engineering and technology > environmental engineering > air pollution engineering

engineering and technology > electrical engineering, electronic engineering, information engineering > electronic engineering > sensors

natural sciences > earth and related environmental sciences > environmental sciences > pollution

**Programme(s)**

H2020-EU.3.4. - SOCIETAL CHALLENGES - Smart, Green And Integrated Transport

**Topic(s)**

MG-3.4-2014 - Traffic safety analysis and integrated approach towards the safety of Vulnerable Road Users
Call for proposal

H2020-MG-2014-2015

See other projects for this call

Sub call

H2020-MG-2014_TwoStages

Funding Scheme

RIA - Research and Innovation action

Coordinator

ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA

Net EU contribution

€ 836 396,00

Address

Via zamboni 33
40126 Bologna

Italy

Region

Nord-Est > Emilia-Romagna > Bologna

Activity type

Higher or Secondary Education Establishments

Links

Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network

Total cost

€ 836 396,25

Participants (11)
UNIVERSITY OF LEEDS

United Kingdom

Net EU contribution
€ 785,073.00

Address
Woodhouse lane
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Region
Yorkshire and the Humber > West Yorkshire > Leeds

Activity type
Higher or Secondary Education Establishments

Links
Contact the organisation
Website
Participation in EU R&I programmes
HORIZON collaboration network

Total cost
€ 785,073.75

VOLVO TECHNOLOGY AB

Sweden

Net EU contribution
€ 562,362.50

Address
Gotaverksgatan 10
405 08 Goteborg

Region
Södra Sverige > Västsverige > Västra Götalands län

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

Links
Contact the organisation
Website
Participation in EU R&I programmes
HORIZON collaboration network
THIRD-PARTY

VOLVO LASTVAGNAR AB
Sweden
Net EU contribution
€ 4,825,00
Address
C/o volvo business services ab
405 08 Goteborg
Region
Södra Sverige > Västsverige > Västra Götalands län
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Links
Contact the organisation  Website  Participation in EU R&I programmes  HORIZON collaboration network
Total cost
€ 4,825,00

THIRD-PARTY

RENAULT TRUCKS SAS
France
Net EU contribution
€ 44,612,50
Address
Route de lyon 99
69800 Saint priest
Region
Auvergne-Rhône-Alpes > Rhône-Alpes > Rhône
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Links
DEUTSCHES ZENTRUM FUR LUFT - UND RAUMFAHRT EV

**Germany**

Net EU contribution
€ 605 781,00

Address
Linder hohe
51147 Köln

Region
Nordrhein-Westfalen > Köln > Köln, Kreisfreie Stadt

Activity type
Research Organisations

Total cost
€ 605 781,25

RIJKSUNIVERSITEIT GRONINGEN

**Netherlands**

Net EU contribution
€ 350 625,00

Address
Broerstraat 5
9712CP Groningen

Region
Noord-Nederland > Groningen > Overig Groningen

Activity type
STATENS VAG- OCH TRANSPORTFORSKNINGSINSTITUT

Sweden
Net EU contribution
€ 499 250,00
Address
Olaus magnus vag 35
58195 Linkoeping
Region
Östra Sverige > Östra Mellansverige > Östergötlands län
Activity type
Research Organisations
Links
Contact the organisation  Website  Participation in EU R&I programmes  HORIZON collaboration network
Total cost
€ 499 250,00

SWARCO MOBILITY NEDERLAND B.V.
Netherlands
Net EU contribution
€ 270 482,00
Address
Basicweg 16
3821 BR Amersfoort
Region
West-Nederland ➔ Utrecht ➔ Utrecht

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

Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Total cost
€ 347 187,50

THIRD-PARTY

SWARCO PEEK NL BV
Netherlands
Net EU contribution
€ 76 705,00

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Basicweg 16
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Region
West-Nederland ➔ Utrecht ➔ Utrecht

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

Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Total cost
€ 76 705,00

KITE SOLUTIONS SRL
Italy
Net EU contribution
€ 341 875,00

Address
Contrada costa 9
21034 Cocquio trevisago va

SME  Yes

Region
Nord-Ovest > Lombardia > Varese

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

Links
Contact the organisation  Website  Participation in EU R&I programmes  HORIZON collaboration network

Total cost
€ 341 875,00

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JENOPTIK ROBOT GMBH

Germany

Net EU contribution
€ 631 343,00

Address
Opladener strasse 202
40789 Monheim am rhein

Region
Nordrhein-Westfalen > Düsseldorf > Mettmann

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

Links
Contact the organisation  Participation in EU R&I programmes  HORIZON collaboration network

Total cost
€ 631 343,75

Last update: 15 August 2022