

Vulnerable Road User Alert Kit

Self-contained system unit for collision warning on dangerous traffic routes

STATUS QUO

New developments in driver assistance systems are already able to prevent a large number of collisions with vulnerable road users (VRUs). However, the widespread use of these systems will continue for several generations of vehicles, meaning that a significant reduction in accidents, for example at dangerous junctions, is not to be expected in the coming years. Newer systems for the infrastructure have always required dedicated communication interfaces, which means that no improvement in road safety can be expected in the near future.

OUR TECHNOLOGY

We have developed a system that can be flexibly integrated into the infrastructure and warns drivers, pedestrians and cyclists of a collision. The system uses radar and infrared sensors to detect the movement of objects and determine potential collision paths. Road users are warned of an impending collision by a light signal. The self-sufficient system can be mounted on any pole as it calibrates itself automatically and does not require a power connection thanks to its integrated battery and solar module.



BENEFITS

- Independent of road users' technical equipment
- Self-sufficiency enables flexible installation
- Data protection-compliant sensor technology

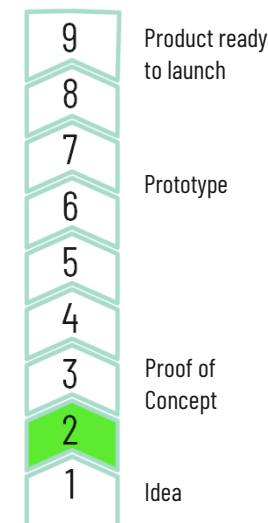
APPLICATION POSSIBILITIES

The system can be used flexibly in different environments to warn moving objects of a collision. The system is not dependent on specific mounting options or a power supply and can be configured for the specific application.

COMMERCIALIZATION OPPORTUNITIES

There are various possibilities for cooperation between the industrial partner and TU Darmstadt: from an exchange with the know-how carriers of the technology up to a close cooperation in case of further development needs. The technology is protected by intellectual property rights and can be used by the industry partner after a sale or licensing agreement.

CURRENT STAGE OF DEVELOPMENT TECHNOLOGY READINESS LEVEL (TRL)



The technology development is at Level 2: We have refined the original idea into a more concrete concept and worked out specific fields of application.

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