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Intelligent Vehicle Safety Systems



Supporting the safe  
driving of tomorrow



Vision Zero, Sweden:

No fatalities and no

# Preventing problems from occurring in the first place

Sweden has a long tradition of safety thinking for cars, trucks and roads. This has resulted in a number of forefront road safety technologies, and has helped the Swedish motor vehicle industry to achieve world-leading status.

Now the time has come for the next step. Most current technologies focus on saving lives through crash safety improvements. The IVSS Programme aims at moving the emphasis from passive solutions to active systems.

In other words, preventing problems from arising in the first place. Vision Zero for Sweden is aimed at achieving zero fatalities and zero serious injuries on the nation's roads.

In working to this end, we enlist both the services of individuals (e.g. engineers and researchers) and the involvement of companies and organisations in many different fields. To the sum total of knowledge already to be found in the motor vehicle industry, we add the expertise and experience of external specialists. An invaluable form of 'cross-fertilisation', both financially and in human terms.

We need to engage more key individuals. You are probably one of these.

## Three elements of road safety

The road user

The vehicle

The road infrastructure

# serious injuries on the nation's roads

# One goal

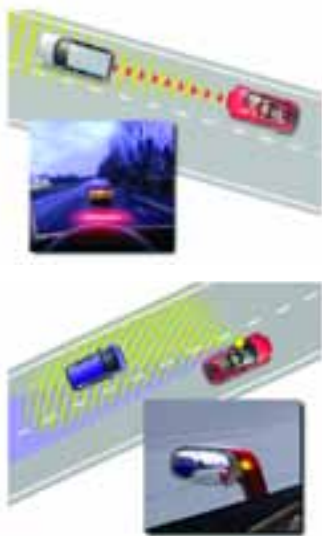
but many roads lead to it

The IVSS Programme was set up to stimulate research and development for the road safety of the future.


The end-result will probably be new, smart technologies and new IT systems which will help reduce the number of traffic-related fatalities and serious injuries. Key areas are active safety, preventive solutions and further development of the roadholding and crash safety characteristics of cars and commercial vehicles.

Another of our focus areas is the development of intelligent vehicle and road infrastructure systems. This includes systems which can improve safety for unprotected road users.

Some of the technical solutions are still on the drawing board, while others are closer to the production stage. Because the IVSS Programme acts as a forum for new ideas and the technology of the future, the most innovative solutions are probably still to come.



Intelligent road and vehicle safety systems



"Cars are driven by people.  
The guiding principle  
behind everything we do  
at Volvo, therefore, is  
– and must remain – safety."

Assar Gabrielsson and Gustaf Larson  
(the founders of Volvo), 1936.



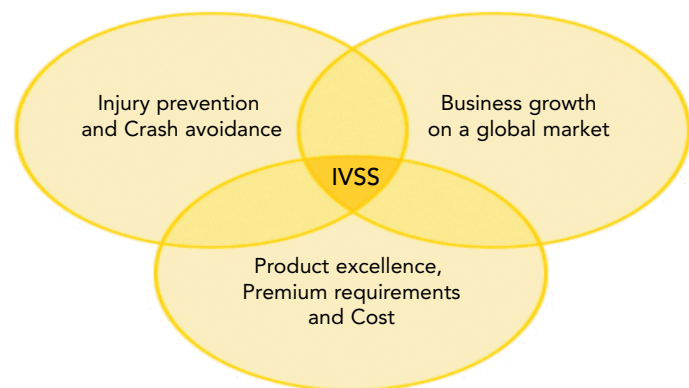
# Benefits for all

Supporting research on road and vehicle safety will lead to the development of new technologies, capable of commercialisation and therefore of saving lives. The results of such research can be incorporated into new products and services, offering the possibility of distinct competitive advantages.

In the longer term, investment in research and development will stimulate both economic growth and employment. Those who benefit first will be the companies involved, but the benefits to society should be obvious too. The IVSS Programme will bring advantages at all levels.

Some indirect, but others very concrete indeed.

## Overlapping objectives



Developmental, commercial and transport policy objectives

# Driven by real needs

All of the projects coordinated by IVSS have one thing in common. Their aim is to solve the road safety problems which the programme participants have defined together.

It follows from this that the research involved is along the lines of needs already identified. By utilising collective expertise to make new products and services, we are not just fulfilling real needs. We are also ensuring that our joint efforts will be concentrated on the areas where they will bring most benefit.

The function of IVSS is to work to achieve a combination of developmental (e.g. employment-related) objectives, commercial objectives and transport policy objectives.

## IVSS Research Area

1. Driver support and human-machine interaction system
2. Communication platform, internal and external
3. Sensors and embedded systems
4. Intelligent roads and informatics
5. Dependable and fault-tolerant systems
6. Crashworthiness bio-mechanics
7. Vehicle dynamic safety systems





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# A strong team – with room for more

IVSS is a unique joint venture by public-sector agencies, private-sector companies and industry organisations. The programme will run up until the end of 2008 and we welcome more ideas for suitable projects.

For a project to be approved as part of the IVSS Programme, it must be demonstrated that it meets the required criteria in terms of road safety improvement, economic growth and technical solutions which can be successfully commercialised. You will also need to “sell” your idea to one of the parties financed by IVSS.

Possible new partners could be Swedish companies, universities or institutes. The companies may be anything from large industrial concerns to small niche companies, including ones which have not previously been active in the automotive field. We would also welcome participation by foreign companies with operations in Sweden or which are already working with one of the parties involved in IVSS. To learn more about IVSS and how to apply, visit us at [www.pff.nu](http://www.pff.nu). There you will also find more information on our existing projects and partners.

Hopefully you, too, can soon be numbered amongst them!

## Partners in IVSS:



**VOLVO**



IVSS Programme budget, 2003–2008

**70 MEUR**