



SAFER SUCCESS STORY: Naturalistic driving data

“SAFER brings together a unique combination of collaborators that are increasingly essential for addressing complex driving safety opportunities, such as naturalistic data analysis. SAFER is leading the world in its analysis of naturalistic data, helping to understand driver distraction and to model driver behaviour.”

John D. Lee
Emerson Professor
University of
Wisconsin-Madison

- Common world-class infrastructure for naturalistic data (ND) collection, storage and analysis
- One of the world leaders in naturalistic data handling and analysis
- One of three consortiums awarded US analysis projects on the world’s largest ND dataset SHRP2
- World leader in collection and analysis of naturalistic data from bikes and e-bikes
- Leader in the development of the FOT/NDS Data Sharing Platform for Europe

The challenge is to better understand the interaction between the driver/rider, the vehicle and the environment including other road users and thereby understand incidents and accidents causation as well as how different vehicle systems enhance safety. The objective is to reduce the number of fatalities and seriously injured in road traffic.

Benefit to the project partners and impact on society:

- Network including the most prominent researchers in the area from the US, Europe, Australia, Japan and China
- Mobile phone use policy in Sweden influenced through SAFER researchers
- Naturalistic driving data integrated and used in the courses at Chalmers
- Data processing and analysis methods developed for naturalistic data, resulting in scientific papers and reports
- Data Protection Concept developed, ranging from data collection, storage, analysis and re-use of data
- Founder of the Driver Distraction and Inattention conference, held three times at SAFER attracting the best researchers
- 3rd International Cycling Safety Conference (ICSC 2014) held at SAFER (record high attendance)
- Information exchange on naturalistic data topics with SHRP2 based on an agreement (MoU) between TRB, VINNOVA and Swedish Transport Administration

The challenge was approached using seven key strategies:

Provide initial SAFER funding for early start-up: networking, travel, lead in proposal writing; Learn from the best, starting with UMTRI and continuing with expertise in key areas such as statistics and human behaviour; Build a complete data handling infrastructure consisting of data collection equipment, database structures and analysis tools, to gain control of the quality and understand the challenges; Use all competences within SAFER and be open-minded as the area is new, complex, and a large variety of competences are needed; Develop a world class worldwide network to get access to vital competences and form strong consortiums; Form a vision of the area in 2016 to create energy to achieve world class; Produce quality results to attract renewed funding.

Measurable results:

- One of three consortiums awarded US analysis projects on the world’s largest ND dataset SHRP2
- Numerous scientific papers and reports based on methods for and results from analysis using naturalistic data
- Founder of the Driver Distraction and Inattention conference, held three times at SAFER attracting the best researchers

(See also SAFER Success Story
Naturalistic Data Platform)

SAFER
VEHICLE AND TRAFFIC SAFETY CENTRE AT CHALMERS

Funding: 11 MSEK SAFER internal (cash and inkind), and more than 113 MSEK external

Partners: AB Volvo, Autoliv, Chalmers, City of Gothenburg, If, Lindholmen Science Park, Saab Automobile, Scania, SP, Swedish Transport Administration, TÖI, University of Gothenburg, Victoria Swedish ICT, Volvo Cars, VTI, ÅF

Funders: VINNOVA, EU, National Academy of Sciences, Swedish Transport Administration, VR, Chalmers (SOT)

Period: 2007 - ongoing