SAFER Annual Report 2025

Year 2 in SAFER Stage 6
January 1 – December 31 2025

Borderless research to save lives

SAFER
VEHICLE AND TRAFFIC SAFETY CENTRE AT CHALMERS

What the SAFER collaboration platform enables

SAFER connects research and practice to deliver measurable road safety impact. Hosted by Chalmers University of Technology, SAFER is a neutral collaboration platform where academia, industry and public-sector actors turn shared needs into joint research, knowledge exchange, utilisation, and real-world use.

- **Connect** partners to form high-quality consortia for national and EU calls.
- **Catalyse** new projects through Working Groups and the SAFER Idea Exploration Program.
- **Accelerate** access to research results, methods, and expert networks.
- **Build** long-term capability through cross-sector learning and competence exchange.
- **Convey** results through dialogue, dissemination and uptake.
- **Support** evidence-based decisions with neutral dialogue and research synthesis.
- **Enable** test beds and data collaborations via the SAFER ecosystem.
- **Strengthen** partners' visibility through seminars, events, and strategic communication.

Scan the code
Appendices and full project list

Meet our partners
saferresearch.com/partners

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saferresearch.com

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safer@chalmers.se

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What we made possible together in 2025

In 2025, SAFER took several important steps as a neutral platform for multidisciplinary road safety research. Below are some of the main achievements that strengthened our community, way of working and impact on road safety.

1. **In 2025, 10 new partners joined SAFER,** taking us past 50 organisations and a network of around 750 people, with more authorities, cities and societal actors actively involved.

2. **A new three-year partner agreement** is in place, providing a more long-term and stable foundation for joint planning, prioritisation and development than the previous one-year cycles.

3. **SAFER's Working Groups** have become strong engines for co-creation, with the newly established Connected Safety and Remote Operations Working Groups clearly showing how partner needs are translated into shared agendas and initiatives.

4. **SAFER Research Days** have established themselves as well-attended key events within the platform, where knowledge is shared, gaps are identified and new collaborations and project ideas emerge during and after each mini-conference.

5. **In 2025, SAFER, in collaboration with the Swedish Transport Administration and SKR, launched and hosted Trafiksäkerhetsdagarna** as Sweden's new national meeting place for road safety, positioning the platform as a hub where researchers, authorities, industry and civil society jointly shape the road safety agenda.

6. **The SAFER Idea Exploration Program** has now supported close to 50 projects and, with 22 high-quality applications in just two calls in 2025 – a record level of interest – it continued to lower the barrier for new ideas and partner constellations to take shape.

7. **Research took important steps forward** in several critical areas – from safe automation, ADAS and connected safety to vulnerable road users, long-term injury outcomes and an open SAFER Human Body Model now available for wider use in developing safer road safety solutions.

50

22

The SAFER Idea Exploration Program has now supported close to 50 projects, with 22 high-quality applications in just two calls in 2025.

Key facts

These figures summarise how the SAFER platform provided support to partners throughout the year: building collaborations, turning ideas into funded activities, and sharing results that strengthen road safety work in practice.

52
Number of partners

11
Number of active Working Groups

72
Number of co-creation and knowledge-sharing activities

39
Number of new partner projects to the portfolio

34
Number of completed projects during the year

64
Number of publications from partner projects

CONNECT – build collaborations

In 2025, we for the first time brought together more than 50 partners – 52 in total, including 10 new ones – and an active network of about 750 people through 11 Working Groups and 72 co-creation and knowledge-sharing activities across the SAFER community.

CATALYSE – turn needs into projects

We converted ideas into action through the SAFER Idea Exploration Program (2 calls; 22 proposals; 8 granted; 695 KSEK) and by adding 39 new partner projects to the portfolio, while 34 projects were completed[3] during the year.

CONVEY– increase reach and uptake

We strengthened the spread of results through ~64 publications[4] from partner projects.

Partner experience and impact

Partner Satisfaction Index[5]: 4,8/ 6
Gender balance in Board and Research Council (women:men) 6:9,
Partner PhDs graduated[6]: 7
Net Promoter Score (NPS): +41

4,8
Partner Satisfaction Index.
(Scale 1–6, where 6 is very good.)

[1] **Partner list**
www.saferresearch.com/partners

[2] **Activity list**
Scan the QR-code on page 2

[3] **Partner project list**
Scan the QR-code on page 2

[4] **Partner publications**
www.saferresearch.com/publications

[5] **Partners rated the overall benefit of the partnership.**
(Scale 1–6, where 6 is very good.)

[6] **List of graduated students and their dissertations**
Scan the QR-code on page 2

Message from the Operational team

Welcome to our Annual Report! 2025 has been a year of both strengthening and strategic movement for SAFER. We have stood close to where collaboration happens – in projects, Working Groups, Research Days and many everyday conversations between partners.

THIS REPORT offers a snapshot of what we achieved together and how the network, facilitation toolbox and partner project portfolio continue to drive knowledge, ideas and real-world change.

Our Working Groups have taken clear steps forward, delivering activities and results according to their aims while also building something less visible, but crucial: a stronger shared direction. Across topics, we see partners moving from isolated questions to joint agendas and from dialogue to action as new groups start and existing ones broaden and deepen their communities of practice. This illustrates how SAFER, as a neutral arena, helps different competences and perspectives come together to create outcomes none of us could achieve alone.

A particularly positive development has been the continued success of our Research Days – our mini-conferences. These events bring together researchers, industry experts and public-sector actors around focused themes, and have become powerful platforms for both spreading knowledge and closing knowledge gaps. In several cases, they have led to follow-up activities, new collaborations and sharper questions for future projects, forming an important bridge between the project portfolio and the wider community of practice.

We have also seen record-high interest in being part of SAFER. For the first time, we have more than 50 partners and an active network of about 750 individuals, with more societal actors engaging in the platform. This broadening is not just “nice to have”; it is necessary if we are serious about safe and sustainable mobility, and we hope even more key players will join in 2026, so we can reflect the full ecosystem that shapes road safety.

The SAFER Idea Exploration Program has continued to prove its value as an engine for early-stage collaboration. With close to 50 projects funded to date, it offers a format that works: fast, relevant and partner-driven, helping partners test ideas, build new partner constellations and prepare for larger initiatives.

Another highlight has been Sveriges Trafiksäkerhetsdagar. Being entrusted to host this meeting place for the very first time has been both an honour and a responsibility. Researchers, municipalities, authorities, NGOs and industry representatives met, shared experiences and discussed future priorities. Our hope is that we have helped create a momentum for safer roads and that this gathering will continue as a meeting place for everyone working with road safety.

Internally, SAFER is in the middle of a transformation. We are developing into an organisation without core partners, where everyone participates on equal terms, and a new Steering Group will take over the strategic development from January 2026. At the same time, we enter the year with a leaner budget and a move to new facilities that will affect us in practice, requiring us to prioritise carefully and focus on what creates real value for partners and for road safety.

Whatever the conditions, our commitment remains the same: to convene, facilitate, connect and create together with you. SAFER exists to turn shared challenges into joint work and to help research and knowledge travel into products, services, policy and practice – ultimately to prevent serious injuries and save lives in traffic.

With appreciation and optimism,
SAFER’s operational team

Turning road safety challenges into joint action

Road injuries remain a global crisis: 1.19 million people are killed in traffic each year, and road injuries are the leading cause of death for people aged 5–29. The burden is uneven, with most fatalities occurring in low- and middle-income countries, highlighting a clear equity challenge.

As a platform, SAFER enables collaboration that accelerates progress. We unite partners from society, academia and industry to develop evidence, methods and projects that support Vision Zero. By connecting needs and expertise, catalysing early ideas into concrete initiatives, and amplifying results through dialogue and dissemination, SAFER helps partners turn shared questions into safer mobility in practice.

SAFER'S VISION
A road transport system safe for *all*.

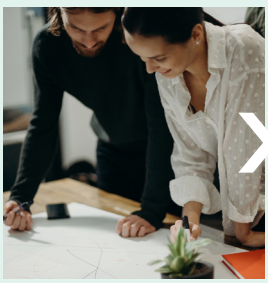
SAFER'S MISSION
We are bringing people together, conducting research and leveraging knowledge to enable safe sustainable mobility.

» We unite partners from society, academia and industry to develop evidence, methods and projects that support Vision Zero.

How we create impact: the pathway

To contribute to Vision Zero and the global road safety agenda, SAFER brings partners together and guides collaboration through three building blocks: gathering needs, forming constellations, leverage knowledge and know-how as well as nurturing a high-quality project portfolio. Across this pathway, we support co-creation and knowledge building, then strengthen impact through a variety of joint activities: dissemination, science outreach and utilisation, that the results reach real-world use.

SAFER's key building blocks



Gathers needs, forms constellations, and facilitates co-creation

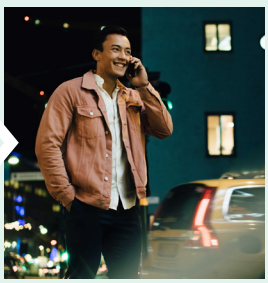
Catalyse research, projects and knowledge building

Leverage knowledge and know-how

- Partner Projects
- Working Groups
- Lab Resources
- SAFER Network
- Eco-system
- Knowledge Library

Provides dissemination, science outreach and utilisation

- Influence
- Convey
- Spread



The society with its actors and stakeholders

- Safe road users
- Safe vehicles
- Safe roads and traffic environment

Our role

Collaboration > Catalyse > Convey

Collaboration > Projects > Impact

How partners engage: our collaboration process & toolbox

SAFER offers a streamlined way for partners to bring in road safety challenges, request support, and find the right collaborators. Through Working Groups, the Operational Team and supported by the Steering Group, needs are matched with the right process and tools – so that ideas move faster towards projects, dissemination and utilisation in practice.

1 **Entry points**
- Bring a challenge
- Request support
- Find partners

2 **Who you meet**
- Working Groups (community & idea incubation)
- Operational Team (facilitation & matchmaking)
- Research Council (quality support & alignment)

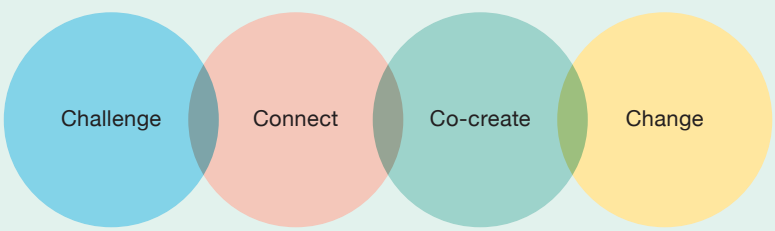
Please note that in 2026, the Research Council will be replaced by a Steering Group.

3 **Toolbox**
- Host seminars
- Run roundtables
- Facilitate workshops
- Join Working Groups
- Partner matchmaking
- Invite external experts
- Funding expertise
- Seed funding (SAFER's Idea Exploration Program)
- Knowledge bank access
- Study tours & visits
- Demos & test environments

Typical outputs

Actionable knowledge applied in products, services and policy – helping prevent serious injuries, save lives, and accelerate safer, sustainable transport.

The partner journey in four steps



Partner project portfolio snapshot: where we contribute – and why it matters

SAFER's partner project portfolio is at the heart of our mission to advance road safety through collaborative research and knowledge-building.

By integrating past and present projects into one structured overview, we place each initiative in a system context, connect the right expertise and reveal knowledge gaps partners can address together.

The portfolio gives each project greater value through visibility, dissemination support and network access and gives all partners a shared direction. With a clear view of where work is happening, and where gaps remain, it helps steer collaboration and funding towards the areas with the greatest potential impact.

84
Number of ongoing partner projects in 2025

39
Number of added partner projects in 2025

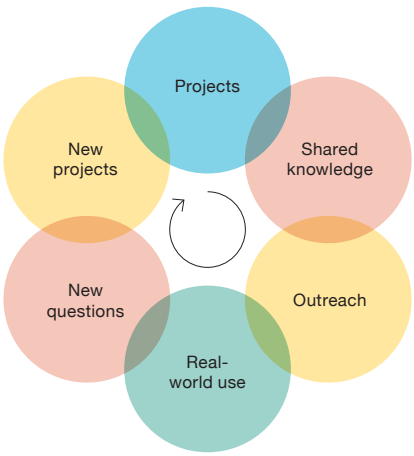
34
Number of completed partner projects in 2025

48
We are starting 2026 with 48 partner projects in the partner project portfolio

Portfolio leverage: how knowledge scales

SAFER maintains a structured overview of partners' projects and results, making it possible to scale knowledge beyond each individual initiative.

A diversified funding base, from national programs to Horizon Europe, combined with partner contributions, strengthens collaboration and increases the platform's ability to disseminate and translate results into products, services, policy and legislation.



What partners get
- Stronger constellations and higher proposal quality
- Greater visibility and targeted dissemination formats
- Faster translation into practice, products and policy

Funding base
- National programmes
- European funding programs, like Horizon Europe
- Partner contributions
- SAFER's funding program

The partner project portfolio is our engine – what we amplify comes from what partners build together.

Impact Stories

Safe automation in mixed and complex environments

The challenge
Connected and automated vehicles must be safe in dense, mixed traffic where human-driven vehicles, cyclists and pedestrians interact under changing conditions. Authorities and industry need credible methods, standards and large-scale experience to show that automation reduces – and does not create – risk.

How SAFER partners are working
SAFER partners advance methods and standards for safe automated driving across the full chain:

- **Standards and verification.** Work linked to future updates in ISO 5084 towards 2027 consolidates knowledge gaps and feeds into standardisation and verification discussions in relevant Working Groups.
- **Large-scale learnings.** Experience and data from major European initiatives – from *L3Pilot* to *HiDrive* and *preparation project for EU-wide large scale demonstrations* – provide practical insight into how automated driving performs in real traffic and where safety challenges remain.
- **Surrogate safety and complex traffic.** Projects such as *SUperSAFE* develop surrogate safety measures and traffic models for mixed traffic, capturing risk before crashes occur and supporting proactive safety assessment.

Through these efforts, Swedish partners help shape how safe automated driving is defined, tested and argued for – in Sweden and elsewhere.

Real-world use and effectiveness of ADAS

The challenge
Advanced driver assistance systems (ADAS) can significantly improve safety, but only if they are correctly designed and actually used as intended. There is often a mismatch between the theoretical safety potential and how systems are activated, interpreted and sometimes switched off in real life.

How SAFER partners are working
2025 saw a strong focus on human interaction with ADAS – behaviour, use and misuse:

- Projects such as *SUPPORTIN, ADAPTION* and Acceptance for use of Safety Technology *AuST* analyse why drivers deactivate systems, under which conditions they are trusted, and how design can better support correct and safe use.
- Within the Working Groups for Road Accident Statistics and Road User Behaviour, partners advance data-driven safety evaluation of ADAS using accident statistics and real-world data to estimate performance and safety impact.
- The *I2Connect* project develops a next-generation, cloud-connected ADAS prototype for heavy trucks and cars, fusing vehicle sensors, roadside sensing, weather data and driver monitoring to prevent rear-end and truck–cyclist crashes in real traffic.

By combining behavioural insight with robust evaluation methods, SAFER partners generate recommendations for system design, information, regulation and consumer communication – so that ADAS deliver real crash and injury reduction in everyday driving.

The SAFER Human Body Model goes global

The challenge
To design tomorrow's safety systems, industry and researchers need tools that can predict real human injury risk – across different body types, seating positions and crash scenarios – in a way that traditional crash test dummies cannot.

How SAFER partners are working
In 2025, the SAFER Human Body Model (SAFER HBM) took a major step from research asset to global tool. A world-leading virtual human body model, SAFER HBM is now being brought to market via the Fraunhofer Chalmers Centre, offering a biofidelic, robust and scalable model for advanced automotive safety development. It provides full-sequence prediction from pre-crash manoeuvres to in-crash impacts, with detailed kinematics and fracture risk analysis for ribs and lumbar spine and can be morphed to represent occupants of different heights, weights and sex. Beyond car occupants, the model can be extended to pedestrians, motorcyclists and cyclists, enabling safety evaluations for all road users. Built on a long line of SAFER projects and partner co-funding, this step makes SAFER HBM openly available as a practical tool for industry, research and, over time, consumer testing protocols.

Safer cycling and walking on everyday streets

The challenge
Walking and cycling are central to climate and health goals, but pedestrians and cyclists remain among the most seriously injured road users, not only in cities, but also on rural roads and not least in a global context. Cities and regions need better data and tools to design, operate and maintain safe networks for active travel. Also, better protection and warning systems are needed.

How SAFER partners are working
SAFER partners work across contexts, from African cities to Nordic countryside:

- Projects like *AfroSAFE* and *REALLOCATE* explore Safe System–based solutions for safe, attractive streets in rapidly growing urban environments.
- *STIG* develops AI-based inspection methods so municipalities can monitor and maintain walking and cycling routes based on data rather than spot checks.
- Cycling safety beyond urban settings is addressed through several follow-up projects building on earlier SAFER pre-studies such as *How We Roll*, as well as studies of driver behaviour and speed on rural and 2+1 roads.
- *MegaBITS* – tests ITS solutions (floating bike data, VMS, smart lighting, apps) in several European cities to make cycling safer and more attractive – and reveals both the potential and the data-quality challenges.

Together, these activities move practice from isolated interventions to more systematic, evidence-based approaches that integrate safety, climate and liveable streets.

Safer travel for pregnant women

The challenge
Pregnant occupants have specific protection needs, and incorrect belt use or unregulated comfort products can greatly reduce safety. Historically, this group has been under-represented in test tools, regulations and guidance.

How SAFER partners are working
Partner projects have generated new evidence on correct belt use during pregnancy and on the safety impact of common, so called, comfort products. Analyses of real-world use patterns, combined with virtual models of pregnant occupants, clarify risks and injury mechanisms in a way that has not been possible before. This work has resulted in national recommendations on seatbelt use and comfort products for pregnant occupants and now informs communication from healthcare and road safety actors. SAFER's neutral platform has made it possible to bring healthcare stakeholders, researchers, authorities and industry together around this sensitive topic and to lay the groundwork for future product development and potential regulation.

SAFER partners' work on pregnant occupants has resulted in Sweden's first evidence-based recommendation on safety belt use and comfort products during pregnancy.

Safety for motorcyclists

The challenge
Motorcyclists remain one of the most high-risk groups in the road transport system. Traditional safety work and regulations have largely focused on cars, while knowledge, tools and Safe System-oriented approaches for powered two-wheelers (PTW) have been less developed.

How SAFER partners are working
Deeper understanding of PTW crashes and protection. Projects improve Human Body Models and protection concepts for motorcyclists, analysing crash dynamics, riding postures and injury mechanisms to inform future vehicle and protection design.

- *Safe System Principles for MC* – a new project that brings authorities, researchers, industry and rider organisations together to translate Safe System thinking into concrete strategies and measures for motorcyclist safety.
- SAFER MC workshop – a dedicated workshop at SAFER that gathered key stakeholders to map the most urgent risks for motorcyclists in south east Asia and co-create the research questions that now drive the new project on Safe System principles for MC.
- SAFER HBM as a motorcyclist – the SAFER Human Body Model can now be configured as a motorcyclist, enabling advanced simulations of rider postures, crash dynamics and protection concepts to inform future vehicle design, gear development and regulatory work.

Organisational road safety and governance

The challenge
Cities, regions and public organisations are increasingly expected to treat road safety as part of their broader sustainability and governance agenda – alongside climate, health and social equity. Many want to do more, but lack practical tools, data and support to integrate traffic safety into strategies, audits, planning and day-to-day decision-making.

How SAFER partners are working
SAFER partners work with municipalities and regions to make road safety a visible, measurable and manageable part of organisational practice:

- *Trafiksäkerhetslyftet* tests and refines an audit and follow-up approach for municipal road safety work, linking leadership, culture, processes and concrete measures. By combining surveys, interviews and action tracking, the project helps municipalities understand where they stand today and what is needed to move from ambition to systematic practice.
- *The SAFER Cities* pre-study connects cities, regions and research organisations to explore how traffic safety can be embedded in climate transition, social sustainability and urban development. It identifies collaboration models, key knowledge gaps and ways to ensure that research results are actually used in planning and governance.

Including people with reduced mobility

The challenge
People with reduced mobility are often invisible in data and system design, despite being strongly affected by choices in infrastructure, vehicles and services. Without their perspective, both safety and accessibility gaps persist.

How SAFER partners are working
SAFER partners work to make people with reduced mobility visible in both research and solutions:

- Projects such as *NoAI* – “No AI About Us Without Us” build open datasets and analyses of movement patterns, perceived safety and risks among road users with reduced mobility, ensuring that future AI-based safety and automation systems are designed with – not just for – these groups.
- The *EARS* – Enhanced Auditory Reality Scout project develops and tests a headphone-based 3D “audio guide” that supports users – especially people with visual impairments – throughout the whole shared-mobility journey, from booking and finding the pick-up point to boarding safely and reaching the final destination, reducing confusion, screen use and risk in busy traffic environments.

Medical conditions, crashes and long-term outcomes

The challenge
Sudden medical events while driving and long-term consequences after crashes are still poorly captured in traditional road safety analysis, which tends to focus on crash occurrence and short-term injury severity. To design effective measures, we need a better understanding of how medical risk, crash dynamics, health outcomes and the care chain interact over time.

How SAFER partners are working
Projects such as *CARDIO* and injury follow-up studies within the EU project *IMPROVA* integrate medical risk and prognosis into traffic safety work:

- They analyse what happens when drivers experience sudden medical events (e.g. cardiac incidents) in traffic – how often this occurs, how it affects crash risk and what mitigating measures could look like.
- They follow up long-term injuries and functional impairment after crashes, shedding light on how road traffic injuries affect individuals' health, quality of life and work ability over time.
- They examine how the care chain can be optimised – from pre-hospital care and emergency response to rehabilitation – to reduce long-term harm and improve outcomes for injured road users.

Together, these efforts move road safety towards a broader health systems perspective, where prevention, emergency care and long-term recovery are seen as connected parts of the same safety challenge.

» To design effective measures, we need a better understanding of how medical risk, crash dynamics, health outcomes and the care chain interact over time.

CCAM collaboration and European frameworks for safe automation

The challenge
Cooperative, connected and automated mobility (CCAM) is developing rapidly across Europe, but without shared test methods, safety definitions and reference environments it is difficult to compare results, align expectations and design coherent regulation. National efforts risk becoming fragmented unless they are connected to European roadmaps and frameworks.

How SAFER partners are working
Through projects such as *CCAMbassador, CCAM Sweden, SUNRISE* and *SYNERGIES*, as well as close ties to European partners, SAFER helps align Swedish competence with the wider CCAM agenda:

- Partners contribute to the establishment of common EU test methods, making it easier to benchmark automated functions across countries, use cases and test environments.
- Work on harmonising safety definitions supports clearer discussions about what "safe enough" means in a CCAM context and how it should be measured.
- SAFER experts are involved in standardisation and policy-oriented task forces, ensuring that methodological insights from research and testing are reflected in future standards and guidance.
- Swedish test environments and data resources – including proving grounds and virtual tools – are integrated into European reference frameworks, positioning Sweden as a relevant and reliable partner in large CCAM initiatives.

In this way, SAFER and its partners help ensure that national work on automation is not an island, but a visible and influential part of Europe's common CCAM development.

SAFER Idea Exploration Program: from needs to new initiatives

THE IDEA EXPLORATION PROGRAM is SAFER's internal funding instrument for early-stage research and strategic pre-studies that can grow into larger collaborative projects. It supports traffic safety ideas that leverage the multidisciplinary SAFER network and often acts as a stepping stone to external funding calls.

In 2025, the program proved once again to be a high-impact, cost-efficient tool for strengthening SAFER's research pipeline and supporting the overall goal of reducing fatalities and serious injuries in road transport. Two calls were launched across SAFER's Working Groups and partner network, resulting in eight approved projects covering topics such as vehicle safety technologies, injury prevention, impaired driving, cooperative mobility, infrastructure safety and remote operation.

1,8

Total program value 2025: 1 825 400 SEK in total (695 000 SEK SAFER funding, 1 130 400 SEK partner in-kind)

02

Number of calls during 2025

22

Number of submitted applications 2025

08

Number of funded projects 2025

07

Final reports received during 2025 (from previously funded projects)

Projects funded in 2025

CoDeSafe – Continuous Deployment Methodologies & Safety Case Generation
A pre-study on adapting Continuous Integration/Continuous Deployment (CI/CD) methods to generate safety cases for software-defined vehicles – laying foundations for future VINNOVA research proposal.
Partners: Volvo Cars, Zenseact, Astus, Rhoda (external).

Whiplash Injuries in Frontal Crashes
Study on risk patterns, long-term consequences, and injury mechanisms of whiplash in frontal collisions, intended to inform protective strategies and future research.
Partners: Chalmers, Volvo Cars, Folksam, Transportstyrelsen, Autoliv, Lightness by Design (external).

In-vehicle Detection of Alcohol and Drug Impaired Drivers
A pre-study preparing experimental design and metrics for in-vehicle detection of impaired driving, with a view toward real-time systems that go beyond traditional interlocks.
Partners: VTI, Magna, Smart Eye, Volvo Cars, Volvo Group, Respiro-Craft (external).

Acceptance for Use of Safety Technology AuST
Investigation into how transport managers and drivers perceive and accept truck safety systems – informing strategies to increase uptake and trust.
Partners: Scania, Guidance To Zero.

Evaluation of Real-World Safety Performance of AEBS on HGVs
Creation of data and methodology frameworks to analyse real-world crash performance of Advanced Emergency Braking Systems (AEBS) on heavy goods vehicles – groundwork for larger future projects.
Partners: RISE (AstaZero), Chalmers, Combitech, Folksam, IF Insurance, Scania, Volvo Group, VTI, STA, LF Älvsborg (external).

Modeling Uncertainty for Safer Cooperative Mobility Simulations
Research on how communication, sensing, and positioning uncertainties impact safety in connected and automated vehicle simulations – toward more realistic evaluation tools.
Partners: RISE (AstaZero), Halmstad University, Chalmers.

What Does It Cost?
A pre-study estimating the cost of infrastructure measures required to meet Sweden's 2030 traffic safety goals – informing prioritisation and investment decisions.
Partners: Guidance to Zero, Folksam, Chalmers.

Exploring the Remote Operation Landscape
Mapping current knowledge and gaps in remote vehicle operations across transport domains – accelerating safe implementation of remote systems.
Partners: VIT, RISE (AstaZero)

Outputs from Idea Exploration projects

Although many projects are pre-studies or early-stage explorations, they already generated tangible results in 2025. Each funded project was required to support one or more Working Group goals, ensuring that outputs feed directly into the groups' roadmaps and joint agendas. Initial and expected results include:

- **Knowledge generation and dissemination:** workshops, lunch seminars and final reports that can be reused in Working Groups and future Research Days.
- **Preparation of future applications for external funding:** several Idea Exploration projects have matured into larger proposals, for example the FFI project VerSACE, which builds on the Idea Exploration pre-study CoDeSafe.
- **Strengthened collaboration across SAFER's partner network:** partners contribute substantial in-kind resources, building new constellations and relationships that extend beyond the individual project.
- **Proof-of-concept developments:** e.g. CoDeSafe's concept for automating safety case work in software updates.
- **Analytical groundwork for future research:** for example real-world evaluation concepts for AEBS, cost estimation methods for safety measures and new insights into remote operation.
- **Enhanced methodological understanding:** from impairment detection metrics to simulation uncertainty, providing input to Working Group discussions and the broader SAFER research agenda.
- **Shared learning and alignment through SAFER Update webinars,** where new Idea Exploration decisions are presented and partners can connect around emerging topics.
- **Working Groups acting as incubators,** continuously shaping ideas, refining needs and feeding well-grounded proposals into future Idea Exploration calls.

Because many Idea Exploration projects are pre-studies, formal academic publications and final deliverables will often appear in 2026 or later.

All project descriptions and reports are available through SAFER's website and publication repository.

During 2025, SAFER's Working Groups served as a central arena for inspiration, knowledge exchange and idea development, where concepts could mature into projects and other joint activities.

SAFER's Working Groups

During 2025, SAFER's Working Groups served as a central arena for inspiration, knowledge exchange and idea development, where partner needs could be explored together and early concepts matured into joint projects and activities that built shared direction.

CLOSE TO 200 partner representatives were engaged across the groups, contributing to focused discussions around specific research and demonstration/innovation regulation themes.

The groups have all been operating with a high degree of autonomy and initiated activities based on partner needs, while maintaining close dialogue with SAFER's strategic governance. Group leaders met regularly to share progress, exchange good practices and address cross-cutting topics. Each group set clear intended outcomes from the outset, ranging from identifying research questions and developing project proposals, to exploring emerging areas in depth or producing outputs such as conference papers, input to standardisation activities and white papers.

The Working Groups were closely connected to SAFER's Research Days, which provided additional opportunities for shared learning, networking and knowledge-sharing through guest speakers and interactive formats. During the year, two new Working Groups were initiated: Remote Operations and Connected Safety.

Our Working Groups at the end of 2025

- Alternative Fuel Powertrain Safety
- Connected Safety (initiated during 2025)
- Long-term Impairments From Injuries In The Traffic Environment
- Organisational Traffic Safety
- Post Crash (in collaboration with Picta)
- Remote Operations (initiated during 2025)
- Road Accident Statistics
- Road User Behaviour
- Safe Infrastructure
- Safety Of Automated Driving Systems
- Safety Of Complex Systems And Emerging Technologies

» The working groups serve as the main forum for inspiration and for developing ideas evolving into projects or other activities.

Results from SAFER's Working Groups

Alternative Fuel Powertrain Safety

Alternative Fuel Powertrain Safety This working group is dedicated to enhancing safety in alternative fuel powertrains, with a particular focus on electric, gas, and hydrogen-powered vehicles. The group addresses a wide range of challenges, including accident response, storage, firefighting, and safety during transport, all with the overarching goal of improving safety for both emergency responders and the public. Their collaborative efforts involve dialogue, knowledge exchange, and identifying potential research needs to advance both team and societal understanding.

The team comprises a diverse range of members, including representatives from academia, manufacturers, authorities, and the insurance industry. Throughout the year, the group has convened several meetings, each featuring discussion topics introduced by a guest lecturer.

These topics are carefully selected to align with the group's interests and to serve as a foundation for insightful discussions, showcasing the varied perspectives of its members. This approach allows the group to gain a broader understanding of relevant issues and adapt to emerging trends. During these meetings, members also share relevant information, such as updates on upcoming calls for proposals and key observations.

One example of identified needs and resulting actions throughout the year is the questions that have emerged regarding batteries and micromobility following the introduction of new company policies restricting storage and charging. Public actors who are struggling to achieve their transition to fossil-free transport while also complying with these policies in a safe manner was put into contact with the team. The actor was interviewed in order to better understand the difficulties and the effects of the policy. These discussed difficulties were translated into gaps and further into a focused lecture featuring invited experts from an Australian government-funded organisation specialising in EV safety. During the lecture, global statistical data were presented, partially justifying the nationally introduced restrictions in Sweden. However, a more nuanced analysis showed that the increased risk associated with micromobility EVs does not apply to all electric vehicles, such as cars. Instead, the higher risk is mainly linked to smaller vehicles that are more exposed to environmental stress and that, by design, lack safety-mitigating features.

Following the presentation, an open discussion was held on how this data could be used within the groups to create future value.

A few examples of the other presentations held in 2025 include:

Failure investigation of tank ruptures in Nybro
At one meeting, MSB presented its investigation of CNG tanks on public buses that, according to media reports, appeared to have burst without any apparent cause. The investigation revealed several important circumstances and demonstrated how such investigations are conducted. It also provided insights into how further learning can be derived from these types of accidents, as well as highlighting the importance of feedback to standards committees and emergency services.

Life extension of vehicle-mounted hydrogen tanks
As a follow-up to the presentation of failed tanks, results from a finalised research project focusing on the life extension of similar Type IV tanks were shared. The study primarily addressed regulatory prerequisites for life extension, together with technologies for qualifying tanks for continued service. The results showed that a first life extension within the same type of service is possible. However, for second-life applications, there is no direct correspondence with the European initiatives related to the secondary use of batteries. Differences in the initial type-approval of hydrogen tanks limit this possibility, even though reuse would be technically feasible and acceptable from a safety perspective. To enable the reuse of tanks, regulatory frameworks need to be further harmonised.

Connected Safety

The Connected Safety working group was established during the year to strengthen collaboration around safety in connected, cooperative, and data-driven transport systems. The group addresses how communication, sensing, positioning, and AI-based methods can be combined to improve situational awareness, risk assessment, and decision-making in safety-critical traffic environments. A particular focus is placed on vulnerable road users, mixed traffic scenarios, and situations where connectivity and sensing reliability are challenged.

The working group brings together participants from academia, research institutes, and industry, with complementary expertise in communication systems, traffic safety, AI, simulation, and transport systems. As a newly formed group, the main focus during the year has been on defining the scope and objectives of the group, identifying relevant use cases, and building a shared understanding of key challenges in connected safety. Several meetings were organised to discuss use-case studies, potential focus areas, and SAFER idea exploration topics, providing a structured platform for dialogue and early-stage collaboration.

The group's discussions have revolved around three main thematic areas. (1) Technology and methodology for safety and optimisation, including how mathematical modeling, information fusion, and advanced AI techniques can enhance situational awareness. (2) Enhancing safety and interaction in traffic systems. The group has discussed how AI-based risk assessment models and digital twin technologies can be used to analyze and mitigate risks in scenarios such as urban intersections, highway on- and off-ramps, and mixed traffic involving cars, buses, trams, and trains. (3) Data, scenarios, and alignment with standards. The group has emphasised the importance of grounding connected safety research in real-world data, such as accident statistics, to identify and prioritises high-risk scenarios.

In addition to internal activities, the group organised two presentations within the SAFER Thursday seminar series: *"Radio positioning, mapping, and SLAM"* and *"Multi-Domain Security for ISAC-Empowered Transportation: Challenges and Opportunities"*, contributing to broader knowledge sharing within the SAFER community.

A key outcome of the year is the successful initiation of the collaborative research project *Modeling Uncertainty for Safer Cooperative Mobility Simulations*, involving AstaZero, Halmstad University, and Chalmers. The project focuses on uncertainty-aware modeling and simulation for cooperative mobility systems and represents an important step from exploratory discussions to funded research activities within the group.

Looking ahead, the Connected Safety working group aims to further refine priority scenarios, strengthen links between data, simulation, and real-world applications, and support new collaborative projects that advance connected safety in realistic transport environments.

Long-term Impairments From Injuries In The Traffic Environment

Objectives

About 15,000 people are injured in road traffic every year, according to STRADA. In addition, there are injuries in the traffic environment, such as pedestrians falling. A very small portion result in death, a large portion recover, and an unclear portion have remaining impairments that affect daily life. This working group wish to increase understanding of the patterns of and prediction needs regarding non-life-threatening injuries resulting in long-term impairment. The knowledge will contribute to development of risk analysis, prediction of injuries and impairments, and to protection against injuries with long-term impairment.

The scope is long-term impairment that last more than 6 months, from injuries in traffic environment for vehicles and vulnerable road users. The aim is to develop knowledge, understanding and competence for prevention and mitigation of impairments.

Key activities

The working group had 6 meetings, including presentations from external and partner researchers, open seminars, meetings focused on project ideas generation and proposal work. During 2025 we continued to explore data registers for knowledge of injuries related to long-term impairments, and gaps in data. Research projects involving partners were shared and discussed, such as analysis of injury patterns from car-to-car crashes, EU projects on long-term injuries, as well as sharing knowledge of funding opportunities. An open seminar focused on arm injuries with research perspectives from US and Sweden and also discussed challenges for protection development and testing for cars.

One of SAFER's Research Days focused on Human body models and Injury Mechanisms addressing injuries on macro and micro level, injuries from e-scooter accidents, modelling and simulation of behaviour of human bodies interacting with vehicles, motorcycles, bicycles, to predict risk of injury and develop means of protection.

Research needs and challenges are continuously discussed at every meeting, leading to topics for future meetings and project collaborations. Sharing knowledge and experiences contribute to the group's work and developments in the area. Group members from more than 10 of SAFER's partners with different competences are involved in this working group, and initiatives for collaborations with other Working Groups have begun. Focus have so far been on physical impairment, however, mental health aspects after traffic accidents and economical effects from reduced working ability are issues that also have been raised.

Organisational Traffic Safety

In 2025 The working group *To identify and improve your organisations work within Traffic safety* changed their name to *Organisational Traffic Safety* to better reflect their focus area.

During 2025 the group held one external workshop with representatives from 11 different organisations and 8 working group meetings.

In the external workshop, held January 29th, the participants brought forward research questions that they experience a need for, five of the main areas have been a focus for the group in 2025.

1. Behavioural change and safety culture
- What strategies are effective in influencing driver behaviour?

2. Traffic safety as a sustainability issue
- How can organisations make traffic safety an integrated part of their sustainability reporting?
- What demands are reasonable and effective for transports?

3. Technical development
- How can organisations utilise the tools effectively?
- How to increase the acceptance and use?

4. Procurements
- How is the relationship between demands for road safety and actual safety footprint?
- Which incentive and procurement systems are needed to ensure compliance?
- How can standards and certifications become a natural part of transport procurements?

5. Measuring, economy and decision support
- How can organisations use existing (or new) data to identify and prioritise traffic safety measures?

Meeting 1: Summary of workshop.
Meeting 2: Fair Transports traffic safety demands and how they make sure they are CSRD-compatible, external presenter from Fair Transport.
Meeting 3: ISO 39001 updates, external presenter from SIS.
Meeting 4: Presentation of the SAFER idea exploration project Acceptance for use of Safety Technology, AuST..
Meeting 5: Recap of the research questions and what we have done to handle them
Meeting 6: Traffic safety as an OHS question. Presentation of an interview with Peter Anderson, expert in labour law and Occupational health and safety, Senior Lecturer at Department of Law, University of Gothenburg. Update about the Euro-Ncap on heavy vehicles.
Meeting 7: What did we learn at Trafiksäkerhetsdagarna? Discussion on how to approach the remaining questions from the workshop.
Meeting 8: Sustainability reporting and CSRD, what effect will it have on how organisations work with traffic safety? external presenter from Trivector.

Focus for 2026:
- Traffic safety's role in Occupational health and safety – It's a big one!
- Traffic safety as a sustainability issue – As a goal in itself and as a prerequisite for other goals
- Procurements as a tool for increased safety – Take responsibility and incentivise with the right demands
- Measuring, economy and decision support – Can we put a price tag on safety?

Post Crash

The Post Crash working group is run jointly between PICTA (Prehospital ICT Arena) and SAFER, which means that we cover a wide range of actors, all relevant to meet the challenge in this area. Some key issues that the group addresses are:

- Technologies for more effective and precise ways to detect, assess, prioritise and monitor (and sometimes predict) incidents for appropriate response and resources dimension and preparedness for larger complex events – while also maintaining basic capacity.
- Managing the accident scene and ensuring the best outcome for victims/patients.
- Preparedness and competence among the people working in alarm/dispatch centres, response vehicles and on accident scenes.
- The safety of first responders – while driving, working on-site or during transport.

During 2025 we have had various activities and presentations, such as: updates and reports from the TEAPaN2 project (Traffic Event Assessment, Prioritising and Notification), fires in batteries, specifically e-bikes (in collaboration with Alternative Fuels), ISO WG 7 expert group on Advanced Automatic Collision Notification, seats for transportation of injured children in ambulances, and development of joint diploma thesis ideas. The group is also constantly monitoring information from relevant conferences.

Remote Operations

Purpose and objectives
The SAFER working group on remote operation has been established since late 2024 with the initial focus on advancing remote operations in Sweden, especially for road vehicles. Remote operation – or teleoperation – of road vehicles is emerging globally as a critical enabler for safe, robust, and scalable deployment of vehicle automation, as well as covering the shortage of drivers. In this context, remote operation refers to a case where a human remote operator located outside the vehicle supports operation of the vehicle remotely in situations when the vehicle reaches its operational limits.

In the context of autonomous vehicle (AV) deployments (such as robotaxi services), remote operation is often used to support AVs in order to ensure safe operations of AVs on public roads. For non-automated vehicles, remote operation is used, e.g., in the context of delivering vehicles to customers via remote driving; or used in harsh environment such as underground mines.

While technical developments have advanced through several field tests and research projects, there are several remaining research challenges related to deployment of remote operations. Especially, human involvement through remote monitoring, assistance, and control remains essential. Remote operations are both an opportunity and a challenge for the future of traffic safety. The group aims to unite Swedish companies, universities, and research institutes to collaborate, share research findings, and develop new collaborations and knowledge. By working together, we intend to strengthen Sweden's position in this field and enhance our international competitiveness.

Summary of key activities
The group had 5 meetings throughout 2025. A typical working group meeting begins with an invited presentation followed by discussions. The presentations covering different topics – i.e., overview of remote operation landscape, maritime remote operation, visual media quality, middleware, human factors – were given by Jonas Andersson (RISE), Mikael Södermalm (RISE), Scott McKinnon (Chalmers), Mahdi Davari (InnoBrain), Kjell Brunnström (RISE), Shirin Rafiei (RISE), Pontus Larsson (Ictech), Frank Jiang (FleetMQ). The group had one associated project, REDO 2, which has ended in December 2025.

Summary of key outcomes
The project has resulted in one project supported by SAFER Idea Exploration, *Exploring the Remote Operation Landscape*, in call #2/2025 (partners: AstaZero, RISE, VTI), and one half-day workshop session focusing on legislation and policy to be held in January 2026.

Road Accident Statistics

The Road Accident Statistics working group focuses on leveraging traffic accident data to answer critical questions about accident types, involved road users, and frequency. By developing methodologies and improving access to global databases, the group identifies data gaps, enhances research capabilities, and supports efforts to reduce road fatalities and achieve Vision Zero targets by 2030.

In 2025, the team made significant progress in increasing knowledge about traffic accidents and their global impact, contributing to enhanced road safety.

Enhancing the STRADA database
STRADA is Sweden's primary traffic accident database and is widely used by many SAFER partners from industry, municipalities, and academia. Work to enhance the quality and usability of the database has continued during 2025. The Swedish Transport Agency is implementing some of the 65 improvement proposals identified by SAFER's partners, which will enable more robust research and more effective safety improvements. The use of AI as a tool within STRADA has been initiated. A workshop is planned for February 2026 to further explore how AI can be used for accident analysis using STRADA, and to identify use cases and pilot projects where AI can save time and improve data quality.

Study on Effectiveness of AEBS on Heavy Goods Vehicles
The study, funded by SAFER's Idea Exploration Program, aims to support an application for a larger research project focused on quantitatively evaluating the real-world safety performance of Advanced Emergency Braking Systems (AEBS) on Heavy Goods Vehicles (HGVs). It addresses a critical knowledge gap, as empirical evidence on AEBS effectiveness for HGVs is currently lacking.

While AEBS has been mandatory on European HGVs since 2015, no comprehensive efficiency studies exist for these vehicles, despite such studies being available for passenger cars. This gap is critical given Euro NCAP inclusion of HGVs in its testing programme. The main outcome of the project will be twofold:

- First, a systematic review of available crash and insurance databases, exposure data, and existing evaluation methodologies and statistical approaches relevant to assessing AEBS performance on HGVs. This review will clarify what data and methods can reliably be used to quantify safety benefits.

- Second, using the outcome from the first step, write an application for a larger research project that will carry out the actual AEBS efficiency evaluation. The methodology proposed in this application will be directly based on the findings of the pre-study.

In addition, an important result is the creation of a multidisciplinary network of SAFER partners, including new collaborators. This network is expected to strengthen future research capacity in safety benefit analysis, prediction of impacts from new safety systems, and development of HGV test scenarios relevant for Euro NCAP.

Future collaboration
Future collaborative projects have been raised in the working group that could target several important research needs. Key topics can include case-by-case analyses that account for occupant diversity or more analysis on detailed crash data with confirmed distraction or fatigue, work-related road safety, as well as systematic evaluation of the effectiveness of different safety systems.

Road User Behaviour

Traffic safety depends to a large extent on human behaviour within the transport system. Promoting safe behaviour is not only a matter of ensuring that road users comply with rules and regulations; it also involves supporting people - both inside and outside vehicles - in making safe decisions and performing safe actions. Road User Behaviour (RUB) has been a prioritised research area at SAFER since 2017.

The RUB research area is inherently multidisciplinary, bringing together researchers from a wide range of disciplines and organisations. The long term objective is to sustain a strong and active network focused on road user behaviour, where partners can introduce emerging research challenges, identify collaboration opportunities, and exchange knowledge to advance the field.

In 2025, the RUB group held five meetings, with between 11 and 16 participants per meeting, representing 16 SAFER partner organisations. In addition, one idea exploration proposal on in-vehicle detection of alcohol- and drug impaired drivers – initially proposed in 2024 – was further developed and successfully funded in the first call of 2025.

Priority topics for 2025 were identified during the first meeting of the year. Proposed topics spanned several research domains, with the most prominent being:

1. Human–ADAS interaction
2. Driver monitoring (impairment detection and mitigation)
3. Improved methodologies for research and testing
4. Driver–vehicle communication (internal and external)
5. Making active travel safer and more attractive

The group's goal for 2025 was to facilitate internal meetings as well as open seminars or workshops linked to these topics.

Improving research methods and tools was a recurring theme during three RUB meetings in 2025. This work included providing methodological input to three newly initiated projects requesting guidance on test design and data collection strategies. A shared focus across these projects was improving acceptance and usability of driver support systems. *The Dialog with Trucks* project explores the use of situation aware, AI based conversational agents in driver assistance systems, with emphasis on conversation flow and impacts on safety, efficiency, and user experience. Originating from SAFER's Organisational Traffic Safety working group, the *Acceptance for Use of Safety Technology (AuST)* pre study aims to map knowledge and acceptance of safety supporting technologies in trucks. The *Driver SUPPORTive Interaction and Improved User Experience (SupportIN)* project investigates user experience of ADAS in passenger cars, including drivers' reasons for deactivating support systems. In addition, the first SAFER Research Day of the year, ADAS & Human Interaction, had a strong RUB focus, featuring presentations and discussions on the effective use of advanced driver assistance systems.

The May meeting focused on test methods for evaluating Driver Drowsiness and Attention Warning (DDAW) systems. A UNECE working group under the General Safety Regulation (GSRG) is currently developing new DDAW regulations and requested research input on evaluation methods for system effectiveness. Experiences and insights from the RUB group were compiled and communicated to UNECE during a dedicated workshop in June.

RUB perspectives were also integrated into the final SAFER Research Day of the year, which focused on designing roads and streets that protect vulnerable road users while promoting walking and cycling. The final RUB meeting of 2025 was dedicated to forward planning and the appointment of a new working group leader. We are pleased to welcome Robert Lowe from the University of Gothenburg as the new RUB leader.

Overall, the RUB activities in 2025 provided valuable input to ongoing research projects among SAFER partners and contributed to external regulatory processes, strengthening the link between research, practice, and policy.

Safe Infrastructure

The working group on Safe Infrastructure addresses both physical and digital infrastructure for all transport modes on roads and streets, to ensure that the infrastructure of tomorrow can be safe for all road users. Thus, the working group engages a wide range of SAFER partners, including leading research institutes such as VTI and RISE, the Swedish Transport Administration, various industry partners, Chalmers and Lund University. This broad participation strengthens the group's foundation, ensuring a multi-disciplinary approach to infrastructure safety.

The working group meets to share knowledge and experiences as well as to both build new and strengthen existing relations to foster increased cooperation. The discussions during 2025 have had much focus on the safety challenges for pedestrians and cyclists leading up to the SAFER Research Day in December on the topic *How can we design roads and streets that truly protect vulnerable road users – while supporting more walking and cycling?*

Since May 2025, the working group is co-chaired by Carmelo D'Agostino from Lund University and Maria Håkansson from Guidance to Zero.

Joint projects
It is a core objective to identify and develop new project ideas, and the team has actively facilitated idea generation based on real safety needs in Sweden, providing crucial support for project development and funding opportunities. As a result, several of the partners are running projects together, aiming to address critical safety challenges through innovative solutions. Examples include REALLOCATE, where Mission Cities test safer, greener street designs; the 2+1 roads dataset study, which uses image-based data to understand speed and overtaking behaviour on rural roads; and AfroSAFE, which applies Safe System principles to improve infrastructure safety for vulnerable road users in African cities.

Looking ahead
As the working group moves forward, it aims to expand its network, engage additional stakeholders, and further develop collaborative frameworks that enhance infrastructure safety for all road users. The work done so far lay a strong foundation for continued progress in the coming years, with a focus on practical solutions, research-driven insights, and industry engagement to drive meaningful improvements in road safety.

Safety of Automated Driving Systems

This working group focuses on the design and verification of automated driving systems (ADS) with the objective of demonstrating that such systems can operate safely. Addressing this question is inherently challenging for several reasons. First, automated driving remains a maturing application that has not yet been deployed in large-scale, real-world operations. Second, safety must be demonstrated prior to system launch, often based on limited amounts of verification and validation data. Third, replacing a human driver in the highly complex and globally diverse traffic environment introduces challenges that extend beyond purely technical considerations. Among the most critical of these are the methods for measuring, arguing, and comparing safety.

The working group addresses these challenges through pre-competitive discussions founded on trust, shared expertise, and an open, collaborative atmosphere. It provides a platform where members can exchange perspectives and experiences, benefiting from competencies beyond their own organisations and primary technical domains. In the group's tri-weekly meetings, a dedicated portion of the agenda is typically reserved for sharing observations from activities outside SAFER. These include insights from conferences, standardisation and regulatory initiatives, experiences related to legislation and homologation, as well as market and product developments.

During 2025, the working group convened on 11 occasions. Each meeting combined a structured sharing session with a defined focus topic. Examples of focus topics included reviews of published approaches to arguing ADS safety; discussions of relevant standards such as ISO 26262 and ISO TS 5084; analyses of reported ADS-related accidents; system design considerations for the safe use of AI-based components; continuous compliance strategies; and presentations of results from ongoing research initiatives in which group members are involved. External experts were also invited to selected meetings, including representatives from Vinnova and other subject-matter experts.

Participants in the working group represent a broad spectrum of industry and academia, including vehicle manufacturers, suppliers, universities, research institutes, and independent researchers. A typical meeting involves 8–12 participants, representing nearly as many different organisations.

Safety of Complex Systems and Emerging Technologies

The working group for Safety of Complex Systems and Emerging Technologies addresses emerging safety challenges in transport systems and particularly in relation to new technologies such as AI, electrification, and connectivity. Considering this context, the group has an adaptive approach following the latest development and the participants specific interests. The group is a meeting place for knowledge sharing and aims to strengthening collaboration between industry, academia, and authorities.

During 2025 there has been a focus on approaches enabling trustworthy AI in automotive systems by balancing inherent safety with external safety measures, aligning with human cognitive models, and addressing data integrity and bias challenges. Totally there has been seven work group meetings during the year. Usually, the meetings include one or two presentations combined with open discussions around subjects lifted by the participants.

Presentations given during the year includes:

- The SEVS project family (Safe Efficient Vehicle Solutions (see https://www.sevs.se/)
- Trustworthy AI from a traffic safety perspective, a SAFER pre-study
- The Smile I/II/III/IV projects (see ri.se/en/expertise-areas/projects/smile-iv)
- The SUNRISE (Safety assurance framework for connected and automated mobility systems) project
- An overview of the newly published standard ISO/PAS 8800 (road vehicles: safety and artificial intelligence)
- Insights from GAIA 2025 Conference
- Presentation of the I2Connect project (Intelligent, Interactive and Connected Next Generation of Realtime Driver Safety Support Systems)
- Presentation of the SAFEXPLAIN project (Safe and Explainable Critical Embedded Systems based on AI, see https://safexplain.eu/)
- Risk-Based Urban Pathfinding for Vulnerable Users
- Drone Swarm for Real-Time Traffic Accident Scene Monitoring
- AI and Data (quality) – A perennial problem

Further, the group has contributed to three proposals to SAFER Idea Exploration Program during the year and initiated discussions aiming for future research project applications.

Future directions

For coming year, the group will continue to explore how to balance problem understanding with solution development for emerging safety challenges in transport systems.

Focus will be on:

1. Continue being a meeting place for knowledge sharing.
2. Further looking into approaches that enables trustworthy AI in automotive systems. How can inherent safety be balanced with external safety measures and aligned with human cognitive models at the same time as data integrity and bias challenges are addressed?
3. Expand safety research collaborations through new projects and funding opportunities. As part of this, the group plan to prepare a one-pager presenting a joint offer.
4. Further engage in shaping safety standards and regulations.

Science outreach and utilisation

In 2025, SAFER continued to invest significantly in knowledge dissemination, networking, and inspiring activities to promote the real-world application of traffic safety research.

THROUGH REGULAR seminars, thematic SAFER Research Days, a dedicated podcast, and a range of collaborative events, we actively engaged our broad partner community and shared research insights with both experts and practitioners. All activities were grounded in collaboration – with the goal of sharing knowledge, inspiring new ideas, and co-creating solutions for safer mobility.

SAFER Thursday Seminars – Weekly knowledge lunches
A long-standing and valued tradition within the SAFER network, our Thursday seminars bring together partners each week for a lunch seminar showcasing current research results, project insights, practical applications or partner updates. Held by experts from across the network, these seminars covered a wide range of topics in 2025 – from autonomous vehicles and traffic planning to practical case studies like partners' use of the FIA safety index. These sessions continue to serve as a popular and informal forum for dialogue, learning, and cross-organisational networking.

SAFER Research Days – Thematic mini-conferences
To enable deeper exchange, SAFER hosts half-day *Research Days* – exclusive thematic events for the SAFER partners. Each occasion focuses on a specific research theme and includes for example presentations, panels, and interactive workshops. The aim is to share results, stimulate discussion, plan next steps, and identify new questions. In 2025, four Research Days were held, covering topics such as injury mechanisms and the evolution of SAFER's Human Body Model, as well as safe infrastructure for vulnerable road users. These events brought together researchers, industry experts, and public-sector partners – exemplifying the fertile ground for new projects and collaborations that defines SAFER.

Liv- och Trafikpodden – The podcast on traffic safety
To broaden our outreach, we continued producing the Swedish podcast *"Liv och Trafik"* in collaboration with NTF Väst. The episodes feature interviews on current research, successful practices, and policy topics in traffic safety – making evidence-based insights accessible to a wider audience. In 2025, episodes ranged from global takeaways from the Marrakech traffic safety conference to cycling safety in rural and urban contexts. With over 20,000 downloads, the podcast has become a powerful complement to our live seminars and a tool for spreading inspiration and knowledge beyond our immediate network.

Conferences and events
Beyond recurring activities, SAFER also organised and participated in several larger events. In September, we hosted the *Autonomous Mobility Research Conference @ SAFER*, welcoming over 20 PhD students and researchers from CARIAD (Volkswagen Group's software company), Chalmers, and the University of Gothenburg. The full-day event focused on AI, machine learning, and autonomous driving – fostering deep academic-industry dialogue.

One of the highlights was SAFER's first-ever Trafiksäkerhetsdagarna – a new national road safety forum (read more on page 29).

SAFER Research Days have established themselves as well-attended key events within the platform, where knowledge is shared, gaps are identified and new collaborations and project ideas emerge during and after each mini-conference.

We also co-hosted the *Vision Zero International Course 2025* with the Vision Zero Academy (Swedish Transport Administration), welcoming 25 participants from around the world for a week of lectures, site visits, and workshops. The course deepened international understanding of Sweden's approach to system-based road safety and reinforced SAFER's global engagement.

Throughout the year, SAFER organised several knowledge-driven open events:

- A webinar for employers on safe work travel highlighted how traffic safety can be part of occupational health and sustainability.
- A breakfast seminar brought together global experts to discuss Safe System principles for motorcyclists and how to translate those into infrastructure and speed guidelines.
- A hands-on workshop at Transportforum (with Drive Sweden) focused on how cities can use AI to improve traffic safety.
- In April, we hosted a seminar on safety belt use during pregnancy, where new research revealed that 4 in 10 pregnant women use their safety belt incorrectly. In response, SAFER researchers and NTF co-developed national recommendations on correct safety belt placement for pregnant women. This recommendation is now shared via healthcare, web, and social media – a clear example of how research leads to life-saving real-world application.

SAFER Update – Our living newsletter
To keep the network informed, our *SAFER Update* webinar series has become a dynamic source of news, upcoming activities, and calls. All events are listed in the calendar on SAFER's website, and presentations, summaries, and recordings are made available on the partner portal SAFER Inside – ensuring that knowledge remains accessible and usable for all.

We also highlight our partners' **doctoral students** – several of whom defended their theses in 2025. Their work strengthens the network's competence and is highlighted on our website as part of the growing knowledge base that we build together. Scan the QR-code below for a complete list of students and their theses.

Scan the code
to get the appendices
and full project list

Sveriges Trafiksäkerhetsdagar A new national meeting place for road safety

WHAT A SUCCESS! On October 21–22, 2025, more than 300 participants gathered at Lindholmen Science Park in Gothenburg for Sweden's first edition of Trafiksäkerhetsdagarna – a new national forum where the entire Swedish road safety ecosystem came together to share knowledge, build connections, and broaden perspectives on creating a safer transport system. The mix of attendees was remarkable: around 35% came from municipalities and regions, 30% from industry, 15% from academia and research, 10% from NGOs, and 10% from national authorities. Conference halls and a bustling exhibition area with close to 50 exhibitors were filled with dialogue, energy, and active collaboration.

SAFER was commissioned to pilot a new national event concept for knowledge exchange in road safety – and Trafiksäkerhetsdagarna was the result. The event was carried out in close collaboration with SKR (Swedish Association of Local Authorities and Regions) and the Swedish Transport Administration, aiming to test and develop a format that brings together all key stakeholders in road safety.

The program addressed a wide range of topics – from the global traffic safety agenda to practical tools for local governments, the role of digitalisation, and how traffic safety contributes to sustainability, public health, and safe working environments. Conversations were dynamic, networking intense, and one thing was clear: road safety is created together.

> The aim of this conference was to bring together different perspectives to learn, inspire, and drive development forward.
>
> Magnus Granström,
> SAFER Director.

The outcome clearly demonstrated Sweden's readiness to take the next steps toward Vision Zero. For SAFER, the event was a milestone – one that helped us reach new audiences, strengthen our network, and set the agenda for the future of road safety work in Sweden and beyond.

SAFER's Value Proposition

SAFER Asset	Value/Benefit
Unique network	The SAFER network gathers all relevant stakeholders who interact through the diverse set of networking activities. Our community consists of a diverse mix of researchers and experts from industry, academia, research institutions, and government bodies. As a partner, you enjoy opportunities to: • **Establish relationships** with people across partner organisations. • **Share insights and expertise** with peers and visiting external experts. • **Collaboratively initiate and lead research** projects, inspire innovative solutions based on identified needs and concepts. • **Identify suitable collaborators** for ground-breaking projects. • **Access experienced peers:** who can help shape your research towards its most valuable impact, guide formative ideas or help build your network for the next project proposal.
Joint resources	SAFER is a node for accumulated knowledge about road safety and has physical resources that the parties can use. Via SAFER, you as a partner get access to: • **Proactive facilitation:** a dedicated centre management team committed to initiating collaborative projects and sharing knowledge. • **Expansive knowledge repository:** A continually growing wealth of research findings and publications, databases, models, methods, and demonstrators for seamless integration into your organisation. • **Dynamic Working Groups:** Agile Working Groups treating different aspects of traffic safety from research to deployment perspectives, which cannot be addressed by partners on their own. • **Collaboration facilities:** Premises with co-creation areas and office workplaces and suitable AV equipment and collaboration tools, supporting centre collaboration and knowledge exchange. • **Research resources:** Associated research assets that facilitate and support the implementation of research projects, e.g. AstaZero, SAFER HBM, Revere and relevant datasets. • **Dissemination channels:** Well-established channels and tools that facilitate the dissemination of research outputs to the community.
Strategic influence	SAFER's renowned brand and its role as a communication platform provide parties with a unified, highly credible communication channel. As a partner, you can utilise SAFER to connect and engage with: • **Targeted audiences:** effectively reaching specific target groups. • **Communicate with research funders** to shape forthcoming research programs. • **Decision makers** in politics and authorities, both nationally and internationally, to influence road safety agendas, policies, and legislation.
Funding opportunities	As a partner in SAFER, you can get funding through our internal calls. These funds can finance exploratory pre-studies, investigating research questions before seeking external financing, as well as other idea exploration activities. The financial contribution to SAFER is multiplied in the project portfolio. Additionally, SAFER offers guidance and assistance in national and international project funding opportunities.

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VEHICLE AND TRAFFIC SAFETY CENTRE AT CHALMERS