What does it cost?

The price of traffic safety and the cost of getting it wrong

2026-06-02

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VEHICLE AND TRAFFIC SAFETY CENTRE AT CHALMERS

What gets measured gets prioritised...

Traffic safety is often described in lives saved and injuries prevented.

But when decisions are made, what counts is what gets measured and valued.

Today's question is therefore not only: What does traffic safety cost?

It is also:

What counts, what is missing, and how does that shape decisions?

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Traffic safety is often described in lives saved and injuries prevented. But when decisions are made, another language often dominates: **cost**.

- Decisions are driven by value for money.
- We often miss health and long-term benefits.
- Better economics helps us prioritise and act.

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Many real costs are not visible….

- long-term injuries
- organisational consequences
- loss of productivity
- human suffering
- … and many benefits are not visible either…

…therefore, the road safety field could benefit from using them more effectively.

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When we count broadly, health often dominates the benefits…

- In a UK appraisal example ("Links to Schools"), health benefits made up 83% of the monetised benefits.
- Across a set of similar schemes, health benefits averaged 74% of the monetised benefits.
- **Takeaway for today:**
  If we leave long-term health and injury impacts out of our economic thinking, we risk skewed priorities and under-investment in the measures that matter most.

Source: Claiming the Health Dividend (UK Department for Transport, 2014).

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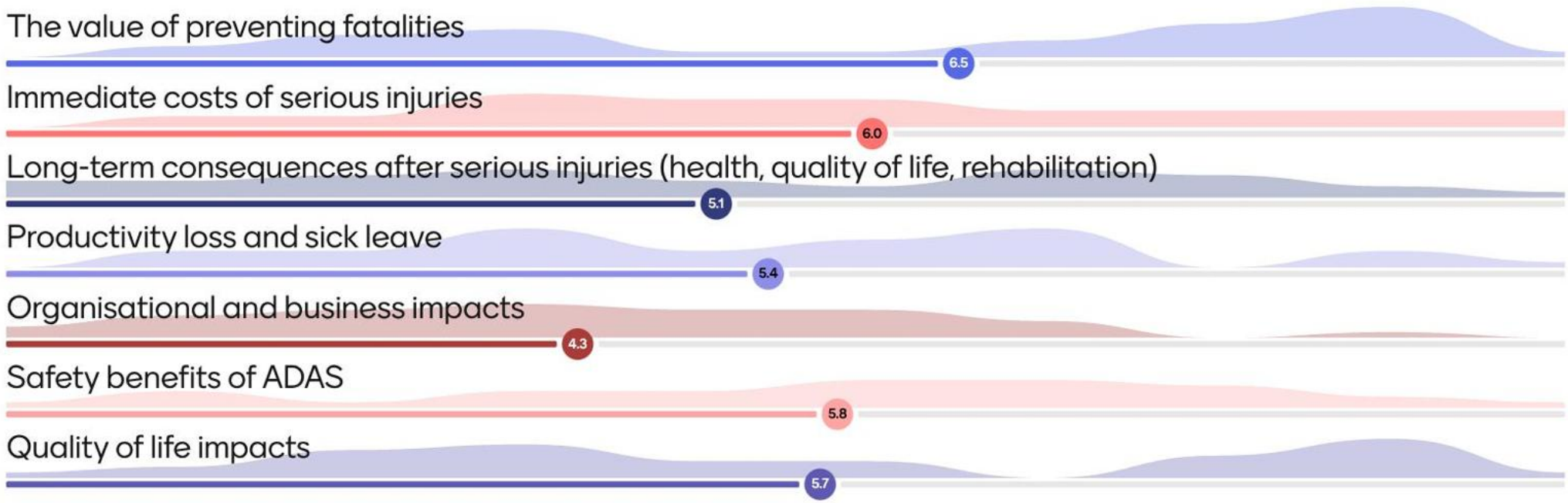
Mentimeter

How well do you think we understand the costs associated with the following factors in road safety?



Today's program

08:40 **Session 1 – Societal costs:** What does traffic injury really cost society?

09:20 **Session 2 – From cost to action:** What does it take to invest in safety?

10:05 Networking break

10:30 **Session 3 – What counts?:** Decision frameworks and valuation

11:30 Break

11:40 **Panel discussion:** Are we investing in the right things?

12:10 Summary

12:20 Networking lunch

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Societal costs: What does traffic injury really cost society?

The societal cost of transport – what are we really paying for?

Anders Ljungberg, Trafikanalys

Work-related traffic and accident costs – a hidden safety challenge

Henrik Sjöstrand, VTI

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TRAFIK ANALYS

Externa effekter, internalisering och ETS

Transportsektorns samhällsekonomiska kostnader för 2025

Safer, 2 juni 2026

Anders Ljungberg

Agenda

Externa effekter och internaliserande skatter o avgifter

Trafikanalys värdering av koldioxid

ETS och internalisering

Läget 2025 i urval (publicerad 31/3 2026)

Behov av ny/uppdaterad kunskap

Externa effekter

Internaliserande skatter och avgifter samt ETS

Regeringsuppdrag (trafikens externa kostnader i relation till skatter o avgifter)

Externa effekter

Slitage (på infrastruktur)

Olyckor

Buller

Koldioxid

Övriga emissioner inkl. slitagepartiklar

Internaliserande skatter o avgifter

Väg: Energi- och koldioxidskatt

Järnväg: Banavgifter

Sjöfart: Farleds- och lotsavgifter

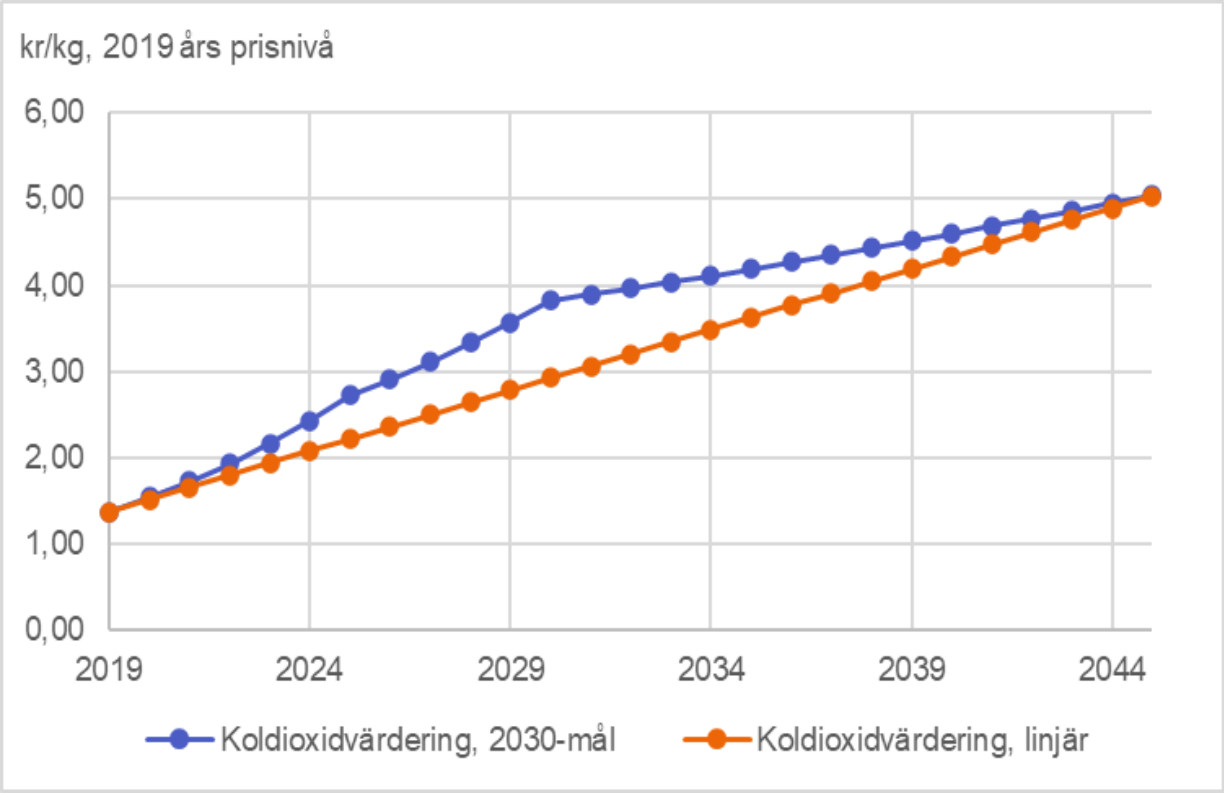
Flyg: Trafikrelaterade flygavgifter

ETS1 och även kommande ETS2

Kostnad för koldioxid i Trafikanalys internaliseringsrapport

Med grund i Trafikverkets ASEK-rekommendation

För väg och järnväg: bågformade banan;
3,40 kr/kg i prisnivå 2025



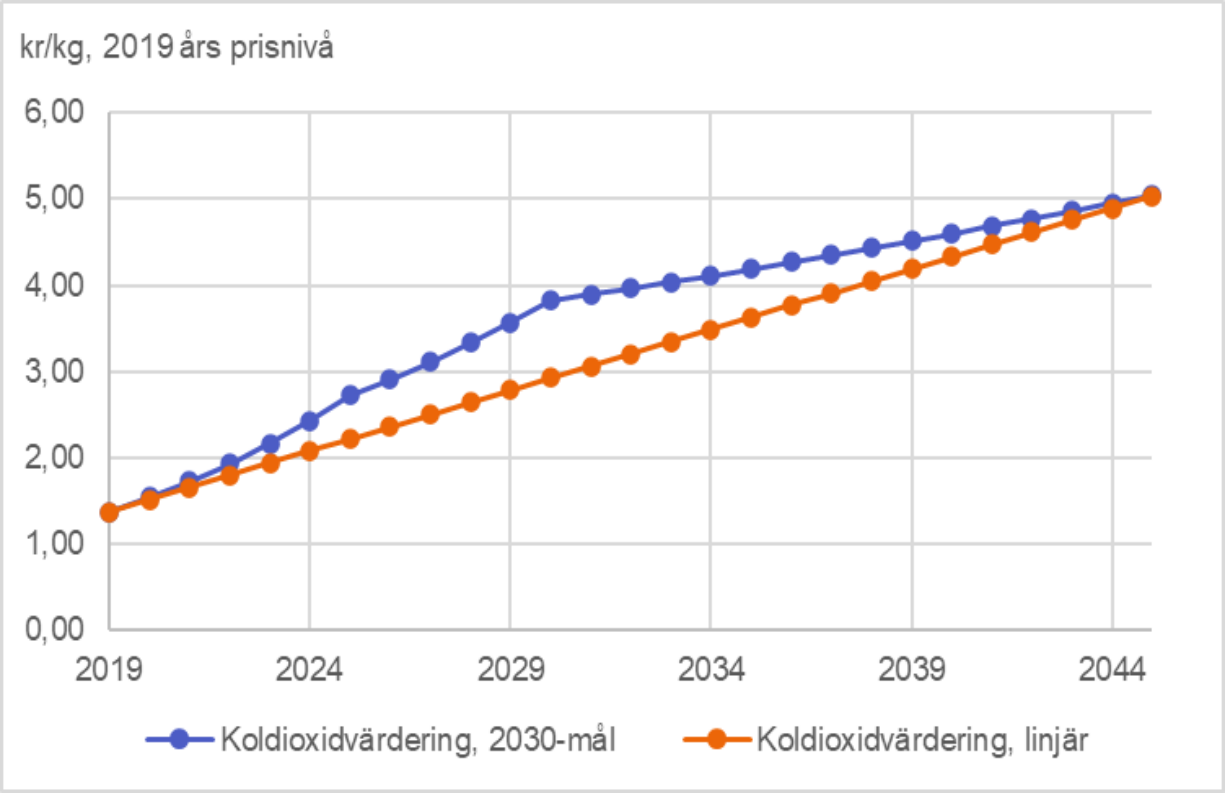
Kostnad för koldioxid i Trafikanalys internaliseringsrapport

Med grund i Trafikverkets ASEK-rekommendation

För väg och järnväg: bågformade banan; **3,40 kr/kg i prisnivå 2025**

Flyget; ETS1 internaliserar CO2, (men vi redovisar CO2 kostnad inom parentes)

Sjöfart; ETS1 internaliserar CO2 till 40% 2024, 70% 2025 och 100% 2026 (om…)



Marginalkostnader för trafikens externa effekter, urval kr/personkm 2025 (publiceras 31 mars 2026)

	Infra-struktur	*Olyckor (säkerhet)*	*Koldioxid*	*Övriga emissioner*	*Buller*	*Summa*
Persontrafik, kr/personkm						
Personbil, diesel	0,04	0,009-**0,43**	**0,36–0,41**	0,002-**0,27**	0-0,09	0,41-1,24
Personbil, el	0,04	0,009-**0,43**	0	0-**0,16**	0-**0,09**	0,04-0,52
Persontåg	**0,092**	**0,034**	0,003	0,0004	0,001-0,02	0,129-0,151
Flygtrafik Arlanda**	≈ 0	--	(**0,50**)	**0,22**	0,001	0,22 (0,69)

Marginalkostnader för trafikens externa effekter, urval
kr/personkm respektive kr/tonkm 2025

TRAFIK ANALYS

	Infra-struktur	*Olyckor (säkerhet)*	*Koldioxid*	*Övriga emissioner*	*Buller*	*Summa*
Persontrafik, kr/personkm						
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Flygtrafik Arlanda	≈ 0	--	(**0,50**)	**0,22**	0,001	0,22 (0,69)
Gods, kr/tonkm						
Tung lastbil utan släp	**0,19**	**0,12-0,38**	**0,51-0,54**	0,001-0,31	0-0,16	0,82-1,58
Tung lastbil med släp	0,09	0,02-**0,08**	**0,17-0,18**	0,000-0,10	0-0,09	0,28-0,56
Godståg	**0,049**	0,006	0,004	0,001	0,005-0,016	0,065-0,075
Sjöfart	0,009	0,004 -0,007	**0,041** **(0,137)**	0,01-0,03	--	0,068-0,087 (0,16-0,18)

Ej internaliserad extern kostnad och internalisering, urval (kr/personkm) 2025

	Landsbygd	*Tätort*	*Vägt genomsnitt*	*Kommentarer*
Persontrafik				
Personbil, diesel	0,22 (48 %)	1,02 (18 %)	0,48 (30 %)	Snittbeläggning 1,5
Personbil, el	-0,02 (142 %)	0,65 (10 %)	0,21 (26 %)	Snittbeläggning 1,5
Stadsbuss, el		**0,31** (15 %)		Snittbeläggning 10,0
Buss, HVO	0,13 (0 %)	0,45 (0 %)		Snittbeläggning 10,0
Persontåg			**0,046** (67 %)	
Flyg Arlanda			**-0,09** (138 %) ((0,38 (45 %))	Avgående inrikesflyg från Arlanda

Ej internaliserad extern kostnad och internalisering, urval (kr/personkm resp kr/tonkm) 2025

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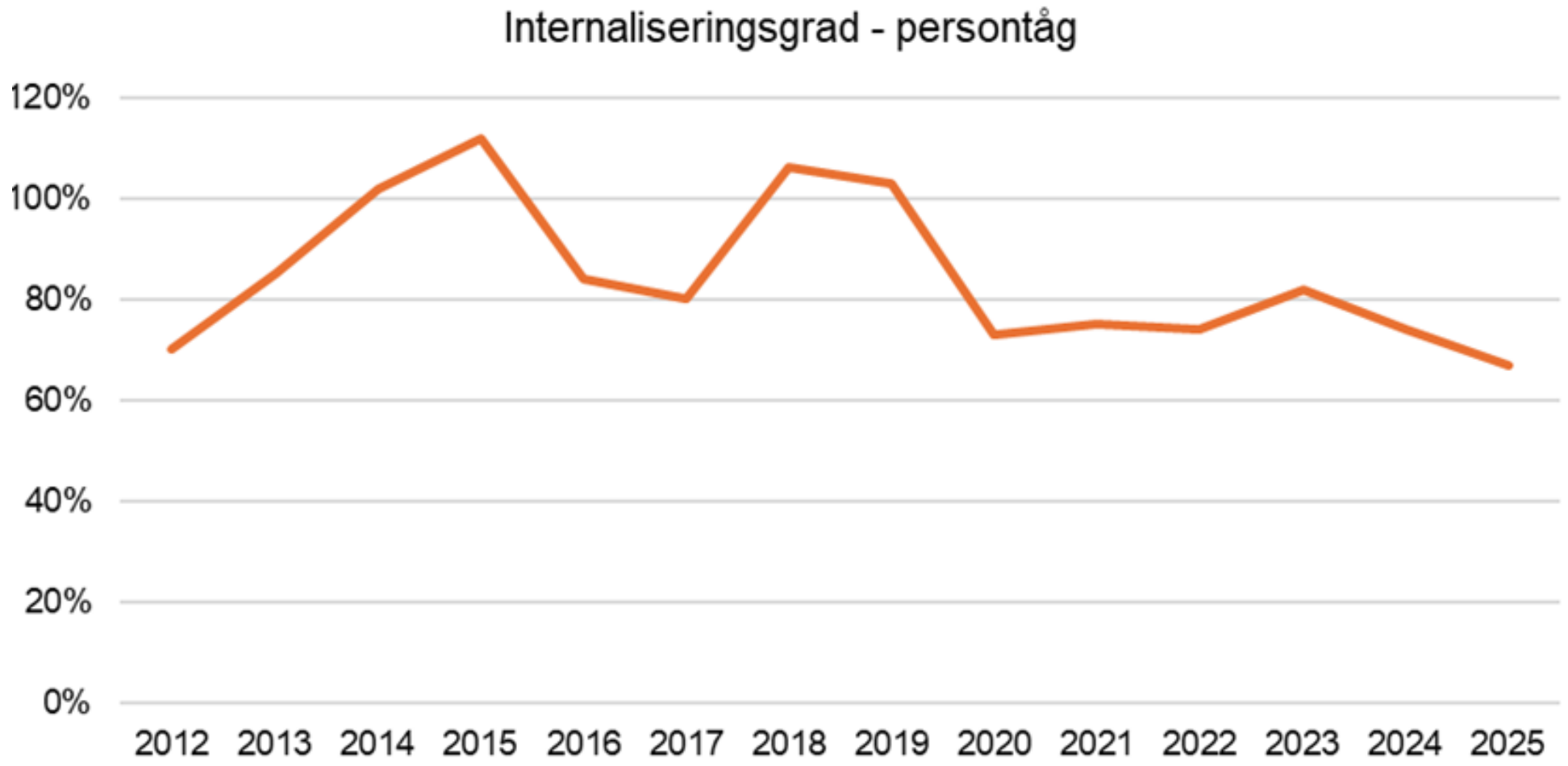
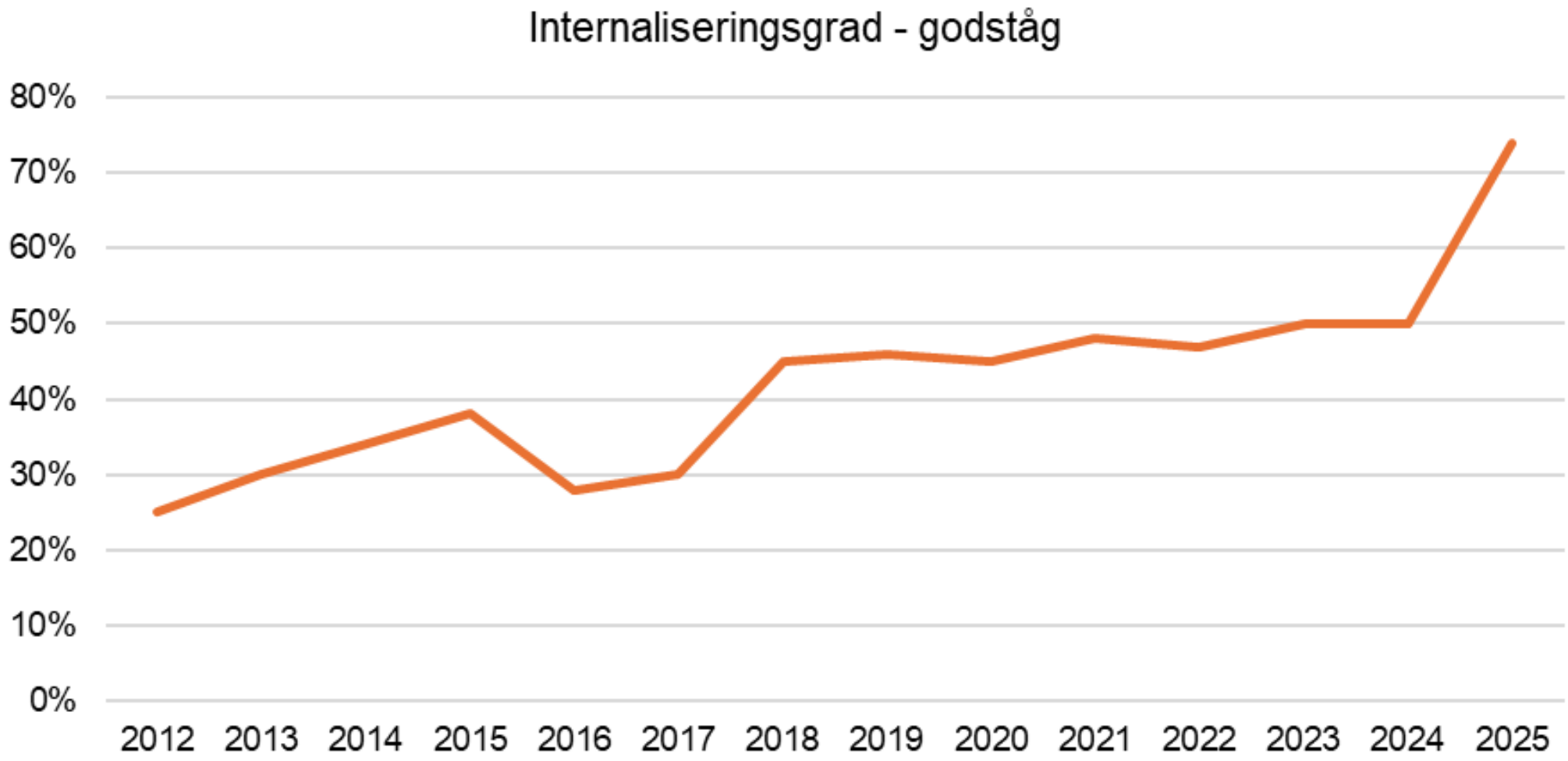
Flyg Arlanda			**-0,09** (138 %) ((0,38 (45 %))	Avgående inrikesflyg från Arlanda
Godstrafik				
Tung lastbil med släp	0,20 (32 %)	0,45 (18 %)	0,23 (28 %)	Genomsnittlig last 18,5 ton
Godståg			**0,018** (74 %)	
Sjöfart			0,01 (90 %) ((0,10 (40 %)	Stor variation

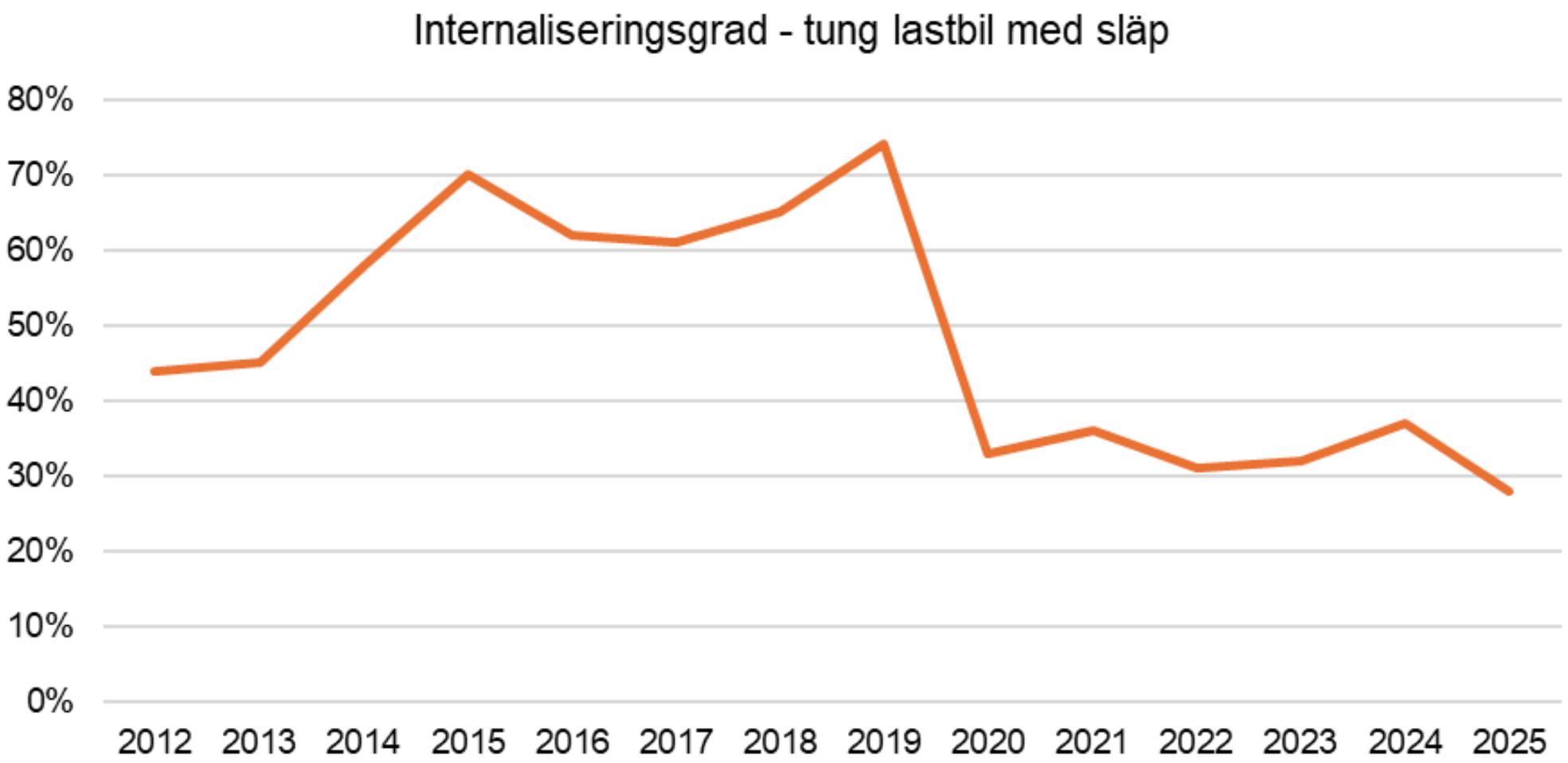
Persontåg, Internalisering över tid



Godståg, Internalisering över tid



Lastbil med släp, Internalisering över tid



Behov av ny kunskap

- Vi lutar oss idag bl.a. mot en del äldre forskningsunderlag (bl.a. Samkost)
- Finns det skäl att studera om och hur externa effekter kan ha påverkats med elektrifiering och nya säkrare bilar/automatisering?
- Behövs en uppdatering av olyckskostnader för respektive trafikslag?
- Påverkas vägslitaget? marginalkostnaden för olyckor? Annat?
- Hur ser det ut med trängsel på vägsidan och kapacitetsbrist på järnväg?
- Sjöfarten berör mest internationell sjöfart på svenskt vatten. Inrikessjöfart behöver lyftas än mer framöver.
- Kan vi ta för givet att ETS1 och ETS2 kommer fungera som tänkt?

Frågor/kommentarer

Trafikanalys Rapport 2026:3, *Transportsektorns samhällsekonomiska kostnader för 2025.*

Trafikanalys PM 2026:2, *Transportsektorns samhällsekonomiska kostnader 2025, bilagor.*

Koldioxidkostnaden kvarstår men utsläppshandeln internaliserar

Även med utsläppshandel finns en **utsläppskostnad**. Den **bärs av den som ger upphov till den** och är därmed internaliserad

I ett perfekt dimensionerat utsläppshandelssystem motsvaras marknadspriset på utsläppsrätter utsläppskostnaden. **Priset på utsläppsrätter beror** i sin tur **av åtgärdskostnaden på marginalen**

Systemet innebär också att utsläpp av koldioxid i motsvarande omfattning **elimineras** någon **annanstans inom den reglerade verksamheten**

I den meningen **uppstår inte någon marginaleffekt** eller extern marginalkostnad på systemnivå. Storleken på **utsläppen inom bubblan är oförändrade (och minskande**)

Utsläppshandels**systemen är internaliserande så länge de finns och fungerar…**

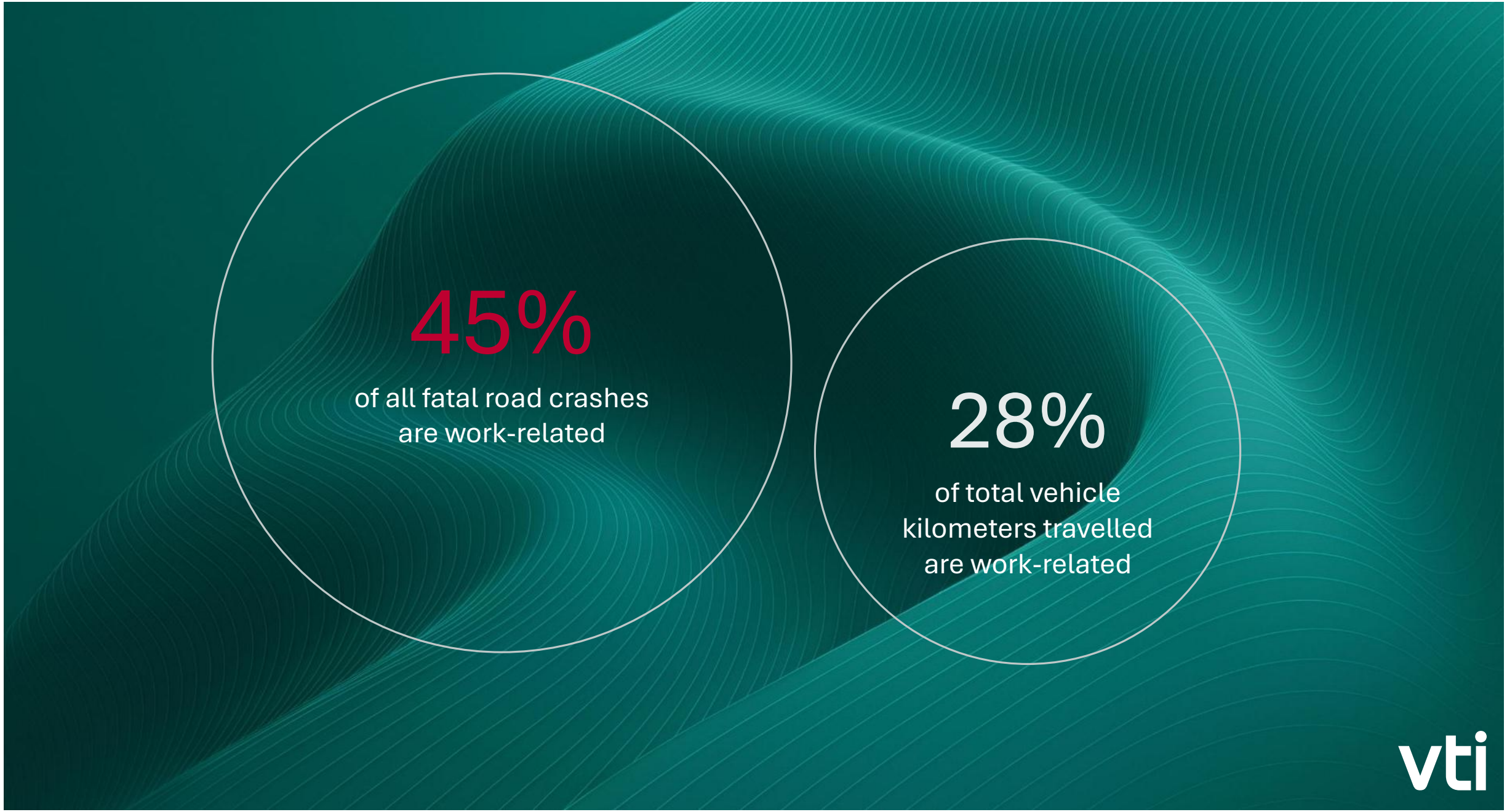
Tack och hej

SAFECAR

Accident Frequency in work-related driving and its Economic Consequences

Henrik Sjöstrand

vti


45%
of all fatal road crashes
are work-related
28%
of total vehicle
kilometers travelled
are work-related
vti

78%

of cars and vans with company logos exceed speed limits (Folksam 2022)

Taxi 90%
Courier & logistics 82%

Previous research

Heavy commercial traffic

SAFECAR's focus

Light vehicles used for work
vs. private cars

Aim – understand the causes of accident risk for light vehicles in work-related traffic

vti

What counts as work-related driving?

Category B license – up to 3,5 tonnes

- vans – carpenters, plumbers, electricians
- taxi
- home care
- courier services
- company cars when used professionally
- private cars when used professionally

A three-part purpose

1. Map

Differences in risk of accidents between work related driving and private car use for light vehicles?

- vehicle registry
- strada: accidents
- socio-economic and demographic data
- orbit: traffic offences

2. Quantify

Estimate accidents costs using ASEK

- fatalities
- injuries
- additional costs

3. Explain

Econometric analysis of socio-economic and situational risk factors

Variation both within the same individual and between individuals

1) drive differently in work
2) socio-economic factors and life situation

vti

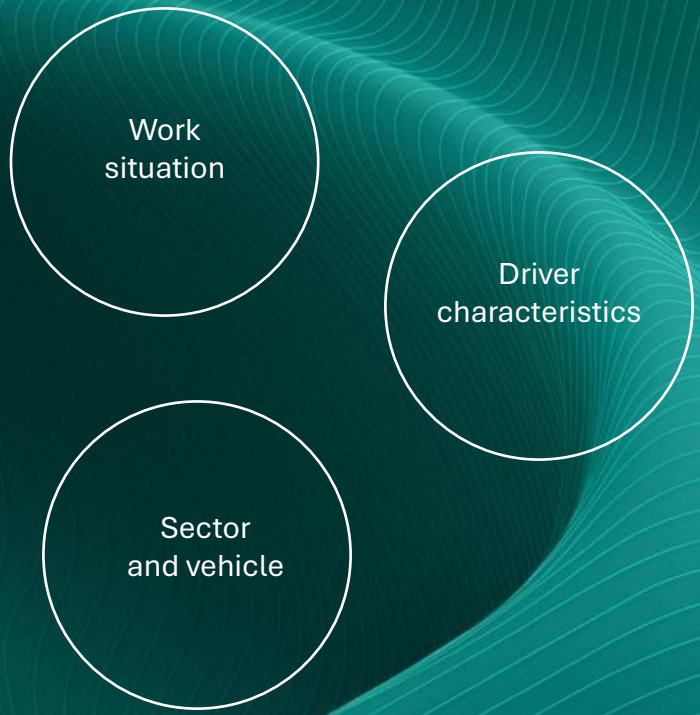
Why might risks differ?

Within variation

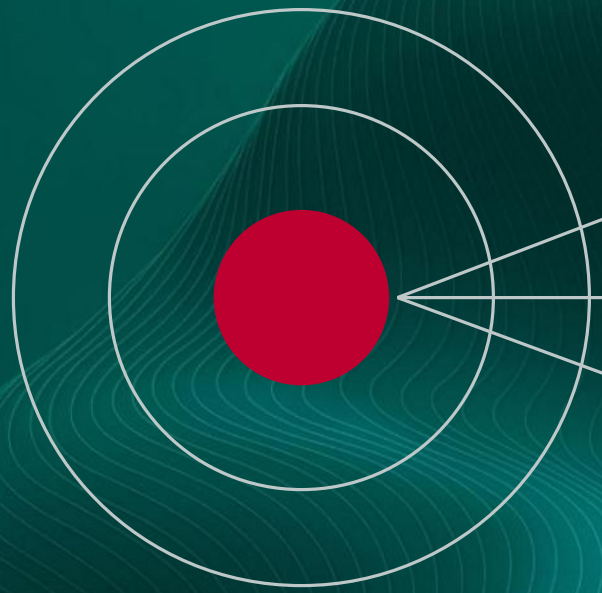
- time pressure
- culture
- employer routines (or lack thereof)
- vehicle type

Between variation

- age
- gender
- Income
- education
- place of residence



Policy implications – focus on step 1 and 2 measures



Procurement
Evidence base for road safety requirements in public procurement

Benchmarking
Annual official reporting on road safety by companies

Targeted measures
Training programmes for high-risk sectors and drivers

vti

Additional info about the project

Funded by Trafikverket

Project leader:

Carl Berry

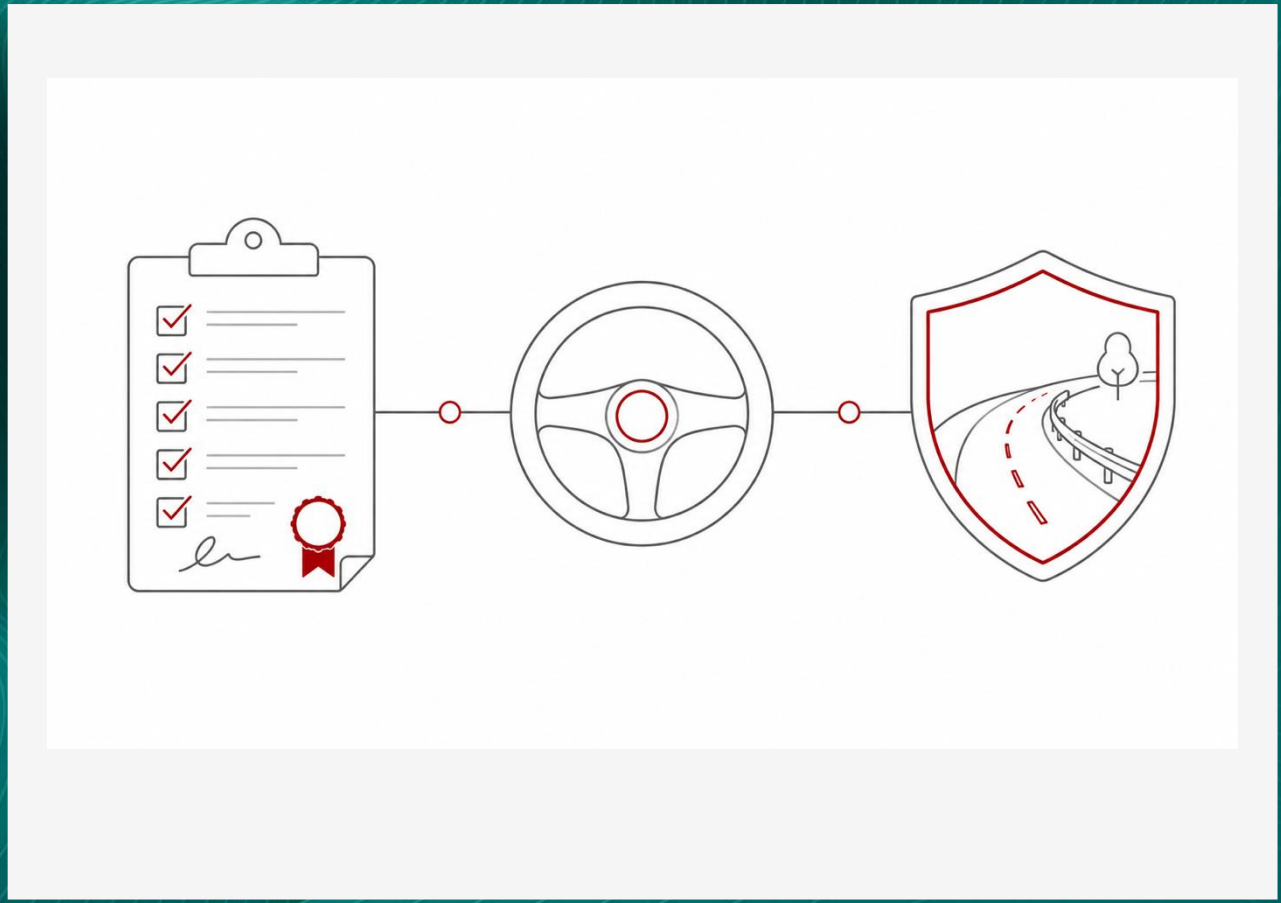
Participants:

Henrik Sjöstrand

Elisabeth Lång

Åsa Forsman

Anna Vadeby



Additional info about the project

Ends in late 2028

VTI report and working paper submitted to academic journal for publication

Reference group:

Arbetsmiljöverket

Folksam

Trygg-Hansa

Svenska taxiförbundet

Thank you!

henrik.sjostrand@vti.se

Leg-stretcher!

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From cost to action: What does it take to invest in safety?

09:20 What does it cost to reach Vision Zero? Estimating the investment gap

Maria Håkansson, Guidance to Zero

09:35 The cost of inaction – making organisational road safety risks visible

Sanna Eveby, Guidance to Zero & Roshni Pramanik, RISE

09:50 Industry perspective: Effects of AD/ADAS on crash severity and frequency

Jonas Ekmark, Zenseact

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What does it cost to reach Vision Zero?

-a study finansed by SAFER's Idea Exploration Programme

SAFER Research Day, 2 June 2026

G2Z: GUIDANCE TO ZERO

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G2Z: GUIDANCE TO ZERO

Road safety interim target 2030

the number of fatalities in road traffic shall be reduced by 50 percent.*

- No more than 133 persons should die in a traffic related accident

the number of seriously injured persons in road traffic shall be reduced by at least 25 percent.*

- No more than 3 100 seriously injured

* Based on an average value from between 2017-2019

G2Z: GUIDANCE TO ZERO

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SAFE SYSTEM APPROACH

If knowledge exists today about measures that can prevent deaths and serious injuries, it is the responsibility of the system designers to implement them.

G2Z GUIDANCE TO ZERO

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Will Sweden reach Vision Zero?

1 200 billion SEK in transport infrastructure investments 2026-2037

➡ Only a marginal effect on the 2030 interim target

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G2Z
GUIDANCE TO ZERO

The purpose with this project has been to collect, carry out and compile overall calculations of what it would cost to address a few of the most important infrastructure measures on national and municipal roads to increase traffic safety in Sweden. Further, to compare these costs with estimated costs of some planned and proposed infrastructure projects.

VISION ZERO
TOGETHER WE SAVE LIVES

G2Z GUIDANCE TO ZERO

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Safety performance indicators for reaching the 2030 interim target

- Safe state roads
- Safe intersections on state roads
- Safe municipal streets
- Safe vehicles
- Safe crossings for pedestrians, cyclists and moped riders
- Systematic work for safe walking and cycling
- Suicide-preventive road design

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G2Z!
GUIDANCE TO ZERO

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G2Z!
GUIDANCE TO ZERO

Performance indicator/ measure	Estimated cost (SEK billions)	Annual cost (SEK billions)
Safe state roads/ 1 500 km 2+1 road	30	6
Safe state roads/ speed reduction	0,03	0,006
Safe state roads/speed compliance. 1400 new ATK cameras	1	0,2
Safe intersections on state roads	12,5	2,5
Safe municipal streets/ speed reduction	0,18	0,036
Safe crossings for pedestrians, cyclists and moped riders. State roads	10	2
Safe crossings for pedestrians, cyclists and moped riders. Municipal roads	1,5	0,3
Systematic work for safe walking and cycling: Municipal streets	0,1	0,02
Suicidprevention väg (46 broar, 120 km väg, 320 viadukter)	1	0,2
Total:	**56,5**	**11,3**

To reach the 2030 interim target

4,7 % of the national plan 2026-2037

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GUIDANCE TO ZERO

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Total:	**56,5**	**11,3**

To reach the 2030 interim target

20 billions SEK on traffic safety measures in the national plan is estimated to have only a marginal effect on the 2030 interim target

?

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GUIDANCE TO ZERO

Beyond the 2030 interim target

- Safe pedestrian and bicycle paths through and between towns and villages
- Maintenance of the state roads; road markings for lane keeping assistance
- Maintenance of pedestrian and bicycle paths

- Organisational traffic safety
- Safe vehicles

Conclusions

For a small amount of the national investment plan we can redirect our funds to reach the goals

G2Z GUIDANCE TO ZERO

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CONTACT

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Project RIMKOT

SAFER Research Day: June 02, 2026.

Session 2. *From cost to action: What does it take to invest in safety?*

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The cost of inaction – making organisational traffic safety risks visible.

Project RIMKOT.

RIMKOT: At a glance

Title:
Risk Analysis as a Method to Measure Consequences for not investing in Traffic Safety.

Swedish Title:
RIsk analys som **M**etod att mäta **KO**nsekvenser av inte arbeta med **T**rafiksäkerhet.

Project Manager & Lead:
Roshni Pramanik, Research Scientist
RISE Research Institutes of Sweden.
Email: **roshni.pramanik@ri.se.**

In collaboration with:
Sanna Eveby, Senior Traffic Safety Expert
Guidance to Zero AB.
Email: sanna@guidancetozero.com.

Duration: Feb 2026 – Aug 2027.

Funded by:
Trafikverket Skyltfonden.

Type of project:
SAFER Connected Project.

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Impact Areas of RIMKOT:

Safety principles, cross functional, investment in traffic safety.

Keywords:

Safety culture, organisational traffic safety, risk mitigation, traffic safety policy making, decision making, traffic safety impact.

RIMKOT: Methodology

- Workshops, focus group discussions (FGDs) and expert dialogues,
  - Identifiy key risks and their impact or consequences from an organisational traffic safety perspective.

- Relevant mitigation measures, whose effects on risk reduction are clearly measurable.
  - A clear connection to actions that are relevant to minimize consequences

- The methodology will be presented in a simple and inspiring guide, tailored for use by corporate boardrooms and decision-makers in public sector.

Why apply risk perspective?

- Proactive anticipatory risk and hazard identification.
- Relevant Risk Mitigation Measures to prevent OR minimize risks.
- Discuss Risk Mitigation Measures that are Concrete, Actionable and Timebound.

→ Traffic safety thus becomes a clearer part of how organisations assess risk, set priorities, and follow up on outcomes.

- This strengthens safety culture and supports more systematic decision-making around traffic safety investments.

Traffic safety benefit of RIMKOT: In a nutshell

- The key outcomes from the project RIMKOT include a simple and inspiring guide with clear identification of risks, consequences and mitigation measures.

- The systematic scientific analysis from an organisational risk perspective shall benefit policy makers in public and private sectors by consolidating overall risk awareness and understanding of how to integrate organizational traffic safety in policy and action.

- Thereby help decision makers & policy makers by translating the risk mitigation measures into organizational traffic safety actions that are measurable.

Curious about RIMKOT?
Warm welcome!

- Participation from SAFER Working Groups and the SAFER network is of added value.

- We are looking for profiles of experts & practitioners from various disciplines, that are actively working with policy integration of traffic safety, organisational traffic safety issues such as safety culture, ensuring safe work environments in the bigger context of organisational traffic safety including research & academia.

What are, from your perspective, the biggest risk connected to a lack of systematic traffic safety?

menti.com

8897 3179


Thank you for listening!

zenseact

Industry perspective: Effects of AD/ADAS on crash severity and frequency

2026-06-02

Jonas Ekmark, Zenseact

Jonas Ekmark

SAAB Automobile	1985
Chalmers	1986
Volvo Cars	1994
Zenuity	2017
Zenseact	2020 -

SAAB

CHALMERS UNIVERSITY OF TECHNOLOGY

VOLVO

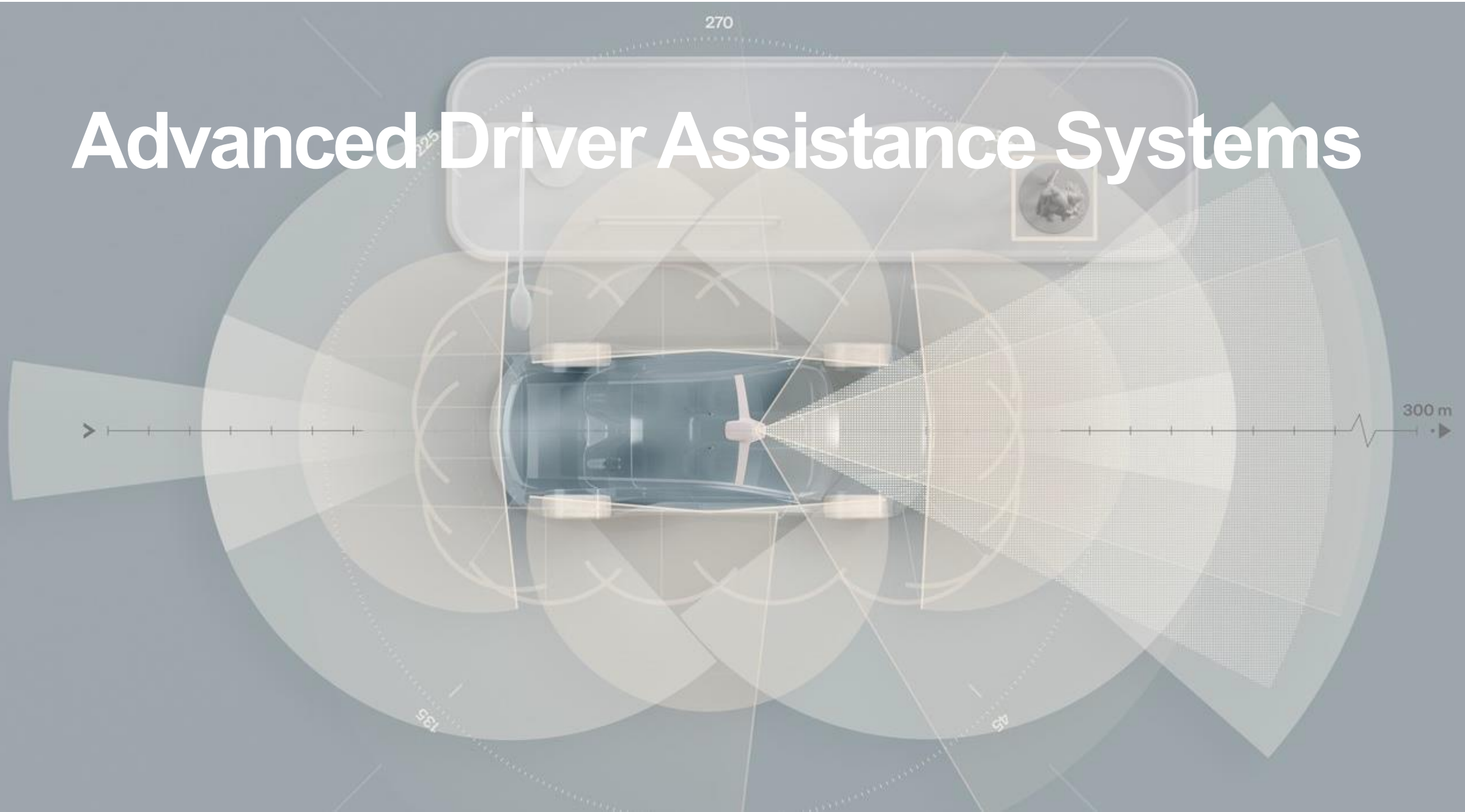
ZENUITY Make it real.

zenseact

Why am I here?

- To reason about effects of AD/ADAS in real life
- Important to monitor both frequency and severity
- A big step in our most recent platform
- ASEK enables optimization

Advanced Driver Assistance Systems



zenseact

Towards zero. *Faster.*

1.2 million

deaths worldwide every year

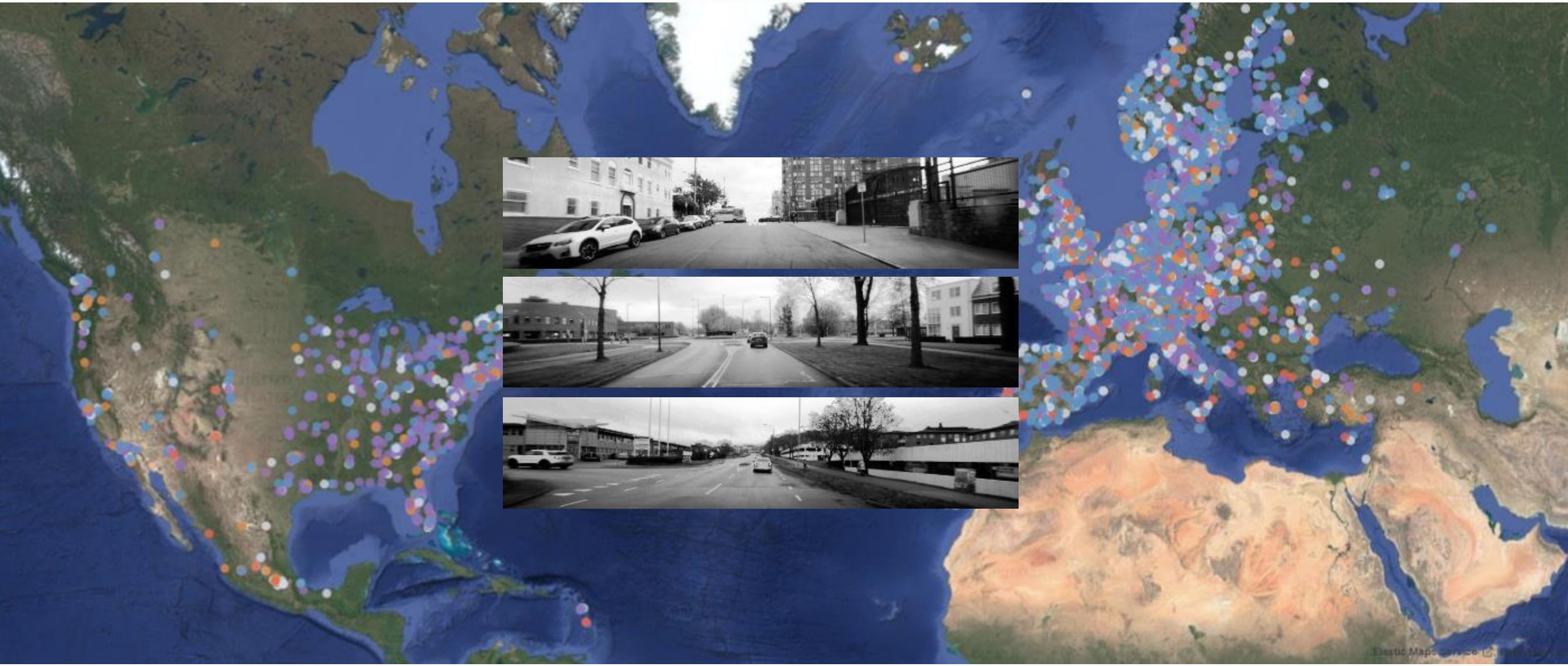
50+ million

injuries worldwide every year


1 Munkeröd
AMBULANS
holmatro
holmatro

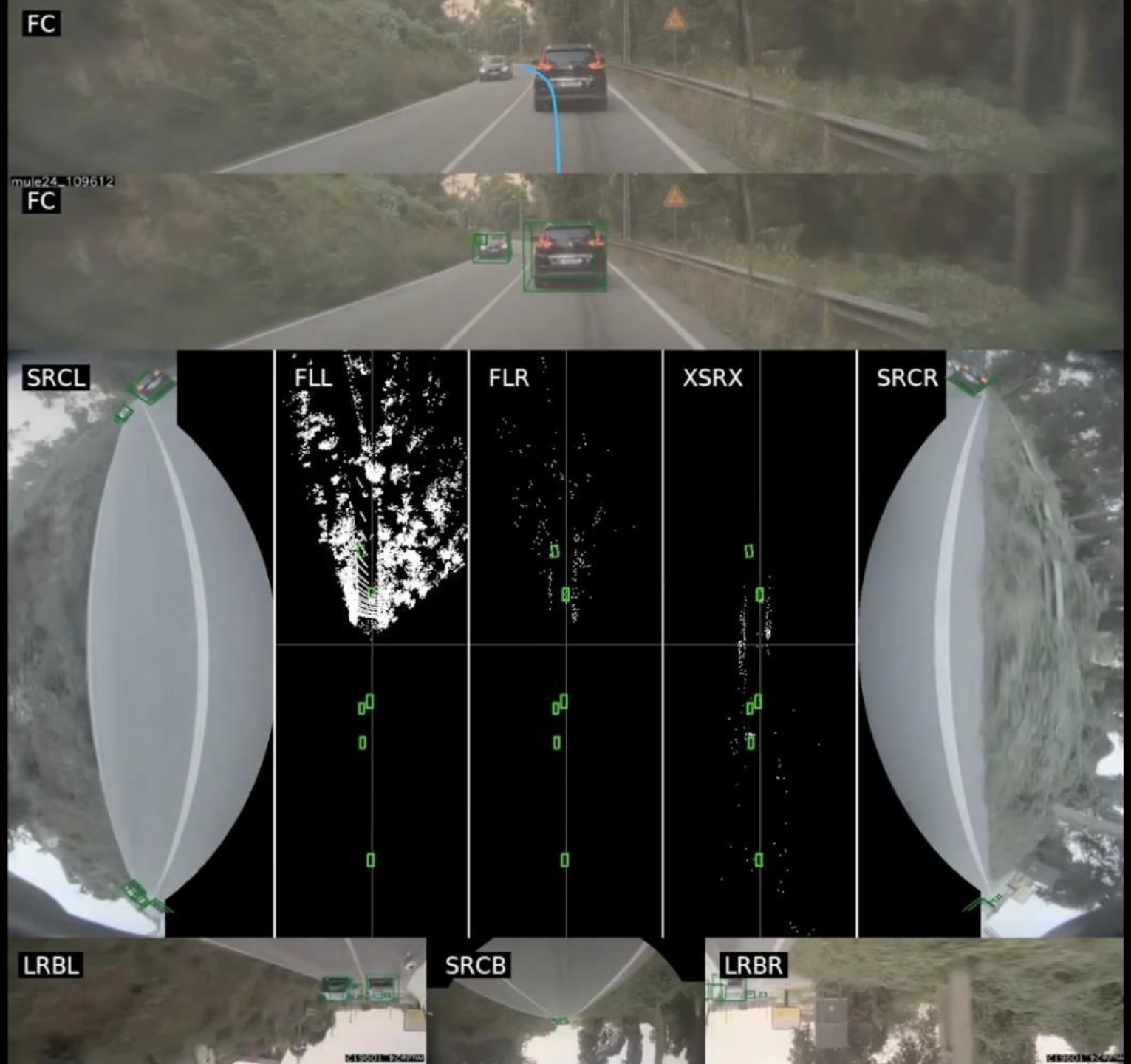
zenseact

10 Tm of real world data



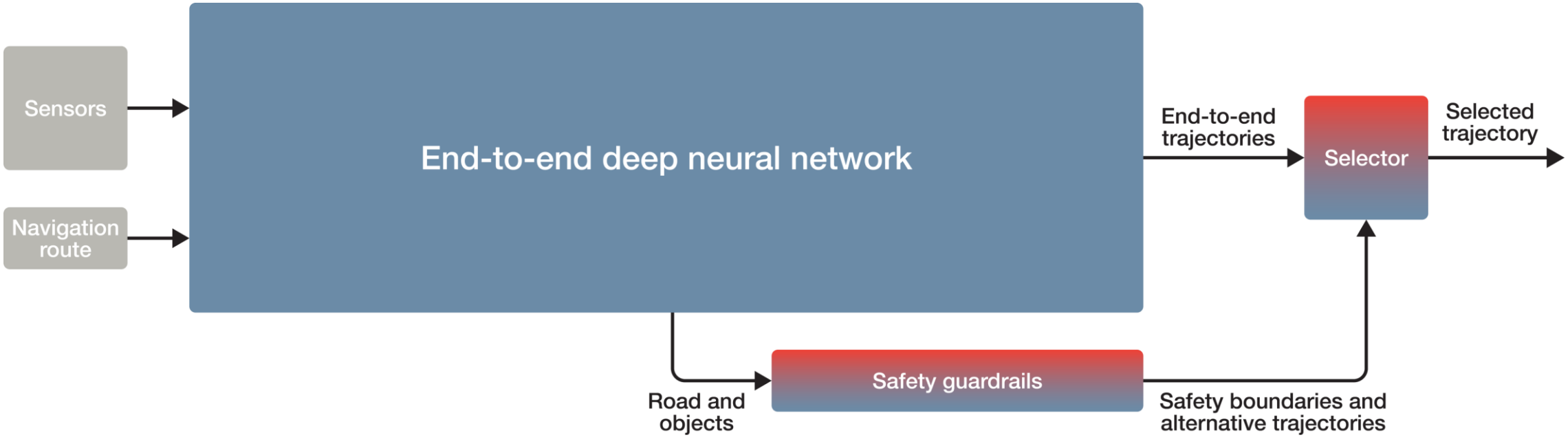
zenseact

10 Tm of real world data



zenseact

End-to-end with safety guardrails (NEW)



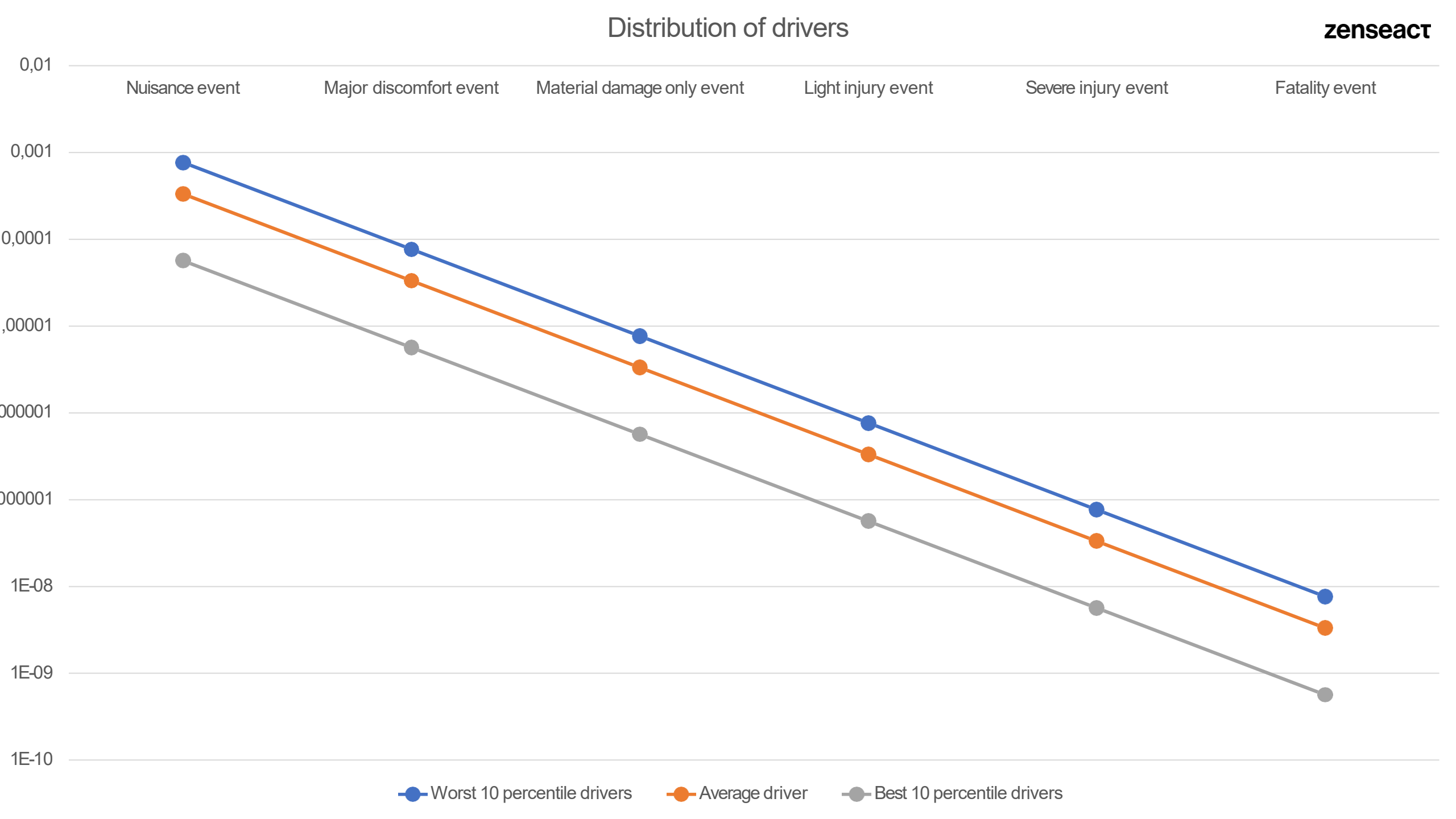
Neural network component

Rule-based component

Mix of neural and rule-based

Real life effects (schematic)


Events per distance
zenseact
0,01
0,001
0,0001
,00001
000001
000001
1E-08
1E-09
1E-10
Nuisance event
Major discomfort event
Material damage only event
Light injury event
Severe injury event
Fatality event
Average driver


Distribution of drivers
zenseact
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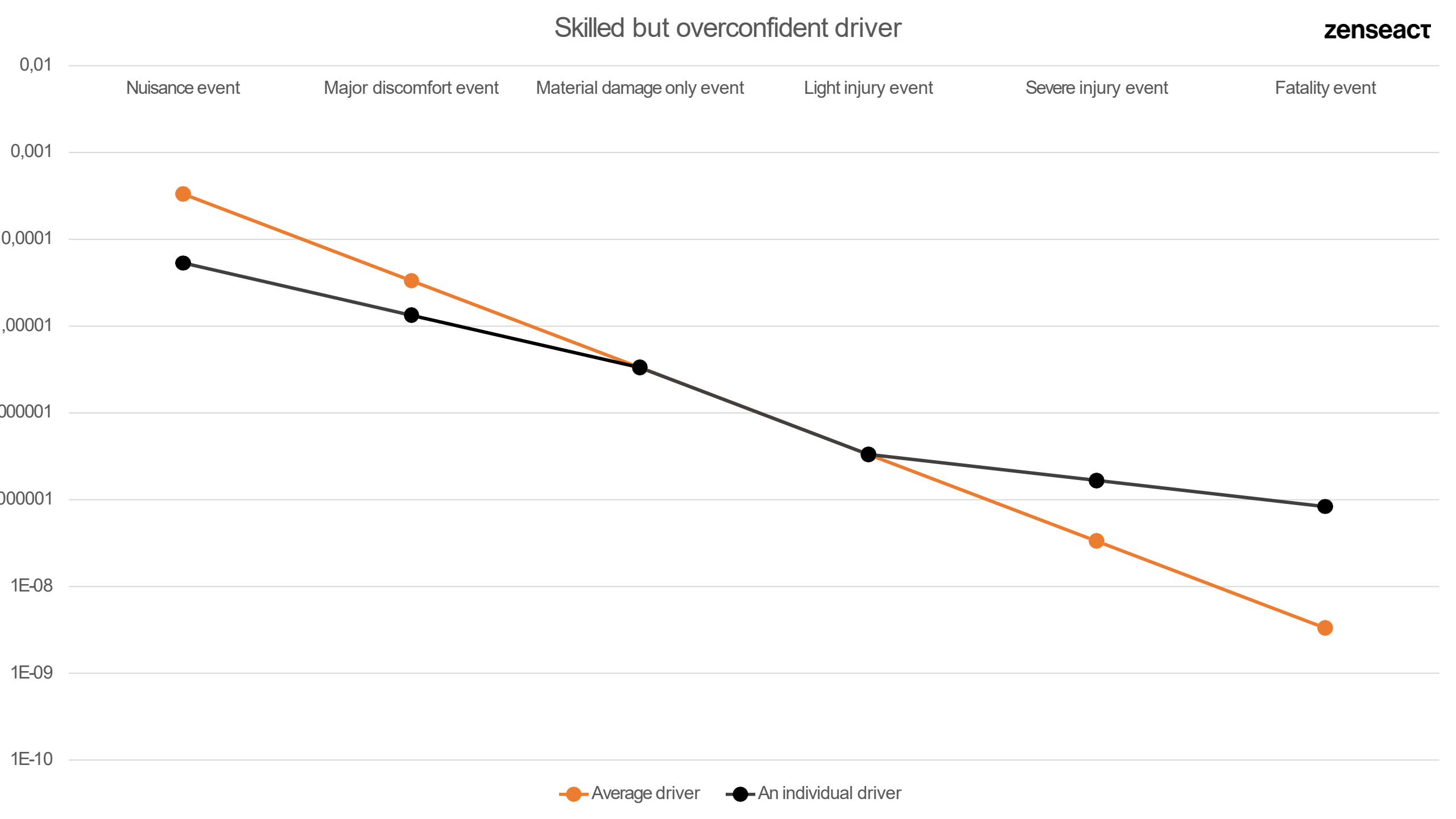
1E-08
1E-09
1E-10
Nuisance event
Major discomfort event
Material damage only event
Light injury event
Severe injury event
Fatality event
Worst 10 percentile drivers
Average driver
Best 10 percentile drivers


Skilled but overconfident driver
zenseact
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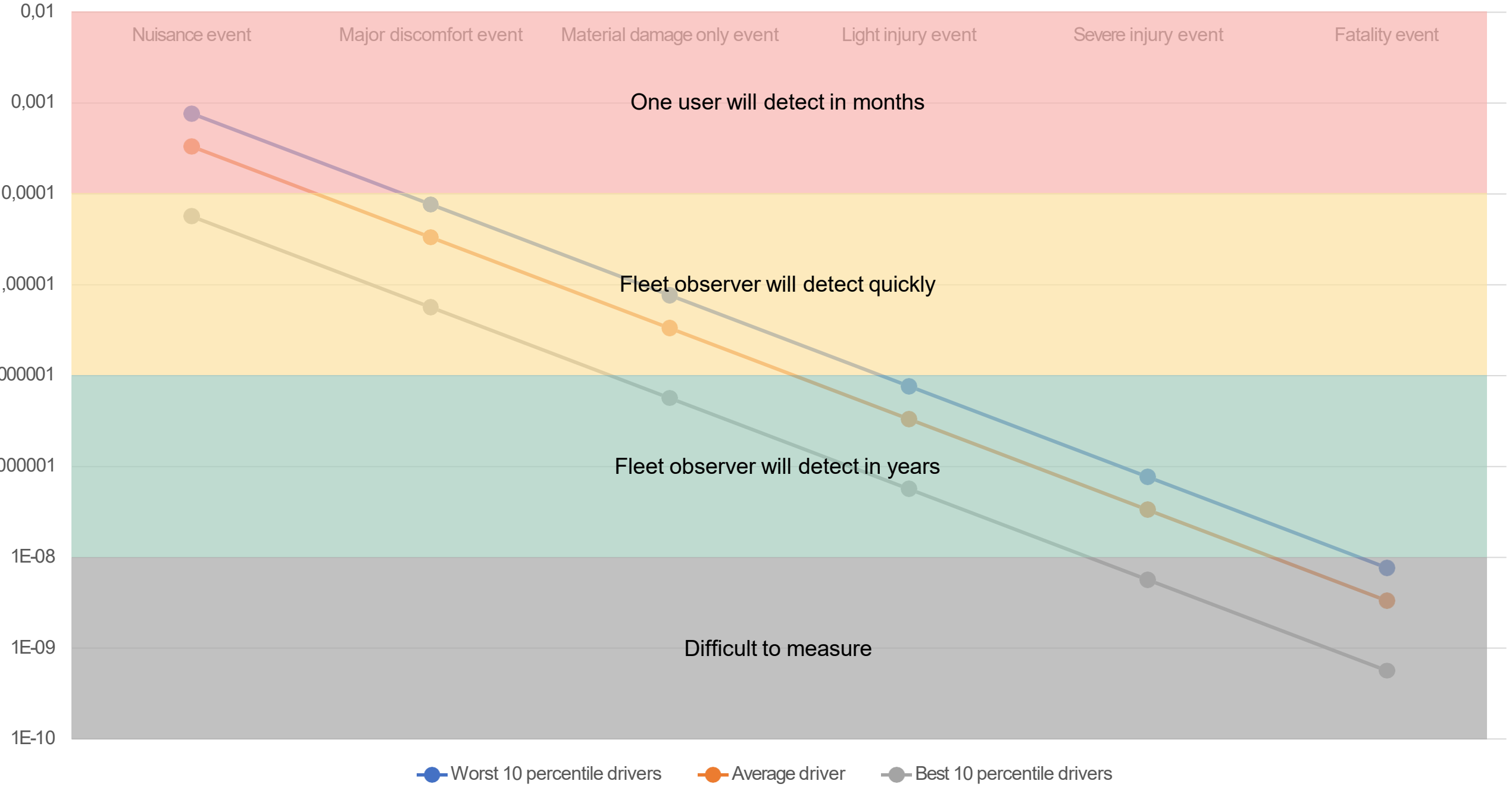
1E-08
1E-09
1E-10
Nuisance event
Major discomfort event
Material damage only event
Light injury event
Severe injury event
Fatality event
Average driver
An individual driver

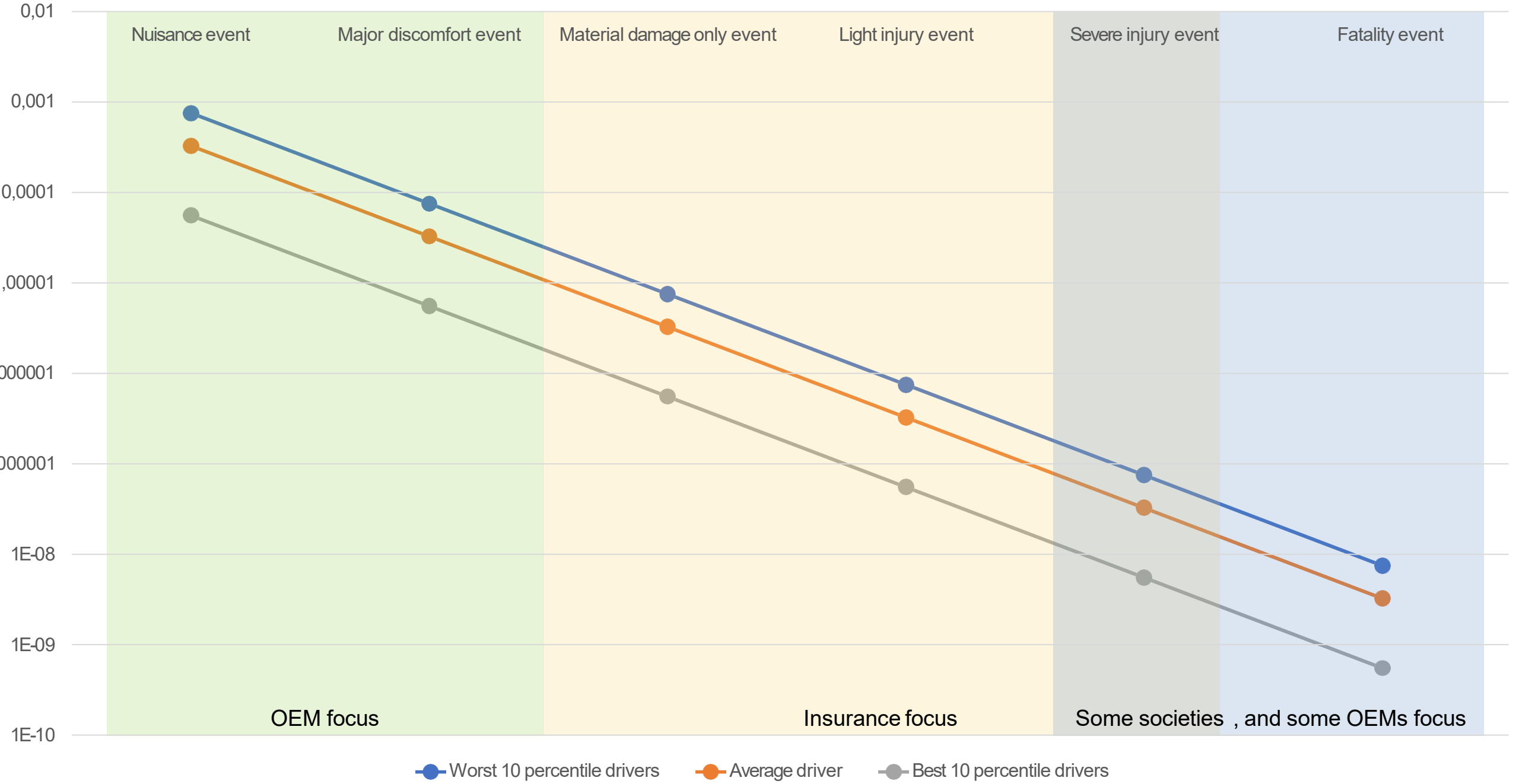
Observability of events

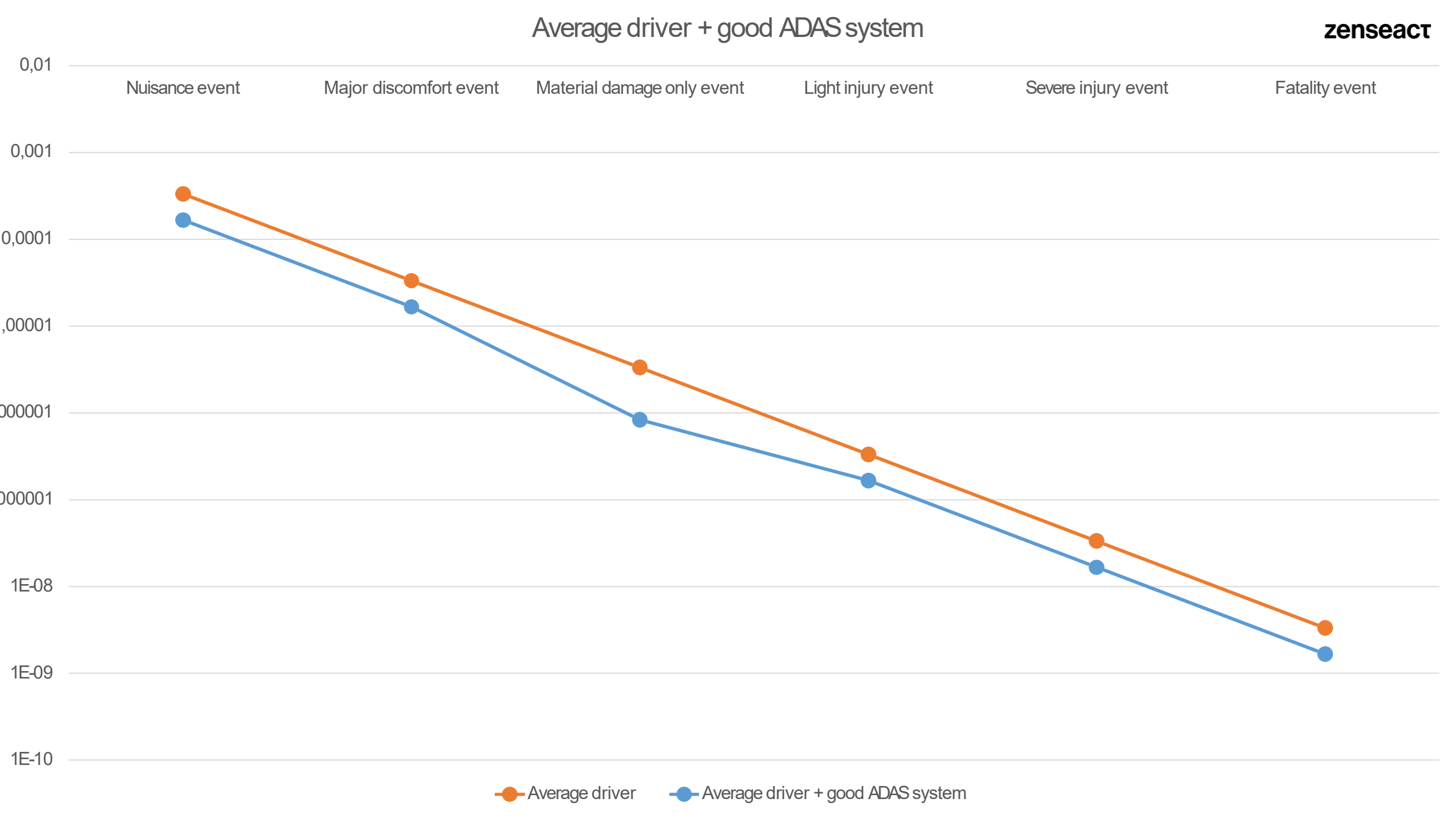
zenseact



Typical focus of stakeholders

zenseact




Average driver + good ADAS system
zenseact
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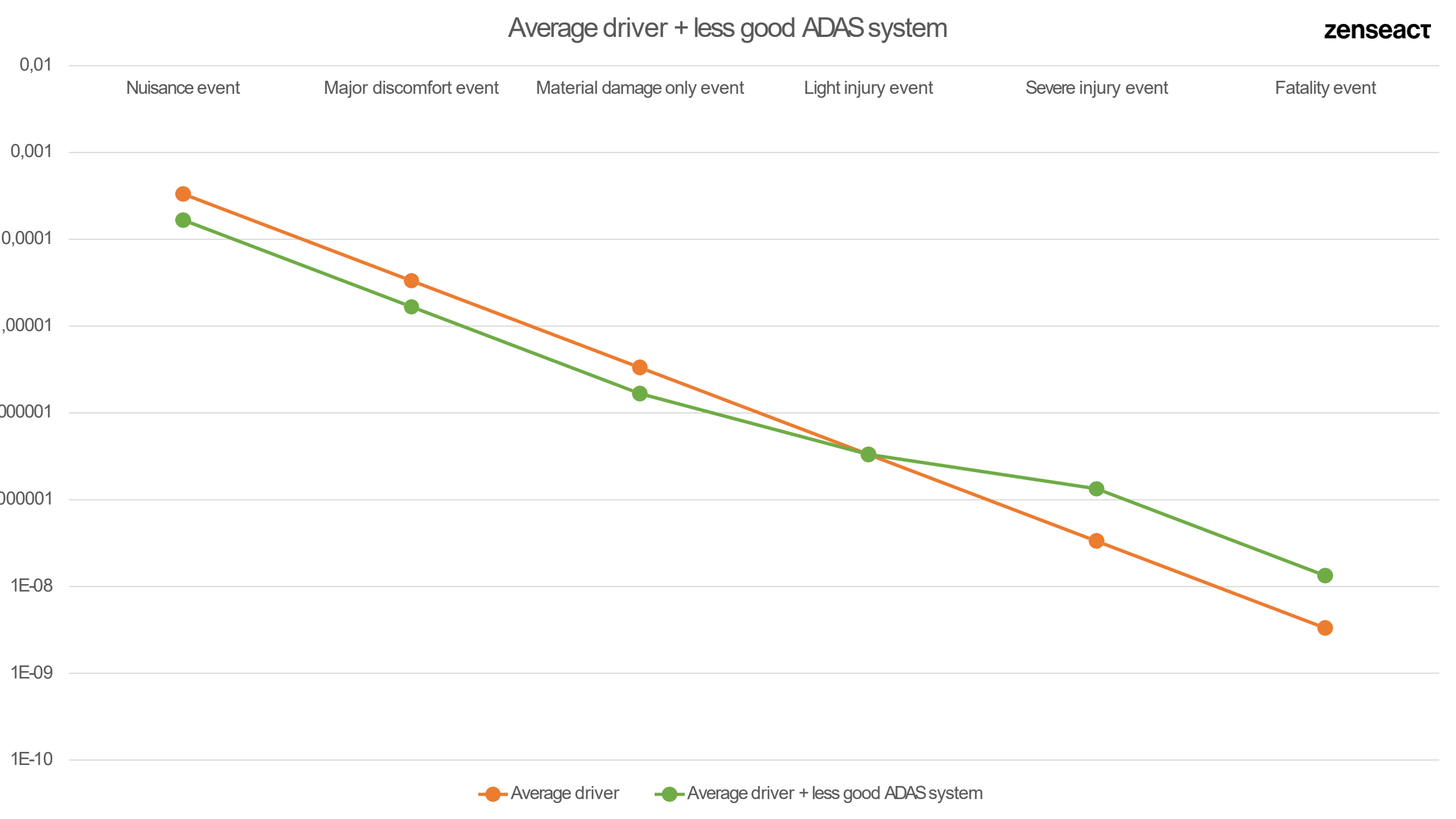
1E-08
1E-09
1E-10
Nuisance event
Major discomfort event
Material damage only event
Light injury event
Severe injury event
Fatality event
Average driver
Average driver + good ADAS system


Average driver + less good ADAS system
zenseact
0,01
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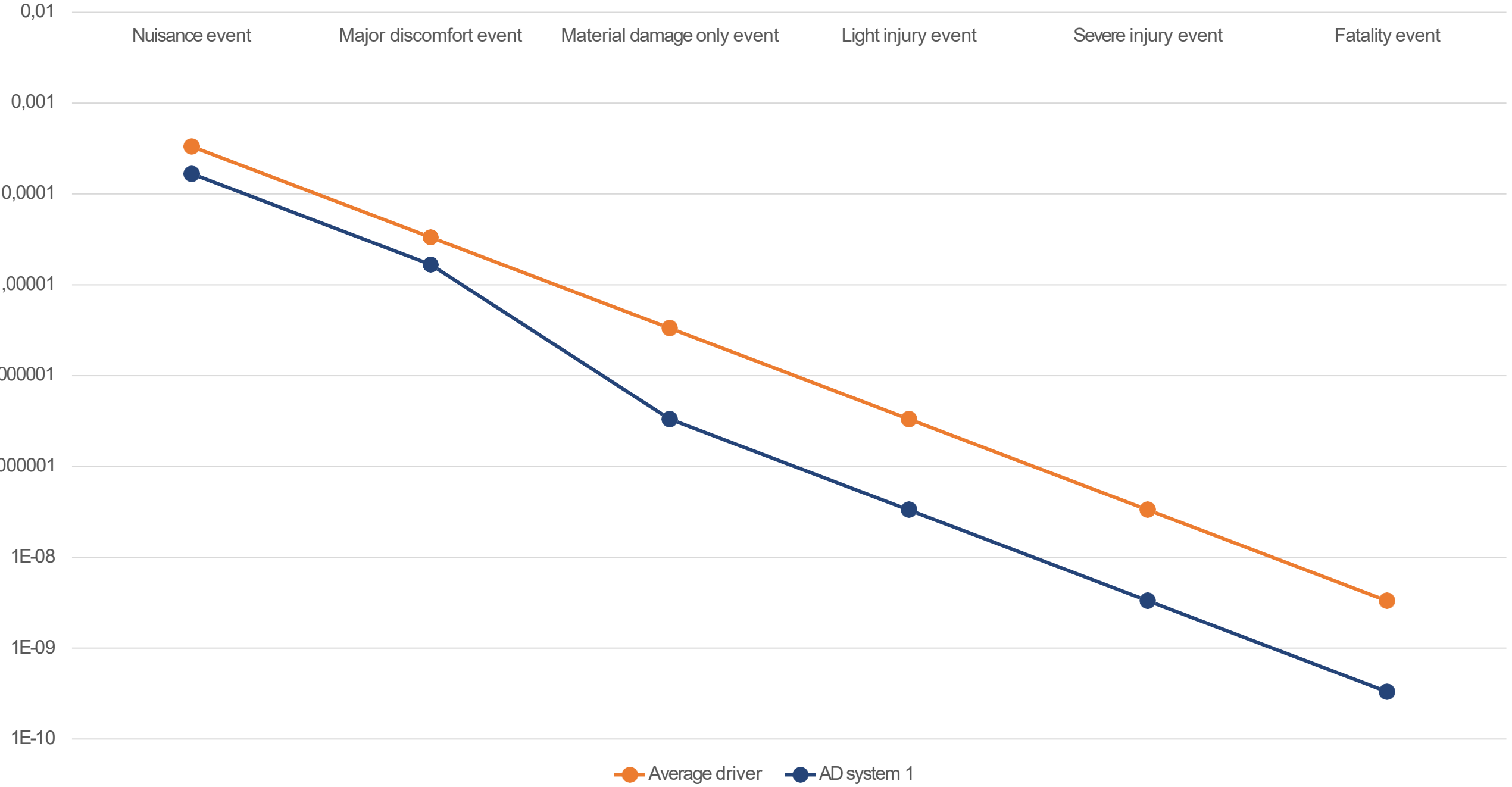
000001
000001
1E-08
1E-09
1E-10
Nuisance event
Major discomfort event
Material damage only event
Light injury event
Severe injury event
Fatality event
Average driver
Average driver + less good ADAS system

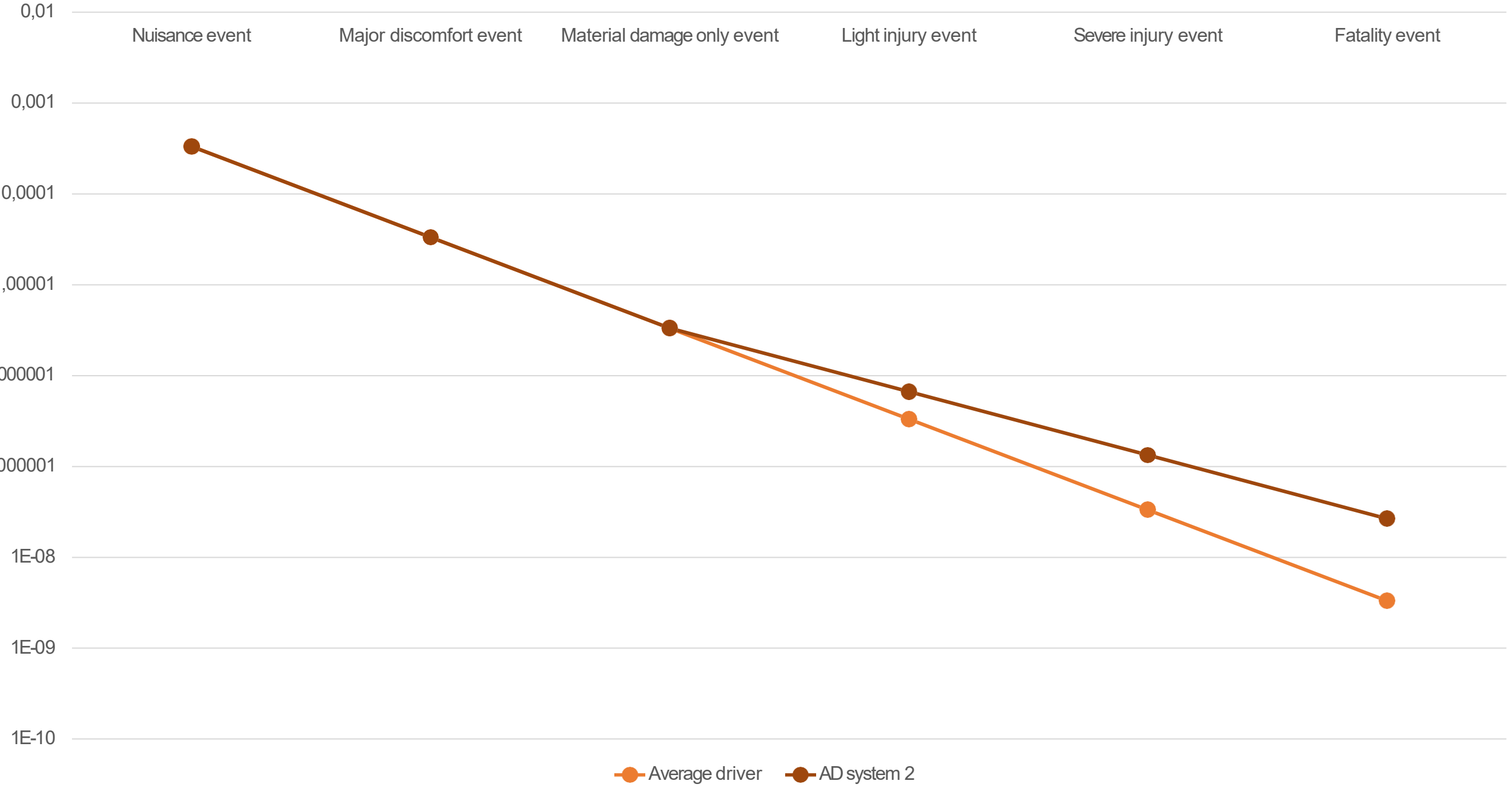
Good unsupervised AD system

zenseact



Apparently good, but insufficient, unsupervised AD system

zenseact



Common misconceptions

zenseact

”ADAS functionality will always make the driving safer, as compared to manual driving”

”Start by offering a driver-supervised system, and make it gradually better. Eventually, supervision is no longer needed”

”If the ADAS system can no longer handle the situation, the reponsibility can be handed over to the driver"

”An ADAS system that shows lower collision frequency is safer"

Discussion

- Monitoring event frequency **and** severity is important.
- The occurrence of events is (thankfully) inverse to severity. Low severities - quick to estimate, high severities take time.
- Swedish Trafikverket's ASEK framework looks like a very useful resource. Transforming all factors into the cost domain enables optimization

Factors
ADAS system cost per vehicle
Electrical energy to run ADAS system
Material damage avoided
Injuries and fatalities avoided

Research at zenseact

Zenseact develops **world-leading safety software** for Volvo Cars. Together, we make roads safer **for everyone.**

For more information and career opportunities, visit zenseact.com.

41 Publications

37 Venues

9 Research Topics

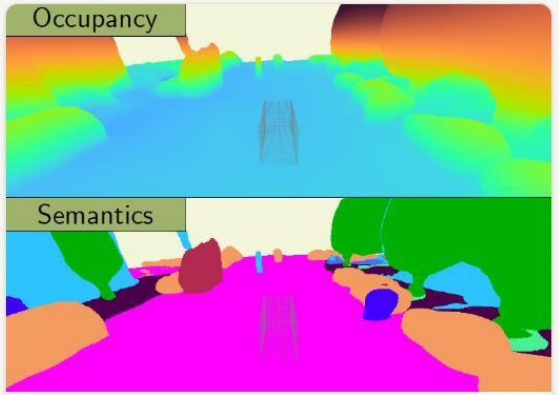
Latest Publications

Scalable GPU Construction of 3D Voronoi and Power Diagrams

Bernardo Taveira*, Carl Lindström*, Maryam Fatemi, Lars Hammarstrand, Fredrik Kahl

IDSplat: Instance-Decomposed 3D Gaussian Splatting for Driving Scenes

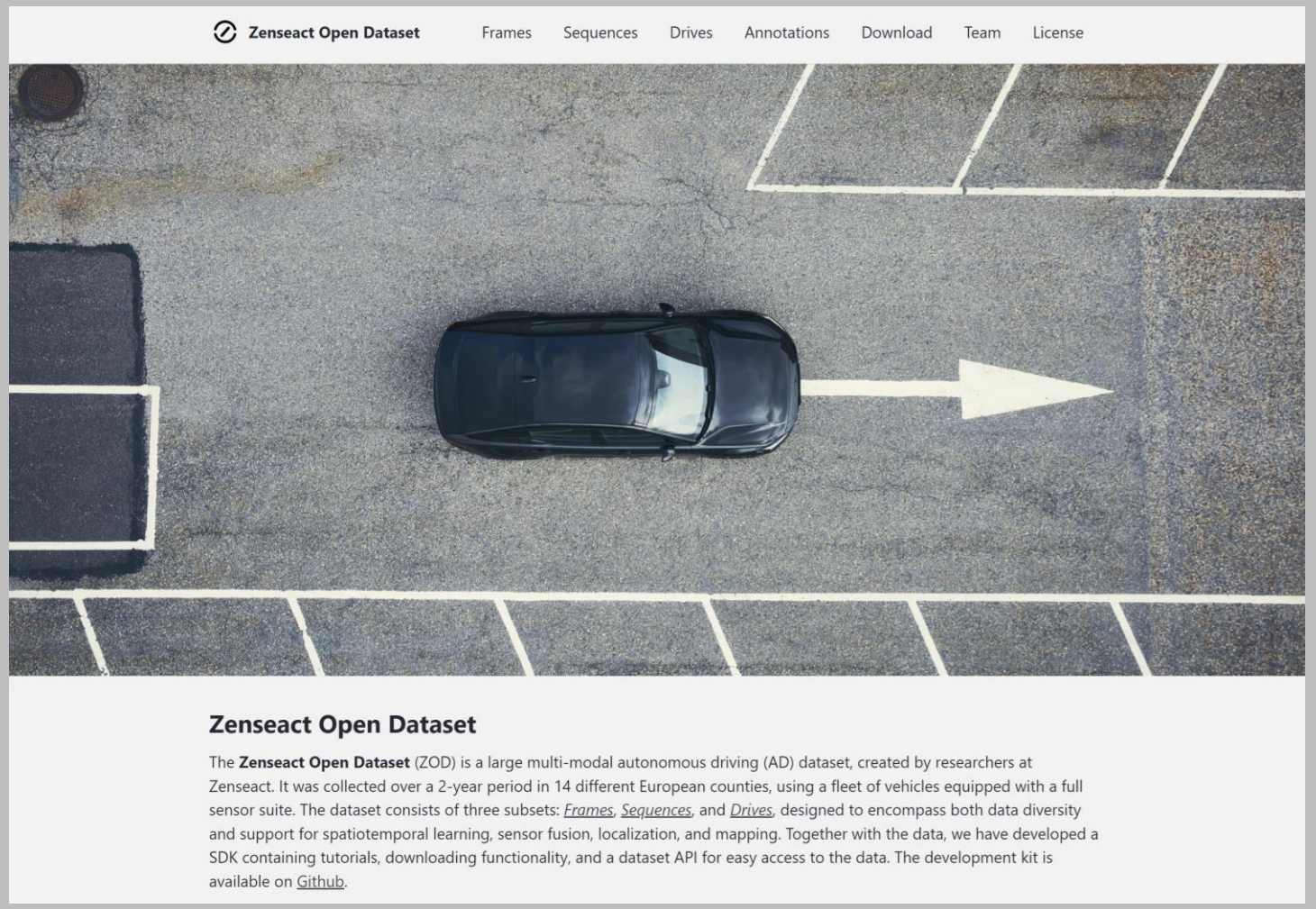
Carl Lindström*, Mahan Rafidashti*, Maryam Fatemi, Lars Hammarstrand, Martin R. Oswald, Lennart Svensson



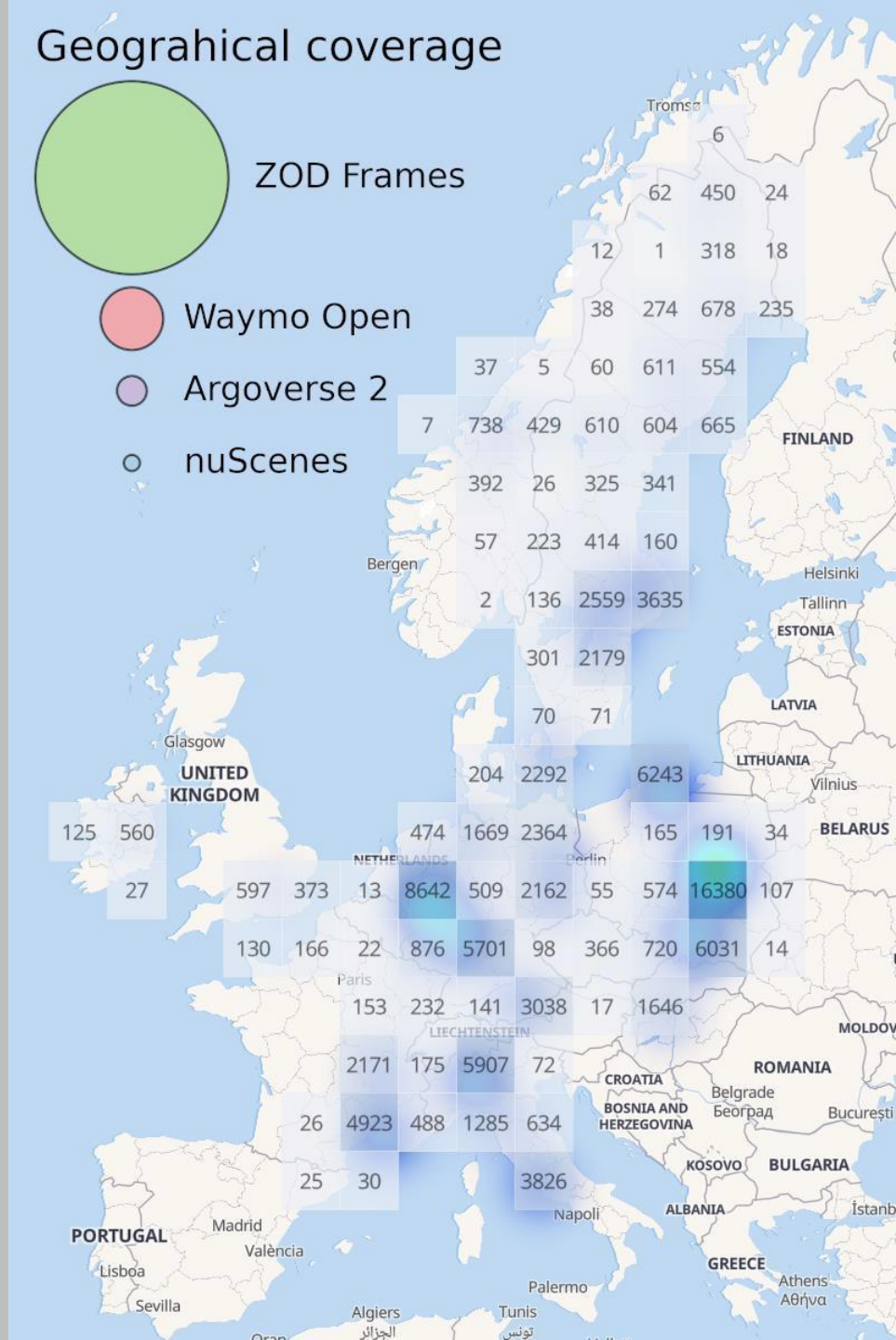
QueryOcc: Query-based Self-Supervision for 3D Semantic Occupancy

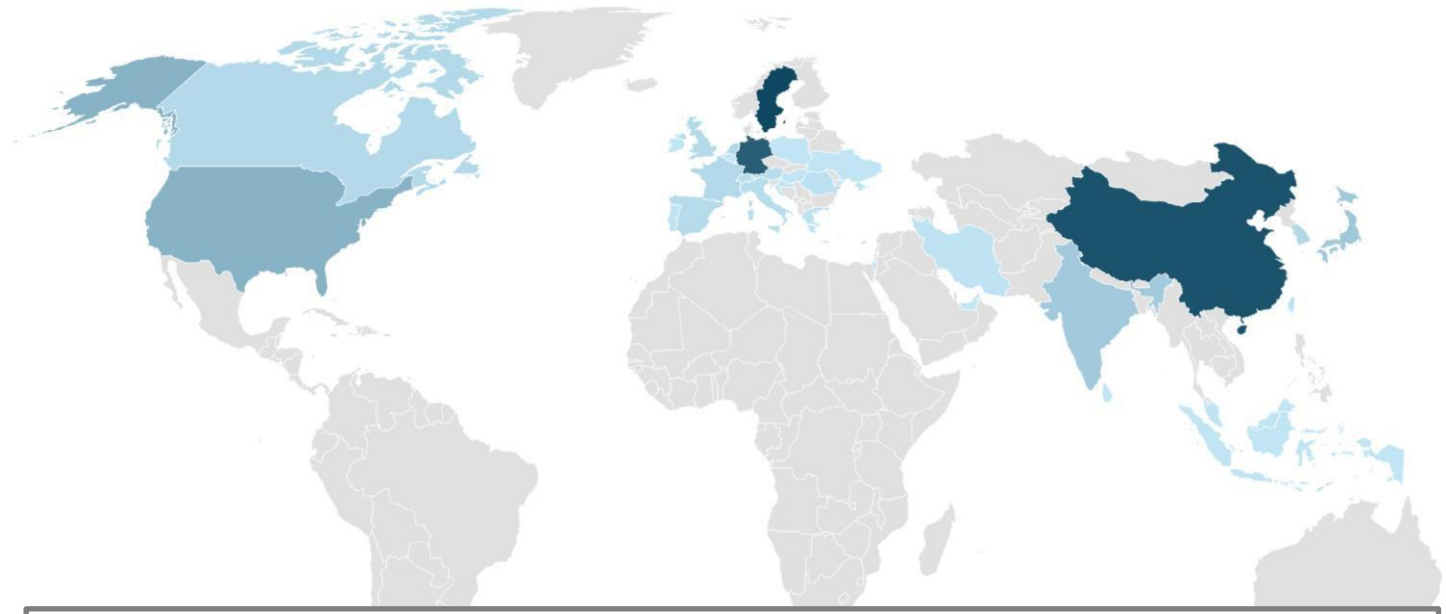
Adam Lilja, Ji Lan, Junsheng Fu, Lars Hammarstrand

Zenseact Open Dataset



Zenseact Open Dataset: A large-scale and diverse multimodal dataset for autonomous driving
Mina Alibeigi*, William Ljungbergh*, Adam Tonderski*, Georg Hess, Adam Lilja, Carl Lindström, Daria Motorniuk, Junsheng Fu, Jenny Widahl, **Christoffer Petersson**
Published at International Conference on Computer Vision (ICCV)




Series1
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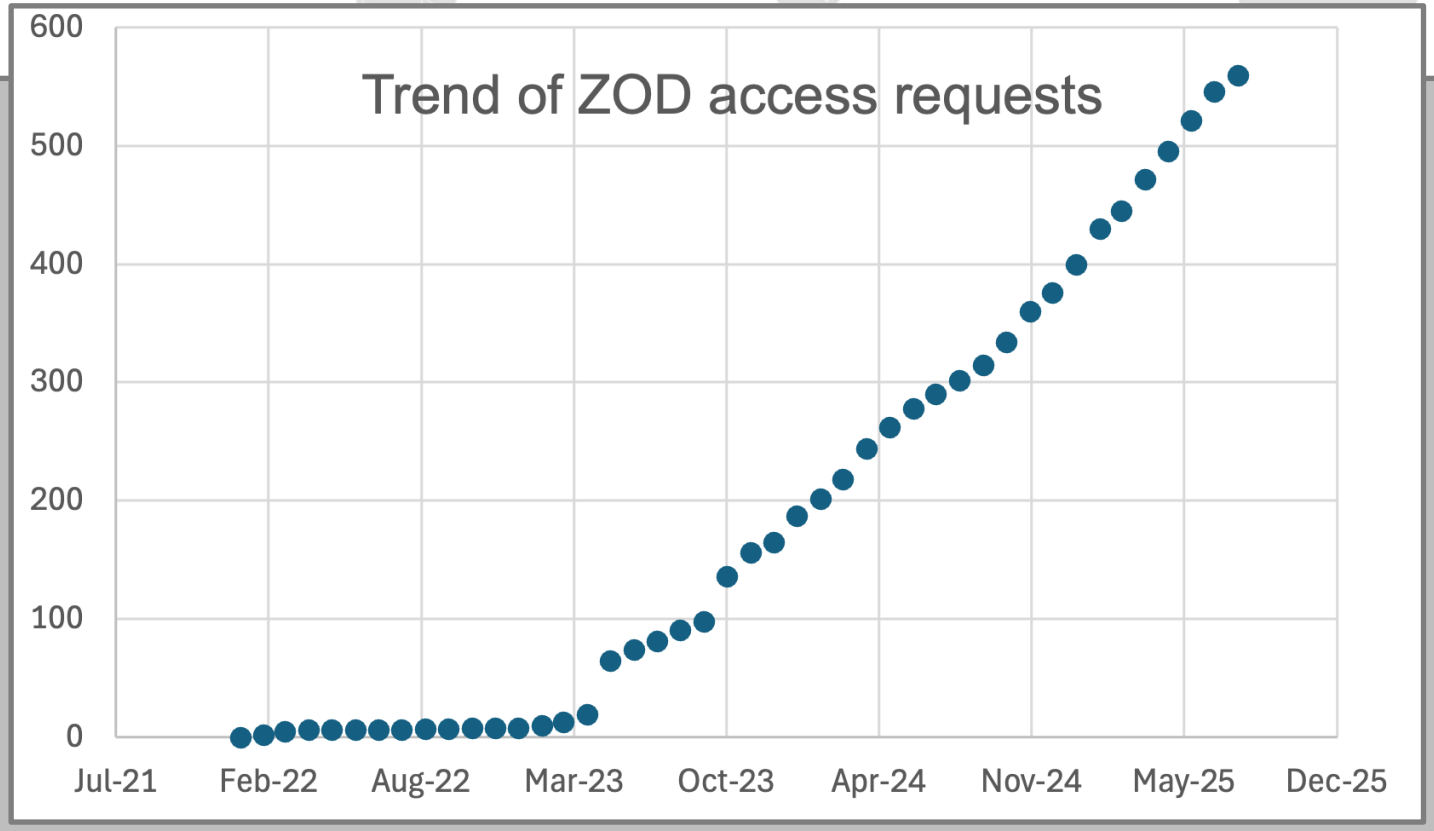
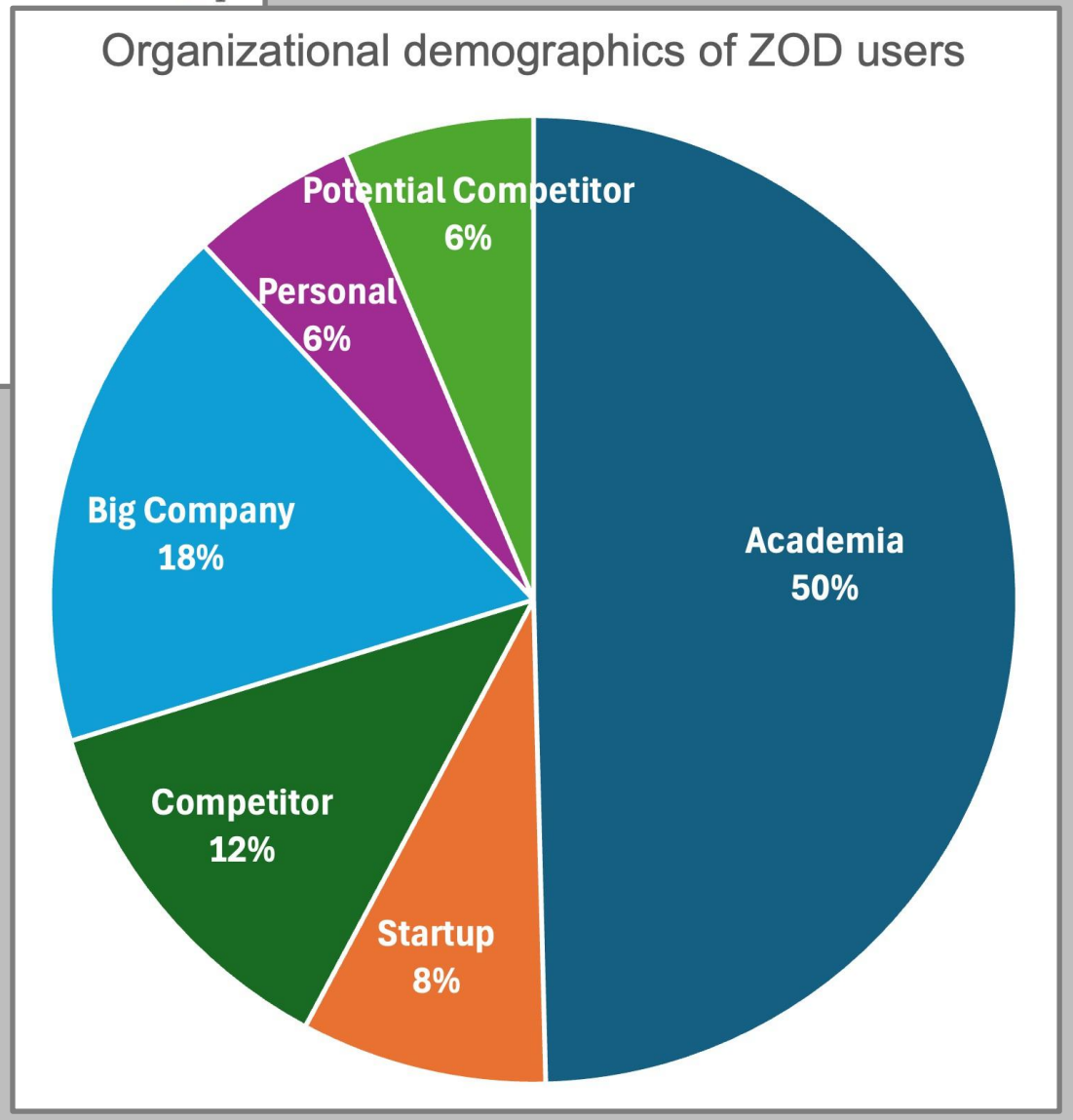
1

zenseact


Trend of ZOD access requests
600
500
400
300
200
100
0
Jul-21
Feb-22
Aug-22
Mar-23
Oct-23
Apr-24
Nov-24
May-25
Dec-25


Organizational demographics of ZOD users
Potential Competitor 6%
Personal 6%
Big Company 18%
Academia 50%
Competitor 12%
Startup 8%


Together

What counts? Decision frameworks and valuation

10:30 What counts in transport decisions? The role of ASEK in shaping investments

Gunnar Isacsson, Trafikverket

10:45 ProtAct-Us: Capturing the real economic burden of non-fatal road injuries

Werner Leitgeb, Virtual Vehicle Research GmbH

11:00 Valuing non-fatal injuries – towards a more complete picture of traffic safety costs

Sara Olofsson, IHE – Institutet för Hälso- och Sjukvårdsekonomi

11:15 From national models to local decisions – estimating the cost of traffic injuries at municipal level

Kristina Mattsson, Trafikverket

SAFER
VEHICLE AND TRAFFIC SAFETY CENTRE AT CHALMERS

TRAFIKVERKET

What counts in transport decisions? The role of ASEK in shaping investments

Gunnar Isacsson, the Swedish Transport Administration
Presentation SAFER June 2026

TRAFIKVERKET

What is ASEK?

- ASEK provides recommendations on how to conduct BCA in the Swedish Transport Sector
  - Exist similar recommendations around the World; e.g. EU and webtag in the UK

- Currently a working group at the Swedish Transport Administration (STA) supported by:
  - A scientific advisory board
  - A consultation group of other government agencies

- Major revision every 4th year
  - Based on new evidence on parameters and recommendations in general
  - Changes in the economy that need to be reflected in the recommendations

TRAFIKVERKET

Benefit Cost Analyses in the Transport Sector

- Part of instructions from the government to STA
  - Economic efficiency also mentioned in the main goal of transport policy in Sweden
- What is the purpose of BCA in general?
  - Indicate a measure's value for money to society
- What should be included?
  - Everything that affects the well-being of individuals by a specific measure should be considered
- How is BCA used by the STA?
  - To guide the government on how much to spend on infrastructure
  - To guide the government on which investments to select from a given budget
- Distributional considerations handled separately from BCA
  - In the total assessment of a measure

TRAFIKVERKET

What do ASEK's recommendations pertain to?

- Effects to be included in a BCA (main categories)
  - travel times
  - accident costs
  - transport costs
  - air pollution
  - climate
  - noise
- How to value effects
  - Goods sold in a market: market prices (e.g. inputs to investment and maintenance, transport expenses)
  - Goods ***not*** sold in a market: Willingness to pay (WTP) or abatement costs, e.g.
- Important distinction: calcuable and non-calcuable effects
  - Non-calcuable difficult to provide standardized values for impacts; e.g. barrier effects of infrastructure
  - Both types of effects need to be considered
- Also many other aspects and parameters; e.g.
  - System boundaries, Investment and maintenance costs etc. Analysis periods, Social discount rate, Treatment of taxes, Wider economic impacts, Distributional analyses

TRAFIKVERKET

General notes on the application of BCA

- Important factors:
  - Number of individuals affected by a measure
  - Investment costs
- Two main categories of investment projects in Swedish infrastructure planning
  - Large (>150 MSEK) – full BCA for subset of investments considered in the national plan
  - Small (<150 MSEK) – limited BCA
- Non-calcuable effects
  - Recent guidelines provided by the STA
  - Assess order of magnitude to adjust BCA-ranking based on calcuable effects
- Calcuable effects usually larger than non-calcuable effects
  - But can change BCA ranking substantially for specific projects
  - Effects on ranking may be used to deduce implicit estimate of non-calcuable benefits

TRAFIKVERKET

Criteria for prioritizing large investments

- From the most recent revision of the national plan
- Order of prioritization criteria of investment projects (>150 MSEK)
  - 1. Projects that have already been started or are about to start within the coming 3 years (219 BSEK)
  - 2. Projects required to meet legal demands or agreements already signed (95 BSEK)
  - 3. Reinvestments that improve infrastructure standards (29 BSEK)
  - 4. Remaining projects prioritized according to BCA-ranking (50 BSEK)
- Point 4: Departures from BCA-ranking carefully motivated e.g.
  - Dependencies between projects and/or connections to other actors' plans or priorities
  - Industry's competitiveness
  - Better connections to sea and air transport and neighboring countries
  - Contributions to TEN-T demands
  - Needs related to the defense of the country

TRAFIKVERKET

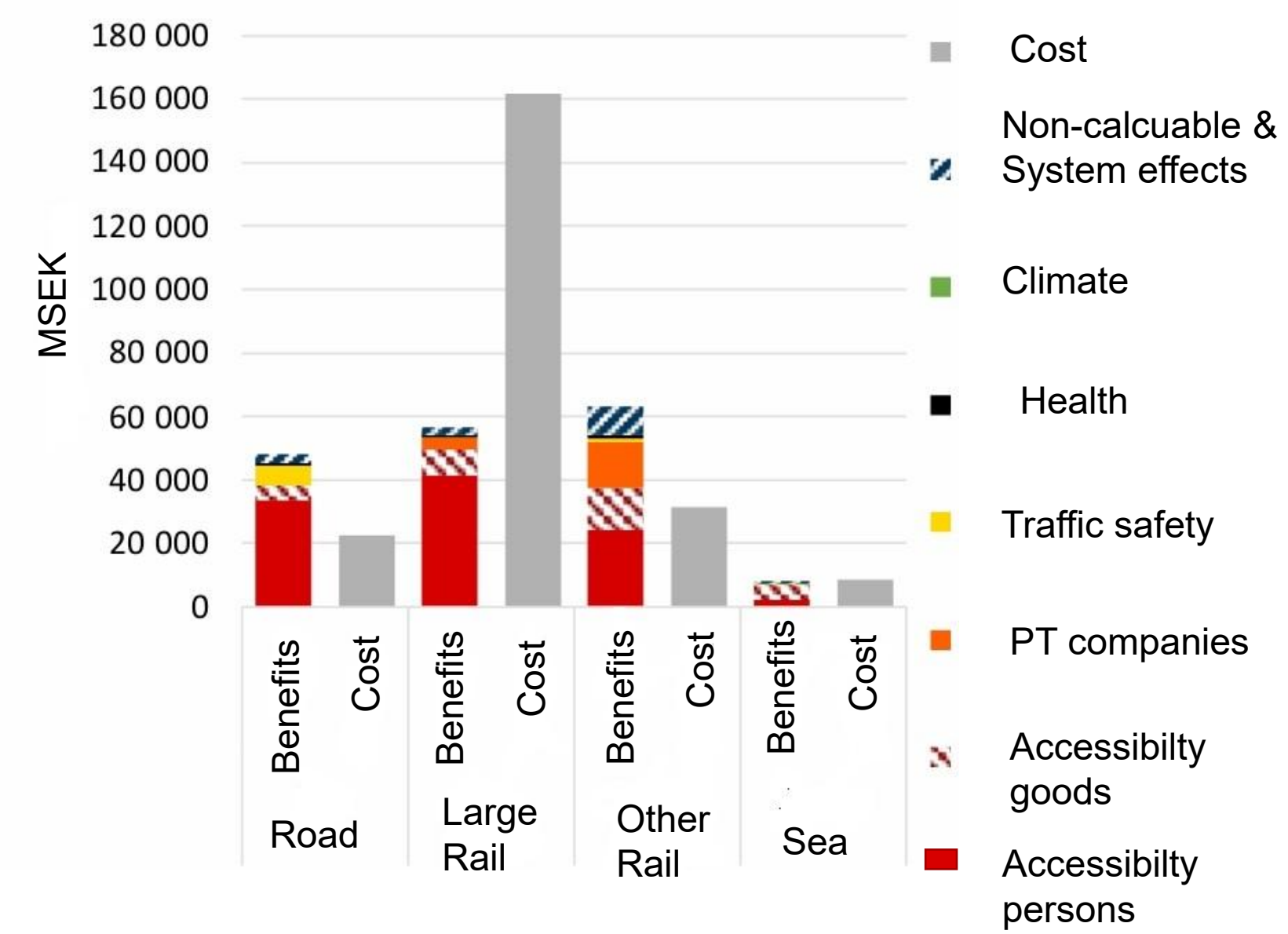
Really large and expensive projects

- Really large investments tend to follow a different logic than the standard BCA
  - Usually decided by the government
  - Sometimes motivated by referring to WEI or regional development

- Example from the most recent revised national plan
  - Five large railway projects have an average net-benefit-cost ratio of -0.8

TRAFIKVERKET

Distribution of benefits related to different types of effects – subset of large investments with BCA in latest proposed national plan for the infrastructure



TRAFIKVERKET

Finally: current values related to accident costs

- Major revision of ASEKs recommendations in 2016
- Large study by IHE in Lund supplemented by meta-study of earlier studies
- WTP to reduce risk of dying in road traffic accidents
  - Value of a statistical life (VSL)
- QALYs lost to link VSL to Values of injuries (VSI)
  - VSI different for different levels of severity
- Also: societal costs of deaths and injuries
  - Production values lost
  - Costs of health care etc.
- Major revision of VSI 2024: non-serious injury

TRAFIKVERKET

ASEK's current recommendation on costs per statistical fatality and injury

	Value SEK
Fatality	52 988 000
Very serious injury (≥10% PMI)	18 962 000
Serious but not very serious injury (<10 and ≥1% PMI)	12 545 000
Serious injury (≥1% PMI)	14 698 000
Non-serious injury (<1% PMI)	744 000

Note: Price and income levels 2019. 1 Euro≈10.60 SEK in 2019

TRAFIKVERKET

Are these numbers high or low?

- Value of saving one fatality is 40% higher than the corresponding value in EU28
  - Note: higher incomes per capita in Sweden than the average in the EU.
  - Note: higher than in comparable countries like Norway and Denmark
- Implied WTP for saving a QALY is approximately 100% higher than in the health sector.
  - Need to be revised after Sara Olofsson's presentation?

ProtAct-Us

ProtAct-Us
from long-term consequences of road crashes

Werner Leitgeb, Virtual Vehicle Research, online

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them. This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101147445.

Content

10:45 – 11:00

- Background & context
- Tools and methods
- Countermeausures

- Impact

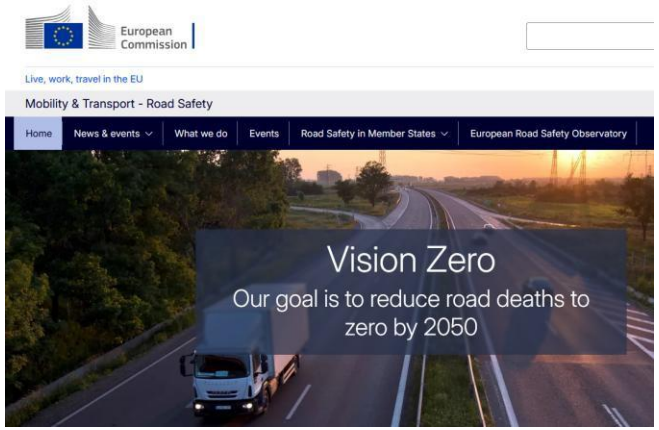
- Outlook

Background & context

https://birigroup.co.uk

EU Road Safety policy: Vision Zero

Priorities
- Infrastructure
- Safe road use
- Safe vehicles
- Post Impact care
- Driving licence



- Socio-economic costs of road traffic related injuries exceeding €100 billion annually
  - fatalities could be reduced in recent decades – but ~stagnating recently
  - progress in vehicle safety technology and regulations (mandating ADAS, etc)
  - Improved infrastructure management
- the numbers of seriously injured still high

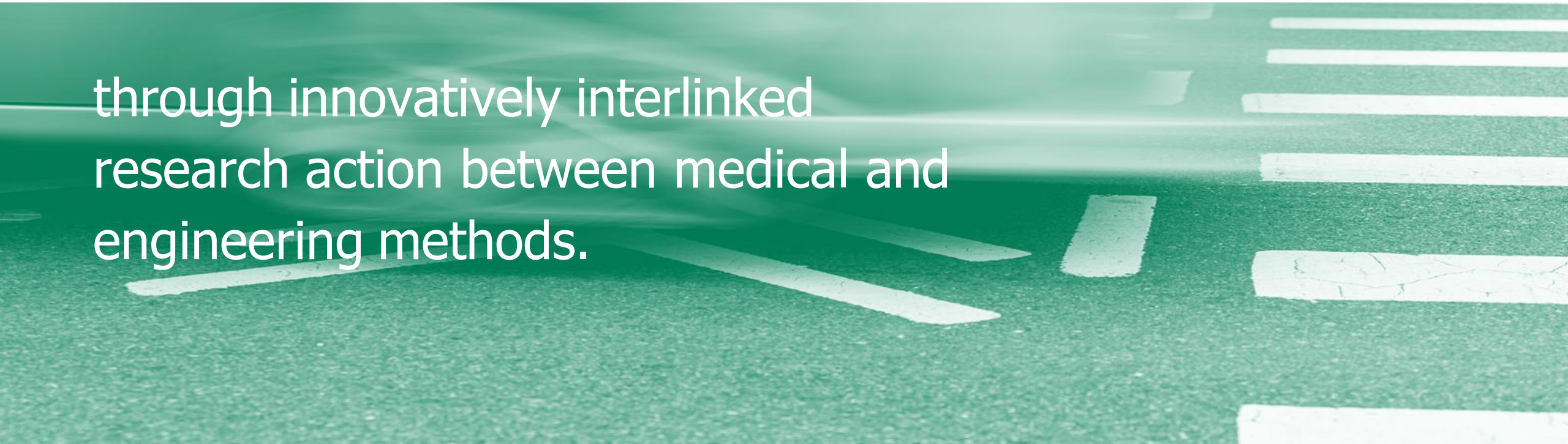
➔ significant gaps persist in understanding and mitigating **long-term physical, psychological, and social consequences**

virtual vehicle

ProtAct-Us

protecting all Road User Groups

from serious injury and
long-term physical, cognitive and mental health
consequences of road crashes



through innovatively interlinked
research action between medical and
engineering methods.

ProtAct-Us Consortium

ProtAct-Us

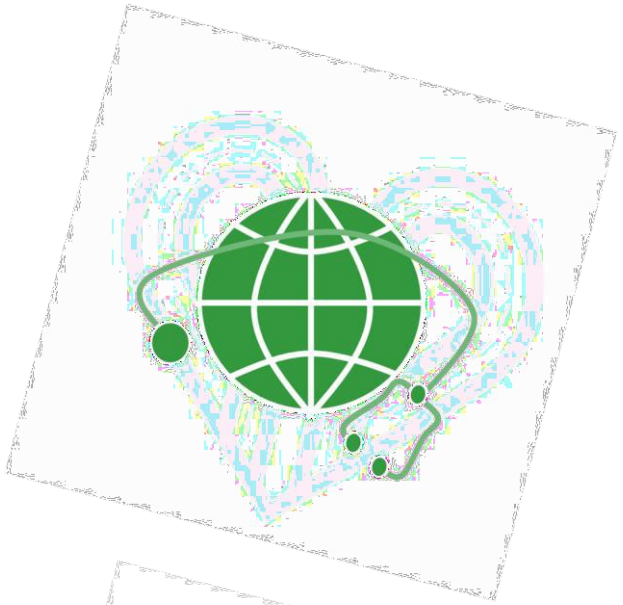
Total Project Budget: 4 Mio EUR (RIA, 100% Funding)

Duration: 36 Months (Start June 1 2024)

Coordinator: Virtual Vehicle Research

Partners: 13 + 2 associated partners

Ambition



Medical & Epidemiological Indicators & Tools

Classification System for long term consequences of injury

Engineering and development tools

- HBM assessment capability upgrade
- ATD / Dummy implementation
- Test procedures development

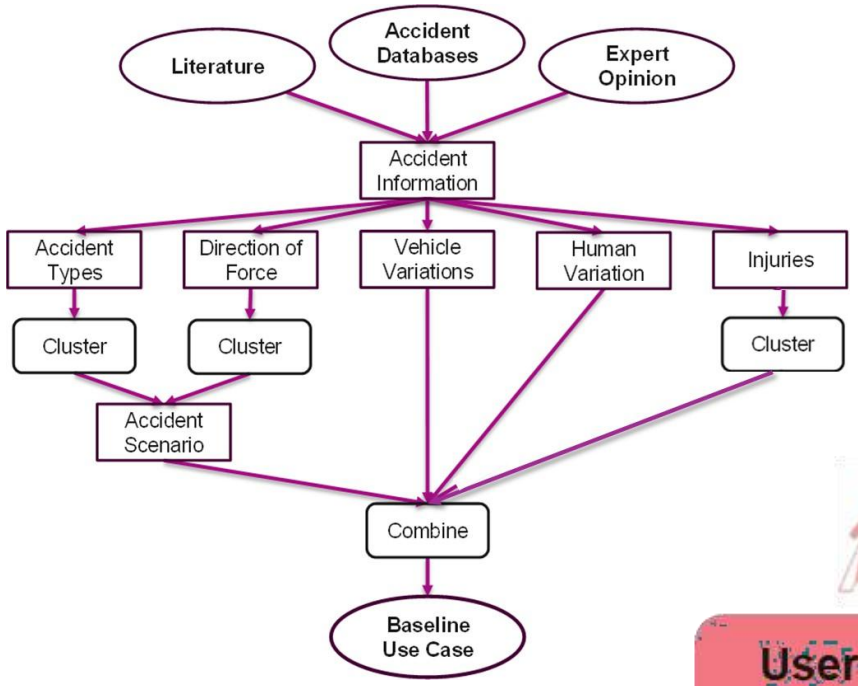
Road user specific Countermeasures development & effectiveness assessment

- Upgraded protection solutions and countermeasures for all road users
- Improved post crash treatment
- Early detection of cognitive and mental health issues

Socio Economic cost reduction of long-term consequences of injury for

- Physical -
- Cognitive impairment -
- mental health issues

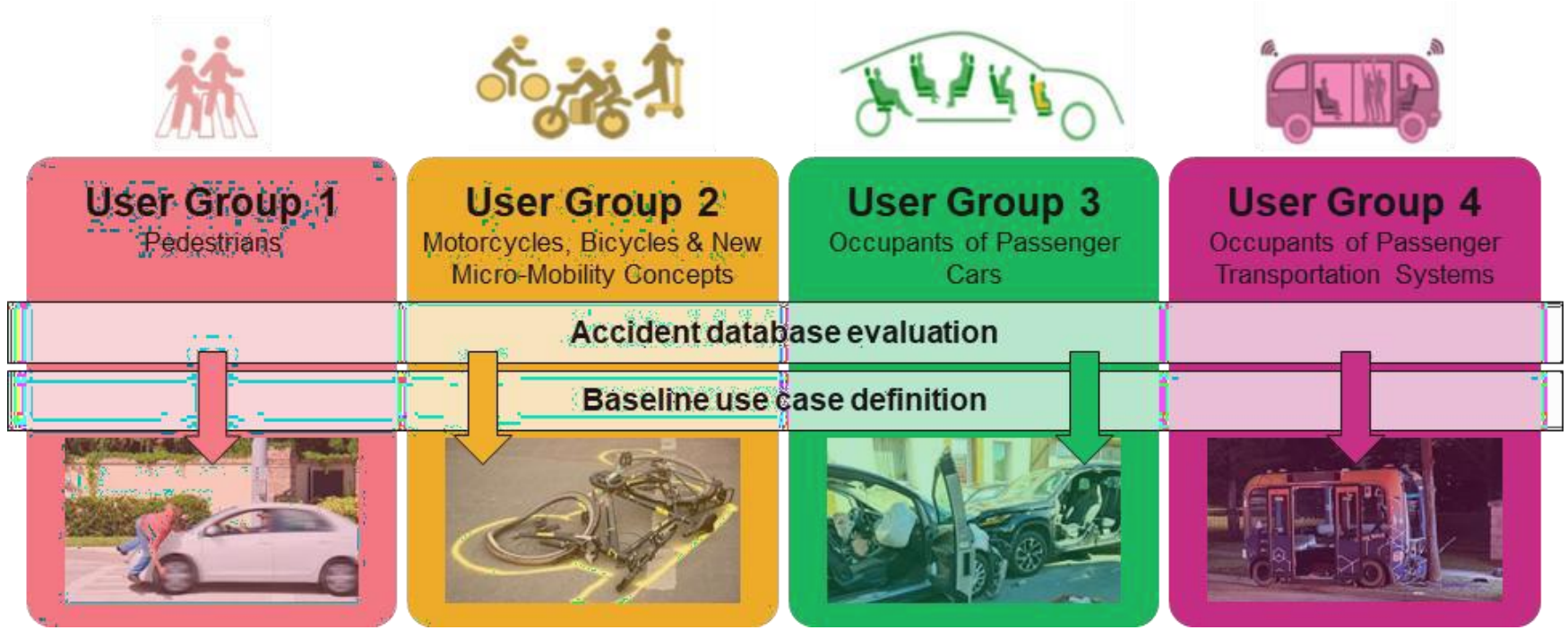
Assessment concept & Use cases Definition



Accident statistics, data on long term consequences

Methodical sequence for use case selection

Preliminary Assessment Concept



Medical and Epidemiological Methods

ProtAct-Us

- Development of multi center data collection scheme
- Development of injury metrics for long term consequences
- Propose guidelines for risk assessment
- Evaluate safety measures

long-term consequences can be related to:

- Injury
- Accident experience
- Combination of both

MHH,Hannover, Germany

On-scene data collection including all injury severities

UKA, Aachen, Germany

Data collection from patients, with personal **psychological assessment** on follow-up

Univ. Pavia, Italy

Data collection from in-patients in hospitals With focus on severe injuries

HMU Heraklion, Greece

Data collection from in-patients in hospitals With focus on severe injuries

ProtAct-Us patient follow up Field Study (multi-center on going)

“invisible injuries”

ProtAct-Us

Long-Term Consequences of Road Traffic Accidents

Road traffic accidents (RTAs) can lead to a wide range of long-term consequences that are not always directly related to the severity of the initial physical injuries. Even no or minor injuries can result in significant and lasting negative impacts on an individual's quality of life.

Cognitive and mental health LTC

Post-Traumatic Stress Disorder (PTSD): A significant number of RTA survivors develop PTSD, with symptoms that can persist for years

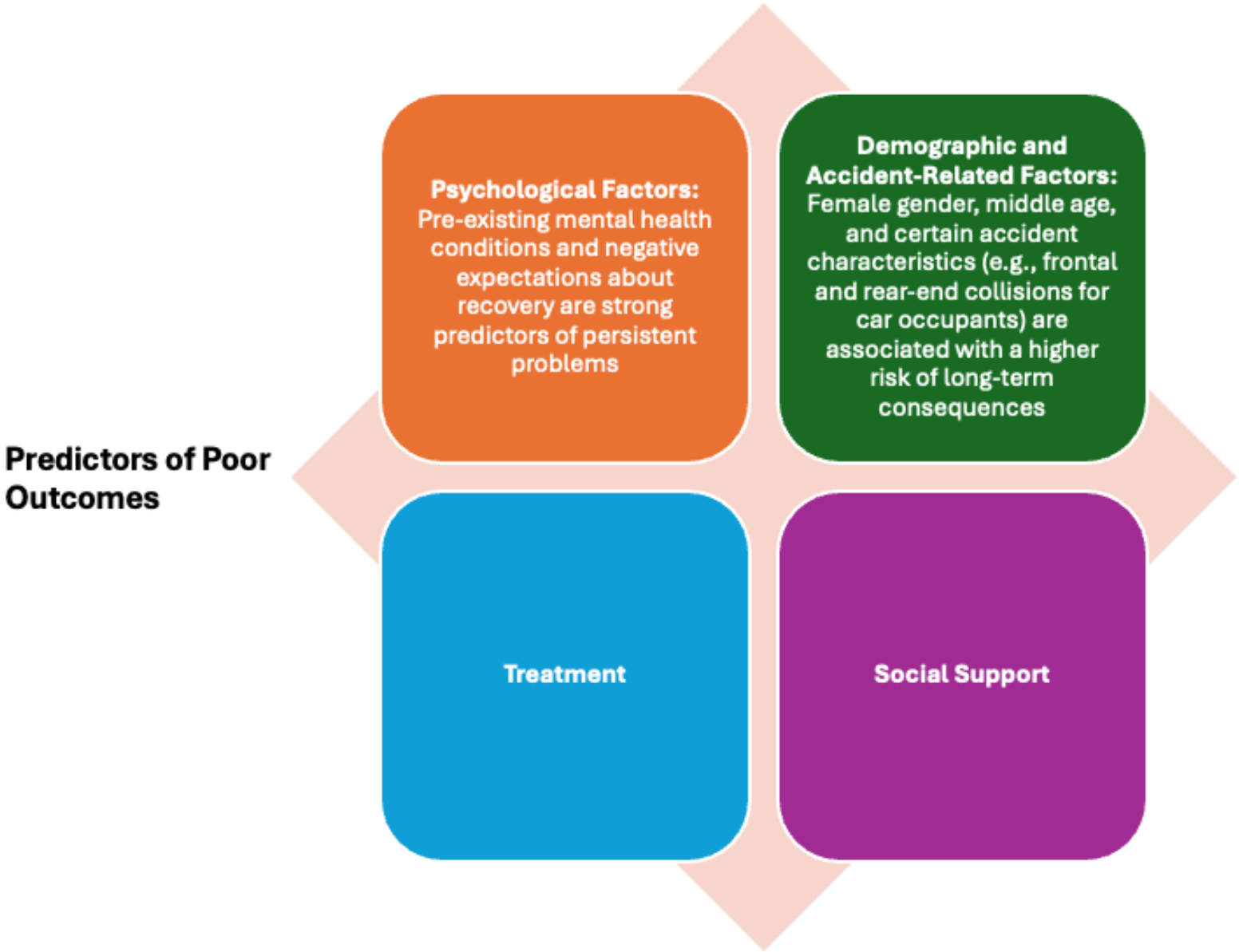
Anxiety and Depression: These are common long-term consequences and are often associated with a slower recovery).

Phobic Travel Anxiety: Many individuals develop a fear of traveling by car, which can be disabling

Cognitive Deficits: Survivors may experience difficulties with reasoning, problem-solving, and memory

Subjective Cognitive Complaints: Individuals often report issues such as forgetfulness, difficulty concentrating, and getting dates mixed up

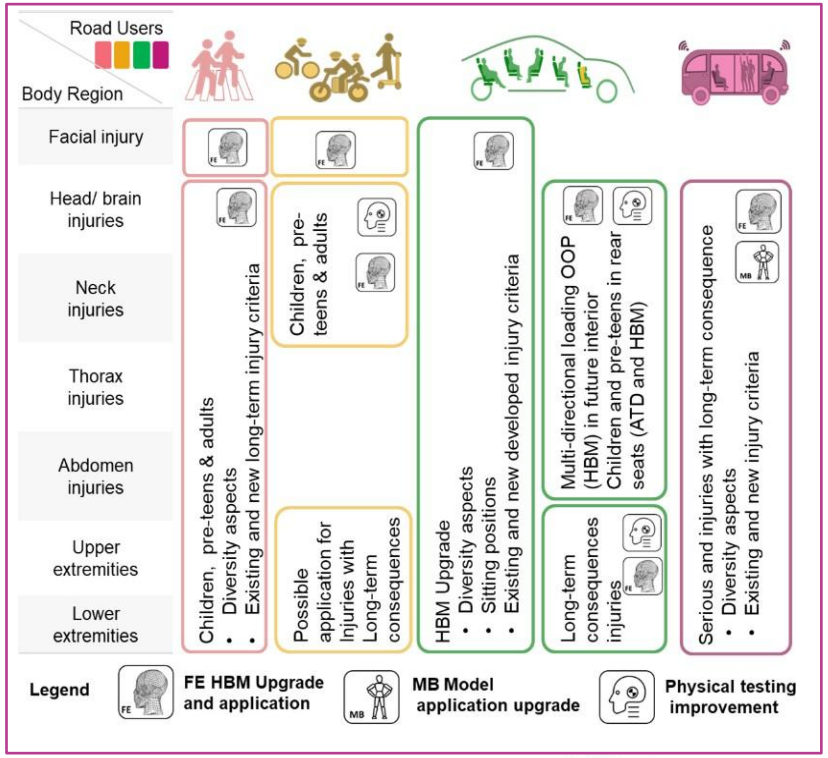
Preliminary predictors for “invisible injuries”

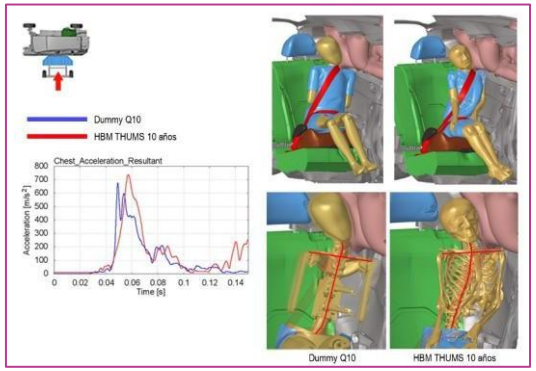


Engineering tools and methods (excerpt)

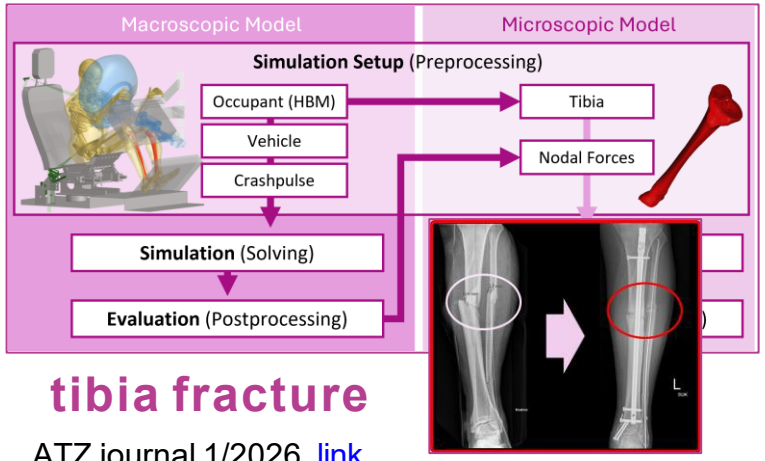
- engineering tools and methods development and validation
  - implementation and upgrade of HBMs
  - physical testing devices
- virtual and physical testing procedures

- Improvement of **head, neck, face and brain injury assessment**
- injury assessment methods for **upper and lower extremities**
- criteria implementation for **pedestrians/occupants/shuttles & buses, active road users**



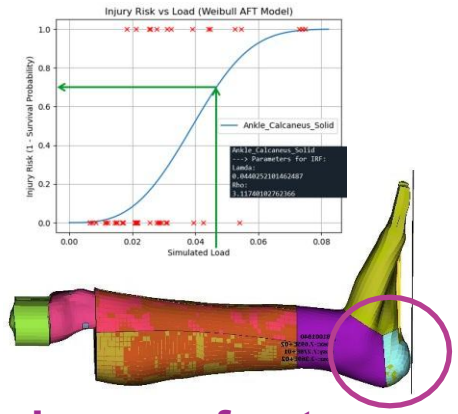


child protection in lateral collisions

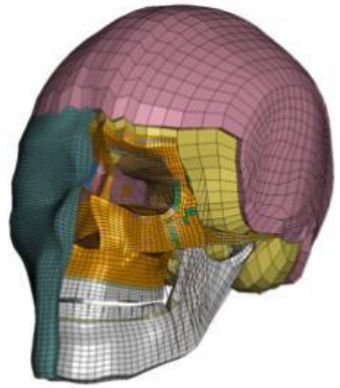


tibia fracture

ATZ journal 1/2026 [link]



calcaneus fracture



SUFEHM + New face 70k elements

virtual and physical testing procedures

ProtAct-Us

Experiments

- Experimental Test Methods for **Head + Neck** at **Component** Level
- Procedures compatible with the different casuistry for each road user group
- Reduced test matrix → Selection of most representative cases for experimental set-up definitions

Numerical simulations

Head impacts of cyclists and e-scooter riders

Child occupants side impact tests matrix

Pedestrian tests matrix (first impact)

Shuttle, bus and people mover occupant

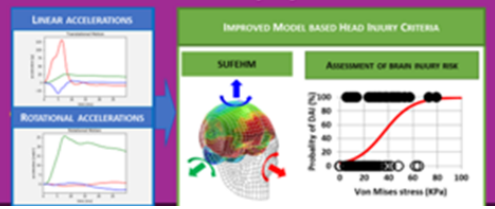
3D Linear acceleration time history curves at head CG
3D Angular velocity time history curves at head CG
3D Linear acceleration time history curves at T1
3D Angular velocity time history curves at T1

Head position just before de impact
Head initial velocity (linear and angular) just before the impact

Impacted Surface definition needed (geometry + material)

Indirect impact

- Adult and Child Brain injury risk assessment
- Adult and Child Neck injury risk assessment



Direct impact

- Adult and Child Brain injury risk assessment
- Adult and Child Skull injury risk assessment
- Adult Face injury risk assessment

ProtAct-Us exemplary excerpt

Networking

ROAD SAFETY CLUSTER

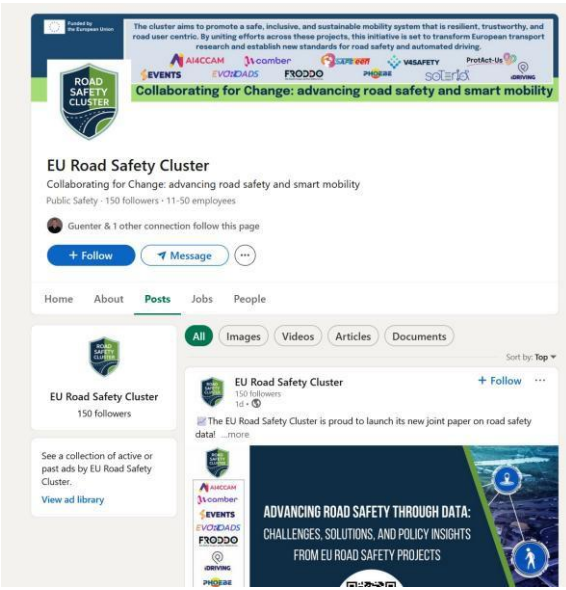
➔ *The cluster aims to promote a safe, inclusive, and sustainable mobility system that is resilient, trustworthy, and road user centric.*

➔ *By uniting efforts across these projects, this initiative is set to transform European transport research and establish new standards for road safety and automated driving.*

➔ *fostering the EU Road Safety topics*

Joint white paper on relevant road safety relevant data link

Linked-In:



Ircobi Pre- conference workshop with sister project IMPROVA
8. Sept. 2026: "**Long-term consequences of road traffic-related injury**" HERE.

Impact

- Analysis and Review of Existing Injury Data and availability data on serious injuries and long-term consequences for the road user groups targeted within ProtAct-Us;

➔ standardization efforts for data collection and assessment

- Multi-center, harmonized data collection scheme

➔ multi-center study at 4 hospitals in progress – potential basis for future clinical practice and public health policy

- Road user specific Countermeasures development & effectiveness assessment, incl. standardization efforts

- Socio Economic cost reduction of long-term consequences of injury for **Physical** - **Cognitive** impairment - mental health issues through **optimized treatment and knowledge** of LTC contributing factors

Outlook

- Road Safety for all road users is part of sustainable road transport
- Safety topic does not stop at the crash site – injuries and related consequences are a continuing issue

➔ needs more focus, better integration of all stakeholders, cooperative understanding to develop mitigation solutions pre-crash and post-crash (hospitals, treatment, etc)

- HEU call : 2026-D6-09 Road Safety and resilience of rural areas
  - Contact us if interested!

- More related funding and calls are needed!
  - ➢ HEU (2027+)
  - ➢ Cost actions… hard competition…. Next chance Oct 2026
  - ➢ Etc…

Funded by the European Union

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Get in contact

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ProtAct-Us!
Make roads a safer place!

Valuing non-fatal injuries – towards a more complete picture of traffic safety costs

Sara Olofsson, The Swedish Institute for Health Economics (IHE)

SAFER, Gothenburg

2 June, 2026

In collaboration with Ulf Persson and Michael Willis, IHE

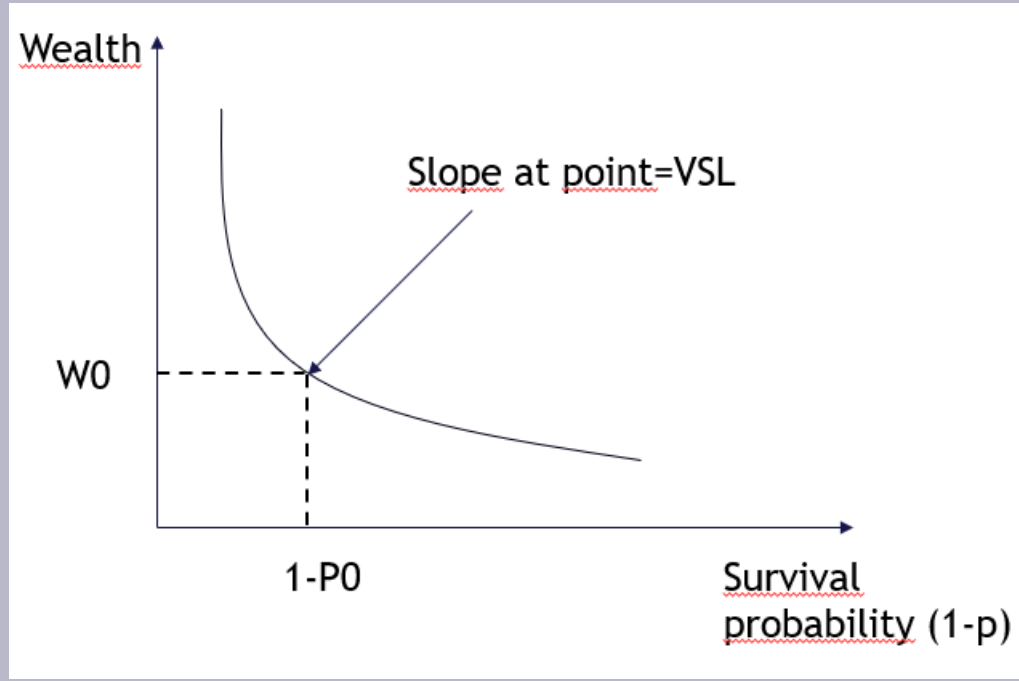
iHE
THE SWEDISH INSTITUTE FOR HEALTH ECONOMICS
ENABLING INFORMED DECISION MAKING

Traffic safety and Risk Preferences

- Investing in traffic safety require knowledge of the tradeoff between money and risk
- On the private market, e.g. when buying a car, individuals decide how much money to spend on reducing risk according to their risk preferences
- Outside of the private market, e.g. when building a road, decision-makers decide how much money to spend on reducing risk
- To align with individual preferences, research is needed to find individuals' tradeoff between money and risk

The Value of a Statistical Life (VSL)

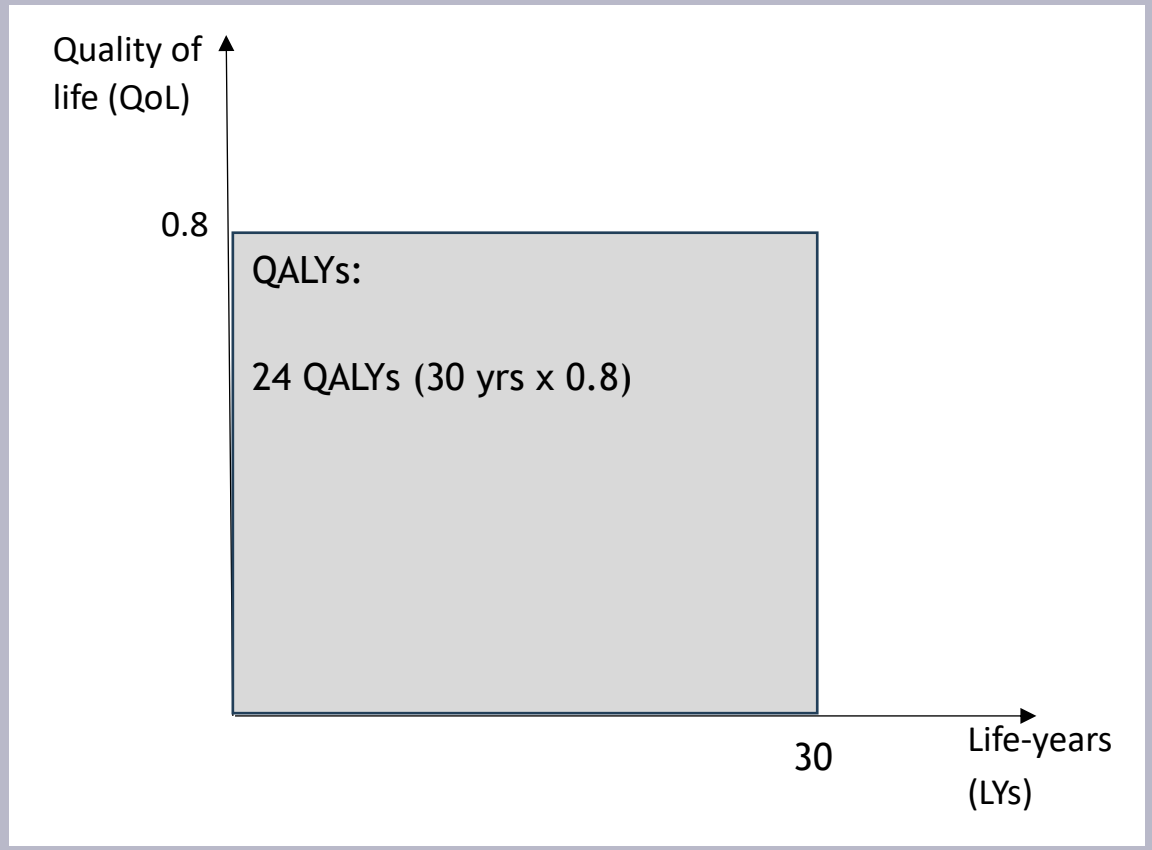
- The value of reducing fatal injury risk in road traffic accidents is derived by searching for the tradeoff between money and fatality risk
- Revealed preferences – e.g., wage compensation in occupations with higher risk
- Stated preferences – asking respondents for their willingness to pay (WTP) on a hypothetical market



Jones-Lee M. The Value of Changes in the Probability of Death or Injury Journal of Political Economy. 1974;82(4):835-49.

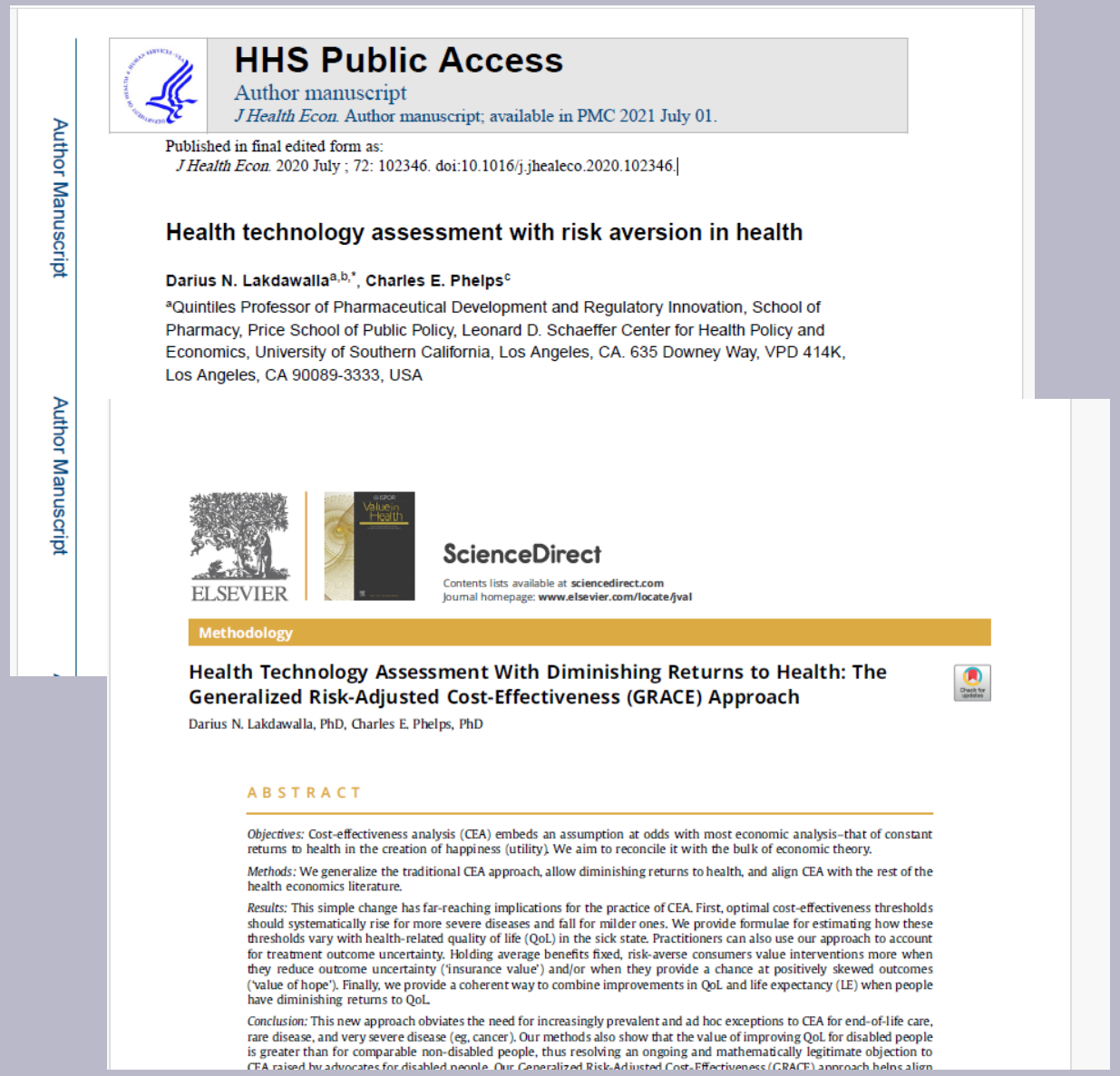
Risk reduction for non-fatal injuries

- Outcomes vary in health-related quality-of-life (HRQoL), from slight to very severe injuries
- Outcomes vary in duration, from temporary to permanent
- The quality-adjusted life-year (QALY) is a measurement in health economics which considers HRQoL and health state duration
- This measurement is used to estimate the health loss from a non-fatal injury and used to estimate the value as a share of the VSL (fatality risk equivalent)



GRACE - a new method in health economics

- The use of QALYs in health economics is currently being debated
- The measurement is based on the assumption that a QALY is worth the same irrespective of initial health
- This is not in line with the assumption of diminishing marginal utility – that we pay more for something when we have less of it
- The Generalized Risk-Adjusted Cost-Effectiveness Approach (GRACE) has been developed to incorporate diminishing marginal utility



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Health technology assessment with risk aversion in health

Darius N. Lakdawalla[a,b,*], **Charles E. Phelps**[c]

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Methodology

Health Technology Assessment With Diminishing Returns to Health: The Generalized Risk-Adjusted Cost-Effectiveness (GRACE) Approach

Darius N. Lakdawalla, PhD, Charles E. Phelps, PhD

ABSTRACT

Objectives: Cost-effectiveness analysis (CEA) embeds an assumption at odds with most economic analysis–that of constant returns to health in the creation of happiness (utility). We aim to reconcile it with the bulk of economic theory.

Methods: We generalize the traditional CEA approach, allow diminishing returns to health, and align CEA with the rest of the health economics literature.

Results: This simple change has far-reaching implications for the practice of CEA. First, optimal cost-effectiveness thresholds should systematically rise for more severe diseases and fall for milder ones. We provide formulae for estimating how these thresholds vary with health-related quality of life (QoL) in the sick state. Practitioners can also use our approach to account for treatment outcome uncertainty. Holding average benefits fixed, risk-averse consumers value interventions more when they reduce outcome uncertainty ('insurance value') and/or when they provide a chance at positively skewed outcomes ('value of hope'). Finally, we provide a coherent way to combine improvements in QoL and life expectancy (LE) when people have diminishing returns to QoL.

Conclusion: This new approach obviates the need for increasingly prevalent and ad hoc exceptions to CEA for end-of-life care, rare disease, and very severe disease (eg, cancer). Our methods also show that the value of improving QoL for disabled people is greater than for comparable non-disabled people, thus resolving an ongoing and mathematically legitimate objection to CEA raised by advocates for disabled people. Our Generalized Risk-Adjusted Cost-Effectiveness (GRACE) approach helps align

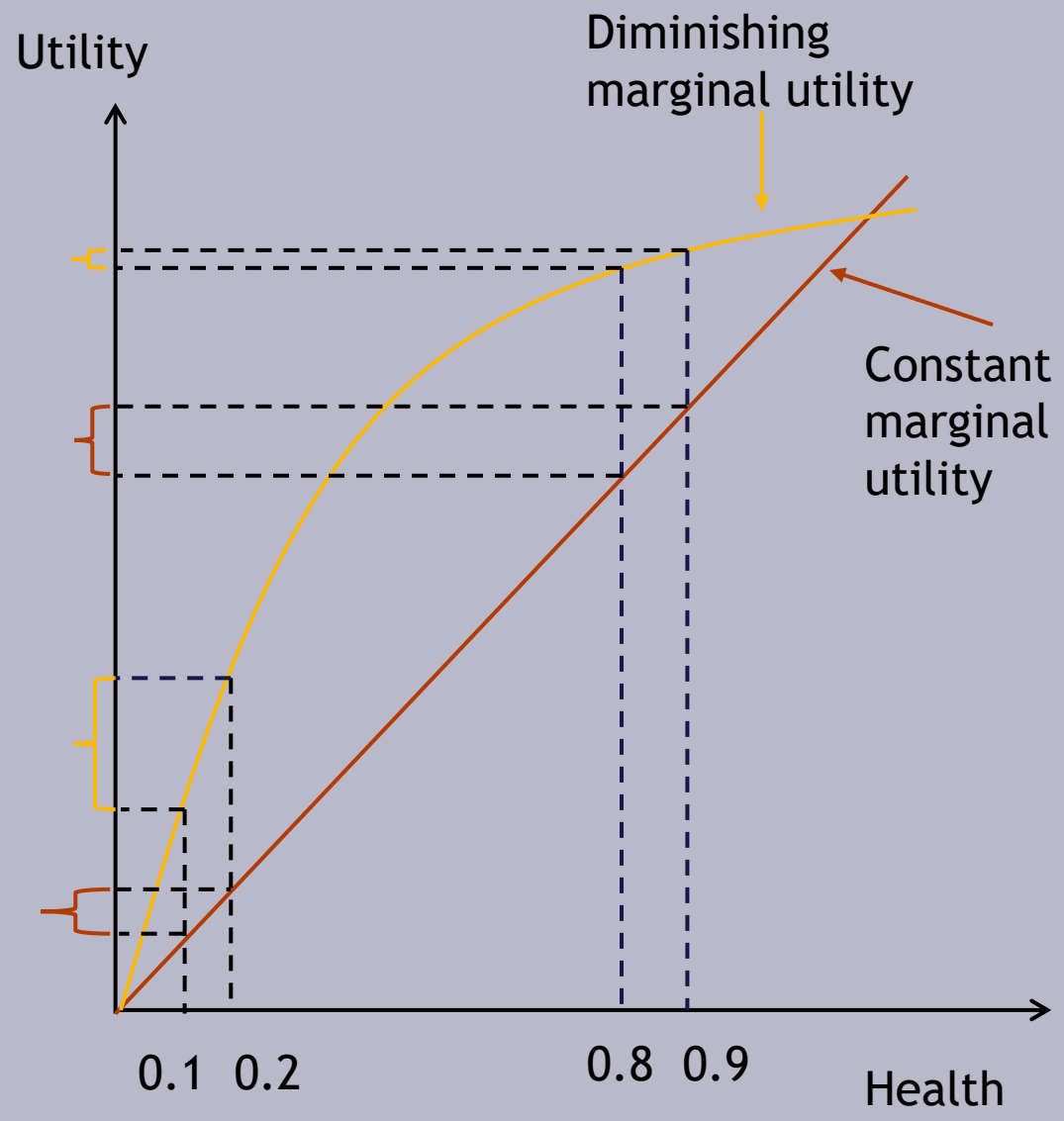
Garber A.M. Phelps C.E., Economic foundations of cost-effectiveness analysis, Journal of Health Economics, 1997;16:1-31.
Lakdawalla DN, Phelps CE. Health Technology Assessment With Diminishing Returns to Health: The Generalized Risk-Adjusted Cost-Effectiveness (GRACE) Approach. Value Health. 2021;24(2):244-9.

Objective

- The objective of this research was to estimate the value of reducing risk of non-fatal road traffic injuries using the GRACE approach and comparing estimates using GRACE to estimates using current methodologies (fatality risk equivalents and WTP)

Methods

- First step: Performing a survey to estimate risk preferences among the Swedish general population
- Second step: Estimate utility functions based on risk preference parameters
- Third step: Adjusting QALY and WTP for a QALY for expected utility using GRACE equations



Survey of risk preferences

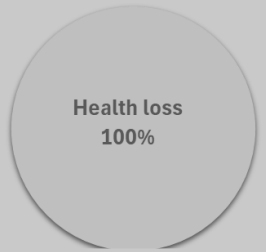
- Certinty Equivalence (CE)
- Reference point is own current health rated at a VAS scale from 0 to 100.
- Choosing between:
- Certain health loss (e.g., 10)
- Uncertain health loss (e.g., 0 or 20)
- Different sizes of health loss and duration (one per respondent)

PUSH A BUTTON FOR HEALTH

Imagine that you are driving (or are a passenger in) a car and that something happens which means that your car is about to crash.

Assume that you can push one of two buttons in an innovative technology system and change the outcome of the crash.

Button X results in a smaller health loss with certainty. The outcome of button Y is uncertain but can either result in no injury or a larger health loss.

	
Button X [outcome varies until indifference] * 100% risk that you health will decline by [5/10/15/20/25 points] on a 100 point scale for [one year/rest of life]	Button Y [outcomes remain the same] * 50% risk that your health will decline by [10/20/30/40/50] on a 100 point scale for [one year/rest of life] * 50% chance of no injury

What button would you push in this situation?

- ☐ I would push button X
- ☐ I would push button Y
- ☐ I am indifferent

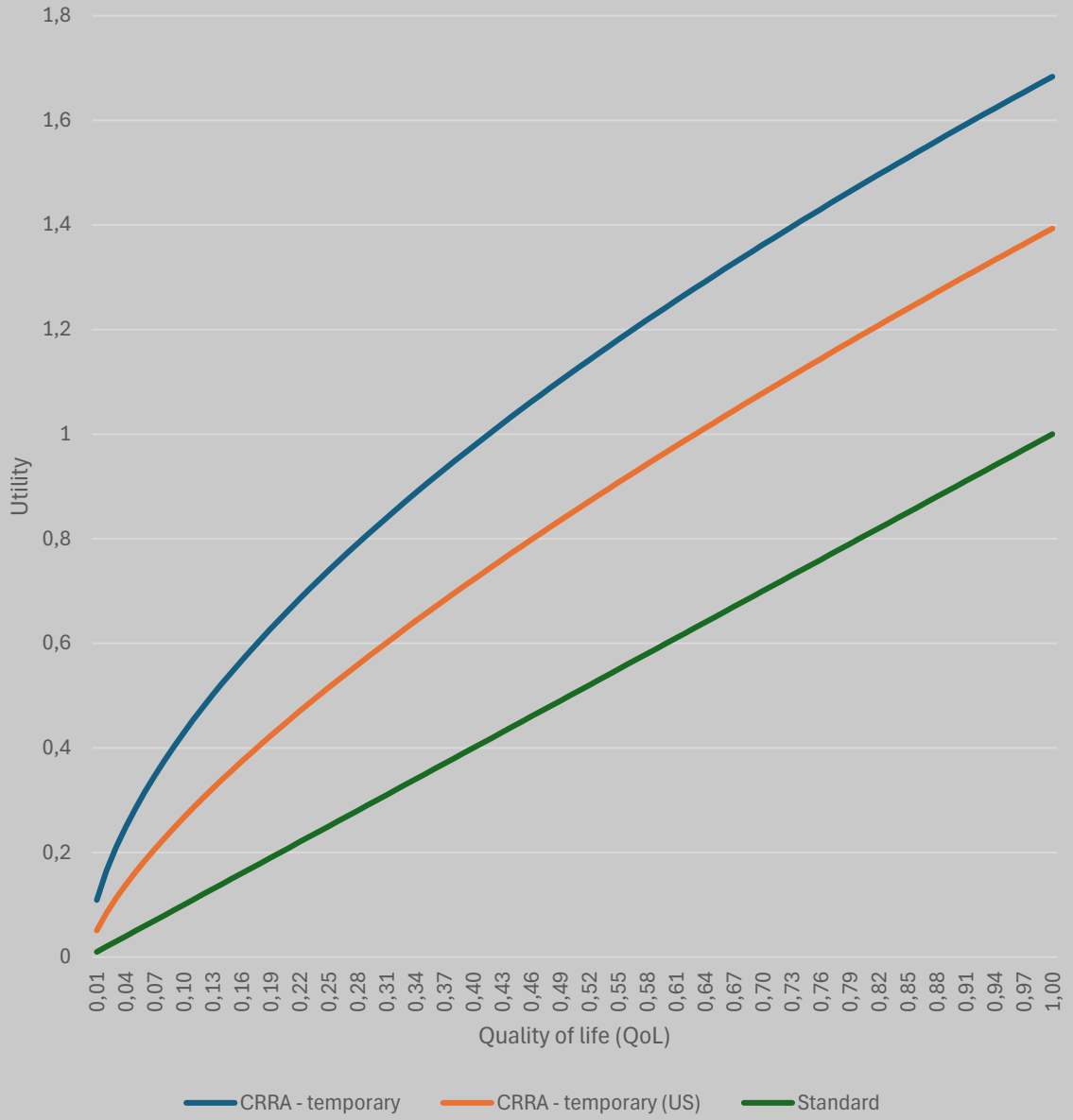
Results

- Survey performed in June, 2025
- 1,003 responses (response rate 57%), around 100 per version
- Mostly representative of Swedish, adult population
- Heterogeneous views on risk
- Risk-taking lower in traffic than in other contexts

Variable		Value
Risk-taking in traffic on a scale from 0 to 10	0-3 (low risk-taking)	52.1%
	4-6 (medium risk-taking)	28.7%
	7-10 (high risk-taking)	17.0%
	Missing	2.1%
	Mean value (SD)	3.63 (2.88)
Risk-taking in sports on a scale from 0 to 10	0-3 (low risk-taking)	34.8%
	4-6 (medium risk-taking)	30.9%
	7-10 (high risk-taking)	31.1%
	Missing	3.2%
	Mean value (SD)	4.79 (2.99)
Risk-taking in health on a scale from 0 to 10	0-3 (low risk-taking)	40.9%
	4-6 (medium risk-taking)	36.0%
	7-10 (high risk-taking)	21.1%
	Missing	2.0%
	Mean value (SD)	4.22 (2.84)
Risk-taking in money on a scale from 0 to 10	0-3 (low risk-taking)	36.5%
	4-6 (medium risk-taking)	34.8%
	7-10 (high risk-taking)	26.9%
	Missing	1.8%
	Mean value (SD)	4.57 (2.87)

Results continued

- Utility estimated with risk preferences from CE and constant relative risk aversion (CRRA)
- Support higher utilty gain when health is low (risk aversion)
- Risk preferences did not differ by duration
- Risk aversion was higher than in the US (Mulligan et al. 2024)

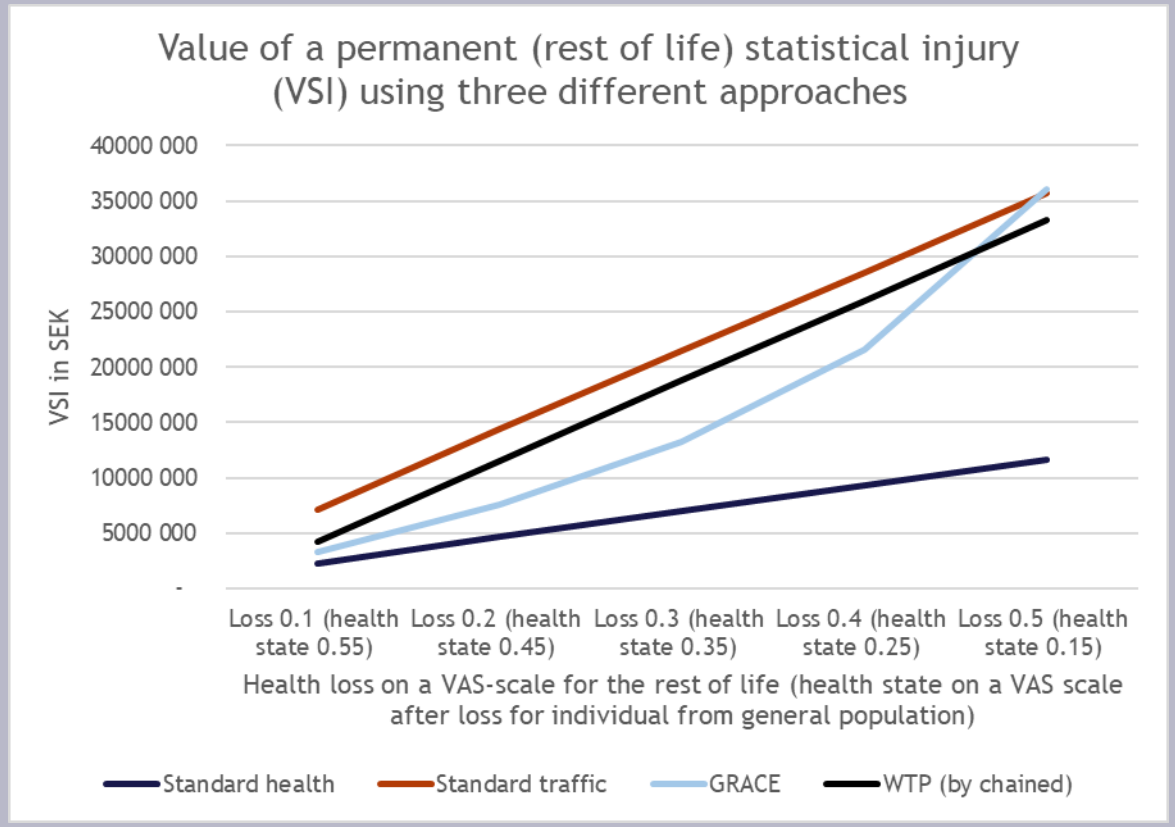


Mulligan K, Baid D, Doctor JN, Phelps CE, Lakdawalla DN. Risk preferences over health: Empirical estimates and implications for medical decision-making. J Health Econ. 2024;94:102857.

Results continued

- VSI estimated with GRACE increase nonlinearly with health loss, include diminishing marginal utility
- GRACE results align with

- the standard health approach (QALY multiplied by threshold value) at lower levels of health loss
- The standard transport approach (fatality risk equivalent multiplied by VSL) at higher levels of health loss



Conclusion and Discussion

- Results support the claim that the standard approach in transport overestimate value for less severe injuries and a higher priority to preventing severe injury
- Study findings support more research on risk preferences and
  - reference point (prospect theory)
  - context (traffic vs others)
- Other important research questions for the area include
  - Relative preferences across injury prevention and other goals (e.g., accessability)
  - Preferences variability, e.g. child premium, equity considerations (reducing mean risk or reducing variability in risk)

Thank You!

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TRAFIKVERKET

Estimating the cost of traffic injuries at municipal level

Kristina Mattsson
Utredningsledare, trafiksäkerhet
Planering, Trafikverket

TRAFIKVERKET

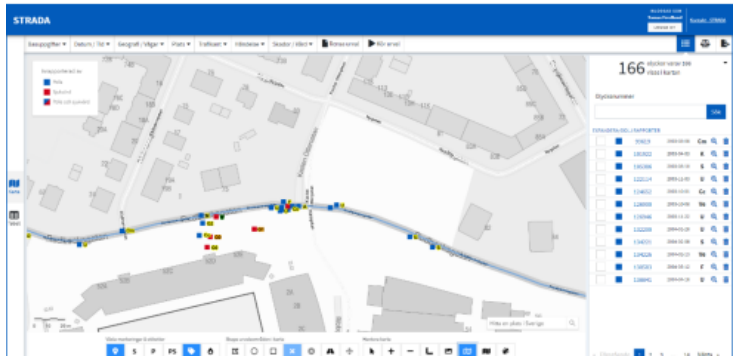
Two starting points for the estimation

- (Accidents) / Personal injuries - Strada

  Strada (Swedish Traffic Accident Data Acquisition)

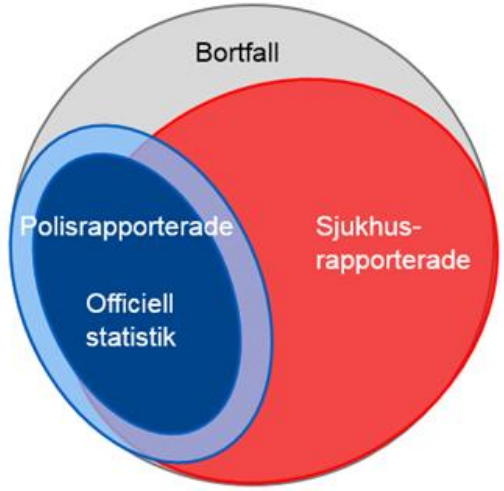
- Calculation values regarding costs for road accidents – ASEK

  ASEK (Analysmetod och samhällsekonomiska kalkylvärden för transportsektorn)



TRAFIKVERKET

Strada - different degrees of injury severity depending on data source



Data source	What is registrated	How severity can be used
police	Severity scale: D (fatality) SS (severe injury) LS (slight injury)	Can be converted into probabilities of serious injury (RPMI ≥ 1%)
hospital	Diagnosis and injury description AIS value per injury	AIS and body region can be used to calculate probability of serious injury (RPMI ≥ 1%) RPMI available as a separate column in data from Strada

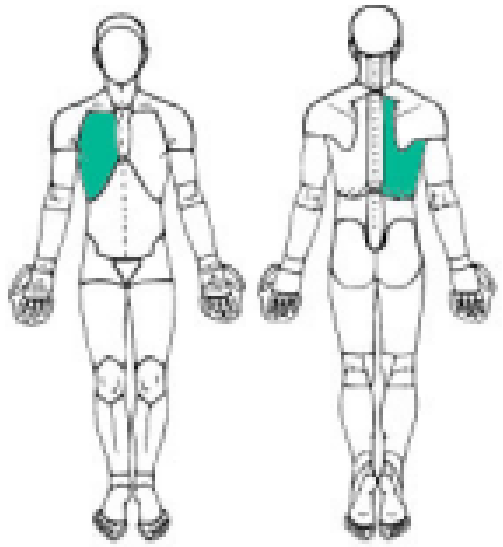
TRAFIKVERKET

Different terms

ISS ≈ risk of fatality
RPMI ≈ risk of permanent medical impairment

- **AIS** (Abbreviated Injury Scale) – indicates the severity of each individual injury (1–6).
- **ISS** (Injury Severity Score) – summarizes the three most severe AIS injuries in different body regions.
- **RPMI** (Risk of Permanent Medical Impairment) – estimate the risk that the injury will lead to permanent medical disability.

AIS^2+AIS^2+AIS^2 = ISS



TRAFIKVERKET

AIS → RPMI (Risk of Permanent Medical Impairment)

RPMI was developed in Sweden to estimate the risk of permanent medical impairment based on AIS-coded injuries.

RPMI ≥ 1 % given AIS level and body region, in percentage. (Malm et al. 2008)

Kroppsregion	AIS 1	AIS 2	AIS 3	AIS 4	AIS 5
Huvud	8,0	15	50	80	100
Nacke/hals	16,7	61	80	100	100
Ansikte	5,8	28	80	80	n.a.
Övre extremiteter	17,4	35	85	100	n.a.
Nedre extremiteter och pelvis	17,6	50	60	60	100
Thorax	2,6	4	4	30	30
Bröstrygg	4,9	45	90	100	100
Buk	0	2,4	10	20	20
Ländrygg	5,7	55	70	100	100
Utvärtes (hud) och termiska skador	1,7	20	50	50	100

TRAFIKVERKET

Strada Uttagswebb – where to find data about injuries

[strada-uttagswebb-handledning-2025.pdf]

Sheet Personer:

Skadegrad (P)	Sammanvägd skadegrad	Skadegrad (S)

Sheet Personer sjukvård:

Underlag till allvarligt skadade 1%	Underlag till allvarligt skadade 5%	Underlag till mycket allvarligt skadade 10%

Strada – example

A municipality of about 60,000 inhabitants

Strada 5 years

Average value per year

Olyckstyp		Dödade	Allvarligt skadade ISS 9-	Måttligt skadade	Underlag till allvarligt skadade 1% (RPMI>=1)
S	Singel (motorfordon)		17	32	30,01
M	Möte (motorfordon)	2	5	15	7,34
O	Omkörning (motorfordon)			1	0,17
U	Upphinnande (motorfordon)		1	11	11,92
A	Avsvängande (motorfordon)		3	3	3,69
K	Korsande (motorfordon)		3	3	3,92
C	Cykel/Moped - Motorfordon		7	9	9,18
F	Fotgängare - Motorfordon	1	3	4	5,18
G0	Fotgängare singel		56	574	282,92
G1	Cykel singel		27	214	110,02
G2	Moped singel		2	17	9,69
G3	Cykel - Fotgängare			4	1,65
G4	Cykel - Cykel			8	4,76
G5	Cykel - Moped		1		0,72
G6	Moped - Fotgängare				
G7	Moped - Moped				0,19
G8	Fotgängare - Fotgängare				
W	Vilt (motorfordon)			3	2,17
V	Övrigt	1	5	14	9,91
J (tåg)	Tåg - Motorfordon				0,04
	Totalt	**4**	**130**	**912**	**493,45**
	Medelvärde per år:	**0,8**	**26**	**182**	**98,69**

TRAFIKVERKET

ASEK 8.0

Analysmetod och samhällsekonomiska kalkylvärden för transportsektorn

(Analysis method and socio-economic calculation values for the transport sector)

Valuation of fatalities and seriously injured

Skadekategori	Definition (STRADA/RPMI)	Kostnad 2019 (kr/person)	Kostnad 2045 (kr/person)
Dödad (D)	–	52 988 000 kr	71 310 000 kr
Allvarligt skadad (AS)	RPMI ≥ 1 %	14 698 000 kr	19 698 000 kr

TRAFIKVERKET

Estimated socio-economic cost of the municipality's accidents

	Dödade	Allvarligt skadade (ISS 9-)	Måttligt skadade	Underlag till allvarligt skadade 1% (RPMI>=1)
Totalt	**4**	130	912	**493,45**
Medelvärde per år:	**0,8**	26	182	**98,69**

Skadekategori	Definition (STRADA/RPMI)	Kostnad 2019 (kr/person)	Kostnad 2045 (kr/person)
Dödad (D)	–	52 988 000 kr	71 310 000 kr
Allvarligt skadad (AS)	RPMI ≥ 1 %	14 698 000 kr	19 698 000 kr

Exempel

	Dödad	Underlag till allvarligt skadade 1% (RPMI>=1)	
Medelvärde per år	0,8	98,69	
ASEK-värden	52 988 000	14 698 000	
Kostnad	42 390 400	214 242 000	
Total kostnad per år			**1 450 milj kr**
Kostnad för kommunen			**116 milj kr**

kristina.mattsson@trafikverket.se

Strada:
Kontakta oss om Strada – Transportstyrelsen

ASEK:
Analysmetod och samhällsekonomiska kalkylvärden, ASEK - Bransch

Panel discussion
Are we investing in the right things?

Panelists

- Gunnar Isacsson, Trafikverket
- Henrik Sjöstrand, VTI
- Jonas Ekmark, Zenseact
- Sara Olofsson, IHE

SAFER
VEHICLE AND TRAFFIC SAFETY CENTRE AT CHALMERS

Key messages from today

1. **Traffic safety is an investment, not just a cost.**
2. **Many important impacts remain hidden.**
   Long-term injuries, productivity loss, organisational consequences and quality of life.
3. **What we count shapes what we prioritise.**
   The choice of metrics influences decisions and investments.
4. **Economic arguments shape real-world decisions.**
   We need to use them more effectively to strengthen traffic safety.

SAFER
VEHICLE AND TRAFFIC SAFETY CENTRE AT CHALMERS

Welcome to our networking lunch!

SAFER
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