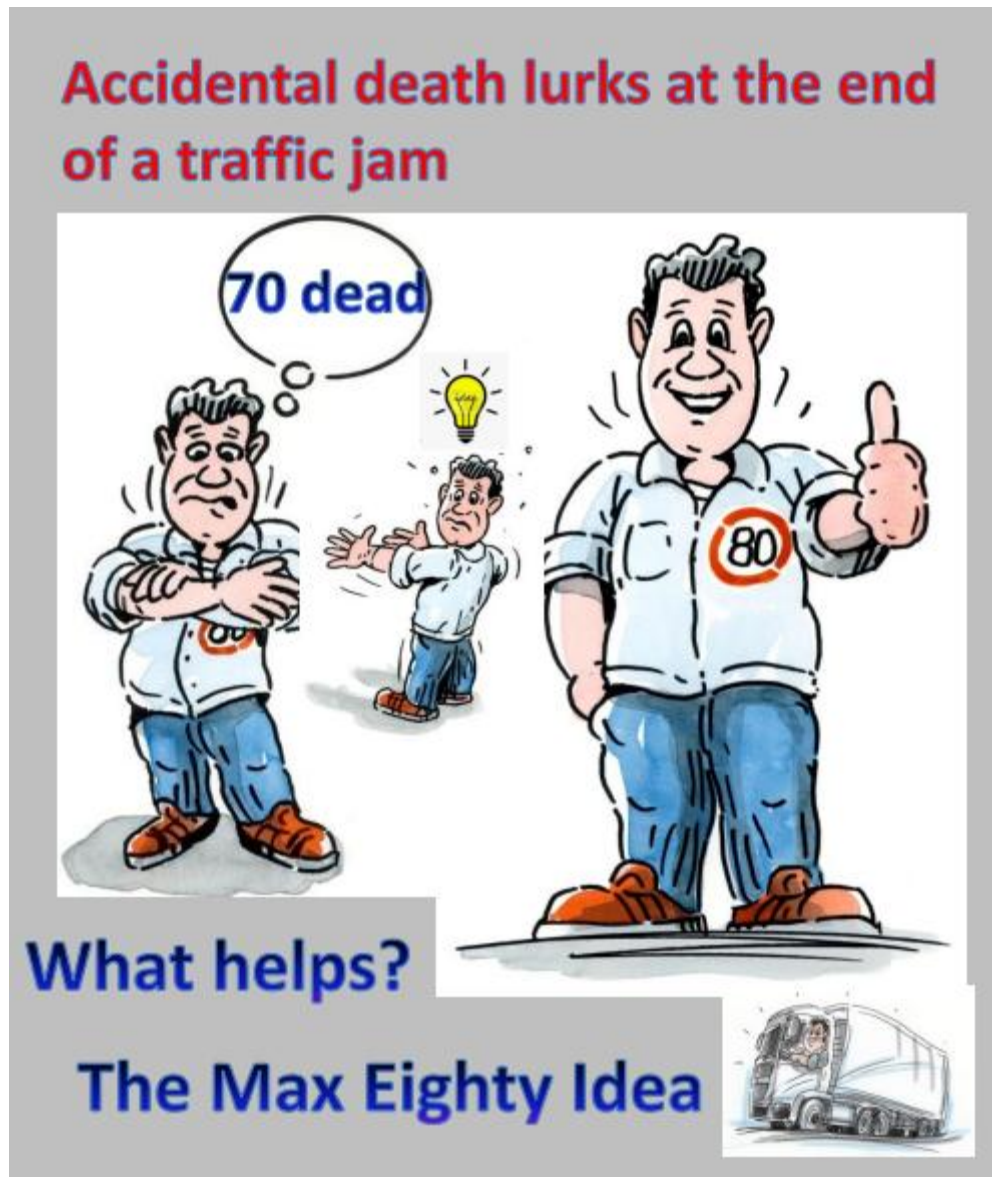


The Max Eighty Idea 2022

Basis for a Europe-wide movement to curb accidental deaths at the end of traffic jams



Time for change - Time to stay alive

Management version

The number of accidental deaths in Germany fell by 596 to an all-time low in the 2020/21 pandemic years. This is a minus of 20 percent. The number of dead occupants of goods road transport vehicles, on the other hand, rose by 60 percent to 70 dead drivers during this period. The majority died on highly congested transit routes at the ends of traffic jams in front of permanent road works at peak traffic times.



We know where the danger of death lurks. We know at what times it is heightened. We know why accidents happen and we know that the causes of death in accidents are almost exclusively to be found in distraction or microsleep, because the fatal impact occurs unbraked, i.e. with a run-up and the force of 40 tonnes.

Only one person can end the death immediately: *the driver!*

Many, however, lack a vital danger radar. There is a Europe-wide lack of training in the risks of accidents and in the effectiveness of the assistance systems installed in trucks.

The *Max Achtzig Idea 2022* focuses on a multilingual illustrated educational brochure that specifically informs the driver. It is part of the Max Achtzig safety register for the driver's manuals of the transport companies, which has an accident-reducing effect when implemented in the company philosophy.

But the driver needs support in the company, in industry and trade, in politics and ultimately also in society. The supply of goods and the logistical supply chain can also break. Its strongest, but at the same time weakest link is the driver. He needs appreciation, but also the unmistakably conveyed awareness that he is transporting 40 tonnes of responsibility. Companies with social sustainability are more apt to eliminate stressors for drivers.

They can also manage time windows for loading activities more flexibly and thus more stress-free for the driver by introducing digital ramp management.

Technical measures are needed to accompany this.

A universal gadget must be developed for navigation apps that actively warns drivers with national voice output when approaching the end of a traffic jam.

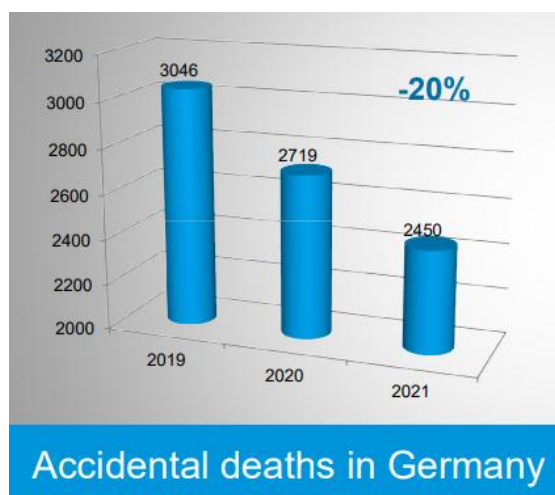
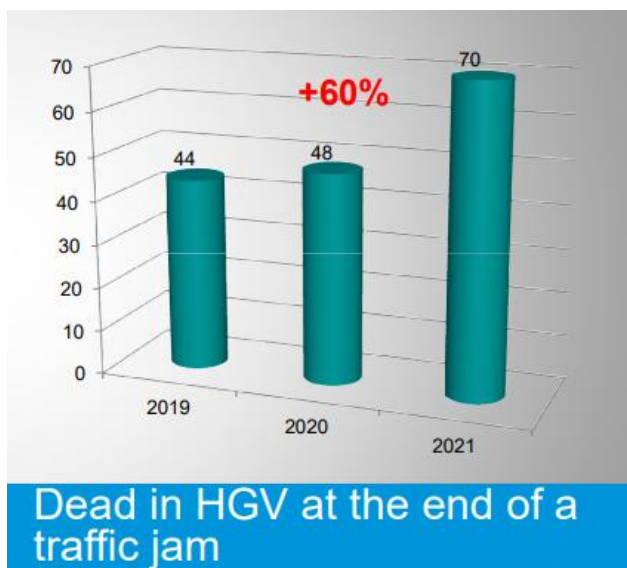
When setting up permanent road works on highly congested transit routes, road authorities must plan the use of intelligent, implementable congestion warning systems as standard in order to warn road users in real time of the end of a traffic jam. Coupling this with an autonomous speed camera would give a distracted driver a "wake-up call" at the last moment.

Germans, like international drivers, are dying. With the increasing driver shortage, everyone involved in the supply chain should feel obliged to adopt the *Max Eighty 2022 idea* and internalise the campaign motto:

It's time for change - time to stay alive.

Deceptive accident development

A small virus has achieved what transport policy in the pursuit of Vision Zero has so far been unable to do on this scale and at this speed. In the pandemic years, the number of accident fatalities fell by almost 20 percent in Germany alone. 596 fewer predicted deaths statistically reduce the suffering and stress disorders of more than 67,000 people from their environment.



In the shadow of these outstanding figures, however, the dramatic developments in the transport industry unfortunately pale into insignificance. Deaths at the tail end of traffic jams are sadly rushing from record to record. While 48 drivers lost their lives in a collision in 2020, by the end of 2021 the figure had risen by another 46 percent to 70. And many more seriously injured must be added to this.

What are the reasons?

While lockdown measures have put a brake on private transport, truck drivers have to ensure that the goods chain works and does not break off. The booming online goods trade did the rest. More and more transports over dilapidated bridge structures are adding to the rehabilitation backlog, causing traffic restrictions and thus increasing the risk of traffic jams. But no lorry driver deliberately drives into the end of a traffic jam and they all hang on for dear life. Many, however, lack a vital awareness of danger. Stress, lack of drivers, unhealthy sleep, monotony and the urge to be distracted while driving, but also Europe-wide training deficits with regard to life-saving assistance systems in trucks are a dangerous mixture that increases the danger of death. And they don't even realise on their own that they have to change something here. The high differential speeds on impact are fatal. If the distance is too small, the braking distance is not sufficient for normal reaction in a convoy. However, the impact speed is usually less than 40 km/h and is not fatal.

*Death does not
distinguish between
Nationalities*



Unbraked, at full speed, the driver is crushed in the cab by the thrust of his load. If a car gets in the way, the occupants have hardly any chance of survival.

The cause here is clearly the temporary lack of *attention on the* part of the driver.

This can be due to *microsleep*. It is caused by physical stress due to loading and unloading activities of the driver. In addition, there are sleep disorders caused by stress, triggered by contractual pressure for just-in-time deliveries and pressure from the driver's own scheduling. Furthermore, there is a lack of flexible and digitalised ramp management. If the driver misses his timeslot, he has to stand in line or take the load back with him. From 3:30 p.m. onwards, he is looking for a parking space for the day's rest period. During night time, environmental conditions such as heat and noise are stressful because the drivers' cabs are not sufficiently insulated and often lack parking air conditioners. Poor working conditions, such as refusal to use toilets at unloading points and inflexible ramp times that regularly lead to unscheduled waiting times, do the rest. This is often compounded by unregulated, long working hours and unhealthy diets.

It can be an in-depth *telephone conversation*. Private, worry-laden conversations challenge the driver emotionally. Regardless of whether he has a hands-free device, he is not consciously with his eyes on the road.

If the companies provide the smartphones or pay the telephone costs, many drivers develop into constant phone callers. Finally, conversations with the dispatcher can also put the driver under stress.

In many cases, however, it is the preoccupation with the *smartphone* and *social media*. When scrolling through their timeline or texting on whatsapp, drivers spend seconds looking at the display. In an emergency, the safety distance is used up within two seconds, which is precisely when the high differential speeds occur in the event of a collision.

Can these accidents be prevented?

A clear yes, if the driver were familiar with the assistance systems and his personal danger radar were intact.

Because we know where the danger of death lurks.

We know at what times it is elevated.

We know why the accident happens.

And we know that the causes of accidental death are almost exclusively to be found in distraction or microsleep, because the fatal impact occurs unbraked, i.e. with run-up and the force of 40 tonnes.

Max Eighty Idea 2022 Death At The End Of Traffic Jam

Where? ☹️ Transit routes before permanent road works

When? ☹️ at rush hours

How? ☹️ unbraked, with run-up

Why? ☹️ distraction or microsleep

Conclusion 😊 You can change it!

Time for change –

Time to stay alive



©Hellwach mit 80 km/h e.V.

What to do?

Leading figure Max Achtzig

A movement needs guiding principles with which the desired is immediately associated. It must trigger anticipatory and considerate driving on routes with a risk of congestion.

We have designed our hero as a friendly and helpful driver with gripping hands and bright eyes.

With the character traits popular, humorous, reliable with high social competence, he makes contacts quickly.

He is "slightly" overweight and his overall appearance does not pin him down to any particular European nation.



Immediate measures



Only the driver himself can have an immediate effect on the accident and help to end the series of accidents quickly. However, he must be aware that he is transporting 40 tonnes of responsibility.

Now, it is not exactly easy to convince a professional driver with several years of experience that he should change or adjust his driving behaviour.

Therefore, we have to convince the transport operators that accident prevention is a matter for the boss. We recommend an act of self-commitment to adherence to rules and attentiveness on routes at risk of congestion. This must become an integral part of the corporate culture and helps to save lives.

Anyone who takes Vision Zero seriously should *become Max Achtziger* with their employees, or at least embrace and spread the idea. In an expert workshop made up of knowledgeable members, the Prevention Association has developed a safety register for company driver manuals, the adoption of which in the company philosophy makes it more likely that the workforce will be accident-free.

The company and its drivers are committed to the following principles:

1. Every driver has the right and the duty to familiarise himself with the assistance systems in the truck.
2. Use of adaptive cruise control is mandatory outside built-up areas
3. Exclusive use of navigation apps suitable for trucks
4. Disposition of sufficient time buffers for appointments and time windows. Unauthorised actions to make up for lost time are prohibited.
5. Riders acknowledge and commit to abide by the 10 Max Eighty rules.

Strategic implementation

Personalised prevention: The Max Eighty Idea 2022 promotes hazard awareness and calls for conditioned anticipatory and considerate driving in front of permanent road works on heavily congested transit routes at peak traffic times.

All those for whom a functioning supply chain is a core value must be concerted at this vital interface. Not only the transport companies, but also the manufacturing industry and the goods trade bear a large share of the responsibility. This requires broad-based education, and not only in Germany.

The focus is our educational brochure translated into all European languages. The European campaign aims to "encircle" accidental death at the end of traffic jams from all sides. It is true that the drivers are the direct addressees of the measures. However, there is an urgent appeal to the entrepreneurs to communicate it to the individuals in their own language. They must agree on and demand attentive and defensive driving precisely there, on such routes, within the company.

And they must train the driver on the safety systems in the truck, but at least instruct them.

Responsible companies minimise stressors through *social sustainability*¹.

However, it is important to create a holistic awareness in industry, trade and goods logistics for the (co-) responsibility of stressors that cause accident risks among drivers.

Assistance systems in HGVs: Emergency Brake Assist Systems (AEBS) are now installed in more than 85 percent of HGVs in long-distance transport. A study conducted by Berg/Petersen² in Lower Saxony shows why there are still more crashes than expected. In 26 percent of the rear-end collisions investigated, AEBS was activated. Since system errors can almost be ruled out, the driver must have unintentionally overridden the brake cascade at the last moment. The override option is prescribed so that the driver can avoid emergency braking in the event of system errors. To do this, the driver must, for example, activate the indicator, depress the accelerator pedal (kickdown) or make a steering move-



¹ Goals that concern social sustainability in companies are, in addition to fair income, compliance with labour rights, health protection and general social standards of employees.

² <https://www.vkuonline.de/erweiterte-betrachtungen-zum-umgang-mit-automatischen-notbremssystemen-und-zu-deren-auslegung-teil-1-2669196.html>

ment. And it is precisely the latter that happens when the distracted driver startles at the onset of the AEBS acoustic warning and instinctively jerks the steering wheel around. In doing so, however, he switches off the braking cascade and usually crashes into the end of the traffic jam in a staggered manner. The cause is a Europe-wide deficit in the haulage companies. There is usually a lack of thorough instruction in how the various auxiliary systems work. The driver, however, naively trusts that they will do their job.

Improvements are urgently needed here in the interest of all.

Navigation apps:

Can an app warn the driver shortly before the end of a traffic jam?

Distraction is one of the main accident risks for drivers. All previous attempts to keep him away from the smartphone in particular have not been successful.

MOVE (EU Commission) recommends the use of the freeware *WAZE Mobile*, which has been available since 2010. *WAZE* is user-dependent, because the road data is edited exclusively by the users. A complete representation of the traffic situation is only guaranteed with a large number of users. Danger-relevant, automated direction-dependent traffic jam reports on motorways do not exist, especially in Germany. In addition, the user has to tap and zoom on the screen while driving and is distracted in the process.

WAZE was bought by Google in 2013, but was not integrated into Google's map service.

WAZE has not yet established itself on the market. A user-dependent up-to-dateness contains gaps and thus dangers of not warning of a traffic jam at the decisive moment.

There is a need for a geo-referenced way to report developing congestion in real time to the approaching motorist.

For this purpose, a universal gadget for navigation apps would be helpful that actively warns with national voice output when approaching the end of a traffic jam. This way, the distracted driver would not drive unknowingly towards the end of a traffic jam. That could save his life and the lives of bystanders. We have already written to the development departments of *Sygic* and *Tom Tom* about this. However, we do not know to what extent the proposals have been followed up. A European initiative would certainly be more promising.

Smart traffic jam warning in real time: Real-time warning prevents road users from becoming accustomed to the warning, so that they know that danger is also imminent. A combination with a mobile autonomous speed camera on the approach route also gives the distracted lorry driver a "wake-up stimulus" by triggering a measuring flash before he crashes into the end of a traffic jam without braking. Therefore, intelligent congestion warning systems (e.g. uStWA from AVTC) should become standard in road traffic technology when permanent road works are set up. It would be optimal to digitally link these with autonomous speed flashers (e.g. enforcement trailers). On the one hand, with real-time warnings, speed reductions are better accepted by road users than orders in time windows with metal signs. And on the other hand, drivers who are distracted and therefore driving too fast at the time of the congestion warning could be given a visual "wake-up stimulus" in the form of a speed flasher in real time and thus warned of the danger. The device coupling requires approval by the Physikalisch Technische Bundesanstalt. Our innovation proposal to Autobahn GmbH was submitted in 2021. However, there has been no response.

Role of politics: Of course, transport and economic policy must also ensure a HGV-friendly environment. However, the stressors for drivers can only be achieved jointly by the economy, goods trade and logistics through socially sustainable cooperation. Politics can moderate this process. Empty shelves and undersupplied petrol stations are no longer a utopia for the coming years.

We are therefore constantly working on our network of supporters and, in addition to some well-known medium-sized companies in the transport sector, we have also been able to win draught horses such as Iveco Magirus AG or Kögel Trailer GmbH. We also already have a promise of support from Daimler Trucks.

We strongly believe that those involved in the supply chain can curb the death at the tail end of congestion the fastest.

Synergies should be used to achieve more mutual consideration and cooperative behaviour in road traffic for society as a whole. After all, even car drivers are often in conflict with truck drivers.

As an NGO, we are in the process of concerting many stakeholders in the supply chain. However, targeted political support would strengthen and accelerate the process towards a movement.

At the European level, the European Commission. Directorate General for Mobility and Transport (MOVE) would be a necessary supporter to push and promote the Max Eighty Europe campaign.

When, if not now? It is time for change - time to stay alive.

Please support the Max Eighty Idea 2022.

Sincerely

Dieter Schäfer
Speaker and Member of the Board
Hellwach mit 80km/h e.V.

About the author: Dieter Schäfer is co-founder and spokesman of the prevention association "Hellwach mit 80 km/h e.V.". Until the end of 2019, he was head of the traffic department at the Mannheim police headquarters and is the author of the book "Der Verkehrspolizist" (The traffic policeman), a specialist biography on urban and supra-regional accident risks with tried and tested practical examples on how to avert them.

Time for change -
Time to stay alive



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