

VISION ZERO

Vision Zero in Trade and Goods
Logistics: How to prevent fatal and
serious occupational accidents?

VISION ZERO
PRACTICE



Vision Zero in Trade and Goods Logistics: How to prevent fatal and serious occupational accidents?

Author

Dr Klaus Schäfer

BGHW / ISSA Section Trade

Key facts

- ▶ The biggest step to prevent accidents, especially fatal and serious occupational accidents, is to identify the real hazards. It is therefore necessary to use all help you can find.
- ▶ People make mistakes. Technical solutions are more successful than organizational solutions or personal protective equipment.
- ▶ To involve the employees in identifying hazards and developing solutions is more effective than to only inform and train them.

Fatal and serious occupational accidents in trade and goods logistics are seldom, so most companies lack concrete operational experience. To reduce such kinds of accidents in the future and to reach a world without fatal and serious occupational accidents, the companies need help to identify the real hazards and to control the risks.

Vision Zero and Seven Golden Rules

The Vision Zero strategy and the seven golden rules are based on the belief that every accident can be prevented by looking at the three pillars of safety, health, and well-being. For the prevention of accidents especially the identification of hazards in the companies – the second golden rule in the Vision Zero strategy – is of special importance. Because based on the identified hazards prevention measures and the health and safety program are developed in the companies. This is the more problematic, the less concrete operational experiences exist in the companies. This can be the case if the company is small, and accidents are therefore seldom or if the risks for accidents are generally low in the company. In these cases, the information about hazards must be gathered from other sources.

In trade and goods logistics, especially fatal and serious accidents are seldom. This, of course, is a good situation. However, as investigations showed, the lack of operational experiences in companies lead to the point that the actual

risks for fatal and serious occupational accidents are not taken into account in the risk assessment. Due to this situation, prevention methods such as defining targets, ensuring a safe and healthy system etc., do not include the risks for fatal and serious occupational accidents and thus, these kinds of accidents are not prevented. So, identifying the actual hazards for fatal and serious occupational accidents is the key for a company's prevention and for the company's way to Vision Zero.

Figure 1. 7 Golden Rules



Accident Investigations

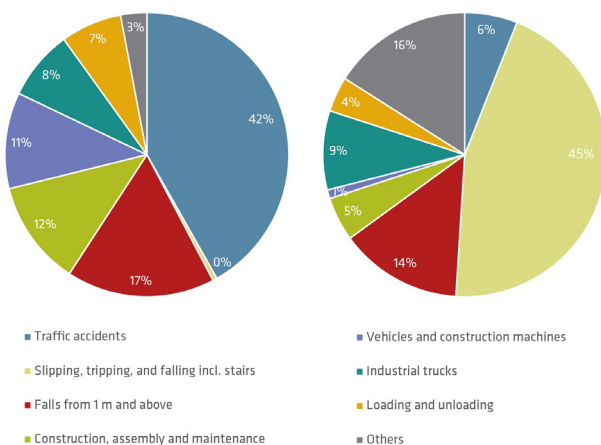
Due to the situation that fatal and serious occupational accidents very rarely occur in trade and goods logistics companies, it is necessary to provide support in identifying the real hazards. Therefore, the first step is to identify what exactly are the fatal and serious occupational accidents in the trade and goods logistics sectors. To gather this information, all fatal occupational accidents were investigated in the period from 2012 to 2019 and all serious occupational accidents in the period from 2017 to 2018 [1, 2]. Commuting accidents that occurred on the way between home and work and back were not included.

The labour inspectors from the Berufsgenossenschaft Handel und Warenlogistik (BGHW), which is the statutory accidents insurance for trade and goods logistics in Germany, visited

“ Identifying the actual hazards for fatal and serious occupational accidents is the key for a company’s prevention and for the company’s way to Vision Zero. ”

the companies at the site shortly after an accident happened, and investigated the accidents in detail using a standardized questionnaire. All relevant data about the investigated 315 fatal accidents and 1,053 serious occupational accidents were analysed in detail, clustered, and described. It was found that only six main causes are responsible for the fatal occupational accidents and seven main causes for serious occupational accidents (see Figure 2).

Figure 2. Distribution of fatal occupational accidents (left pie) and serious occupational accidents (right pie) in trade and goods logistics in Germany



Most fatalities are caused by normal traffic accidents, followed by falls from the height, especially from ladders and roofs, and by internal traffic. Most serious occupational accidents is caused by slipping, tripping and falling, followed by falls and traffic accidents.

Such accidents do not occur while using high risk machineries, but by doing a normal job: driving a car, using a ladder, driving a forklift truck etc. And in normal life, these activities are not considered as high-risk work as accidents usually do not occur. So, the main issue is to inform and to convince both employers and employees of what are their high-risk workplaces and, in the second step, of what they can do to avoid such accidents.

Particularly in case of traffic accidents most companies believe that they have no possibility to influence the drivers’ behaviour as soon as they leave company premises, which is not true at all.

In summary, only a few distinct work conditions are responsible for fatal and serious occupational accidents in

trade and goods logistics which is positive for a focus on prevention activities. On the other hand, exactly these work conditions are very common in trade and goods logistics and generally not considered as high-risk workplaces by employers and employees.

Conclusion

As mentioned before, both employers and employees normally do not recognize the risks for fatal and serious occupational accidents. They do not consider their workplaces as high-risk workplaces. And in most of the accidents examined, human behaviour played a decisive role in the event, such as being distracted while driving, stepping on unstable roof surfaces or reversing without support by a banksman.

So, are the victims themselves to blame? Do companies just need to work towards changing employee behaviour? No, certainly not! The behaviour shown may well be the result of technical or organizational deficiencies: potential technical aids may not be provided, or the wrong equipment is made available, hazards are neither recognized nor discussed, patterns of behaviour are generally accepted, and safety instructions are not sufficiently observed. Many other examples could be added to this list.

However, it shows that the cause of any accident does not only relate to the moment of the accident itself. Previous decisions, such as the purchase of a vehicle or machinery, may be decisive for the cause of an accident. If technical measures to protect employees are not considered, this may have fatal or serious consequences for the employees at a later point in time.

The person involved or killed in an occupational accident is only the last link in the STOP chain. The STOP abbreviation stands for Substitution, Technical Measures, Organizational Measures and Personal Measures. This principle represents a chain of hierarchical prevention measures to be taken. At the same time, all conceivable prevention measures may be assigned to this hierarchy. Accident risks that are not minimized by the STOP principle or eliminated in advance

must be minimized by individual action according to the situation. Prevention is meant to protect employees in such a way that, if possible, incorrect actions in high-risk situations have no harmful consequences.

References

All information about the investigation of fatal and serious occupation accidents in trade and goods logistics and a practical guide to prevent such kind of accidents are available on the BGHW Kompendium Arbeitsschutz website or the ISSA Section Trade website [3, 4].

[1] Schäfer, K.; Mahlberg, J.; Klockmann, H. C.. 2021. "Tödliche Arbeitsunfälle im Handel und in der Warenlogistik", in *Zentralblatt für Arbeitsmedizin, Arbeitsschutz und Ergonomie*, Vol. 71, No. 3.

[2] Schäfer, K.; Klockmann, H. C.; Wetzel, C.; Mahlberg, J. 2022. "Schwere Arbeitsunfälle im Handel und in der Warenlogistik", in *DGUV Forum*, No. 11.

[3] Schäfer, K.; Ehnes, H. 2023. *Vision Zero in trade and goods logistics. Part 1: In depth analysis of fatal and serious occupational accidents*. Geneva, International Social Security Association.

[4] Schäfer, K.; Ehnes, H. 2023. *Vision Zero in trade and goods logistics. Part 2: Practical guide to prevent fatal and serious occupational accidents*. Geneva, International Social Security Association.



This article was presented at the A+A 2023 held in Düsseldorf from 24 to 25 October 2023.

A publication of the International Section of the ISSA on Information for Prevention.

Published in 2024.