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The importance of commitment, communication, culture and learning for the implementation of the Zero Accident Vision in 27 companies in Europe

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ABSTRACT

In this paper the findings are presented of a multinational study involving 27 companies that have adopted a 'Zero Accident Vision' (ZAV). ZAV is the ambition that all accidents are preventable, and this paper focuses on how companies implement ZAV through ZAV commitment, safety communication, safety culture and safety learning. Managers and workers took part in a survey (8,819 respondents), company interviews and national workshops in seven European countries. A common characteristic of all the companies was the high ZAV commitment of their managers and workers, which often were embedded in the companies' business strategies. It is very likely that this commitment is the main driver for long-term safety improvements. This research supports the importance of safety communication for ZAV implementation, especially of: specific ZAV or safety promotion programmes, constant and updated communication on functional tools, and effective supervisor communication. Successful communication must ensure 'relevant' information to respective organisational levels (not a one-size fits-all strategy), and allow for 'decentralised' initiatives. This research also highlights the importance of safety culture for ZAV implementation, with ZAV companies having high survey scores on management safety priority, safety empowerment and safety justice. The results also support the importance of safety learning (incidents and good-practice) for ZAV implementation. Additional success factors were top management support and an 'open atmosphere', systematic communication and dialogue on incidents, and a focus on things that go right. We conclude that ZAV is the basis for inspiring and innovative approaches to improve safety, as an integrated part of doing business.

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1. Introduction

There has recently been an increasing political and research interest in the Zero Accident Vision (ZAV): the vision that all accidents are preventable. Or, as Zwetsloot et al. (2017) explained it "ZAV is the ambition and commitment to create and ensure safe

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work and prevent all (serious) accidents in order to achieve safety excellence" (p. 260). Some of the recent research literature emphasises the potential benefits of ZAV as a concept (e.g., Salminen and Lee, 2015; Runyan et al., 2013), whereas others are critical about the concept (e.g., Dekker, 2014a,b, 2015). These are however mainly papers about the ZAV concept as such, and there is only a limited number of empirical studies available.

There are, however, a few of such studies: Virta et al. (2009) demonstrated that the member-organisations of the Finnish Zero Accident Forum were substantially improving their safety performance (in terms of loss time incidents) over time, while the average company safety performance in Finland remained stable. Young (2014) analysed the major safety improvements over time in a New Zealand aluminium smelter company that was committed to ZAV, and showed that innovation of work processes,





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especially automation, and transformational leadership where the main enablers for a successful strategy. Twaalfhoven and Kortleven (2016) analysed dilemmas in dealing with sanctions on human error in two ZAV committed companies (steel and construction) in the Netherlands, and concluded that sanctions were dominantly regarded as a preventive action (to prevent reoccurrence, compatible with ZAV), not as a punitive measure. Employees were perceived to be individuals who intrinsically wanted to work safely and who benefited most from doing so. The causes of unsafe behaviour were therefore regarded as primarily external factors, which were the responsibility of management.

Critical reflections and statements on ZAV have also been published. Particularly from Australia stem several publications suggesting counter-productive effects of ZAV (e.g., Dekker, 2014a,b; Long, 2012). One of the main critiques is that ZAV denies the realities of risk (implying uncertainties, human limitation, and learning by mistake) (Long, 2012). Another argument is it diverts attention to microscopic risks (Sharman, 2014), which is associated with overspending of investigation resources (Dekker, 2014b). Although there are several publications criticising ZAV, so far no empirical research on negative effects have been published, and the main focus of the critical papers is not on implementation (Zwetsloot et al., 2017).

It is, however, certainly relevant to know more about the strategies and success factors of companies that have committed themselves to ZAV. The safety divisions of several leading European research institutes cooperating in the Partnership for European Research on Occupational Safety and Health (PEROSH) were involved in a call for more research in this area (Zwetsloot et al., 2013), and thereafter initiated a European research project involving 27 companies in seven EU countries and seven research institutes (Zwetsloot et al., 2015).

In this paper we present the findings of this European research project. The research is part of a larger study, which was presented in a non-scientific report to the funding agency (Zwetsloot et al., 2015), and which has also generated a few other papers (Zwetsloot et al., 2017). The aim of this project is to identify strategies for safety promotion and accident prevention that are typical for companies that have adopted ZAV. Of course, merely the desire to achieve zero accidents can in it-self never be sufficient to achieve substantial safety improvements. To understand the success factors behind ZAV, it is inevitable to look more in-depth into the strategies, and activities of the companies that pursue ZAV. It is thereby important that ZAV is not a (quantitative) target, but the ambition to make work safe, which will always require a long-term journey and sustained efforts.

In the research we adopted the idea that such strategies start with a genuine commitment of the organisation to ZAV, to initiate a 'commitment strategy for safety' as Zwetsloot et al. (2013) suggested. This implies that it should start with an active commitment and involvement of senior management with ZAV (which would imply several aspects of good safety leadership). The primary focus of the research presented here was on four main concepts: safety commitment, communication, culture and learning associated with the implementation of ZAV.

1.1. Research question

The central research question in this paper is: What are the factors that contribute to successful implementation of the 'Zero Accident Vision' (ZAV)?

Four sub-research questions cover the four key areas mentioned above:

• What are the factors that make 'commitment' to ZAV a driver for ZAV implementation and safety improvement?

- What are the factors in 'safety communication' that contribute to successfully implementing ZAV?
- What are the specific characteristics of the 'safety culture' in ZAV committed companies?
- What are the factors in ZAV companies that contribute to successful 'learning' from incidents and 'learning' from good (safety) practices?

1.2. Commitment

Commitment to ZAV was regarded as a crucial factor in the design of the project. Organisational safety commitment is the extent of engagement with safety promotion and accident prevention in an organisation. Factors include strong belief and acceptance of the organisation's goals and values, willingness to exert considerable effort on behalf of the organisation, and a strong desire to maintain membership in the organisation. ZAV encompasses the idea of the commitment-based approach to safety (management), in which safety leadership is motivated by concern and respect for the employees, in contrast to a compliance based approach, where the motivation comes from following legislation and cost consciousness (compare Barling and Hutchinson, 2000).

Zwetsloot et al. (2013) suggested that the implementation of ZAV requires a 'commitment strategy': the idea being that ZAV provides a clear safety message from top management within and outside a company, which can boost safety culture and performance. Commitment is hereby not regarded as a formal (written) commitment (only), but as active and visible support, particularly from senior managers, or in Small and Medium sized Enterprises (SMEs, not involved in this research) from the owners/directors. The concept of a 'commitment strategy' was originally developed in the area of human resource management (Walton, 1985; Beer, 2009). Contrastingly to what Dekker (2014a,b) suggests, commitment strategies are developed as alternatives for strategies of hierarchic and bureaucratic control (Walton, 1985), and are characterised by shared goals and values, flat organisations, empowerment of the personnel, high engagement of the personnel, and by high performance (Beer, 2009).

1.3. Communication

Important as genuine commitment of senior management is, the success of any safety strategy cannot depend only on the active commitment of senior management, as it has to be translated into concrete actions of the personnel: this implies that the organisation has to communicate the organisational ZAV commitment in order to share it with all of its personnel. When a company commits itself to ZAV it requires communication of the vision and processes of sharing the belief that 'all (serious) accidents are preventable'; without good communication processes, ZAV cannot be expected to impact the safety behaviour of all members of the organisation (Cudworth, 2009).

Communication climate is often described as a subset of organisational climate that refers to the relationships and interactions in the workplace (Keyton, 2011). Communication climate contains for instance superior-subordinate communication, quality and accuracy of downward information, upward communication, and perception of reliability (Guzley, 1992; Allen, 1992). Communication is also recognised and often considered as a contributing factor to a healthy safety climate (e.g., Griffin and Neal, 2000; DeJoy et al., 2004; Real and Cooper, 2009; Kines et al., 2011).

1.4. Culture

We assumed that the ZAV commitment of personnel can only be sustained when the commitment towards 'all (serious) Download English Version:

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