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The influence of leadership on the prevention of safety incidents: on risk reduction, leadership, safety principles and practices

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Important aspects of risk and safety are about general social and behavioural dynamics, rather than specifically about risk and safety.

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1 Introduction

This research concerns operational disturbances in organisations where safety risks, if insufficiently controlled, may lead to safety incidents resulting in personal injury, asset damage, pollution of the environment, interruption of primary processes, reputational damage and ultimately damage to an organisation's fundamental values. We argue that reducing safety risks results in increasing safety.

Leaders are generally regarded as important, probably even key elements with respect to the operational performance of organisations, which includes risk management. They are therefore also considered an important factor in the management of safety in their organisation. According to Flin: "A potential fruitful research avenue is to study the influence of senior managers' leadership styles in relation to safety."¹

We believe that leadership at any organisational level plays a role in risk management, and so we take an extended look at leadership, and consider all members of organisations with leading roles at strategic, tactical and operational levels. This means that we include CEOs, managers, department heads, shift supervisors, and so on.

This research aims to provide clarity about the relationship between the way leaders play their leading roles in the organisational unit for which they are responsible, and the effectiveness of managing safety risks related to primary production processes. This clarity may serve as an aid to improving the effectiveness of leaders where risk management is concerned, and thereby contribute to preventing future safety incidents in organisations.

From a historical view, numerous experts have contributed to optimising the reduction of operational disturbances in many ways, using different models and approaches, but primary processes and operational equipment are seldom fully failsafe, and so safety incidents still occur. To compensate for shortcomings in the design of processes and equipment, organisations make a great deal of effort to change the behaviours of the operational people using those suboptimal processes and equipment. The application of the referred models and approaches has apparently not so far led to the intended result, however: optimal safety.

We argue that one probable reason for limited success is that safety-related data gen-

1 Flin (2003), p. 264.

erated by external sources (e.g., inspection/audit reports) does not have a sufficient effect on people, and even makes them feel sceptical about the findings of ‘strangers’, and hampers their motivation to change. In this respect, we hold that doing the same thing over and over again will not lead to better results.² Our contribution to the pursuit to safer primary processes, using scientific methods and references, is therefore to support an approach in which we identify the individual perceptions of members of our research population, based on a) trust in people and b) our belief that data from external sources (i.e., inspectors, auditors, consultants, etc.) is not always an effective moderator for changing people’s behaviours.

We refer to the Thomas’ theorem: “If men [sic] define situations as real, they are real in their consequences.”³ This is also the view of Soliman and Wilson, who argue that: “Lay theories can be thought of as a general lens through which people perceive and interpret the qualities of individuals, groups and the world around them. They are fundamental knowledge structures that – although often ‘implicit’ and not explicitly articulated – can have powerful effects on behaviour.”⁴ Flin phrased it as follows: “The safety culture of an organisation is determined by the perceptions of management commitment to safety, as judged by the workforce.”⁵ In our safety-focused research, we note the view of Reniers, who argues that the people’s *safety-related perception* is one of the three core domains of safety.⁶

On this basis, we put the hearts and minds of our research subjects (leaders and followers, members of organisations) at the centre of our study. We have high respect for the discernment of individuals, who are strongly connected to operational processes and who, as potential victims, know how safety risks and the behaviours of their particular leaders *feel*.

We focus on the individual perceptions of the researched group members. Where applicable we will analyse, interpret and comment on the data as delivered by this group. This complementary approach is used to hopefully deliver the optimal culture-independent research outcome.

Safety incidents have various causes and manifest in different ways.^{7, 8} Depending on the specific circumstances and the amount of energy involved, the development of an incident and its specific consequences differ in severity.⁹ The author’s curiosity about the actual contribution of leaders and followers in the causation of safety incidents, as well as his personal aspiration to contribute to an increased level of safety in the sectors

2 A reference to a quote attributed to Albert Einstein: “Insanity is doing the same thing over and over again and expecting different results.”

3 Thomas (1928), p.572.

4 Soliman and Wilson (2017), p. 105.

5 Flin (2003), p. 265.

6 Reniers (2020).

7 Groeneweg (1992).

8 Gawande, Thomas, Zinner and Brennan (1999).

9 Dekker (2011).

in this research, were the motivation for conducting this study. We suggest that research conclusions about human relations and other contextual working circumstances, based on individual perceptions of the people involved, may offer new insights followed by changes in thinking, which is required to amend deeply ingrained routines in both leadership and followers, ultimately resulting in fewer safety incidents. This research aims to contribute to this objective.

In the next chapter we will discuss the theoretical framework underpinning this research, and risk management concepts developed by scholars and safety professionals. We also elucidate the contextual factors faced by leaders in their attempts to optimise the safety of the processes for which they are responsible.

