THE STATE OF SAFETY CULTURE IN UTILITIES: LESSONS FROM INDUSTRY

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ABSTRACT

Investment in safety culture is crucial. Even with the right equipment, experience and systems, if people lack the motivation to take responsibility for their own safety, it's not a question of if an incident will occur, but when. Safety culture is an organisation's shared attitudes, beliefs, and values about safety and has been significantly associated with safety performance. Research on safety culture can be categorized into four broad dimensions: environment, practices, person, and leadership. Many organisations have been facing the challenge of sustainably improving their safety performance and decreasing the likelihood of workplace injuries and fatalities; the utilities sector is not exempt from this. The aim of this paper is to provide insights into the utilities industry and recommendations for improving safety culture. Sentis conducted both quantitative and qualitative assessments of organisations across the utilities industry. Informed by a research study based on a stratified sample taken from more than 6,889 utilities workers across water and sewerage, electricity and gas, infrastructure and maintenance, network and supply, renewable energy, and waste management. Concerningly, 87% of utilities worksites in this sample operate within a negative or unhelpful safety culture—placing workers at increased risk of serious incidents and fatalities. There are opportunities for improvement across all four dimensions of safety culture. The results of these assessments were also compared to data collected from a variety of industries as a benchmark. This presentation will provide critical insights and recommendations for improving safety culture and performance.

1.0 INTRODUCTION

In Australia, 563,000 people experienced a work-related injury or illness between July 2017 and June 2018 (Australian Bureau of Statistics, 2018), and for 2020 alone, Safe Work Australia (2021) reported 194 work-related fatalities. Furthermore, the cost of work-related injuries and diseases is on the rise, with the total estimated cost rising from $34.3 billion between 2000 and 2001, to $61.8 billion between 2012 and 2013 (Safe Work Australia, 2018). Workplace safety is therefore a key area of interest and addressing it will benefit not only individual workers, but also organisations.

To address workplace safety issues, safety culture is fundamental as it is correlated with safety performance and is a significant predictor of safety incidents (Bergman et al., 2014; Sentis, 2020). Safety culture is defined as an organisation's shared attitudes, beliefs, and values about safety; this also includes the implicit safety rules and guidelines present amongst workers. Going further than having the right equipment, experience, and systems, the Sentis Safety Culture Model presents a holistic model that encompasses the environment, practices, person, and leadership dimensions of safety (see Figure 1). The environment dimension includes components such as equipment, engineering, and housekeeping. The practices dimension includes components such as policies, procedures, and safety training. The person dimension encompasses components such as workers' attitudes, behavioural choices, and teamwork. Finally, the leadership dimension includes components such as management support for safety, the level of workforce consultation that occurs, and downwards safety communication. Research suggests that

organisations need to invest in all four dimensions to effectively manage risks and create a mature and effective safety culture.

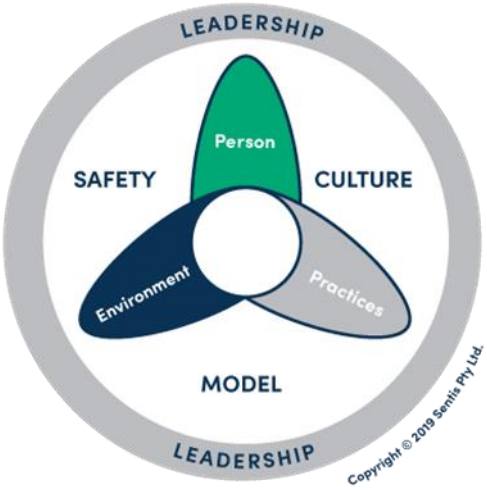

Figure 1: ***Sentis Safety Culture Model***

The maturity level of an organisation's safety culture can sit at various levels ranging from negative to positive. Organisations with negative or immature safety cultures are driven by unhelpful shared safety attitudes, beliefs, and values. Safety is generally seen as a burden imposed by leaders or the organisation, rather than coming from a place of internal motivation. As a result, compliance with safety processes, rules, and procedures are sporadic and often reliant on leaders supervising and enforcing safety. In a negative safety culture, employees are also less willing to be involved in safety activities and are more likely to only care for themselves rather than their team or organisation. In contrast, organisations with positive or mature safety cultures are driven by helpful shared safety attitudes, beliefs, and values. Employees in this culture have a genuine interest in safety, closely value safety, and actively choose to be safe and follow safety procedures. Safety systems are seen as valuable tools rather than a burden. Employee relationships have high trust, mutual respect, and a common understanding around how safety helps everyone to return home safe. In a positive safety culture, safety is prioritised in business decisions; this fosters employees' willingness to exert extra effort beyond their minimum role requirements to assist others and contribute to the organisation's safety goals. A positive safety culture is thus conducive to positive safety outcomes. Safety culture can be mapped to the Sentis Safety Culture Maturity Model (see Figure 2).

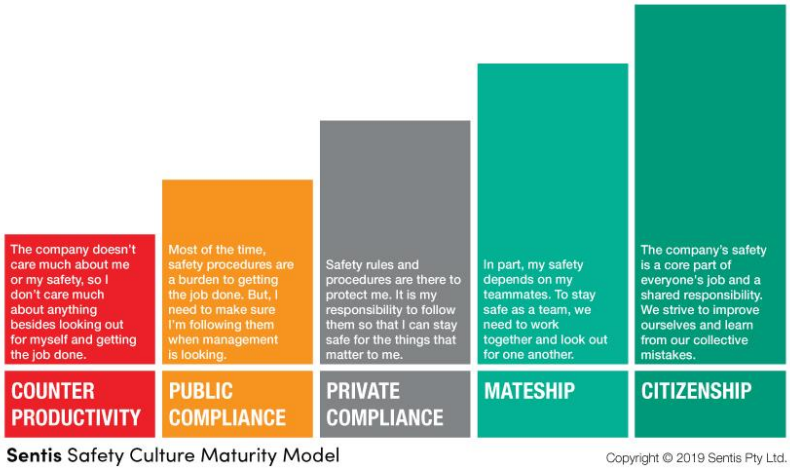

Figure 2: ***Sentis Safety Culture Maturity Model***

The Sentis mission is to change the lives of individuals and organisations for the better, every day. Sentis recognises the importance of safety and the significant impact of an organisation's safety culture on not only the organisation, but its employees. This paper will provide key quantitative and qualitative findings from the utilities industry, as well as recommendations for improving safety culture.

2.0 DISCUSSION

A combination of quantitative and qualitative measures was used to evaluate the underlying safety culture and climate of organisations. The Sentis Safety Climate Survey (SCS) was administered to a total of 6,889 respondents within 10 organisations in the utilities industry, of which a stratified sample of 3,490 respondents were included in the current study. The benchmark comparison group consists of a stratified sample of over 20,300 respondents from 47 companies across 11 industries. Responses to survey items were averaged and interpreted as positive, fair, or negative based on the ranges displayed below (see Figure 3). Sentis also conducted Onsite Safety Evaluations (OSE) to gain key qualitative insights into organisations. Qualitative data from focus groups, interviews, and observations were thematically analysed and assessed against the 23 dimensions of the Sentis Safety Culture Maturity Model. The use of SCS and OSE assessments allowed for the consideration of quantitative survey results with the qualitative depth gained from interviews, focus groups, and observations.

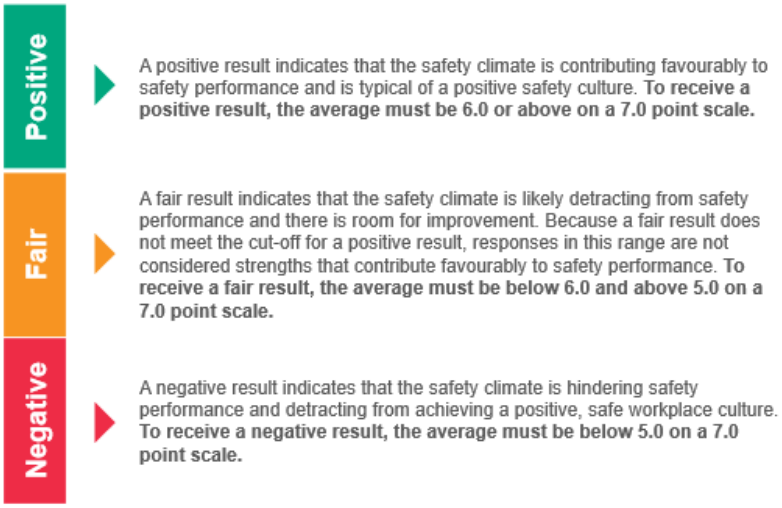

Figure 3: ***Sentis Safety Climate Survey Range Interpretation***

2.1 Overall Safety Culture for Utilities

OSE data revealed that 87% of utilities worksites operate from a negative safety culture (counter-productive or public compliance), this result is only slightly higher than the cross-industry benchmark of 86%. This result indicates that approximately 7 in 8 utilities worksites have a safety culture which may put workers at risk of serious incidents and fatalities. Therefore, results suggest that there is a clear opportunity for improving safety culture across the sector.

2.2 SCS Key Findings for Utilities

The results of the analysis provide insights in the areas of incident underreporting, production pressure, contractor management, and the four primary areas of safety culture (environment, practices, person and leadership).

Incident underreporting presents a risk to organisations and workers. Underreporting indicates missed opportunities for organisations and workers to learn from incidents and prevent them from happening again or turning into a more serious safety event in the future. Results indicate that 25% of incidents in the utilities industry are not reported, which is slightly higher than the cross-industry benchmark of 23%. Younger and less experienced workers were observed to underreport slightly more. These results reveal the need to improve incident reporting in the utilities industry, particularly in the younger workforce.

Production pressure describes the pressure placed on workers to prioritise work completion over safety. Production pressure can lead employees to neglect safety and make decisions which pose a safety risk. The overall production pressure experienced by workers within a 3-month period in the utilities industry was at 5% which is lower than the benchmark of 13%. However, production pressure was observed to significantly rise and exceed the cross-industry benchmark in younger workers, with those aged under 20 years experiencing the most production pressure at 21%. These results indicate the opportunity to improve safety through addressing production pressures felt by the younger workforce in utilities.

Contractors compose a significant part of the workforce in utilities, therefore the social

and technical integration of contractors into an organisation has an impact on its safety culture. Results reveal that contractor integration is a key opportunity area, with utilities scoring negatively across several components of contractor integration. Contractor training and inductions, contractor attitudes and behaviours, production pressures placed on contractors, employees' relationships with contractors, and leadership of contractors are some areas of concern.

For the *environment* dimension, the utilities industry tracked behind benchmark overall and fell within the fair range. This indicates that whilst most elements in this dimension are effective to some degree, there is still opportunity for improvement (e.g. housekeeping, physical environment and maintenance). In comparison, a particular environmental strength of the utilities industry appears to be the presence of appropriate personal protective equipment for work. Despite this strength, results indicate that environmental components still require improvement to adequately support safety.

For the *practices* dimension, the utilities industry results were generally in the fair range. The most notable findings are around safety violations and incident investigations, where utilities scored significantly below benchmark and into the negative range, indicating practices which hinder safety.

For the *person* dimension, the utilities industry was above benchmark for some components and below for others. The utilities industry was observed to perform well in areas such as within-team support for safety, but poorer in areas such as workers' involvement in safety activities, workers' tendency to openly disclose incidents and near-misses and using errors as an opportunity to improve the way work is done. Results also indicate that whilst supervisors' care about their team's wellbeing, there is a lack of investment in this area. These results indicate areas where focus should be placed on improvement, and areas which can be leveraged to improve safety.

Finally, the results indicate that the utilities industry falls below benchmark for components within the *leadership* dimension. Most notably, results reveal a strong disconnect between frontline workers and senior management and the perception that senior management does not understand the issues which truly impact safety. As utilities tracks behind benchmark in the leadership dimension and negatively in some components, results highlight a key area for improvement.

2.3 A Roadmap for Change

Positively transforming safety culture can take years and requires commitment and alignment in the executive levels. Figure 4 outlines key steps to consider before commencing a safety culture improvement process.

Figure 4: ***Sentis Roadmap for Change***

2.4 Implications

Results outlined in this paper give key insights into several areas of concern within the utilities industry and reveals an opportunity to address underlying factors which may negatively impact safety. As organisations have their own unique safety culture, a personalised approach to each organisation is recommended, rather than relying on results for the broader industry. However, these results indicate that organisations in the water industry could target improvements in safety leadership (building confidence and competence of safety leaders to have effective safety conversations), increased support for younger workers, and ensuring that safety is not left behind during periods of increased work demands. Sentis has worked to address the safety culture of utilities organisations across water and sewerage, electricity and gas, renewable energy, infrastructure and maintenance, network and supply, and waste management. Some of our case studies can be accessed through this link: https://sentis.com.au/case-studies. By engaging third-party expert support and following the Sentis Roadmap for Change (see Figure 3), organisations within the water sector can work to improve their safety culture.

3.0 CONCLUSION

An analysis of the safety culture in the utilities industry revealed several areas of concern. Results suggest that 87% of utilities worksites operate within a negative safety culture and 25% of incidents are not reported, with younger workers exhibiting a higher underreporting rate. Production pressure is also significantly higher in the younger workforce. Results also highlight negative approaches to incident investigations, inadequate contractor integration, inadequate environmental components, a disconnect between senior management and frontline workers, low investment in workers' wellbeing, and issues with the person dimension relating to safety such as their

willingness to report incidents and be involved in safety activities. It is important to note that this study is an analysis of the broader utilities industry and as organisations have their own circumstances and underlying factors, it is recommended to assess organisations individually and provide a more tailored approach to safety culture change.

4.0 ACKNOWLEDGEMENTS

We would like to acknowledge the participating organisations and their employees who contributed to this paper through their involvement in Sentis Assessments as part of their journey to improve their safety culture and climate.

5.0 REFERENCES

Australian Bureau of Statistics. (2018). *Work-related injuries, Australia, Jul 2017 to Jun 2018*. https://www.abs.gov.au/ausstats/abs@.nsf/mf/6324.0

Bergman, M. E., Payne, S. C., Taylor, A. B. & Beus, J. M. (2014). The shelf life of a safety climate assessment: How long until the relationship with safety critical incidents expires? *Journal of Business Psychology, 29,* 519-540.

Safe Work Australia. (2018). C*osts of work-related injuries and diseases: Key WHS statistics Australia 2018*. https://www.safeworkaustralia.gov.au/book/costs-work-related-injuries-and-diseases-key-whs-statistics-australia-2018

Safe Work Australia. (2021). Work-related injury fatalities: Key WHS statistics Australia 2021. https://www.safeworkaustralia.gov.au/sites/default/files/2021-10/Key%20work%20health%20and%20safety%20statistics%20Australia%202021.pdf

Sentis. *Case Studies*. Sentis. https://sentis.com.au/case-studies

Sentis. (2020). *Driving a Positive Safety Culture.*