



# Analysis of safety culture maturity in two Finnish companies

International Symposium on Occupational Safety and Hygiene 17.-19.11.2021

Julius Pirhonen, Sari Tappura & Aki Jääskeläinen  
Tampere University  
Finland



# Background

- Studies show there is a strong link between safety culture and safety performance in many industries
- Understanding of the status of safety culture and the specific needs for development is still limited
- Maturity models are often used to measure the level of safety culture
- Maturity models allow the assessment of the current situation, as well as the identification of obvious development needs
- Maturity models provide one overall maturity score for an entire organization and do not assess differences between organizational levels
- Some maturity models attempt to measure the state of safety culture between groups within an organization, but relevant studies are still limited.



# Objectives

This study is a part of SafePotential (SAF€RA) project focusing on to create models and develop practices for materializing the potential of safety performance measurement.

We developed **SafePotential Toolbox** for measuring safety performance:

<https://projects.tuni.fi/safepotential>

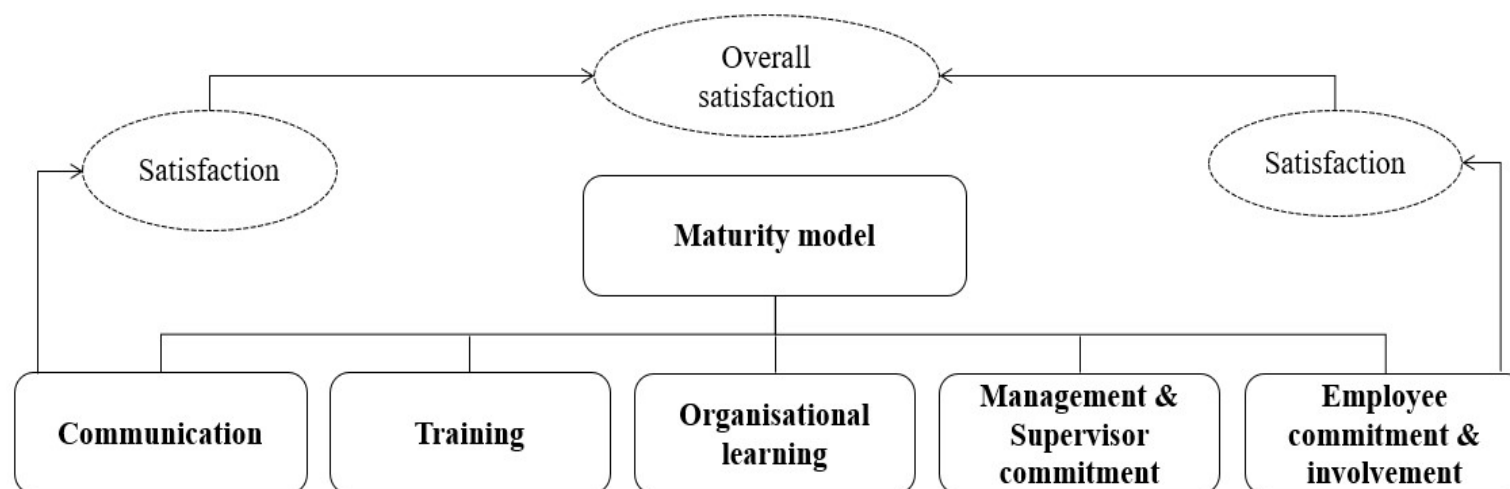
The aim of this sub-study was to analyze the state of safety culture in two Finnish industrial companies and to identify differences between organizational levels.



# Material and methods

- Recently developed safety culture maturity model (Tappura et al 2021) was used to analyze the level of safety culture through a survey of two Finnish companies
  - The review of safety culture maturity models by Goncalves Filho and Waterson (2018) was used as a starting point
  - The evaluation variables were identified by synthesizing existing literature
  - The model contains four written maturity stages, in which higher stages build on the requirements of lower stages
- Self-evaluation survey
  - Infrastructure (approximately 1400 employees) and chemical industry (approximately 200 employees)
  - Questionnaire was sent to 1109 respondents, 289 of whom completed it (26% response rate).

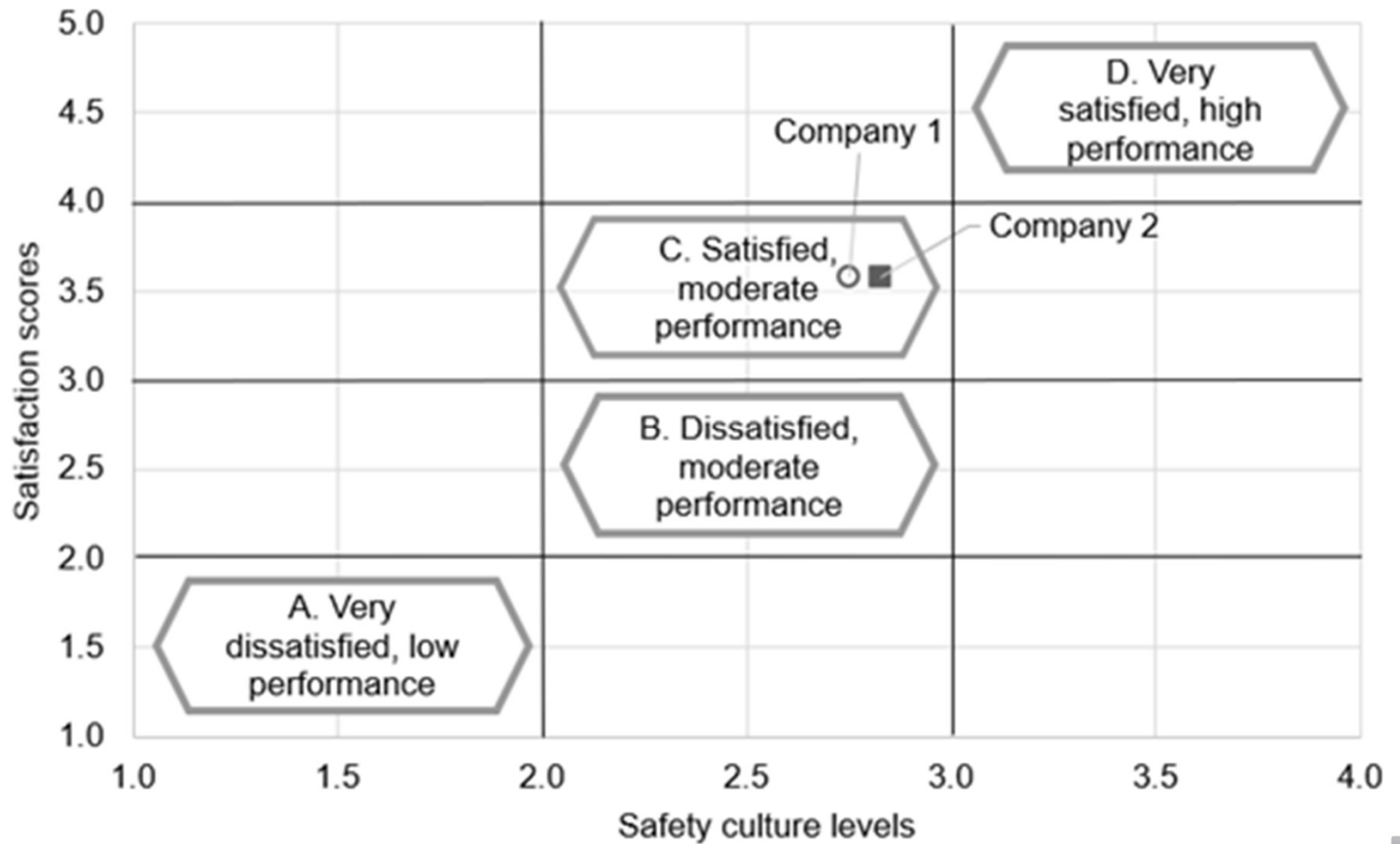
# Maturity model and questionnaire



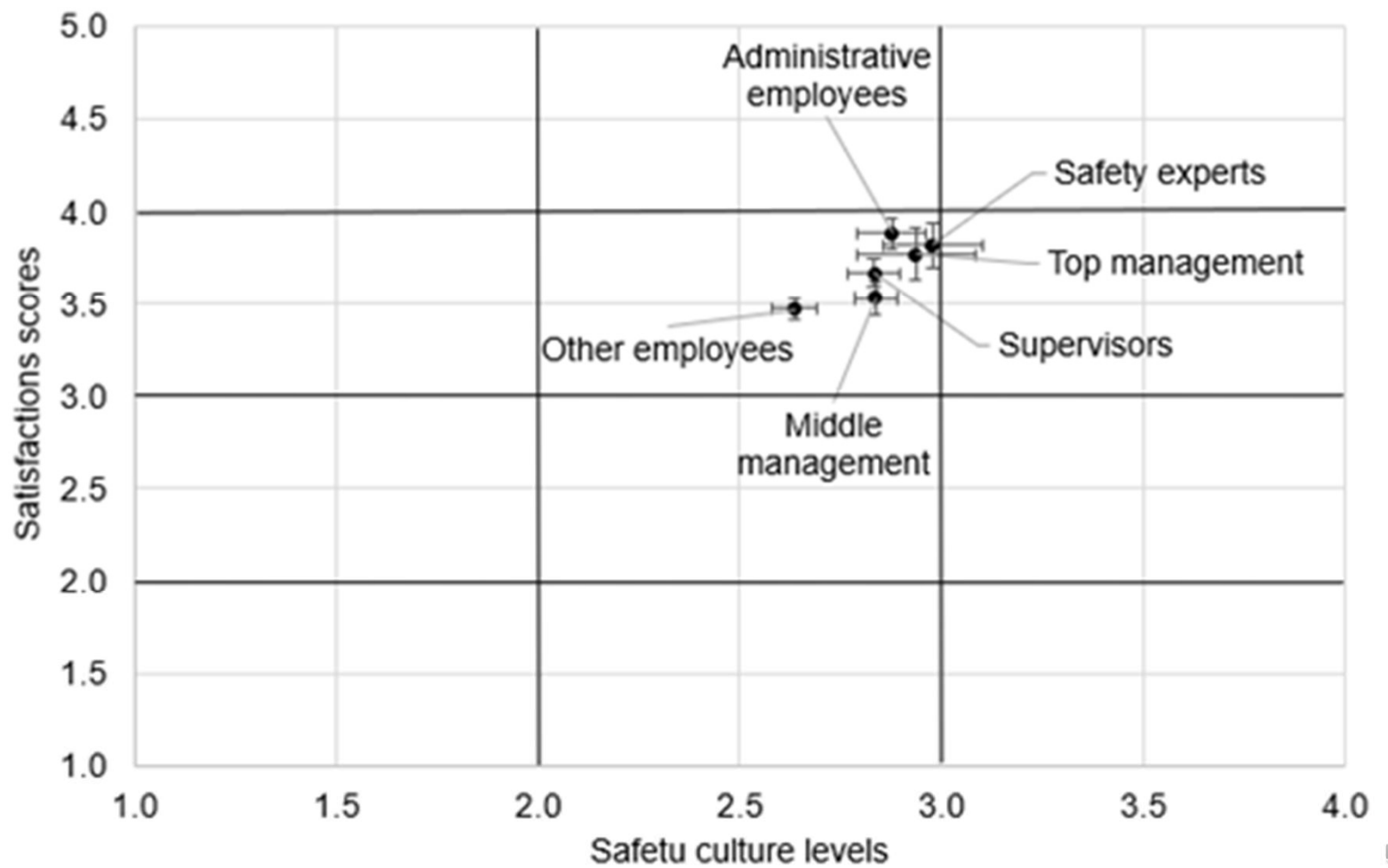
- Questionnaire consisted of 29 items in five themes
  - Each item was measured on a four-level maturity scale with written evaluation criteria
  - Answers were scaled from 1 to 4
- Satisfaction was rated on a 5-point Likert scale in each theme



# Results



# Results



# Discussion

- The level of safety culture was relatively high in case companies, and the they were overall satisfied with it
- Both companies could further develop their safety cultures based on the results
- Safety training practices were not very advanced, even though respondents were quite satisfied with them
- Employee commitment and involvement had the lowest satisfaction score and the second lowest safety culture level
- The results showed differences in safety culture between organizational levels.
- The results suggest that the state of safety culture is not industry-dependent





# Thank you!



Contact info: [sari.tappura@tuni.fi](mailto:sari.tappura@tuni.fi)

