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ETHICAL CULTURE CHANGE THROUGH CODE OF CONDUCT REINFORCEMENT:
CASE OF STONERIDGE ELECTRONICS AS

Master thesis

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We have written this Master Thesis independently. Any ideas or data from other authors or sources have been fully referenced.

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Abstract

Steered, structured, and positively influenced ethical culture change plays a vital role in the company's well-being, boosting employee morale and ambition towards high financial performance. Understanding ethical decision-making is an essential drive towards high economic performance and for continuous improvement and organisational learning points.

Firstly, we introduced multiple interventions (active standard corporate e-learning, active in-person open discussion, passive posters on the wall and standard new employee introduction) to the organisation to reintroduce and reinforce the corporate code of conduct. Secondly, we measured the eight-dimension ethicality level in 2020 and 2022 to compare overall ethicality change and intervention impact to each dimension. Thirdly we compared employees' perceptible change with objective change results.

The study result confirmed that companies' ethicality level has statistically improved, and different intervention methods have the potential to address different ethicality dimensions. Employees rated perceptual ethicality change lower than objective change. Also, we presented the study's limitations as the company's internal and external environment is frequently changing (and two significant global interference happened during the study period: The Covid-19 outbreak and the Russia-Ukraine war).

Keywords: Corporate code of conduct; Longitudinal survey; Ethical decision making
CERCS codes: S180 (Economics, econometrics, economic theory, economic systems, economic policy); S189(Organisational science); S190 (Management of enterprises)

Introduction

“...most all of us may commit unethical behaviours, given the right circumstances” (de Cremer et al., 2010, p. 2).

Companies worldwide are losing financially due to employees' unethical behaviour (Hess, 2007; Shin et al., 2015), and to avoid that, companies are introducing different ethics programs. Gomez-Alatore et al. study (Gómez-Alatorre et al., 2022) indicate that ethics programs might not always have the desired effect if not evaluating the potential effectiveness of an ethics program prior to investing time and resources into implementation. Our study aims to investigate the change in an ethical culture by introducing, reinforcing, and releasing a corporate Code of Conduct. We raise the hypothesis that the existence of a corporate code of conduct in a company and its introduction to the individual employee will impact the company's ethical culture. By increasing the ethicality level, we expect a positive shareholder and social effect (Center for Business Ethics, 1992; de Cremer et al., 2010; Erwin, 2011; Kaptein & Schwartz, 2008; Shin et al., 2015). Our study does not state how ethical the organisation's culture is, but we investigate the change from 2020 to the current survey conducted in 2022. Under review are different interference methods, and we investigate how to identify the potential of different effects on introduction methods (Weber, 2015).

First, we give a theoretical overview of ethical decision-making models, eight virtue dimensions of ethical leadership by Kaptein's Corporate ethical virtue model (Kaptein, 2007) with shortened 32-item scale (DeBode et al., 2013) developed to unload administrative load for conducting the survey. We based study trials on selecting ethical culture introduction (passive and active) methods (Center for Business Ethics, 1992; Weber, 2015) suitable to the organisation.

For the study, we selected international company Stoneridge Inc as the target, and its subsidiary in Estonia - Stoneridge Electronics AS. Ethical culture baseline is assessed as a survey done during 2020 (Kaaver & Pari, 2020) and change evaluated based on the same study reconducted in 2022. The result will give an overview of what dimensions of ethical culture are improved and that the perceptual feeling of the improvement does not reflect the objectively measured result. Considering the survey's timing, we also reviewed potential macroeconomic and company internal influences that might have an undesired or uncontrolled impact on the company's ethical culture.

Our contribution to business ethics is to understand ethical organisational culture and the Corporate Code of Conduct relationship. We do this through the reintroduction Code of conduct through different means and measuring before and after effects (DeBode et al., 2013) on a longitudinal study. The assessment will base on an Estonian company belonging to the multinational corporation.

1. Theoretical background

1.1. Ethical organisational culture and ethical decision-making models

Ethics and values are essential to working professionals in any industry. Employees who believe in a code of conduct and share companies' values are a massive asset to the organization. This knowledge is widely spread, and companies are introducing different ethics programs to avoid employees' possible fraudulent behaviour. By increasing the ethicality level, we expect a positive shareholder and social effect (Center for Business Ethics, 1992; de Cremer et al., 2010; Erwin, 2011; Kaptein & Schwartz, 2008; Shin et al., 2015).

1.1.1. Ethical organisational culture

Researchers use various definitions of organisational cultures (Newton & Knight, 2022, p. 7; Sackmann, 2021, p. 18). “Organisational culture creates the interactions among organisational members, leaders, behaviours and norms, and consequently, influences individuals’ behaviour in an organisation.” (DeBode et al., 2013, p. 461). Ethical behaviour can be considered as “Ethicality, meaning right, admirable and fair values and practices” (Riivari et al., 2012, p. 313). Adding the ethicality dimension to the general organizational culture definition, “Ethical culture encompasses the experiences, expectations and presumptions of how the organisation promotes ethical and prevents unethical behaviour” (Riivari et al., 2012, p. 313). In other words, ethical organisational culture defines as how an organisation encourages behaviour to operate sustainably or deviates from that (Kaptein, 2007; Weaver & Treviño, 1999).

Company ethical culture depends on ethical infrastructure in the organisation and a person's ethical decision-making. Different studies have proposed multiple models for

evaluating ethical climate and decision-making. Victor and Cullen (Victor & Cullen, 1988) developed their model for measuring the perception of ethical orientation by combining the theoretical constructs of cognitive moral development, ethical theory, and locus of analysis resulting in nine ethical climate types. Solomon (Solomon, 1992) based his model on business ethics values and referred that people should have specific virtues for moral development. Solomon's virtue-based theory is also the baseline for the Kaptein Corporate Ethical Virtues (CEV)¹ model to assess the multidimensional (eight virtues) ethicality level. DeBode (DeBode et al., 2013) continued Kaptein's work to simplify the measuring system to unload administrative burdens during ethical culture evaluation. There are multiple different organisation study methods developed and used. For example, Trevino studied ethical behaviour (Treviño et al., 1998) through ethical culture and climate, focusing on formal and informal factors. Singhapakdi et al. developed The PRESOR (Perceived Role of Ethics and Social Responsibility) scale to study whether the organisation can perceive a particular ethical problem and identify some variables, such as the importance of norms or relevance given to stakeholders affected by a specific situation (Camacho Ibáñez & Fernández Fernández, 2021). There are also broader approaches to organisations, such as European Foundation for Quality Management (EFQM) excellence model (leadership, processes, people/employee, policy and strategy, and partnership and resources) (Babri et al., 2021, p. 86). Babri et al. have done a relatively comprehensive review of different models used in different analyses. She has studied over 100 empirical papers published from 2005 to 2016, dividing different studies into content-oriented, output-oriented, and transformation-oriented (Babri et al., 2021).

For the current analysis, we selected Kaptein's Corporate Ethical Virtues Model (CEV) (Kaptein, 2007) for four primary reasons:

- I-EDM considers ethical behaviour as a result of rational and non-rational processes linking Organisation rules and individual employees' judgment.
- Corporate environment to control/influence persons' ethical decisions with Code of Conduct.
- To use standard structure within the existing framework to support further meta-analyses of the content and output studies (Babri et al., 2021, p. 104; Kaptein & Schwartz, 2008).

¹ Here and afterwards, see abbreviations in Appendix B

- Kaaver and Pari (Kaaver & Pari, 2020) did their thesis using Kaptein's CEV model. Alignment with study models will give us a comparison possibility of how the ethical culture has changed over time.

Kaptein bases his work on Solomon's virtue-based theory, where he claims that companies can influence their business culture by stimulating employees to act ethically and avoid unethical behaviour. Kaptein proposed in his Corporate Ethical Virtues (CEV) Model eight different dimensions (virtues) that illustrate companies' ethical climate: Clarity, Congruency of supervisors, Congruency of senior management, Feasibility, Supportability, Transparency, Discussability and Sanctionability.

Kaptein developed his CEV Model to standardise Corporate Ethics environment studies with a stable framework, which can be used to "... examine and measure the ethical quality of the working environment." (Kaptein, 2007). For that, Kaptein divided proposed virtues into three organisational capacities: Self-regulating, self-providing, and self-correcting.

Self-regulating capabilities define an organisation's expectations towards its internal and external environment and stakeholders. Sets the standard for interacting within and outside the company (Kaptein & Schwartz, 2008). To change the organisational culture toward more ethical conduct, various methods are used, such as business codes, code of conduct, ethics or compliance officers, ethical training, and incentive systems for rewarding and disciplining personnel. Behavioural guidelines to leadership for being role models to the employees (Kirsten & Wordsworth, 2017, p. 154). They maximise business results by nurturing ethical behaviour (Goebel & Weißenberger, 2017):

The virtue of *Clarity* – Clarity of the organisation's normative expectations of the employees to behave in a business environment compared to other social situations. Those expectations should be concrete, comprehensive, and understandable. The vaguer or unclearer the organisation's frameset, the more significant the influence of the employee's moral discretion is. That causes a higher risk for unethical acts or behaviour. Not-defined ethical standards can also be a source of ignorance among the employees leading to excuses or deliberate ignorance of the company's ethical culture expectations towards employees who should conduct their daily tasks. Victor and Cullen are using a similar dimension as the archetype "Law and Code" (Agarwal & Malloy, 1999)

Congruency of supervisors- The act or behaviour of the supervisors can either confront the organisation's ethical expectations or reassure them. When employees' direct supervisors are not following ethical expectations, they leave employees with conflicting signals or uncertainty about their moral compass. That might lead to unpredicted behaviour and potentially undesired unethical acts. When supervisors follow and behave per companies ethical normative, that gives a clear signal and reassurance to the employees that what kind of behaviour is desired and expected in the company.

Congruency of senior management – Virtue leads to alignment and unity of the senior management and their message and support to the organisation (Kaptein & Schwartz, 2008; Kotzian et al., 2021). It is very much related to the Congruency of the Supervisors. Still, it refers to establishing the baseline for the organisation's ethical culture where directors or board members set the ethical expectations for the organisation, expressing and demanding their fulfilment jointly.

Self-providing capabilities focus on organisations' ability to create an environment for employees to follow a set ethical code with available resources and organisational support. Considering the Code of conduct as a tool for creating an ethical environment, then in our study, we should see among those virtues an impact and positive change:

Feasibility – Virtue refers to the organisations' conditions created for employees to conduct their daily tasks in compliance with ethical norms. Requirements are defined as adequate or sufficient: time, information, monetary funds, authority, tools, and equipment. Resources available for employees to fulfil their responsibilities. Lack of resources, if not proportional to the task, can cause pressure for unethical behaviour to achieve required results (Kaptein, 2007).

Supportability – Virtue demonstrates what kind of support system an organisation is established for employees to nurture ethical behaviour. Low engagement, demotivated and dissatisfied employees can lead to intentional unethical behaviour that potentially damages the organisation. A hostile work environment and mistrust in the organisation can seriously impact following the established ethical norms. Supportability refers to the involvement and commitment of the individual to comply with the organisation's expectations and how companies' internal environment supports that (Kaptein, 2007).

Self-Correcting capabilities are focused on organisational corrections and adjustments of already happened acts to steer employee actions towards desired norms through feedback within the organisation (Maclean et al., 2015; Treviño et al., 1998). A significant section to allow organisation self-healing (Maclean et al., 2015) possibility through learning and feedback loop (Schwartz, 2016) :

Transparency- Virtue describes the visibility of behaviour in the organisation. It refers to the visibility of expectations and knowledge, actual ethical or unethical behaviour, and consequences of decisions and actions following the act. The bigger the visibility and transparency in the whole organisation, the more significant match to the ethical norms will be. Thus, low visibility might lead to misbehaviour in correlation with companies' expectations. High visibility also gives a tremendous potential to adjust individual behaviour based on practical situations within the organisation. Transparency is split into vertical and horizontal directions. The vertical component describes manager-employee interactions and how managers can observe employee behaviour and vice versa the consequences following it. The flat part refers to observing unethical behaviour and results among themselves.

Discussability- Virtue defines the environment within the organisation to discuss and debate ethical concerns. Per multiple studies, Kaptein argues (Kaptein, 2007) that people in closed cultures (low level of discussability or debatability) avoid unethical topics and criticism. By preventing dialogue and discussion, an opportunity to gain experience from the situation is lost, thus also the possibility to adjust the ethical decision-making process within the organisation. Avoiding the debate can lead to higher employee tensions, causing moral stress within the organisation. Companies with an elevated level of discussing ability, different ethical dilemmas, lack of clarity or unethical behaviours can be discussed openly for the organisational learning opportunity. A subcategory of notifying unethical behaviour is called "Whistle-blowing": a process for employees afraid of disclosure or punishment to inform authorities or third-party moderators (if needed anonymously). To detect fraud timely, minimise the effect on the company, and provide the option to correct the wrongdoing (Lee & Fargher, 2013). For example, for publicly listed companies (in the USA), Sarbanes Oxley Act (SOX) regulates (Sarbanes-Oxley Act of 2002, PUBLIC LAW 107–204, 116 STAT. 745, 2002) very specifically, how to share, review and discuss financial information (Hess, 2007) or similar European union directives on protecting informers (European Parliament, 2019).

Sanctionability – Virtue is defining the reaction to ethical or unethical conduct. Response, in its essence, can be in the form of punishment, appreciation/reward or ignorance

by management and co-workers. Punishment stimulates the enforcement of norms and steers the behaviour to avoid unethical acts (Kotzian et al., 2021). Appreciation or even rewarding unethical acts gives a clear message of what kind of behaviour is expected from the other employees, thus leading to conflict with established ethical norms. Rewarding an ethical act means that this behaviour is preferred, thus minimising unethical acts. Ignorance can serve in both directions: ignoring ethical behaviour may lead to unethical acts, as lack of recognition lowers the employee's willingness to act ethically. Ignoring unethical behaviour (also onlookers) threatens discipline and conveys that norms can be ignored (Kaptein, 2007).

For evaluating CEV, Kaptein created 58 driven questions with answers on a six-point Likert-type scale (1- Very Unclear to 6- Very Clear) to standardise the survey creating the Corporate Ethical Virtues Model Scale (CEVMS). As a survey of that length is burdening for organisations to conduct, DeBode et al. (DeBode et al., 2013) redefined the CEVMS to a shortened version (CEVMS-SF) with fewer questions, thus minimising organisations' efforts to evaluate ethical business culture in the organisation.

1.1.2. Ethical Decision making

Jones defines ethical decision-making as "...a decision that is both legal and morally acceptable to the larger community. Controversially, an unethical decision is either illegal or morally unacceptable to the larger community." (Jones, 1991a, p. 367)

For describing an individual's decision-making process, diverse models combine a person's capabilities and experiences with his/her surrounding environment. Ethical decision-making (EDM) models help to describe how cognitive (i.e. reasoning) and affective (i.e. emotions) processes are working and how they are leading to moral judgement and behaviour (Schwartz, 2016). He used two distinct theoretical categories to divide the approach into rational and non-rational-based decisions (Schwartz, 2016). The rational approach assumes that decisions are dominantly taken through moral reasoning, leading to moral judgement. The non-rational approach assumes that emotions and intuition are the basis of moral judgement, and reasoning might come after the decision to justify the decisions.

Schwartz claims that exclusive models, where reason-rationalization and intuition-emotion models do not function together, actually work together in two stages or system interactions, leading to moral judgement (Schwartz, 2016). Considering the complexity of the

decision-making process and the human brain, then M. Schwartz proposed in his article (Schwartz, 2016) an Integrated Ethical Decision-Making (I-EDM) Model. He tries to combine rational and non-rational decision-making processes with multi-round and level stages with external factors (Situation) that can impact the specific decision (internal process) (see Figure 1). The I-EDM model assumes that ethical behaviour depends on the situation context where the person is and the particular person's ethical dilemma he or she faces. Causing a multitude of solutions for the same person depending on input variables (situation and dilemma) (Schwartz, 2016). Ibanez et al. investigate organisation ethical leadership maintenance and ethical infrastructure, which composes a formal system, an informal system and organisational climate cooperation (Camacho Ibáñez & Fernández Fernández, 2021, p. 341).

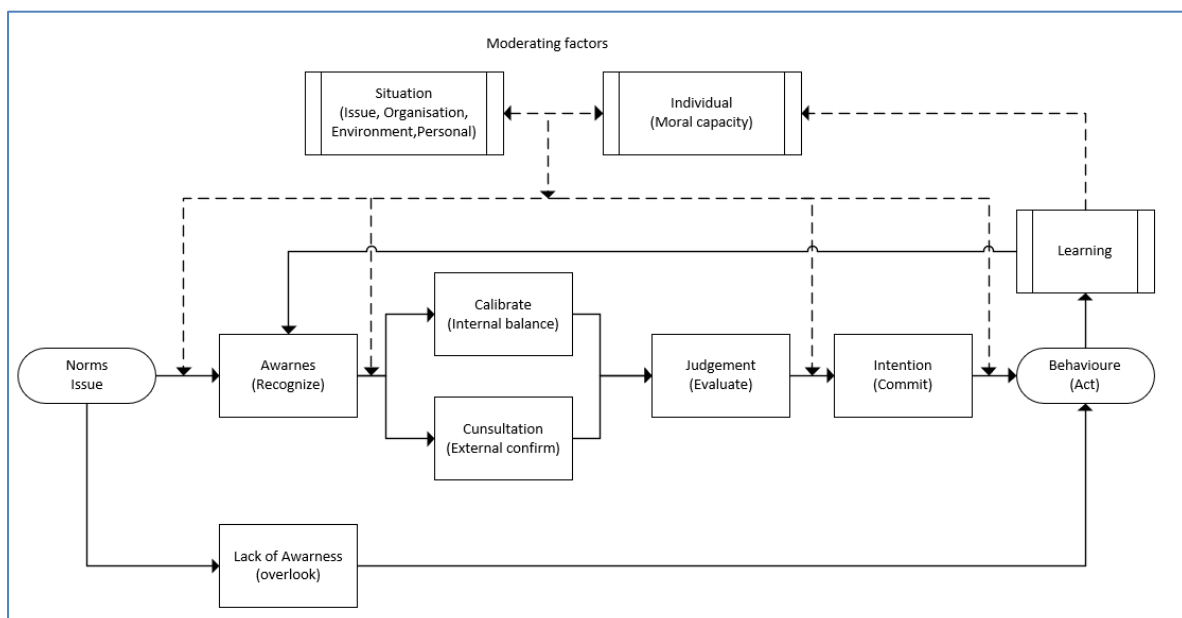


Figure 1 Ethical decision-making model

Source: Compiled by the authors based on Ethical Decision-Making Theory: An Integrated Approach (Schwartz, 2016)

The I-EDM model starts from the issue – a situation where a person should choose. A person realises (Awareness) that he or she needs to decide. He or she will consult internally (Calibrate) based on her knowledge, experience, and personality or externally (Consultation) to get advice in the current situation. Due to the multitude of possibilities, an evaluation or selection (Judgement) will be needed to select one direction (Intention) based on a person's moral values. If the decision is made on direction or path, a reaction act (behaviour) will

follow. The reaction leads to understanding (Learning) a decision's results, increasing people's awareness. That aligns with the four-component model of Rest (Bebeau, 1999; Jones, 1991b). The first aim for a person is to become aware that there is an ethical issue, the second is judgement, the third is establishing a motivation or intention to act, and the fourth is to work on those intentions through one's behaviour.

I-EDM is constructed to reflect the ethical decision-making of an individual in a business context. That makes it an advantageous construction in a corporate environment addressing basic behaviours that a company expects of their employees in daily life to align with the company's image reflected in their Core Values—considering that every person takes approximately 35 000 decisions daily (Hoomans, 2015). Half of that awake time person is representing the company. Thus, the ethical level of decisions (of course, considering the significance and strategic importance) is making a substantial impact to the company. Both personal and professional decisions and behaviour are expected to be ethical and reflect the core principles and values stated by the employer. Schwartz suggests that business ethics education should focus on EDM's moral awareness and judgment stages (Schwartz, 2016, p. 770). Kirsten and Wordsworth argue that to reduce unethical behaviour, “organisations need to communicate ethical standards effectively to employees, ensure that they understand what these standards entail and provide means by which employees at all levels can ensure that these standards are met.” (Kirsten & Wordsworth, 2017, p. 154). When placing a corporate code of conduct into the i-EDM model, we can draw parallels with *Awareness*, as how a person understands the situation and *Calibrate* through obtaining knowledge and guidance through training. Also, written code allows external *Consultation* where the situation is unfamiliar or a question arises about how to act.

1.2. Code of conduct as a tool to govern employee behaviour

The reason to have Ethical culture is driven by either social pressure or financial results, where unethical behaviour can severely damage an organisation's reputation and increase regulatory costs with broad social damage (Epley & Kumar, 2019; Goebel & Weißenberger, 2017). As companies are increasingly held responsible for their employee behaviour, then ensuring compliance with general or industry ethical norms are becoming a necessity for management control core element (Kotzian et al., 2021, p. 108).

Ethics programmes aim to stimulate ethical behaviour in the organisation and assist employees in acting morally responsibly (Kirsten & Wordsworth, 2017; McDonald, 1999). Based on Ferrell and Gresham's (Ferrell & Gresham, 1985) multi-stage contingency model, an individual (employee) makes ethical decisions based on knowledge, values, beliefs, attitudes, and intentions. In this model, firms can develop a code of conduct by introducing formal organisational norms that will influence employees' personal preferences. Considering the multitude of variables in employees' personal features, situation features and variations of understanding ethical codes, a standardised approach is needed to stabilise the expected outcome (Kotzian et al., 2021). Per Kirsten and Wordsworth, a high proportion (88%) of respondents indicated that their organisations have written standards of ethical conduct to guide employee behaviour. Sadly, fewer companies have the knowledge provided to employees on how to apply the code (62,8%) and the mechanism for reaction (67,2%) (Kirsten & Wordsworth, 2017). For example, New York Stock Exchange forces the presence of the Code of Conduct as one tool to establish ethical (Schwartz, 2002) culture. New York Stock Exchange (NYSE) states that listed companies must adopt and disclose a code of business conduct and ethics for directors, officers, and employees (NYSE, 2022, p. 1).

Corporate codes of conduct are a practical corporate social responsibility (CSR) instrument commonly used to govern employee behaviour and establish a socially responsible organisation (Babri et al., 2021; Erwin, 2011; Kotzian et al., 2021). Various empirical studies result in different contra-dictionary results regarding the Code of Conduct's existence and linkage to companies' high financial results (Erwin, 2011; Kotzian et al., 2021). Many prominent global corporations are using Codes to drive alignment within their subsidiaries worldwide or to shape their public image in partnership with suppliers and customers or forced by regulatory instances (NYSE, 2022).

Companies are using different tools like the “Code of Ethics”, “Code of Conduct”, or “Code of Business Standard” to address desired ethical behaviour to maximise desired manners and suppress not desired habits in the organisation. Based on Stöber et al., “a code of ethics... express the company’s shared values and guide employees’ behaviour in a more fundamental way” (Stöber et al., 2019a, p. 112). A company’s code of ethics positively affects various elements of corporate cultures, such as perceived ethical values, organisational commitment, job satisfaction and peer behaviour.

Improving ethical conduct in organisations necessitates measuring the effectiveness of business ethics programs. Chen et al. studied that better measurement could help managers

identify redundant or ineffective initiatives that can be replaced or eliminated—and reveal opportunities to make programs more effective” (Chen & Soltes, 2018, p. 125). Companies are constantly changing and driving for better measurable performance (financial, leadership, processes effectiveness) throughout their existence. Company leadership usually has not defined a measurable target for the ethicality level.

“...most all of us may commit unethical behaviours, given the right circumstances” (de Cremer et al., 2010, p. 2). That is partially supported also by Somers's study, where he concluded that the presence of a code of conduct and awareness do not trigger decisions from an ethical perspective (Somers, 2001). Also, Kaptein and Schwartz refer that the Business code might not serve its intended purpose because those who need it and the target audience will not follow it regardless of its presence. The rest of the people already know what they need to do and how to behave (Kaptein & Schwartz, 2008).

The main reason to have a professional code is assumed that it will promote ethical behaviour in organisations (Kotzian et al., 2021; Schwartz, 2002; Stöber et al., 2019a). According to Somers and Kotzian (Kotzian et al., 2021; Somers, 2001), ethical decision-making and organisation ethical behaviour relationship still needs to be fully confirmed. On the other hand, Somers states in his study (Somers, 2001) that employees in Organisations who have formal Codes of Conduct are less aware of unethical behaviour than employees without formal codes of ethics (Somers, 2001, p. 187). A corporate Code of Conduct is used for formal written guidelines to harmonise common messages from top leadership to individual employees and drive company profitability. Somers argues that companies with or without formal codes have different dimensions: focus on profitability, charitable initiatives, and behaving ethically and morally (Somers, 2001). Babri et al. summarise in their meta-analysis that the existence of a code has the lowest correlation with unethical behaviour. In contrast, the embeddedness of the code by local management has the highest correlation (Babri et al., 2021, p. 96). Kirsten et al. highlight that the existence of a formal ethical training program significantly impacts ethical behaviour (Kirsten & Wordsworth, 2017, p. 166).

Kaptein and Schwartz state that a business code is a separate and formal document containing a set of prescriptions developed by and for a company. It guides company employees' and managers' behaviour in consideration of external stakeholders and society's expectations (Kaptein & Schwartz, 2008, p. 113). Stöber et al. add to code composition that a code's design matters for making ethical intentions. A clearly written code that provides only

limited discretion positively impacts managers' ethical intent (Stöber et al., 2019b, p. 22). See the general overview in Figure 2. Code establishment starts by defining the objectives towards which the company will eventually evaluate the code's effectiveness. Code gets its content input from the external environment, stake- and shareholder expectations, and corporate characteristics of how the company is structured and defined. As also our study object, Stoneridge is a global corporation, where ethical norms are cascaded through the mother company to its subbranches without the option not to adopt it to align corporate ethical behaviour within diverse cultures, religions, and business environments.

Effective code keywords by Stöber et al. are highlighted as positive tone foreword by management, pictures of correct behaviour, and very clear behaviour limits followed by not as big or no observed influence like specific behavioural examples in the code, as code is a broader document and cannot match with all situations (Stöber et al., 2019b).

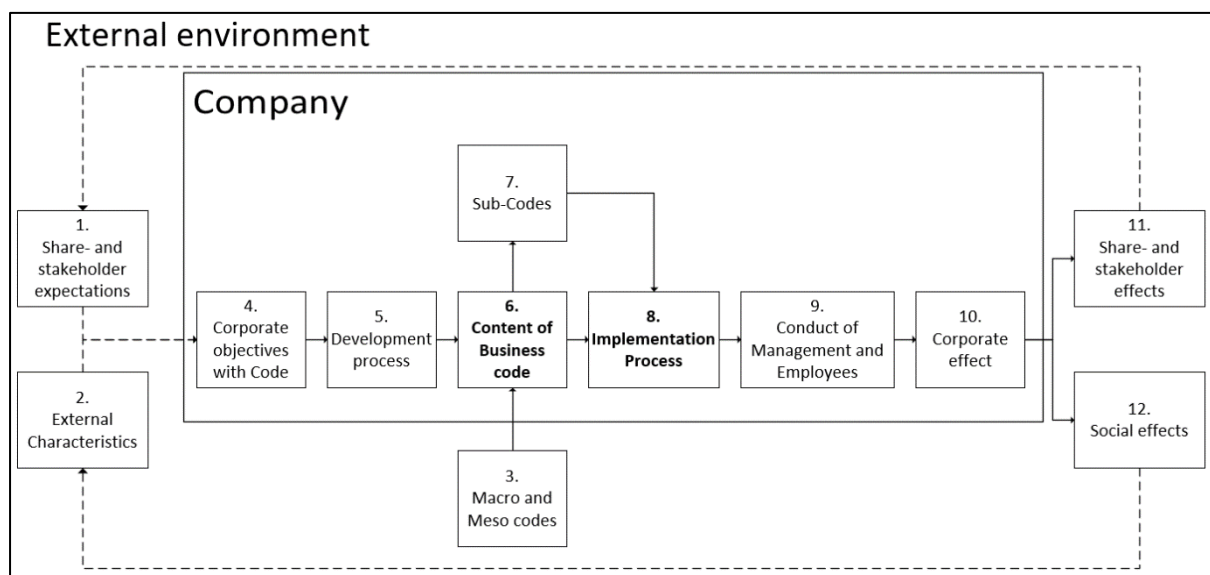


Figure 2 Business code effect model.

Source: compiled by the authors based on Integrated Research Model (Kaptein & Schwartz, 2008)

One separate category having a Code of Conduct in a Company is third-party instances requirements. As an example, New York Stock Exchange (NYSE) listed company manual states: “Listed companies must adopt and disclose a code of business conduct and ethics for directors, officers and employees, and promptly disclose any waivers of the code for directors or executive officers” (NYSE, 2022, p. 1). That focuses on “...help to foster a

culture of honesty and accountability” (NYSE, 2022, p. 1). NYSE states that the Code must be published or made available through the company’s website, but it does not state the content of the code. However, it gives guidance on what areas should be covered: conflicts of interest, corporate opportunities, confidentiality, fair dealing, protection and proper use of listed company assets, compliance with laws, rules, and regulations (including insider trading laws) and encouraging the reporting of any illegal or unethical behaviour.

Combining code objectives and expectations with Kaptein CEV model dimensions, we can form our first study question:

SQ1: Has the Company’s ethical culture dimensions changed through the code of conduct reintroduction and reinforcement?

The current article content of the code is not analysed deeply. In Babri et al. 2021 meta-analyse, several studies focus on Code content and its effect on the company (Babri et al., 2021; Kaptein & Schwartz, 2008; Kotzian et al., 2021).

1.2.1. Code of Conduct implementation methods

Managers often stand at a crossroads when implementing changes and developing a meaningful code of conduct. Trigger to update the code can be employee-driven change or management led redesigns. In both cases, a decision must be made between a method and how to approach the implementation. One success factor of companies ethical culture is code familiarity and how well employees understand the code's aim and content (Stöber et al., 2019a).

Printed materials are the most used form to communicate ethical policies to workers, and the secondarily used practice is workshops or seminars (Center for Business Ethics, 1992, p. 864). Survey results indicate that training for employee ethics awareness is arranged most likely by larger firms than reported by Weaver's study in 1999 (Weber, 2015). On some occasions, the training mandate comes from a regulatory standard, but primarily the knowledge is organised or practised by nearly every company. The main goal of the employee ethics training program is to enhance awareness of ethics in everyday situations, followed by developing an understanding of ethical standards. „It seems most useful to organise the discussion around these behavioural and contextual themes “ (Somers, 2001, p.

192). Gomez-Alatorre's study shows the significant impact of how codes are communicated on the ethicality level of the company (Gómez-Alatorre et al., 2022, p. 74).

Today, various ethical training programs are designed in corporate training programs, business schools, or workshops. Verschoor highlights that ethics training should be exciting and demanding and boost moral imagination. Excellent ethics training allows employees to recognise, appreciate, and resolve ethical dilemmas (Verschoor, 2000). Empirical research confirms the importance of corporate ethics and compliance programs. Weaver and Trevino's study shows that employees in these programs are more likely to avoid unethical behaviour, seek advice when confronted with ethical dilemmas, have a more significant commitment to the organisation, and are more willing to deliver bad news when observing misconduct (Weaver & Treviño, 1999).

Ibanez et al. give a guideline in what order intervention should be to gain maximum effect on the organisation and how employees and managers perceive the importance of ethics. He suggests that establishing infrastructure with specific and actionable elements (establish norms of behaviour; clearly communicate that nonethical behaviour is not tolerated; put in place sanctioning methods; consider employee expectations, give employee feedback system; measure work-life balance) will give better-perceived results to ethical culture different dimensions and elements (Camacho Ibáñez & Fernández Fernández, 2021). On the other hand, Stöber argues that a negative tone is not seen as guiding employees but instead conveys the message to protect the management from legal penalties. Compliance programs, seen as merely protecting top executives, lead to negative employee commitment, making employees uncomfortable (Stöber et al., 2019a). There seems to be a dispute between studies as Kotzian claims, "The more elements the compliance program has, the more ethical the behaviour" (Kotzian et al., 2021, p. 111), but on the other hand Kirsten et al. claim that „more is not always better“ (Kirsten & Wordsworth, 2017, p. 166). She indicates that careful consideration should be given to the types of ethics initiatives organisations invest in, with a particular emphasis on ethics training. Ethics initiatives should be supported by all levels of management and integrated into the daily functioning of organisations

We decided on the split between active and passive intervention methods per Stöber's study, where he claims that specific training has more results than general training (Stöber et al., 2019b, p. 407). For in-person training, we used different training materials (see Appendix C) even though the baseline code is the same for the whole corporation. That aligns with

Kotzian et al. study, where he claims that tailoring is possible per targeted audience (Kotzian et al., 2021, p. 125).

A separate subcategory for active training is newcomers, as Li et al. study suggest that the positive effects of knowledge sharing on service performance become more robust as time progresses. Accumulation of diverse information in the workplace does not happen all at once. Given this extended period, repetitive knowledge-sharing activities need to be enforced. In addition, managers need to consider the lagged effects when evaluating the impact of knowledge sharing (Li et al., 2022). Also, Stöberg argues that a strong underline of the code familiarity and beliefs in it are essential (Stöber et al., 2019a).

In our study focus target company, we could not fully control the spillovers, so complete randomization in intervention methods could not be used (Gómez-Alatorre et al., 2022). Based on that, we formulate our second study question with different intervention groups introduced in chapter 2.2.2 and Table 2.

SQ2: Do different code of conduct introduction methods affect ethical organisational culture (dimensions) differently?

We have addressed the first two study questions to understand the measurable effect of ethicality level, components and change. For the additional survey, we are interested in how actual employees understand or feel the impact of ethical framework actions that we are making. Both Ibanez et al. (Camacho Ibáñez & Fernández Fernández, 2021) and Gorondutse et al. (Gorondutse & Hilman, 2016) claim that employee perception to the ethical culture and infrastructure are essential factors of companies' success and performance. Thus, we introduce our third study question:

SQ3: Does perceptual change align with the objective change in ethicality level?

2. Methods

This study is the second part of a longitudinal study over two years (2020 and 2022) based on Stoneridge Electronics AS (SRE AS), an automotive electronics design and manufacturing company belonging to the Stoneridge Inc. group (SRI) operating in Estonia.

Study research ethical culture level (ethicality) and change over the period in consideration of corporate code of conduct reinforcement.

The first analysis identifies that the Stoneridge Code of conduct (DeGaynor, 2020) meets the Codes' definition by Kaptein and Schwartz (Kaptein & Schwartz, 2008, p. 113). Emphasis is set on behavioural guidelines for employees and managers to work together to develop the company's current and future cooperation within and with shareholders and stakeholders. SRI Code has represented significant positive parts by Stöber et al. to affect the organisation (Stöber et al., 2019a, 2019b). However, by Kotzian's study, the code effectiveness promoting senior management signed part is missing (Kotzian et al., 2021). The Focus area of ethical behaviour when reintroducing the SRI Code of Conduct is concentrating on the Implementation and Personal Characteristics (see study group split in Table 2) phase per Kaptein's CEV model shorter form by DeBode.

2.1. Stoneridge Electronics AS introduction and cultural development

The study subject is selected Stoneridge Electronics AS (SRE AS), part of Stoneridge INC., a USA-origin automotive components design and manufacturing company. Stoneridge INC was established in 1965 in Warren, OH, USA and Stoneridge Electronics AS was established in 1998 in Estonia. Stoneridge Inc. has acquired different entities and merged multiple times (see Figure 7), which has impacted SRE AS. SRE AS was established in 1998 under Beriforss AS, a sister plant to Beriforss AB in Sweden. The focus was to form a manufacturing entity in a lower-cost country, keeping the shared functions centralised in Sweden. 1996 acquired SRI 49% of Beriforss AB in Sweden, and in 1998 acquired the rest of Beriforss AB and, based on that, formed Stoneridge Electronics (SRE) division in Europe. 2001 Beriforss AS was renamed Stoneridge Electronics AS to merge under one Stoneridge identity.

Company culture (ethical and work) has received significant effects from different level leadership changes (see Figure 8) at Site, Division and Corporate levels. The most significant impact changes to this survey can be considered the 2015 Group president change (J. DeGaynor) that triggered multiple cascading Corporate leadership changes.

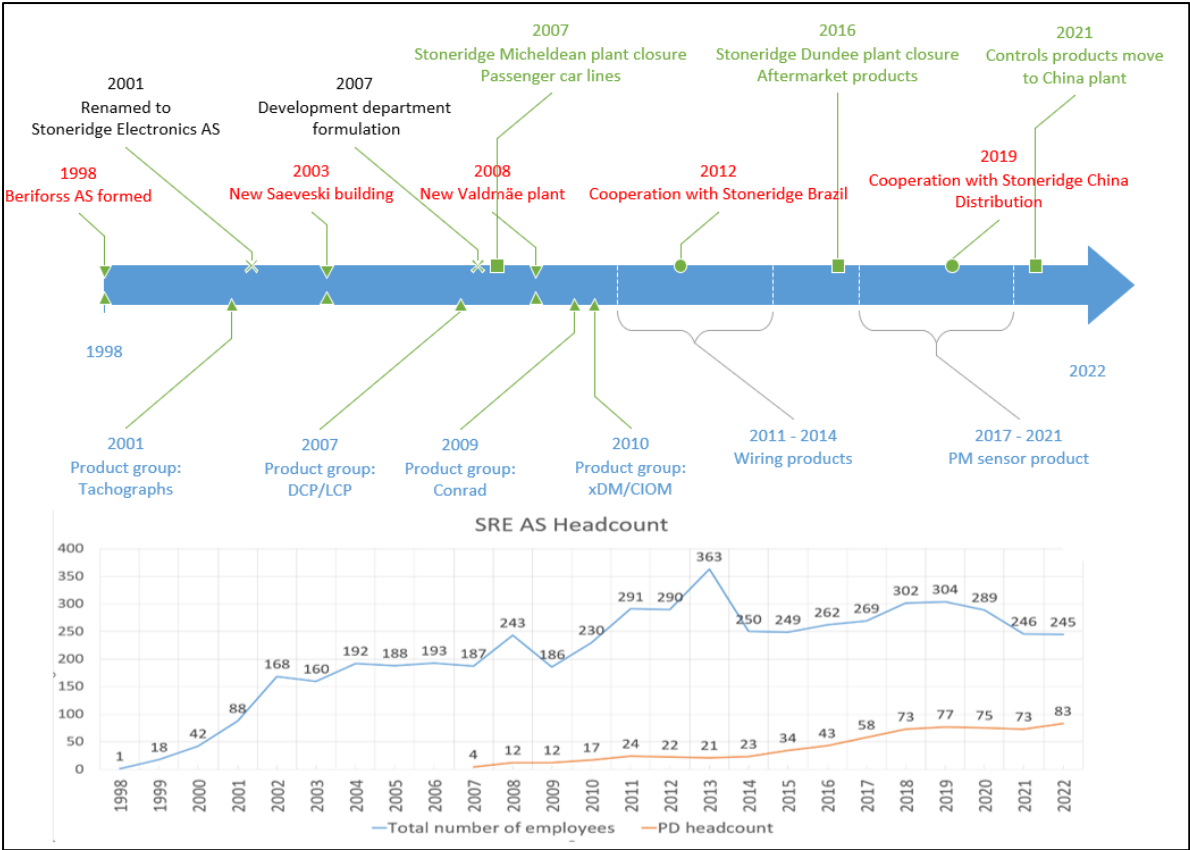


Figure 3 Stoneridge Electronics historical events and headcount timeline

Note: presented only major impact events to Stoneridge Electronics AS. PD-Design and development

Source: compiled by the authors

SRE AS had 245 employees (see Figure 3) (in Nov. 2022) divided into three disciplines: Production (98 persons), Design and Development (83 persons) and General office (64 persons). The production unit is responsible for operations/serial production with its engineering level support reporting straight line to Global Operations VP and Dotted line to SRE Division President/General manager. Design and Development are working in a global cross-functional development task, reporting directly to Division VP and dotted line (indirect) to the Plant manager. In contrast, only location/legislation-based connections to house rules exist. The general office consists of corporate and group-level function representatives (Human Resources (HR), Finance, IT/Business Systems (BS), Procurement and site leadership) reporting in various levels and functions but following SRE AS site local house rules.

2.2. Study setup

The study was set up as a longitudinal survey to follow up on the 2020 study to identify three significant study questions listed in the previous chapter. The following figure (see Figure 4) illustrates the general workflow of the current study during 2022 without the 2020 survey process.

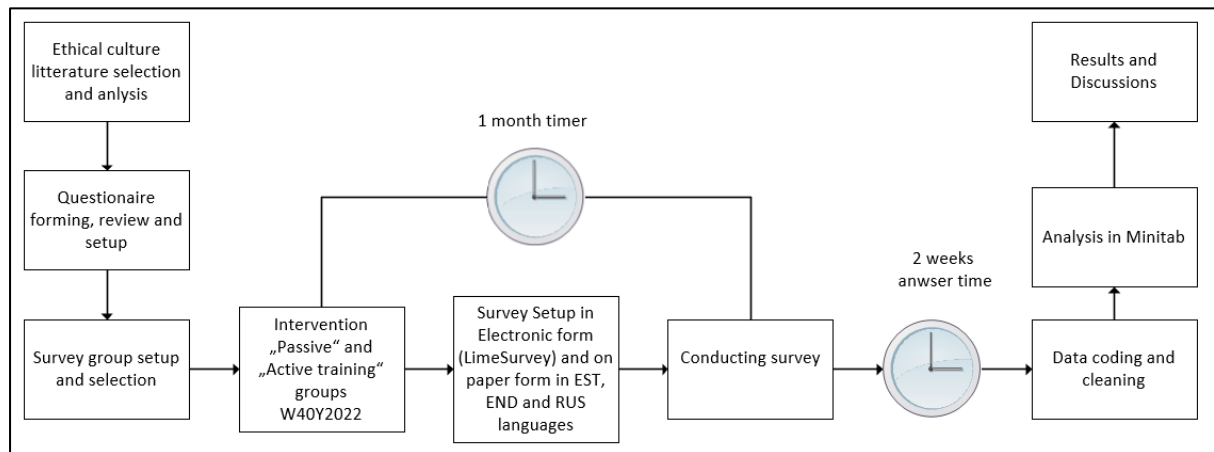


Figure 4 Empirical study plan for 2022.

Source: compiled by the authors

We analyzed personnel records and split intervention groups (see chapter 2.2.2) with minimal cross-contamination possibility. In October 2022, we intervened in groups “Passive” (G2) and “Active training” (G3). After an intervention, we gave a one-month impact delay to the feedback survey launch. After opening the survey questionnaire, we gave two weeks of answering time with one midterm reminder. We compiled 2020 and 2022 raw study data from paper responses and computer database results and performed a cleanup by eliminating responses without usable answers.

2.2.1. Survey setup

We compiled the questionnaire per Kaptein's (Kaptein, 2007) CEV model and Kaaver and Pari's (Kaaver & Pari, 2020) 41 questions. We selected 32 questions aligning with Kaptein's CEV, five background social-demographic classifiers and added two study-specific questions. See APPENDIX D Questionnaire.

To investigate the Organisation's Ethical culture change, we used all Kaaver and Pari CEV-related questions, and Translation differences with the Kaptein CEV model were kept without change not to influence response variation. Those were considering a shortened version of the Kaptein model that was developed by DeBode CEVMS-SF (DeBode et al., 2013) and practically valid for survey length compression (Huhtala et al., 2018). 32 Questions (questions 7-39) were used in eight different virtues, whereas four were in each category. Answer options on a 7-point Likert scale where “1 - Strongly disagree“, „4- Do not know“, and „7 Strongly agree“. Thus, a higher score reflects a positive context and a higher level of ethicality for each dimension (DeBode et al., 2013).

Additional two questions were raised (questions 6-7):

- “What was the latest contact point with the Corporate code of conduct?”

The question was raised as a manipulation check to understand whether the manipulations were successful (Kotzian et al., 2021).

Answer options:

- “Corporate training” refers to group G1
 - “Poster at your workplace” refers to group G2
 - “Site manager training” refers to group G3
 - “I do not recall” refers to group G4 or general lack of information.
 - “New employee introduction training” refers to group G5
- “How do you see Stoneridge Electronics TALLINN site ethical climate change during last two year’s”

We are limiting the Ethical Culture change reflection to the SRI Tallinn site, where the study is conducted with a minor potential to limit the corporate impact on culture change.

Answer options on a seven-point Likert scale where “1 – Strongly disagree“; „4- Do not know“ and „7 Strongly agree“ (Norman, 2010)

Background questions (questions 1-5): “Gender”, “Age group”, “Time worked in the company”, “Position”, and “Unit”.

The survey was set up in 3 different languages-Estonian, English, and Russian, considering company employee profiles. We distributed separately identified surveys in electronic and paper form based on three subgroups per intervention group setup:

- Group G2 “Passive”– Electronics survey only
- Group G3 “Active training”– Electronics and paper form survey
- All other groups (intervention groups G1, G4 and G5 as general background questions identify them) – electronic and paper form.

We used UT LimeSurvey survey environment and defined the open period as two weeks. We sent out the survey on Nov 2022. For Electronics Survey, a response reminder was sent out one week after the survey release. We were targeting, in total, 245 employees employed in November 2022 in SRE AS. We received 155 answers. We removed three responses due to intentional data manipulation (all equal values). Not answered values were classified as “Do Not Know” and excluded from further analysis.

Recorded answers were recoded for analysis purposes as follows:

- Not answered values – recoded as “* -empty/missing value.”
- Answers “Do not Know” – recoded as “* -empty/missing value.”
- We reviewed every question block of four among eight categories, and if at least two answers were classified as “Do not know” or empty, the entire block of four answers was ignored and classified as “* -empty/missing value.”

A General Social demographic overview is used to analyse, is the survey response representative selection of the company’s social-demographic distribution and covers all potential answer groups. A detailed overview is presented in Table 1. Conducted survey participants represented slightly more than half (62,0%) of the total 245 SRE AS employees. We received an equal response rate by gender (Female 50,7% -Male 49,3%) even though the male population is bigger in the company; thus, their response rate was lower (male 52,4% vs female 75,5% from total - see column “Participation rate”). We observed an extremely high response rate (92.7%) among workers who do not have company computer access. The high worker participation rate also explains the high response rate on paper to be slightly higher than the electronic answer rate. The lowest response rate was in the Design and development (39,8%) unit. Service length analysis showed that employment length in the company is significant, where over eight years’ service length (40,8%) responses formed 44,7% of

answers. As was expected, age groups had a normal distribution with slight tails in the lower and higher end.

Table 1 Participation overview

	2022 Study participants		Employees in Stoneridge Electronics AS		
	<i>Answers n=152</i>	<i>% from answered</i>	<i>Total employees n=245</i>	<i>The portion from Total employees (%)</i>	<i>Participation rate (%)</i>
Gender					
1. Female	77	50,7%	102	41,6%	75,5%
2. Male	75	49,3%	143	58,4%	52,4%
Age					
1. till 30y	25	16,4%	-	-	-
2. 31 - 40y	42	27,6%	-	-	-
3. 41 -50y	44	28,9%	-	-	-
4. 51 - 60y	26	17,1%	-	-	-
5. 61 and above	15	9,9%	-	-	-
Time worked in the company:					
1. up to 6 months	12	7,9%	23	9,4%	52,2%
2. 6 months to 2 years	36	23,7%	44	18,0%	81,8%
3. 3 -7 years	36	23,7%	78	31,8%	46,2%
4. 8 and more years	68	44,7%	100	40,8%	68,0%
Position:					
1. Worker	51	33,6%	55	22,4%	92,7%
2. Specialist	77	50,7%	154	62,9%	50,0%
3. Middle manager	17	11,2%	26	10,6%	65,4%
4. Manager	7	4,6%	10	4,1%	70,0%
Unit:					
1. Production	74	48,7%	98	40,0%	75,5%
2. Development department	33	21,7%	83	33,9%	39,8%
3. Other office	45	29,6%	64	26,1%	70,3%
Start language					
1. EST	94	61,8%	139	56,7%	67,6%
2. RUS	46	30,3%	91	37,1%	50,5%
3. ENG	12	7,9%	24	9,8%	50,0%
Response					
1. Electronics	106	69,7%	189	77,1%	56,1%
2. Paper	46	30,3%	65	26,5%	70,8%

Note: Employee count in November 2022.

Source: Study results, SRE AS personnel records, compiled by the authors

Considering that the answer group social distribution per different parameters is similar to companies' complete personnel data, we can consider the answer group as a general representation of the total employee's profile.

Before further analysis, we checked internal data validity on every dimension (eight Virtues per Kaptein) response within four questions (reliability analysis). For that, Cronbach alpha (α) was calculated (Taber, 2018) and compared with two previous similar studies (Kaaver & Pari, 2020) and (Huhtala et al., 2018) (see Table 12).

Considerable is that the dimensions 6-8 response rate were significantly lower than the total response rate (Column "Comment" for the 2022 dataset) for both the 2020 and 2022 surveys. All results in all eight dimensions of the reliability study were over 0,7, so they can be considered reliable data within this questionnaire (Hinton, 2004, p. 303).

2.2.2. Code of Conduct reinforcement methods

We could not use a fully randomized study as Glennerster and Takavarasha (Glennerster & Takavarasha, 2013, p. 113) recognize due to the high risk of spillovers. SRE AS site employee profiles (workers, operations engineering, design and development, office administrative, local, and corporate functions) and physical site setup (Production, laboratory, warehouse, office) triggered intentional intervention group selection. We identified five different subgroups. Active intervention groups G1 "Corporate training", G3 "Active training", G5 "New employees" (uncontrolled content) and G2 "Passive" passive intervention. No intervention G4 "Reference" as the exclusion for reference baseline.

Group G1- "Corporate training" – white collar (Office position, have corporate e-mail access) employees who received standard corporate „Code of Conduct training“ in three languages (EST, ENG, RUS) from October to December 2022. We conducted training as e-training with prerecorded and compiled study material by the Corporate Compliance management office. Participation was monitored and followed up on the corporate level.

Group G2- "Passive" – Passive intervention. Group identified by their physical isolation from the rest of the plant, but spillovers are possible.

Warehouse – The warehouse is open to all employees in the building for access. However, minimal non-needed presence is required for safety purposes (different dress codes with safety vests are mandatory. We did not expect any non-functional movement in the area.

We place posters in areas where warehouse employees get their daily information, and other persons do not need to either focus on information or pass by without intention.

Test laboratory (LAB)- area doors are closed for general employees. The poster is placed in the office area/climate test, separating the glass wall for visualisation.

For intervention method visualisation, see APPENDIX C Intervention plans section one. As standardized corporate core value posters in Estonian and English can have minor deviations in translation, we considered that they are the same and acceptable (Kotzian et al., 2021; Stöber et al., 2019b) for the same intervention group

Group G3 – “Active Training” – active intervention. Based on the exclusion method, 23 employees who do not belong to G1, G2, and G5 subgroups were selected. Russian-speaking employees (who do not speak English or Estonian fluently) were excluded (Training capability in Russian as the Site Manager is not capable of fluent interaction). Three rounds of open discussions were taken place during 5-7 October, two hours per session. Two rounds in Estonian and one round in English. Discussion topics were around Corporate Core Values and individual employees' either positive or negative experiences during their employment. For intervention method visualisation, see APPENDIX C Intervention plans section two.

Group G4 – “Reference” – Reference Group. Extracted from total employees by NOT belonging to G1, G2, G3 and G5. Gomez et al. and Duflo et al. identify in their studies that a comparator group can be either formed by statistical design or by securing treated and not treated group separation (Duflo et al., 2007, p. 3899; Gómez-Alatorre et al., 2022, p. 25).

Group G5 – “New employees” – Active, not controlled intervention. All new employees are to get standard Core Values introduction by Human Resources (HR) department. Employees form groups with a length of service of fewer than six months. Group influence is considered uncontrolled due to HR standard training effect on stable, reliable quality level (Statement by SRE AS HR manager (M. Tiisler-Pohla), started in the company 08.2022).

Intervention timing for groups G2 “Passive” and G3 “Active training” was selected one month before the survey: W40Y2022, beginning of October 2022. The plant manager performed three separate training/discussion events and placed wall posters with corporate Core Values in Warehouse and Laboratory areas. See APPENDIX C Intervention plans.

Table 2 Intervention method overview

Group Identifier	Type of intervention	Introduction Method	Focus area among employees	Reference group size # employees	Actual participated # employees
G1 “Corporate training”	Corporate Code of conduct training	Corporate video training	All White-collar on site	127	80
G2 “Passive”	Passive-Poster on the wall.	Poster on a wall in a closed area	Warehouse office Product validation lab	25	8*
G3 “Active training”	Personal training-Plant manager	Face to Face training with case study examples	No corporate training passed, Not in the Poster focus group area	26	17
G4 “Reference”	Reference group	No Code of Conduct introduction	Blue-collar, Corporate training not done white-collar	54	37
G5 “New employees”	New Employee intro	HR 1st day introduction training	less than 6-month tenure employees	23	11

Note: Group size based on employee count October-November 2022

Source: compiled by the authors

Exclusions:

We excluded from the total number of employees persons on extended leave absent (for example, maternity leave).

* We removed two datasets from group G2 “Passive” source data as all questions were answered with the value “Totally agree”, as we estimated that as intentional data manipulation.

3. Analysis results

For statistical analysis, we used Minitab (Minitab® 21.3 (64-bit), © 2022 Minitab, LLC) software program.

Before further analysis, we performed normality analysis to identify data normality to select parametric or non-parametric test methods (2022 Minitab, 2016). We tested all eight parameters and total 2022 and 2020 data for Normality with the Anderson-Darling test (see Figure 13). As all test results (see Figure 14) raise a p-value lower than 0,05 ($p < 0,05$), then nonparametric tests are used.

3.1. Ethical culture change through the code of conduct reintroduction

Comparison of the 2020-year survey (Kaaver & Pari, 2020) and 2022-year survey. We averaged all eight-dimension responses per study year, and Mann-Whitney analysis was performed on the “Not Equal” and “Greater than” conditions with a confidence level of 95% (see Table 3). Evaluation of p-value conducted null hypothesis rejected as the significance level is greater than 0,05. (See Table 3) Concluding, ethicality levels are different between 2022 and 2020, where the 2022 level is greater than the 2020 level. The unadjusted p-value two is considered a more conservative estimate due it is always greater for a specific pair of samples than adjusted. Even though adjusted for ties is usually more accurate (see APPENDIX F Figure 15). Thus, we conclude that the 2022 ethicality level has significant change (Greater than) compared with the 2020 survey, and ethical culture has improved.

Table 3 The median comparison between 2022 and 2020

Mann-Whitney:

Confidence: 95,00%

Method

η_1 : median of 2022

η_2 : median of 2020

	2022		2020		Estimation for Difference			Not adjusted for ties		
	N	Median	N	Median	Difference	Lower Bound; CI for Difference	Achieved Confidence	W-Value	P-Value	
Difference: $\eta_1 - \eta_2$										
Null hypothesis $H_0: \eta_1 - \eta_2 = 0$										
Alternative hypothesis $H_1: \eta_1 - \eta_2 > 0$	IS Greater	152	4,830	136	4,667	0,157	0,044	95,01%	23575	0,011
Null hypothesis $H_0: \eta_1 - \eta_2 = 0$										
Alternative hypothesis $H_1: \eta_1 - \eta_2 \neq 0$	Not EQUAL	152	4,830	136	4,667	0,157	(0,021; 0,295)	95,01%	23575	0,022

Note: Mann – Whitney test, One-sided Greater than and two-sided Not Equal 2022 against 2020; Confidence level 95%.

Source: compiled by the authors

We compared the eight dimensions/virtues in the 2020-year survey (Kaaver & Pari, 2020) with the 2022-year survey. We averaged each dimension four questions. The statistical Hypothesis was raised as is the 2022 Median “Greater than” the 2020 Median? A one-sided Mann-Whitney test with a confidence level of 95% was run (see Table 4). Evaluation of p-value conducted and on Dimensions 1,2 and 4 null hypotheses accepted, and on Dimensions 3, 5-8 null hypothesis rejected as the significance level is smaller than 0,05. In conclusion, ethicality levels in categories 3, 5-8 are different (Greater than with the estimation for a difference of 0,250 to 0,333) between 2022 and 2020. The graphical view in Figure 5 visualises different years (2020, 2022) study results per dimensions. We can identify significant change with confidence intervals supporting Mann-Whitney test results.

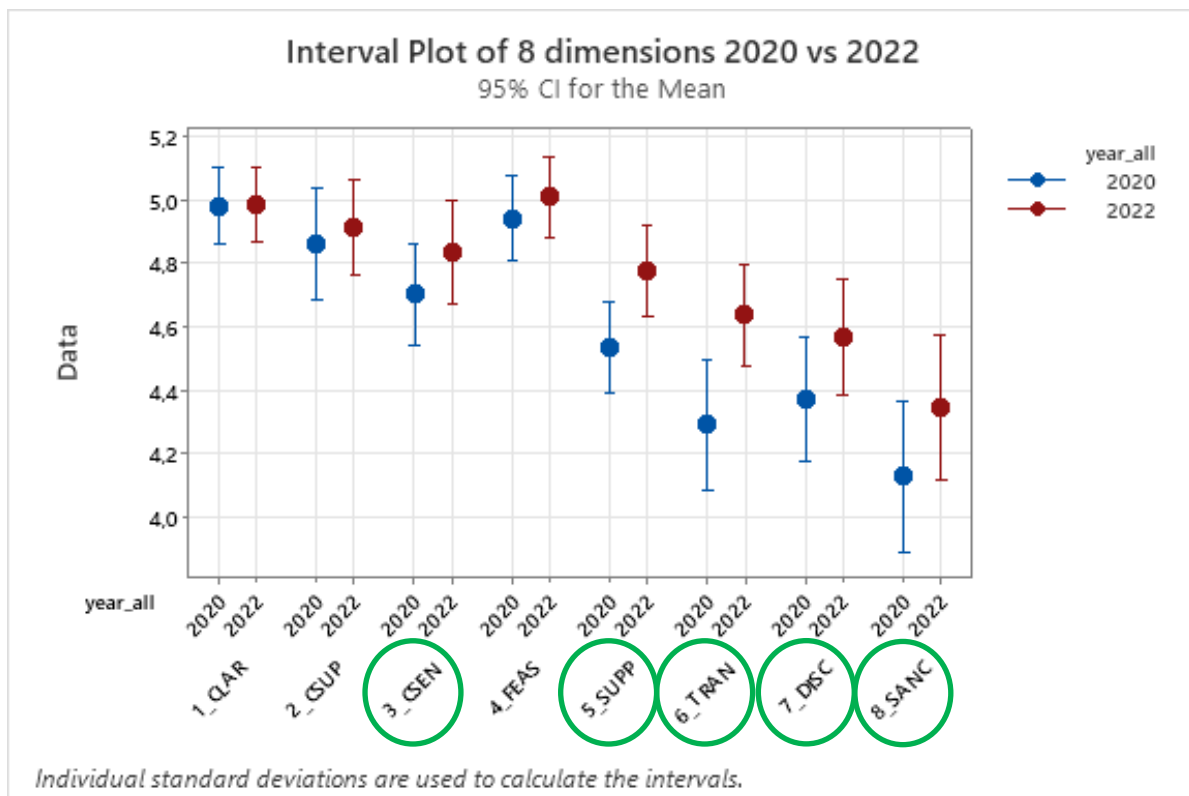


Figure 5 Interval plot of eight dimensions displayed per year

1_Clarify, 2_Congruency_of_supervisors, 3_Congruency_of_senior_management, 4_Feasibility, 5_Supportability, 6_Transparency, 7_Discussability, 8_Sanctionability

Note: Statistically significant changes highlighted

Source: compiled by the authors

Table 4 The median comparison between 2022 and 2020

Mann-Whitney:

Confidence 95,00%

Method η_1 : median of 2022 η_2 : median of 2020Difference: $\eta_1 - \eta_2$ Null hypothesis H_0 : $\eta_1 - \eta_2 = 0$ Alternative hypothesis H_1 : $\eta_1 - \eta_2 > 0$

	2022		2020		Estimation for Difference			Not adjusted for ties	
	<i>N</i>	<i>Median</i>	<i>N</i>	<i>Median</i>	<i>Difference</i>	<i>Lower Bound for Difference</i>	<i>Achieved Confidence</i>	<i>W-Value</i>	<i>P-Value</i>
1_Clarify	146	5,00	126	5,00	0,000	-0,083	95,01%	19854,50	0,546
2_Congruency of supervisors	144	5,00	118	5,00	0,000	0,000	95,01%	19318,00	0,266
3_Congruency of senior management	127	5,00	109	4,67	0,250	0,000	95,02%	15990,00	0,036
4_Feasibility	143	5,00	132	5,00	0,000	0,000	95,01%	20366,50	0,169
5_Supportability	134	5,00	124	4,50	0,250	0,000	95,01%	18935,00	0,004
6_Transparency	95	4,75	82	4,33	0,333	0,167	95,01%	9440,00	0,002
7_Discussability	109	4,75	104	4,50	0,250	0,000	95,02%	12443,50	0,041
8_Sanctionability	89	4,67	82	4,33	0,250	0,000	95,02%	8279,50	0,027

Note: Mann – Whitney test, One-sided 2020 Greater than 2020; Confidence level 95%

Source: compiled by the authors

Thus we conclude that five out of eight dimensions had significant changes, and the ethical culture improved.

3.2. Code of conduct introduction methods impact.

We performed a dispersion analysis on the intervention Groups (G1-G5) towards eight dimensions with the Kruskal-Wallis H test. An overview is presented in Table 5.

We observed a significant difference in dimension *Sanctionability* (p-value 0,047), where Group G2 “Passive” had the highest mean rank (81,5), and group G4 “Reference” had the lowest mean rank (33,1). We observed in dimensions *Feasibility* and *Supportability* very stable results (p-value 0,958 and 0,933). Among other dimensions (1-3,6-7), we were not observing any significant differences.

Kruskal-Wallis dispersion analyses (see Table 5) indicate that interference G2 “Passive” has significant variance in dimensions 1-3 and 7-8. Dimensions *Feasibility* and *Supportability* are very stable compared with all intervention groups. Visual interpretation on the Interval plot level is seen in APPENDIX F by GROUP (see Figure 16) and by UNIT (see Figure 17).

Analysis on Not answer rate was performed (see Table 6) with every intervention group towards each dimension to identify potential derailers. Dimensions *Clarity* and *Congruency of Supervisors* showed a low (<15%) not answering rate among all Interference

groups. Dimensions *Congruency of senior management*, *Feasibility*, whereas dimension *Supportability* showed a mixed Not answering rate (<30%). *Transparency*, *Discussability*, and *Sanctionability* had high (>30%, up to 86%) not answering rates. Per Interference groups, Group G3, “Active Training”, showed the overall lowest (12,5%) Not answer rate and interference group G2 “, Passive”, showed the overall highest (35,7%) not answer rate.

Table 5 Dispersion analysis on ethicality between intervention groups 2022 survey

Group	1_Clarify	2_Congruency of supervisors	3_Congruency of senior management	4_Feasibility	5_Supportability	6_Transparency	7_Discussability	8_Sanctionability
1. G1- Corporate training	77,8	76,4	64,8	71,1	67,1	45,8	56,9	49,6
2. G2- Passive intervention-Poster	42,8	50,2	42,4	70,7	60,7	56,2	70,8	81,5
3. G3- Active training	71,7	68,6	69,4	73,4	75,2	61,0	54,0	40,5
4. G4- Reference group	71,1	71,1	64,3	75,9	66,2	48,4	45,2	33,1
5. G5- New employees <6 months	70,0	68,1	65,2	65,2	65,7	43,8	64,8	54,6
P-Value Not adjusted for ties	0,386	0,614	0,594	0,958	0,933	0,546	0,414	0,047

Note: Kruskal-Wallis H-test

Source: compiled by the authors

Table 6 Missing answer rate analysis, eight parameters versus intervention groups.

Group	Total Answers N	1_Clarify	2_Congruency of supervisors	3_Congruency of senior management	4_Feasibility	5_Supportability	6_Transparency	7_Discussability	8_Sanctionability	No answer % from total (8*N) answers
<i>Missing answers count</i>										
1. G1- Corporate training	80	2	4	12	3	8	26	19	35	17,0%
2. G2- Passive intervention-Poster	7	1	1	0	2	2	4	4	6	35,7%
3. G3- Active training	17	0	0	2	0	1	7	3	4	12,5%
4. G4- Reference group	37	2	2	9	4	5	19	14	15	23,6%
5. G5- New employees <6 months	11	1	1	2	0	2	1	3	3	14,8%
<i>Missing answers % from total participants per group</i>										
1. G1- Corporate training		3%	5%	15%	4%	10%	33%	24%	44%	
2. G2- Passive intervention-Poster		14%	14%	0%	29%	29%	57%	57%	86%	
3. G3- Active training		0%	0%	12%	0%	6%	41%	18%	24%	
4. G4- Reference group		5%	5%	24%	11%	14%	51%	38%	41%	
5. G5- New employees <6 months		9%	9%	18%	0%	18%	9%	27%	27%	

Source: compiled by the authors

We conducted further analysis on the Questionnaire answer option “Missing” - “Do not know” a significant portion of the total answers (in the current survey, 17,6%), and a detailed demographic analysis was conducted (See Table 13). Compared to the 2020 survey, the “Do Not know” portion (18%) (Kaaver & Pari, 2020, p. 46) remains the same.

Based on analysis results (see Table 13), the most significant portion of not answered dimensions were *Transparency* (34,9%) and *Sanctionability* (38,5%), and the lowest on *Clarity* (3,7%) and *Congruency of supervisors* (5,0%). The demographic overview does not reveal any specific outlier from the general data, more than that among the English answer group (14,6%) and Middle Managers (12,5%) not answering rate was slightly lower than the group average.

We can conclude that the average aggregated ethical organisation evaluation does not depend on the Code of conduct introduction method. The significant change in dimension *Sanctionability* needs further research, as a low answer rate might impact the result. Different introduction methods we used contribute only to the employee's general ethical behaviour knowledge level and do not significantly impact different virtue dimensions.

3.3. Perceptible change compared with the objective change.

We raised one perceptible question for comparing the 2020-year survey (Kaaver & Pari, 2020) and the 2022-year survey summarised objective data. “7 Stoneridge Electronics TALLINN site ethical climate has changed towards better during last two years”, perceptual classified as “Perceptual_2022”. The detailed 32-question/eight-dimension questionnaire correlated to one six-level Likert scale question with results indicating a perceptual change.

We averaged all eight dimension responses per study year difference. We ran the normality test on Perceptual_2022 (see Figure 19), whereas p-value <0,005 confirmed normal distribution. We performed Mann-Whitney median analysis in three comparison blocks “Objective 2022”-“Objective_2020”, “Objective_2022”-“Perceptual_2022”, and “Objective 2020”-“Perceptual 2022” (see Table 7). Evaluation of p-value conducted null hypothesis rejected as the significance level is greater than 0,05. They concluded that ethicality levels are different between Objective_2022, Objective_2020 and Perceptual_2022. Comparison of levels: The Objective 2022 level is greater than the Objective 2020 and Perceptual_2022. Perceptual_2022 is lower than Objective_2020 and Objective_2022. For visual identification, see Figure 6

Table 7 Mean analysis, aggregated (objective) 2020 and 2022 vs perceptual 2022 result.

Difference: $\eta_1 - \eta_2$	Mann Whitney	Estimation for Difference			Not adjusted for ties		Objective 2020	
		Difference	CI for Difference	Achieved Confidence	W-Value	P-Value	N	Median
η_1 : median of objective 2022	Not Equal $H_1: \eta_1 - \eta_2 \neq 0$	0,157	(0,021; 0,295)	95,01%	23575,00	0,022	136	4,67
η_2 : median of objective 2020	Greater than: $H_1: \eta_1 - \eta_2 > 0$	0,157	0,044	95,01%	23575,00	0,011		
η_1 : median of Objective 2022	Less than: $H_1: \eta_1 - \eta_2 < 0$	0,714	0,893	95,01%	22479,00	1,000	Perceptual 2022	
η_2 : median of Perceptual_2022	Not Equal $H_1: \eta_1 - \eta_2 \neq 0$	0,714	(0,522; 0,900)	95,02%	22479,00	0,000	N	Median
	Greater than: $H_1: \eta_1 - \eta_2 > 0$	0,714	0,556	95,01%	22479,00	0,000	100	4,00
η_1 : median of Objective 2020	Less than: $H_1: \eta_1 - \eta_2 < 0$	0,571	0,739	95,00%	18559,50	1,000	Objective 2022	
η_2 : median of Perceptual 2022	Not Equal $H_1: \eta_1 - \eta_2 \neq 0$	0,571	(0,409; 0,778)	95,02%	18559,50	0,000	N	Median
	Greater than: $H_1: \eta_1 - \eta_2 > 0$	0,571	0,438	95,00%	18559,50	0,000	152	4,83

Source: compiled by the authors

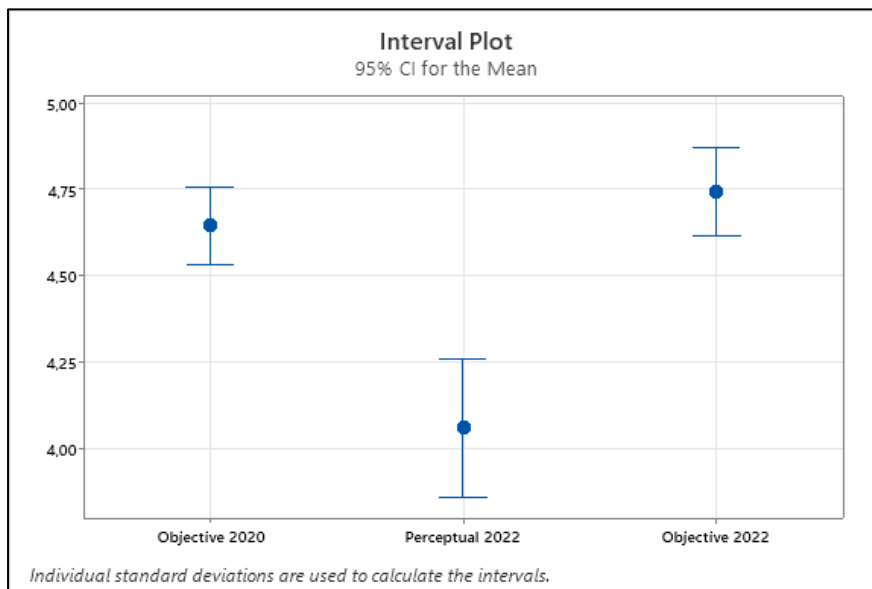


Figure 6 Interval plot of ethicality level between 2020 and 2022 objective results and 2022 perceptual change.

Source: compiled by the authors

Thus, we conclude that perceptual change based on one question has a significantly lower ethicality level than the 2020 and 2022 32-question objective survey results.

4. Discussion

This study aimed to provide insight into reintroducing a code of conduct with different means in the company to raise the ethical organisational culture. The current study is the second data point in a longitudinal study over two years.

For our first study question, "Has the Company's ethical culture dimensions changed through the code of conduct reintroduction and reinforcement?" we introduced CEVMS-SF 32 different questions focusing on eight dimensions (DeBode et al., 2013; Kaptein, 2007). Analyse identified that the ethicality level has changed (increased) compared to the 2020 year. The overall median change is 4,667 (2020) to 4,830 (2022). That indicates that with intentional work, ethicality level can be influenced (positively) by company management through ethics programs. That correlates to Stöber, Kotzian, Kaptein, and Riivari studies (Kaptein, 2015; Kaptein & Schwartz, 2008; Kotzian et al., 2021; Riivari et al., 2012; Stöber et al., 2019a, 2019b).

If we look in more detail, we can detect a change in different virtues as our study gave non-uniform change (increase) per dimension. 2020 and 2022 datasets are trending similarly and have higher values in Dimensions 1-4 (no desired defined target defined by the organisation nor by this study), with both declining trend levels in dimensions 5-8. Despite the declining trend, we can identify a significant improvement between study years 2020 and 2022, with 0,25 points on dimensions *Congruency of senior management*, *Supportability*, *Discussability* and *Sanctionability* and most extensive with 0,33 points in *Transparency*. When comparing the results with Huhtala et al. and Kangas et al. survey, those symptoms are not visible in his study groups (Huhtala et al., 2018; Kangas et al., 2018). Based on that, we can say that *Self-correcting* capabilities are weakly represented in the organisation. The learning loop for raising awareness of the EDM might not be functioning well in the company.

We introduced a set of intervention methods for our second study question, "*Do different code of conduct introduction methods affect ethical organisational culture (dimensions) differently?*". Controlled study groups (participants known and recorded) G1- "*Corporate training*" and G3- "*Active training*". Non-controlled group (participants known but spill possible) G2- "*Passive*". Comparison group without any intervention G4- "*Reference*". Also, we considered group G5- "*New employees*" non-controlled as to the uncontrolled introduction of training content and quality level. HR manager replacement due

to mediocre performance in December 2021 and transition period up to August 2022 when the new HR manager started.

We identified only statistically significant differences between intervention groups in the *Sanctionability* dimension. All other dimensions had changes in means but were statistically not important. Change in dimension *Congruency of senior management* might have an impact from frequent leadership changes on Division and Group level as SRE AS has a solid multi-level relationship with corporate matrix steering functions. Further study may help if Supervisors and Senior management is defined on a specific level – senior management of survey entity (SRE AS) or division or group level. Lawton refers that a leader must have a vision of a promising future (Lawton & Páez, 2015). However, if a leader changes very often, the definition of goodwill changes as the situation (Schwartz, 2016) changes and corporate objectives (Kaptein & Schwartz, 2008) may change. That raises a possibility that *Congruency* dimensions could show a higher level in a more stable environment. Stöber claims that ethical culture is also composed of employees' beliefs on how other employees and top management behave. In particular, whether or not other employees and top management feel bound by the rules and behave accordingly (Stöber et al., 2019a, p. 114).

We can interpret intervention group results as G1 “Corporate training” group had the highest values in *Clarity* and *Congruency of supervisors*, indicating that an overall clear message has been understood. Active training group G3 “Active training” showed the highest values in dimensions: *Supportability* and *Transparency* saying that personnel felt personal touch and open-mindedness during the in-person training session. That can be tied back to the code communication effectiveness. That in-person approach gives more options for discussions and reasoning, thus influencing *Transparency* dimension as most in the intervention groups. We can see a similar effect as Verma et al. raised in their study (Verma et al., 2016), a hypothesis that a combination of formal and informal ethics training has a more significant impact than isolated formal training. Based on the current study, we can see a difference in *Transparency* virtue in response means between corporate standard training and in-person plant manager training. Full confirmation that the in-person approach has a more significant effect can not still be made as the effect was not statistically significant. The reference group had the lowest values in *Discussability* and *Sanctionability*, potentially indicating a lack of information and feedback. Adam et al. investigated formal and informal Code of conduct implementation methods and effects on different values. He and Stöber and

Kotzian argue that formal methods are only sometimes the most effective ones. Different methods can affect values related to “Manager sets an example”. To conclude our second study question, we can align that different methods can affect value dimensions. Statistical relevance still needs to be confirmed (Adam & Rachman-Moore, 2004; Kotzian et al., 2021; Stöber et al., 2019a, 2019b).

For our third study question: “Does perceptual change align with the objective change in ethicality level?” we cannot agree that measured and perceptual results align. Here we can align with Babier et al. cumulative study, where she has identified multiple surveys where bias is found between perceptual ethicality level and observed ethicality level (Babri et al., 2021, p. 103)

Table 8 Research question results

Question #	Research question	Method	Result	Comment
SQ1	Has the Company’s ethical culture dimensions changed through the code of conduct reintroduction and reinforcement?	Comparison of eight virtues on the 2020-year survey and 2022-year survey. Mann-Whitney test.	Accepted	-
SQ2	Do different code of conduct introduction methods affect ethical organisational culture (dimensions) differently?	Difference between intervention groups in the 2022 study among eight virtue dimensions. Kruskal-Wallis H test.	Partially confirmed	G2- Passive intervention response rate was low. Statically significant difference only in <i>Transparency</i> dimension
SQ3	Does perceptual change align with the objective change in ethicality level?	One question perceptual change compared to overall objective change results in the 2020 and 2022 study Mann-Whitney test.	Rejected	Perceptual change is significantly lower than the 2020 and 2022 study results

Source: compiled by the authors

We conclude that work with ethicality seems to influence a change as per the EDM models feedback loop “Learning”. The ethical decision-making model is where single

individuals and organisations learn (continuously improving) from experience and feedback. (Schwartz, 2016; Somers, 2001). Babri and Kaptein align (Babri et al., 2021, p. 96; Kaptein, 2015) that organisations with an ethics program have significantly lower unethical behaviour than organisations without an ethics program. Also, the broader scope of the ethics programs leads to a lower level of unethical behaviour. With our study results, we can agree that code of conduct introduction raises the ethicality level of a company. Regardless is the focus on ethicality in formal or informal ways.

With further stretch, the CEVMS model, as the ethicality level measurement tool, could be a tool to investigate a company's leadership managerial/leadership work quality for generating a favourable climate in the organisation (Goebel & Weißenberger, 2017). Regular executive work feedback is measured by finance figures (sales growth, profitability), but that cannot be correlated directly to collaborating with people. Managers might occasionally feel a lack of visible results in their work efforts (Kangas et al., 2018).

4.1. Limitations and further research.

High “Do not know” or “Not Answered” rates could be investigated. Focus on dimensions 6-8 (see Table 13). Is it caused by knowledge level, inability to take a decision or just that the dimension questions are last in the queue?

In multi-level corporations, a definition of Board or (Senior) management (DeBode et al., 2013; Kaptein, 2007) must be clearly defined. For the survey participants, it can be unclear what local or corporate level is under focus in the survey, especially in a matrix organisation. It might cause data skewness or high answer spread (high standard deviation).

As the survey was longitudinal and the first data point was taken in 2020 (Kaaver & Pari, 2020), we have to lift multiple internal and external potential influence factors. Duflo et al. claim that: “Comparing the same individual over time will not, in most cases, give a reliable estimate of the program's impact since other factors that affect outcomes may have changed since the program was introduced” (Duflo et al., 2007, p. 3899). Also, Kotzian et al. highlight, “Taken to the extreme, conducting ethics training may sensitize employees to ethical issues, which affects their behaviour, even if the company has no code at all” (Kotzian et al., 2021, p. 110).

Internal influence potential factors (see subsection 2.1):

Leadership changes in the corporate structure. Since 2020 multiple Corporate and Division level leadership key role changes (voluntary and mutual agreement) have occurred, which may impact mainly Design and Development and Other office employees. It might impact the following dimensions: *Congruency of supervisors, Congruency of senior management, Transparency and Sanctionability*

Leadership changes in SRE AS. During 2022 HR Manager (Involuntary leave), Warehouse manager (Involuntary reassignment to a lower position) and Finance manager (Voluntary leave) have changed in local leadership. Local managers have more significant (Corporate) responsibility roles (IT/BS, Project Management, Lean Manager. The significant impact on the Production group, but a moderate effect on all personnel. It might impact the following dimensions: *Congruency of supervisors, Congruency of senior management, Transparency, Discussability and Sanctionability*

Demographic changes. During two years, several production lines were phased out with a direct impact on production operators (a decline from Jan. 2021, 121 operators to Jan 2022, 58 operators) with voluntary and involuntary leave from the company. The indirect effect on all structural units as production lines (9+1) exit without a clear pipeline for new incoming production lines (no loss of SRE AS sales revenue) gives a potential perspective of decline. It might impact the following dimensions: *Clarity, Feasibility, Transparency, Discussability and Sanctionability.*

Corporate Focus changes towards Ethical behaviour. During 2021 Corporate HR started to Focus on the Code of Conduct. Release an updated version in all languages (DeGaynor, 2020) and a partial introduction (Intervention group G1 "Corporate training", one-time event 2021 Nov-Dec.). In addition, the Corporate Compliance department (part of HR) communication (In multiple used languages) was sporadically more visible with a focus on "Be Compliant in your actions". It might impact the following dimensions: *Clarity, Congruency of senior management, Transparency, Discussability and Sanctionability.*

FIKA. (Brones & Kindvall, 2015). Since July 2022 Plant manager has introduced a Friday 14:15 coffee break for all employees. The focus is to provide open options for employees to discuss freely selected or guided positive trending topics and items. FIKA's purpose is to lower the communication gap caused by home office distancing and to add an informal information-sharing channel. It might impact the following dimensions: *Congruency of senior management, Transparency and Discussability.*

Potential External influence factors:

Covid 19 outbreak. The 2019 Covid-19 pandemic outbreak effect to the automotive industry and impacted the SRE AS site after the 2020 survey data was collected. Impact on site was Full delivery stop in March 2020, Layoffs (seven persons), reduced worktime (and correlating reduced salary) in different units (Design and Development continued 100% work, Production continued at 10% of average load). Maximum home office strategy was possible- distance from supervisors and colleagues. Cooperation through IT means (Teams and other virtual platforms). Strict Sanitation and Quarantine rules in corporations and on Estonian sites. Different government rules per country (global cooperation). It might influence ALL ethical dimensions.

Russia-Ukraine War. 24th February 2024, Russia attacked Ukraine territory with military force. In SRE AS, five persons from Ukraine were working at that time. In addition to them, due to Estonian Soviet background, multiple employees have relatives in Ukraine and, in some cases, both in Ukraine and Russia. Support initiatives in Estonia and in SRE AS to support Ukraine. Preparations for nationality conflicts (reference on Language group Russian speaking population in the plant). It might influence ALL ethical dimensions.

Conclusion

Two years longitudinal survey focused on ethical culture steered change by reinforcing the code of conduct with multiple interventions (active standard corporate e-learning, active in-person open discussion, passive posters on the wall and standard new employee introduction). The survey case base was a multi-level Stoneridge corporation Estonian site with local (Production) and global (Design and Development and general office) matrix influences.

We raised three study questions to measure overall ethicality level change between 2020 and 2022 and eight virtue dimensions separately. We focused mainly on intentional impact trials and how different intervention ways in the Code of Conduct introduction methods impact the company's ethicality level. Also, we compared employees' perceptible change with objective change results. The study result confirmed that companies' ethicality level has statistically improved, and different intervention methods have the potential, although not fully guaranteed, to address different ethicality dimensions. Employees rated perceptual ethicality change lower than objective change.

Also, we presented the study's limitations as the company's internal and external environment is constantly changing. During the study period, most internal environment changes were related to multi-level leadership and external changes with two global Force Majeure interference: The Covid-19 outbreak and the Russia-Ukraine war.

Steered, structured, and positively influenced ethical culture change plays a vital role in the company's well-being, boosting employee morale and driving towards high financial performance. Understanding ethical decision-making is essential for continuous improvement and organisational learning points.

Further researchers should investigate a high rate of "Do not know" or "Not Answered" responses to understand the reason for the lack of data. Is that caused by knowledge level, inability to take a decision or just that the lowest answered dimension questions are last in the queue? Also, a definition of Board or Senior management must be clearly defined in multi-level corporations. For the survey participants, it can be unclear what local or corporate level is under focus in the survey, especially in a matrix organisation. That might cause data skewness or high answer spread.

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APPENDICES

APPENDIX A Stoneridge history

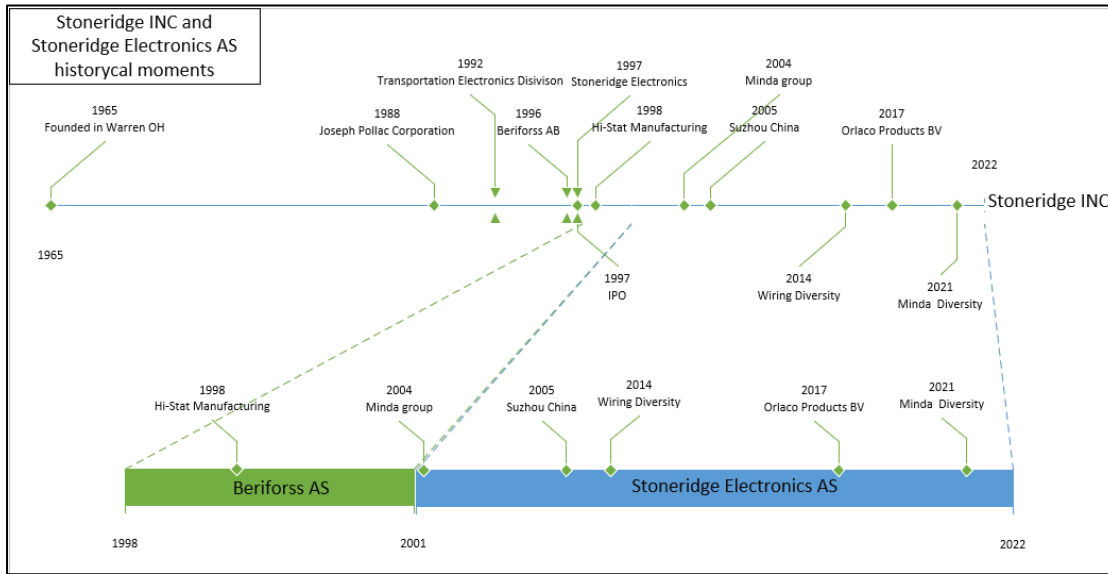


Figure 7 Stoneridge Inc and Stoneridge Electronics historical events.

Note: highlighted only major impact events to Stoneridge Electronics AS

Source: Compiled by the authors

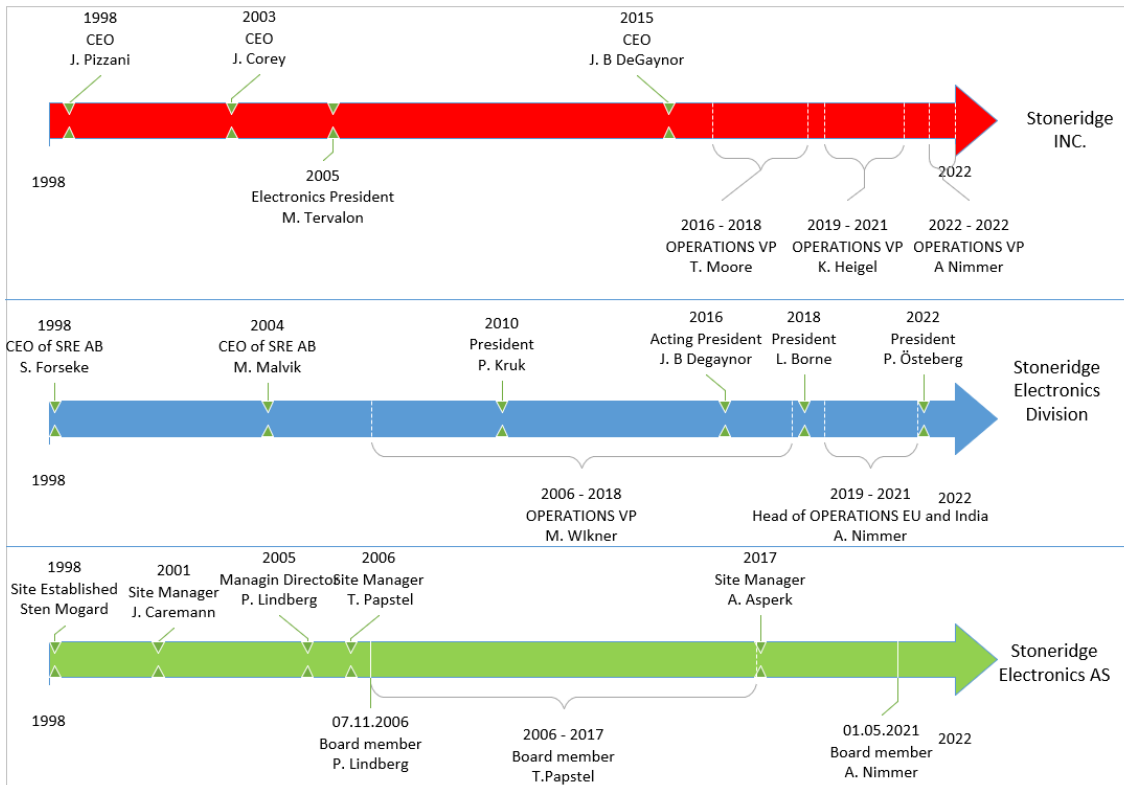


Figure 8 Stoneridge leadership changes

Note: Only the SRE AS existence period since 1998 is covered

Source: Compiled by the authors

APPENDIX B Abbreviations

Table 9 Abbreviations

Abbreviation	Meaning	Page
CEV	Corporate Ethical Virtues	8
CEVMS	CEV Model Scale	12
CEVMS-SF	Shortened CEVMS questionnaire, 32 questions	12
CSR	Corporate Social Responsibility	15
EDM	Ethical Decision Making	12
HR	Human Resources	22
I-EDM	Integrated-Ethical Decision Making model	13
IT/BS	Information Technology/Business systems	22
LAB	Test Laboratory at Stoneridge facility	28
NYSE	New York Stock Exchange	15
SOX	Sarbanes Oxley	11
SRE	Stoneridge Electronics division	21
SRE AS	Stoneridge Electronics AS	20
SRI	Stoneridge INC; Stoneridge group	20
VP	Vice President	22

APPENDIX C Intervention plans

1. Intervention Group G2 Passive Core Value posters on the wall

Table 10 Intervention group G2 employee count

Unit	Unit Name	Number of employees
203420	LAB	10
204410	Material Handling	7
204510	Logistics Distribution	6
204720	Incoming inspection	2

Note: Data extracted on 07.11.2022

Source: Compiled by the authors

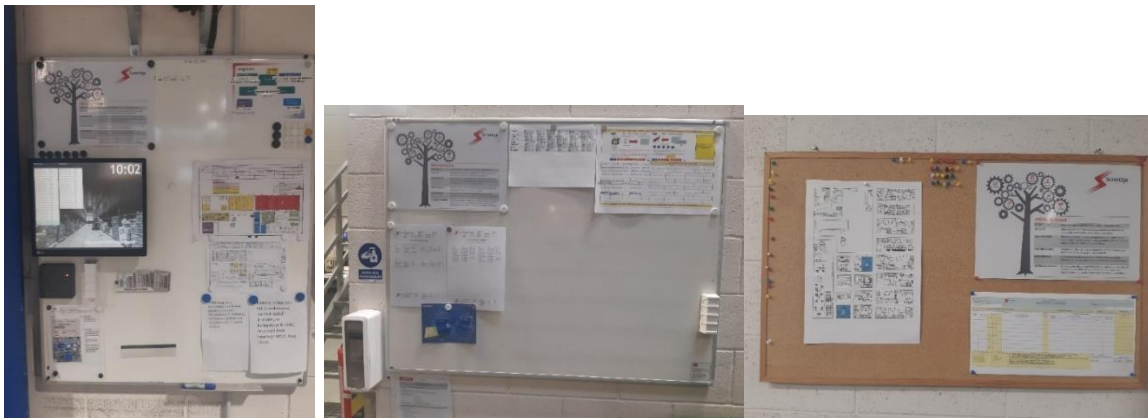


Figure 9 Core values presented on dashboards- warehouse

Source: K. Eilo, Stoneridge



Figure 10 Core values presented on double sided glass wall- laboratory

Source: A. Asperk, Stoneridge Site Manager

2. Intervention Group G3 active training

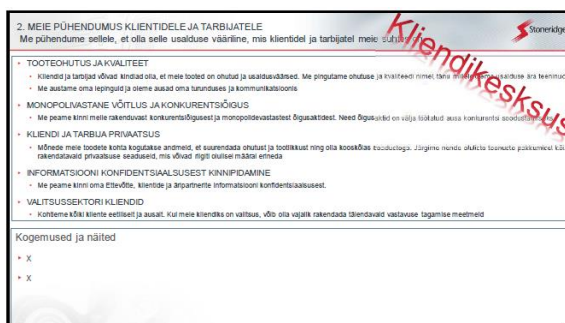
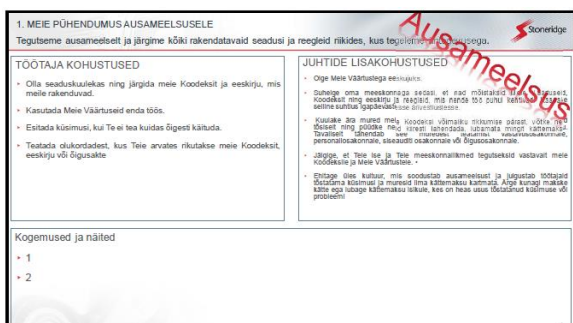
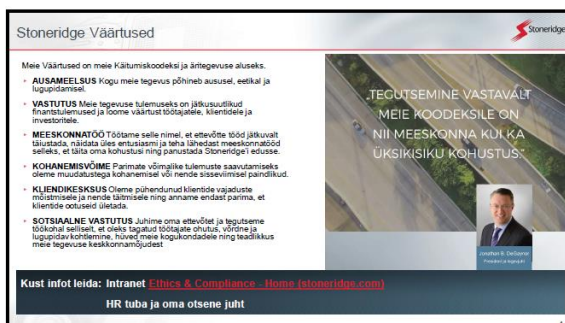
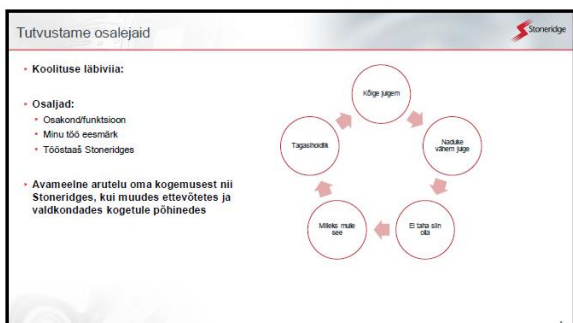
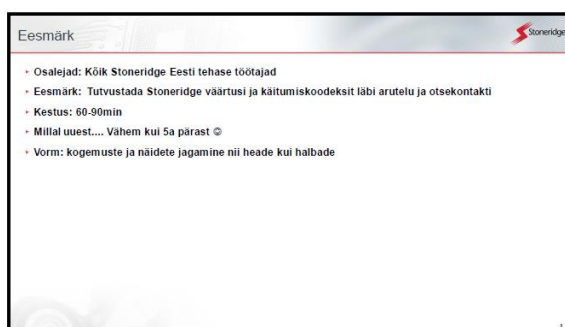
Table 11 Intervention group G3 training intervention participation

Session	Training session	Number of employees
1	05. Oct 13:00	5
2	06. Oct 13:30	6
3	07. Oct 11:00	5
absent	Absent from training	10

Note: Data extracted on 07.11.2022

Source: Compiled by the authors

Presented materials in Estonian and in English:



The figure displays four training slides from StoraEnso, each with a red watermark. The slides are:

- Slide 3: MEIE PÜHENDUMUS ÜKSTEISELE** (Our commitment to each other). It discusses the importance of mutual commitment between employees and the company. A red watermark 'Meeskonnatöö' is overlaid.
- Slide 4: MEIE PÜHENDUMUS INVESTORITELE** (Our commitment to investors). It covers the company's responsibility to investors and the importance of transparency. A red watermark 'Vastutus' is overlaid.
- Slide 5: MEIE PÜHENDUMUS OMA KOGUKONDALE** (Our commitment to our community). It focuses on the company's role in the community and social responsibility. A red watermark 'Sotsiaalne vastutus' is overlaid.
- Slide 6: ESITAJA KÜSIMISI JA AVALDAGE ARVAMUST** (Share your questions and opinions). It encourages employees to voice their concerns and ask questions. A red watermark 'Kohene misvõime' is overlaid.

Each slide includes a 'Kogemused ja näited' (Experiences and examples) section with checkboxes for responses.

Figure 11 Intervention group G3 presented training materials in Estonian.

Source: Compiled by the authors

APPENDIX D Questionnaire

Please choose **only one** of the following:

1 Gender:	Female	Male			
2 Age group:	till 30y	31 - 40y	41 -50y	51 - 60y	61y and older
Time worked in the company:	up to 6 months	6 months-2 years	3 -7 years	8 and more years	
4 Position:	worker	specialist	middle manager	manager	
5 Unit:	Production	Development department	Other office		

Following arguments are investigating change in the organization culture compared to 2020 conducted survey. Please mark how much to you agree or disagree with arguments.

6 What was the latest contact point with corporate code of conduct

Corporate training	Site manager training	Poster at my workplace	New employee introduction training	Do not recall
--------------------	-----------------------	------------------------	------------------------------------	---------------

7 Stoneridge Electronics TALLINN site ethical climate has changed towards better during last 2 years

Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

Clarity describes official expectations concerning the ethical behavior of employees; these expectations should be clear and legitimate.

	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
8 The organization makes it sufficiently clear to me how I should conduct myself appropriately toward others within the organization.							
9 The organization makes it sufficiently clear to me how I should deal with confidential information responsibly.							
10 The organization makes it sufficiently clear to me how I should deal with external persons and organizations responsibly.							
11 In my immediate working environment, it is sufficiently clear how we are expected to conduct ourselves in a responsible way.							

Congruency implies that supervisors should ensure that their own behavior is in line with the formal requirements of the organization.

	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
12 My supervisor sets a good example in terms of ethical behavior.							
13 My supervisor communicates the importance of ethics and integrity clearly and convincingly.							
14 My supervisor does as he/she says.							
15 My supervisor is honest and reliable.							

Congruency of management shows other employees that they should respect the shared expectations of the organization and their own behavior is in line with the formal requirements of the organization.

	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
16 The conduct of the Board and (senior) management reflects a shared set of norms and values.							
17 The Board and (senior) management set a good example in terms of ethical behavior.							
18 The Board and (senior) management communicate the importance of ethics and integrity clearly and convincingly.							
19 The Board and (senior) management would never authorize unethical or illegal conduct to meet business goals.							

ETHICAL CULTURE CHANGE THROUGH CODE OF CONDUCT REINFORCEMENT 58

Feasibility includes the resources, such as time, money, supplies, tools, and information, that an organization provides for its employees to make it possible for them to meet the official requirements.

	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
20 I am not asked to do things that conflict with my conscience in my immediate working environment.							
21 I do not have to sacrifice my personal norms and values in order to be successful in my organization.							
22 I have adequate resources at my disposal to carry out my tasks responsibly.							
23 I am not put under pressure to break the rules in my job.							

Supportability refers to how the organization helps its employees to carry out normative expectations.

	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
24 In my immediate working environment, everyone has the best interests of the organization at heart.							
25 In my immediate working environment, a mutual relationship of trust prevails between employees and management.							
26 In my immediate working environment, everyone takes the existing norms and standards seriously.							
27 In my immediate working environment, everyone treats one another with respect.							

Transparency is related to employee awareness of the consequences of everyone's actions.

	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
28 If a colleague does something which is not permitted, my manager will find out about it.							
29 If my manager does something which is not permitted, someone in the organization will find out about it.							
30 In my immediate working environment, adequate checks are carried out to detect violations and unethical conduct.							
31 Management is aware of the type of incidents and unethical conduct that occur in my immediate working environment.							

Discussability refers to employees' opportunities to talk about ethical topics in the workplace.

	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
32 In my immediate working environment, there is adequate opportunity to discuss unethical conduct.							
33 In my immediate working environment, reports of unethical conduct are taken seriously.							
34 In my immediate working environment, there is ample opportunity for discussing moral dilemmas.							
35 In my immediate working environment, there is adequate opportunity to correct unethical conduct.							

Sanctionability refers to the punishment meted out for unethical conduct and the rewards given for ethical conduct.

	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
36 In my immediate working environment, ethical conduct is valued highly.							
37 In my immediate working environment, ethical conduct is rewarded.							
38 In my immediate working environment, employees will be disciplined if they behave unethically.							
39 If I reported unethical conduct to management, I believe those involved would be disciplined fairly regardless of their position.							

Figure 12 All intervention groups questionnaire in English

Source: Compiled by the authors

APPENDIX E Supporting tables

Table 12 Cronbach α values within eight dimensions/virtues

Dimension	Subgroups	Cronbach's α, n=152	Comment, Cases used	Ref 2020 survey, Cronbach's α, n=137	Ref Finnish 2018 survey, Cronbach's α, n=493
1_Clarify	4	0,891	135 cases used, 17 cases contain missing values	0,76	0,92
2_Congruency of supervisors	4	0,896	114 cases used, 38 cases contain missing values	0,93	0,94
3_Congruency of senior management	4	0,883	95 cases used, 57 cases contain missing values	0,85	0,91
4_Feasibility	4	0,893	134 cases used, 18 cases contain missing values	0,83	0,78
5_Supportability	4	0,888	114 cases used, 38 cases contain missing values	0,82	0,86
6_Transparency	4	0,901	58 cases used, 94 cases contain missing values	0,80	0,84
7_Discussability	4	0,903	85 cases used, 67 cases contain missing values	0,87	0,92
8_Sanctionability	4	0,888	47 cases used, 105 cases contain missing values	0,90	0,79

Source: Study results, reference studies: (Huhtala et al., 2018, p. 243) and (Kaaver & Pari, 2020, p. 38) Compiled by the authors.

Table 13 Not answered demographic overview

	Total Answers n=152	Missing answers count								No answer % from total (8*152) answers
		1_Clarify	2_Congruency of supervisors	3_Congruency of senior management	4_Feasibility	5_Supportability	6_Transparency	7_Discussability	8_Sanctionability	
Gender										
1. Female	77	1	3	9	3	7	27	20	29	16,1%
2. Male	75	5	5	16	6	11	30	23	34	21,7%
Age										
1. till 30y	25	3	0	4	4	5	6	9	8	19,5%
2. 31 - 40y	42	1	2	7	1	4	12	6	19	15,5%
3. 41 -50y	44	1	5	5	3	4	18	13	17	18,8%
4. 51 - 60y	26	0	1	7	0	3	14	7	12	21,2%
5. 61 and above	15	1	0	2	1	2	7	8	7	23,3%
Time worked in the company:										
1. up to 6 months	12	1	1	2	0	2	1	3	3	13,5%
2. 6 months to 2 years	36	2	1	7	3	3	16	8	13	18,4%
3. 3 -7 years	36	2	3	7	4	5	14	14	13	21,5%
4. 8 and more years	68	1	3	9	2	8	26	18	34	18,6%
Position:										
1. Worker	51	3	3	9	5	8	23	19	21	22,3%
2. Specialist	77	3	3	14	4	8	30	19	31	18,2%
3. Middle manager	17	0	1	1	0	1	2	4	8	12,5%
4. Manager	7	0	1	1	0	1	2	1	3	16,1%
Unit:										
1. Production	74	4	3	14	4	10	29	24	32	20,3%
2. Development department	33	2	2	6	2	4	11	8	13	18,2%
3. Other office	45	0	3	5	3	4	17	11	18	16,9%
Start language										
1. EST	94	3	4	18	4	12	34	24	40	18,5%
2. RUS	46	2	3	6	4	5	21	16	19	20,7%
3. ENG	12	1	1	1	1	1	2	3	4	14,6%
Group										
1. G1- Corporate training	80	2	4	12	3	8	26	19	35	17,0%
2. G2- Passive intervention-Poster	7	1	1	0	2	2	4	4	6	35,7%
3. G3- Active training	17	0	0	2	0	1	7	3	4	12,5%
4. G4- Reference group	37	2	2	9	4	5	19	14	15	23,6%
5. G5- New employees <6 months	11	1	1	2	0	2	1	3	3	14,8%
What was the latest contact point with corporate code of conduct										
1. Corporate training	67	4	4	8	6	6	21	19	30	18,3%
2. Site manager training	9	0	0	3	0	0	5	1	3	16,7%
3. Poster at my workplace	17	0	0	1	1	0	6	1	2	8,1%
4. New employee introduction training	22	1	1	5	0	5	7	6	10	19,9%
5. Do not recall	37	1	3	8	2	7	18	16	18	24,7%
How do you see Stoneridge Electronics TALLINN site ethical climate change during last 2 year's										
	152	3	4	13	4	8	22	17	23	7,7%
Total N	1368	51	68	213	76	152	478	361	527	17,6%
Total %		3,7%	5,0%	15,6%	5,6%	11,1%	34,9%	26,4%	38,5%	

Source: compiled by the authors

Table 14 Dispersion analysis on ethicality 2022 survey.

	<i>1_Clarify</i>	<i>2_Congruency of supervisors</i>	<i>3_Congruency of senior management</i>	<i>4_Feasibility</i>	<i>5_Supportability</i>	<i>6_Transparency</i>	<i>7_Discussability</i>	<i>8_Sanctionability</i>
Gender								
	<i>Dispersion Mean rank and significance</i>							
1. Female	79,8	73,6	66,7	74,6	70,4	55,5	54,3	45,1
2. Male	66,7	71,3	60,9	69,2	64,4	39,6	55,8	44,9
P-Value Not adjusted for ties	0,061	0,743	0,383	0,437	0,372	0,005	0,797	0,977
Age								
1. till 30y	73,5	72,9	65,5	78,2	70,7	40,2	43,8	42,5
2. 31 - 40y	62,4	70,7	63,7	75,9	66,2	51,6	61,2	51,2
3. 41 -50y	81,3	72,5	60,9	61,4	64,3	46,2	54,7	44,8
4. 51 - 60y	77,5	82,4	70,3	81,0	75,0	61,1	58,5	47,9
5. 61 and above	74,5	60,0	62,2	65,8	63,1	39,2	40,5	28,1
P-Value Not adjusted for ties	0,339	0,587	0,926	0,282	0,832	0,222	0,281	0,280
Time worked in the company								
1. up to 6 months	72,5	73,8	69,2	71,0	71,6	47,7	67,7	57,6
2. 6 months to 2 years	89,8	86,2	77,6	81,0	80,4	53,3	54,3	46,2
3. 3 -7 years	63,4	69,6	57,5	68,1	58,0	46,2	47,5	41,5
4. 8 and more years	70,5	66,4	59,6	69,5	64,6	46,5	56,4	43,2
P-Value Not adjusted for ties	0,061	0,149	0,116	0,555	0,114	0,816	0,425	0,428
Position								
1. Worker	73,2	71,4	64,7	74,3	68,1	54,8	51,2	40,1
2. Specialist	71,5	71,3	64,9	71,9	67,5	46,2	52,1	45,3
3. Middle manager	73,0	74,9	53,3	64,6	65,9	42,7	69,3	55,4
4. Manager	97,9	89,5	78,0	75,4	67,2	42,8	72,3	54,9
P-Value Not adjusted for ties	0,477	0,767	0,520	0,864	0,998	0,450	0,143	0,374
Unit								
1. Production	71,2	68,9	59,7	72,6	68,0	47,5	55,6	40,5
2. Development department	70,8	80,6	71,0	67,9	71,2	45,0	55,9	54,5
3. Other office	79,0	72,6	65,7	74,0	64,2	51,2	53,4	44,9
P-Value Not adjusted for ties	0,579	0,426	0,390	0,816	0,749	0,660	0,941	0,135
Start language								
1. EST	70,9	69,4	60,4	67,8	65,7	45,3	55,5	43,1
2. RUS	75,6	75,2	66,0	78,5	70,5	56,0	49,1	42,7
3. ENG	86,5	87,4	81,6	81,7	69,7	44,1	70,8	65,2
P-Value Not adjusted for ties	0,474	0,351	0,185	0,274	0,793	0,236	0,191	0,068

Note: Kruskal-Wallis H-test

Source: compiled by the authors

APPENDIX F Supporting figures

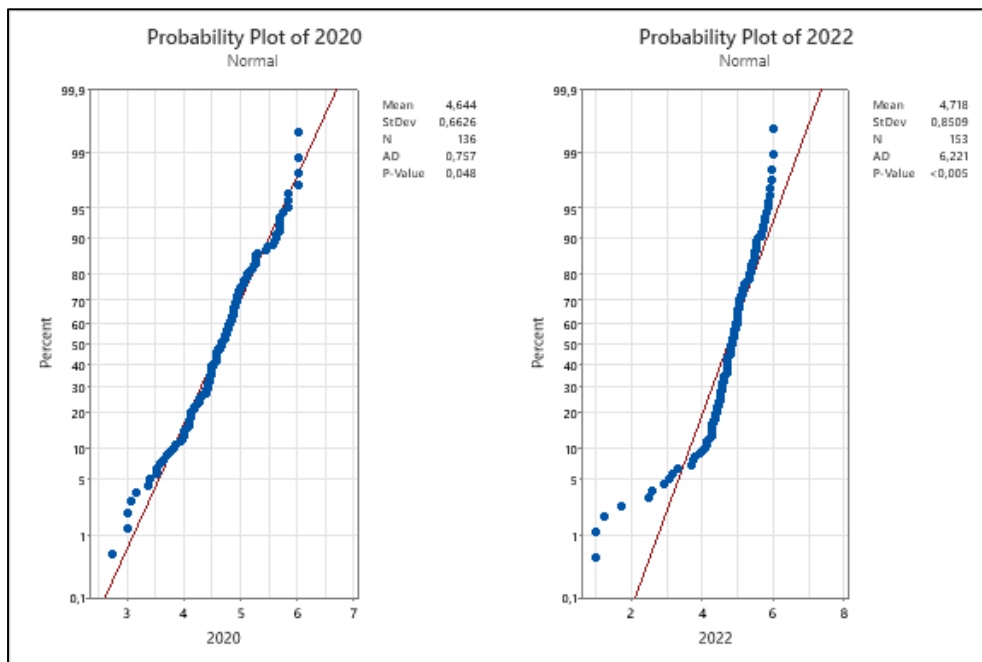


Figure 13 Anderson- Darling normality test for 2020 and 2022 results.

Source: compiled by the authors

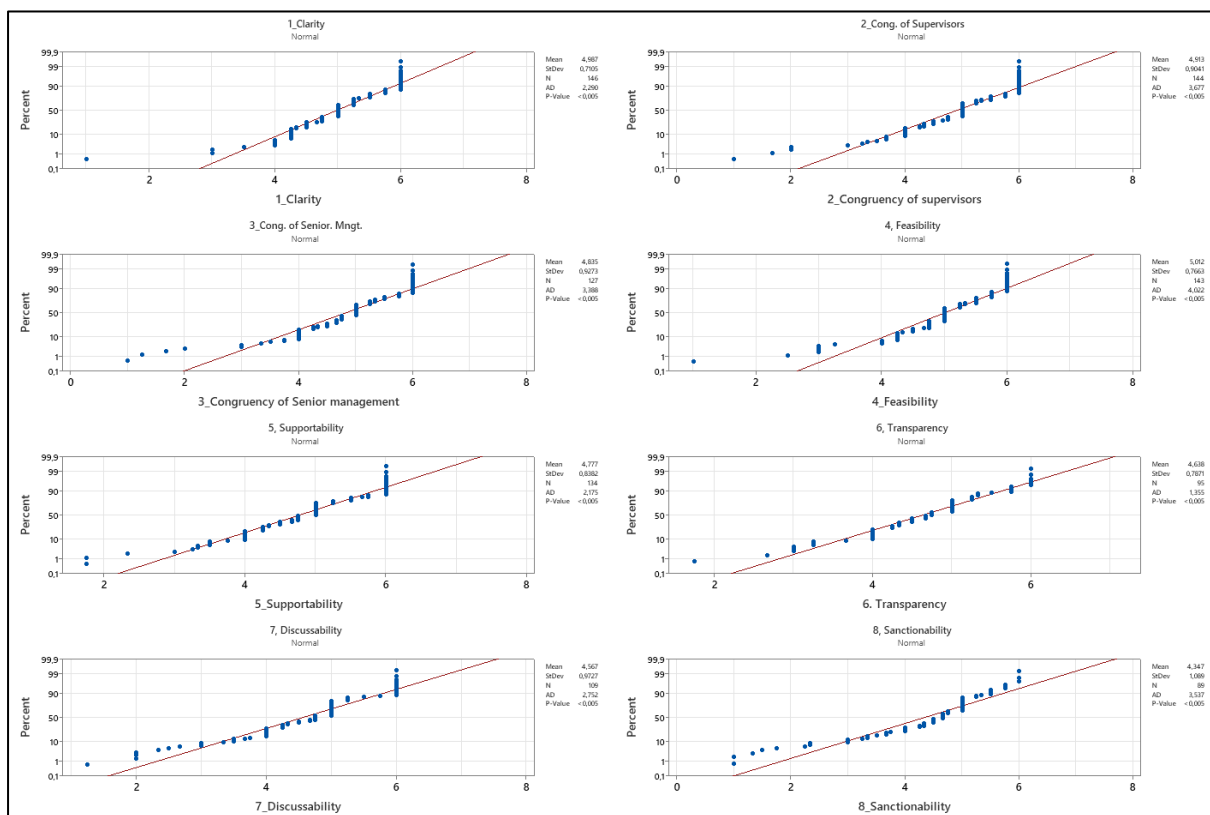


Figure 14 Anderson- Darling normality test for 2022 all eight dimensions.

Source: compiled by the authors

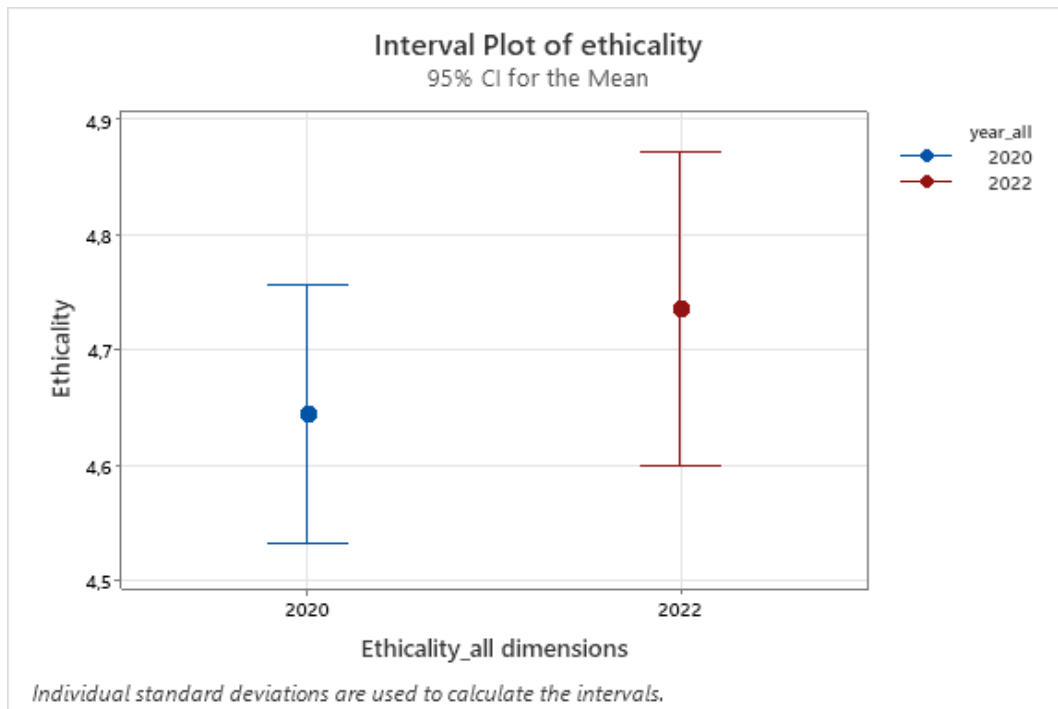


Figure 15 Interval plot of ethicality level between 2020 and 2022 study

Source: compiled by the authors

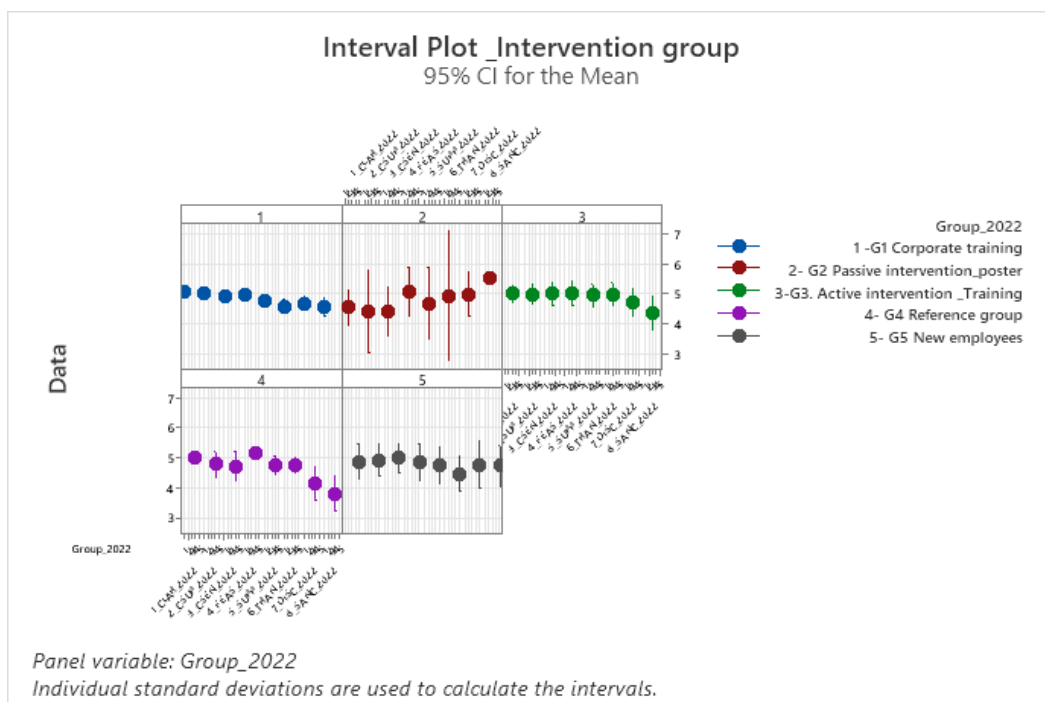


Figure 16 Interval plot forced intervention, split by GROUP 2022 survey data

Source: compiled by the authors

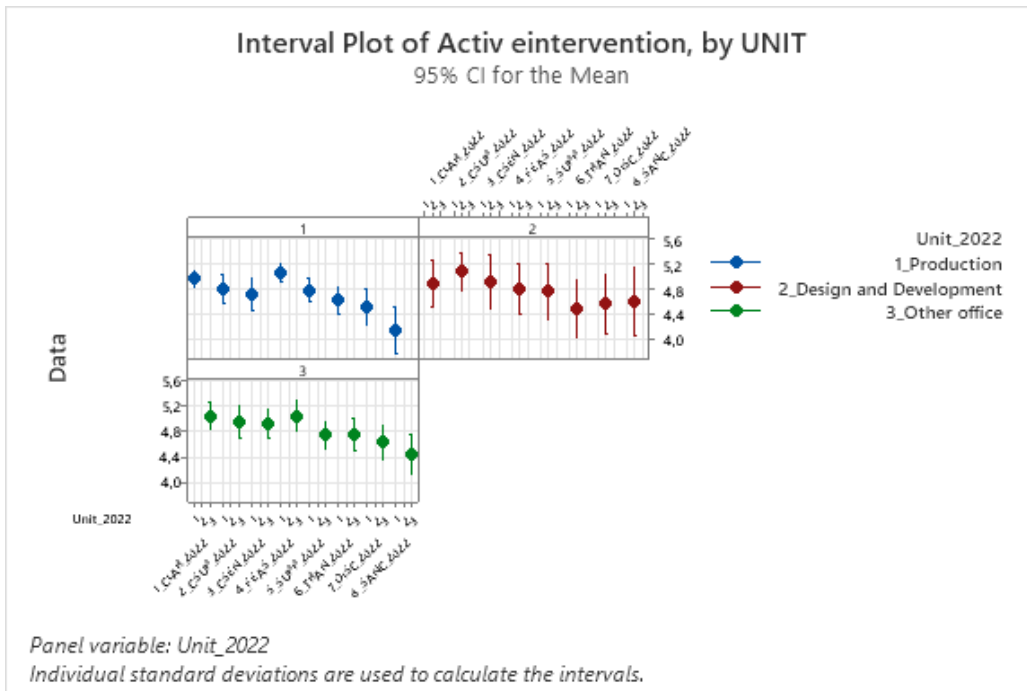


Figure 17 Interval plot forced intervention, split by UNIT 2022 survey data

Source: compiled by the authors

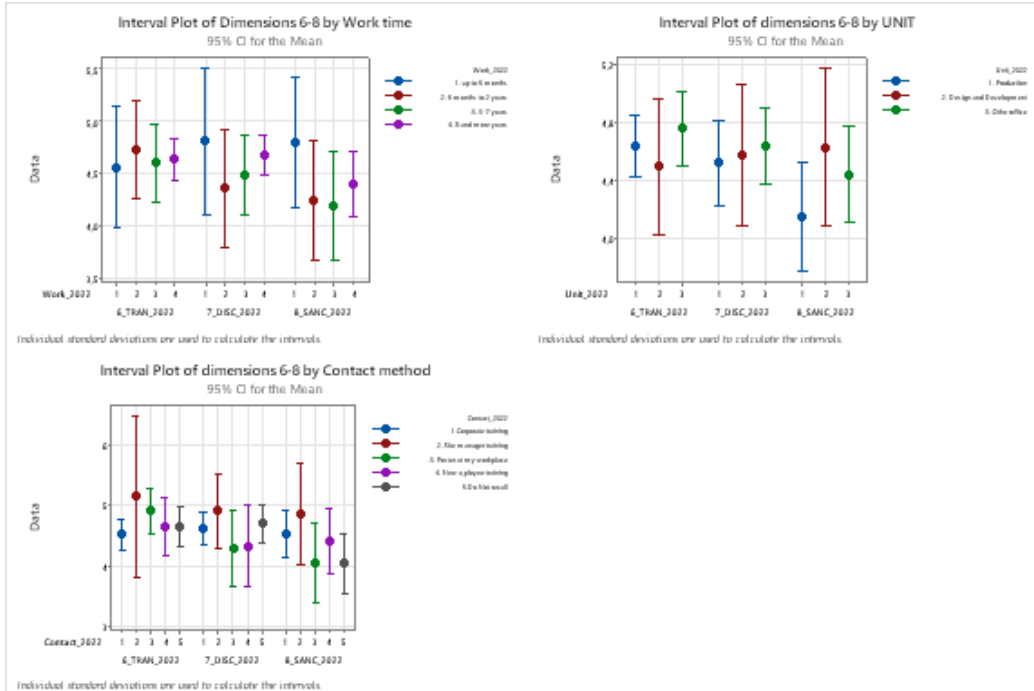


Figure 18 Interval plot, dimensions 6-8, worked time, unit and contact method

Source: compiled by the authors

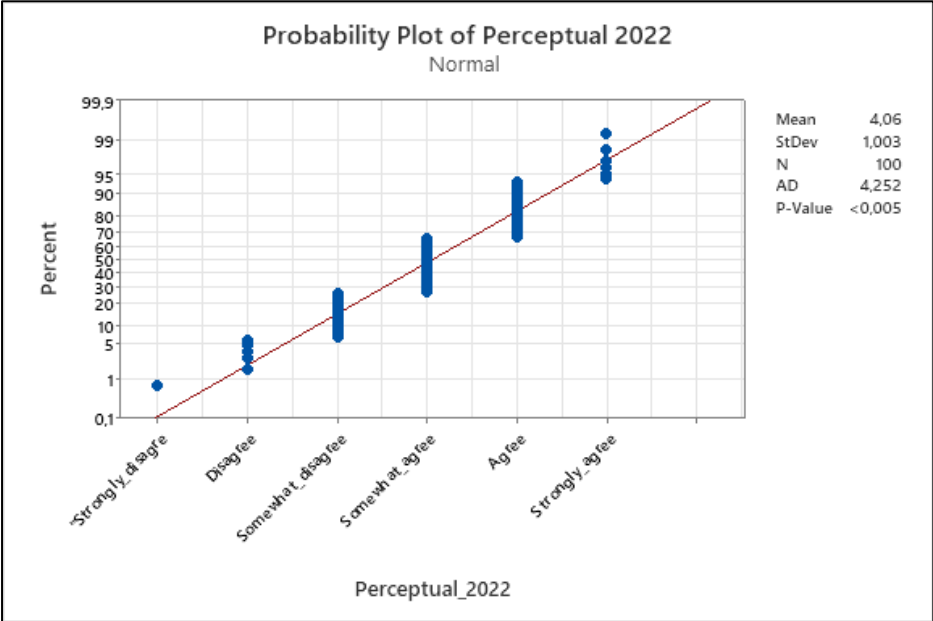


Figure 19 Anderson-Darling normality test for question 7- 2022 perceptual change.

Source: compiled by the authors

Resümee

Suunatud, struktureeritud ja positiivselt mõjutatud eetilise kultuuri muutused mängivad ettevõtte heaolus üliolulist rolli, suurendades töötajate moraali ja ambitsiooni paremate finantstulemuste suunas. Eetiliste otsuste tegemise mõistmine on oluline lisandväärtust kõrgete majandustulemuste saavutamiseks ning täiustab järjepidevalt organisatsiooni.

Töö eesmärk on anda ülevaade erinevate vahenditega käitumisjuhendi kasutamisele võtmisest ettevõttes, et tõsta eetilist organisatsioonikultuuri. Soovisime uurida muutusi eetilises kultuuris, juurutades, täiendades ja kasutusele võttes ettevõtte käitumiskoodeksi. Seame hüpoteesi, et ettevõtte käitumiskoodeksi olemasolu ettevõttes ja selle tutvustamine töötajatele mõjutab ettevõtteülest eetilist kultuuri. Käesolev uuring on kahe aasta pikkuse uuringu teine etapp .

Esmalt võtsime kasutusele erinevad tegevused (aktiivne standardne ettevõtte e-õpe, aktiivne isiklik avatud arutelu, passiivsed plakatid seinal ja standardne uute töötajate tutvustus) ettevõtte käitumiskoodeksi täiustamiseks ja uuesti avaldamiseks. Teiseks mõõtsime kaheksadimensioonilist eetilise taset aastatel 2020 ja 2022, et võrrelda üldist eetilise muutust ja sekkumise mõju igas mõõtmes. Kolmandaks võrdlesime töötajate tajutavat muutust objektiivsete muutuste tulemustega. Oma töös anname teoreetilise ülevaate eetilistest otsustusmudelitest, eetilise juhtimise kaheksast dimensioonist Kapteini CEV-mudeli (Kaptein, 2007) lühendatud 32-punktilise CEV-skaalaga (DeBode et al., 2013), mis on välja töötatud halduskoormuse vähendamiseks. Õppekatsetes lähtusime organisatsioonile sobivate eetilise kultuuri tutvustamise (passiivne ja aktiivne) meetodite valikust.

Meie esimeseks uuringüküsimuseks on: Kas ettevõtte eetilise kultuuri mõõtmed on käitumisjuhendi taas kehtestamise ja tugevdamise kaudu muutunud? Analüüsiga tuvastati, et eetilise tase on võrreldes 2020. aastaga muutunud (tõusnud). Üldine mediaanmuutus on 4667 (2020) kuni 4830 (2022). See näitab, et tahtliku töö korral saab ettevõtte juhtkond eetikaprogrammide kaudu (positiivselt) mõjutada eetilise taset. Saadud tulemus on korrelatsioonis ka teiste analoogsete tulemustega ning kinnitab tõesust.

Teise uuringüküsimuse kinnituseks - „Kas erinevad käitumisjuhendi tutvustamismeetodid mõjutavad eetilist organisatsioonikultuuri (dimensioone) erinevalt?“ - võtsime kasutusele erinevad sekkumise meetodid. Selleks jagasime töötajad eraldi rühmadesse. Kindlad õpperühmad (osalejad on teada ja registreeritud), kes läbisid

“Ettevõttekoolituse” ja “Aktiivkoolituse”. Mittekontrollitav rühm (osalejad on teada, kuid ei ole võimalik tuvastada) ehk passiivne rühm. Võrdlusrühm ilma sekkumiseta. Samuti eraldasime rühma “Uued töötajad” kontrollimatuks koolituse sisu ja kvaliteeditaseme kontrollimatu juurutamise osas.

Meie kolmandas uuringuküsimuses: "Kas tajumuutused on kooskõlas objektiivse eetilise muutusega?" jõudsime järeldusele ja ei saa nõustuda sellega, et mõõdetud ja tajutavad tulemused langevad kokku. Siin saame lähtuda Babieri jt. kumulatiivsest uuringust, kus on läbi viidud mitmeid küsitlusi, mille puhul leiti kallutatust tajutava eetilise taseme ja täheldatud eetilise taseme vahel.

Uuringu tulemus kinnitas, et ettevõtte eetilise tase on statistiliselt tõusnud ning erinevatel sekkumismeetoditel on potentsiaali käsitleda erinevaid eetilise dimensioone. Töötajad hindasid tajutavat eetilist madalamalt kui objektiivset muutust. Samuti tutvustasime uuringu piiranguid, kuna ettevõtte sise- ja väliskeskond on pidevas muutumises (ning uuringuperioodi jooksul toimus kaks olulist globaalset sekkumist: Covid-19 epideemia ja Venemaa-Ukraina sõda). Suunatud, struktureeritud ja positiivselt mõjutatud eetilise kultuuri muutused mängivad ettevõtte heaolus üliolulist rolli, tõstes töötajate moraali ja parandades finantstulemusi. Eetiliste otsuste tegemise mõistmine on pideva täiustamise ja organisatsiooni arengu jaoks hädavajalik.

Märksõnad: ettevõtte käitumiskoodeks; pikaajaline uuring; eetiliste otsuste tegemine
CERCS koodid: S180 (Majandus, ökonomeetrika, majandusteooria, majanduslikud süsteemid, majanduspoliitika); S189 (Organisatsiooniteadus); S190 (Ettevõtete juhtimine)

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