STREAMLINING SUPPLIER AUDITS: THE VALUE OF MULTIPURPOSE AUDIT CHECKLISTS

Lappeenranta-Lahti University of Technology LUT

Bachelor's thesis

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Kaisa Mankki

Examiner: Junior researcher Natalia Lyly

ABSTRACT

Lappeenranta-Lahti University of Technology LUT
LUT School of Business and Management
Business Administration

Kaisa Mankki

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The aim of this thesis is to investigate the possible advantages of employing a multipurpose supplier audit checklist that could be utilised regardless of the nature of the audit itself. This study examines three different audit types: new supplier, control, and strategic audits. Furthermore, different evaluation aspects that should be assessed in the context of these three audit types are identified. In addition, a multipurpose audit checklist was developed for a Finnish middle-market company operating in the construction industry. This study was conducted using qualitative research methods. The data used in this study was gathered through observation, semi-structured interviews, and a group interview. The data was analysed through thematic analysis.

The findings of this study suggest that employing multipurpose audit checklists could facilitate the comparison of results across different types of audits and simplify the auditing process for less experienced auditors. In addition, the findings indicate that six evaluation areas should be assessed in a multipurpose audit checklist: Quality, Reliability, Equipment, Responsibility, Personnel and Communication. However, a seventh evaluation area, Finances and Costs, should be included when auditing new suppliers. Furthermore, the results indicate that the perceived importance of each identified evaluation category varies across the three audit types. As the possibilities offered by a multipurpose audit checklist have not been thoroughly studied in the past, this study offers valuable insight into this research field.

TIIVISTELMÄ

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Kauppatieteet

Kaisa Mankki

Toimittajia koskevien auditointien virtaviivaistaminen: monikäyttöisten auditointilomakkeiden tuomat hyödyt

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Tämän kandidaatintutkielman tarkoituksena on tutkia monikäyttöisen toimittaja-auditointilomakkeen tarjoamia mahdollisia hyötyjä. Monikäyttöisellä auditointilomakkeella tarkoitetaan toimittaja-auditointilomaketta, jota voi käyttää auditoinnin tukena auditoinnin luonteesta riippumatta. Tutkimuskysymyksiä tarkastellaan kolmen auditointityypin näkökulmasta: uuden toimittajan auditoinnin, seuranta-auditoinnin ja strategisen auditoinnin. Tutkielmassa pyritään myös tunnistamaan erilaisia arviointinäkökohtia, jotka tulisi huomioida toimittaja-arvioinneissa kunkin kolmen auditointityypin yhteydessä. Tutkielman yhteydessä eräälle suomalaiselle rakennusalalla toimivalle suuryritykselle kehitettiin monikäyttöinen toimittaja-auditointilomake. Tutkimus toteutettiin kvalitatiivisia tutkimusmenetelmiä hyödyntäen. Tutkimuksessa käytetty aineisto kerättiin havainnoimalla kohdeyrityksen toteuttamaa seuranta-auditointia ja haastattelemalla yrityksen sisäisiin sidosryhmiin kuuluvia henkilöitä. Kerättyä aineistoa analysoitiin teema-analyysin avulla.

Tutkimuksen tulokset osoittavat, että monikäyttöiset auditointilomakkeet saattaisivat sekä helpottaa erilaisten auditointien tulosten vertailua, että auttaa kokemattomia auditoijia. Tulokset osoittavat myös, että monikäyttöisessä auditointilomakkeessa tulisi arvioida toimittajan suoriutumista seuraavilla osa-alueilla: laatu, luotettavuus, laitteisto, vastuullisuus, henkilöstö ja viestintä. Uusien toimittajien auditoinnissa tulisi kuitenkin arvioida myös seitsemäs osa-alue: talous ja kustannukset. Tulokset osoittavat myös, että näiden osa-alueiden painoarvot vaihtelevat eri auditointityypeissä. Monikäyttöisen auditointilomakkeen tarjoamia mahdollisuuksia ei ole aikaisemmin arvioitu, joten tämä tutkimus tarjoaa arvokasta lisätietoa kyseiseltä tutkimusalalta.

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1. INTRODUCTION

The strategic significance of supply chain management for any company operating in the primary, secondary, or tertiary sectors is widely acknowledged (Chen & Jeter, 2008, p. 1; Morana, 2013, p. 11). Supply chain management, if done correctly, can aid firms to reduce inventory, shorten product development cycles, and improve delivery services, often giving said companies a competitive advantage (Ireland & Webb, 2007, p. 483; Fawcett et al., 2008, p. 35). One crucial component of effective supply chain management is supplier auditing. In essence, supplier auditing refers to the process of companies ensuring that their suppliers meet certain set standards, such as product quality or workplace safety (Castka et al., 2022, p. 1297). Auditing can, for example, assist businesses in the identification of system faults and development opportunities (Castello Dalmau et al., 2016, p. 1090; Castka et al., 2022, p. 1297).

To facilitate this process, companies commonly employ audit checklists. Utilising audit checklists as auditing instruments has numerous advantages. For instance, audit checklists ensure adherence to certain audit scopes and approaches. In addition, they offer concrete evidence that the audit was carried out and can be used to document that the quality management system (QMS) was inspected. Furthermore, audit checklists provide structure and consistency to audits, and can offer relevant information for future audits. (Tricker 2005, as cited in GlobalSpec n.d.)

The audit checklists used for auditing vary depending on the nature of the audit. For instance, the contents of an audit checklist can differ depending on the supplier being audited (Blank, 2017, p. 36). However, not much is known about the process or implications of merging supplier audit checklists with different aims into one.

Several advantages could arise from combining audit checklists with separate objectives into a single document. Due to the consistent layout of a multifunctional checklist, comparing audit results across various suppliers, regardless of the nature of the audit, could potentially become quicker and less challenging. Moreover, the nature of supplier audits tends to evolve as the supplier relationship between a company and a new supplier becomes more established. Therefore, if the same, multipurpose, checklist is utilised for both the initial and following audits, comparing the results, and identifying potential adjustments could be facilitated.

The primary purpose of this thesis is to explore the possibility and understand the value of adopting a multipurpose audit checklist. To achieve this aim, this thesis attempts to identify the aspects that should be evaluated in a multipurpose audit checklist by analysing three distinct audit types. Based on the findings of this study, a multipurpose audit checklist will be developed for a Finnish middle market company operating in the construction industry. As multifunctional audit checklists and their possible benefits have not necessarily been investigated in past research, the findings of this study have the potential to contribute to the advancement of this field of research.

1.1. Research Goals and Questions

This study focuses on three audit types: (1) new supplier audits, (2) control audits, and (3) strategic audits. The main purpose of this thesis is to identify the different categories that should be evaluated during the three different audit types and assess whether they could be merged into a multipurpose audit checklist to enhance the efficiency of audit procedures. Therefore, four research questions will be addressed.

The main research question of this thesis is:

1. *How could a company benefit from adopting a combined audit checklist as opposed to maintaining separate checklists for each of their audit types?*

The following sub-questions supplement the main research question:

2. *Which evaluation areas should be assessed in a multipurpose audit checklist?*
3. *How do the evaluation areas differ between the three audit types?*
4. *Which performance indicators or metrics should be employed to measure the supplier's performance in a multifunctional audit checklist?*

The main research question focuses on the possible advantages of employing a multipurpose audit checklist as opposed to using several checklists. The first sub-question provides further insight into the creation of a multipurpose audit checklist, while the second question focuses on the identification of key similarities and differences among the three separate audit categories and will guide the development of the checklist. Lastly, the third sub-question focuses on identifying which scoring system is the most appropriate to employ in a multipurpose

audit checklist. However, as previously stated, this study is conducted for a specific company from the standpoint of the construction industry, and therefore it is important to acknowledge that the results might not be applicable to other industries.

1.2. Theoretical Framework

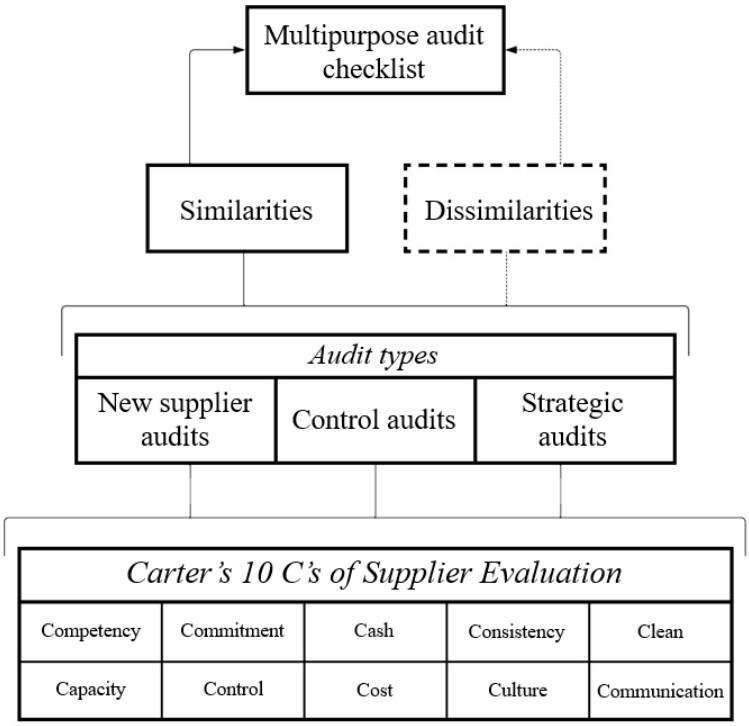

Figure 1. Framework of the study.

Carter's 10 Cs of Supplier Evaluation will serve as the initial base of this study. Carter's model has gained international recognition and is frequently employed as a framework for the purpose of selecting suppliers. The model consists of ten factors, which, according to Carter, should be considered when selecting a supplier: Competency, Capacity, Commitment, Control, Cash, Cost, Consistency, Culture, Clean and Communication. (Okpighe & Ogbolu, 2020, pp. 414-415) The aforementioned factors will be discussed further in the second chapter.

One of the purposes of this thesis is to identify and connect the primary areas of focus of three distinctive audit categories: new supplier audits, control audits and strategic audits. The audit types that are examined can all be classified as external second-party audits. Past

literature has identified and classified several types of supplier audits. These predefined categories include, for instance, performance audits, process audits, and product audits. (Arter, 2003, pp. 11-12) Although earlier research has acknowledged and described multiple supplier audit types, the audit categories of this study have not been clearly defined or outlined. Despite not falling into any of the predefined categories alone, the audit types that this study the focuses on share characteristics with multiple existing audit categories.

1.3. Methodology

The theoretical section of this study draws upon prior research and existing literature. The purpose of the theoretical section is to provide further knowledge on the area of research, and to serve as a base for the empirical section.

The empirical section of this study relies on qualitative research methodologies. According to Fossey et al. (2002, p. 717), qualitative research "aims to address questions concerned with developing and understanding of the meaning and experience dimensions of humans' lives and social words." In other words, employing qualitative research methods is especially useful, when one is investigating beliefs, attitudes, or concepts (Hammarberg et al., 2016, p. 499).

Three qualitative research methods will be utilised in this study: observation, semi-structured interviews, and a group interview. At first, an audit meeting between the case company and one of its suppliers will be observed to gain further knowledge of the procedures involved in auditing. Although observation tends to be underused as a qualitative data collection method, it can provide valuable insights, such as fundamental aspects of structures and processes, which might not be attainable through other data gathering techniques, such as interviewing (Mulhall, 2003, p. 306; Furlong, 2010, cited in Morgan et al., 2017, [no pagination]).

Following the observation, two interviews will be held with some of the focal company's internal stakeholders. At first, a semi-structured interview will be conducted. Semi-structured interviews are a commonly utilised approach for data collection due to their inherent flexibility (Kallio et al., 2016, p. 2955). Although semi-structured interviews usually consist of predetermined open-end questions, they allow additional questions to surface throughout the dialogue. The structure of the interview can also be altered to better align

with the study's objectives. (DiCicco-Bloom & Crabtree, 2006, p. 315; Kelly, 2010, cited in Kallio et al., 2016, p. 2955)

The aim of the first interview is to identify the different aspects that should be evaluated in a multipurpose audit checklist. The first interview could also be considered to be explorative in nature, as the desired features of the new audit checklist and the strengths and weaknesses of the focal company's previous checklists will be identified. The first version of an audit checklist will be developed based on the results of the first interview.

The data gathered during observation and the semi-structured interviews will be analysed separately through thematic analysis. Thematic analysis is a flexible research technique, which involves the identification, analysation, and interpretation of patterns of meaning, commonly referred to as "themes," within data (Clarke & Braun, 2017, p. 297). The observational data will be analysed through inductive thematic analysis, while the data gathered during the semi-structured interviews will be analysed through hybrid thematic analysis.

After the development of the first version of the multipurpose audit checklist, the new checklist will be compared to the focal company's current checklists, and possible similarities and differences between the documents will be identified. Following this, a group interview will be conducted to validate the findings of the observation and the semi-structured interviews. The data gathered during the group interview will also be used for the development of the final version of the multipurpose checklist. The research methodology employed in this study will be elaborated upon in chapter 3.

1.4. Definitions of Key Terms

As auditing in supply chain management is a relatively broad topic, it is necessary to introduce a few important key terms. Defining certain keywords is essential, as it enables the reader to gain basic knowledge of the topic at hand and aids in the establishment of a shared vocabulary. Furthermore, clarifying keywords can be helpful as it places the research within the context of the current body of literature.

Supply chain management is an organised process, in which standard corporate procedures are coordinated strategically both within an organisation and throughout businesses relevant to the company's supply chain. In other words, supply chain management refers to the systematic coordination and integration of various organisations that participate

in the production and distribution of goods, from the acquisition of raw materials to the delivery of finished products to the end-user (Pienaar, 2009, cited in Janvier-James, 2011, p. 195). The primary purposes of supply chain management are to improve the performance of an individual company in the long-term and to enhance the business's supply chain itself. (Mentzer et al, 2001, p. 18)

Supplier auditing is an evaluation technique commonly employed by organisations to assess the performance of their supplier controls (Arter, 2003, p. 11). Supplier audits are an important aspect of supply chain management as they help organisations control and supervise their supply chain (Castka et al., 2022, p. 1297).

Audit checklists are commonly used as a tool in audits and inspections. They usually contain a list of questions which auditees are expected to answer, and therefore allow auditors to methodically verify conformity with specific standards. (Boritz & Timoshenko, 2014, p. C1)

Second-party audits refer to audits which are carried out by a client or any other party that has a vested interest in the outcome of the audit (Djekic et al., 2016, p 1042). Within the realm of supplier auditing, second-party audits refer to an evaluation conducted by the customer on a supplier. (Arter, 2003, p. 6). Second-party audits have multiple objectives. For instance, second-party audits aim to verify the processes used by a supplier to produce goods and services. Furthermore, they are used to confirm the traceability of materials, addressment of discrepancies and defects, and conformance to certain requirements. (Russell, 2009, pp. 85–86)

As previously stated, this study will focus on three audit types: (1) new supplier audits, (2) control audits, and (3) strategic audits. Prior to delineating these audit types, it is essential to acknowledge that the following audit types have not been explicitly defined in past research. The following information has been gained through discussions with some of the case company's internal stakeholders.

New supplier audits refer to the process of conducting audits with suppliers who have recently commenced a business relationship with the focal company. In other words, the focal company has neither worked with, nor audited these suppliers previously.

Control audits refer to audits conducted on suppliers that have established a long-standing business relationship with the company. Control audits serve the objective of verifying that the supplier maintains compliance with specific criteria. These suppliers have been audited previously by the focal company.

Strategic audits refer to audits conduced on the company's strategic suppliers. The suppliers have been audited previously and are strategically important to the management of the company's supply chain. Li et al. (2005, p. 620) define strategic supplier partnerships as "the long-term relationship between the organisation and its suppliers". The aim of strategic supplier partnerships is to maximise strategic and operational capabilities for both the focal company and its suppliers. (Nenavani & Jain, 2022, p. 996).

1.5. Structure of the Study

This study will consist of five main chapters. In the first chapter, the study's background, purpose, research questions, and key concepts are described. The second chapter consists of an in-depth review of the existing literature and will function as a foundation for this study's empirical section. In the third chapter, this study's research methodology will be discussed, while in the fourth chapter the findings of this study will be presented. The last chapter will discuss the findings of this study in relation to past literature, reflect on the research questions, identify possible limitations, and suggest areas to focus on in future research.

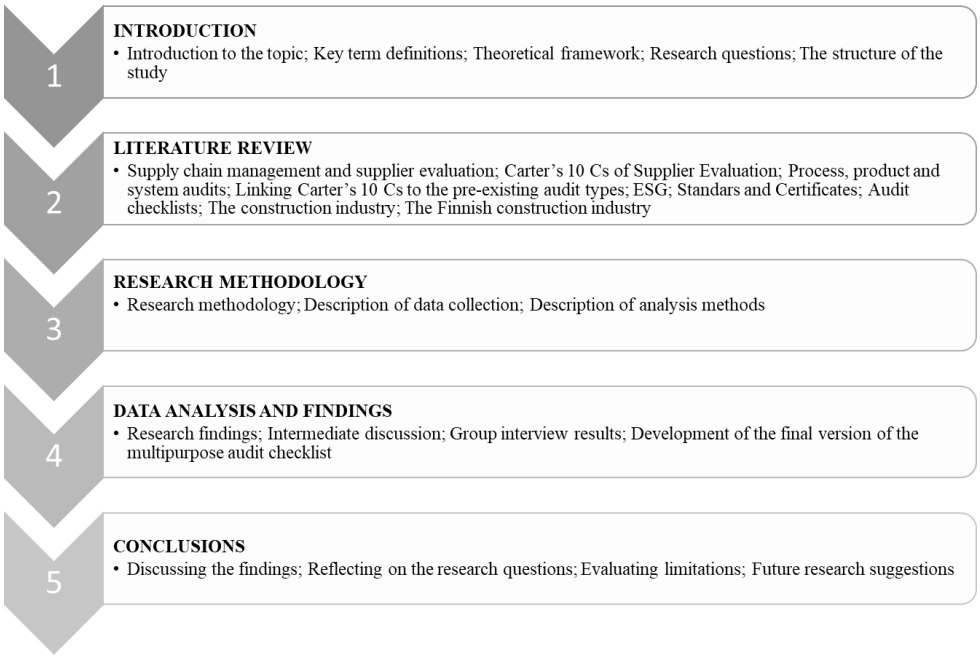

Figure 2. Structure of the study.

2. LITERATURE REVIEW

According to Snyder (2019, p. 333) building one's research on and identifying connections between existing information is essential in all academic research. In this chapter, relevant themes and theories will be discussed and examined in greater depth. The purpose of this chapter is to provide the reader with further insight into the subjects and concepts relevant to the research problem. In addition, the literature review will serve as a base for this study.

2.1. Supply Chain Management and Supplier Evaluation

Supply chain management (SCM) is a somewhat new concept, as the term emerged in the late 1980's and gained popularity throughout the 1990's. Prior to the existence of the term, companies used phrases such as "logistics" and "operations management" to describe the processes commonly associated with supply chain management today. Supply chain management combines a company and its supply chain into a single entity and utilises systems approach to manage the various activities related to the coordination of product flow to cater to the end-user as effectively as possible. (Hugos, 2018, p. 3–5)

To put it briefly, the supply chain serves as a linkage between a company and its suppliers, and customers and distribution organisations. Some of the main purposes of a supply chain include reducing costs and producing added value for the company (Logistiikan maailma, n.d.). In addition, modern-day supply chain management aims to establish long-term partnerships with suppliers while employing fewer, although more dependable, suppliers. Consequently, decisions regarding supplier selection depend on a variety of both qualitative and quantitative factors. (Ho et al., 2010, p. 16)

Identifying suitable suppliers has become an essential strategic aspect to consider in the management of a supply chain (Chen et al., 2006, p. 289). A company's competitiveness is significantly affected by its purchasing function. Thus, it is essential for purchasing managers to evaluate suppliers regularly to ensure that relationships with suppliers who meet certain demands are maintained (Pi & Low, 2005, p. 155).

Supplier evaluation is a process in which the efficiency and effectiveness of supplier action is measured. The aim of supplier evaluation is to quantify various factors to encourage decision-making inside the purchasing organisation. Furthermore, supplier evaluation can motivate the supplier to change their behaviour. (Sundtoft and Ellegaard, 2011, p. 890)

Past studies have acknowledged the importance of using strategic management controls in supply chains, although non-financial factors regarding performance have not necessarily been discussed (Schmitz & Platts, 2003, p. 711). Traditionally, businesses have used a single-criteria approach, in which suppliers have been selected based on lowest costs. However, in this day and age, instead of solely focusing on costs, multiple factors are taken into consideration in the management of a supply chain when evaluating the performance of a potential supplier. Past research suggests that the most used criteria in the evaluation of supplier performance is quality, although delivery, and price and cost are often taken into consideration as well. (Ho et al., 2010, pp. 16–22)

Several academics have questioned which factors should be considered when selecting and assessing suppliers, and whether these factors should be weighted equally in terms of importance (Ho et al., 2007, p. 404). For instance, Pi and Low (2005, p. 155) suggest that when evaluating a supplier, the most important criteria are quality, on-time delivery, price, and service. However, past research suggests that a universally accepted criteria for selecting and assessing suppliers has not yet been established. The criteria used by purchasing companies to evaluate their suppliers vary across businesses, even within businesses operating in the same industry. Despite this, it has been argued that supplier evaluation criteria can be divided into three main categories: cost, quality, and delivery performance. (Ho et al., 2007, pp. 404–405)

2.2. Carter's 10 Cs of Supplier Evaluation

Carter's 10 Cs model is an internationally recognised supply management evaluation approach, which examines ten aspects that should be assessed both prior to contracting and during the ongoing evaluation of the performance of a supplier. The model was developed by Dr. Carter in 1995 to serve as a tool for evaluating potential suppliers as a part of the sourcing process. Originally, the model consisted of 7 Cs, but the additional 3 Cs were added later as a result of peer feedback. The ten categories currently included in the model are: Capacity, Competency, Consistency, Control (of process), Commitment (to quality), Cash, Cost, Culture, Clean and Communication (efficiency). (Cordell & Thompson, 2019, p. 19; Helmold, 2021, pp. 105–106) Cordell and Thompson (2019, p. 19) have provided the following definitions for the ten categories:

Competency – Does the supplier have the necessary skills to deliver the goods/services you require?

Capacity – Has the supplier sufficient capacity/flexibility to produce the goods/services? Capacity in this context can include equipment, human resources, and materials.

Commitment – Is the supplier committed to maintaining suitable standards and/or suitable procedures and systems?

Control – How does the supplier control its policies, procedures, and supply chain?

Cash – Is the supplier in good financial health? What is its financial standing, does it have a positive cash flow or is it over-extended?

Cost – How are the costs of the goods/services made up (i.e., total cost of ownership) and how do these compare with others?

Consistency – How does the supplier guarantee consistency of output in relation to its goods/services?

Clean/Corporate Social Responsibility (CSR) – How committed is the supplier to sustainability, i.e., is the supplier compliant with relevant sustainability legislation?

Culture and relationships – Does the supplier share similar cultural values, i.e., is it a good match/fit?

Communication – How does the supplier communicate with its customers and what communication infrastructure/ICT does it have in place?

There are multiple advantages to using Carter's model as a tool for supplier evaluation. For instance, the model is effective when assessing supplier risks and can be used to evaluate suppliers regardless of whether the assessment takes place before or after a contract has been signed. However, the model possesses some limitations, which should be addressed. For example, the model lacks analytical application, and is only applicable to private sector sourcing. (Cordell & Thompson, 2019, p. 19)

2.3. Process, Product and System Audits

According to Arter (2002, p. 12), depending on their scope, audits can be divided into three categories: product, process, and system audits. In product audits, completed items or tasks

are inspected to verify that they possess certain required characteristics. Product audits are commonly conducted in industries in which electronics or appliances are manufactured, and they are commonly considered to be a “prevention action”. In other words, product audits are a form of quality assurance, rather than a quality inspection method (Arter, 2002, p. 11; Russell, 2009, p. 84).

Although process audits have been given some definitions in past literature, the field lacks established guidelines and universally recognised practices. However, process audits could be defined as audits, which are conducted in order to “verify and validate” certain manufacturing and service processes. (Russell, 2009, pp. 4-6). To put it briefly, processes are activities, in which something is transformed from one state to another (see Figure 3). In other words, inputs are transformed into outputs (Arter, 2002, p. 12). The factors making up a process can be divided into six groups: people, equipment, environment, materials, measures, and methods.

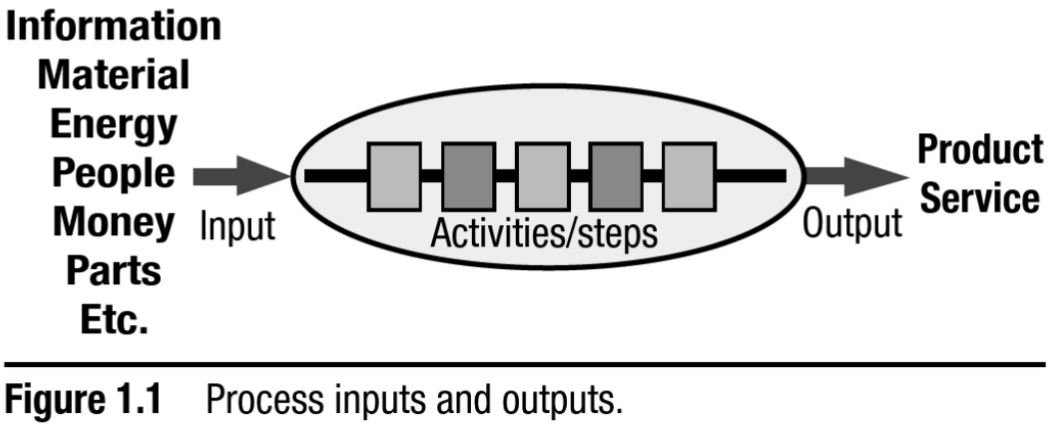

Figure 1.1 Process inputs and outputs.

Figure 3. Process inputs and outputs (Russell, 2009, p.3).

Lastly, system audits evaluate the processes and controls of a supplier. A system refers to a set of processes collaborating in order to achieve a shared objective. In other words, unlike process or product audits, system audits investigate an organisation on the macro level. As a result, system audits typically require more time. Furthermore, system audits tend to examine multiple activities, such as quality systems, functional departments, manufacturing locations and product lines. (Arter, 2003, pp. 12-16)

2.4. Linking Carter's 10 Cs to the Three Pre-existing Audit Types

As some of Carter's 10 Cs seem to be linkable to certain pre-existing auditing types, the aim of this section is to categorise each of Carter's 10 categories into one of the three auditing categories. This can be beneficial when determining the questions which should be included in the audit checklist, as the pre-existing audit types can serve as a guideline. The reasoning behind each category choice will be explained, although it should be noted that Carter's 10Cs leave space for interpretation and, therefore, the categorisation of the 10Cs is subjective.

As previously mentioned, in product audits the centre of attention is the product itself. Out of Carter's 10Cs, Cost and Consistency are the only factors solely focusing on the product. While Cost considers the cost-effectiveness or products, Consistency focuses on the supplier's capability of producing high-quality products consistently. Therefore, these two categories can be linked to product audits.

The objective of a process audit is to examine a specific activity in order to verify whether its inputs, actions and outputs conform to specific requirements or not (Arter, 2002, p. 15). Competency, Commitment, and Cash could all be categorised as specific activities rather than a set of processes, and, therefore, they could fall into the process audit category. Lastly, Control, Communication, Culture, Capacity and Clean could be linked to system audits, as these categories examine multiple actions related to a specific action.

2.5. ESG

As the focal company follows the Environmental, Social and Governance (ESG) guidelines, it is essential to ensure that the company's suppliers conform to said standards. As the acronym suggests, the ESG framework is used to report the environmental, social and governance issues, which are believed to impact the investment choices of companies (see Figure 4.). (Nordea, 2021; Armstrong, 2020, p. 8). Thus, it is most commonly employed by investors for assessing a company's behaviour and projected economic growth. (Li et al., 2021, p. 1)

The Environmental dimension of the ESG framework focuses on environmental aspects, which might impact, either positively or negatively, the financial performance or solvency of an organisation or individual. When measuring this dimension, factors such as air

pollutants, recycling, the use of water, and dependence and impact on ecosystems are considered. ESG's Social dimension, on the other hand, analyses social aspects, such as child labour, health and safety, privacy of customers and discrimination. Lastly, the Governance dimension evaluates matters related to the administration of an organisation. These aspects include bribery, corruption, the rights and engagement of stakeholders and accountability. (Li et al., 2021, p. 2)

Dimension	Factors	Definition
Environmental (E)	• GHG emissions • Energy consumption and efficiency • Air pollutants • Water usage and recycling • Waste production and management (water, solid, hazardous) • Impact and dependence on biodiversity • Impact and dependence on ecosystems • Innovation in environmentally friendly products and services	Environmental matters that may have a positive or negative impact on the financial performance or solvency of an entity, sovereign, or individual.
Social (S)	• Workforce freedom of association • Child labor • Forced and compulsory labor • Workplace health and safety • Customer health and safety • Discrimination, diversity, and equal • Opportunity • Poverty and community impact • Supply chain management • Training and education • Customer privacy • Community impacts	Social matters that may have a positive or negative impact on the financial performance or solvency of an entity, sovereign, or individual.
Governance (G)	• Codes of conduct and business principles • Accountability • Transparency and disclosure • Executive pay • Board diversity and structure • Bribery and corruption • Stakeholder engagement • Shareholder rights	Governance matters that may have a positive or negative impact on the financial performance or solvency of an entity, sovereign, or individual.

Figure 4. ESG framework (Li et al., 2021, p. 2).

Employing the ESG framework can be beneficial for companies, as it can enhance value creation (Koller et al., 2019, [no pagination]). However, it should be noted that ESG has received some criticism. For instance, some have argued that the framework interferes with the fundamental purpose of companies: generating maximum profits while complying to society's basic principles. In other words, although ESG can enhance the brand of a company, employing it is not essential for a company to be successful. (Pérez et al., 2022, p. 2)

2.6. Standards and Certificates

Companies often use standards and certificates to ensure that the products and services of their suppliers meet certain requirements. Certificates and standards make it easier for purchasing organisations to make purchasing decisions, as they often provide essential information, which can be used to identify the most competent suppliers. Standards compile criteria and recommendations regarding a product or a service, and complying to the requirements of these standards is usually the most effective way to demonstrate that the product or service fits the requirements set for them. The requirements of such standards are usually defined by the market, although it is possible for the European Union to request that certain requirements are jointly agreed on in EU member states. (SFS, 2023)

The focal company incorporates the SA8000 standard into its practices and has recently begun mandating that its suppliers also adhere to the requirements of the standard. The SA8000 standard is a social certification program founded on globally acknowledged standards of decent work, such as the Universal Declaration of Human Rights, ILO conventions and national laws. SA8000 employs a "management-systems approach to social performance" and encourages continuous improvement instead of simply auditing based on a set of criteria. (SAI, n.d.-a.) The standard guidelines examine nine dimensions (see Figure 5.).

SA8000 Element	Definition and Requirements
Child Labour	Prohibition of child (below the age of 15) labour. In the event of a child undergoing job termination as a consequence of the enforcement of this criterion, the certified company is required to provide financial resources to support the child's education.
Forced Labour	The employees cannot be required to hand over their identity documents or pay "deposits" as a condition of employment.
Health & Safety	Companies must meet the minimum requirements for a healthy and safe working environment. These include potable water, toilet facilities, proper safety equipment, and necessary training.
Freedom of Association and Right to Collective Bargaining	Protects employees' rights to join and form unions and to engage in collective bargaining without the fear of punishment.
Discrimination	No discrimination based on race, caste, national origin, disability, gender, sexual orientation, trade union membership or political affiliation.
Disciplinary Practices	The use of corporal punishment, mental or physical coercion and verbal abuse towards employees is forbidden.
Working Hours	A maximum of 48 hours of work per week, a minimum of one day off per week, a maximum of 12 hours of compensable overtime per week.
Remuneration	The salary must meet all minimum statuatory requirements and provide sufficient income for basic needs and at least some discretionary income.
Management System	Defines procedures for the effective implementation of SA8000 compliance and the designation of reponsible parties for accounting, problem resolution, and corrective actions.

Figure 5. Elements of the SA8000® Standard, based on DNV, n.d.; SAI, n.d-b.

A certificate, on the other hand, is an official document, which proves that a supplier complies with certain standards (SFS, 2023). Companies often require their suppliers to possess certain certificates, as they can be useful when ensuring that the supplier's products are of high quality. Furthermore, supplier certification can promote the reduction of inventory levels, errors in communication, cycle time and non-compliance. (Tan, 2001, p. 45)

2.7. Audit Checklists

Identifying suitable suppliers has become an essential strategic factor to consider in the management of a supply chain (Chen et al., 2006, p. 289). A company's competitiveness is significantly affected by its purchasing function. Thus, it is essential for purchasing managers to evaluate suppliers regularly to ensure that relationships with suppliers who meet certain demands are maintained (Pi & Low, 2005, p. 155). Experts have agreed that no ideal method for supplier evaluation exists; consequently, organisations utilise a variety of evaluation techniques when assessing their suppliers (Lokpriya & Vivek, 2019, p. 18).

Many auditors do not conduct audits on a regular basis, making it challenging for them to determine which questions they should be asking the auditee. To ease the auditing process, companies often use audit checklists (Welch, 2004, p. 25) The main purpose of an audit checklist is to gather information, making them a useful tool for supplier evaluation (Arter, 2003, p. 57)

Brown (1997, p.144) suggests that an effective and easy-to-use audit checklist should include "evaluation criteria, questions to be answered, information to be verified, reference sources for requirements or audit points, and space for recording objective evidence. According to Arter (2003, p. 57) an audit checklist should contain clearly defined audit topics or subjects. In addition, to ensure the clarity of the checklist, each question included in the checklist should "address one piece of information". The questions should be measurable, listed in a logical order, precise, and not open-ended, as they are needed to create concrete conclusions. (Arter, 2003, pp- 57-59) According to Arter (2003, p. 59) it is recommended to form the questions in a way that they can be responded to with a yes or a no. However, Brown argues that it is common for an audit checklist to "fail" due to the structure of the posed questions. Although many audit questions can be responded to with either a "yes" or "no", it is more effective to phrase audit questions in a way that requires a

narrative response. When audit questions are phrased to require a descriptive response, more in-depth information can be obtained. Therefore, it can be beneficial to use words such as “who”, “where”, “what” and “when” when phrasing the questions. (Brown, 1997, p. 144)

The format of an audit checklist can vary between organisations. In some checklists, the questions are listed in a columnar form (see Figure 6.). In other checklists, a free form style is employed, meaning that a space between the questions is included for notetaking (see Figure 7). However, any functioning format can be considered suitable. (Arter, 2003, pp. 57-58)

Audit Checklist (date)				
Requirement	*Yes*	*No*	*N/A*	Notes
Question 1 (reference)				
Question 2 (reference)				
Question 3 (reference)				

Figure 6. Columnar form checklist, based on Arter, 2003, p. 58.

Audit Checklist (date)

1. The first question is written here. A reference shown in parenthesis is included at the end of the question. An empty space below the question allows for handwritten notes to be included.

2. The second question.

3. The third question.

Figure 7. Free form checklist, based on Arter, 2003, p. 58.

According to Lokpriya and Vivek (2019, p. 20), the development of a supplier survey consists of four steps: (1) identifying key supplier evaluation categories, (2) evaluating category weightage, (3) identifying and weighing subcategories and identifying a scoring system for categories and (4) subcategories. Although these steps have been utilised specifically

for the creation of supplier surveys, it is reasonable to presume that they are equally applicable to the development of an audit checklist.

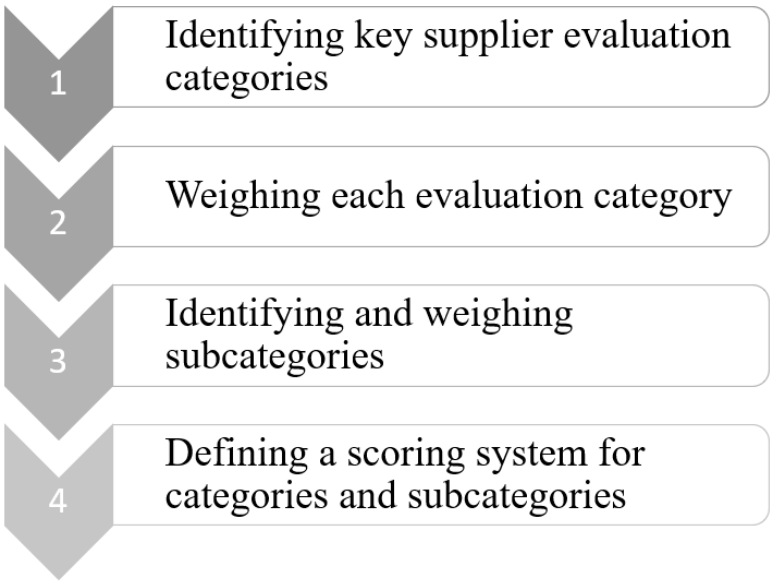

Figure 8. The development of a supplier survey, based on Lokpriya & Vivek, 2019, p. 20.

During the first step, supplier evaluation criteria are identified. These categories might include, for instance, cost, conformity to ecological regulations, quality, and delivery time. Within the second step, on the other hand, the chosen categories are weighed based on their importance. It is essential that the sum of all weights equals 1.0, as this facilitates the evaluation of suppliers. In the third step, subcategories are identified and weighed within the broader categories. It is important to note, that the total weight of each subcategory must match the weight of the main category which they are a part of. Lastly, in the fourth step a scoring system for the categories and subcategories is determined. Employing a scoring system in an audit checklist can be beneficial, especially if multiple individuals make inferences and give scores to the same categories during a supplier audit. (Lokpriya & Vivek, 2019, pp. 18–19)

2.8. The Construction Industry

Defining the construction industry as a concept can be challenging. The construction industry is commonly defined through the activities and products, which are either included in or excluded from said industry (see Figure 9) (Ofori, 1990, p. 20). Furthermore, Segerstedt and Olofsson (2010, p. 348) argue that the line between the construction industry and the manufacturing industry has not been properly defined. However, Ofori (1990, p. 23) suggests that the construction industry could be defined as "that sector of the economy which plans, designs, constructs, alters, maintains, repairs, and eventually demolishes buildings of all kinds, civil engineering works, mechanical and electrical engineering structures, and other similar works". It is a commonly held belief that the construction industry significantly differs from other industries, and therefore alternative solutions and concepts are needed to enhance its productivity and effectiveness (Segerstedt and Olofsson, 2010, p. 348).

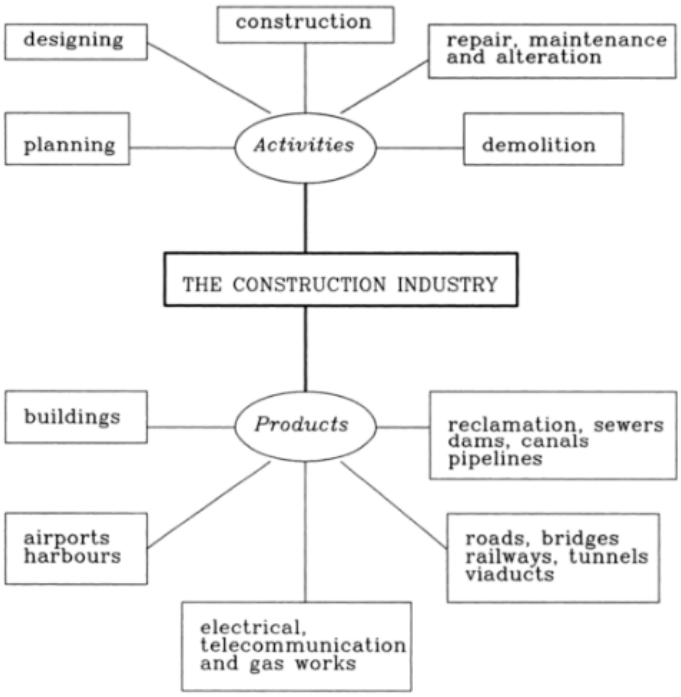

Figure 9. The Construction Industry (Ofori, 1990, p. 20).

In 2022, the construction industry in Finland was estimated to be worth around $46.9 billion USD (GlobalData, 2023). In the context of construction building types in the Finnish construction industry, the predominant trend appears to be apartment buildings. In addition,

the construction of residential buildings, such as houses, and other smaller residential projects is increasing across the country. Furthermore, the share of public construction in relation to overall construction is gradually decreasing, while the share of private construction is increasing. (LogiNets, 2022)

As of now, it appears that the primary obstacles affecting the Finnish construction industry are shortages of materials and lack of skilled labour (LogiNets, 2022). In 2022 the Finnish construction industry encountered material shortages due to Russia's attack on Ukraine (YLE News, 2022). In February of 2022, the European Union imposed sanctions against Russia as a response to the country's war of aggression against Ukraine. Consequently, importing goods from Ukraine's Donetsk and Luhansk regions became prohibited, with the exception of products for which the Ukrainian government had issued a certificate of origin (Council of the European Union, 2023; Ministry for Foreign Affairs of Finland, 2023).

The Russian invasion of Ukraine significantly impacted the Finnish construction industry. For instance, the access to crucial construction materials, such as steel, became limited, resulting in the increase of overall expenses. Before the war, around a quarter of the steel used in Finland was produced in Russia, Belarus, and Ukraine. During the COVID-19 pandemic steel prices doubled, and as a result of the war in Ukraine, steel prices increased further. In addition, rising energy costs increased the overall expenses of Finnish companies operating in the construction industry. (YLE News, 2022)

The "one-off nature of projects and the enormity of project size and life cycle" can pose difficulties for Supplier Quality Management in the construction industry. Given the extensive and complex nature of supply chains in the construction industry, companies often face challenges in managing them. These challenges are essentially caused by the widespread use of suppliers, often numbering in the hundreds or, in some cases, thousands worldwide. (AlMaian et al., 2015, p. 11)

The findings of past studies indicate that the weak performance of companies operating in the construction industry could be tackled by strengthening supply chain management (Ballard & Elfving, 2020, p. 1). Tuomela-Pyykkönen et al. (2015, p. 268) argue that, in terms of procurement, companies can enhance the planning and organisation of their purchasing through the comprehension of various industrial sectors, which could positively impact the company's overall performance. However, Tuomela-Pyykkönen et al. (2015, p. 268)

also suggest that despite the use of procurement tools, companies operating in the construction industry frequently demonstrate a limited understanding of the management of partnerships and supply chain, often resulting in said companies not fully utilising the potential benefits that procurement could offer.

In their study *'Procurement in the real estate and construction sector (RECS) - Preliminary context-specific attributes*' Tuomela et al. (2015) identified and examined the context-specific attributes, which impact procurement in the real estate and construction industry. Four themes were used to classify the identified aspects: relationship management, supply risk, coordination, and learning/knowledge sharing. The findings of the study suggest that the construction industry could be considered to be a "project-based environment", characterised by discontinuity, uniqueness, and complexity (see Figure 10). (Tuomela-Pyykkönen et al. 2015, p. 268)

Themes	Relationship management	Supply risk	Coordination	Learning/knowledge sharing
General attributes	Strategic/project-based approach; Repetitive sales of other industrial service and products; the concept of relationship management and partnership well understood	Risks in inbound supplies (individual supplier failures) and supplier markets	Culture; Skills; Routines; Teamwork; Supply network initiatives	Case study identified individual and organizational level barriers to knowledge sharing (i.e., lack of trust and motivation, lack of incentives), more related to complex nature of an organization than to the industrial sector
Key/unique attributes	Single projects vs. long-term cooperation; Discontinuity; Uniqueness; Complexity; Varying relationship lifecycles; Reluctance to adopt partnering approach linked to company characteristics (purchasing strategy, structure, and culture); Understanding SCM/RM concepts	Discontinuous nature of transacting; Uniqueness of exchange (in relation to technical, organizational, and economic differences); Customized exchanges; Unique and complex nature of products and services	Customisation; Task complexity; Closed business networks with specialized knowledge, capabilities, rather permanent supplier pools, and established norms and rules	Non-repetitive and temporary nature of projects; Effective knowledge management and learning/knowledge sharing requires understanding the scale and industry sector of company operations

Figure 10. Context-specific attributes related to procurement in the real estate and construction sector (Tuomela-Pyykkönen et al. 2015, p. 268).

3. RESEARCH METHODOLOGY

The following section discusses this study's research design, analysis methods, and the utilised data collection methods.

3.1. Research Design

Qualitative Research

This study is conducted using a qualitative approach. Defining 'qualitative research' as a concept can be somewhat challenging, as it is often considered to be a "broad umbrella term", encompassing a vast array of techniques and philosophies. However, broadly speaking, the term is commonly used to describe a research approach, which aims to examine the experiences of individuals in great depth. Some research methods frequently employed in qualitative research include focus group discussions, interviews, content analysis and observation. (Hennink et al., 2020, p. 10) In contrast to quantitative research, the main research instrument in qualitative research methods is the researcher themselves. As the researcher is the one to record observations, self-reflection regarding one's objectives, possible biases and interests is especially important in qualitative research. (Tracy, 2019, [no pagination]) In general, qualitative research utilises a flexible research design, meaning that research questions might be unspecified at the beginning of a study, and are developed as the research progresses. (Taylor et al., 2015, [no pagination])

Qualitative research is often considered to be inductive. In other words, instead of assessing pre-existing theories or hypotheses through data collection, qualitative researchers tend to create concepts and understandings based on patterns in data. (Taylor et al., 2015, [no pagination]) As one of the primary focuses of this thesis is the identification and analysation of the aspects that should be evaluated in a multipurpose supplier audit checklist, the utilisation of qualitative research methods is deemed appropriate.

As a research technique, qualitative research offers multiple advantages. For instance, qualitative research offers valuable insights into cultural activities, which could be overlooked when using quantitative research approaches. Furthermore, qualitative research, if done correctly, can help us understand cultures, individuals, and the world around us in general. (Tracy, 2019, [no pagination])

Although the use of qualitative research methods is popular amongst academics, they are also frequently utilised by companies to plan and analyse changes. For example, companies might use said research methods when attempting to evaluate how its employees are responding to organisational changes, or how customers are utilising a new product. (Tracy, 2019, [no pagination])

The Research Process

As can be seen from Figure 11, three research methods were utilised to collect data for this study: observation, semi-structured interviews, and a group interview. Observation was used as a data gathering method to gain further knowledge on the categories currently evaluated by the focal company in their supplier audits. The researcher attended and made observations during an audit conducted by the case company on one of their suppliers. Among the three types of audits examined in this study, the observed audit could be classified as a control audit. The results of the observation were analysed through inductive thematic analysis to identify the areas of evaluation.

After the observation, semi-structured interviews were conducted with some of the focal company's stakeholders. The results of the interviews were analysed through hybrid thematic analysis. The purpose of the hybrid thematic analysis was to identify the areas that should be evaluated in a multipurpose audit checklist as well as examine the views and perceptions that the participants held regarding Carter's 10Cs of Supplier Evaluation. Based on the results of the observation and the semi-structured interviews, the first version of the multipurpose checklist was developed.

Lastly, a group interview was conducted with some of the focal company's stakeholders. The purpose of the group interview was to validate the results of the observation and the semi-structured interviews, and to further develop the draft of the multipurpose checklist. After the group interview, the researcher gained access to the focal company's current checklists, which were used along with the findings of the group interview, to develop the final version of the multipurpose audit checklist.

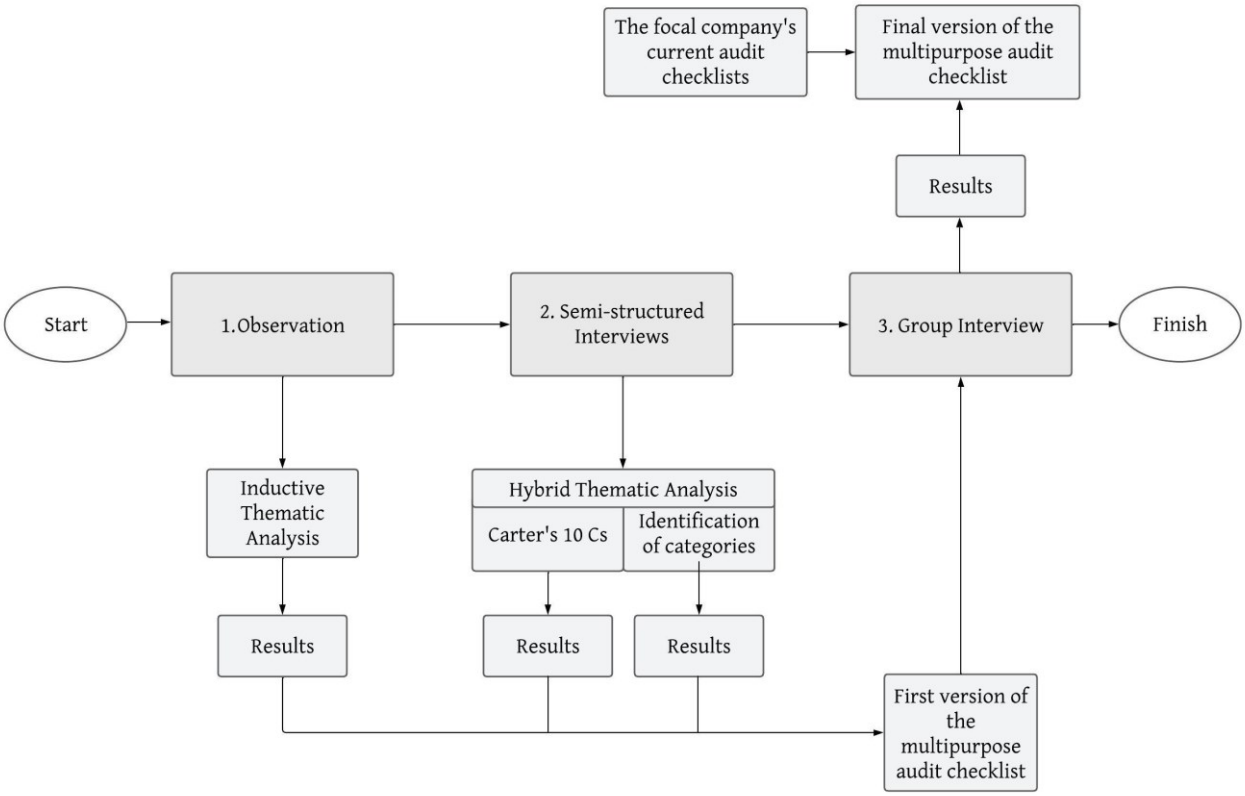

Figure 11. A flowchart illustrating the research process.

Observation

Observation is often defined as a systematic data collection approach, which requires researchers to use all their senses to discern individuals in their natural environment or in a situation that occurs naturally. Through observing the events, behaviours and items within a given social setting, the researcher can gain insight into the different meanings attached to these elements. Data gathered through observation can be especially useful when the research topic is relatively unstudied, or the comprehension of a social setting is essential for understanding the studied phenomenon. Using observation data as a complement to verbal or written findings can be valuable, as it can offer a unique perspective. (Billups, 2021, pp. 133-135)

As a data collection method, observation can be further classified into two categories: unstructured and structured. In unstructured observation, the researcher is typically unaware of the specific aspect that they will be observing. Therefore, to identify themes, the investigator records as much information as possible during the observation. In structured observa-

tion, on the other hand, the examined variables and their values are predefined. In comparison to unstructured observation, structured observation is more quantitative in nature, as it "emphasises factual measures" over metrics "requiring judgement or interpretation". (Given, 2008a, pp. 838-908)

In this study, the observation included elements of both unstructured and structured observation approaches. Prior to attending and observing the audit, the researcher had a general understanding of which elements should be examined. However, the specific themes had not been defined. The goal of the observation was to identify the areas in which the supplier was evaluated.

Semi-structured Interviews

Interviews are one of the most common data gathering methods in qualitative research. The objective of interviews in qualitative research is to offer further insight to pre-existing conceptual and theoretical body of knowledge, and they usually emphasise the importance of the life-experiences of the interviewees. (DiCicco-Bloom & Crabtree, 2006, p.314) In this study, semi-structured interviews were used to gather data and information regarding audits conducted by the focal company and the factors which should be included in a multipurpose audit checklist.

A semi-structured interview is a qualitative research approach, in which the researcher asks the interviewees a set of predetermined questions. The questions of a semi-structured interview are open-ended, meaning that the questions do not have an established range of possible responses. However, it is possible for questions outside of the predefined set of questions to arise as the interview progresses. The use of semi-structured interviews can be beneficial in studies in which the concepts and relationships of the research questions are generally comprehended. (Given, 2008b, p. 810-811; DiCicco-Bloom & Crabtree, 2006, p. 315)

Unlike structured interviews, semi-structured interviews tend to be the sole source of data for qualitative research projects. These kinds of interviews are typically scheduled in advance, and are conducted in a specific location, distinct from everyday events. Semi-structured interviews can be conducted either on a one-on-one basis or in a group setting, and they typically last between 30 minutes and several hours. Individual interviews give the researcher the chance to investigate social and personal matters in more depth, while group

interviews can be used to gather information on a broader range of experiences. (DiCicco-Bloom & Crabtree, 2006, p.314)

Group Interviews

Group interviews are a qualitative data gathering method, commonly used by social scientists. Group interviews are commonly utilised as a data gathering method, as they can provide essential insight to "the interpretation of a social behaviour or event". Furthermore, group interviews allow researchers to optimise the allocation of their resources. (Frey & Fontana, 1991, [no pagination])

Utilising group interviews as a data gathering method has multiple advantages. For instance, this research approach is effective and can serve as validation source for observed events and data gathered through interviews. Furthermore, group interviews often enhance the objectivity, reliability, and validity of the results of a study. However, the disadvantages associated with this data collection method should also be addressed. For instance, the researcher has to be aware of the group dynamics of the interview's participants, as the responses and opinions between the individuals of the group can differ. Moreover, the participants might be pressured to conformity, which can impact the data gathered through group interviews. (Frey & Fontana, 1991, [no pagination])

3.2. Data and Analysis

Observation

The observed audit was performed on May 23, 2023, between 10:40 and 14:30. The audit was attended by the researcher, three internal stakeholders from the focal company and two representatives from the supplier's company. The audit participants were aware that the audit was being observed by the researcher. The researcher did not actively participate in the audit or audit-related conversations.

The audit was conducted in two parts. During the first part, the auditors posed questions to the supplier, using the current audit checklist, in the supplier's office space. During the second part, the auditors were given a tour of the factory. The auditors asked some questions during the factory tour, but no audit checklist was used.

The first part of the audit lasted from 10:40 to 12:48. During this time the auditors posed questions based on the focal company's audit checklist. The researcher documented observations, such as areas of discussion and the questions posed to the suppliers, during the audit with the use of an iPad. The audit was neither videotaped nor tape-recorded.

The factory tour lasted from 13:00 to 14:30. During this time, the supplier's representatives presented and described the various machinery and production processes associated with the manufacturing of their products. This part of the audit was not documented by the researcher due to the noisy factory environment posing challenges for conducting coherent discussions between the auditors and the auditees.

Semi-structured Interviews

The study recruited six participants, out of which five agreed to participate. Consequently, a series of semi-structured interviews were conducted with five internal stakeholders of the focal company. All participants had prior procurement experience.

Participants were contacted and invited to participate in the study via email. Each email contained a privacy notice and information regarding the study. Individual interviews were conducted with each participant to eliminate the possibility of the influence of group pressure on their responses. The interview time and location were agreed on individually with each participant. The interviews were conducted over the course of two weeks. The participants did not have prior access to the interview questions but were informed about the nature of the interview questions and the areas of discussion.

Two of the interviews were conducted in-person, while three were conducted remotely via Teams. Before the interview, the researcher told the participants about the progression of the interview, and the participants were either asked to sign a consent form or were recorded giving their consent to participate in the study, depending on whether the interview was conducted remotely or not. In all five interviews the same set of questions was utilised.

Throughout the interviews, the interviewer utilised a computer for note documenting. In addition, the interviews were recorded with a tape recorder. The audio files were later transcribed by the researcher to ease the analysing process. In total, 44 pages of transcribed material was produced.

The interviews were conducted with the use of a questionnaire (see Appendix 1) consisting of predetermined questions. The interviews were held in Finnish, as it is the primary language of the majority of the participants. The questionnaire used as the foundation of the interviews was originally in Finnish, but it was translated into English for the purposes of this thesis.

The interview questionnaire consisted of seven sections. In the first section, the participants were asked about auditing in general, their roles in the focal company and their responsibilities during audits conducted by the case company. The purpose of this section was to gain a better understanding of the ways in which audits are conducted in the case company. The second, third, and fourth sections of the interview questionnaire each focused on one of the three audit categories investigated in this study: new supplier audits, control audits and strategic audits. The participants were asked, for example, how they would define each audit type, and what they believed to be the most important factors for each audit category. In section five, the interviewees were asked to identify similarities and dissimilarities between the three audit categories. During section six, participants were asked about audit checklists in general. The questions of this section concentrated on identifying possible strengths and limitations of the focal company's current audit checklists. The aim of this section was to gain further understanding of the elements and features which should be included in the multipurpose audit checklist. During section seven, the participants were asked to reflect on Carter's 10 Cs of Supplier Evaluation model. The interviewees were asked what they thought of the categories, if they believed any crucial categories were not included and whether some of the categories appeared irrelevant in the context of supplier evaluation. Lastly, the participants were asked to rank each of Carter's categories according to their viewed importance in the context of each of the three audit types.

During face-to-face interviews, the interviewees were handed an envelope that contained paper cutouts. Each cutout included one of Carter's 10Cs of supplier evaluation factors, along with a definition of said factor. The purpose of this procedure was to facilitate the tasks which interviewees were asked to perform in section 7 of the interview questionnaire. In interviews conducted remotely, the participant had either received the envelope prior to the interview or was sent a modifiable Word document that contained each factor with definitions, and three charts for arranging said factors in a specific order.

Group Interview

Four participants were interviewed through a group interview. Three of the participants had been interviewed before during the semi-structured interviews. All four individuals participating in the interview were internal stakeholders of the focal company. All participants consented to take part in the group interview. The duration of the group interview was around two hours.

Before the interview itself, the researcher presented the findings of the observation and semi-structured interviews. In addition, the first version of the multipurpose audit checklist was introduced. After the presentation, the participants were asked about their opinions on the checklist draft (see Appendix 3). The group interview was not recorded in anyway; however, the researcher documented the participants' responses to the questions that they were presented.

3.3. Analysis Method

The observational data and the transcriptions of the interviews were analysed separately with the use of thematic analysis. Thematic analysis is a common data analysing technique used in qualitative research (Terry et al., 2017, p. 17). The purpose of thematic analysis is to identify and analyse patterns of meaning within a given set of data. Furthermore, this analysis method illustrates which themes are significant in regard to the phenomenon under investigation. The outcome of a thematic analysis should highlight the most prevalent patterns of meaning existing within a data set. (Harper & Thompson, 2011, [no pagination])

Data collected through semi-structured interviews is typically the most appropriate type of data for conducting thematic analysis. Thematic analysis is especially suitable for clarifying the precise nature of a certain group's "conceptualisation of the phenomenon" being studied. Furthermore, thematic analysis can help researchers to gain further insight into the research topic and can be useful when developing models related to human thinking, feeling and behaviour. (Harper & Thompson, 2011, [no pagination]) As the research questions of this study focus on the perspectives of the focal company's stakeholders regarding auditing and audit checklists, thematic analysis is an appropriate method for analysing the research data.

Thematic analysis can be further classified into two types: inductive and deductive. If the themes being studied are derived from pre-existing theories or ideas, the analysis is deductive. If the themes are derived from raw data, the analysis is inductive. (Harper & Thompson, 2011, [no pagination]) However, a hybrid approach can also be taken when analysing qualitative data through thematic analysis. A hybrid approach in the context of thematic analysis refers to a method, in which the two, inductive and deductive, philosophical thinking methods are combined. (Swain, 2018, p. 5) In regard to this study, the data gathered during the observation was analysed through inductive thematic analysis to identify the categories commonly evaluated during supplier audits. Due to its flexibility, inductive thematic analysis is especially suitable for analysing observational data (Alhojailan, 2012, p. 11). Hybrid thematic analysis, one the other hand, was used to analyse the data gathered during the semi-structured interviews.

The hybrid thematic analysis had two primary objectives: to identify all relevant evaluation categories that should be assessed during a supplier audit and to thoroughly examine the perspectives and perceptions of the participants regarding Carter's 10 Cs.

The data analysis process of the semi-structured interviews (see Figure 12) was based on a combination of the hybrid data analysis steps proposed by Swain (2018, p. 7) and the thematic analysis steps suggested by Braun and Clarke (2006, cited in Xu & Zammit, 2020, p. 2).

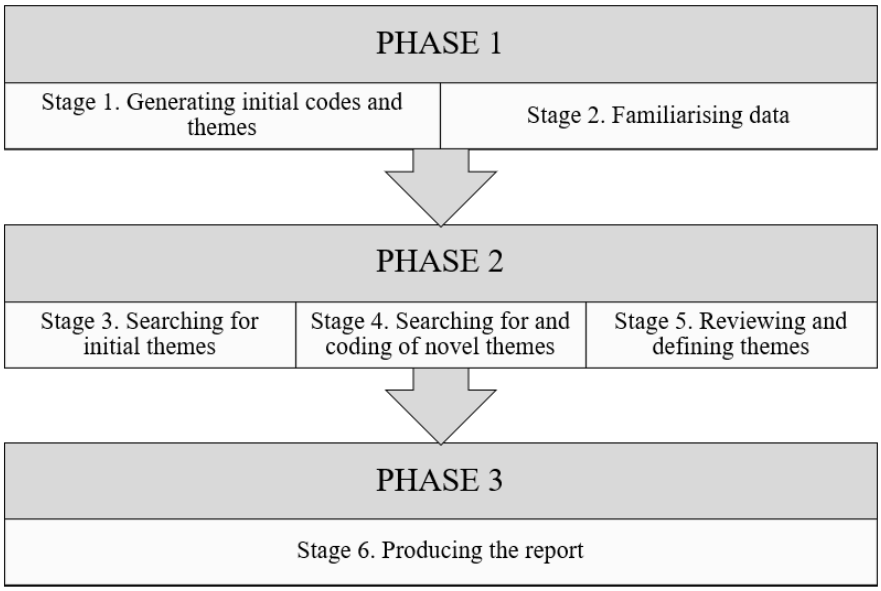

Figure 12. The stages of hybrid thematic analysis (based on Swain, 2018, p.7; Braun & Clarke, 2006, cited in Xu & Zammit, 2020, p. 2).

In Stage 1, initial themes of the hybrid thematic analysis were determined (see Figure 13). The initial themes were used for the analysation of Carter's 10Cs. According to Xu and Zammit (2020, p. 2), during Stage 2, the researcher should become familiar with the research data and conduct transcripts of interviews. The transcription process can be seen as being valuable for the researcher, as it gives the researcher the chance to become more acquainted with the data (Saldana, 2011, p. 45). In regard to this study, during Stage 2, the interview audio files were transcribed, allowing the researcher to become more familiar with the data.

During Stage 3, coded data should be transformed into themes by identifying "broader patterns of meaning across the data set". This can help with the clarification of the research questions. It is essential that the themes function harmoniously, and it is possible that some codes and themes are discarded. This stage concludes with a list of potential themes and a perception of the relationship between said themes. (Xu & Zammit, 2020, p. 3)

In Stage 4, a new set of posteriori codes are determined and created based on meaning and patterns identified in the data (Swain, 2018, p. 10). Stage 5, on the other hand, can be divided into two levels of checking: checking whether the themes represent the fundamental meaning of the coded data in relation to the research questions and verifying if the themes are suitable to the data set as a whole. Lastly, during Stage 6, themes emerging from the data and prior research should be analysed, discussed, and compared to previous literature. (Xu & Zammit, 2020, p. 3–7)

Primary theme	Subtheme	Description	Codes
New supplier audits	Competency	Competency in the context of new supplier audits	• Skills and knowledge • Quality assurance
	Capacity	Capacity in the context of new supplier audits	• Production capabilities • Delivery Capabilities
	Commitment	Commitment in the context of new supplier audits	• Long-term collaboration • Collaboration
	Control	Control in the context of new supplier audits	• Reliability of delivery • Supply chain management
	Cash	Cash in the context of new supplier audits	• Financial stability
	Cost	Cost in the context of new supplier audits	• Product prices
	Consistency	Consistency in the context of new supplier audits	• Reliability of delivery • Consistency of quality
	Culture	Culture in the context of new supplier audits	• Values and ethics • Organisational similarities between values
	Clean	Clean in the context of new supplier audits	• Sustainability • Social responsibility
	Communication	Communication in the context of new supplier audits	• Responsiveness • Communication systems
Control audits	Competency	Competency in the context of control audits	• Skills and knowledge • Quality assurance
	Capacity	Capacity in the context of control audits	• Production capabilities • Delivery Capabilities
	Commitment	Commitment in the context of control audits	• Long-term collaboration • Collaboration
	Control	Control in the context of new control audits	• Reliability of delivery • Supply chain management
	Cash	Cash in the context of new control audits	• Financial stability
	Cost	Cost in the context of new control audits	• Product prices
	Consistency	Consistency in the context of control audits	• Reliability of delivery • Consistency of quality
	Culture	Culture in the context of control audits	• Values and ethics • Organisational similarities between values
	Clean	Clean in the context of control audits	• Sustainability • Social responsibility
	Communication	Communication in the context of control audits	• Responsiveness • Communication systems
Strategic audits	Competency	Competency in the context of strategic audits	• Skills and knowledge • Quality assurance
	Capacity	Capacity in the context of strategic audits	• Production capabilities • Delivery Capabilities
	Commitment	Commitment in the context of strategic audits	• Long-term collaboration • Collaboration
	Control	Control in the context of strategic audits	• Reliability of delivery • Supply chain management
	Cash	Cash in the context of strategic audits	• Financial stability
	Cost	Cost in the context of strategic audits	• Product prices
	Consistency	Consistency in the context of strategic audits	• Reliability of delivery • Consistency of quality
	Culture	Culture in the context of strategic audits	• Values and ethics • Organisational similarities between values
	Clean	Clean in the context of strategic audits	• Sustainability • Social responsibility
	Communication	Communication in the context of strategic audits	• Responsiveness • Communication systems
Audit checklists	Current audit checklists	The strengths and weaknesses of the current audit checklists	• Skills and knowledge • Quality assurance
	Evaluation method	Which evaluation method is seen as being the most appropriate for a multipurpose audit checklist	• Production capabilities • Delivery Capabilities

Figure 13. Initial codes for themes for the part of the hybrid thematic analysis concentrating on Carter's 10Cs.

4. DATA ANALYSIS AND FINDINGS

In this chapter, the findings of the inductive thematic analysis and the hybrid thematic analysis will be discussed.

4.1. Observation: Identified Themes

The purpose of the observation was to acquire a deeper understanding of the areas commonly explored and evaluated during supplier audits. During the observed audit, the auditors posed questions to the supplier's representatives, who provided responses. The majority of the questions posed by the auditors were predefined; however, as the discussion progressed, undefined questions also seemed to arise. During the audit, the observer recorded and took note of the questions and their subject areas (see Figure 14).

The data collected during the observation was analysed through inductive thematic analysis, and five themes, ten subthemes and three secondary subthemes were identified (see Figure 15). The first theme, Reliability, refers to the supplier's ability to maintain consistency in its operations. Within this theme, four subthemes were identified: Capacity, Delivery Reliability, Risks and Exceptional Circumstances. Capacity refers to the supplier's ability to preserve and manage capacity. Within Capacity one secondary subtheme, Capacity Management, was identified. This subtheme refers to the procedures that the supplier has in place to ensure capacity. Delivery Reliability, on the other hand, describes the supplier's ability to deliver products on time and within agreed-upon timeframes, while in the subtheme of risks, the potential challenges that could have a negative impact on the supplier's capability are identified, and the supplier's precautions for these obstacles are evaluated. The last subtheme, Exceptional Circumstances, represents the supplier's adaptability to sudden and unexpected challenges, that could potentially impact the supplier's operational functions.

The second theme, Responsibility, describes the supplier's views on and approaches to environmental and social responsibility. Within this theme, two subthemes were identified: Sustainability and Safety. Sustainability refers to the measures that supplier has in place to minimise its environmental impact, while Safety describes the methods that the supplier employs to guarantee the well-being and safety of its personnel. Within Safety, a secondary subtheme, Workplace Accidents, was identified. This secondary subtheme includes aspects regarding accidents resulting in physical harm or injury among the supplier's employees.

Quality, the third identified theme, refers to the supplier's quality-related aspects. Within Quality, two subthemes were identified: Final Product and Customer Satisfaction. In this context, Final Product refers to the extent to which the supplier's final products meet certain, required, standards. Furthermore, this subtheme addresses factors impacting the quality of the supplier's products. In the second subtheme, Customer Satisfaction, processes, and data regarding customer experience are evaluated. Within Customer Satisfaction, a secondary subtheme, Claims, was identified. This subtheme covers aspects regarding the number of claims received by the supplier, and the policies and processes that the supplier has in place to address claims. The inclusion of Customer Satisfaction and Claims within the theme of Quality was deemed appropriate, as these two subthemes can function as metrics and indicators for evaluating the effectiveness of the supplier's quality-related processes.

The fourth theme which was discovered during the analysis was Staff. This theme covers aspects relevant to the supplier's personnel. Within this theme, one subtheme, Skills, and Knowledge, was identified. Within this secondary subtheme, the ways in which the supplier encourages the learning of its personnel is evaluated.

Lastly, the fifth theme, Assets, refers to the supplier's physical resources and equipment. Within this theme, a subtheme, Machinery, was identified. This subtheme entails the evaluation of aspects relevant to the suppliers' equipment, such as the maintenance and safety of its machinery.

Evaluation Category	Main questions	Secondary questions
Delivery Reliability	What measures have been taken to ensure delivery reliability? How is delivery reliability maintained? Have there been any factors affecting delivery reliability? How have challenges been addressed?	
Quality	How many defects in quality have there been? How has the supplier addressed quality-related errors? How does the supplier ensure that their products are of high quality? How has the quality of products and/or services been improved? How is data regarding quality acquired and measured?	Is there evidence that data regarding the quality of products/services has been acquired and measured? How are the quality measuring instruments being used? How integrated are the quality measuring instruments?
Capacity Management	How is capacity measured and managed? How are sudden changes taken into account? Can products be ordered at short notice, if demand suddenly increases?	How quickly can products be ordered in the event of a sudden increase in demand?
Customer Satisfaction	How many claims have been recorded within the past year? How is customer satisfaction measured?	How often is the customer satisfaction measured?
Processes Related to Claims	What kind of procedures does the supplier have in place for addressing claims? Could you describe the processes related to customer complaints?	What is the response time for complaints from the customer's perspective?
The Quality of the Final Product	How is the quality of the final product measured?	What procedures are involved in measuring the quality of the final product?
Employees' Skills and Knowledge	How is employee competence ensured? How is employee learning supported? How many employees does the supplier currently have?	What roles does the supplier have their employees in?
Staff	Does the company have seasonal or summer employees?	How many of the seasonal workers are new? How many of the seasonal workers wish to work for the supplier in the future?
Maintenance of Equipment and Machinery	Which processes and systems does the supplier have in place for maintaining equipment and machinery? Have there been any issues with equipment or machinery?	What kind of issues have there been?
Environment	What measures does the supplier have in place regarding sustainability? What measures does the supplier have in place for improving sustainability? Does the supplier have any certificates regarding sustainability?	
Safety	What measures does the supplier have in place regarding safety? How are the employees encouraged to make safety observations? What kind of safety equipment do the supplier's employees have?	
Risks	What kind of risks has the supplier identified? What kind of challenges has the supplier had recently?	
Exceptional Circumstances	What kind of safety measures does the supplier have in place for ensuring the continuity of production? (For example, if a machine breaks.)	
Workplace Accidents	What kind of measures does the supplier have in place regarding workplace accidents? What was the last workplace accident like? What kind of workplace accidents are the most common?	

Figure 14. Data gathered during the observation.

Theme	Subtheme	Secondary subtheme
Reliability	Capacity	Capacity Management
	Delivery Reliability	
	Risks	
	Exceptional Circumstances	
Responsibility	Sustainability	
	Safety	Workplace Accidents
Quality	Final Product	
	Customer Satisfaction	Claims
Staff	Skills and Knowledge	-
Assets	Machinery	-

Figure 15. The results of the inductive thematic analysis performed on observational data.

4.2. Semi-structured Interviews: Emerging Themes

When the data collected through semi-structured interviews was analysed, six themes and 21 subthemes were identified (see Figure 16).

Quality

The first identified theme was Quality. All five participants viewed quality as an important aspect to consider when conducting supplier audits.

> *'[In general] I think that it is necessary to evaluate quality related factors during supplier audits . . . '* (Interview 1)

As a theme, Quality was commonly associated with the supplier's quality processes and the quality of its products.

> *'. . . in my opinion [it is essential] to evaluate aspects which affect quality [in supplier audits in general]. [For example] quality assurance processes, like factors that [impact] the quality of the final product, and of course the quality of the suppliers' various processes.'* (Interview 5)

Within Quality, five subthemes were identified (see Figure 16). The first subtheme identified within Quality was **Quality Assurance**. In this context, Quality Assurance refers to

the policies that the supplier has in place to ensure that its products are of high quality and meet certain criteria and requirements. This subtheme was deemed important in all the three audit types. Furthermore, Quality Assurance was frequently associated with the supplier's quality processes.

> *'[When conducting control audits] quality and quality processes [are important to consider].'* (Interview 5)

> *'I would say that [in strategic audits] quality and processes . . . are of course important [factors to evaluate].'* (Interview 1)

> *'[In new supplier audits] it is of course [important to ensure] that the processes regarding quality assurance are adequate, so that the quality of the final product is good.'* (Interview 5)

> *'. . . [before an audit] we usually receive some information, for example on how the supplier's quality assurance processes work, and then we visit the supplier to confirm that this is indeed how they operate as a business . . . and [during an audit] the supplier usually shows us how their quality processes work . . .'* (Interview 2)

The second subtheme that was identified within quality was **Quality Control and Monitoring**. Similarly to Quality Assurance, this subtheme was perceived to be interconnected with the supplier's quality processes.

> *'. . . [during audits] we visit the supplier to ensure that their processes work as they have stated, and that quality is monitored appropriately . . . '* (Interview 2)

The third subtheme, **Quality Development**, was also viewed as an essential area to evaluate in supplier audits.

> *'. . . in my opinion, quality is an important factor to consider [in supplier audits] . . . and the processes related to quality monitoring and development [should be evaluated] . . .* (Interview 2)

The fourth identified subtheme of Quality was **Claims**. The participants believed that recent claims received by the supplier should be discussed during supplier audits.

> '. . . *at the beginning [of an audit], one of the auditors has gone through the supplier's delivery reliability and quality-related issues and [aspects related] to claims.'* (Interview 5)

Furthermore, the participants believed that examining the supplier's various processes associated with claims was essential, especially during control audits.

> *'. . . the last time we conducted a [control] audit, there had been some claims, and[, therefore, we examined] the [supplier's] processes [related to claims].'* (Interview 4)

While the participants did not directly associate Claims with Quality, it could be considered appropriate to incorporate this subtheme within the main theme, as the number and nature of claims received by the supplier could be regarded as an indicator of the quality of the supplier's final products and its quality-related processes.

The last subtheme of Quality was **Certificates**. Although certificates were commonly associated with both quality and sustainability, it was considered appropriate to place this subtheme within the main theme of quality, since certificates can serve as indicators of the overall quality of a supplier's processes.

> *'. . . usually [each audit] has a certain focal point. The focal point could be . . . for example environmental certification . . .'* (Interview 2)

Product

Some of the participants expressed that aspects related to the supplier's final products should be evaluated during audits. As can be seen from Figure 16, three subthemes were identified within this theme. The first subtheme within the Product theme was **Price**. One of the product-related aspects which the participants deemed important to consider during audits was the pricing of the supplier's products. The importance of product prices was especially apparent in the context of strategic audits.

> *'. . . [in strategic audits] the [product] prices are probably something [that should be considered] . . . we might sometimes get bulk discounts or some other discounts by negotiating . . .'* (Interview 2)

Furthermore, due to increasing inflation rates, the assessment of the price development of a supplier's products was viewed as essential.

> *'However, we have to keep in mind that this is business that we are doing, so for example inflation has recently been rather extreme, and currently we have to focus, along with processes, on the [supplier's] financial situation and prices, like, it is natural that [the suppliers] want to keep their prices [high], even if they cannot justify doing so.'* (Interview 3)

The second subtheme identified within the product theme was **Product Quality**. While there is some overlap between this subtheme and the main theme of Quality, it was deemed appropriate to categorise this subtheme under the Product theme as it pertains directly to said theme.

> *'The quality of the supplier's products [should be evaluated when auditing] . . .'* (Interview 2)

The last subtheme identified within the main theme of Product was **Suitability**. In this context, Suitability refers to the extent to which the supplier's products align with the needs and requirements of the purchasing company. Suitability was deemed especially important in new supplier audits, as it was regarded as a significant determinant for assessing the feasibility of establishing a partnership with a potential supplier.

> *'. . . [When selecting a new supplier] we will probably have a few [supplier] options for a specific product . . . Of course, it has to be ensured that when we are looking for a new supplier that [the supplier] meets our needs.'* (Interview 2)

Reliability

The third primary theme, Reliability, encompasses factors related to the extent to which the purchasing company can place trust in the supplier. Within this theme, five subthemes were identified (see Figure 16).

The first identified subtheme within reliability was **Capability**. In this context, Capability refers to the extent to which a supplier is capable of meeting the needs and requirements of the purchasing company. Evaluating the supplier's capability was deemed important in all three audit types.

> *'In [all of our audits] we aim to evaluate the supplier's capability . . .'* (Interview 5)

Furthermore, Capability was linked to the supplier's ability to adapt to unforeseen circumstances.

> *'When we have conducted [control] audits, it is of course important to ensure . . . that the supplier is capable [of producing products] when the demand possibly increases.'* (Interview 5)

Moreover, in the context of strategic audits, Capability was deemed as an indicator of the long-term viability of the partnership.

> *'. . . [in strategic audits] I think that [one of the main goals] is to evaluate the supplier's capability from a business perspective . . . our goal [as a business] is to double our sales during the next five years, and at that point some of our suppliers might not be able to meet our needs . . .'* (Interview 2)

The second identified subtheme of Reliability was **Delivery Reliability**. In essence, this subtheme refers to the supplier's ability to ensure timely delivery of products. Assessing the supplier's delivery reliability was considered important, especially in cases where the supplier had previously encountered difficulties in this area.

> *'[If the supplier has had] issues with delivery reliability . . . [it could possibly be] the focal point of an audit.'* (Interview 3)

Furthermore, evaluating the supplier's delivery reliability was deemed especially important when conducting audits on new suppliers. In addition, Delivery Reliability was linked with processes.

> *'. . . Delivery reliability is [an] important [factor to consider, when evaluating a new supplier.]'* (Interview 2)

> *'. . . [in control audits, we examine] the ways in which [the supplier] ensures that our orders are delivered to us.'* (Interview 4)

The third subtheme, which was identified within Reliability, was **Delivery Capacity**. In this context, Delivery Capacity refers to the volume or number of products that the supplier is capable of delivering. Similarly to Delivery Reliability, the evaluation of Delivery Capacity was deemed particularly significant when conducting new supplier audits. Furthermore, Delivery Capacity was associated with Delivery Reliability.

> *'[When auditing a new supplier] it is probably important to consider the supplier's delivery capacity.'* (Interview 4)

> *'[When conducting audits on new suppliers, I would say that evaluating the supplier's] delivery reliability and capacity ... [is important].'* (Interview 4)

The fourth subtheme of Reliability, **Risks**, encompasses the evaluation of potential challenges that could negatively impact the supplier's operational and functional capabilities. The evaluation of possible risks that might arise from working with a certain supplier was deemed particularly crucial in strategic audits.

> *'. . . [in strategic audits it is important to consider] how disruptions will be managed. China is a good example. For instance, if something happens over there with Taiwan, and if some [new] trade restrictions arise, or if tariffs increase drastically, it might no longer be as cost-effective to purchase from China . . . these kinds of [potential risks] should be brought up in [strategic audits] . . .'* (Interview 3)

Additionally, the assessment of potential risks was also considered crucial in new supplier audits.

> *'. . . [when auditing a new supplier] one should be able to identify and estimate the potential risks that might arise from working with [said] supplier.'* (Interview 2)

The fifth subtheme of Reliability, namely **Raw Materials and Stock**, refers to the extent of control that the supplier to which the supplier possesses over its raw materials. In other words, whether the supplier can access raw materials and maintain uninterrupted production, even under uncertain circumstances. In addition, the supplier's management of stock and risks were viewed as important factors to consider in this context.

> *'In the past, we have conducted audits during which we have assessed potential risks, for example, at one point there were shortages of raw materials all over the world, and, therefore, we visited [some of our suppliers] to ensure that they have enough stock, and stuff like that.'* (Interview 2)

The sixth subtheme, which was identified within Reliability, was **Stability**. In essence, this subtheme refers to the supplier's long-term viability. This subtheme could be viewed as being connected to the subtheme of risks, as the supplier's instability could increase the number of potential risks from the perspective of the purchasing company. Moreover, stability was viewed as especially relevant when conducting strategic audits.

> *'[In strategic audits, we have to evaluate] that the existence of the supplier's business is secured . . . and that there are no possible threats that could result in the supplier suddenly being unable to continue doing business, as that could have negative consequences on our business.'* (Interview 2)

The seventh and last subtheme identified within Reliability was **Adaptability**. The participants viewed the supplier's ability to adapt in the face of unanticipated obstacles as crucial, as the supplier's inability to adapt to sudden changes in the environment could negatively impact the purchasing company. Furthermore, Adaptability was viewed as particularly important to evaluate in strategic audits.

> *'. . . [in strategic audits] we evaluate whether the supplier is able to adapt to constant changes in the business environment . . . if we grow as a business, and the supplier is unable to meet our needs, the supplier might not be suitable for us anymore . . .'* (Interview 2)

Responsibility

The fourth identified primary theme was Responsibility. Within responsibility, five additional subthemes were identified (see Figure 16). This theme incorporates aspects related to the supplier's social, environmental, and financial accountability.

> *'. . . I think that . . . factors regarding responsibility should be noted [during supplier audits], for example environmental, social, and financial responsibility.'* (Interview 1)

While the participants acknowledged the significance of evaluating responsibility across all three audit types, some argued that in the context of strategic audits, greater emphasis should be placed on Responsibility in comparison to new supplier or control audits.

> *'. . . I would also argue that [in strategic audits] factors regarding responsibility are more important [than in control audits or audits conducted on new suppliers].'* (Interview 1)

The first identified subtheme of Responsibility was **Values**. It was deemed essential that the supplier's values align with the values of the purchasing company.

> *'[The supplier's] values are important . . . Our values and the supplier's values should be at least somewhat similar . . .'* (Interview 3)

Ensuring that the supplier's values correspond with those of the purchasing company was deemed especially necessary in the context of new supplier audits.

> *'[In new supplier audits, we have to ensure] that the [supplier's] values are not questionable, like that [the supplier's] activities and processes do not lead to [laughter] like, the destruction of rainforests or something [laughter]. The destruction of rainforests might be quite an extreme example, but [you probably get the point].'* (Interview 2)

The second subtheme within Responsibility was **Ethics**. The participants believed it to be essential to ensure that the supplier adheres to certain ethical standards. This became especially apparent in the context of new supplier audits.

> *'[When auditing a new supplier] it is important to ensure through audits that all ethical guidelines are complied with.'* (Interview 4)

The third subtheme of Responsibility, **Sustainability**, refers to the environmental impact resulting from the practices of the supplier. The importance of ensuring that the supplier operates in a sustainable manner was recognised due to its perceived influence on the long-term viability of the purchasing company.

> *'. . . [it is] of course important to discuss factors that impact safety and the environment [during supplier audits] . . . as they have an impact on the bigger picture.'* (Interview 5)

The fourth subtheme identified within the theme of Responsibility was **Safety**. In this context, Safety refers to the extent to which the supplier ensures safe working conditions for its employees. The evaluation of safety was deemed important in all three types of auditing.

> *'[When auditing new suppliers] safety [is a factor that should be considered].'* (Interview 1)

> *'I would say that . . . safety [is one of the most important factors to consider in control audits].'* (Interview 1)

> *'. . . I think that . . . [in strategic audits] factors regarding safety are important . . .'* (Interview 1)

The fifth and last subtheme, which was identified within the theme of responsibility, was **Financial Responsibility and Stability**. The assessment of a supplier's financial stability and responsibility was deemed particularly relevant in the context of audits conducted on new supplies. This was due to the belief that the supplier's financial situation could have an impact on its long-term viability as a company.

> *'[When conducting audits on new suppliers] . . . It is important to ensure that the supplier's finances and ownership are strong enough, so that we can see ourselves building a long-term partnership with them.'* (Interview 3)

Moreover, the evaluation of aspects related to the financial situation of a supplier was perceived to be significant in strategic audits. Furthermore, assessing the financial situation of a supplier's finances was considered more crucial in the context of strategic audits than in the context of control audits.

'. . . [in strategic audits] aspects regarding [the supplier's] finances and how the [supplier's] business is being managed and lead . . . are more relevant than in control audits . . . ' (Interview 5)

Processes

The fifth identified primary theme was Processes. In this context, processes refer to the degree to which the supplier monitors, controls and manages its various production-related activities The assessment of a supplier's processes were regarded as important in all three audit types. According to some of the participants, this theme is frequently one of the focal points of supplier audits.

'[The most important factor to consider in control audits] changes depending on [the nature of the audit]. Typically, the easiest answer [to what evaluation aspect should be highlighter in control audits] would be processes.' (Interview 3)

Moreover, the importance of this theme was further highlighted in the context of new supplier audits.

'. . . processes [should], of course, [be considered when auditing a new supplier].' (Interview 3)

Some of the participants also argued, that the supplier's management processes should, in certain cases, be evaluated.

'. . . [sometimes] we audit the supplier thoroughly, including the managers and their management processes . . .' (Interview 3)

Competitiveness

The sixth and last identified theme was Competitiveness. In essence, this theme refers to the supplier's level of competitiveness. In the context of control audits, Competitiveness was linked with aspects such as the price development of the supplier's products.

'One of the more emphasized areas of focus [in control audits] is price development, [as this helps us evaluate] whether the supplier is still able to compete [against its competitors].' (Interview 3)

Within Competitiveness, the subtheme of **Replaceability** was identified. In this context, Replaceability refers to the perceived level of ease with which the supplier could be substituted or replaced.

> *'[When conducting strategic audits, we have to identify] the suppliers whose actions directly impact our business and the continuity of our business . . . [we also have to identify] which ones of our supplier can be easily replaced . . . [for example] there could be a product that is easily accessible, but no supplier is able to deliver said product in high enough quantities.'* (Interview 2)

Differences Between the Perceived Significance of Each Evaluation Category

The participants consistently expressed that generally in supplier audits, the most important aspects to evaluate were quality and delivery reliability.

> *'Usually when we conduct supplier audits, the main focus is quality or delivery reliability.'* (Interview 2)

> *'I think that [in supplier audits in general] the most important factors to evaluate are quality and delivery reliability'* (Interview 5)

However, the interviewees indicated that significance of each evaluation category can change within each audit type. For example, recent and past events could have an impact on which evaluation area was deemed the most important in supplier audits.

> *'. . . we have performed risk audits in the past, like there have been shortages of raw materials in the supplier's operating country, and we have therefore visited the supplier to ensure how it manages its stock and inventory . . .'* (Interview 2)

> *'If [the supplier] has had issues with quality, delivery reliability or the pricing of its products, then we have usually placed more importance on these aspects.'* (Interview 3)

Theme	Description	Subtheme(s)	Description
Quality	Factors influencing the quality of a supplier's processes and products, as well as the indicators used to measure this quality.	Quality assurance	How does the supplier ensure that its products are of high quality?
		Quality Control & Monitoring	How does the supplier control and monitor quality?
		Quality Development	What strategies or mechanisms does the supplier employ to enhance the development of quality?
		Claims	How many claims has the supplier received, and what kinds of claim-related mechanisms does the supplier have in place?
		Certificates	What kinds of certificates does the supplier have?
Product	Factors impacting the perceived value of the supplier's products.	Price	What is the price and price development of the supplier's products?
		Product Quality	Do the supplier's products adhere to specific quality standards?
		Suitability	Are the supplier's products suitable for the requirements of the purchasing organisation?
Reliability	Factors impacting the supplier's reliability and the perceived long-term viability of the supplier relationship.	Capability	Is the supplier able to fulfill the requirements of the purchasing company?
		Delivery Reliability	Can the supplier ensure the timely delivery of products?
		Delivery Capacity	Is the supplier capable of delivering products efficiently?
		Risks	What kinds of risks exist that could negatively impact the supplier's operational and functional capabilities?
		Raw Materials and Stock	Can the supplier ensure access to raw materials, and how does the supplier manage its inventory?
		Stability	How stable is the supplier?
		Adaptability	Is the supplier capable of adapting to changes?
Responsibility	Factors impacting the supplier's social, environmental and financial accountability.	Values	What are the supplier's values?
		Ethics	Does the supplier adhere to ethical standards in its operations?
		Sustainability	Does the supplier operate in a sustainable manner?
		Safety	Does the supplier provide safe working conditions for its employees?
		Financial Responsibility and Stability	Is the supplier financially stable and responsible?
Processes	The extent to which the supplier monitors, manages and controls its different production-related activities.	-	-
Competitiveness	Factors impacting the supplier's competitive position.	Replaceability	How easy is it to replace the supplier?

Figure 16. Themes emerging from the semi-structured interviews.

4.3. Carter's 10Cs: Deeper Insights

Competency

Overall, Competency was ranked as the most important aspect to consider in supplier audits (see Figure 20). As can be seen from Figures 17 and 18, in new supplier and control audits competency was rated as the most significant supplier evaluation category, whereas in strategic audits, it was ranked as the second most important category (see Figure 19). Furthermore, in the context of new supplier audits, Competency was perceived to be a determining factor in whether the purchasing corporation should be doing business with a certain supplier or not.

> *'[It is important to consider] whether the supplier can even respond to the needs and demands of the purchasing company. So, of course, that is the starting point, whether the supplier is able to produce the necessary products. If the supplier cannot [produce the necessary products], then it probably is not a [good] starting point for a [partnership].'* (Interview 5)

> *'Competency is the most important factor [in new supplier audits], like, if we are buying vegetables and the supplier sells windows [it will not work out] . . . [the supplier] has to be able to produce what we require . . . [we have to ensure that] we are working with the right company.'* (Interview 2)

As previously stated, the competency of a supplier was viewed as being important in control audits. However, the participants believed that in control audits the supplier had already been deemed competent during prior audits, as the purchasing company would most likely not be working with said supplier had it not been deemed competent from the very beginning of the partnership.

> *'[In control audits, it is important that the supplier] is capable, that nothing has changed, that they are still able to meet the needs of the buying company.*' (Interview 5)

> *'. . . [in control audits, we have to evaluate] what the supplier's current situation is, can they [still] deliver the necessary products to us.'* (Interview 4)

From the perspective of strategic audits, the competency of a supplier was viewed as a crucial factor in determining whether long-term collaboration with a certain supplier is beneficial or even feasible.

> *'. . . if we are [evaluating] a strategic supplier, we usually think about the long-term prerequisites for a long-term partnership . . . [which is why I think that] competency and the supplier's ability to respond to the needs of the company [is important].'* (Interview 5)

Capacity

Capacity was perceived to be one of the most important factors to consider in all three auditing types. Overall, Capacity was perceived as the second most important factor to evaluate in supplier audits (see Figure 20). As can be seen from Figures 17 and 18, Capacity was viewed as the second most important category in new supplier and control audits, while in strategic audit it was viewed as the most important one (see Figure 19). When determining whether a company should work with a new supplier, Capacity was deemed as one of the most essential factors to consider.

> *'. . . does [the supplier] have sufficient resources, raw materials, and personnel, for example, to meet the [purchasing] company's requirements? So, in a way [competency] is perhaps the very fundamental [factor to consider], when [considering whether we should] begin to establish a partnership with them.'* (Interview 5)

The processes related to ensuring capacity were also perceived as being crucial, particularly in control audits. Additionally, aspects such as delivery reliability were perceived as being connected to capacity, due to their influence on the performance of the purchasing company.

> *'In a way, I reckon that the most important thing [in control audits] is to [evaluate] how [the supplier] can ensure their capacity, and… and really how they run it… process-wise, like how they manage the process as a whole, so that the supply chain works well.'* (Interview 1)

> *'. . . matters related to delivery reliability and capacity [are important in control audits], [as they] of course affect the [supplier's] day-to-day operations and their ability to deliver, which is directly reflected in our own operations and production capacity.'* (Interview 5)

Furthermore, Capacity was believed to be linked to Competence.

> *'. . . capacity [relates to] competency, and in general the [supplier's] knowledge [of how to do something].'* (Interview 3)

> *'Capacity is probably quite similar to competency, but [I think that it is important to evaluate whether the supplier] is capable of producing the quantities we need and able to meet our needs.'* (Interview 2)

Capacity was also associated with the supplier's resources, personnel, and access to raw materials.

> *'. . . [I would say that when evaluating the capacity of a strategic supplier, we should consider] whether the supplier has all the necessary resources, in other words that the supplier's circumstances have not changed, that the [supplier] continues to have access to raw materials and has [enough] personnel et cetera, like necessary capacity . . . to ensure that they can respond to the needs of the purchasing company.'* (Interview 5)

Commitment

Overall, Commitment was regarded as moderately significant, as it was ranked as the fifth most important supplier evaluation category overall (see Figure 20). However, in the context of strategic audits Commitment was perceived as the second least important evaluation category (see Figure 19). Despite being ranked as the fourth most significant evaluation category in control audits (see Figure 18), some argued that Commitment is not as important in these types of audits. This was due to the assumption that in control audits, the supplier has already proved its commitment to the purchasing company; otherwise, the partnership would not have been maintained.

> *'[In control audits] the supplier is already committed. Therefore, I think that [in the context of control audits] it is the least important category [out of Carter's 10 supplier evaluation criteria].'* (Interview 1)

In the context of new supplier audits, Commitment was perceived to be relatively important. As can be seen from Figure 17, in the context of new supplier audits, Commitment was ranked as the fourth most important category to be evaluated. Furthermore, Commitment was perceived to be linked to Quality.

> *'[When ranking Carter's 10 Cs of supplier evaluation in the context of new supplier audits] I ranked it as the fourth most important category. [The supplier] has to be able to commit to the production of high-quality products, and above all, quality is very important to us . . .'* (Interview 2)

Additionally, Commitment was perceived to be linked to the Clean category. Furthermore, when performing audits on new suppliers, Clean and Culture were viewed as being equally significant. Due to these reasons, it was suggested, that these two categories should not be evaluated separately.

> *'. . . if we decide, that okay, [the supplier's] skills and knowledge [are sufficient], and above all communication [is working well], and that we could begin a partnership [with the supplier], then [the supplier] need to commit to certain criteria. Like, in my opinion they cannot be evaluated independently; if [the supplier] commits [to working with the purchasing company], then they must also commit to complying with criteria regarding environmental issues.'* (Interview 3)

Control

Overall, Control was perceived to be somewhat important, as it was ranked as the fifth most significant supplier evaluation category overall (see Figure 20). Furthermore, Control appeared to be especially important in control audits (see Figure 18). However, in both new supplier and strategic audits, control was ranked as the fifth least important category (see Figures 17 and 19). As a supplier evaluation category, Control appeared to be associated with sudden and unforeseen challenges, manufacturing processes and procedures related to delivery reliability.

> *'. . . the supplier has to have their processes under control, and when unexpected challenges arise, [the supplier] has to be able to ensure that they can deliver their products to us. Of course, it depends on whether we are purchasing products from a reseller or a manufacturer, there is definitely a difference. Usually, if you are interacting directly with the manufacturer, they have greater control over their manufacturing processes, and can therefore have a greater impact on delivery reliability et cetera when sudden challenges arise.'* (Interview 2)

Furthermore, Control was associated with Commitment, Consistency, and Quality.

> *'. . . commitment and consistency [are] of course [important when evaluating new suppliers], the supplier has to be able to commit to [producing] high quality [products], and consistently ensure the quality [of its products]. [The supplier] should also be able to impact [the quality of its products].'* (Interview 5)

Cash

Overall, Cash was ranked as the fourth most important supplier evaluation category (see Figure 20). In the context of strategic audits, Cash was rated as the fourth most important evaluation category (see Figure 19), whereas in new supplier audits it was rated as the third most significant category (see Figure 17). However, as can be seen from Figure 18, in the context of control audits, Cash was perceived to be somewhat irrelevant, as it was rated as the third least important category.

Cash was viewed as a metric for assessing the potential future risks associated with working with a particular supplier, particularly in the context of new supplier audits. Furthermore, the main concerns associated with this category were related to the continuity of the supplier's business practices.

> *'. . . of course, the supplier's financial situation [is important when conducting new supplier audits], [we must ensure] that there is no risk of the supplier suddenly going bankrupt.'* (Interview 5)

> *'. . . [I would say that cash is the most important category to consider in new supplier audits] because what if the supplier suddenly goes bankrupt? What if I have found a good supplier, and the partnership fails right at the beginning, because [the supplier] is not financially stable? Like, if the supplier lives on a shoestring. I have had these kinds of suppliers in the past. It is extremely difficult.'* (Interview 4)

> *'. . . [In my opinion cash is the second most important category to consider in new supplier audits] because the supplier should be financially stable since we are usually looking for long-term suppliers . . . the supplier's finances, like, if the possibility of the supplier going bankrupt in the next six months exists, then we should not waste our resources on [them].*

In the context of control audits, however, the supplier's financial stability was not regarded as being as significant as it was in the context of new supplier or strategic audits. Similarly to Competency, it was believed that the supplier had already been deemed financially stable in prior audits, as the purchasing company would most likely not continue working with said supplier if it had not been perceived as being financially stable from the very beginning of the business relationship.

> *'[When I was ranking the supplier evaluation categories based on their importance in control audits] I of course imagined that the supplier is financially stable . . . '* (Interview 4)

On the other hand, in control audits, the supplier's financial status was also perceived as an indicator of how successful and competent the supplier had been in the past and will be in the future.

> *'Well, I would argue [that the most important category to evaluate in control audits is] cash . . . like how well the supplier has performed, [and] what their prospects for the future are like, and, therefore, we of course [evaluate] their financial situation, although without going into detail . . . '* (Interview 5)

In strategic audits, however, the supplier's financial situation was deemed significant, as it was perceived to be linked to the long-term success of the partnership.

> *'If we [are conducting an audit] on a strategic supplier, we think about the prerequisites for a long-term partnership, in other words [that is why I think that] cash [as a supplier evaluation category] should be ranked as one of the most important areas of evaluation.'* (Interview 5)

Cost

In comparison to the other supplier evaluation areas, Cost was perceived as rather insignificant (see Figure 20). Cost was evaluated as the third least important category of evaluation in the context of new supplier and strategic audits (see Figures 17 and 19), while it was considered to be the second least important in control audits (see Figure 18). Some even argued that product prices are irrelevant in supplier audits in general.

> *'Of course, costs are important [in new supplier audits], but at the end [I would still argue that it is one of Carter's least significant categories]. A supplier's product might be cheap, but if the supplier does not meet the requirements of the other categories, at the end, we could lose a great deal of money.'* (Interview 2)

> *'I do not think that costs or product prices are really relevant in audits, especially in control audits.'* (Interview 5)

Furthermore, the quality of the supplier's products was considered to be more important than the prices of the products. This was due to the belief that purchasing and selling low quality products could have a negative impact on the costs of the purchasing company over time.

> *'[Product] prices can certainly be a determinative factor [when selecting a new supplier], but they are not as significant as quality . . . the [product's] quality [is more important as it] can also affect costs.'* (Interview 5)

Consistency

In new supplier and strategic audits, Consistency was rated as the seventh most important evaluation category (see Figures 17 and 19), while in control audits Consistency was perceived as slightly more important, as it was ranked as the sixth most important category (see Figure 18). Overall, Consistency was viewed as somewhat important, as it was ranked as the seventh most important category to consider in supplier audits (see Figure 20). Furthermore, Consistency was associated with Commitment.

> *'. . . [I ranked consistency as the sixth most important evaluation category to consider during new supplier audits], the supplier has to be able to commit to [producing] high quality [products] and ensure quality consistently.'* (Interview 5)

Moreover, Consistency was perceived to be related to both processes and Control.

> *'. . . consistency, I kind of think that it is connected to aspects related to processes . . . I also kind of think that [consistency] is similar to control [as a supplier evaluation category].'* (Interview 1)

In addition, Consistency was deemed as somewhat unnecessary as a separate supplier evaluation category. This was due to the perception, that aspects addressed in the Consistency category were also covered in some of the other categories.

> *'[Out of the ten supplier evaluation categories] I would say that [in new supplier audits] consistency is the least important category. I think that quality already kind of comes up in the other evaluation categories.'* (Interview 2)

Culture

In both control and new supplier audits, Culture was ranked as the fifth most important supplier evaluation category (see Figures 18 and 17). However, in the context of strategic audits Culture was perceived as more important, as it was rated as the third most important category (see Figure 19). Overall, as can be seen from Figure 20, culture was ranked as the third most important category to consider when conducting supplier audits. As a supplier evaluation category, Culture was deemed as somewhat significant, as it was viewed as a factor that could potentially impact the purchasing company's relationship with the supplier.

> *'. . . [when evaluating culture in new supplier audits] we look at whether the [supplier's] methods of operation are similar [to ours] . . . [we ensure] that the supplier does not operate in a way that goes against our values. We do this to avoid any potential conflicts, that could harm the relationship between us and the supplier.'* (Interview 5)

Additionally, it was considered essential that the supplier's values are similar to the values of the purchasing company.

> *'. . . the supplier's values should be somewhat similar to ours, or at the very least, they should support our values.'* (Interview 3)

In the context of control audits, however, some participants did not consider Culture to be as significant as in the context of other audit categories. Once again, this was due to the belief that the purchasing company would most likely not begin a business relationship with a supplier whose values do not align with their own. In other words, control audits would not be conducted on such suppliers.

'I would say that culture is the second least important category [to be evaluated in control audits] . . . at this point [we should know what the supplier's values are like], and I doubt that the supplier's values would have somehow suddenly changed . . .of course when we are auditing a new supplier, it is important that our values align, but maybe at this point [the supplier's values] should already be clear and consistent.' (Interview 5)

From the perspective of strategic audits, however, Culture was viewed as a somewhat significant factor. In addition, Culture associated with the Clean category.

'. . . culture and sustainability . . . I think that they are important in long-term partnerships, like, [we have to ensure] that we still think that we can continue building the strategic partnership, in other words [we have to confirm] that our values match.' (Interview 5)

'. . . I think that as categories clean and culture are quite similar.' (Interview 2)

Clean

In the context of new supplier audits, Clean was ranked as the second least important supplier evaluation category (see Figure 17), while in control audits it was regarded as the least important (see Figure 18). However, in strategic audits Clean was viewed as somewhat more significant, as it was ranked as the fifth most important category (see Figure 19). Overall, Clean was ranked as the seventh most important category to consider, when conducting supplier audits (see Figure 20).

As a supplier evaluation category, Clean elicited somewhat conflicting responses from the participants. Despite the participants' statements that aspects associated with sustainability are important in supplier audits, several of them ranked Clean as one of the least significant categories.

'It feels silly to rank sustainability [as the third least significant evaluation category in control audits], as it is not insignificant.' (Interview 5)

'Is it bad if I rank clean [as one of the least significant categories in new supplier audits]?' (Interview 4)

'Of course, sustainability is important, although it is at the tail end of my ranking [of the categories' importance in the context of control audits].' (Interview 2)

However, as previously stated, in strategic audits, Clean was perceived to be more important than in the two other audit types.

> *'. . . when it comes to sustainability . . . if we have a long-term strategic supplier . . . and as aspects related to sustainability are [nowadays] discussed constantly, it is of course important to us that our supplier operates in a sustainable manner, as it impacts the sustainability of our products as well.'* (Interview 5)

Communication

Similarly to Clean, as a supplier evaluation category, Communication elicited somewhat contrasting responses from the participants. In both strategic and new supplier audits, Communication was rated as the least important evaluation category (see Figures 19 and 17). However, in control audits, Communication was perceived as slightly more significant, as it was rated as the seventh most important category (see Figure 18). Overall, Communication was ranked as the least important evaluation category (see Figure 20). Despite being consistently ranked as the least or one of the least important evaluation categories, Communication was thought to be an important factor to evaluate when conducting supplier audits.

> *'[Generally speaking] communication is something which [suppliers] never seem to manage well enough, not matter what they have done [to ensure that they communicate properly]. It is something that is constantly criticised. [For example,] someone feels like [the supplier] does not communicate well enough, [their] messages do not come through, like, [communication] is definitely an area of focus that should be examined more, and then if we come to the conclusion that [the supplier] communicates with us well enough, then we can leave it at that, but there are companies that have difficulties with communication.'* (Interview 3)

Moreover, communication was associated with risk management.

> *'[I ranked communication as the 7th most important category to consider in control audits]. After all, in [our] day-to-day operation it is important that communication [with the supplier] works properly, and that problems and challenging situations come to our attention as soon as possible for our business to operate effectively.'* (Interview 5)

In the context of new supplier audits, some participants viewed Communication as especially important.

> *'. . . when we have confirmed that [the new supplier] has sufficient capacity and that they are capable [of producing high quality products], [we then must ensure] whether the supplier is able to communicate with us effectively. [I] probably should have ranked [communication] higher.'* (Interview 3)

On the other hand, some argued that in comparison to the other evaluation categories, Communication was relatively unimportant in new supplier audits.

> *'I ranked communication as the least important category to evaluate in new supplier audits. I do think that communication is important, but I would maybe argue that the other categories are more important when we are evaluating a new supplier.'* (Interview 5)

However, Communication appeared to be valued in control audits.

> *'I do think that communication is relevant [in control audits] . . . After all, it is an important part of collecting information.'* (Interview 1)

Evaluation Method

When participants were asked what kind of an evaluation system would be ideal for a multipurpose audit checklist, numerical rating scale was undoubtedly the most popular response.

> *'Maybe a numerical rating scale, like from one to five, would be comprehensive enough, one could already make good estimates with it.'* (Interview 2)

> *'Maybe some kind of a simple numerical scoring system would be useful.'* (Interview 5)

Some also pointed out that the auditors should be encouraged to give more "extreme" scores. In other words, auditors should be motivated to avoid giving different evaluation areas average scores.

'. . . many audit checklists employ a scoring system which ranges from one to five. However, I think it's important that the auditors do not just give every evaluation category an average score, like for example, if the scale is from one to five, every section should not be given a score of three . . . if a supplier actually performs well on a certain area, then that area should be given a [higher] score, or if a supplier does not perform well on a certain area, then a lower score should be given.' (Interview 3)

However, some of the participants believed that employing a numerical scoring system alone was insufficient. Therefore, some suggested that a comment box could be added to support the numerical scoring system.

'. . . a numerical scoring system could be good. In our current audit checklists, we only have the comment box . . . [in the comment box] we write the positive [and the negative] remarks . . . a comment box could be included to explain the reasoning for why a specific score was given.' (Interview 4)

'Usually a "just put a tick in a box" system is not enough . . . audit checklists often require a verbal explanation as reports are written based on them, so there is probably no way of getting rid of the comment box.' (Interview 3)

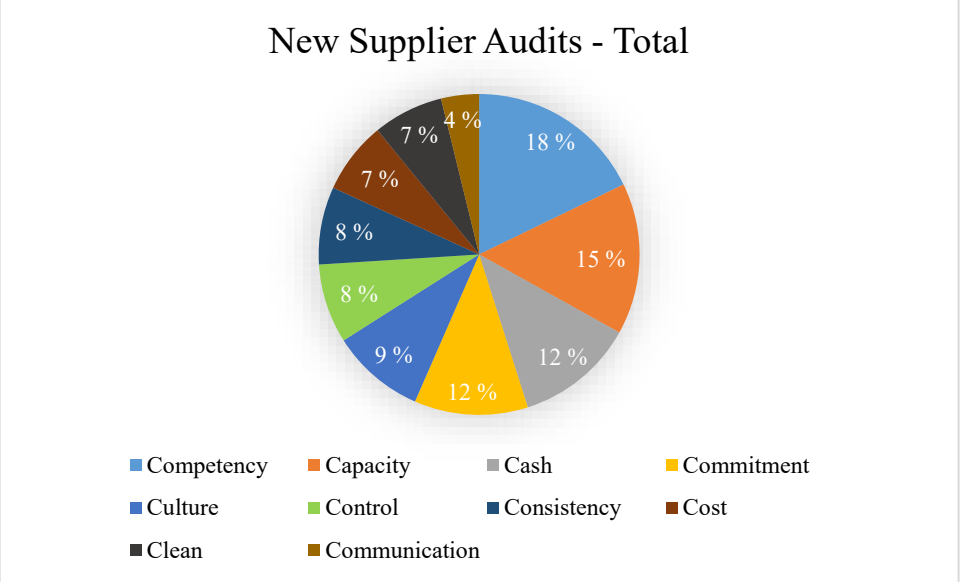

Figure 17. The overall perceived importance of each category in the context of new supplier audits.

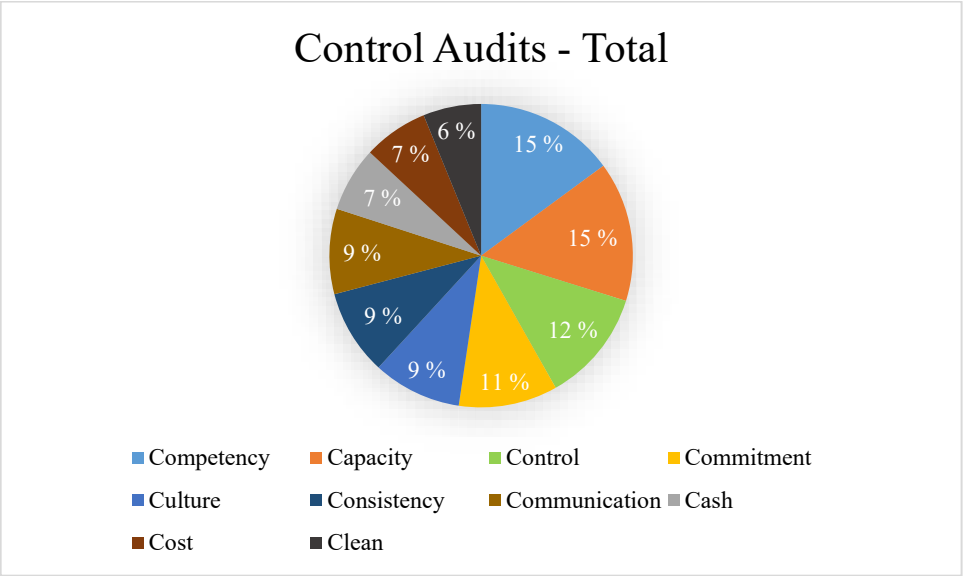

Figure 18. The overall perceived importance of each category in the context of control audits.

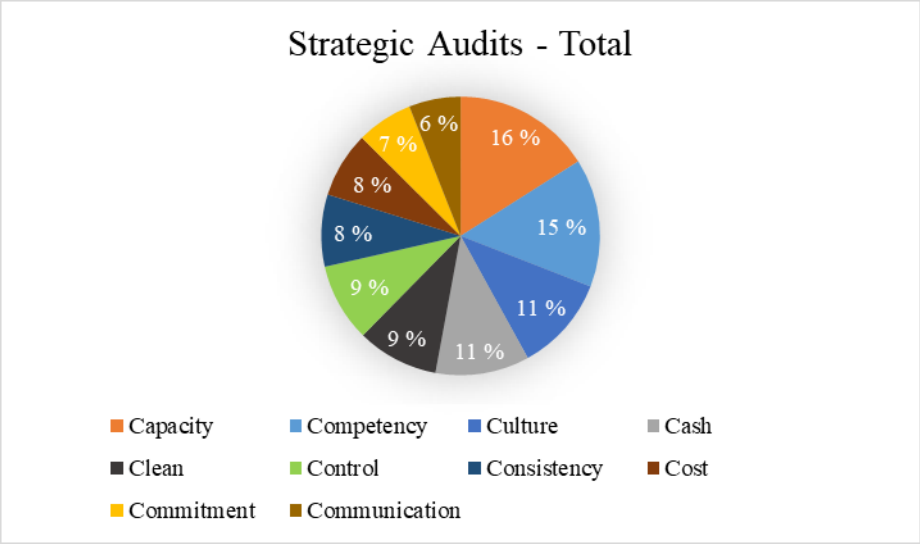

Figure 19. The overall perceived importance of each category in the context of strategic audits.

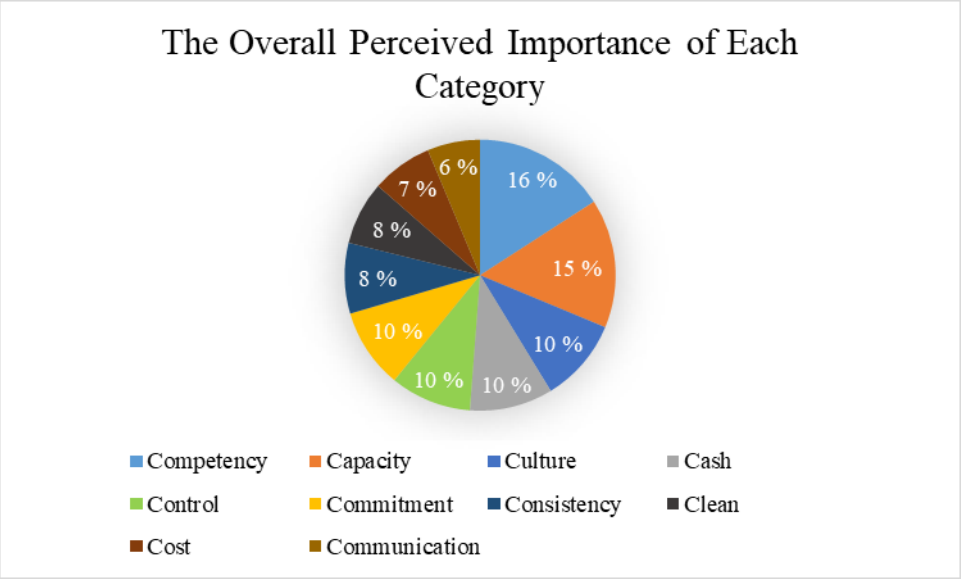

Figure 20. The overall perceived importance of each category combined.

4.4. Cross-comparing and Validating the Findings

Following the completion of the three analyses, the pre-existing supplier evaluation categories and the newly identified themes were compared. Subsequently, these categories were combined to constitute a compilation of distinct categories (see Figure 21). The identified main categories represent the evaluation area as a whole, while the subcategories represent the different factors that should be assessed within the main category.

A draft of a potential multipurpose audit checklist was developed based on the results of the three analyses (see Appendix 2). The subcategories identified through the three analyses serve as individual evaluation areas, that should be considered when evaluating the main category as a whole. Within each subcategory, one or more questions were included as evaluation criteria for the subcategory itself. The questions in each subcategory were developed based on the observational data, interviews, and past research.

The draft employs a columnar format, as the findings of this study indicated that the utilisation of both a comment section and a scoring system as an evaluation tool in a multipurpose audit checklist was deemed to be the most effective approach. Furthermore, the participants suggested that, if a scoring system was utilised, the auditors should be encouraged to refrain from providing "average" ratings. Hence, the scale of the scoring system employed in the draft ranges from one to four. The draft also includes a table with the defi-

nitions for each score, as it could help minimise potential misunderstandings regarding scoring. However, as the results of the analyses suggested, the perceived importance of each category tends to fluctuate depending on the nature of an audit. This finding might complicate the establishment of a scoring system for a multifunctional audit checklist.

As previously mentioned, the focal company requires that its suppliers follow the ESG guidelines. The results of the analyses indicate a strong resemblance between the factors influencing the perceived responsibility of a supplier and the criteria included in the ESG guidelines are very similar. Therefore, the subcategories and their questions were formulated based on the ESG principles.

The results of both the inductive and deductive analyses suggested that out of Carter's 10 Cs, Capacity and Competency were perceived to be the most important areas to evaluate in supplier audits. However, both aforementioned categories are somewhat extensive, and, therefore, it was deemed more appropriate to incorporate features from these categories into more specific subcategories. Furthermore, despite Communication being ranked as one of the least significant categories, the participants expressed that they perceived said category to be important to evaluate when conducting supplier audits. Therefore, the decision to incorporate Communication as a distinct subject area in the draft was considered appropriate.

Although aspects regarding the supplier's financial status and product prices were deemed important to evaluate when assessing the suitability of the supplier, the results of the observation do not support this perception. Therefore, evaluation areas regarding the supplier's financial situation or product pricing were not included in the draft of the multipurpose audit checklist.

Lastly, as can be seen from Figure 21, Information Safety was included as a subcategory within the main category of Communication. Although the results of the analyses do not suggest that the supplier's information security should be evaluated, past research suggests otherwise. For instance, according to Eloff and Solms (2000, p. 698), Information Security can greatly impact how effectively a company operating in the industrial sector is managed. Therefore, including Information Security as its own subcategory was seen as appropriate.

Main category	Subcategories
Quality	Quality Defects
	Quality Assurance and Monitoring
	The Quality of the Final Product
	Quality Development
	Claims and Claim Processes
	Leadership
	Certificates and Standards
	Customer Satisfaction
Reliability	Delivery Reliability
	Access to Raw Materials
	Inventory
	Capacity
Responsibility	ESG
	Sustainability
	Social Responsibility
	Governance
Personnel	Employees
	Employees' Skills
	Employees' Safety
	Work Accidents
Communication	Information Transmission
	Information Security
Equipment and Machinery	System
	Maintenance
	Risks and Exceptional Circumstances

Figure 21. The supplier evaluation categories, and their subcategories, which the results suggest should be included in a multipurpose audit checklist.

To validate the findings of the semi-structured interviews and the observation, and to gain an additional perspective on the draft of the multipurpose checklist, a group interview was conducted. The majority of the participants provided positive feedback regarding the check-list draft. For instance, the participants expressed that the first version of the checklist was clear and appeared to be user-friendly. Furthermore, the participants had a positive response towards the wording of the questions, as they elicited responses that went beyond a binary "yes" or "no" answer.

However, improvement suggestions were also made. For example, the participants suggested that increasing the size of the comment section could be beneficial. Furthermore,

the inclusion of a rating scale for the total points of each category was suggested. In addition, the participants suggested that the rating scale for the total points could include a section detailing the necessary measures that need to be based on the score. The participants also noted that some of the questions could not necessarily be given a score. For example, questions 4.1.1 and 4.2.1 were considered "unscorable". Moreover, the participants recommended that the questions of section 3.4 were further specified.

Some additional questions were also suggested by the participants. In section 6.3, for instance, it was proposed that questions regarding the measures that the supplier has taken to minimise the risks of machinery breaking unexpectedly were added. Additionally, including questions regarding the supplier's methods for measuring delivery reliability was advised. Furthermore, the participants suggested that in the section of Responsibility, additional questions regarding the supplier's values could be added. Lastly, the participants proposed that the checklist could include an additional section regarding the supplier's financial stability and product prices, which would only be evaluated in the context of new supplier audits.

4.5. Towards the Development of a Multipurpose Audit Checklist: Lessons Learned

After the group interview was held, the researcher gained access to the current supplier audit checklists of the focal company. On the basis of the focal company's current checklists and the results of the group interview, a final version of a multipurpose audit checklist was developed (see Appendix 4).

In the final version of the suggested multipurpose checklist, and additional section, Finances and Costs, was included. However, as this category was deemed significant only in the context of new supplier audits, it should only be evaluated when conducting new supplier audits. Furthermore, a guideline table (adapted from Galankashi et al., 2015, p. 692; MANN+HUMMEL, 2021, p. 4) and a separate section for summarising the scores were added to facilitate the analysis of the audit's results and implications. Although the suggested scoring system does not account for differences in the perceived significance of each category, it can nevertheless offer useful insights regarding how well the supplier performs in each individual evaluation aspect.

5. CONCLUSIONS

In this section, the findings of this study will be discussed with regards to the research questions. Furthermore, the study's limitations and potential implications will be assessed. Lastly, suggestions for future research will be presented.

This study was conducted in collaboration with a Finnish middle market company operating in the construction industry. The main objective of this study was to identify the various assessment areas that should be evaluated in three different types of supplier audits: new supplier audits, control audits and strategic audits. Furthermore, based on the identified evaluation areas, a suggestion was made regarding the contents and format of a supplier audit checklist, that could be used regardless of the nature of the audit itself.

5.1. Addressing the Research Questions

In this section, the results of this study will be analysed in relation to the research questions. This study had one primary research question and three sub-questions.

1. *How could a company benefit from adopting a combined audit checklist as opposed to maintaining separate checklists for each of their audit types?*

The primary research question of this study concentrated on the possible advantages and disadvantages associated with the utilisation of a multipurpose audit checklist as a means of evaluating suppliers. However, previous studies have not addressed the potential implications of employing a multipurpose supplier audit checklist. Regardless, some conclusions can be derived based on the results of this study.

The most notable advantage of utilising a single checklist for multiple audit types is that it could potentially facilitate the comparison of the results of different suppliers, as they are evaluated based on the same criteria. Furthermore, the utilisation of a multipurpose checklist could benefit auditors, particularly those with little auditing experience. The consistent nature of a multipurpose audit checklist might allow auditors to become familiar with the contents of the checklist as they become more experienced in performing audits. This is

in contrast to situations where several audit checklists are used for different audit types, as their varying contents may hinder the cultivation of such familiarity.

However, the adoption of a multifunctional supplier audit checklist could also entail certain disadvantages. As the results of this finding suggest, the perceived importance of each assessment category varies between different types of audits. Therefore, if the checklist employs a scoring system, the relative importance assigned to each category cannot be consistent between different audit types. However, this issue could be partially resolved by having auditors collectively determine the significance of each evaluation category and subsequently assign appropriate weight to these categories prior to conducting each audit, although this could be time-consuming. Furthermore, due to the consistent nature of the audit checklist, certain aspects that hold importance solely in the context of a particular audit type might not be addressed as extensively as they would in an audit checklist specifically designed for said audit type.

2. *Which evaluation areas should be assessed in a multipurpose audit checklist?*

The findings of this study suggest that six areas should be addressed in a multipurpose supplier audit: Quality, Reliability, Equipment, Responsibility, Personnel and Communication. However, a seventh evaluation area, Finances and Costs, could be included when auditing new suppliers. In regard to Carter's 10Cs, Competency and Capacity were consistently rated as the two most significant areas to evaluate during supplier audits, while Cost and Communication were perceived to be the least important evaluation aspects overall.

These results are, to some extent, supported by the findings of past research. For instance, the findings of a study conducted by Ho et al. (2007, p. 421) suggest that in the construction industry in Taiwan, the five most significant supplier evaluation areas were perceived to be commitment to quality, ability to meet delivery due dates, prices of materials, reputation of supplier and the supplier's process capability. Similarly to the findings of Ho et al, the results of this study indicate that aspects regarding the supplier's quality management and delivery reliability were perceived as being important to assess in supplier audits. However, costs were only deemed important to assess when auditing new suppliers. Furthermore, the results of this study do not suggest that the reputation of a supplier should be assessed during supplier audits.

Moreover, the results of a study conducted by Kannan and Tan (2002, p. 14) suggest that, in the context of the American manufacturing industry, the most important assessment areas for selecting suppliers were perceived to be the supplier's quality level, service level, on-time delivery, quick response time (in case of emergency, problem or special request) and flexibility to respond to sudden increases in demand. These findings support the ones of this study, as the results of this study indicate that aspects related to quality and delivery reliability should be assessed in a multipurpose audit checklist. Despite the participants' initial perception of Communication being insignificant in comparison to the other aspects of Carter's 10 Cs of supplier evaluation, the results of the group interview still suggest that factors impacting Communication, such as quick response time in case of an emergency, should be evaluated when auditing suppliers. Although the findings of past studies do not specifically determine which categories should be included in a multipurpose audit checklist, they do provide valuable insight into the evaluation categories considered significant in supplier audits.

3. *How do the evaluation areas differ between the three audit types?*

The findings of this study suggest that there is a significant degree of similarity across the three audit types. In other words, the same evaluation areas are assessed across all three types of audits. The only found difference was that in new supplier audits the supplier's financial stability and product prices should be assessed. While the importance of the financial stability of a long-time or strategic supplier was recognised, the evaluation of this aspect was not considered to be relevant in the audits conducted on them.

The most significant difference between the evaluation areas was their perceived importance. Although out of Carter's 10Cs of supplier evaluation, Competency and Capacity were consistently ranked as the two most important supplier evaluation categories across all three audit types, and Communication and Cost were consistently ranked as some of the least significant evaluation categories, there was considerable variation in the perceived importance of the remaining evaluation categories. For example, while Clean was considered to be the second least category in new supplier audits, in the context of strategic audits it was perceived to be the fifth most important. Furthermore, in the context of new supplier and control audits Commitment was ranked as the fourth most significant supplier assessment area, while in strategic audits it was rated as the second least important.

4. *Which performance indicators or metrics should be employed to measure the supplier's performance in a multifunctional audit checklist?*

The results of this study indicate that a scoring system, along with a section for comments, was the most the preferred performance indicator for measuring the performance of a supplier. Furthermore, the findings of this study suggest that the scoring scale utilised in a multipurpose audit checklist should discourage auditors from giving average scores. This finding is supported by past literature. For example, according to Namboodiripad (2015, p. 18), minimising the tendency to give a middle score can be beneficial for auditors, as it can facilitate them to give scores that are reflective of reality.

However, as previously discussed, the differences between the perceived significance of each evaluation area poses difficulties for the implementation of this evaluation approach. Nevertheless, the proposed scoring method can provide insight on the supplier's performance with respect to each specific evaluation area.

5.2. Limitations and Future Research

The most significant limitation of this study was that all of the interview participants were stakeholders of the focal company. Therefore, only the perspective of the focal company was examined, meaning that the results might not be applicable to other companies. Furthermore, the participants were all of Finnish nationality. Therefore, the generalisation of the findings of this study to other industries beyond the Finnish construction industry is uncertain.

In addition, it should be noted that the total number of participants was somewhat small, which could make the results less reliable. Furthermore, as the audit which was observed was a control audit, the data gathered through observation is somewhat limited. The results of this study could have potentially been more reliable if audits of the two other audit types had been observed in addition. Nevertheless, this study provides valuable insight into a research area, that appears to have gained limited attention in past research.

Future research could concentrate on the impact that cultural differences might have on which evaluation categories are considered necessary to evaluate in supplier audits and

the differences between their perceived importance. Furthermore, future studies could evaluate whether the perceived significance of each supplier evaluation category varies across companies operating in the same industry.

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Appendices

Appendix 1: The questionnaire used for the first interviews (translated to English).

The questions of the first interview

1) **Audits in general**
    a. Could you describe the audits conducted by the focal company? (What the audits are usually like, how often are suppliers audited)
    b. Who usually conducts the audits?
    c. How are audits usually executed?
    d. Could you identify and describe some types of audits?
    e. What do you think is important to consider when auditing suppliers?

2) **New supplier audits**
    a. How would you define new supplier audits as a concept?
    b. Which factors should be taken into consideration when conducting new supplier audits?

3) **Control audits**
    a. How would you define new control audits as a concept?
    b. Which factors should be taken into consideration when conducting control audits?

4) **Strategic audits**
    a. How would you define new strategic audits as a concept?
    b. Which factors should be taken into consideration when conducting strategic audits?

5) **Similarities and differences**
    a. How do you think new supplier audits, control audits and strategic audits differ from each other?
    b. What do you think new supplier audits, control audits and strategic audits have in common?

6) **Audit checklists**
    a. What do you think about the current auditing practices and tools?
        i. What advantages do they have? Are there any disadvantages?
    b. How would you change the current audit checklists?
    c. What are the weaknesses of the current audit checklists?
    d. What are the strengths of the current audit checklists?
    e. Which rating system do you think is the most efficient for audit checklists and why?

7) **Carter's 10 Cs of Supplier Evaluation***
    a. What are your opinions on these categories?
    b. Do you think there is a category missing from this list?
    c. Do you consider any of these categories to be irrelevant?
    d. Could you rank these categories based on how important they are in the context of:
        i. New supplier audits
        ii. Control audits
        iii. Strategic audits

*Carter's 10Cs of Supplier Evaluation

1. **Competency**: Is the supplier able to meet the needs of the purchasing company? Is the supplier able to produce the necessary products?

2. **Capacity**: Does the supplier have the necessary resources for producing the products? (For example, raw materials, personnel, machinery, etc.)

3. **Commitment**: Is the supplier able to commit to producing high quality products?

4. **Control**: How well can the supplier control and influence its production and supply chain management? How does the supplier ensure delivery reliability?

5. **Cash**: Is the supplier financially stable?

6. **Cost**: How much do the products of the supplier cost? Are the products of the supplier's competitors more affordable?

7. **Consistency**: How does the supplier ensure that high-quality products are produced consistently?

8. **Culture**: What are the supplier's core values? Are the supplier's values compatible with those of the purchasing company?

9. **Clean**: Are the supplier's practices ethical and environmentally friendly? What strategies are employed by the supplier to minimise its ecological footprint?

10. **Communication:** How does the supplier communicate with the purchasing company? Does the supplier have their own contact person? How and how quickly does the supplier notify, for example, of problems?

Appendix 2: The first version of the multipurpose supplier audit checklist (translated to English).

AUDIT CHECKLIST

Name of supplier/supplier code:	
Name of auditor:	
Date:	
Place:	
Reference number of audit:	

Score	Definition
1 = Poor	• The section's criteria are not met. • Several deficiencies have been found. • Several significant risks identified without adequate corrective actions.
2 = Acceptable	• Criteria are met to some extent, but there is still room for improvement. • Some shortcomings or challenges detected, but no significant risks. • Corrective actions are necessary.
3 = Good	• The section's criteria are mostly met. • Only minor deficiencies were detected, and the risks are under control. • Some improvements still need to be made.
4 = Excellent	• The section's criteria are fully met. • No significant deficiencies or risks have been identified.

1. QUALITY

Subject area and criteria	Score				Comments
	1	2	3	4	
1.1 Quality Defects					
1.1.1 How many quality defects has the company had within the past year?					
1.1.2 How have quality defects been addressed?					
1.2 Quality Assurance and Monitoring					
1.2.1 How is the management of quality ensured?					
1.2.2 How is quality measured and monitored?					
1.2.3 What systems or tools are used to measure quality?					
1.2.4 How are the tools utilised, and who uses them?					
1.3 The Quality of the Final Product					
1.3.1 How is the quality of the final product measured?					
1.4 Quality Development					
1.4.1 How has quality been developed?					
1.4.2 How are opportunities for quality development identified?					
1.4.3 Are employees encouraged to make quality development proposals? How?					
1.5 Claims and Claim Processes					
1.5.1 How many claims has the company received within the past year?					
1.5.2 What policies and procedures does the company employ in relation to the management and resolution of claims?					
1.5.3 Can you describe the processes related to claims?					
1.5.4 How quickly are claims addressed?					
1.6 Leadership					
1.6.1 What kinds of management models does the company utilise?					
1.6.2 How are the roles and responsibilities of the employees divided?					
1.7 Certificates and Standards					
1.7.1 What certificates or standards does the company have?					
1.7.2 To what extent have the aforementioned certificates and standards influenced the company's operational aspects?					
1.8 Customer Satisfaction					
1.8.1 How is customer satisfaction measured?					
1.8.2 How often is customer satisfaction measured?					
1.8.3 What kind of results were obtained from the most recent customer satisfaction measurement?					

Total score: ___ / 84

2. RELIABILITY					
Subject area and criteria	Score				Comments
	1	2	3	4	
2.1 Delivery Reliability					
2.1.1 How is delivery reliability maintained?					
2.1.2 What measures have been taken to ensure delivery reliability?					
2.1.3 Which factors or challenges affect delivery reliability the most?					
2.1.4 What kind challenges have there been regarding delivery reliability? How have these challenges been addressed?					
2.2 Access to Raw Materials					
2.2.1 What are the most important raw materials needed to manufacture the products?					
2.2.2 What procedures does the company have in place to ensure the availability of raw materials?					
2.2.3 Have there been any challenges regarding the availability of raw materials? What kind of challenges?					
2.2.3 How has the company prepared for potential disruptions in the supply of raw materials?					
2.3 Inventory					
2.3.1 How are inventory levels monitored and controlled?					
2.3.2 What methods does the company employ to detect possible inventory errors?					
2.4 Capacity					
2.4.1 How is capacity measured and managed?					
2.4.2 What precautions does the company have in place to minimise the impact of sudden changes on its operations?					
2.4.3 How quickly can products be ordered and delivered if demand suddenly increases?					

Total score: ___/ 52

3. RESPONSIBILITY					
Subject area and criteria	Score				Comments
	1	2	3	4	
3.1 ESG					
3.1.1 Does the company comply with ESG reporting standards?					
3.1.2 How is compliance with ESG reporting standards reflected in the company's operations?					
3.2 Sustainability					
3.2.1 What measures has the company taken to minimise its environmental impact?					
3.2.2 How does the company monitor its carbon footprint? What methods does the company utilise to minimise its carbon footprint?					
3.2.3 What kind of goals regarding sustainable development does the company have?					
3.2.4 What kind of recycling and waste management procedures does the company employ?					
3.3 Social Responsibility					
3.3.1 How does the company ensure that its employees have fair wages and working hours?					
3.3.2 What measures does the company have in place to promote the health and well-being of its employees?					
3.3.3 What measures does the company have in place to prevent discrimination, harassment, and unfair treatment?					
3.4 Governance					
3.4.1 How does the company ensure compliance with laws, regulations, and industry standards?					
3.4.2 How does the company identify and handle potential conflicts of interest?					

Total score: ___/ 44

4.PERSONNEL					
Subject area and criteria	Score				Comments
	1	2	3	4	
4.1 Employees					
4.1.1 How many employees does the company currently have and in which positions?					
4.1.2 Does the company have seasonal or summer employees?					
4.2 Employees' Skills					
4.2.1 How is employee competence ensured?					
4.2.2 How is the learning of employees supported?					
4.3 Employees' Safety					
4.3.1 How does the company ensure that its employees have safe working conditions?					
4.3.2 What kind of safety equipment do the employees have?					
4.3.3 How are employees encouraged to make safety observations?					
4.4 Work Accidents					
4.4.1 What policies does the company have regarding work accidents?					
4.4.2 What kinds of work accidents are the most common?					
4.4.3 What was the most recent work accident like?					

Total score: ___/ 40

5. COMMUNICATION					
Subject area and criteria	Score				Comments
	1	2	3	4	
5.1 Communication					
5.1.1 How does the company ensure clear and timely communication with its customers?					
5.1.2 Does the company have a contact person?					
5.1.3 What communication channels does the company use to communicate with its customers?					
5.2 Information Security					
5.2.1 How does the company ensure that information security obligations are complied with?					

Total score: ___/ 16

6. EQUIPMENT AND MACHINERY					
Subject area and criteria	Score				Comments
	1	2	3	4	
6.1 System					
6.1.1 What system does the company use in its operations?					
6.2 Maintenance					
6.2.1 How is equipment and machinery maintained?					
6.2.2 How often are equipment and machinery maintained and repaired?					
6.3 Risks and Exceptional Situations					
6.3.1 Have there been any challenges with the equipment or machinery? How has the company responded to these challenges?					
6.3.2 How is the continuity of production ensured if a machine essential to production suddenly breaks?					

Total score: ___/ 20

Appendix 3: The group interview questions (translated to English).

Group Interview – Questions

1. What is your first impression of the checklist draft?
    a. What do you think works?
    b. Which aspects should be further developed?
2. Are there any points or features that should be added to or removed from the checklist?
3. Are the questions included in the checklist too broad or narrow?
4. Should the questions in any of the assessment areas be specified?
5. Is the checklist draft too short or long?
6. What do you think about the proposed evaluation system?
    a. Should the scoring of certain areas be emphasised? Are some questions more important to the overall score than others?
7. In which format would the checklist work best?
8. How would you improve the checklist?
9. Should the order of the categories be changed?

Appendix 4: The final version of the multipurpose audit checklist (translated to English).

AUDIT CHECKLIST

BASIC INFORMATION	
Supplier's name:	
Supplier's Business ID:	
Supplier's address:	
Supplier's contact person: • Phone number: • E-mail:	
Number of employees:	
Revenue:	
Date of audit:	
Names of auditors:	

NATURE OF THE AUDIT:

- ☐ New supplier audit
- ☐ Control audit
- ☐ Strategic audit
- ☐ Other (please specify):

Score	Definition
1 = Poor	• The section's criteria are not met. • Several deficiencies have been found. • Several significant risks identified without adequate corrective actions.
2 = Acceptable	• Criteria are met to some extent, but there is still room for improvement. • Some shortcomings or challenges detected, but no significant risks. • Corrective actions are necessary.
3 = Good	• The section's criteria are mostly met. • Only minor deficiencies were detected, and the risks are under control. • Some improvements still need to be made.
4 = Excellent	• The section's criteria are fully met. • No significant deficiencies or risks have been identified.

1. QUALITY					
Subject area and criteria	Score				Comments
	1	2	3	4	
1.1 Quality Defects					
1.1.1 How many quality defects has the company had within the past year?					
1.1.2 How have quality defects been addressed?					
1.2 Quality Assurance and Monitoring					
1.2.1 Does the company have a certified quality management system?					
1.2.2 How is quality managed?					
1.2.3 How is quality measured and monitored?					
1.2.4 What systems or tools are used to measure quality? How are these tools utilised, and who uses them?					
1.3 The Quality of the Final Product					
1.3.1 Do the products the supplier delivers fall within the scope of the product standard (CE marking)?					
1.3.1 How is the quality of the final product measured?					
1.4 Quality Development					
1.4.1 What measures has the company taken to ensure the development of quality during the past year?					
1.4.2 How are opportunities for quality development identified?					
1.4.3 Are employees encouraged to make quality development proposals? How?					
1.5 Claims and Claim Processes					
1.5.1 How many claims has the company received within the past year?					
1.5.2 What policies and procedures does the company employ in relation to the management and resolution of claims?					

1.5.3 Can you describe the processes related to claims?					
1.5.4 How quickly are claims addressed?					
1.6 Leadership					
1.6.1 What kinds of management models does the company utilise?					
1.7 Customer Satisfaction					
1.7.1 How does the company monitor customer satisfaction?					
1.7.2 How is customer satisfaction measured?					
1.7.3 How often is customer satisfaction measured?					
1.7.4 What kind of results were obtained from the most recent customer satisfaction measurement?					

Total score: ___/ 80

2. RELIABILITY

Subject area and criteria	Score				Comments
	1	2	3	4	
2.1 Delivery Reliability					
2.1.1 How is delivery reliability maintained?					
2.1.2 What measures have been taken to ensure delivery reliability?					
2.1.3 Which factors or challenges affect delivery reliability the most?					
2.1.4 What kind of challenges have there been regarding delivery reliability? How have these challenges been addressed?					
2.2 Access to Raw Materials					
2.2.1 What are the most important raw materials needed to manufacture the products?					
2.2.2 What procedures does the company have in place to ensure the availability of raw materials?					
2.2.3 Have there been any challenges regarding the availability of raw materials? What kind of challenges?					
2.2.4 How has the company prepared for potential disruptions in the supply of raw materials?					
2.3 Inventory					
2.3.1 How are inventory levels monitored and controlled?					
2.3.2 What methods does the company employ to detect possible inventory errors?					
2.4 Capacity					
2.4.1 How is capacity measured and managed?					
2.4.2 What precautions does the company have in place to minimise the impact of sudden changes on its operations?					
2.4.3 How quickly can products be ordered and delivered if demand suddenly increases?					

Total score: ___/ 52

3. EQUIPMENT					
Subject area and criteria	Score				Comments
	1	2	3	4	
3.1 System					
3.1.1 What system or software does the company use in its operations?					
3.2 Maintenance					
3.2.1 How is equipment and machinery maintained?					
3.3 Risks and Exceptional Situations					
3.3.1 Have there been any challenges with the equipment or machinery? How has the company responded to these challenges?					
3.3.2 How is the continuity of production ensured if a machine essential to production suddenly breaks?					

Total score: ___/ 16

4. RESPONSIBILITY					
Subject area and criteria	Score				Comments
	1	2	3	4	
4.1 Values and Ethics					
4.1.1 What are the company's core values?					
4.1.2 Has the company defined its ethical guidelines (i.e., Code of Conduct)? If so, where can it be found?					
4.2 ESG					
4.2.1 Does the company comply with ESG reporting standards?					
4.2.2 How is compliance with ESG reporting standards reflected in the company's operations?					
4.3 Sustainability					
4.3.1 Does the company have a sustainability management system? If yes, is it certified?					
4.3.2 What measures has the company taken to minimise its environmental impact?					
4.3.3 How does the company monitor its carbon footprint? What methods does the company utilise to minimise its carbon footprint?					

4.3.4 What kind of goals regarding sustainable development does the company have?					
4.3.5 What kind of recycling and waste management procedures does the company employ?					
4.4 Social Responsibility					
4.4.1 How does the company ensure that its employees have fair wages and working hours?					
4.4.2 What measures does the company have in place to promote the health and well-being of its employees?					
4.4.3 What measures does the company have in place to prevent discrimination, harassment, and unfair treatment?					
4.5 Governance					
4.5.1 How does the company ensure compliance with laws, regulations, and industry standards?					
4.5.2 How does the company identify and handle potential conflicts of interest?					

Total score: ___/ 56

5. PERSONNEL					
Subject area and criteria	Score				Comments
	1	2	3	4	
5.1 Employees					
5.1.1 Does the company use subcontractors (if yes, what for?)					
5.1.2 Is the Act on Contractor's Obligations and Liability applied to your company?					
5.2 Employees' Skills					
5.2.1 How is employee competence ensured?					
5.2.2 How is the learning of employees supported?					
5.3 Employees' Safety					
5.3.1 Does the company have a Safety Management System? If yes, is it certified?					
5.3.2 How does the company ensure that its employees have safe working conditions?					
5.3.3 What kind of safety equipment do the employees have?					
5.3.4 How are employees encouraged to make safety observations?					
5.4 Work Accidents					
5.4.1 What policies does the company have regarding work accidents?					
5.4.2 What kinds of work accidents are the most common?					
5.4.3 When did the most recent work accident happen?					

Total score: ___/ 44

6. COMMUNICATION

Subject area and criteria	Score 1	2	3	4	Comments
6.1 Communication					
6.1.1 How does the company ensure clear and timely communication with its customers?					
6.1.2 Does the company have a contact person?					
6.1.3 What communication channels does the company use to communicate with its customers?					
6.1.4 Does the company use electronic invoicing?					
6.2 Information Security					
6.2.1 How does the company ensure that information security obligations are complied with?					

Total score: ___/ 20

(NB: only fill in when conducting new supplier audits)

7. FINANCES & COSTS

Subject area and criteria	Score 1	2	3	4	Comments
7.1 Financial Stability					
7.1.1 What has been the trend in the company's revenue during the past three years?					
7.1.2 Is the company's current cash flow positive?					
7.1.3 What measures has the company taken to minimise risks that could negatively impact its financial stability?					
7.2 Product Prices					
7.2.1 What is the price structure of the company's products like?					
7.2.1 Which factors impact the pricing of the company's products the most?					
7.2.1 What has the price development of the company's products been like over the past two years?					

Total score: ___/ 24

AUDIT CHECKLIST – TOTAL SCORES

Assessment Criteria (%)	Unsatisfactory (<60 %)	Needs Improvement (60 % - 70 %)	Satisfactory (70 % - 90 %)	Outstanding (>90 %)
Definition	• Multiple areas for improvement identified. • Further actions required. • Supplier required to provide an action plan regarding identified issues. • Partnership with supplier cannot be established/should be put on hold.	• Several areas for improvement identified. • Further actions required. • Supplier required to provide an action plan regarding identified issues. • Continuation/formation of partnership should be reconsidered.	• A few areas for improvement identified. • Some further actions may be required. • Partnership with supplier can be established/continued.	• No significant areas for improvement identified. • No further actions required. • Partnership with supplier can be established/continued.

	Section		Points achieved	Score %
Quality	1.1	Quality Defects	___/ 8	
	1.2	Quality Assurance and Monitoring	___/ 16	
	1.3	The Quality of the Final Product	___/ 8	
	1.4	Quality Development	___/ 12	
	1.5	Claims and Claim Processes	___/ 16	
	1.6	Leadership	___/ 4	
	1.7	Customer Satisfaction	___/ 16	
	Total Score: ___/ 80 → ___%			
Reliability	2.1	Delivery Reliability	___/ 16	
	2.2	Access to Raw Materials	___/ 16	
	2.3	Inventory	___/ 8	
	2.4	Capacity	___/ 12	
	Total Score: ___/ 52 → ___%			
Equipment	3.1	System	___/ 4	
	3.2	Maintenance	___/ 4	
	3.3	Risks and Exceptional Situations	___/ 8	
	Total Score: ___/ 16 → ___%			
Responsibility	4.1	Values and Ethics	___/ 8	
	4.2	ESG	___/ 8	
	4.3	Sustainability	___/ 20	
	4.4	Social Responsibility	___/ 12	
	4.5	Governance	___/ 8	
	Total Score: ___/ 56 → ___%			
Personnel	5.1	Employees	___/ 8	
	5.2	Employee's Skills	___/ 8	
	5.3	Employee's Safety	___/ 16	
	5.4	Work Accidents	___/12	
	Total Score: ___/ 44 → ___%			
Commu-nication	6.1	Communication	___/ 16	
	6.2	Information Security	___/ 4	
	Total Score: ___/ 20 → ___%			
Overall Score: ___/268 → ___%				
Finances & Costs	7.1	Financial Stability	___/ 12	
	7.2	Product Prices	___/ 12	
	Total Score: ___/ 24 → ___%			
Overall Score: ___/292 → ___%				