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Economics

# **Evaluating sustainable purchasing and supply management performance for a tier-1 company**

Operations and Supply Chain Management

Master's thesis

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Sustainable purchasing and supply management is a growing field both in academia and in companies. New legislation requires firms to mitigate, prevent and address adverse impacts in their supply chains which puts pressure on bigger firms to manage their supply chain's sustainability performance. However, assessing sustainability performance in firm's supply chain is complicated because of various factors. Therefore, a detailed tool for assessing sustainability performance in a firm's supply chain is needed to help purchasing and supply chain functions to enable firms to work more sustainably, especially the case company in this thesis.

Pressures from legislation and customers push tier-1 suppliers to adopt sustainability practices into their own operations and further to the supply chain. Low efforts on adopting a due diligence process plays a big role in why sustainability has been difficult to adopt in purchasing functions. The European Union's new directive on corporate sustainability due diligence requires bigger companies to conduct due diligence in their supply chains by the end of 2020s. Practices of conducting due diligence have been shown to vary widely and their effectiveness is not set in stone. This thesis will tackle this problem by bridging the gap between legislative requirements and academic best-practices to build a maturity model on the due diligence process. Maturity models have been shown to be a good tool to both evaluate organizational performance and improve it.

The study utilizes a constructive research approach in which a maturity model based on scientific literature is validated by an expert interview. The study created five levels of maturity ranging from "Unaware and uncertain" to "Leadership and certainty". The model's six dimensions are structured by a due diligence process made by OECD and subdimensions are both from the academic literature and OECD's due diligence process. This in turn creates both a valid maturity model and one that can enable companies to build competencies to comply with the CSDDD. The result of the study was a validated maturity model that can enable the case company to measure its sustainable PSM performance and give the top management a critical view on the organizational competence of the firm. With proper knowledge, resources and cooperation with relevant stakeholders, the maturity model can enable the company to build its competencies to a level of sustainability leaders.

**Key words:** Sustainable purchasing and supply management, maturity model, due diligence

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Kestävä hankinta ja toimitusketjun hallinta ovat kasvava ala tutkimuksessa ja yrityksissä. Uusi lainsäädäntö edellyttää yrityksiä lieventämään, ennaltaehkäisemään ja käsittelemään haitallisia vaikutuksia toimitusketjuissaan, mikä asettaa paineita suuremmille yrityksille hallita toimitusketjunsä kestävyyttä. Kuitenkin kestävyysarvioinnin suorittaminen yrityksen toimitusketjussa on monimutkaista erilaisten tekijöiden vuoksi. Siksi tarvitaan yksityiskohtainen työkalu kestävyuden arvioimiseksi yrityksen toimitusketjussa auttamaan ja mahdollistamaan hankinta- ja toimitusketjun toimintoja auttamaan yrityksiä työskentelemään kestävämmiin, ja erityisesti tämän tutkielman tapausyritystä.

Lainsäädännön ja asiakkaiden paineet ajavat ensimmäisen tason toimittajia omaksumaan kestävyyskäytäntöjä omaan toimintaansa ja siitä yhä edelleen toimitusketjuun. Vähäiset ponnistelut due diligence -prosessin omaksumisessa ovat suuri syy siihen, miksi hankinnan on ollut vaikeaa omaksua kestävä kehityksen vaatimuksia. Euroopan unionin uusi direktiivi yritysten huolellisuusvelvoitteesta vaatii suurempia yrityksiä suorittamaan due diligence -toimia toimitusketjuissaan 2020-luvun loppuun mennessä. Due diligence:n suorittamisen käytännöt ovat osoittautuneet vaihteleviksi ja niiden tehokkuus ei ole ollut itsestään selvää. Tämä opinnäytetyö käsittelee tätä ongelmaa yhdistämällä lainsäädännöllisiä vaatimuksia ja akateemisesti parhaaksi koettuja käytäntöjä rakentaakseen kypsyysmallin due diligence -prosessille. Kypsyysmallit ovat osoittautuneet hyväksi työkaluksi sekä organisaation suorituskyvyn arvioimisessa että parantamisessa.

Tutkimus hyödyntää konstruktivistista tutkimuslähestymistapaa, jossa tieteelliseen kirjallisuuteen perustuva kypsyysmalli validoidaan asiantuntijahaastatteluilla. Tutkimus loi viisi kypsyuden tasoa "Tietämätön ja epävarma" ja "Johtajuus ja varmuus" välillä. Mallin kuusi ulottuvuutta on rakennettu OECD:n laatiman due diligence -prosessin mukaan ja alalottuvuudet ovat peräisin sekä akateemisesta kirjallisuudesta että OECD:n due diligence -prosessista. Tämä puolestaan luo sekä pätevän kypsyysmallin että sellaisen, joka voi auttaa yrityksiä rakentamaan kyvykkyyksiä noudattaakseen EU:n huolellisuusvelvoitedirektiiviä. Tutkimuksen tuloksena syntyi validoitu kypsyysmalli, joka mahdollistaa kohdeyrityksen kestävä hankinta- ja toimitusketjun hallinnan suorituskyvyn mittaamisen ja tarjoaa ylimmälle johdolle kriittisen näkemyksen yrityksen organisaation osaamisen tasosta. Oikeilla tiedoilla, resursseilla ja olennaisten sidosryhmien yhteistyöllä kypsyysmalli voi auttaa yritystä kehittämään osaamistaan kestävä kehityksen johtajien tasolle.

**Avainsanat:** kestävä hankinta ja toimitusketjujen hallinta, maturiteettimalli, due diligence

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## **LIST OF ABBREVIATIONS**

CSDDD	Corporate Sustainability Due Diligence Directive
CSRD	Corporate Sustainability Reporting Directive
ESG	Environmental, Social and Governance
EU	European Union
MNC	Multinational corporation
PSM	Purchasing and Supply Management
RBC	Responsible business conduct
SAQ	Sustainability assessment questionnaire
SCoC	Supplier Code of Conduct
SDG	Sustainable Development Goal
TBL	Triple bottom line





# 1 Introduction

## 1.1 Background

Companies are as sustainable as their supply chains. Many multinational corporations (MNC) are willing to implement sustainable procurement practices into their supply chains according to the triple bottom line standard (TBL) – people, planet, profit (see Table 1). However, the fact that some MNCs don't yet include any sustainability criteria of the TBL in their procurement processes increases the risks of sustainability violations upstream of the supply chain. In addition, great supply chain complexity often means that sustainability information is generally hard to gather (Villena & Gioia 2020; Fraser et al. (2020, 1). Purchasing and supply management (PSM) is thus a vital area for corporate sustainability and performance. Kähkönen et al. (2017) suggest sustainable PSM activities will bring significant value to the corporation's sustainability performance if managed properly. A more sustainable PSM is not about managing unsustainable supply chains in a more sustainable way, but rather creating and managing a sustainable supply chain (Schulze et al. 2019).

Sustainability can be seen as not repeatedly performing or enhancing unsustainable practices. Sustainable supply chain on the other hand can be seen as not only performing well on profit, quality and service but also expand the conceptualization of performance into social and environmental dimensions and thus considering all aspects of TBL into companies supply chain (Kähkönen et al. 2017). Soini & Birkeland (2014) suggested that there should be 4<sup>th</sup> dimension in TBL – cultural sustainability. This dimension is seen in legislation under social and thus will be managed so in this thesis.

Table 1 – Triple Bottom Line (Ahmad et al. 2019)

	<b>Examples of TBL aspects</b>	<b>Examples of TBL indicators</b>
People	Workers/employees Local community and society Customers/consumers	Worker's health and safety Forced labor Local employment Transparency
Planet	Material used Energy used Water used Air emissions Wastewater	Overall emissions Air pollution Overall energy Overall materials Overall solid waste

	Examples of TBL aspects	Examples of TBL indicators
	Solid waste	
Profit	Cost Profit	Overhead Investment Revenue Profit

Sustainable PSM is regarded as an important part of sustainability performance, but sustainable PSM activities of individual firms are still less known and the whole sustainable PSM performance is typically not evaluated (Akhavan & Beckmann 2017). However, the European Union is pushing forward new legislation to tackle this issue. On 31<sup>st</sup> of July 2023, European Commission adopted new initiative regarding European sustainability reporting standards (ESRS) which sets out requirements for reporting the TBL areas as well as clear requirements for firms to handle TBL issues in their supply chains (European Commission 2023). Furthermore, the European Union has published a directive on Corporate Sustainability Due Diligence Directive (CSDDD) which sets out comprehensive mitigation processes for the companies to achieve goals of the European Green Deal and delivery of the UN Sustainable Development Goals (Council of the European Union 2024). These legislations are going to be implemented at a fast pace and thus lack comprehensive research about their effects on business and PSM activities.

European Commission (2022) launched the CSDDD to mitigate sustainability risks for more companies to exercise due diligence on their supply chains. The proposal for a directive concludes that to lack of legal clarity, complexity of value chains, market pressure, information deficiencies and costs cause companies to not practice due diligence which leads to inconsistencies on sustainability performance and have led to for example human rights violations in EU companies' value chains.

The final agreement for CSDDD was passed on 15<sup>th</sup> of March 2024. The CSDDD determines that companies should establish a six-step due diligence process in accordance with OECD Due Diligence Guidance for Responsible Business Conduct. The scope and implementation of the CSDDD is set to three phases based on companies' employee number and turnover. Directive's transposition into national law is planned to enter in 2026. In the last phase companies in EU member states that have 1000+ employees on average over the financial year and have a net worldwide turnover of more than EUR 450

million are under the scope of the directive. The assignment company is in the scope of this legislation. (Council of the European Union 2024)

This research is a part of an assignment for a multinational automotive company which is keen on building its capability of sustainable PSM at a long-term strategical level. The company has launched an initiative for sustainable PSM and is currently building and enhancing its capabilities for sustainable PSM. The company has recognized its unique position in the value chain as a tier-1 supplier supplying multiple MNCs, has thousands of suppliers and is thus eager to build sustainable PSM performance further. The objective of this research is to close the gap between sustainable PSM and upcoming EU legislation about sustainable PSM to be able to evaluate the company's sustainable PSM performance. The research method used for this thesis is a maturity model in accordance with Maier et al. (2012).

## 1.2 Research question

This study will build a maturity model for a tier-1 automotive company about their sustainable PSM performance. The research question has been addressed as follows:

- ***RQ1:*** *How to measure sustainable purchasing and supply management performance with a maturity model in a tier-1 automotive company?*

The aim of this research question is to find out an answer for the research problem which is how a company can measure its PSM performance most effectively and more importantly objectively in a quickly changing world of sustainability. Typically, sustainability is viewed as subjective matter which means that companies choose sustainability problems they tackle. This is due to improper legislation now, but upcoming legislation will force EU companies to assure their compliance in sustainability. The assignment company has conducted a Double Materiality Assessment in accordance with Corporate Sustainability Reporting Directive (CSRD) and the relevant sustainability topics noticed are the base in this thesis. A maturity model is chosen to give an academic background for this research and build a more effective and futureproof set of requirements which are then evaluated. This allows the assignment company to then see their baseline and set future road maps for a more sustainable PSM.

## **2 Sustainability as a competitive advantage**

### **2.1 Sustainable PSM as part of Corporate Sustainability**

Corporate sustainability can be seen as a three-principal concept: environmental, social and governance (ESG) which is a similar concept compared to TBL. Teerikangas et al. (2021) saw sustainability as a growing agenda in companies and commonly it is seen as sustainable development that doesn't compromise future generation's ability to meet their needs. This definition of sustainability is also acknowledged in this thesis and in context of corporate sustainability. However, corporations have had difficulties in implementing this practice although there have been several efforts (Villena et al. 2019; Meehan & Bryle 2011). Villena (2018) sees procurement as a key part of corporate sustainability. They state that procurement is typically built to minimize costs and maximize quality while improving flexibility, but sustainability as environmental and social factors may not be included in procurement terms. The classic procurement function thus has not motivated the supply chain to improve sustainability aspects which has led to multiple violations and bad publicity for some MNCs. The assignment company plays a critical role in MNC's sustainability efforts as a tier-1 supplier because of their deeper control of the supply chain. The Villena (2018) study mentions that typically MNCs cascade their sustainability requirements to their tier-1 suppliers which are supposed to integrate these requirements into their own policies and thus deeper into supply chain. However, the study argues otherwise as this has not happened in practice. The problem lies in the fact that typically buyers of tier-1 suppliers are not aware of some MNCs sustainability requirements and procurement managers in some cases have downplayed supplier sustainability.

Meehan & Bryle (2011) mentioned the importance of imbedding sustainable procurement practices into corporate sustainability. The study discovered that environmental practices were more advanced than socio-economic ones back in 2011. Furthermore, the study found that there were more sustainable procurement practices being worked towards or not considered than compared to those ones in place. This brings a dilemma as Krause et al. (2009) suggested that a company is no more sustainable than its supply chain. The study argues that if a company wants to put sustainable development into its strategy, it needs to put that in place also in business functions, such as procurement.

Hahn et al. (2017) study says that unsustainable practices in a firm hinders its sustainability commitments. These activities have a negative impact on the firm's surroundings and the value chain. This creates an issue that some firms are wearing out environmental and social systems leading to sustainability violations. Therefore Bari et al. (2022) argue that the paradox of corporate sustainability will lead to differences in sustainability performance of firms and creates a competitive advantage for the firm leading sustainability. The study argues however, that typical focus on only ESG ratings and requirements will lead to firms experiencing no to little competitive advantage because of the lack of dynamic capability. Dynamic capability in this context means flexibility in matching current resources with upcoming requirements from outside of the firm. It was discovered in the study that sustainable PSM will have a very high impact on corporate sustainability regardless of the firm size. Furthermore, sustainable PSM together with sustainable strategic management were found to contribute the most to dynamic capability and corporate sustainability.

Miemyczyk et al. (2012) study found that sustainability practices have concentrated more heavily on environmental ones compared to social practices. Moreover, when asked, companies tend to see their sustainability to be in a good place. This is contradictory to the results of various sustainability self-assessments and this conflict is due to personnel having more positive attitudes and views on their own company's performance on sustainability. Furthermore, the views of sustainability are relative and subjective from one organization to another which brings complications to the table and makes determining the supply chain sustainability difficult from one company to another.

A supplier's sustainability performance has a clear impact on the buying company's value. The study found that supplier's social aspects of sustainability especially affected buying firm's value. To a tier-1 supplier, building capability on sustainability is thus valuable. However, companies having positive news about sustainability has risen drastically in recent years, as has the value add from positive news while negative news on sustainability violations have significantly increased the negative impact on a firm's value. Value added to the company when improving sustainable PSM has been found to vary. Calculating value added can be difficult when you cannot count saved negative events over the long run and building sustainability into supplier's competencies tend to be expensive. (Rogers et al. 2023)

Rogers et al. (2023) also found that firms tend to achieve a positive relationship between sustainability and financial performance. When measuring the positive relationship, it was discovered that past research had contradictory results on this relationship where some saw positive and some negative signs. It was argued that financially healthy companies tend to make more investments into sustainable development and thus see better results compared to low-profit companies. Furthermore, the study found that negative social events have a higher impact on firm value than negative environmental ones. However, study's results show that stakeholder awareness has increased significantly on sustainability violations over the last 20 years. This may be due to better communication and endorsement of sustainability, but the fact is that stakeholders are proven to punish a company for its sustainability violations in the supply chain. That is why building the sustainability capability into the PSM is important.

Gimenez et al. (2012) discovered that collaborating with key suppliers will lead to a more sustainable and competent supply chain. Assessments such as sustainability assessment questionnaires (SAQ) are a good starting point for supplier sustainability, but a more collaborative approach is needed if capability building is to be taken seriously. The study found a positive relationship between supplier commitment to sustainability and collaboration. Two enablers enabling sustainable PSM practices were also found: internal and external capabilities. These are like the dynamic capability Bari et al. (2022) mentioned where stakeholders outside the company are pushing requirements and internal resources are allocated and used the most efficiently as possible to give the optimal result. Therefore, educating purchasing staff and having clear performance objectives are crucial for sustainable PSM.

## **2.2 Disclosing sustainability information related to PSM**

According to Marshall et al. (2016) supply chain disclosure is a theme where companies tend to share publicly their supply chain's information. Companies have gathered some transparency into their supply chains, but fatigue in information gathering is setting because there is lack of automated information sharing in supply chains and non-industrial assessments are loading the workforce. High-quality transparency systems tend to be a substantial up-front investment and require deep collaboration in the supply chain on top of typical operational activities. Supply chain information disclosure is a hot topic as sustainability communication is directed to both internal and external stakeholders

which are evaluating the information and giving value to the company. On the other hand, the level of sustainability risk in the supply chain varies, and Marshall et al. (2016) made a supply chain disclosure matrix (see Figure 1) to evaluate how to disclose sustainability information. Managers can then optimize the value created when deciding on what information to share based on the severity and possibility of risk and the possibility of value added to the company.

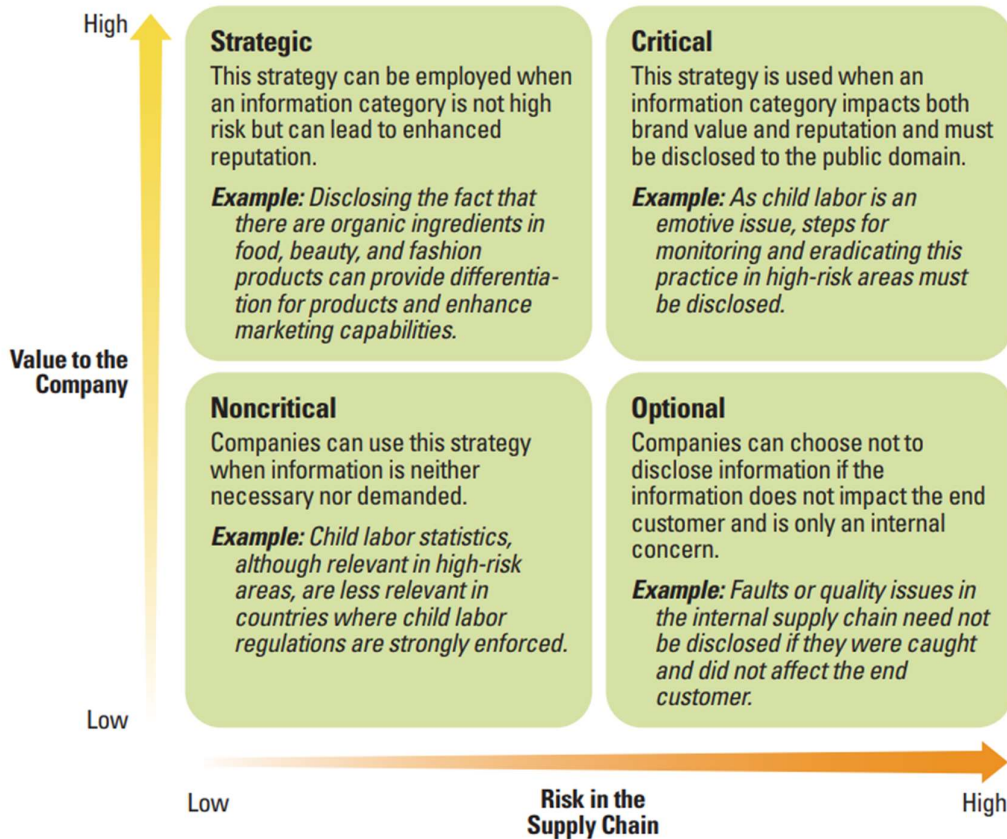


Figure 1 - Supply chain disclosure matrix (Marshall et al. 2016)

Marshall et al. (2016) found that supply chain disclosure is a key topic in being on point in sustainability requirements coming out from stakeholders so that most critical information is disclosed but also the less relevant information is not disclosed which in other words means greenwashing. Therefore, the study suggested a 6-point strategy for supply chain disclosure (see Figure 2). Firms can utilize this step-by-step procedure to maximize competitive advantage gathered from a more sustainable supply chain.



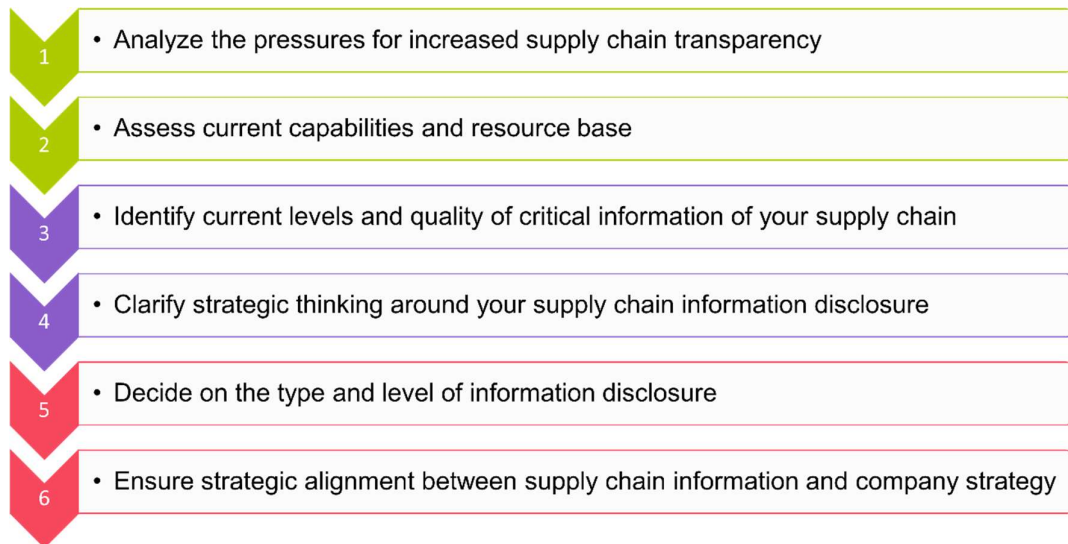


Figure 2 – Strategy for supply chain disclosure adopted from Marshall et al. (2016)

Hung Lau et al. (2023) study conducted research on how companies disclose sustainability information on 4-axis: governance, economic, social and environmental. They gathered 33 relevant topics and found out that industry group consisting of materials and consumer goods were reporting more on the governance and environmental than social and economic. The reasons behind this phenomenon need more research, but many of these 33 topics reported are being proposed by European Financial Reporting Advisory Group (EFRAG) and thus results on these topics may be improved in the future.

Okongwu et al. (2013) study on the other hand researched supply chain disclosure maturity as part of continuous improvement. The study proposed a framework maturity model for firms to improve their supply chain sustainability disclosure. The defined sustainability criteria mentioned in the maturity model were at most importance as they integrated organizational sustainability and supply chain sustainability as one. There were in total 3 parts of sustainability defined: corporate governance and management, societal development sustainability and supply chain sustainability. This contradicts from the famous TBL as having supply chain sustainability as one big part of the model. The study found out that B2C companies tend to disclose more sustainability information than B2B companies and that disclosure maturity is low compared to theoretical expectations. This has been improved according to Hung Lau et al. (2023) study as companies have improved their governance and environmental disclosure, but social and economic aspects seek to be improved upon.

Chen & Slotnik (2015) studied costs of supply chain disclosure and found that an unethical firm should disclose information when its ethical rival is disclosing information, and the ethical firm should not disclose information if its unethical rival does not disclose. Although, the firm must not always think about costs when to disclose. Market responds to disclosure complexly and interdependently and should also be considered when information is to be disclosed. Market share affects an ethical company so that they should disclose when they have lower market share and an unethical firm should disclose mainly based on the costs, not the market share. Probability of discovery also affects disclosure as when the probability is high, then the information should be disclosed. However, the study underlined the importance of transparent supply chain and how customers are looking forward to knowing where their product has been made at. But the question remains: how do companies gather sustainability related information from their PSM practices?

### **3 Sustainable PSM in the automotive industry**

#### **3.1 Key sustainable PSM practices in the automotive industry**

In the following chapters, we are looking at the sustainable PSM practices in the automotive industry. Meehan & Bryle (2011) found that typically sustainable PSM activities are related to sustainability policies set by the buying companies. This was shown when, for example in the tendering process, suppliers that rate highly against sustainability policy criteria are preferred more than those who do not. The study argued that companies tend to build and show compliance rather than develop and collaborate on enhancing sustainable PSM performance. Krause et al. (2009) showed that sustainable supply chains have been described in academia as green supply chain, socially responsible sourcing, or closed-loop supply chain. Furthermore, the study concluded that environmental aspects of TBL are about preservation of natural resources, waste minimization and reduced emissions. The social aspects of TBL are mainly discussing poverty, injustice and human rights issues.

Villena (2018) found that customer requirements on sustainability are key drivers for supplier sustainability performance and one of the key reasons why suppliers have sustainability incorporated into their strategies. Fraser et al. (2020, 1) found that some industries like pharmaceutical and chemicals have very good visibility into their lower-tier supply chain while automotive sector is lacking in this aspect. Much of this comes down to the supply chain's complexity, especially at lower tiers where materials are typically smelted and redefined. In the automotive industry, this has led to difficulties in achieving sustainability in the supply chain as there is lack of visibility. Large MNCs typically use their own sustainability achievements and are eager to integrate those into their supply chain as sustainability requirements to make their supply chain sustainability performance vastly better. Tier-1 companies were found to have the instrumental role in the supply chain as they are fulfilling MNCs sustainability requirements and cascading those deeper into the supply chain. The study concluded that the basis for supplier sustainability is deep in procurement decision and supplier transparency, or so-called due diligence processes associated with that. However, value created from these activities is closely linked to the amount and quality of information shared with stakeholders.

According to Drive Sustainability (2023) intelligence report on how automotive companies conduct due diligence and improve it, automotive companies' supply chain performs the worst on human rights and working conditions. The data from the report was gathered from 43 560 sustainability assessment questionnaires (SAQ) all-over automotive supply chain. However, the results from the report show an interesting pattern – the bigger the company is, the better results it gets from the SAQ. The problem becomes obvious when 70 % of the report's companies were small to medium sized enterprises (SME) with headcounts below 250 employees. Furthermore, report found out that 39 % of the SMEs both had no CSR/Sustainability report or management system for human rights and working conditions. This brings up a specific problem for supply chain sustainability. How do we manage and improve our supply chain's sustainability performance when many of our suppliers are SMEs and have fewer resources to invest in sustainability?

Teerikangas et al. (2021) gave great importance to industry-wide collaboration to enhance sustainability performance, but also about information sharing and management standards. Villena (2018) gave value to those MNCs that had specific sustainability related ISO standards integrated into their management systems and as so this thesis will look on the relevant ISO standards. Other types of administrative tools to enhance sustainability are mainly code of conducts. Maixner & Papula (2021) saw code of conduct as a better tool to evaluate company's maturity level than ISO standards, but this is deeply dependent on the company's quality level and compliance with the conduct.

Hąbek et al. (2022) saw that automotive companies conduct sustainability assessments in their supply chains with the help of supplier auditing and development. These activities can be divided into areas such as supplier portal which helps suppliers connect to the focal firm and action plans are set for suppliers to develop their capabilities. Material traceability and risk based due diligence processes were touched. The study found out a structure on how automotive companies conduct sustainable supplier development practices (see table 2).

Table 2 - Ten sustainable supplier development practices identified in automotive industry (Hąbek et al. 2022)

Process	Activity
Prevention	Sustainability requirements and code of conduct
	Self-assessment
	Training
	Sustainability awards
	Blockchain-based material traceability
Detection	Assessment and audits
	Risk-based audits and due diligence process
	Whistleblowing system
Reaction	Action plans
Support	Supplier portal

When Hąbek et al. (2022) defined the key practices in the automotive industry in the sustainable PSM area, a division was made into the four areas of how the process flows: prevention, detection, reaction and support. These areas are closely linked to OECD (2018) due diligence process which is going to be looked at in greater detail in chapter 4. This thesis is going to deep dive into relevant prevention and detection methods in the automotive industry in the chapters below. The emphasis will be given to practices that help the case company to detect the key activity types to enable sustainable PSM.

### **3.2 Sustainability requirements in supplier selection and code of conduct**

Fraser et al. (2020, 1) saw in their study MNCs in automotive industry typically force their tier-1 suppliers to sign MNC's code of conducts and enforce these further down into their supply chains. Study from van Hoek & Udesen (2023) concluded that supplier code of conduct (SCoC) is the most widely used sustainability practice nowadays. Typically, SCoCs are evaluated by their content, but the engagement and adoption from suppliers remains an open topic. SCoC tells a supplier about minimum sustainability requirements they must adopt to be a business partner for the supplied firm. However, the adaptation of SCoC to the supply base may be neglected and the SCoC compliance might not be checked at all. This has led to critique of SCoCs as they can be seen as greenwashing the image of the firm if compliance of the supply chain is not checked.

Study from van Hoek & Udesen (2023) considered a case study on a global pharmaceutical company and found out some possible industry-wide points to be considered. The use of engaging and motivational SCoCs may have potential to engage suppliers because nowadays' SCoCs are more risk aversion tools than motivators. A greater improvement for sustainability performance was argued: Emphasis was put on incentivizing suppliers to build their sustainability performance rather than compliance. For example, suppliers should see their sustainability targets with individual buyers, and they should be educated and motivated to collaborate sustainability deeper into suppliers. The best way to build the SCoC is to connect it to be a part of performance initiatives to drive action, not just compliance. The study's case company integrated SCoC to be a key part of its sustainability strategy and roadmap in which both sustainability performance and SCoC improvement were hand in hand, but most importantly, not just setting minimum requirements but more about setting targets for continuous improvement. Therefore, SCoC should be a key part of the roadmap for sustainability.

Implementation of SCoC into supplier's operations could significantly increase overhead costs if fully adopted by the supplier according to a study by Jiang (2009) especially in developing countries. Suppliers can therefore see SCoC as only a signed contract, but do not see it as something they should implement. In the worst-case scenario, the supplier adopts SCoC, but is not rewarded for the effort because of rising costs. But how does a firm take sustainability into account in its supplier selection process?

Procurement can enhance sustainability by buying environmentally friendly goods and services. However, having a positive impact on the planet does not always mean having a positive impact on, for example, people affected in the supply chain because of a conflict in employment. This phenomenon is typical for sustainable procurement which has led to some companies seeing sustainable procurement complex and arguably paradoxical. In a procurement decision, sustainability must be considered by many factors leading to an overall sustainability impact ultimately influencing procurement decisions. (Meehan & Bryle 2011).

Krause et al. (2009) saw sustainability in procurement as built into Kraljic's 1983 purchasing framework. The framework divides supply items into four categories in relation to their buying and supply power. Strategic items saw more emphasis on performance criterion such as innovation and product development were put on suppliers

and this section was where most of the collaboration benefits on sustainability would come from. Leverage items saw more emphasis on sharing best practices, for example on sourcing more sustainable raw materials. Bottleneck items are the most difficult to manage and sustainability is typically neglected, because the focus is on cost and minimizing risk. The study found that enhancing industry-wide standards may be the most effective for this category. Noncritical items were seen as low priority but buying organizations were suggested to get third-party certification of supplier to ensure no sustainability violations.

Villena (2018) study found that buying companies typically prefer costs, quality and delivery while compromising sustainability when faced with procurement decisions. This is due to distinct functions inside the company having unaligned goals or even having aligned goals and not honoring them. This can leave the company having sustainability as only a strategic goal when faced with a dilemma which can disrupt the practical implementation of sustainability deep into the firm's processes and daily life. Therefore, a new way of looking at procurement needs to be addressed in firms looking at sustainability and building up competencies in procurement. But what are these competencies?

Beske-Jessen et al. (2023) saw procurement competencies as both enhancing innovation and sustainability. The study's participants saw that today's sustainability challenges can be addressed by the technology of today but saw improvement and an opportunity in circular economy. Furthermore, the role of procurement is moving towards a more strategical role as a facilitator and mediator between internal and external stakeholders to improve sustainability and innovation performance in a firm. A holistic approach to procurement was found that balances between innovation and sustainability where strategic thinking, cross-functional teamwork, creativity and curiosity, risk management, leadership skills and external stakeholder relationship management were found to be key enablers for the two aspects. The typical way of looking at integrating sustainability into procurement has been that risk management needs to be implemented and reducing harm is the priority. However, the trend is now towards creating a net positive impact on sustainability which means that procurement tends to move from developing supplier code of conducts and audits to a more analytical and critical thinking department.

Wilhelm & Villena (2021) study saw the importance of sustainability related management systems to be considered in procurement decision. Alongside these requirements, the study saw that the suppliers compliant with assessing sustainability and agreeing to audits achieved greater amount of sustainability improvement. There was an observation in the study that during the supplier selection process the emphasis was more on the internationally accepted standards and the calculation of supplier's initial sustainability level was left out. A bigger emphasis should be put on the willingness of the supplier to participate in sustainability initiatives and improve their sustainability performance during these initiatives. To more dependent and unwilling suppliers, the study suggested a program that puts pressure on suppliers that have conducted noncritical sustainability violations and thus are a target for more frequent audits and assessments. For suppliers that have conducted critical sustainability violations and are not motivated to improve upon, the study suggests a termination approach. Therefore, companies should consider what the supplier is willing to do and how motivated it is to take part in sustainability initiatives and other instruments. Hąbek et al. (2022) saw that participating in life cycle assessments and CDP supply chain program to be relevant ways to improve suppliers' awareness of sustainability especially in the environmental area.



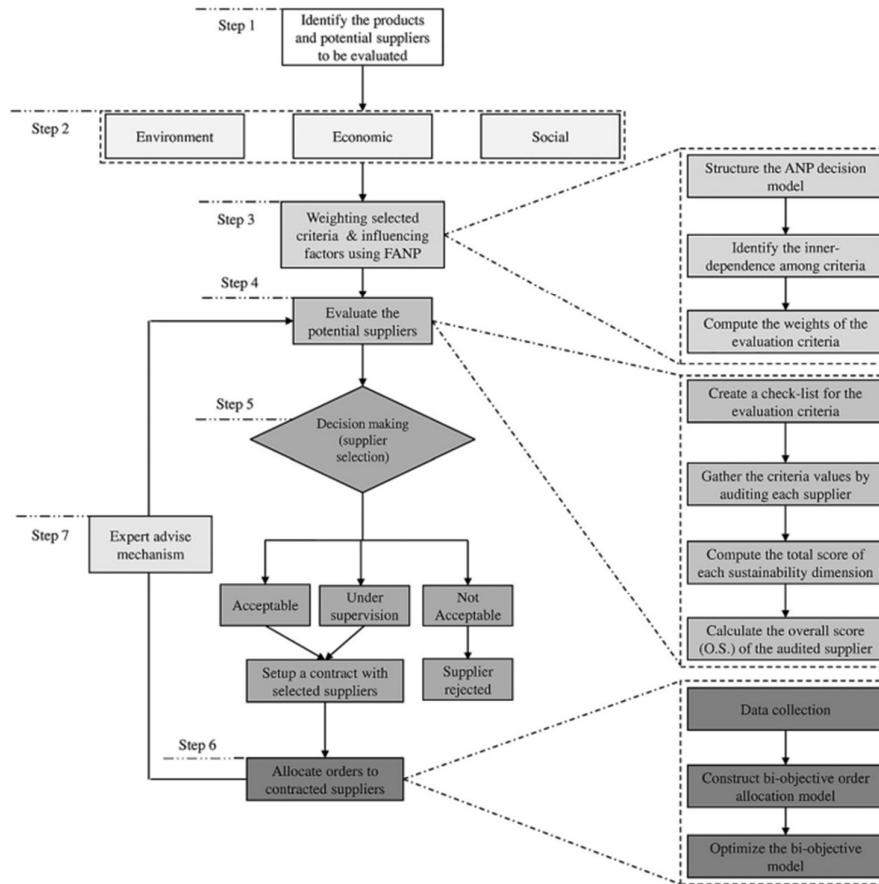


Figure 3 – A TBL compatible supplier selection and order allocation framework for automotive companies (Ghadimi et al. 2017)

How do companies then implement TBL in their procurement decisions and supplier selection process? Ghadimi et al. (2017) built a 7-step framework for procurement to consider all relevant aspects of sustainability into procurement (see Figure 3). The study's framework saw managerial feedback that emphasized the importance of implementing TBL aspects into procurement important. However, order allocation between suppliers based upon sustainability performance was seen as impractical and complicated to use because information tended to be valid for only 3 to 6 months until it had to be updated leading to more manual labor. Further research has been done to complement this framework by You et al. (2020) and Mohammed et al. (2019), but they give similar approaches and frameworks to this problem and that is why this thesis will emphasize the importance of automotive specific framework Ghadimi et al. (2017) have created. Deciding upon our supply base is one piece in the sustainable PSM puzzle, but what do international management standards bring to the table?

ISO (International Organization for Standardization) standards are internationally recognized business management standards (Ronalter et al. 2023). Vilhelm & Villena (2021) found that few suppliers in China use even one ISO management system which highlights the importance of cascading these systems to lower tier suppliers in developing countries and in general to the supply base. Ronalter et al. (2023) studied the ISO standards and found out the three most widely used standards were ISO 9001 – Quality management systems, ISO 14001 – Environmental management systems and ISO 45001 – Occupational health and safety management systems which was previously known as OHSAS 18001. They examined the effects on UN’s Social Development Goals (SDGs) and found that two of these three standards are identified as having very strong sustainability relation. The 3<sup>rd</sup> highest sustainability related ISO standard is ISO 26000 which is a management system designed to implement aspects of social responsibility. Unlike other ISO standards, ISO 26000 cannot be certified by a 3<sup>rd</sup> party. ISO (2023) also released a new ISO 20400 which standardizes sustainable procurement, but there is currently very little research on this standard and its adoption.

Table 3 - Sustainable PSM relevant ISO standards

ISO standards	Description	3 <sup>rd</sup> party certifiable
ISO 9001	Quality management systems	Yes
ISO 14001	Environmental management systems	Yes
ISO 26000	Social responsibility	No
ISO 45001	Occupational health and safety management systems	Yes
ISO 20400	Sustainable procurement	No

According to Ronalter et al. (2023) ISO 14001 is the second most widely adopted ISO-standard, and it contributes to 12 UN’s SDGs and therefore has a vast and positive impact on corporate sustainability when implemented. The ISO 14001 has been widely researched in academia. Camilleri (2022) sees ISO 14001 as a good standard for improving corporate sustainability performance if it is demanded by an authority. In the

study, authority is defined by a regulatory body, but a MNC has authority according to Fraser et al. (2020, 1) and Camilleri (2022) to promote the ISO 14001 to its suppliers. There were inconsistencies found in the effectiveness of ISO 14001, but the standard was seen as a necessary part of an environmental management system. The found benefits of ISO 14001 were:

- Raised awareness of compliance requirements.
- Facilitation of planning, organization, leadership, and control of environmental management systems.
- Monitoring and reducing pollution and emissions.
- Helps to establish and maintain communications with stakeholders and increases the legitimacy of environmental efforts.
- Can create shared value to the firm's financial performance.

Camilleri (2022) also underlined some costs associated with ISO 14001 which were related to increased number of spent resources as additional costs and time. Failure to comply with ISO 14001 when certified can lead to financial sanctions when these failures are realized in annual audits. A lack of motivation for ISO 14001 by employees and management can lead to misuses and the lack of continuous improvement in the environmental aspect. Thus, stakeholder pressure is needed for ISO 14001 to be implemented and integrated into a firm. Mosgaard et al. (2022) saw in their study that firms that have had ISO 14001 for at least 5 years and are environmentally mature companies have difficulties in finding improvements year by year. However, pressure from key stakeholders like customers was found to be the most important factor behind ISO 14001 certification. Difficulties in finding improvements were raised and poor knowledge of how to define environmental objectives was discussed to lead to this phenomenon.

ISO 45001 on the other hand was more concentrated on social aspects as per occupational health and safety (OHS) according to Camilleri (2022) where a management system must be set in place to get certified which is a lot like the ISO 14001 standard. Liu et al. (2023) saw that companies implementing the ISO 45001 may face difficulties if employees are not aware or are intentionally downplaying OHS. This may be due to the

firm not having a safety culture and lacking top management support. For example, in China approximately 15 % of ISO 45001 certified companies lost their certification due to noncompliance with the standards' requirements and audits. The study found that the root cause of this phenomenon is that organizations have little or no motivation to implement ISO 45001. Especially, the motivation of top management towards OHS is vital and this must be realized if companies want to implement these standards deeper into their supply chain. With certified ISO standards having these difficulties in their implementation, it raises the question if implementing a non-certified ISO standards – like the ISO 26000 – will be even more challenging.

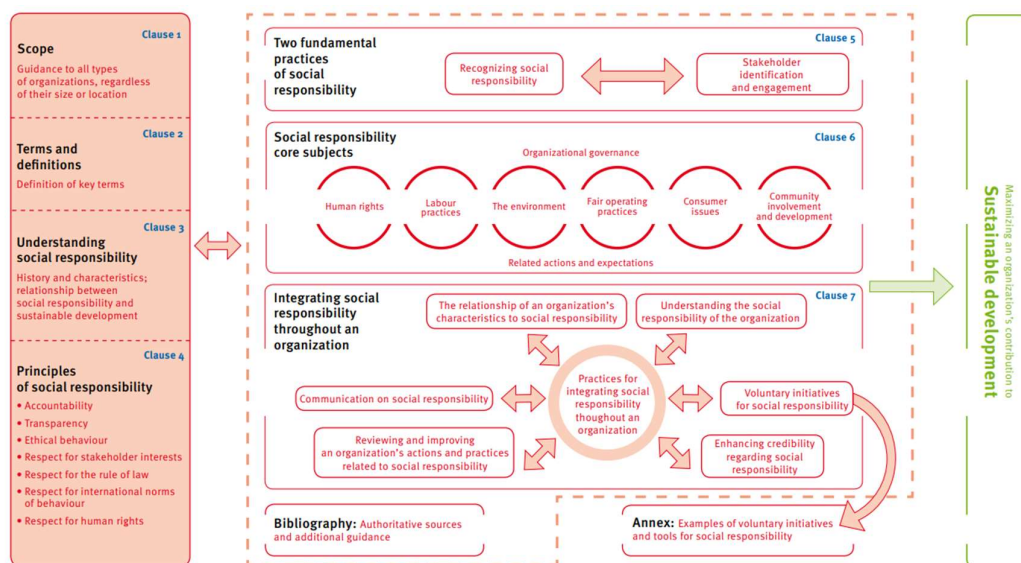


Figure 4 – A schematic overview of ISO 26000 (ISO 2010)

Ronalter et al. (2023) mentioned ISO 26000 as a management system for social responsibility and found a strong correlation between sustainability and the standard. However, the standard is non-certified because ISO (2010) concluded that the standard provides guidance to enterprises rather than requirements, which means that there cannot be a 3<sup>rd</sup> party certification for it. ISO (2010) aims to have a clarification for organizations to define what social responsibility is and help them implement it. A more schematic approach to social responsibility is seen with 7-step clauses (see Figure 5). This appears to be a good approach because according to Barbanti et al. (2022) businesses rarely consider social practices in their PSM activities, but as this may be due to the vagueness of social responsibility and financial performance, a more structured approach is needed. According to Chakroun et al. (2019) good corporate governance has a positive impact on

financial performance including labor relations and community involvement but there was no significant relationship between human rights, fair operating practices and consumer issues to financial performance. Overall, implementing ISO 26000 was seen to improve all aspects of TBL: social, environmental and financial performance. Stakeholder involvement and communication on implementing ISO 26000 was also seen as a positive and important part of positive performance on ISO 26000.

### **3.3 Supplier assessments and audits**

Villena (2018) mentioned that MNCs use different sustainability self-assessments for their suppliers to measure supply chain sustainability. Typically, MNCs prefer industry-wide self-assessments which gives a good situational awareness and credible scoring on their suppliers. These assessments have few questions about lower-tier suppliers to enhance MNCs knowledge on key sustainability questions related to them. However, the study found that lack of lower-tier supplier questions has led to MNCs knowing less about their lower tier supply base than they are expected to do by key stakeholders. This has led to those companies that have better lower-tier sustainability performance and visibility to achieve competitive advantage. Hąbek et al. (2022) found that manufacturers in the automotive industry have used supplier self-assessments as a tool for years but have lately integrated industry-wide assessments to their operations. All the major car manufacturers in Europe utilized industry wide assessment questionnaires.

Industry-wide sustainability assessments have been found according to Villena et al. (2018) to have penetrated widely into MNCs supply networks. The key reasons were that there were associations behind the assessments giving credibility into assessments and respondents saw the benefits behind these assessments. The third reason was that buyers typically helped key suppliers become members of the association, integrating them further into sustainability related issues. Industry-wide assessments don't come with the same downsides as company specific assessments as they don't differentiate companies from others. It is still unknown if these assessments are an order qualifier or order winner for a supplier or how companies utilize the results of these assessments in their supplier selection or order allocation.

Villena (2018) mentions audits as a key part of showing a company's commitment to sustainability and deepening supplier's awareness on the importance of sustainability in the supply chain. Hąbek et al. (2022) saw that some car companies utilize audit programs

from other industries which was in this case the electronics industry. Automotive companies conduct audits to see if supplier complies with sustainability requirements before commercial activity starts and after that the audits are based on the risks found in the due diligence process. Fraser et al. (2020, 2) saw audits as one part of sustainable PSM toolkit, but also discussed how the increase in audits have caused audit fatigue. They argued that the biggest benefit from audits are their results and how these are followed up. There were 8 different audit standards with 13 similar dimensions. Håbek et al. (2022) saw large European automotive companies using 4 different auditing standards. Fraser et al. (2020, 2) tried to tackle this phenomenon by utilizing strategic alliances with key companies to share audit results together. However, the key point is to utilize audits as part of assessing suppliers' sustainability performance. The key to maximizing the results of these audits is collaboration and information sharing.

## **4 Due diligence in sustainable PSM and legislation**

After the literature review into key sustainable PSM practices in the automotive industry, this thesis will deep dive into the due diligence of sustainable PSM practices and legislation in this chapter. There is already EU legislation in place to set sustainable PSM standards in European Sustainability Reporting Standards (ESRS) where companies which have over 250 employees should disclose (European Commission 2023a). To tackle environmental and social sustainability issues, the EU has put place a new set of legislation called EU Corporate Sustainability Due Diligence Directive which is set to put down a due diligence process for a more sustainable PSM practices (European Council 2023). European Commission (2022) set out these 2 directives to enhance sustainable development by adding a substantive corporate duty to report on sustainability and to conduct due diligence, but most importantly CSRD sets out mandates for all large and listed companies to disclose plans to undertake strategic and operational goals to transit to a sustainable economy and limit global warming in accordance with the Paris Agreement to 1,5 °C.

### **4.1 EU Corporate Sustainability Due Diligence Directive**

European Commission (2022) set out a new proposal for a directive on Corporate Sustainability Due Diligence which promotes new set of rules for companies to enhance sustainability in their supply chains, especially in human rights and environmental due diligence. According to OECD (2018, 15) Due Diligence is the process that enterprises carry to identify, prevent, mitigate and account to address actual and potential impacts in their supply chains. EU companies are operating in a global market where the overall complexity of value chains, legal unclarity, information deficiencies and costs puts companies at risk of having human rights violations in their value chains and overall, nowadays' due diligence practices aren't benefiting the economy. Due diligence is based on voluntary action and thus violations in sustainability may not be realized if conducting due diligence is not seen as important or it is not a competitive advantage for a company (European Commission 2022).

The implementation of the directive and its scope of companies is divided into 2 sections according to Council of the European Union (2024). The section including franchising or licensing agreements was left out of the grouping below:

1. EU companies which have over 1000 employees and over €450 million in net turnover worldwide.
2. The company doesn't reach the thresholds but is the ultimate parent company of a group that reaches the thresholds.

According to European Parliament Think Tank (2023) only 37 % of globally operating business respondents conducted environmental and human rights due diligence and only 16 % covering the entire value chain. There are already national due diligence laws in EU's two biggest economies – France and Germany. Loi sur le devoir de vigilance and Sorgfaltspflichtengesetz were adopted to tackle due diligence. The legislation was based on a vigilance plan and a risk management system with varying penalties for noncompliance. The CSDDD would bring union-wide standards for every EU company without any exceptions for the companies in scope. Breaches would be dealt with by national supervisory body and liability for companies: “A company would not be liable for damages caused by an adverse impact arising as a result of the activities of an indirect partner with whom it has an established business relationship; however, the company would be liable in case it was unreasonable to expect that the action actually taken by the indirect partner (including as regards verifying compliance) would be adequate to prevent, mitigate, bring to an end or minimise the extent of the adverse impact.” According to Škvařilová-Pelzl & Adams (2023) this harmonizes EUs due diligence laws as national legislations tackle a specific issue and vary in their implementation.

Existing international standards recognise the responsibility of companies to exercise sustainable practices. The United Nations Guiding Principles on Business and Human Rights (2011) establishes the basis for enterprises to respect human rights and to conduct human rights due diligence. Furthermore, enterprises should establish grievance mechanisms and ensure that they are available. European Commission (2022) set out in the CSDDD that the due diligence process is defined by OECD (2018) which includes the 6 steps of due diligence:

1. Embed responsible business conduct into policies and management systems
2. Identify & assess adverse impacts in operations, supply chains & business relationships
3. Cease, prevent or mitigate adverse impacts
4. Track implementation and results



5. Communicate how impacts are addressed
6. Provide for or cooperate

The scope of which business partners due diligence process involves is established in the CSDDD. The process should be established in those business relations where the nature of relationship is expected to be lasting and these relationships should be reassessed periodically, but at least every 12 months. Furthermore, the company practising due diligence should link both direct and indirect business relationships which means conducting due diligence deeper into the supply chains to lower levels. (European Commission 2022).

CSDDD establishes the need for business conduct describing the rules and principles to be followed by the company's employees and subsidiaries. Furthermore, the compliance with business conduct must be verified and applied to business partners, but also business functions especially procurement. Due diligence policy should be updated annually. Directive sets out the termination of business relations as a last resort as termination could end in even worse sustainability impacts. Instead CSDDD sets out measures for companies to mitigate and prevent these negative impacts where relevant. (European Commission 2022).

Study from Hofmann et al. (2018) underlined the fact that the classical thinking of supply chain management of switching suppliers when seeing non-compliance is the least effective way to enhance sustainability and human rights. Due diligence especially in conflict minerals in upstream is challenging because of several sustainability violations. These companies are not directly influenced by the power of large firms, do not provide enough or necessary information or they operate in high-risk areas and are easy to replace. Furthermore, the complicated nature of conflict minerals supply chain such as cobalt supply chain was further discovered by Fraser et al. (2020, 1). In the study, a case company had discovered 28 actors in its cobalt supply chain in 6 tiers, but the study discovered the real number to be over 79 which is 282 % more than the case company had initially identified. Therefore, the need for implementing common due diligence practices and information sharing is greatly increased and legislation such as CSDDD is needed in place. Study from Camoletto et al. (2022) underlined issues with nowadays due diligence processes having poor data quality.

The effects the CSDDD on companies are highly debated. For example, Patz (2022) called that exactly what level of intensity or duration of time is needed to establish a business relationship as this is not stated clearly. It may lead to some companies shortening their sourcing relationships with their suppliers after a cost-benefit-analysis. Some results have been concluded from the German Due Diligence law Sorgfaltspflichtengesetz from Brandenburg et al. (2023). The study found that German companies found several risks associated with the legislation as fear of excessive bureaucracy, additional costs and compliance efforts were seen as competitive disadvantage compared to foreign competitors. Opportunities in due diligence were also found on equal business conditions for German firms and embedding higher quality standards for suppliers but most importantly higher sustainability performance. However, the effects on firm performance remained uncertain.

#### **4.2 Due diligence as part of responsible business conduct**

According to OECD (2018) due diligence is a construct in which an organization addresses adverse impact on potential risks related to sustainability violations related to the TBL. The meaning of the risk can be explained by the financial, operational, or reputational risk the firm faces if the risk is realized. Conducting due diligence is in nature a preventive act and based on risk. Firms must address their risk and conduct preventive acts on that risk. Therefore, due diligence can involve prioritization based on the most significant impacts being prioritized. However, this prioritization cannot lead to shifting responsibilities away although the risk might be less significant. The due diligence process is described by a 6-step framework of individual measures (see Figure 6). According to Hąbek et al. (2022), all major European car manufacturers use OECD (2018) guidelines as their basis for due diligence.

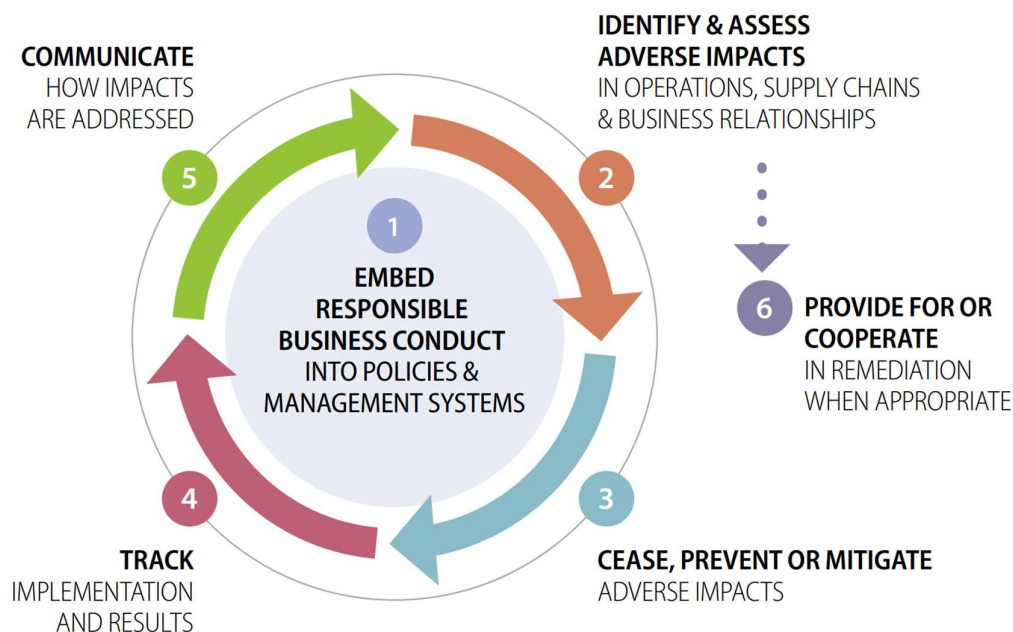


Figure 5 – Due diligence process and supportive measures (OECD 2018)

The due diligence process and the 6-steps and their actions are more detailed in the following chapters.

#### 4.2.1 Embed responsible business conduct (RBC) into policies and management systems

Embedding RBC into policies and management systems is a 3-phased process. First, the firm must articulate its commitments to its policies and implement all relevant principles and international standards to its policies. Furthermore, the firm must plan to implement all relevant risks to be addressed with due diligence. This in turn means that the firm must determine all relevant risks on RBC issues and plan its policies based on those determined risks. RBC policies must be publicly available and communicated to all relevant employees. (OECD 2018, 22 & 56)

When policies on RBC issues are integrated into policies, these must be embedded into the firm's oversight bodies. Implementation must take part in all relevant management systems and business processes. Ownership of relevant RBC issues must be put into practice in all relevant departments. Different business locations may tailor their RBC policies to the local context. (OECD 2018, 23 & 57-59)

RBC policies must be engaged with suppliers and other business relationships. All relevant aspects and expectations must be made clear to the supplier at the earliest phase of the business relationship. This in turn means that due diligence must be incorporated into pre-qualification processes for suppliers that have been recognized as having a specific risk on RBC issues. The firm must provide adequate resources and training to suppliers to implement relevant RBC policies and to implement due diligence. (OECD 2018, 24 & 60)

#### 4.2.2 Identify & assess adverse impacts in operations, supply chains & business relationships

The firm must carry out broad scoping exercise to identify where the most significant and likely RBC risks are. This exercise must be conducted in the firm's own operations, but furthermore also in its supply chain. This is the basis for a risk prioritization mentioned in the earlier chapter. Sources for the scoping exercise may include reports from the government, media, or international organizations to gather a comprehensive overall picture on every possible RBC risk which may include corruption, environmental adverse impacts, or human rights violations. To fill gaps in information, relevant stakeholder involvement is recommended. Grievance mechanisms must be established, and their information must be considered in the risk scoping exercise. Once the scoping exercise is completed, potential and actual impacts must be measured and followed. If the business environment changes or sourcing activities start in a different country, the scoping exercise must be updated. (OECD 2018, 25 & 62-63)

After assessing high-risk RBC issues, the company must address less significant risks in all its business relationships. This can include supply chain mapping where risks are addressed beyond the tier-1 supplier. Assessing suppliers beyond tier-1 is recommended and so-called control points in the supply chain where due diligence is conducted deeper may be established in the high-risk chains. These control points may have more visibility and leverage towards their suppliers thus increasing visibility and addressing adverse impacts. The firm must identify activities that should have been carried out to protect RBC policies and thus may lead to violations. Prioritization into RBC risks may be done by categorization. This may include for example categorizing product suppliers and prioritizing the highest percentage suppliers. Sometimes assessing existing business relationships and adverse impacts may not be relevant as these are either high risk or

realizing so that the focus should be on mitigating and preventing those impacts. These acts can be done by, for example supplier training and encouraging suppliers to carry out preventive acts. (OECD 2018, 26 & 65-69)

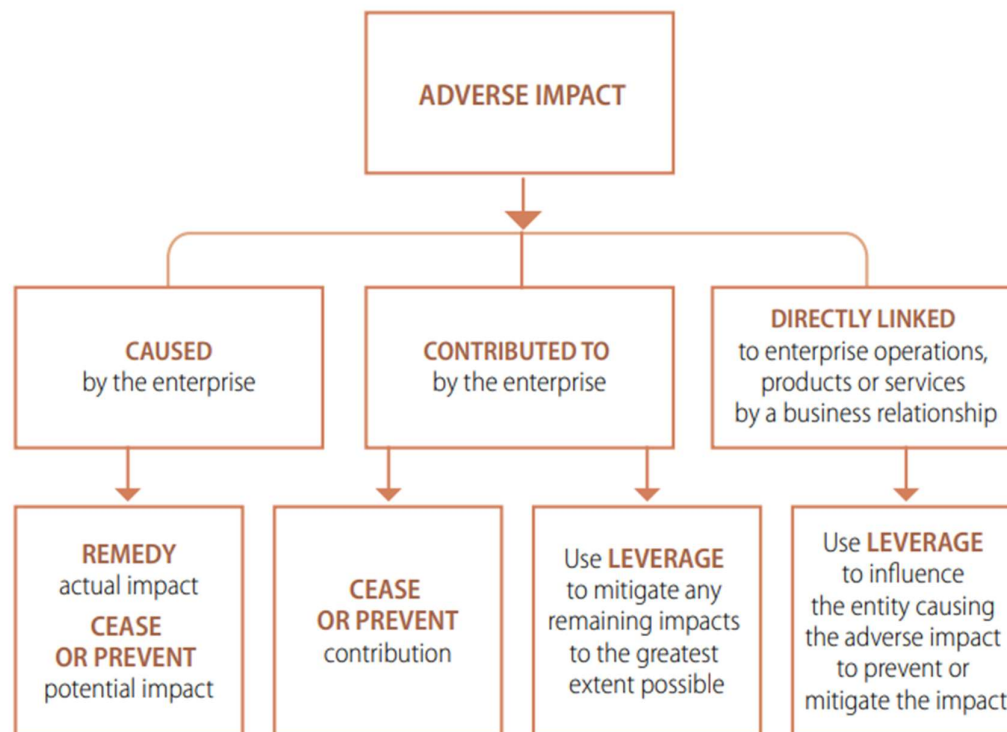


Figure 6 - How to address adverse impacts (OECD 2018, 72)

The firm must address if the address impact is caused, contributed or whether the impact is linked to its stakeholders' operations, products, or services (see Figure 7). The causing of adverse impact is the cause of operational activities having affected an adverse impact. Contributing to an adverse impact may be, for example, having exceeding performance expectations on suppliers which may lead to violations in working conditions. Directly linked can mean sourcing components that have been manufactured using materials dug up by forced labor. The firm must base its prioritization on the most significant harm the adverse impact may cause if realized. (OECD 2018, 27-28 & 70-73)

#### 4.2.3 Cease, prevent or mitigate adverse impacts

The firm must stop any activities that are actively contributing to or causing adverse impacts. If this is not possible due to operational reasons, a clear roadmap to stop these activities must be addressed with all relevant and impacted stakeholders and with an in-

house legal counsel. If the firm is only one part of a collective adverse impact where multiple actors play a key role in the RBC risk, the firm should contact relevant stakeholders, but importantly governmental bodies and involving discussion in industry-wide initiatives. If the company notices that one of its business partners has adverse impacts, the firm should take necessary steps to stop and mitigate any negative impacts as soon as possible. The firm must plan follow up action to mitigate prioritized RBC risks and have a decision to leverage the business partner to mitigate adverse impacts. These actions can be temporary suspension of business relationship until adverse impact is mitigated, disengagement with the partner if there are multiple failed attempts at mitigation or suspend having a business relationship with the partner if there are no prerequisite for addressing adverse impacts. The firm must remember that although suspension of business relationships seems possible, due diligence does not shift responsibilities. To leverage due diligence into companies, RBC expectations must be built into commercial contracts. Furthermore, the possibility of disengagement must be communicated to business partners. Supporting business partners in adhering to RBC expectations, the firm can use multiple ways to help partners mitigate adverse impact. These can be helping partners to develop corrective action plans or guiding partners to implement sector-wide initiatives. (OECD 2018, 29-30 & 74-81)

#### 4.2.4 Track implementation and results

The firm must assess its due diligence process' effectiveness and implementation with an internal or 3<sup>rd</sup> party audit and document it. Establish qualitative and quantitative indicators to help the tracking of the process. Furthermore, the results of these audits must be communicated with relevant internal stakeholders. For human rights impacts where the firm causes or contributes to, the firm must consult relevant workers and their representatives, but also trade unions. Tracking implementations and results should be done, for example, with the help of grievance mechanisms and assessment data. The urgency of tracking depends on the severity of adverse impacts. (OECD 2018, 32 & 82-84)

#### 4.2.5 Communicate how impacts are addressed

The firm should communicate externally relevant information on its due diligence process and the relevant aspects of it while taking into consideration commercial confidentiality.

Disclosing information on human rights impacts should not contain any sensitive information that could be used against the firm or any individual. Therefore, anonymizing the source of information and addressing why all information wasn't shared is key to protecting those at risk. (OECD 2018, 33 & 85-87)

#### 4.2.6 Provide for or cooperate

The firm is responsible for providing for or cooperating with the impacts it has caused or contributed to. Remediation should be at the same scale as the adverse impact occurred. The remediation must be done in accordance with national law and can be non-financial and financial. Human rights are the most severe class of violation in which impacted stakeholders must be determined for the remedy. The firm must assess those who have made complaints and review their level of satisfaction. An early warning system like a grievance mechanism can also play a part in enabling remediation. (OECD 2018, 34-35 & 88-91)

## **5 Maturity model**

### **5.1 Maturity models as building blocks for continuous improvement**

A maturity model describes the organizational capabilities which are assessed in consultation with an expert as a determination for scaled performance. This tool is made for top management as a supporting tool for organizational performance and is a basis for continuous improvement and a building block for a road map. An important feature of a maturity grid is that it differentiates performance levels by descriptive characteristic traits. This gives the model a clear indication that what level the organization's maturity is in the subject. A maturity level describes a level of maturity where higher levels represent high maturity, and low levels represent low maturity. (Maier et al. 2012)

Maier et al. (2012) determined maturity as something that is a process of building into full maturity or being complete in the subject. Maturity level on the other hand is a concept where higher levels build upon lower level's requirements like a ladder. In this thesis, maturity is looked at the level of organizational capabilities in regards of sustainable PSM. Academic literature gives a background on the best practices and capabilities which organizations can adopt, but the legislation requirements mainly from CSDDD are giving strict requirements to which the organization must build its maturity upon. This gives a certain framework that must be met to even be mature in the maturity model. Furthermore, CSDDD is built upon continuous improvement and as such the maturity model must be able to be built to recognize that fact. Backlund et al. (2015) discussed in their research about continuous improvement maturity models that a Plan, Do, Check and Act (PDCA-cycle) is built into. The concept of continuous improvement is that it is a process in which an organization continuously and incrementally innovates and builds its capabilities. Altogether, maturity models were first created to serve quality management and its process maturity & improvement. It was noted in the study that a strong stakeholder engagement is needed when constructing a maturity model so that the model can be assessed and improved upon in the future to meet changing needs of requirements.

### **5.2 Constructing a maturity model**

Maier et al. (2012) discussed that a maturity model creation process consists of 4 phases, in which maturity model is first planned, second developed, thirdly evaluated, and



fourthly maintained. The steps are necessary for practitioners and this thesis is to develop a maturity grid. The maturity grid gives a good understanding of organizational capabilities in conjunction with selected scope. In the following subchapters, the processes are explained further.

### 5.2.1 Planning

Maier et al. (2012) talks about decision points what should be considered in each step of building maturity model. In planning the following decision points are:

1. Specifying audience
2. Define aim
3. Clarifying scope
4. Define success criteria

According to Maier et al. (2012) the first step, specifying audience, defines which stakeholders are intended to be involved in the assessing of maturity grid areas and to whom the maturity grid results are defined to. Typically, assessing maturity grids is given to specialists in the area, for example sustainable supply chain specialist in this thesis. The target audience to whom the end-result and situational picture is intended to be typically manager-level. This is the case with this thesis as the target audience will be top management who take further actions based on the maturity levels found in this thesis. Assessing the grid will be conducted by a corresponding specialist.

Maier et al. (2012) sees that defining aim means that what and how is the maturity grid intended to achieve? There are two general aims: benchmarking and analytical. Benchmarking defines best practices of a certain field, for example it takes model from ISO standards. Analytical is seen as more as an improvement path where we determine more the steps to become the most mature as possible.

The third step, clarifying scope, is more about how the maturity model is going to fit the stakeholders according to Maier et al. (2012). Maturity models can be created as industry-wide or by needs of a case. Fourthly, defining success criteria is setting the criteria to which the maturity model must meet. This can be usability or stakeholder objectives. This

thesis will be done for a case company and so the maturity model is solely aimed at fitting its needs.

### 5.2.2 Development

Maier et al. (2012) saw the development phase as an architecture for the maturity grid. The four decision points of development phase are:

1. Select process areas
2. Select maturity levels
3. Formulate cell text
4. Define administration mechanism

Selecting process areas is according to Maier et al. (2012) selecting the content and one of the most difficult aspects of constructing a maturity grid. A literature review is said to be only sufficient to give a theoretical standpoint and other means of identifying are necessary. This may mean identifying key organizational process goals and adapting this to the development work with different stakeholders.

After defining process areas in the maturity grid, Maier et al. (2012) suggest selecting maturity levels for the maturity grid. This is the rating scale. The levels must be distinct but show logical progression as levels go higher. This is why it was found that this part is one of the hardest to define. The study found that a typical number of maturity levels is 4-5. Levels have been described by other authors as stages, levels or states depending on the aim of the maturity model. For example, maturity levels bring steps throughout the model and gives a clear roadmap for continuous improvement so that the organization can improve. Correia et al. (2017) study conducted a literature review on maturity models in sustainable supply chains and found out that typical number of maturity levels to be 3-6. The architecture was in most cases continuous as is in this thesis. Thus, the amount of maturity levels decided to go with in this thesis is 5. The levels are based upon the literature review and their capability factors are measured by sustainable PSM capability. Maier et al. (2012) saw that the next step after maturity level definition is formulating the cell text. It can be prescriptive or descriptive in their nature. Prescriptive cell text needs detailed courses of action to level up in the maturity levels. This, therefore, requires more maintenance in the future, if the maturity model is wanted to keep on time. Descriptive

approach on the other hand gives more flexibility and the focus is more on the detailed account of the level. A descriptive approach is thus more suitable for this thesis. Information source for formulating the cell text is done in cooperation with future maturity model assessors.

Process areas move up in capabilities like a ladder. On the bottom level we see that the measured capability is not aware or certain by the company and on the highest level we see leadership and that PSM activities bring positive value to sustainability. As Mair et al. (2012) said in their study, the maturity levels set leverage points for organizational change. Therefore, it is good to build the levels to align with the organization's long-term sustainability strategy and academic literature. This can be seen especially in the level 4 where PSM activities are seen as bringing positive value to sustainability which is contradictory to beliefs of sustainability being only risk management or risk aversion.

Table 4 - First sketch of upcoming maturity model

		Maturity levels					
Dimensions	Question	Level 1	Level 2	Level 3	Level 4	Level 5	Score
D1	D1-Q1						
	D1-Q2						
D2	D2-Q1						
	D2-Q2						
D3	D3-Q1						
	D3-Q1						
							Overall score

Defining administration mechanism is hand in hand to the success of the maturity model assessment according to Maier et al. (2012). Before deciding the mechanism, it must be realized how much resources and support the assessment is going to have. There are two types of administration mechanisms: focus on process (raising awareness) and focus on end results (benchmarking). Focusing on process assessments are made by group workshops where maturity grid scores are assessed and necessary steps for improvement are discussed. Focusing on the end results, on the other hand, the maturity grid's scores are evaluated based on overall assessment of the measured capability and thus suit more case-companies like in this thesis. The overall score of the maturity assessment is based

on averaging out individual results. The focus on benchmarking is, as the name says it, on the end results.

### 5.2.3 Evaluation

Evaluation is the phase where we determine the end results discussed in the previous chapter. Maier et al. (2012) split evaluation phase into two sections: validation and verification. Firstly, after building the maturity grid, we need to validate it. Validation is the process in which the assessment grid is tested for its validity and the results are correct, accurate and repeatable. Verification is the part where the maturity models are evaluated against the success criteria and requirements defined in previous chapters.

### 5.2.4 Maintenance

Maintaining the maturity grid is an ongoing improvement process. This can be visualized by the picture below where continuous improvement cycle (Plan, Do, Check & Act - cycle) is implemented. Mair et al. (2012) saw maintenance as continuous as knowledge and understanding of maturity levels progress. Benchmarking maturity grid's saw significant importance in accurate data storage and retrieval. However, updating the benchmarking maturity grid reflecting current best practices will compromise validity and lead to a need to repeat the evaluation phase.

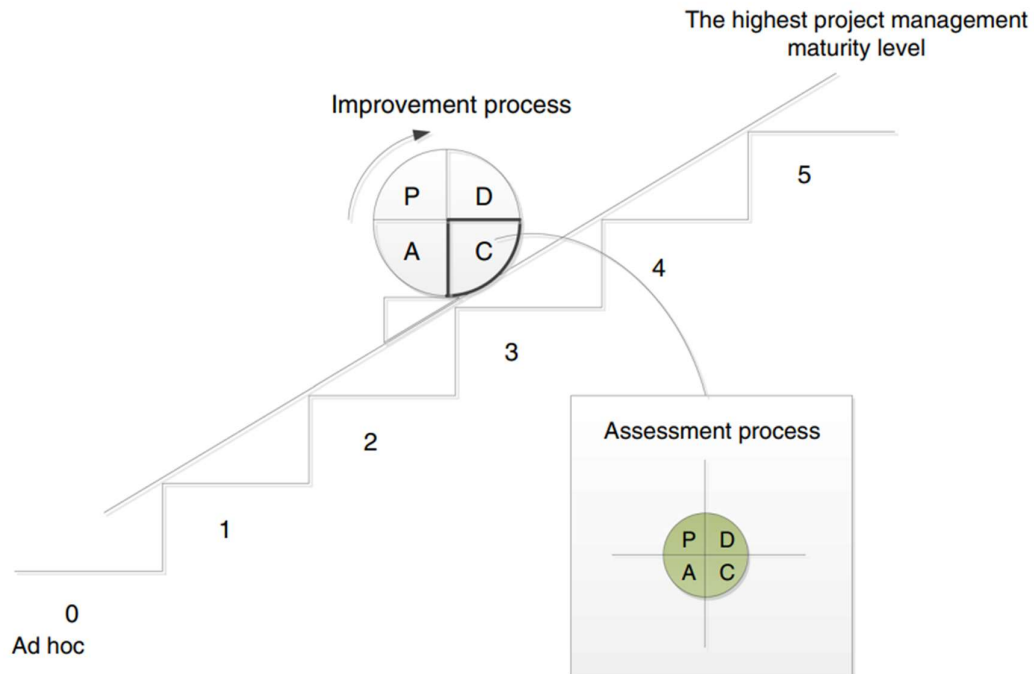


Figure 7 – Continuous improvement as basis for maturity model performance improvement (Backlund et al. 2015)

Although maintenance of maturity model is vital, it is outside the scope of this thesis. The maintenance is left for the assessors of the model to further improve it.

### 5.3 Existing sustainable PSM maturity models

Correia et al. (2017) saw in their literature review on supply chain sustainability maturity models that current maturity models are mainly concerned about TBL and especially the environmental dimension. This brings up the question about how balanced maturity grids concerning TBL in PSM really are. A true TBL approach where also social and economic dimensions are considered is missing. By just narrowing down to one aspect of TBL exposes the existing maturity models to having just too niche capabilities measured and can be hard to implement as they might have, for example, high overhead costs or solutions doesn't maximize social well-being. That is why in this thesis' maturity model, all dimensions of TBL are going to be considered. Correia et al. (2017) also found out that the number of sustainable PSM oriented maturity models is low and thus highlighting the importance of initiating new maturity models in this area. Picture below shows how many maturity models about sustainable PSM are found by searching academic literature.

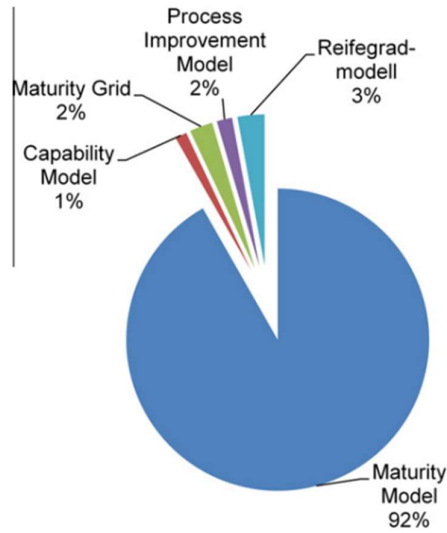


Figure 8 – Search phrases relevant to finding maturity models of sustainable PSM (Correia et al. 2017)

Pavana et al. (2023) conducted a systematic review on studies about sustainable supply chain management and maturity models. Half of the found studies were about developing a maturity model, 15 % were about adaptation of the maturity model and 15 % were about validating the model. The rest were not applicable to the typical maturity model assessment which was earlier defined in this thesis. The study found the same phenomenon as Correia et al. (2017) as there was found more maturity models considering the environmental aspect rather than social and economic. 12 out of 19 maturity models dealt with the manufacturing sector, but as they differ from each other, there is concluded that maturity models are indeed mainly intended for case analysis.

## 6 Method

### 6.1 Positioning of the study

The research question of this thesis determines the underlining goal this thesis must achieve. To achieve this, a correct research methodology will be chosen. The type of research subject, sustainable PSM, is highly complex and varies, which in this case a qualitative study fits better than quantitative one. The research methodologies adopted in business research are mainly determined by Neilimo & Näsi (1980) and further improved by Kasanen et al. (1993). Former study built a research methodology matrix (see table below) which describes business research as per theoretical & empirical axis and descriptive & normative axis. These can build 4 different research approaches: conceptual, decision-oriented, nomothetical and constructive approach.

Table 5 – Research methodology matrix (Neilimo & Näsi 1980)

	Theoretical	Empirical
Descriptive	Conceptual approach	Nomothetical approach
Normative	Decision-oriented approach	Constructive approach

While the aim of this thesis is to build a maturity model for a tier-1 automotive company, an empirical approach is more likely to suit the case company's needs than theoretical approach. Eriksson & Engström (2021) say that while empirical studies are better for organizational learning, a theoretical approach would fit a best practice approach. While both approaches might fit this thesis, the previously reviewed subjects on literature review better underline an organizational learning approach rather than a best practice one. It can also be argued that there is a best practice approach for complex subjects such as sustainable purchasing and supply management.

Kasanen et al. (1993) underlined that case studies fit with both normative and descriptive methods. However, a normative study gives hands to constructive approach which means creating models, diagrams or plans for problem solving which is in line with this thesis' goal. A typical construction can be about a real-world phenomenon or business case

where the research is subject to model the real world as best as it can. Not all problem-solving models should use a constructive research approach. This approach, according to the authors, needs to tie the problem to its solution. While doing constructive research and solving problems, there is also a tendency to be free from prejudices, because constructions show what solutions do work and what does not. Moreover, construction offers new questions leading to new problems that haven't yet been realized. Therefore, a constructive approach is the most suitable for this thesis. Kasanen et al. (1993) made a research process which was later updated by Lukka (2014) which can be seen below.

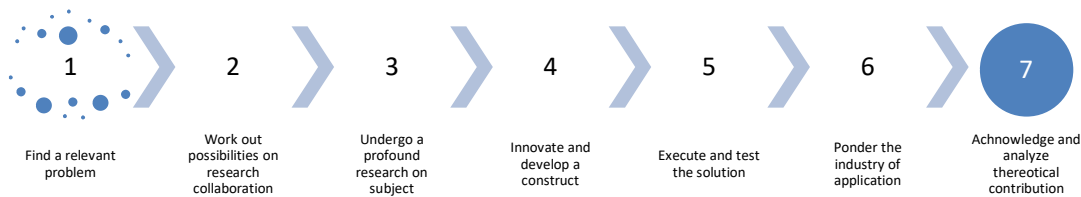


Figure 9 – Constructive research process (Lukka 2014)

Lukka (2014) saw constructive research like Kasanen et al. (1993): pragmatic and usable in practice. Former saw 4 success factors for constructive research, the practical implication of the problem and solution, usability of solution in practice, connection with theory and theoretical contribution of the research. Maturity model creation and validation is thus the most suitable solution for this research. Maier et al. (2012) underlined that usability of maturity models is the most important factor on its implementation to the intended audience.

## 6.2 Research process

A research method explains how this research will be conducted. The base for this research was to conduct a profound literature review into sustainable PSM practices. To achieve, the literature review conducted earlier on this thesis needed to undergo different types of literature which were mainly divided into two subject areas: sustainable sourcing & procurement and sustainable supply chain management. Furthermore, this research utilized upcoming legislation on due diligence and thus integrated internationally recognized OECD Guidance into its literature review. This was the third step of the constructive research process.



Following the profound literature review comes fourth part on Lukka (2014) constructive research process, developing a construct which is in this case the maturity model. Following the maturity model creation process, which was already defined at chapter 4, Maier et al. (2012) defined the 4 phases of the process. Following our reasoning, phase 4 – maintenance – will be left out of the scope of this thesis (see Figure 9).

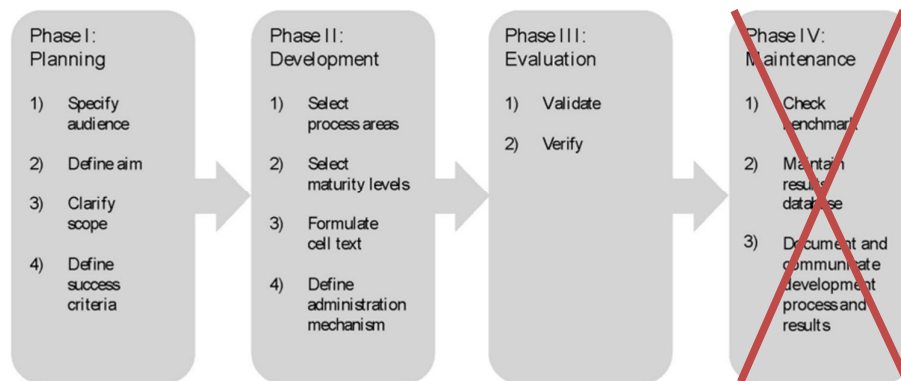


Figure 10 - Developing maturity model (Maier et al. 2012)

Aligning maturity model creation process to Lukka (2014) constructive research approach will be the practical basis for this thesis. The following picture below explains the very detailed process this thesis is utilizing. The creation of the maturity model is building on the literature review into sustainable PSM literature and, more specifically, aligning the discovered PSM themes with the 6-step Due Diligence process outlined in the OECD Due Diligence Guidance for Responsible Business Conduct. The literature-based maturity model is going to be the baseline for the validation stage. The aim of baselining the thesis with OECD Due Diligence Guidance for Responsible Business Conduct is to help the case company align itself with the CSDDD. Kasanen (1993) underlined that while a constructive research approach is focused on practical problems told and creating a construct based on it, a base on legislation and relevant literature bases the model's maintenance phase more practical to implement outside of this thesis.

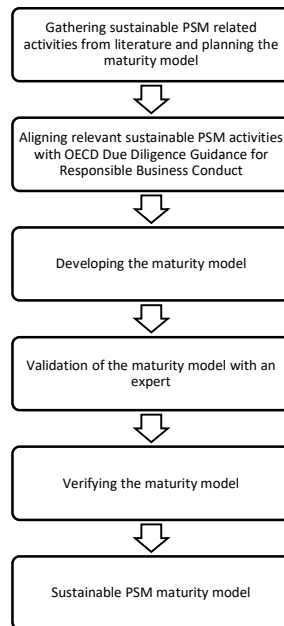


Figure 11 – Maturity model creation process in this thesis aligned with Lukka (2014) and Maier et al. (2012)

In the next step, a validation by an expert is needed to according to Maier et al. (2012) to fit the model into case company's needs and special requirements. The method chosen for validating the maturity model based on literature review is a semi-structured interview. Galletta & Cross (2013) saw semi-structured interviews as valuable for constructive research where interviews incorporate more open-minded questions which can lead to further discussion. This in turn will encourage improvement to maturity model in line with Maier et al. (2012). Ghauri (2020) saw interviews as a typical way of doing qualitative research. Semi-structured interviews have predetermined questions, but the interviewee has full rights to answer in their own words. Unstructured interviews may give a better picture of respondent's position or behavior but can mislead the focus of the interview. Fully structured interviews on the other hand can be too rigid and the full potential of the interviewee is not utilized. Therefore, a semi-structured interview will be adopted to validate the maturity model.

Maier et al. (2012) underlined the importance of validation to check if the chosen maturity grids are relevant and covered. Therefore, the semi-structured interview will go through every developed maturity grid and the aim of the interview will be to find improvement, see the relevance and to see if it is in scope of the case company. If the respondent perceives that one or several dimensions are lacking in the literature-based maturity model, they can suggest an addition. In total there will be 3 interviewees and all of them

are working at the case company. The aim of who to invite to be the interviewees had to be aligned with the aim of the maturity model. A sustainability specialist was necessary to be involved in the process of the validation because the specialist was intended to give the scoring on the model. Representatives from manager-level were invited to give a wide view on the model and the possible improvement points that specialists may be lacking. The interviews were conducted remotely over Teams. Interviewees were given the maturity model and interview frame beforehand to familiarize them. The interview frame can be seen on Appendix 1. The table below describes the interviewees involved in the interview and their background.

Interviewee	Position	Experience in sustainability / sourcing	Industry experience
SS1	Sustainability specialist	3 years in sustainability	Automotive
SSM1	Senior sourcing manager	20 years in sourcing	Automotive and IT
SD	Sustainability director	1,5 years in sustainability and 14 in quality management	Automotive

The results from the interviews are analyzed by automatic transcription software built into Teams. This research is aligned with Eriksson & Kovalainen (2008) who examined open coding as a tool for analyzing interview's results. Open coding is used to find themes and differences in respondent's answers and find the most relevant and important aspects. The results of the coding will be gone line-by-line and cell text will be improved accordingly. Interviewee's answers are then considered to conduct a validation process where the final version of the maturity model will be created. The overall process of analysis fulfills the requirements of a constructive research process where the construct of the real-world is created and validated.

### 6.3 Research quality

High-quality research must be correct, accurate and repeatable (Maier et al. 2012). The results shall be repeatable although this thesis is aimed for a case company. The general framework of the maturity model will be alike for other automotive tier-1 suppliers, but differences may exist due to differences in operational environment. Eriksson &

Engström (2021) study warned researchers of an obstacle in bridging a gap between theory and data which can lead to new research needs. These needs are vital for further research but can mislead the research process into unwanted directions. Therefore, the need for research to solely focus on the research question and aim is crucial for high-quality research especially for operations and supply chain management research.

Eriksson & Kovalainen (2008) concluded that research quality can be measured by 2 indicators: reliability and validity. Reliability means to which extent the results are the same on repeated trials. Validity on the other hand refers to how the construct reflects the real-life phenomenon or construction. In a maturity model these 2 attributes refer to how repeatable maturity grids are when the research aim is the same and how well can the model reflect the real-life problem. Maier et al. (2012) concluded that maturity models in general fit these 2 attributes when the research process is followed thoroughly. Further validity for the model is constructed by sending the research model being sent for informants for review.

## 7 Analysis

The sixth chapter is solely based on the maturity model creation process aligned with Maier et al. (2012). The basis for the model will be explained thoroughly in the planning chapter and the model will be developed after that. Based on the first iteration of the maturity model, an expert validation will be conducted, and a final form of the model is created.

### 7.1 Planning

Planning of the model was made in close collaboration with the assignment company and its requirements to measure sustainable PSM performance. As there was lack of a good tool to get an overview on sustainable PSM performance, rising pressure from upcoming legislation and lack of good maturity model on due diligence in the literature, a decision was made to align the thesis with due diligence. Subjects under this thesis were aligned with the assignment company and academic literature to the most recent and valid competencies built into the model.

#### 7.1.1 Specify audience

The audience targeted for the maturity model is the sourcing department of the assignment company. A clear stance is taken to prioritize automotive industry and its specialties in the model to fit not only the intended department, but also other procurement or sourcing departments of the assignment company. The model can work with other manufacturing companies or other industries like automotive. There should be no differentiation between indirect or direct sourcing in the model and therefore it is applicable to use both if the department conducts due diligence.

End-users of the maturity model are intended to sustainable PSM representatives or specialists in the assignment company. Their task is to score the model based on their best information on the current situation and if necessary, consult other departments to gather information. The decision to use specialists is because of the complicated nature of due diligence and sustainable PSM. The information based on the scoring will be useful for managers and senior managers to further develop competencies in-house and in suppliers. Directors will be given an overview of the score of the model and see where the company is succeeding and where there is room for improvement. Furthermore, Maier et al. (2012)

said that maturity model should be basis for a road map of improvement, and this can be a good tool for reporting to the director-level.

### 7.1.2 Define aim

In this thesis a benchmarking point of view is taken as this currently offers the best fit to meet prerequisite customer demands and different standards, but also sees some top-level maturity levels. Maier et al. (2012) saw that benchmarking can identify an excellent organization and the levels can be differentiated by how much added value they bring to the company. While the overall aim of the model is to benchmark the company, a very important factor is the finding of room for improvement. Furthermore, as there are few maturity models based on due diligence in particular, a stance on complying with CSDDD is set to be the aim of the maturity model. Although, this maturity model measures organizational capabilities, compliance is ensured by having high enough capability in every sector. Therefore, sections which have been lacking before can be recognized.

### 7.1.3 Clarifying scope

While the aim of the maturity model is to fit the case company in question, the model can be used in similar manufacturing industries, although it was not intended to do so. Maier et al. (2012) mentioned that maturity model grids can be further scoped to specify one aspect of interest. This is the case on this thesis as these grids will look at different competencies in the company that must be met. The model will not clarify certain sustainability issues in the automotive industry, rather it is intended to comply and develop the OECD (2018) due diligence guidance to build competencies that can help the case company tackle sustainability issues.

### 7.1.4 Defining success criteria

Success criteria are the criteria that the maturity model meets. Success criteria are therefore met to meet the assignment company's needs. The first success criterion is therefore building compliance in due diligence processes. This is to meet the growing need for valid and high-quality information sustainable PSM requires to meet both growing customer demands and legislation. The second success criteria are to build a comprehensive overview into sustainable PSM competencies and improvement points.

This is to ensure a clear understanding in top-management about the level of sustainable PSM competencies in the company.

## **7.2 Development**

Developing the maturity model is the basis for the validation and the final form. Therefore, this is a key part in the process and must be done carefully. Maier et al. (2012) underlined the importance of comprehensive literature review, but also a good understanding of the model's targets and aims to align them with the model.

### **7.2.1 Selecting process areas**

Selection of process areas is the fundamental decision point according to Maier et al. (2012) and may be the hardest decision. Process areas can also be called the maturity model's dimensions. They can be based upon internationally recognized standards which can improve the longevity and credibility of the model and make it more tangible. The model can be done in accordance with TBL or more relevantly in accordance with OECD (2018) due diligence guidelines which were inspected in chapter 3.2. These guidelines will help the model to identify the places in which the competencies must be built upon and how they can be divided into the OECD (2018) guidelines. The subdimensions below process areas are based on the OECD (2018) guidelines and the best practices found in the literature review. Therefore, the selected process areas are as follows:

1. Embed responsible business conduct into policies and management systems
  - 1.1. Devise, adopt and disseminate a combination of policies on RBC issues
  - 1.2. Developing RBC policies - Supplier code of conduct
  - 1.3. Implementing RBC policies - Supplier code of conduct
  - 1.4. Oversighting RBC policies in procurement & sourcing
  - 1.5. Sustainability in procurement process & decision
  - 1.6. ISO standards
2. Identify & assess adverse impacts in operations, supply chains & business relationships

- 2.1. RBC risk scoping exercise
- 2.2. Product based RBC risks
- 2.3. Geographic and enterprise-level based RBC risks
- 2.4. Risk management and supplier involvement strategies
- 2.5. Control points in the supply chain
- 2.6. Supplier management strategies for Kraljic's purchasing categories
- 2.7. Supplier auditing
3. Cease, prevent or mitigate adverse impacts
  - 3.1. Addressing noncompliance
  - 3.2. Communicate to prevent adverse impacts
  - 3.3. Leverage RBC expectations in business contracts
  - 3.4. Supplier development - Action plans
4. Track implementation and results
  - 4.1. Assessing implementation of due diligence process
  - 4.2. Assessing the effectiveness of due diligence process
  - 4.3. Communication of tracking implementation and results
  - 4.4. Involving relevant stakeholders in continuous improvement of due diligence process
  - 4.5. Supplier development - supplier portal
5. Communicate how impacts are addressed
  - 5.1. Due diligence in reporting
  - 5.2. RBC risk mitigation reporting
  - 5.3. Respect anonymity and sensitive information



## 6. Provide for or cooperate

### 6.1. Remediation for those affected by adverse impacts

### 6.2. Grievance mechanism enabling early warning and remediation

## 7.2.2 Selecting maturity levels

Selection of maturity levels is put together from the conducted literature review and comparison with existing maturity models. Formulation mechanism is based upon detecting absolute ends of the cases. In this thesis they will be complete in the worst performing end about unawareness and at the leading end about leadership. Maier et al. (2012) showcased that maturity levels are descriptive and tell the level of competence. In this thesis, the aim was to showcase the competence on, 1<sup>st</sup> complying and 2<sup>nd</sup> having a proactive role in sustainable PSM. When selecting the best-fitting maturity levels, we must look on the opposite levels first. Correia et al. (2017) study on sustainable PSM found other maturity models using “un-aware and non-compliant”, “unprepared” or “very low maturity” for low maturity. Maier et al. (2012) found others using words “naive” or simply level 1. As un-awareness and non-compliance describe low maturity on sustainability in general, this is a good starting point for the lowest maturity level. The situation can be described as there is a high risk of sustainability violation. Going to the opposite end of maturity, things can be described as aware and compliant. However, Kocmanová et al. (2016) saw sustainability having impact on value added and concluded that very few companies can add positive value on their business activities on sustainability. Therefore, combined with Maier et al. (2012) most competent level: industry leader, the highest level must showcase sustainable PSM activities bringing positive value on sustainability and be the leader in the area.

The next question after defining 2 opposite ends of maturity levels is how many is appropriate to be in between the ends? As previously discussed, the common number of maturity levels for a benchmarking model is 4-5 found in academic literature. Because of the highly complex nature of sustainability, a decision to take 5 levels of maturity is taken. This will give more room for decisions as end-users use the maturity model and can fit their reasoning better into a more specific level. Therefore, a middle ground is needed: something between uncertainty and certainty. This can be described as maturity where a

clear foundation on standardized processes is set, and sustainability risks are measured and complied with. One level below this can be about basic compliance where competency is built, but there is still high uncertainty in the area. Processes are set, but different stakeholders may not be that involved in the process leading to inefficiencies. One level up from the middle ground can be described with the concept of having proactive measures on sustainability. Activities may not bring positive value on sustainability, but they are close to it. However, the activities are tied to long-term planning and standardized processes are redefined as necessary.

The maturity levels and their description are in the table below.

Table 6 - Maturity levels and their description

<b>Maturity level</b>	<b>Description</b>
Level 1: Unaware and uncertain	The area is still unprepared and there is a very high risk of sustainability violation. Processes are unclear and not followed.
Level 2: Basic compliance	The area is prepared, but there is still uncertainty. Processes are set but may not be followed. Sustainable PSM is only viewed as risk management.
Level 3: Foundation on sustainable PSM	Standardized processes on sustainable PSM are set and they are followed. Sustainability risks are well known and measured. However, risks still exist.
Level 4: Proactive and managed sustainable PSM	Proactive measures are taken and sustainable PSM is deeply embedded into every part of PSM functions activities.
Level 5: Leadership and certainty	Area is continuously improved and there is clear certainty on the level of sustainability. PSM activities and processes are bringing positive value on sustainability.

### 7.2.3 Formulating cell text

Formulation of the cell text to the maturity model will be done straight after defining the dimensions and their questions. Cell text is aligned with the dimension and the level it is assigned to. The most important factor when creating the cell texts was to align it with the OECD Due diligence process and the relevant academic literature. The cells need to differentiate from each other and give an overall and measurable view on the measured competence. One aspect of research quality will be that all the cells in the same level need to be at the same level and this aspect has been noted when creating the cell texts.

#### 7.2.4 Defining administrative mechanism

The administration mechanism was previously seen as benchmarking one where the assignment company addresses its competencies and maturity, but more importantly follows the maturity level progress over time. Maier et al. (2012) said that administrative mechanism goes hand in hand with the aspect of what the aim of the maturity model is. The decision was to go for a benchmarking maturity model which gives a good view on what aspects the literature and the OECD Due diligence process is requiring. This in turn will go hand in hand with how quality of cell texts is measured.

### 7.3 Empirical evaluation of the maturity model

The research process continues to its validation phase, where the expert interviews were conducted. In total, 3 experts were interviewed both from the sourcing and sustainability functions to validate the maturity model. All the candidates had years of experience on either sourcing or sustainability and thus knew the background requirements of sustainability and the unique aspect of sourcing to enable sustainability. The interviewees had gathered experience in the automotive industry, and one had experience also from the IT industry. While the interviewees had years of experience, differences could be found in the background. Those specializing in sustainability had a background on quality management before jumping to sustainability and the ones specializing in sourcing had background on business and management. This further improves the validation process as diverse views can be gathered from the interviewees. Furthermore, the interviewees represented diverse positions on the case company: specialist, senior manager and director. To support the empirical validation, the presentation of the results is supported by quotations from the transcripts and to further improve anonymity, the interviewee codes will not be used.

The interviewees were at first asked about a quick overview of the model and how they felt about the levels on the model. Most of them felt that the steps sounded logical, and the model was in good shape in general.

*“In general, the definitions and scales are logical”*

*“I really liked the model and the levels that show how we can mirror the subdimension”*

*“I personally use these 5-level models to find out the situation awareness and how we can improve”*

*“The levels make sense to me ... and this is quite a good approach”*

*“The distribution between the levels was very good”*

The interviewees also saw challenges in utilizing maturity models and the difficulty in building it on the OECD guidelines.

*“This [maturity model] is going to emphasize certain points where you set the scale”*

*“The toughest point on this questionnaire is how you set the right ambition level and how an individual is going to see how each score is going to be evaluated”*

*“[OECD guidance] is complicated and thus this model needs explanation in its subdimensions”*

*“Dimensions are also progressing on this model which brings difficulties in having a balanced overall score”*

The dimensions were walked through after the general overview. The interviewees were asked to give their views on the cell texts and how to improve them. The interviewees saw that differentiating the line between the firm’s own code of conduct and supplier code of conduct would be beneficial.

*“I always think is very important is the consistency between our own code of conduct that applies to us and the supplier code of conduct, because there needs to be a direct link”*

*“I think that is where that linkage between our code of conduct and supply code of conduct could be emphasized here”*

One interviewee mirrored the maturity model based on how the firm is currently processing and saw possible improvements on how to resolve situations where result is between levels. This can be done for example with a description or explanation box right after the score to give a better understanding of why it was scored the way it was.

*“Sourcing is a key player in stakeholder involvement and while it says on the level 3 that stakeholder involvement is lacking, it may not represent the real world”*

This was underlined by a second interviewee who saw that the challenge may be with who is the evaluator of the model.

*“So how the individual responses to individual questions are then gonna be later translated into an overall score”*

Within the dimensions, there were also international standards mentioned in the form of ISO standards. The interviewees saw that the ISO standards may be good to mention in the cell texts.

*“Those [ISO standards] need to be specific enough to for them to be to know what to look for as well and ISO stand at this kind of a broad statement.”*

However, there was variation between the interviewees on how they saw ISO standards. One interviewer was ready to list all relevant ones and say how the firm follows new standards. Furthermore, the interviewee was ready to give scores on the maturity model.

*“We require 9001 – quality, 14001 – environmental, 45001 – health & safety, but are following the new 20400, but have not requested it”*

*“We are between levels 4 & 5, because we have the right tools and operating models”*

Further differences could be found under how RBC policies were oversights. One interviewer referenced how they have done it thoroughly in another firm and how it can be improved in the case firm. Others put more importance on how tools can enable effective oversight.

*“I see that we have an oversight on tier-1 suppliers, but lose oversight on tier-2”*

*“We may not have the experience or the competence how to map this”*

*“I don’t understand what you mean by oversight”*

*“If you have some kind of a supplier relationship management tool to actually get kind of a confirmation of all whether or that where they actually need to take a stand on whether they accept it or don't accept it, and whether they've taken the time to review it”*

One interviewee saw the importance of having sustainability right in procurement & sourcing function compared to only having a one centralized sustainability function.

*“We run to a problem in this firm when we have one centralized sustainability function, and the sustainability is not built into sourcing and thus the competence may be in the sustainability function but not in sourcing”*

The ownership issue was raised by another interviewer which also saw conflict in adopting the supplier code of conduct. There has been recognized a conflict where the firm's sourcing function doesn't necessarily fully implement the code of conduct into processes.

*"So there I think defining that ownership and refining that process a little bit would be beneficial, for example for us."*

*"you could have one part of the organization working and publishing this supplier code of conduct and then, for example, the purchasing organization defining their processes in and not necessarily including that as a necessarily element and fully integrating that into their processes"*

One interviewer undelined the importance of having proper supplier selection process and policies which are followed.

*"I'm sure that as part of the a CSDDD also that is gonna be one of the aspects you need to demonstrate compliance and where you need to be able to demonstrate how you actually guarantee those processes within your business"*

*"second step is of course, having the necessary evidence in place to demonstrate that we, yes, we are doing that and having the data to support that"*

When it came to RBC risk scoping exercise, the interviewees saw differences on how it can be implemented. Furthermore, the use of 3<sup>rd</sup> party certification on level 3 was disputed.

*"How do we assess risks? What are the criteria that we apply? How are those relevant to our business in the industry that we operate in?"*

*"We have a risk management tool that is widely used, but RBC risks may not be too standardized"*

*"Where I was a little bit unsure in on this particular question was actually the aspect of third party certification which I know that always it does not guarantee third party input and that is not necessarily an advantage"*

*"In that regard, I've also winning the sustainability and knowing that a lot of that legislation is news to not just for the firm, but also for some of the consulting companies out there that offer those third party verification and we'll probably move that higher up the expectation chain and probably see that more in a leadership."*

Product based RBC risks got an improvement point about establishing a material commodity-based RBC risk.

*“it would be still on an organizational level based on the type of product or material commodity that you're looking at or that you're looking at sourcing”*

*“We can look at it more on the sourcing category level”*

Risk categories might need to be established so that they are easy to integrate into external databases.

*“So whenever I for example look at whenever I categorized my purchased goods and I need to be make sure that it's meaningful that categorization is meaningful, that I can actually connect it to some kind of an external database”*

Geographical and company-based RBC risks were seen as straight forward. However, the concept of tier-n management was raised and the issues of utilizing information from the upstream of the supply chain.

*“We practice these RBC risks based mitigations because it is easy and based on public information”*

*“Absolutely in scope that we need to check those kind of supplier groups and have strategies in place to avoid or to mitigate risks”*

*“I think those are very relevant dimensions both and I think having that here I'm does make a lot of sense, although that's not always easy, especially I think they're the complexity lies within probably and that's probably a relevant part of information is well we a lot of our direct partners are somewhere in Europe or at least in the Western world, whereas I think where it gets more interesting is further down the supply chain and then probably that's one thing that could be highlighted here a little bit different”*

The importance of auditing, auditor competence and having action plans and following them was underlined many times during the interview.

*“We have corrective action plans and demand our suppliers to follow up on corrective actions when audited, but improvement can be found on how these action plans are followed up”*

*“If you're looking at auditing practices, there's standards out there that say, OK, they need to be familiar with the OECD guidelines with risk management and supply chain*

*with due diligence as a whole and a responsible business conduct. They [auditors] need to be qualified in that sense”*

*“they need to be qualified also in the industry”*

*“auditor competence that when they do those audits, their conduct is appropriate, that they ask open questions and not closed questions”*

Furthermore, the aspect of communicating to suppliers on development plans and when recognizing non-adherence to build the necessary communication methods was risen. Part of sustainability is to make a positive impact and the interviews also recognized that.

*“Having the plan also set out a strategy laid out how to engage with the with the suppliers is going to be of essence because technically what we would be one way of doing it for example is going down our supply chain”*

*“Whereas when I try to engage with them and try to convince them, actually that maybe the much harder part, yet that's the only part where we can actually have an impact to change something”*

Data management and supplier portal was a subject that all the interviewees agreed upon and its importance.

*“We need a tool to see transparent results on audits and supplier performance, but more also the supplier development”*

*“Getting the purchasing group to work with that platform in addition and enter data and maintain it properly”*

Remediation of adverse impacts was seen as hard to evaluate.

*“We can assess and compensate for example our Scope 1 and Scope 2 CO<sub>2</sub>-emissions, but it is hard to assess social impacts”*

*“Somebody needs to have thought about the concept of what our relevant impacts that we do have and need to remediate for and I don't think that there's criteria in place”*

None of the interviewees saw it necessary to add other dimensions to the model.

However, the interviews saw that the model should be a part of heat mapping a like to employee satisfaction questionnaires to relevant stakeholders. The aspect of differentiating levels was also raised.



*“This is a good evaluation and we can use this as a heat map a like to our employee satisfaction questionnaire”*

*“The objective is that we need to send this questionnaire to different functions and get improvement points also from there because we aspire to be at level 5”*

*“So the comparison between the different questions is eventually going to identify what we should be working on”*

*“Yeah, I do believe that that thus gives somewhat of an over a good comprehensive overview of what aspects should be reflected in the process of what aspects companies should be considering in the application of due diligence and yeah, what levels they are there are to that companies should be working towards”*

Furthermore, the importance of to whom this questionnaire will be sent is going to be evaluated.

*“Sometimes in order to make the this is a comprehensive picture of typically windows sets of when you look at defining some kind of a methodology or assessment like this is defining criteria for the people that should be conducting those audits or that are qualified to conduct those audits is probably something that adds to a comprehensive picture because the questions themselves are only as good as the person who's going to have to make the call at the later point”*

#### **7.4 Final enhancement of the model**

After the validation questionnaire answered by three experts, the final form of the maturity model was formed and can be seen on Appendix 3. The aim of the validation was to get a comprehensive overview on the maturity model and build an even better one based on the validation. Several points were raised during the interviews about how the maturity model can be improved and they are listed below. Overall, the interviews had similar views, but differences could be found when the amount of experience in sourcing varied. One dimension was added to the model based on the feedback, but other dimensions were mostly untouched.

- The model emphasizes collaboration even more.
- The model gives explanation texts to questions that were found difficult.
- The model introduces tier-n management instead of control points.

- The importance of audits was emphasized.
- ISO standard dimension was split into specifying the firm and the supply base.
- The importance of auditor's competences and audit standards were introduced.
- Language on cell texts were softened.
- Requiring 3<sup>rd</sup> party certification or validation on level 3 were removed on some dimensions.
- The steps between levels were enhanced on some dimensions.

The success criterion for the model were enabling the compliance building into due diligence process and getting a comprehensive overview into sustainable PSM competencies in a firm. The interviewees saw that the model will give a good overview and help the company to build its competencies on due diligence in the supply chain which goes hand in hand with the success criteria. Therefore, the model has reached its criteria and can be called the validated version of the maturity model. However, the interviews brought a new demand for the model. To get clarity and reliability to the results, it is now recommended that the model should be conducted in cooperation with relevant stakeholders to enable better information and knowledge learning while evaluation and giving scores to the model.

## 8 Discussion and Conclusions

### 8.1 Discussion

Sustainable PSM has gotten attention from both academic research and international companies both from growing customer demands and legislation which has put the need for evaluating sustainable PSM performance to an even greater level. To enable this evaluation, companies will conduct due diligence to address, mitigate and prevent adverse impacts on RBC violations and risks. OECD (2018) determines the 6-stepped due diligence process which is aligned with upcoming CSDDD from European Union. To enable the case company to determine the level of its due diligence process, it can see how the firm can comply not only with the legislation, but also with strict customer demands. As Schultze et al. (2019) underlined that sustainable PSM is enabled only when appropriate knowledge about sustainability is gathered in a firm. Maier et al. (2012) saw that maturity models are a great way to get a situational awareness into organization capabilities and supports Schultze et al. (2019) argument that sustainability performance is raised in a firm through competencies and especially in individual level and organizational level. The following research question was set to achieve a better understanding of measuring sustainable PSM performance for the case company.

- **RQ1:** *How to measure sustainable purchasing and supply management performance with a maturity model in a tier-1 automotive company?*

To answer the research question a thorough research process was conducted in accordance with Lukka (2014) process on constructive research. A comprehensive understanding of sustainable PSM activities was researched on automotive industry by examining academic research throughout the years. During the literature review it was realized that many of the sources were relatively new, only a few years old at times or even newer. This underlines the growing importance of sustainable PSM in academia and in firms. The level of sustainable PSM in firms was seen as varied as Villena & Gioia (2020) suggest when sustainability related information has been seen as complicated and hard to get. Many MNCs are seeking to build sustainability competencies in their supply chains but are facing difficulties even in implementing them to tier-1 suppliers and beyond. The challenge faced by the MNCs may be due to poor collaboration on sustainability as Villena (2018) brought the missing link on sustainability to the table.

The traditional way of communication between firms doesn't always enable sustainable PSM competencies to flow upstream of the supply chain which makes management of the upstream supply chain even more challenging if, for example, procurement personnel are unaware of sustainability requirements set by the customer.

To tackle even growing demands on sustainable PSM and its measurement, a method of building a maturity model for the firm was chosen. Maier et al. (2012) saw that maturity models are a good basis for organizational capability measurement and improvement. Pavana et al. (2023) saw that existing maturity models on sustainable PSM were mostly keen on environmental aspects and the organizational capability of due diligence process was not measured. To bridge this gap in building a due diligence process evaluation, a framework of OECD (2018) was chosen as a basis for the model. OECD (2018) due diligence process defines internationally recognized process, that is a trusted basis for the model. The model was built according to Maier et al. (2012) study on building maturity models and the model development was done in three phases: planning, development, and evaluation. A maturity model is evaluated by maturity levels and there were in total five maturity levels ranging from level 1: unaware and uncertain to level 5: leadership and certainty. They are then evaluated against dimensions which in this thesis were aligned by the 6-step OECD (2018) guideline. Below the dimensions, there were subdimensions and each one of them was both relevant to the OECD (2018) guideline and the found academic literature.

The first version of the maturity model was solely reliant on the information gathered on the literature review and therefore, a validation as suggested by Maier et al. (2012) was conducted. Three expert interviews were conducted and insights from specialists and top management were gathered to first validate the model but secondly to gather valuable information on how the model can be improved. After gathering results of the interviews, a validated version of the model was created. The final and validated version of the model will help the case company to measure its level of performance on sustainable PSM and especially due diligence.

The model created in this thesis was solely aimed at fitting the individual case companies needs and requirements which narrows down its usability outside of the automotive industry. As per Lukka (2014) constructive research is the process of building a construct on a real-world phenomenon and is solely good at constructing this case example.

## 8.2 Conclusions

The growing demand for sustainability in every firm's supply chain is only going to be rising and tools for measuring the performance of sustainable PSM activities will be vital for companies to build competencies in the long-term. While sustainable PSM is a complicated subject, this thesis tries to comprehend the subject by building a maturity model on sustainable PSM. Top level management needs more tools as the legislative environment gets even more complicated and new customer requirements are behind the corner. The thesis in academic contributions tries to bridge this gap of finding relevant information on automotive industry's sustainability practices and the level of sustainability in upstream management of the supply chain. Information gathered from the literature review underlines the fact that sustainability management in supply chains is a growing and a young subject as many of the oldest sources were dated back to 2010s. Furthermore, the thesis found a lack of comprehensive research on due diligence in firm's supply chains which makes it even more important to build a maturity model to evaluate it. Overall, the challenges on sustainability have been mentioned in most of the research as being both an organizational and individual competence problem. Furthermore, sustainability has been seen as only for firms that are financially stable and can hold up increased fixed costs and ensure financial benefits from disclosing necessary information. Future legislation on due diligence requires bigger firms to comply with due diligence leading to even wider adoption of sustainable PSM activities.

The managerial contribution that this thesis has brought is the maturity model. It is based on research and OECD (2018) framework on due diligence which further supports the firm to comply with upcoming legislation. The model is intended to be done regularly in the case company so that the necessary improvements for sustainable PSM activities can be tracked and implemented. The top management administration is going to enable the model to also be maintained in the future. While sustainability is a vastly growing field, this maturity model must keep up to the pace. Sustainability in PSM activities is complicated, but with the right tools, resources and competences, the road to leadership can be achieved in the long-term. But as one interviewer put it, there are a lot of companies in the same boat towards sustainable PSM:

*“Leaders right now make more of an approach to go down further in the business, supply chain and understand it really to the root, a lot of companies are still getting started”*

### 8.3 Limitations and future research

All research needs to be critically reviewed and this research is no exception. Even if the study decreased the existing gap on measuring sustainable PSM performance, there is still a gap on how firm's effectively measure sustainable PSM performance as this thesis only closed a gap for one case company. Future research can look at how different industries have measured sustainable PSM activities and compare them to each other. Further research is needed to evaluate how firms will tackle the requirements set by the CSDDD outside of the tools found in literature review and how each company builds both individual and organizational competencies in sustainable PSM. The maturity model was built so that the levels could represent what is the general situation in the automotive industry before wider adoption of necessary due diligence. The level of maturity is supposed to rise after wider adoption of due diligence. Furthermore, future research could look at how new legislation affects both data quality and quantity, but also how suppliers adapt to even stricter requirements set by the MNC and the poor level of social sustainability in the sector. The complexity of due diligence and how firms build it into their management systems and processes will vary widely and the effectiveness of due diligence processes needs to be studied.

Few limitations come both from the availability of time to make this model and deep dive into the subject of sustainable PSM. The maturity model is specialized to comply with the OECD due diligence process, but more dedicated and complex maturity models can be built. Furthermore, the interviewees of this thesis all came from automotive industry which limits the usability of the maturity model to this specific industry although exceptions can be found in other manufacturing sectors. Further limitations come from the lack of supporting academic research into sustainable PSM maturity models and due diligence processes in the supply chain. This thesis limited its maturity model creation to only three phases, excluding the maintenance phase of the maturity model. Therefore, there can be improvements on how usable this maturity model can be made in the long-term.

## References

- Ahmad, S. – Yew Wong, K. – Rajoo, S. (2019) Sustainability indicators for manufacturing sectors: A literature survey and maturity analysis from the triple-bottom line perspective. *Journal of manufacturing technology management*. Vol. 30 (2), 312-334.
- Backlund, F. – Chronéer, D. – Sundqvist, E. (2015) Maturity assessment: towards continuous improvements for project-based organisations? *International journal of managing projects in business*. Vol. 8 (2), 256-278.
- Barbanti, A. – Anholon, R. – Rampasso, I. – Martins, V. – Quelhas, O. – Leal, F. (2022) Sustainable procurement practices in the supplier selection process: an exploratory study in the context of Brazilian manufacturing companies. *Corporate governance (Bradford)*. Vol. 22 (1), 114-127.
- Beske-Jessen, P. – Johnsen, T. – Constant, F. – Wieland, A. (2023) New competences enhancing Procurement's contribution to innovation and sustainability. *Journal of purchasing and supply management*. Vol.29 (3), 100847.
- Brandenburg, M. – Warasthe, R. – Seuring, S. (2023) Impact pathways: improving supply chain sustainability by due diligence acts? Insights from a German case. *International journal of operations & production management*.
- Camilleri, M. (2022) The rationale for ISO 14001 certification: A systematic review and a cost-benefit analysis. *Corporate social-responsibility and environmental management*. Vol. 29 (4), 1067-1083.
- Camoletto, S. – Corazza, L. – Pizzi, S. – Santini, E. (2022) Corporate Social Responsibility due diligence among European companies: The results of an interventionist research project with accountability and political implications. *Corporate social-responsibility and environmental management*. Vol. 29 (5), 1122-1133.
- Chakroun, S. – Salhi, B. – Ben Amar, A. Jarboui, A. (2019) The impact of ISO 26000 social responsibility standard adoption on firm financial performance: Evidence from France. *Management research review*. Vol. 43 (5), 545-571.
- Chen, J. – Slotnik, S. (2015) Supply chain disclosure and ethical sourcing. *International Journal of Production Economics*. Vol. 161, 17-30.

- Correia, E. – Carvalho, H. – Azevedo, S. – Govindan, K. (2017) Maturity models in supply chain sustainability: A systematic literature review. *Sustainability (Basel, Switzerland)*. Vol. 9 (1), 64.
- Council of the European Union (2024) Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937 - Letter to the Chair of the JURI Committee of the European parliament. <<https://data.consilium.europa.eu/doc/document/ST-6145-2024-INIT/en/pdf>>, retrieved 4.4.2024.
- Drive Sustainability (2023) Supply Chain Due Diligence. How is the automotive industry improving sustainability performance? <<https://www.drivesustainability.org/drive-sustainability-intelligence-report/>>, retrieved 1.11.2023.
- Eriksson, D. – Engström, A. (2021) Using critical realism and abduction to navigate theory and data in operations and supply chain management research. *Supply Chain Management: An International Journal*. Vol. 26 (2), 224-239.
- Eriksson, P. – Kovalainen, A. (2008) Case Study Research. *Qualitative Methods in Business Research*. London: SAGE Publications Ltd.
- European Commission (2022) DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937. <[https://eur-lex.europa.eu/resource.html?uri=cellar:bc4dcea4-9584-11ec-b4e4-01aa75ed71a1.0001.02/DOC\\_1&format=PDF](https://eur-lex.europa.eu/resource.html?uri=cellar:bc4dcea4-9584-11ec-b4e4-01aa75ed71a1.0001.02/DOC_1&format=PDF)>, retrieved 19.10.2023.
- European Commission (2023a) COMMISSION DELEGATED REGULATION (EU) supplementing Directive 2013/34/EU of the European Parliament and of the Council as regards sustainability reporting standards. <[https://eur-lex.europa.eu/resource.html?uri=cellar:a17f44bd-2f9c-11ee-9e98-01aa75ed71a1.0008.02/DOC\\_1&format=PDF](https://eur-lex.europa.eu/resource.html?uri=cellar:a17f44bd-2f9c-11ee-9e98-01aa75ed71a1.0008.02/DOC_1&format=PDF)>, retrieved 4.1.2024.
- European Commission (2023b) ANNEX to the Commission Delegated Regulation (EU) supplementing Directive 2013/34/EU of the European Parliament and of the Council as regards sustainability reporting standards. <[https://eur-lex.europa.eu/resource.html?uri=cellar:a17f44bd-2f9c-11ee-9e98-01aa75ed71a1.0008.02/DOC\\_2&format=PDF](https://eur-lex.europa.eu/resource.html?uri=cellar:a17f44bd-2f9c-11ee-9e98-01aa75ed71a1.0008.02/DOC_2&format=PDF)>, retrieved 4.1.2024.



- European Council (2023) Corporate sustainability.  
 <<https://www.consilium.europa.eu/en/policies/corporate-sustainability/#due-diligence>>, retrieved 4.1.2024.
- European Parliament Think Tank (2023) Corporate sustainability due diligence: How to integrate human rights and environmental concerns in value chains.  
 <[https://www.europarl.europa.eu/thinktank/en/document/EPRS\\_BRI\(2022\)729424](https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2022)729424)>, retrieved 8.1.2024.
- Fraser, I. – Müller, M. – Schwarzkopf, J. (2020, 1) Transparency for Multi-Tier Sustainable Supply Chain Management: A Case Study of a Multi-tier Transparency Approach for SSCM in the Automotive Industry. *Sustainability*. Vol. 12 (5), 1814.
- Fraser, I. – Schwarzkopf, J. – Müller, M. (2020, 2) Exploring supplier sustainability audit standards: Potential for and barriers to standardization. *Sustainability*. Vol. 12 (19), 8223.
- Galletta, A. – Cross, W. (2013) Mastering the Semi-Structured Interview and Beyond: From Research Design to Analysis and Publication. New York: NYU Press.
- Ghadimi, P. – Dargi, A. – Heavey, C. (2017) Making sustainable sourcing decisions: practical evidence from the automotive industry. *International journal of logistics*. Vol. 20 (4), 297-321.
- Gimenez, C. – Tachizawa, E. Wilding, R. (2012) Extending sustainability to suppliers: a systematic literature review. *Supply chain management*. Vol. 17 (5), 531-543.
- Hąbek, P. – Lavios, J. – Krupah, E. (2022) How car producers are driving toward sustainable supplier development. *Production Engineering Archives*. Vol. 28 (3), 268-278.
- Hahn, T – Figge, F. – Pinkse, J. – Preuss, L. (2018) A Paradox Perspective on Corporate Sustainability: Descriptive, Instrumental, and Normative Aspects. *Journal of business ethics*, Vol.148 (2), 235-248.
- Hofmann, H. – Schleper, M. – Blome, C. (2018) Conflict Minerals and Supply Chain Due Diligence: An Exploratory Study of Multi-tier Supply Chains. *Journal of business ethics*. Vol.147 (1), 115-141.
- Hung Lau, K. – Yadlapalli, A. – Dan-Asabe Abdulrahman, M. – Chhetri, P. – Thai, V. (2023) Disclosure index development for sustainable procurement: An Australian perspective. *Journal of Cleaner Production*. Vol. 420, 138357.

- ISO (2010) ISO 26000:2010. <<https://www.iso.org/iso-26000-social-responsibility.html>>, retrieved 25.1.2024.
- ISO (2023) ISO 20400:2017. <<https://www.iso.org/standard/63026.html>>, retrieved 25.1.2024.
- Jiang, B. (2009) Implementing Supplier Codes of Conduct in Global Supply Chains: Process Explanations from Theoretic and Empirical Perspectives. *Journal of business ethics*. Vol. 85 (1), 77-92.
- Kähkönen, A. – Lintukangas, K. – Hallikas, J. (2018) Sustainable supply management practices: making a difference in a firm's sustainability performance. *Supply chain management*. Vol.23 (6), 518-530.
- Kasanen, E. – Lukka, K. – Siitonen, A. (1993) The constructive approach in management accounting research. *Journal of management accounting research*. Vol. 5, 243.
- Kocmanová, A. – Docekalova, M. – Skapa, S. – Smolikova, L. (2016) Measuring corporate sustainability and environmental, social, and corporate governance value added. *Sustainability (Basel, Switzerland)*. Vol. 8 (9), 945.
- Krause, D. – Vachon, S. – Klassen, R. (2009) Special topic forum on sustainable supply chain management: Introduction and reflections on the role of purchasing management. *The journal of supply chain management*. Vol. 45 (4), 18-25.
- Liu, X. – Liu, Y. – Li, H. – Wen, D. (2023) Identification and analysis of barriers to the effectiveness of ISO 45001 certification in Chinese certified organisations: A DEMATEL-ISM approach. *Journal of cleaner production*. Vol. 383, 135447.
- Lukka, K. (2014) Konstruktiivinen tutkimusote. METODIX, <<https://metodix.fi/2014/05/19/lukka-konstruktiivinen-tutkimusote/>>, 13.3.2024.
- Maier, A. – Moultrie, J. – Clarkson, P. (2012) Assessing Organizational Capabilities: Reviewing and Guiding the Development of Maturity Grids. *IEEE transactions on engineering management*, Vol.59 (1), 138-159.
- Maixner, J. – Papula, J. (2021) Strategic alignment and implementation of codes of conducts in organisations. *Entrepreneurship and Sustainability Issues*. Vol. 8 (4), 331-348.
- Marshall, D. – McCarthy, L. – McGrath, P. – Harrigan, F. (2016) What's Your Strategy for Supply Chain Disclosure? *MIT Sloan management review*. Vol.57 (2), 37.
- Meehan, J. – Bryde, D. (2011) Sustainable Procurement Practice. *Business Strategy and the Environment*. Vol. 20 (2), 94-106.

- Miemyczyk, J. – Johnsen, T. – Spencer, R. – Walker, H. (2012) Sustainable procurement: Past, present and future. *Journal of purchasing and supply management*. Vol. 18 (4), 201-206.
- Mohammed, A. – Harris, I. – Govindan, K. (2019) A hybrid MCDM-FMOO approach for sustainable supplier selection and order allocation. *International Journal of Production Economics*. Vol. 217, 171-184.
- Mosgaard, M. – Bundgaard, A. – Kristensen, H. (2022) ISO 14001 practices – A study of environmental objectives in Danish organizations. *Journal of cleaner production*. Vol. 331, 129799.
- Neilimo, K.– Näsi, J. (1980) Nomoteettinen tutkimusote ja suomalaisen yrityksen taloustiede, tutkimus positivismiin soveltamisesta. Tampere : Tampereen yliopisto, 1980.
- OECD (2018) OECD Due Diligence Guidance for Responsible Business Conduct. <<https://www.oecd.org/investment/due-diligence-guidance-for-responsible-business-conduct.htm>>, retrieved 19.1.2024.
- Okongwu, U. – Morimoto, R. – Lauras, M. (2013) The maturity of supply chain sustainability disclosure from a continuous improvement perspective. *International Journal of Productivity and Performance Management*. Vol. 62 (8), 827-855.
- Patz, C. (2023) The EU's Draft Corporate Sustainability Due Diligence Directive: A First Assessment. *Business and human rights journal*. Vol. 7 (2), 291-297.
- Pavan, R. – Ferreira, M. – Stefanelli, N. – Leal, G. (2023) Maturity models in SSCM: a systematic review aimed at consolidating models and outlining possibilities for future research. *Benchmarking: An International Journal*. Vol. 30 (10), 4076-4099.
- Rogers, Z – Golara, S. – Carter, C. (2023) Moving Beyond the four walls: The evolving impact of supplier sustainability on firm value. *Journal of Purchasing and Supply Management*. Vol. 29 (1), 11918.
- Ronalter, L. – Poltronieri, C. – Gerolamo, M. (2023) ISO management system standards in the light of corporate sustainability: a bibliometric analysis. *TQM journal*. Vol. 35 (9), 256-298.
- Schulze, H. – Bals, L. – Johnsen, Thomas E. (2019) Individual competences for sustainable purchasing and supply management (SPSM). *International Journal of Physical Distribution & Logistics Management*. Vol. 49 (3), 287-304.

- Škvařilová-Pelzl, P. – Adams, A. (2023) The Duty of Due Diligence: A European Race to Corporate Responsibility and Sustainability? *European business law review*. Vol. 34 (2), 193-212.
- Soini, K. – Birkeland, I. (2014) Exploring the scientific discourse on cultural sustainability. *Geoforum*. Vol. 51, 213-223.
- Teerikangas, S. – Onkila, T. – Koistinen, K. – Marileena, M. (2021) *Research Handbook of Sustainability Agency*. United Kingdom: Edward Elgar Publishing.
- United Nations (2011) *Guiding Principles on Business and Human Rights*. <[https://www.ohchr.org/sites/default/files/documents/publications/guidingprinciplesbusinesshr\\_en.pdf](https://www.ohchr.org/sites/default/files/documents/publications/guidingprinciplesbusinesshr_en.pdf)>, retrieved 5.1.2024.
- Van Hoek, R. – Udesen, T. (2023) Developing a benchmark for supplier code of conducts – lessons learned from Bayer’s journey towards sustainable procurement and research opportunities. *Benchmarking : an international journal*.
- Villena, V. – Gioia, D. (2020) A More Sustainable Supply Chain. *Harvard Business Review*. Vol. 98 (2), 84-93.
- Villena, V. (2018) The Missing Link? The Strategic Role of Procurement in Building Sustainable Supply Networks. *Production and operations management*. Vol. 28 (5), 1149-1172.
- Wilhelm, M. – Villena, V. (2021) Cascading Sustainability in Multi-tier Supply Chains: When Do Chinese Suppliers Adopt Sustainable Procurement? *Production and operations management*. Vol. 30 (11), 4198-4218.
- You, S. – Zhang, L. – Xu, X. – Liu, H. (2020) A new integrated multi-criteria decision making and multi-objective programming model for sustainable supplier selection and order allocation. *Symmetry (Bandung)*. Vol. 12 (2), 302.

## Appendices

### Appendix 1: Interview frame

Background:

The interview is going to be recorded to ensure the quality of the research. The research is about building a maturity model about sustainable purchasing and supply management (PSM) for the firm. The model is built according to OECD Due Diligence guidance for responsible business conduct (RBC) to enable the firm to comply with European Union's upcoming directive on corporate sustainability due diligence directive (CSDDD). The aim of the model is to find the levels for not only complying with the legislation, but to find levels for higher competence levels. Current maturity model is based on the guidelines and best-practices found on literature. The following questions are intended to improve the model and see how it fits with the firm's requirements. The data gathered is processed anonymously and confidentially.

1. What is your current title and do you work for sourcing or sustainability or both?
2. How many years have you worked on abovementioned areas?

Next, we are going to walk through the maturity model.

3. Is the following dimension relevant and in scope of the case company and its purchasing & supply management activities?
4. How would you change the cell texts to improve them?

The following questions will be asked after the walk through.

5. Do you consider other dimensions to be added to the model?
6. What is the overview of the model and how can it be improved?

## Appendix 2: Maturity model based on literature review

Sustainable purchasing and supply management means the thorough understanding and managing of sustainability performance on environmental, social and governance aspects in the supply chain. Due Diligence is the process that enterprises carry to identify, prevent, mitigate and account to address actual and potential impacts in their supply chains.

Dimensions	Question	Level 1: Unaware and uncertain	Level 2: Basic compliance	Level 3: Foundation on sustainable PSM	Level 4: Proactive and managed sustainable PSM	Level 5: Leadership and certainty
		The area is still unprepared and there is a very high-risk of sustainability violation. Processes are unclear and not followed.	The area is prepared, but there is still uncertainty. Processes are set, but are not followed. Sustainable PSM is only viewed as risk management.	Standardized processes on sustainable PSM are set and they are followed. Sustainability risks are well known and measured. However, risks still exists.	Proactive measures are taken and sustainable PSM is deeply embedded into every part of PSM functions activities.	Area is continuously improved and there is clear certainty on the level of sustainability. PSM activities and processes are bringing positive value on sustainability.
<b>D1: Embed responsible business conduct into policies and management systems</b>						
Devise, adopt and disseminate a combination of policies on RBC issues	Has the firm conducted research on its RBC issues based on risk-based view?	The firm has not conducted any research on RBC issues.	The firm has conducted research into RBC issues, but lacks deep understanding on all relevant risks.	RBC issues and relevant risks are clear, but they are not communicated to relevant stakeholders nor updated when business environment evolves.	RBC issues and relevant risks are clear and clearly communicated, but they are not updated regularly when the business environment evolves.	RBC issues and relevant risks are clear and communicated to all relevant stakeholders. They are updated when new ones emerge.
Developing RBC policies - Supplier code of conduct	How does the firm develop its RBC policies?	The firm has not developed nor is planning to develop RBC policies.	The firm has developed basic RBC policies, but doesn't consult any stakeholders in its context.	RBC policies are based on all relevant international standards, but stakeholder involvement is lacking.	All RBC policies are based on relevant international standards and internal stakeholder involvement is high, but i.e. industry associations or NGOs are not involved in policy development.	RBC policies are developed by consulting all relevant stakeholders: relevant business units, NGOs, industry associations etc. International standards are followed and policies updated regularly as standards are updated.
Implementing RBC policies - Supplier code of conduct	How does the firm implement supplier code of conduct?	The firm has no code of conduct place for their suppliers.	The firm has a basic code of conduct in place for their suppliers and this requires them to follow absolute minimum internationally recognized standards.	The firm has a basic code of conduct in place for their suppliers and this requires them to follow absolute minimum internationally recognized standards. Suppliers are given support to implement standards.	The firm has a basic code of conduct in place for their suppliers and this requires them to follow absolute minimum internationally recognized standards and tells suppliers what the firm expects from them in the near future. Suppliers are given support to implement standards.	The firm has a basic code of conduct in place for their suppliers and this requires them to follow absolute minimum internationally recognized standards and tells suppliers what the firm expects from them in the near future. Suppliers are given support to implement standards and help them to implement their own SCoC.
Oversighting RBC policies in procurement & sourcing	Is oversight of relevant RBC policies aligned in procurement & sourcing?	RBC policies may be set, but are not overseight by procurement & sourcing.	RBC policies are overseight to some extent, but there might be differences between business lines or functions.	There is a clear role in how procurement and sourcing conducts RBC policy oversight, but information gathered may not be sufficiently handled or followed.	There is a clear role in how procurement and sourcing conducts RBC policy oversight and there are clear next steps for the information gathered in the process.	All relevant RBC policies are overseight by procurement and sourcing, but preventive action is also taken. New risks still that hasn't arose are noticed.
Sustainability in procurement process & decision	Is sustainability integrated into procurement processes & decisions?	Sustainability is not part of procurement criteria.	Aspects of sustainability are taken into account in procurement processes.	Sustainability is seen as a whole and overall impact can be calculated. This in turn is used in the procurement process.	Sustainability is seen as a whole and overall impact can be calculated. This in turn is used in the procurement process. Supplier is agreeing to start a sustainability improvement program.	Sustainability is seen as a whole and overall impact can be calculated. This in turn is used in the procurement process. Supplier is agreeing to start a sustainability improvement program. Suppliers agreeing to a high level of sustainability are chosen.
ISO standards	Does the firm comply with all relevant and follow new ISO standards?	The firm isn't complying with or following relevant ISO standards.	The firm is complying with relevant ISO standards, but only with the bare minimum.	The firm is complying with relevant ISO standards and is following them on regular basis.	The firm is complying with relevant ISO standards and is following them on regular basis. Further investigation is going on into more complicated and rarely used standards which can support the firm on sustainable PSM.	The firm is complying with relevant ISO standards and is following them on regular basis. More complicated and rarely used standards which can support the firm on sustainable PSM are implemented.
<b>D2: Identify &amp; assess adverse impacts in operations, supply chains &amp; business relationships</b>						
RBC risk scoping exercise	Has the company conducted a scoping exercise based on RBC risk?	The firm has not conducted any or has conducted few RBC risk scoping exercise.	The firm has conducted a simple RBC risk scoping exercise, but is not updating it regularly.	The firm has conducted thorough RBC risk scoping exercise based on viral and trusted reports and has certified it with a 3rd party.	The firm has conducted thorough RBC risk scoping exercise based on viral and trusted reports and has certified it with a 3rd party. Potential and actual risks are followed and action is taken.	The firm has conducted thorough RBC risk scoping exercise based on viral and trusted reports and has certified it with a 3rd party. Potential and actual risks are followed and action is taken. Scoping exercise update is part of new business relationship processes.
Product based RBC risks	Has the firm conducted product based RBC risk analysis?	The firm has not conducted any product based RBC risks. Risks may be know at the most basic level, but product based risk classification is not conducted by any means.	The firm has conducted product based RBC risk analysis to its most high risk products, but lacks knowledge of any less significant risks or may lack knowledge on actual realized risks.	The firm conducts product based RBC risk analysis as part of its normal product development processes. Decisions are made to lower the risk, but is lacking when following the risk.	Product based RBC risk analysis is built into product development and actual risks are followed. The risk analysis is also part of suppliers' product based RBC risk analysis.	Product based risk mitigation is done regularly and integrated to suppliers' own processes. Risks are being minimized by conducting positive value adding by using alternative low-risk methods and materials.

<b>Geographic and enterprise-level based RBC risks</b>	Has the firm conducted geographic and enterprise-level based RBC risk analysis?	The firm has not conducted any geographic or enterprise-level based risk analysis and is unaware of potential risks.	The firm is aware of potential risks based on geographical and enterprise-level risks. The level of risk is well known and highest risk entities and countries are being followed.	The firm conducts RBC risk analysis on detailed level on geographical areas and enterprises. Risks are well known and documented, but proactive action on how or what new risks arises is not conducted.	RBC risk analysis on geographical and enterprise-level is detailed and proactive. Various sources are being used to determine sources of new risks. Company does proactive measures on the ground to mitigate the raising of new risks.	RBC risk analysis on geographical and enterprise-level is detailed and proactive. Various sources are being used to determine sources of new risks. Company does proactive measures on the ground to mitigate the raising of new risks.
<b>Risk management and supplier involvement strategies</b>	Does the firm classify its RBC risks and address appropriate risk management strategy and involve suppliers to the strategy?	The firm does not classify its RBC risks nor addresses any risk management strategies.	The firm has classified high-risks and has addressed risk management strategies for them. However, supplier involvement into strategies is lacking.	The firm has classified high-risks and has addressed risk management strategies for them. Suppliers are involved in risk management.	The firm has classified high- and medium-risks and has addressed risk management strategies for them. Suppliers are involved in risk management and the firm is taking proactive role in advising suppliers and educating them.	The firm has classified RBC risks and has addressed risk management strategies for them. Suppliers are involved in risk management and the firm is taking proactive role in advising suppliers and educating them. Suppliers are proactively addressing risks more independently.
<b>Control points in the supply chain</b>	Has the firm established control points in the supply chain?	The firm has not established any control points in its supply chain.	The firm has established control points in its supply chain for high-risk supply chains. These control point suppliers provide basic information on due diligence.	The firm has established control points in its supply chain for high-risk supply chains. These control point suppliers provide information on due diligence and are mitigating risks in their supply chain.	The firm has established control points in its supply chain for high- and medium-risk supply chains. These control point suppliers provide information on due diligence and are mitigating risks in their supply chain. The firm consults control points in regular basis.	The firm has established control points in its supply chain for RBC risk supply chains. These control point suppliers provide information on due diligence and are mitigating risks in their supply chain. The firm has established regular information flow with the control points.
<b>Supplier management strategies for Kraljic's purchasing categories</b>	Does the firm use full leverage for its suppliers to improve sustainability based on Kraljic's purchasing categories?	The firm has not recognized how its suppliers can be leveraged and differentiated by purchasing and supply power and how it influences the sustainable PSM performance improvement	The firm has recognized how suppliers can differentiate when supply and demand power changes. Some approaches are made in contrast of how to manage suppliers in each category.	The firm has recognized the importance of categorizing suppliers and has ready plans for each category on how to approach suppliers based on its category.	The firm not only has plans for each supplier category, but actively wants to influence and leverage suppliers to move them towards favourable categories for them.	The firm actively leverages suppliers and develops them in a more favourable negotiation position. The foundation for sustainable PSM is therefore set in place with suppliers and they are keen on improving the supply chain sustainability together with the firm and its customers.
<b>Supplier auditing</b>	Does the firm conduct auditing to assess sustainability risks and ensure valid sustainability performance from its suppliers?	The firm does not conduct any auditing on its suppliers sustainability performance.	The firm has conducted some auditing on its suppliers, but lacks comprehensive and standardized process for auditing.	The firm has standardized process for auditing of its supplier's sustainability performance and seeks to validate these audit results with a 3rd party.	The firm conducts auditing both on administrative level and on site to ensure valid performance between signed contracts and business action. The firm has in place a risk mitigation plan for the suppliers who show divergence in how they have agreed to comply and how they do it in daily business.	The firm knows the true and up to date sustainability performance of its suppliers sustainability performance and the risks associated with them. Auditing results are synchronized so that the firm has transparent information into its supply chain.
<b>D3: Cease, prevent or mitigate adverse impacts</b>						
<b>Addressing non-compliance</b>	Does the firm address non-compliance in its business relationships?	The firm does not address or is aware of any non-compliance in its business relationships.	The firm is aware of non-compliance regarding high RBC risk violations and has developed action plans for them.	The firm is aware of non-compliance regarding high RBC risk violations and has developed action plans for them. Results are followed and suppliers are demanded to develop further mitigation efforts or a delivery block is put in place.	The firm has a proactive attitude towards addressing non-compliance. Suppliers in high-risk categories are demanded to conduct and report mitigation efforts. Non-compliant suppliers are managed by following action plans and blocked for delivery for not following action plans.	The firm is proactively discussing and sharing information with relevant stakeholders, including NGOs and suppliers to address possible non-compliance. Suppliers are forced to integrate their non-compliance efforts deeper into their suppliers and their action plans are shared with the firm. The possibility for non-compliance is very small.
<b>Communicate to prevent adverse impacts</b>	Does the firm communicate with its suppliers its adverse impacts?	The firm doesn't communicate its possible adverse impact to its suppliers.	The firm has set clear priorities to its suppliers on what adverse impacts need to be prevented. The firm has established communication methods for the prevention activities.	The firm has set clear priorities to its suppliers on what adverse impacts need to be prevented. The firm has established communication methods for the prevention activities. The firm utilizes standard or automated processes to follow up on preventative acts.	Suppliers are forced to collaborate and communicate with the firm on firm's possible adverse impacts and have their own mitigation and prevention plan in place. The communication is part of supplier relationship management and the prevention plan performance is part of supplier performance evaluation. The prevention plans are developed with NGOs and relevant stakeholders and high performing suppliers are rewarded.	Suppliers are forced to collaborate and communicate with the firm on firm's possible adverse impacts and have their own mitigation and prevention plan in place. The communication is part of supplier relationship management and the prevention plan performance is part of supplier performance evaluation. The prevention plans are developed with NGOs and relevant stakeholders and high performing suppliers are rewarded.

<b>Leverage RBC expectations in business contracts</b>	Does the firm leverage, for example, disengagement in its business contracts with suppliers?	The firm has not included any measures to cease any business relationships if RBC is violated.	The firm has included terms in their business contracts to cease business relationships if RBC is violated.	The firm has standardized all RBC expectations in their business contracts and requires suppliers to mitigate the possibility of RBC violations. Ceasing is agreed.	The firm has standardized all RBC expectations in their business contracts and requires suppliers to mitigate and prevent the possibility of RBC violations. Ceasing is agreed.	The firm has standardized all RBC expectations in their business contracts and requires suppliers to mitigate and prevent the possibility of RBC violations. Ceasing is agreed. Suppliers are agreed to work with all relevant stakeholders, including NGOs, to fulfill the firm's requirements.
<b>Supplier development - Action plans</b>	Does the firm have action plans in place if noncompliance or nonclearance is recognized?	The firm has not set any action plans for noncompliance.	The firm has action plans for high-risk suppliers set in place. However, noncompliance monitoring for low-risk suppliers is lacking.	The firm has standardized processes in place for any noncompliance and responsible persons / departments are clearly indicated.	The firm has standardized processes in place for any noncompliance and responsible persons / departments are clearly indicated. Noncompliance efforts are communicated with relevant stakeholders to mitigate impact for the supply chain.	The firm has standardized processes in place for any noncompliance and responsible persons / departments are clearly indicated. Noncompliance efforts are communicated with relevant stakeholders to mitigate impact for the supply chain. NGOs are used to share the information and mitigate adverse impacts.

**D4: Track implementation and results**

<b>Assessing implementation of due diligence process</b>	Does the firm track the implementation of its due diligence process?	The firm does not track the implementation of the due diligence process.	The firm tracks the due diligence process implementation with relevant KPIs.	The firm tracks the due diligence process implementation with relevant KPIs and shares best practices and information between different internal stakeholders.	The firm tracks the due diligence process implementation with relevant KPIs and shares best practices and information between different internal stakeholders. The firm has consulted best practices from industry associations and NGOs.	The firm tracks the due diligence process implementation with relevant KPIs and shares best practices and information between different internal stakeholders. The firm has consulted best practices from industry associations and NGOs. The firm helps its suppliers adopt due diligence processes when needed.
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<b>Assessing the effectiveness of due diligence process</b>	Does the firm track the effectiveness of the due diligence process?	The firm does not track the effectiveness of the due diligence process.	The firm has set KPIs on how to measure the effectiveness of the due diligence process.	The firm has set KPIs on how to measure the effectiveness of the due diligence process and works with 3rd parties to implement tools to measure the effectiveness of the process.	The firm has relevant KPIs set and verified them with a 3rd party. Audits are used to monitor the process and its effectiveness. Risks of gaps in the process are mitigated.	The firm has relevant KPIs set and verified them with a 3rd party. Audits are used to monitor the process and its effectiveness. Risks of gaps in the process are mitigated. NGOs are communicating with the firm to implement best practices to ensure effectiveness.
<b>Communication of tracking implementation and results</b>	Does the firm communicate its implementation and results to its internal stakeholders?	The firm does not communicate any tracking of implementation nor results to relevant shareholders or does it seldomly.	The firm has set communication channels to affected stakeholders about tracking implementation and results of the process. A clear distinction between who is responsible, affected, consulted and informed is clear.	The firm has set communication channels to affected stakeholders about tracking implementation and results of the process and stakeholders proactively are involved in the improvement of the implementation.	Top management supports the implementation process and is proactively involved in the assessing follow-up actions based on the results. They also support on the importance of due diligence process to employees.	Communication of due diligence process is fully transparent to all relevant internal stakeholders and backed by top management support. Checkpoints are set to review the implementation and results on regular basis.
<b>Involving relevant stakeholders in continuous improvement of due diligence process</b>	Does the firm conduct continuous improvement on its due diligence process and consult relevant stakeholders?	The firm does not improve its due diligence process or is just setting it.	The firm has involved some relevant stakeholders in its improvement process. However, improvement process is not done regularly.	The firm has set standardized process for its due diligence process and has a plan for continuous improvement. Feedbacks are taken into account from relevant stakeholders.	There are yearly workshops with all relevant stakeholders about improving the due diligence process. Key improvement points are taken into account when improving the process.	The firm has information channels for both internal and external stakeholders where key points for improvement are collected. Stakeholder involvement is high and their input proactively lowers the risk of adverse impact.
<b>Supplier development - supplier portal</b>	Does the firm use supplier portal to track and support suppliers?	The firm does not use a supplier portal to track and support its suppliers.	The firm uses supplier portal to track the activities and sustainability KPIs.	The firm uses supplier portal to support supplier's sustainability performance. This can be for instance with high-level training.	The firm uses supplier portal to support suppliers, enhance their knowledge and performance on sustainability, but also conducts assessments via supplier portal.	The firm uses supplier portal for not only enhancing sustainable performance of its suppliers, but has established real time data-based system which can calculate sustainability KPIs automatically.

**D5: Communicate how impacts are addressed**

<b>Due diligence in reporting</b>	Does the firm communicate its due diligence process in its sustainability report?	The firm does not disclose its due diligence process by any means in its sustainability report.	The firm discloses basic information on its due diligence process and its results in the sustainability report. However, the report is containing only basic high-level information.	The firm discloses not only its due diligence process, but also high-risks on its results and shows that mitigation processes are ongoing in the firm.	The firm discloses a detailed risk-matrix where severity and probability bases the risk mapping of the due diligence process. The firm shows how it approaches the mitigation of those risks and shows practical case-studies of the mitigation efforts.	The firm bases its reporting on a detailed level where risks are shown and response is determined. The involvement of suppliers is shown and how the data is utilized in cooperation with NGOs to push sustainability beyond tier-1 suppliers.
<b>RBC risk mitigation reporting</b>	Does the firm communicate its RBC risk mitigation plan in its sustainability report?	The firm does not communicate its risk mitigation plan in its sustainability reporting.	The firm has established a risk mitigation plan for the risks determined in its due diligence report and discloses the plan in reporting.	The firm discloses the risk mitigation plan and how the results are followed in the report.	The firm discloses risk mitigation plan in a detailed level and shows how its suppliers comply with the plan. The firm consults a 3rd party who audits the mitigation plan implementation and results for validation.	The firm not only discloses the risk mitigation plan and results, but proactively shows how the firm and its suppliers proactively take part in mitigation efforts and how these suppliers are rewarded. 3rd part provides validation for the results and the process.
<b>Respect anonymity and sensitive information</b>	How does the firm ensure anonymity in its grievance mechanism?	The firm lacks the efforts to protect anonymity in its grievance mechanism.	The firm shows respect towards anonymity in its grievance mechanism.	The firm has established clear procedures for whistleblowers to protect their anonymity in the grievance mechanism.	The firm has no way of determining the personality of the whistleblower. Whistleblower is always protected via a third party who protects them and ensures justice.	The firm establishes a 3rd party to protect the whistleblower and has action plans in place for who to consults and what is the procedure to ensure justice and remediate the adverse impact.

**D6: Provide for or cooperate**

<b>Remediation for those affected by adverse impacts</b>	How does the firm remediate adverse impacts?	The firm has not detected or does not remediate adverse impacts in its supply chain.	The firm has remediated adverse impacts that it has detected, but the amount of remediation is not planned and remediation is only done reactive.	The firm has a clear plan for how it remediates high risk adverse impacts and has shown to fully comply with the affected parties of the adverse impact.	The firm showcases its ability to calculate the amount of adverse impacts and fully remediate the impact based on the calculation. The firm utilizes affected parties and NGOs to determine the adverse impact and the remediation effort.	The firm proactively seeks to mitigate adverse impacts together with its suppliers, NGOs and other relevant 3rd parties. The firm has action plans in place for remediation efforts and has a team in place to remediate and mitigate the adverse impact.
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<b>Grievance mechanism enabling early warning and remediation</b>	Does the firm have a grievance mechanism in place for early warning and remediation?	The firm has no grievance mechanism in place to enable early warning.	The firm has a simple early warning system in place, but is not proactively advertising it to its suppliers.	The firm utilizes the grievance mechanism and advertises the use of it internally. Mechanism allows the firm to identify patterns and potential risks in the supply chain.	The firm actively advertizes the use of grievance mechanism to its suppliers and the mechanism is part of the supply chain's overall adverse impact identification. Suppliers have set their own mechanisms, but they don't synchronize with the firm's mechanism.	The grievance mechanism is built to synchronize with supplier's system so that the firm gets the total picture of its supply chain's adverse impacts. The firm works in cooperation with NGOs to identify patterns and remediate possible adverse impacts.
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## Appendix 3: The final form of the maturity model

Sustainable purchasing and supply management means the thorough understanding and managing of sustainability performance on environmental, social and governance aspects in the supply chain. Due Diligence is the process that enterprises carry to identify, prevent, mitigate and account to address actual and potential impacts in their supply chains.

Dimensions	Question	Level 1: Unaware and uncertain	Level 2: Basic compliance	Level 3: Foundation on sustainable PSM	Level 4: Proactive and managed sustainable PSM	Level 5: Leadership and certainty
		The area is still unprepared and there is a very high-risk of sustainability violation. Processes are unclear and not followed.	The area is prepared, but there is still uncertainty. Processes are set, but are not followed. Sustainable PSM is only viewed as risk management.	Standardized processes on sustainable PSM are set and they are followed. Sustainability risks are well known and measured. However, risks still exists.	Proactive measures are taken and sustainable PSM is deeply embedded into every part of PSM functions activities.	Area is continuously improved and there is clear certainty on the level of sustainability. PSM activities and processes are bringing positive value on sustainability.
<b>D1: Embed responsible business conduct into policies and management systems</b>						
<b>Devise, adopt and disseminate a combination of policies on RBC issues</b>	Has the firm conducted research on its RBC issues based on risk-based view? <i>The company is required by law to conduct research on RBC issues in regular basis.</i>	The firm has not conducted any research on RBC issues.	The firm has conducted research into RBC issues, but may lack deep understanding on all relevant risks.	RBC issues and relevant risks are clear, but they may not be communicated to relevant stakeholders nor updated when business environment evolves. Research into RBC issues is done regularly.	RBC issues and relevant risks are clear and clearly communicated to relevant stakeholders, but they are not updated regularly when the business environment evolves. Research into RBC issues is done regularly.	RBC issues and relevant risks are clear and communicated to all relevant stakeholders. They are updated when new ones emerge. The firm collaborates with NGOs to research RBC issues.
<b>Developing RBC policies - Supplier code of conduct</b>	How does the firm develop its RBC policies? <i>The firm must follow up on relevant international standards and develop its RBC policies accordingly.</i>	The firm has not developed nor is planning to develop RBC policies.	The firm has developed basic RBC policies, but doesn't consult any stakeholders in its context.	RBC policies are based on all relevant international standards, but stakeholder involvement is lacking.	All RBC policies are based on relevant international standards and internal stakeholder involvement is high, but i.e. industry associations or NGOs are not involved in policy development.	RBC policies are developed by consulting all relevant stakeholders: relevant business units, NGOs, industry associations etc. International standards are followed and policies updated regularly as standards are updated.
<b>Implementing RBC policies - Supplier code of conduct</b>	How does the firm implement supplier code of conduct? <i>The act of setting up the SCoC into firm's operations.</i>	The firm has no code of conduct place for their suppliers.	The firm has a basic code of conduct in place for their suppliers and this requires them to follow absolute minimum internationally recognized standards.	The firm has a basic code of conduct in place for their suppliers and this requires them to follow absolute minimum internationally recognized standards. Suppliers are given support to implement standards.	The firm has a basic code of conduct in place for their suppliers and this requires them to follow absolute minimum internationally recognized standards and tells suppliers what the firm expects from them in the near future. Suppliers are given support to implement standards.	The firm has a basic code of conduct in place for their suppliers and this requires them to follow absolute minimum internationally recognized standards and tells suppliers what the firm expects from them in the near future. Suppliers are given support to implement standards and help them to implement their own SCoC.

<b>Oversighting RBC policies in procurement &amp; sourcing</b>	Is oversight of relevant RBC policies aligned in procurement & sourcing? <i>Oversight with respect to implementation and results.</i>	RBC policies may be set, but are not oversighted by procurement & sourcing.	RBC policies are oversighted to some extent, but there might be differences between business lines or functions.	There is a clear role in how procurement and sourcing conducts RBC policy oversight, but information gathered may not be sufficiently handled or followed.	There is a clear role in how procurement and sourcing conducts RBC policy oversight and there are clear next steps for the information gathered in the process.	All relevant RBC policies are oversighted by procurement and sourcing, but preventive action is also taken. New risks still that hasn't arose are noticed.
<b>Sustainability in procurement process &amp; decision</b>	Is sustainability integrated into procurement processes & decisions?	Sustainability is not part of procurement criteria.	Aspects of sustainability are taken into account in procurement processes.	Sustainability is seen as a whole and overall impact can be calculated. This in turn is used in the procurement process.	Sustainability is seen as a whole and overall impact can be calculated. This in turn is used in the procurement process. Supplier is agreeing to start a sustainability improvement program. Suppliers agreeing to a high level of sustainability are chosen.	Sustainability is seen as a whole and overall impact can be calculated. This in turn is used in the procurement process. Supplier is agreeing to start a sustainability improvement program. Suppliers agreeing to a high level of sustainability are chosen.
<b>ISO standards - firms operations</b>	Does the firm comply with all relevant and follow new ISO standards?	The firm isn't complying with or following relevant ISO standards.	The firm is complying with relevant ISO standards, but only with the bare minimum. ISO 14001 & ISO 9001.	The firm is complying with relevant ISO standards and is following them on regular basis. ISO 14001, ISO 45001 & ISO 9001.	The firm is complying with relevant ISO standards and is following them on regular basis. Further investigation is going on into more complicated and rarely used standards which can support the firm on sustainable PSM. ISO 14001, ISO 45001, ISO 9001 & ISO 20400.	The firm is complying with relevant ISO standards and is following them on regular basis. More complicated and rarely used standards which can support the firm on sustainable PSM are implemented. ISO 14001, ISO 45001, ISO 9001, ISO 20400, ISO 26000 & ISO 14040.
<b>ISO standards - supply base</b>	Does the firm require, track and support its suppliers in ISO standards.	The firm does not require any ISO standards from its suppliers.	The firm requires basic ISO standards from its key suppliers. ISO 14001 & ISO 9001 are emphasized.	The firm not only requires, but tracks how its supply base's ISO standard adoption evolves. ISO 14001, ISO 45001 & ISO 9001 are emphasized.	The firm tracks, requires and supports its key suppliers to adopt relevant ISO standards. ISO 14001, ISO 45001, ISO 20400 & ISO 9001 are emphasized.	The firm has transparent knowledge on how its supply base's ISO standard adoption has evolved. The firm actively supports other than key suppliers to adopt ISO standards. ISO 14001, ISO 45001, ISO 9001, ISO 20400, ISO 26000 & ISO 14040 are emphasized.

**D2: Identify & assess adverse impacts in operations, supply chains & business relationships**

<b>RBC risk scoping exercise</b>	Has the company conducted a scoping exercise based on RBC risk? <i>The firm must conduct an exercise to scope its RBC risks.</i>	The firm has not conducted any or has conducted few RBC risk scoping exercise.	The firm has conducted a simple RBC risk scoping exercise, but is not updating it regularly.	The firm has conducted thorough RBC risk scoping exercise based on viral and trusted reports.	The firm has conducted thorough RBC risk scoping exercise based on viral and trusted reports and has certified it with a 3rd party. Potential and actual risks are followed and action is taken.	The firm has conducted thorough RBC risk scoping exercise based on viral and trusted reports and has certified it with a 3rd party. Potential and actual risks are followed and action is taken. Scoping exercise update is part of new business relationship processes.
<b>Product based RBC risks</b>	Has the firm conducted product based RBC risk analysis? <i>The firm's products.</i>	The firm has not conducted any product based RBC risks. Risks may be know at the most basic level, but product based risk classification is not conducted by any means.	The firm has conducted product based RBC risk analysis to its most high risk products, but lacks knowledge of any less significant risks or may lack knowledge on actual realized risks.	The firm conducts product based RBC risk analysis as part of its normal product development processes. Decisions are made to lower the risk, but is lacking when following the risk.	Product based RBC risk analysis is built into product development and actual risks are followed. The risk analysis is also part of suppliers' product based RBC risk analysis.	Product based risk mitigation is done regularly and integrated to suppliers' own processes. Risks are being minimized by conducting positive value adding by using alternative low-risk methods and materials.
<b>Geographic and enterprise-level based RBC risks</b>	Has the firm conducted geographic and enterprise-level based RBC risk analysis?	The firm has not conducted any geographic or enterprise-level based risk analysis and is unaware of potential risks.	The firm is aware of potential risks based on geographical and enterprise-level risks. The level of risk is well known and highest risk entities and countries are being followed.	The firm conducts RBC risk analysis on detailed level on geographical areas and enterprises. Risks are well known and documented, but proactive action on how or what new risks arises is not conducted.	RBC risk analysis on geographical and enterprise-level is detailed and proactive. Various sources are being used to determine sources of new risks.	RBC risk analysis on geographical and enterprise-level is detailed and proactive. Various sources are being used to determine sources of new risks. Company does proactive measures on the ground to mitigate the raising of new risks.
<b>Risk management and supplier involvement strategies</b>	Does the firm classify its RBC risks and address appropriate risk management strategy and involve suppliers to the strategy?	The firm does not classify its RBC risks nor addresses any risk management strategies.	The firm has classified high-risks and has addressed risk management strategies for them. However, supplier involvement into strategies is lacking.	The firm has classified high-risks and has addressed risk management strategies for them. Suppliers are involved in risk management.	The firm has classified high- and medium-risks and has addressed risk management strategies for them. Suppliers are involved in risk management and the firm is taking proactive role in advising suppliers and educating them.	The firm has classified RBC risks and has addressed risk management strategies for them. Suppliers are involved in risk management and the firm is taking proactive role in advising suppliers and educating them. Suppliers are proactively addressing risks more independently.

<b>Tier-n management in the supply chain</b>	Has the firm established tier-n management in its supply chain?	The firm has no visibility through tier-1 suppliers downstream of the supply chain.	The firm has established control points in its supply chain for high-risk supply chains. These control point suppliers provide basic information on due diligence on the downstream suppliers.	The firm has established control points in its supply chain for high-risk supply chains. These control point suppliers provide information on due diligence and are mitigating risks in their supply chain.	The firm has established control points in its supply chain for high- and medium-risk supply chains. These control point suppliers provide information on due diligence and are mitigating risks in their supply chain. The firm consults control points in regular basis. The firm has established procedures for throughout tier-n visibility in its supply chain.	The firm has established control points in its supply chain for RBC risk supply chains. These control point suppliers provide information on due diligence and are mitigating risks in their supply chain. The firm has established regular information flow with the control points. The firm has transparency throughout tier-n in its supply chain.
<b>Supplier management strategies for purchasing categories - leveraging buyer &amp; supplier power</b>	Does the firm use full leverage for its suppliers to improve sustainability based on Krajiac's purchasing categories?	The firm has not recognized how its suppliers can be leveraged and differentiated by purchasing and supply power and how it influences the sustainable PSM performance improvement	The firm has recognized how suppliers can differentiate when supply and demand power changes. Some approaches are made in contrast of how to manage suppliers in each category.	The firm has recognized the importance of categorizing suppliers and has ready plans for each category on how to approach suppliers based on its category.	The firm not only has plans for each supplier category, but actively wants to influence and leverage suppliers to move them towards favourable categories for them.	The firm actively leverages suppliers and develops them in a more favourable negotiation position. The foundation for sustainable PSM is therefore set in place with suppliers and they are keen on improving the supply chain sustainability together with the firm and its customers.
<b>Supplier auditing</b>	Does the firm conduct auditing to assess sustainability risks and ensure valid sustainability performance from its suppliers?	The firm does not conduct any auditing on its suppliers sustainability performance.	The firm has conducted some auditing on its suppliers, but lacks comprehensive and standardized process for auditing.	The firm has standardized process for auditing of its supplier's sustainability performance and seeks to use highly competent auditors.	The firm conducts auditing both on administrative level and on-site to ensure valid performance business action. The firm has in place a risk mitigation plan for the suppliers who show divergence in how they have agreed to comply and how they do it in daily business.	The firm knows the true and up-to-date sustainability performance of its suppliers sustainability performance and the risks associated with them. Auditing results are synchronized so that the firm has transparent information into its supply chain.

**D3: Cease, prevent or mitigate adverse impacts**

<b>Addressing non-compliance</b>	Does the firm address non-compliance in its business relationships?	The firm does not address or is aware of any non-compliance in its business relationships.	The firm is aware of non-compliance regarding high RBC risk violations and has developed action plans for them.	The firm is aware of non-compliance regarding high RBC risk violations and has developed action plans for them. Results are followed and suppliers are demanded to develop further mitigation efforts or a delivery block is put in place.	The firm has a proactive attitude towards addressing non-compliance using audits as a tool. Suppliers in high-risk categories are demanded to conduct and report mitigation efforts. Non-compliant suppliers are managed by following action plans and blocked for delivery for not following action plans.	The firm is proactively discussing and sharing information with relevant stakeholders, including NGOs and suppliers to address possible non-compliance. Suppliers are forced to integrate their non-compliance efforts deeper into their suppliers and their action plans are shared with the firm. The possibility for non-compliance is very small.
<b>Communicate to prevent adverse impacts</b>	Does the firm communicate with its suppliers its adverse impacts?	The firm doesn't communicate its possible adverse impact to its suppliers.	The firm has set clear priorities to its suppliers on what adverse impacts need to be prevented. The firm has established communication methods for the prevention activities.	The firm has set clear priorities to its suppliers on what adverse impacts need to be prevented. The firm has established communication methods for the prevention activities. The firm utilizes standard or automated processes to follow up on preventative acts.	Suppliers are collaborating and communicating with the firm on firm's possible adverse impacts and have their own mitigation and prevention plan in place. The communication is part of supplier relationship management and the prevention plan performance is part of supplier performance evaluation.	Suppliers are collaborating and communicating with the firm on firm's possible adverse impacts and have their own mitigation and prevention plan in place. The communication is part of supplier relationship management and the prevention plan performance is part of supplier performance evaluation. The prevention plans are developed with NGOs and relevant stakeholders and high performing suppliers are rewarded.
<b>Leverage RBC expectations in business contracts</b>	Does the firm leverage, for example, disengagement in its business contracts with suppliers? <i>Disengagement is the last mean when other options are exhausted.</i>	The firm has not included any measures to cease any business relationships if RBC is violated.	The firm has included terms in their business contracts to cease business relationships if RBC is violated.	The firm has standardized all RBC expectations in their business contracts and requires suppliers to mitigate the possibility of RBC violations. Ceasing is agreed.	The firm has standardized all RBC expectations in their business contracts and requires suppliers to mitigate and prevent the possibility of RBC violations. Ceasing is agreed.	The firm has standardized all RBC expectations in their business contracts and requires suppliers to mitigate and prevent the possibility of RBC violations. Ceasing is agreed. Suppliers are agreed to work with all relevant stakeholders, including NGOs, to fulfill the firm's requirements.

<b>Supplier development - Action plans</b>	Does the firm have action plans in place if noncompliance or nonadherence is recognized?	The firm has not set any action plans for noncompliance.	The firm has action plans for high-risk suppliers set in place. However, noncompliance monitoring for low-risk suppliers is lacking.	The firm has standardized processes in place for any noncompliance and responsible persons / departments are clearly indicated.	The firm has standardized processes in place for any noncompliance and responsible persons / departments are clearly indicated. Noncompliance efforts are communicated with relevant stakeholders to mitigate impact for the supply chain.	The firm has standardized processes in place for any noncompliance and responsible persons / departments are clearly indicated. Noncompliance efforts are communicated with relevant stakeholders to mitigate impact for the supply chain. NGOs are used to share the information and mitigate adverse impacts.
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#### D4: Track implementation and results

<b>Assessing implementation of due diligence process</b>	Does the firm track the implementation of its due diligence process?	The firm does not track the implementation of the due diligence process.	The firm tracks the due diligence process implementation with relevant KPIs.	The firm tracks the due diligence process implementation with relevant KPIs and shares best practices and information between different internal stakeholders.	The firm tracks the due diligence process implementation with relevant KPIs and shares best practices and information between different internal stakeholders. The firm has consulted best practices from industry associations and NGOs.	The firm tracks the due diligence process implementation with relevant KPIs and shares best practices and information between different internal stakeholders. The firm has consulted best practices from industry associations and NGOs. The firm helps its suppliers adopt due diligence processes when needed.
<b>Assessing the effectiveness of due diligence process</b>	Does the firm track the effectiveness of the due diligence process?	The firm does not track the effectiveness of the due diligence process.	The firm has set KPIs on how to measure the effectiveness of the due diligence process.	The firm has set KPIs on how to measure the effectiveness of the due diligence process. The firm has worked with 3rd parties to implement tools to measure the effectiveness of the process.	The firm has relevant KPIs set and verified them with a 3rd party. Audits are used to monitor the process and its effectiveness. Risks of gaps in the process are mitigated.	The firm has relevant KPIs set and verified them with a 3rd party. Audits are used to monitor the process and its effectiveness. Risks of gaps in the process are mitigated. NGOs are communicating with the firm to implement best practices to ensure effectiveness.
<b>Communication of tracking implementation and results</b>	Does the firm communicate its implementation and results to its internal stakeholders?	The firm does not communicate any tracking of implementation nor results to relevant shareholders or does it seldomly.	The firm has set communication channels to affected stakeholders about tracking implementation and results of the process. A clear distinction between who is responsible, affected, consulted and informed is clear.	The firm has set communication channels to affected stakeholders about tracking implementation and results of the process and stakeholders proactively are involved in the improvement of the implementation.	Top management supports the implementation process and is proactively involved in the assessing follow-up actions based on the results. They also support on the importance of due diligence process to employees.	Communication of due diligence process is fully transparent to all relevant internal stakeholders and backed by top management support. Checkpoints are set to review the implementation and results on regular basis.

<b>Involving relevant stakeholders in continuous improvement of due diligence process</b>	Does the firm conduct continuous improvement on its due diligence process and consult relevant stakeholders?	The firm does not improve its due diligence process or is just setting it.	The firm has involved some relevant stakeholders in its improvement process. However, improvement process is not done regularly.	The firm has set standardized process for its due diligence process and has a plan for continuous improvement. Feedbacks are taken into account from relevant stakeholders.	There are yearly workshops with all relevant stakeholders about improving the due diligence process. Key improvement points are taken into account when improving the process.	The firm has information channels for both internal and external stakeholders where key points for improvement are collected. Stakeholder involvement is high and their input proactively lowers the risk of adverse impact.
<b>Supplier development - supplier portal</b>	Does the firm use supplier portal to track and support suppliers?	The firm does not use a supplier portal to track and support its suppliers.	The firm uses supplier portal to track the activities and sustainability KPIs.	The firm uses supplier portal to support supplier's sustainability performance. This can be for instance with high-level training.	The firm uses supplier portal to support suppliers, enhance their knowledge and performance on sustainability, but also conducts assessments via supplier portal.	The firm uses supplier portal for not only enhancing sustainable performance of its suppliers, but has established real time data-based system which can calculate sustainability KPIs automatically.

**D5: Communicate how impacts are addressed**

<b>Due diligence in reporting</b>	Does the firm communicate its due diligence process in its sustainability report or in a similar report?	The firm does not disclose its due diligence process by any means in its sustainability report.	The firm discloses basic information on its due diligence process and its results in the sustainability report. However, the report is containing only basic high-level information.	The firm discloses not only its due diligence process, but also high-risks on its results and shows that mitigation processes are ongoing in the firm.	The firm discloses a detailed risk-matrix where severity and probability bases the risk mapping of the due diligence process. The firm shows how it approaches the mitigation of those risks and shows practical case-studies of the mitigation efforts.	The firm bases its reporting on a detailed level where risks are shown and response is determined. The involvement of suppliers is shown and how the data is utilized in cooperation with NGOs to push sustainability beyond tier-1 suppliers.
<b>RBC risk mitigation reporting</b>	Does the firm communicate its RBC risk mitigation plan in its sustainability report?	The firm does not communicate its risk mitigation plan in its sustainability reporting.	The firm has established a risk mitigation plan for the risks determined in its due diligence report and discloses the plan in reporting.	The firm discloses the risk mitigation plan and how the results are followed in the report.	The firm discloses risk mitigation plan in a detailed level and shows how its suppliers comply with the plan. The firm consults a 3rd party who audits the mitigation plan implementation and results for validation.	The firm not only discloses the risk mitigation plan and results, but proactively shows how the firm and its suppliers proactively take part in mitigation efforts and how these suppliers are rewarded. 3rd part provides validation for the results and the process.

**D6: Provide for or cooperate**

<b>Remediation for those affected by adverse impacts</b>	How does the firm remediate adverse impacts?	The firm has not detected or does not remediate adverse impacts in its supply chain.	The firm has remediated adverse impacts that it has detected, but the amount of remediation is not planned and remediation is only done reactive.	The firm has a clear plan for how it remediates high risk adverse impacts and has shown to fully comply with the affected parties of the adverse impact.	The firm showcases its ability to calculate the amount of adverse impacts and fully remediate the impact based on the calculation. The firm utilizes affected parties and NGOs to determine the adverse impact and the remediation effort.	The firm proactively seeks to mitigate adverse impacts together with its suppliers, NGOs and other relevant 3rd parties. The firm has action plans in place for remediation efforts and has a team in place to remediate and mitigate the adverse impact.
<b>Grievance mechanism enabling early warning and remediation</b>	Does the firm have a grievance mechanism in place for early warning and remediation?	The firm has no grievance mechanism in place to enable early warning.	The firm has a simple early warning system in place, but is not proactively advertising it to its suppliers.	The firm utilizes the grievance mechanism and advertises the use of it internally. Mechanism allows the firm to identify patterns and potential risks in the supply chain. 3rd party is used.	The firm actively advertises the use of grievance mechanism to its suppliers and the mechanism is part of the supply chain's overall adverse impact identification. Suppliers have set their own mechanisms, but they don't synchronize with the firm's mechanism.	The grievance mechanism is built to synchronize with supplier's system so that the firm gets the total picture of its supply chain's adverse impacts. The firm works in cooperation with NGOs to identify patterns and remediate possible adverse impacts.