

Towards a Sustainable Military Supply Chain: An Empirical Exploration of Defence Industry Codes of Conduct

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Abstract

To be successful in meeting their environmental sustainability goals Ministries of Defence (MoDs) depend on their suppliers, the Defence Industry (DI). However, a comprehensive inquiry into the current state of affairs of the addressing of sustainability by the DI is still lacking. Following the literature, evidence of the interest in sustainability of DI companies can be found in their code of conduct (CoC). This chapter aims to make a first step towards closing this gap by empirically exploring to what extent and in what manner the CoCs of the top 18 contractors of the DI reflect the theme of sustainability. The insights gained support the identification of opportunities for MoDs' policymakers, especially in the areas of procurement and supply-chain management, as well as identify possible avenues for further research into this subject area. The results show that DI members differ in their approach to sustainability and the manner in which key values have been anchored in their CoCs. Some CoCs do not effectively address company expectations and standards on sustainability, which undermines CoC effectiveness.

Keywords: code of conduct, defence industry, environmental sustainability, supply chain management, military supply chain.

8.1 Introduction

Meeting the environmental sustainability challenges facing our world has become a pressing priority. As large consumers of fossil fuels and other resources, the Ministries of Defence (MoDs) are not an exception. Both in the literature and in policy documents, the importance of energy security and resilience and a reduction of the environmental footprint have been articulated (Brzoska, 2015; Crawford, 2019; Department of Defense, 2021; Global Military Advisory Council on Climate Change, 2021; Ministry of Defence, 2021; Scott & Khan, 2016; van Schaik et al., 2020).

To be successful in meeting their sustainability goals, MoDs depend on their partners, not least their business partners in the supply-chain (Erkul et al., 2015;

Gopalakrishnan et al., 2012; Rudnicka, 2016). The MoDs thus have an interest in their suppliers to make their business, products and services sustainable.

This is well recognised by both the defence industry (DI) (ASD, 2021) and four major consulting firms that are advising the industry (Dimitrova et al., 2023; EY, 2023; KPMG, 2023; McKinsey, 2022). Nevertheless, to the authors' knowledge, a comprehensive inquiry into the current state of affairs of the addressing of sustainability by the DI is still lacking. Insight into the DI's addressing of sustainability supports the identification of opportunities for MoDs' policymakers, especially in the areas of procurement and supply-chain management, as well as identifying possible avenues for further research into this subject area. This chapter aims to make a first step towards closing this gap by empirically exploring the codes of conduct (CoCs) of DI companies for evidence of the addressing of sustainability.

A code of conduct is 'a set of prescriptions developed by a company to guide the behaviour of managers and employees' (Kaptein, 2011). It is a commonly used management control instrument (Weber & Wasieleski, 2013) aimed at the outward responsibilities of companies to their external stakeholders as well as the inward responsibilities of their employees to display accepted behaviour (Kaptein & Wempe, 2002). The content of CoCs therefore can be expected to display consistency with stakeholder values and expectations (Garegnani et al., 2015; Kaptein & Schwartz, 2008; McDonald, 2009; J. M. Stevens et al., 2005; Weaver & Trevino, 1999; Webley & Werner, 2008). Consequently, evidence of whether the interest in sustainability has been carried over to the MoDs business partners can be found in the CoCs of these partners (Erkul et al., 2015; Gopalakrishnan et al., 2012; Rudnicka, 2016). And, indirectly, the attention to sustainability of CoCs of DI companies can also be considered a predictor of the interest in sustainability by their main stakeholders, the Ministries of Defence (MoDs).

Building on this thesis, this contribution qualitatively investigates to what extent and in what manner the CoCs of the top 18 contractors of the DI reflect the theme of sustainability. Moreover, to ascertain whether there have been any developments in this respect, the study offers a longitudinal approach comparing the CoCs of 5 years ago with the most recent editions. This way, the research provides insight into the development of the interest in sustainability by the MoDs' DI partners. Moreover, it offers an initial impulse to get a better understanding of the military supply chain and thereby ways of effectively managing it towards sustainability.

This chapter continues by outlining the qualitative method used for the content analysis of CoCs. In section three the findings are discussed according to the main themes that surfaced from the analysis. The last section offers a brief discussion of the results and some concluding remarks.

8.2 Method: Qualitative Content Analysis

In order to meet the aim, a qualitative content analysis of the CoCs of 18 of the largest multinational companies operating in the DI is conducted. This sample is based on the SIPRI top 25 largest DI companies in 2019 ranked according to their arms sales (SIPRI, 2019). However, seven (all non-western) companies are excluded because they do not have a publicly available CoC. Also, these companies do not conduct business with Western MoDs. The arms sales of 5 of the 18 remaining companies (italicised, see Table 8.1) amounts to less than 25% of their total annual sales. Because the absolute volume of their arms sales is still significant, these companies are nevertheless included in the sample. Moreover, it is warranted to limit ourselves to the largest companies, because earlier research has indicated that smaller companies tend to imitate those of the larger ones (Forster et al., 2009; Garegnani et al., 2015).

Table 8.1. SIPRI 2019 top 25 DI-companies excluding non-western companies.
(Source: SIPRI Arms Industry Database, retrieved April 2021).

Rank	Company	Home-country	Arms sales (\$MM)	% Arms sales	CoC 2019	Updated CoC 2023
1	Lockheed Martin Corp.	US	53,230	89	X	X
2	Boeing	US	33,580	44	X	X
3	Northrop Grumman Corp.	US	29,220	86	X	X
4	Raytheon	US	25,320	87	X	X
5	General Dynamics Corp.	US	24,500	62	X	-
7	BAE Systems	UK	22,240	95	X	X
10	L3Harris Technologies	US	13,920	77	X	-
11	<i>United Technologies Corp.</i>	US	13,100	17	X	- ¹
12	Leonardo	Italy	11,110	72	X	-
13	<i>Airbus</i>	EU	11,050	14	X	X
14	Thales	France	9,470	46	X	X
16	Huntington Ingalls Industries	US	7,740	87	X	-
17	Dassault Aviation Group	France	5,760	70	X	-
18	<i>Honeywell International</i>	US	5,330	15	X	X
19	Leidos	US	5,330	48	X	-
20	Booz Allen Hamilton	US	5,140	69	X	X
21	<i>General Electric</i>	US	4,760	5	X	X
23	<i>Rolls-Royce</i>	UK	4,710	24	X	X

¹ United Technologies merged with Raytheon in 2020 and operates under the new name Raytheon Technologies. Here we will retain Raytheon for the sake of simplicity.

For the time analysis, CoCs were collected online at two points in time, namely in 2019 and in 2023. Notably, 6 of the 18 companies have not published an updated CoC since 2019 (See Table 8.1). Consequently, to study the development over time of the CoC content regarding sustainability, for those companies the same CoC is considered for both measure points. Furthermore, because in 2020 United Technologies merged with Raytheon, there is no CoC of United Technologies in the 2023 sample.

The content of the CoC is analysed using thematic coding followed by a cross-source comparison. Thematic coding is a method for systematically identifying, organising, and offering insight into patterns of meaning (themes) across a data set (Braun & Clarke, 2012). It allows for a combination of inductive and deductive analyses.

In order to meet the aim of this research, the primary focus of the coding is on the addressing of the topic of sustainability in CoC content. Sustainability, here, is solely understood as environmental sustainability. So references to other types of sustainability, for example, sustaining an ethical culture, are excluded. Besides ‘sustainability’ and its derivatives such as ‘sustainable’, the related concepts ‘environment’, ‘ecology’ and ‘recycling’ are used to analyse the CoCs. The snippets of content thus singled out, such as a paragraph or a (sub)section of text that addresses sustainability for each CoC, are then further analysed. Deductively, because of the dependence on partnerships to meet sustainability goals, coding will focus on evidence for cooperation within (1) the supply chain and (2) horizontally with peer groups i.e. concerted practices between companies operating at the same level in the market.

Apart from these two themes, inductively, four additional themes arose during the analysis. These are added to the coding scheme, namely:

- 1) Type of CoC (sub)section in which the theme of sustainability is addressed;
- 2) Inclusion of ‘guidelines for behaviour’ as a manner to operationalise the theme;
- 3) Different types of motivation for addressing sustainability;
- 4) Reference to a policy document on sustainability.

The analysis was carried out by two people: each CoC was coded independently by one coder and then reviewed by the other coder.

Lastly, to corroborate the findings and put them in a broader context, they are tested against:

- 1) a purposive sample of five companies¹ from the 2021 nominees of Ethisphere’s 2021 World’s Most Ethical Companies (Ethisphere, 2021), and
- 2) a quick scan of the most recent sustainability reports (or equivalent reportages) of the companies in the sample.

8.3 Findings

The discussion of the findings starts by drawing an overall picture of the addressing of the theme of sustainability across the CoCs. Second, the inductive codes ‘guidelines for behaviour’ and ‘reference to policy documents’ the CoCs use to guide employee behaviour in relation to sustainability are discussed. Third, based on the code ‘(sub)sections of CoCs addressing sustainability’ the conceptualisation of sustainability is analysed, followed by a discussion of the vertical and horizon cooperation with regard to sustainability based on the related deductive codes. Fifth, different types of motivation for sustainability are assessed based on the related inductive code. The section finishes by corroborating the results and then putting them in a broader context by comparing them with the quick scan of the benchmark and the sustainability reports.

8.3.1 Overall attention to sustainability

The research shows that the theme of sustainability is touched upon in all the sample’s CoCs except for those by Boeing, whose 2019 CoC and 2023 update do not reference it. However, although sustainability is referred to across the CoCs, relatively little text is dedicated to it. Most of the CoCs spend just a few sentences or paragraphs on sustainability, whereas only a few have a dedicated (sub)section on the topic (see Table 8.A1 in the appendix). On average 8 lines are dedicated to the theme, ranging between 2 and 18 across both years. So, based on this metric alone, there is no indication of an increase in the companies’ interest in sustainability.

A possible explanation of the number of lines dedicated to sustainability can be the overall size of the CoC. When comparing the number of lines to the overall size, this shows that more substantial CoCs do tend to spend the most lines on sustainability (see Table 8.A2 in the appendix). However, at the medium and lower end of the spectrum, size offers no clear predictor of the amount of text dedicated to sustainability.

Apart from Boeing, the least evidence is found in the CoCs by Leidos, L3, Huntington and Thales, of which only Thales updated theirs in 2023, and the 2019 CoCs of Raytheon and Rolls Royce. In these CoCs the attention to sustainability is limited to a statement of commitment to the protection of the environment.

On the other end of the spectrum, there are the CoCs by Leonardo, United Technology, Honeywell and the 2023 update by Rolls Royce that offer a more elaborate discussion of their sustainability goals and include practical guidance to their employees. In their CoCs Honeywell, for example, discusses how they ‘[...] identify, control, and endeavor to reduce emissions, waste and inefficient use of resources and energy.’ (p.30) And, across different sections of their CoC Rolls Royce shows how they ‘integrate sustainability considerations into decisionmaking at all levels of the organisation.’ (p. 27)

In between these ends, the remaining CoCs are located. Lockheed Martin's and General Dynamics' CoCs, for instance, offer some elaboration on why sustainability is important to them, but lack any translation into practical guidance.

Over time, in those cases in which the companies updated it, their 2023 CoC shows little development. The only exception is Rolls Royce's², who went from very limited (2 lines) to integrating sustainability across many subsections of their CoC in 2023 (23 lines). That does not mean, however, that across the CoCs the discussion of sustainability underwent changes. The following paragraphs discuss in more depth the manner in which the theme of sustainability is being addressed.

8.3.2 Guidance of employees' behaviour

A CoC contains guidelines on the acceptable behaviour of employees in the organisation. There is no fixed and generally approved format for drawing up a code of conduct; consequently, companies use their own unique format. Table 8.A1 in the appendix shows that, in 2019 and 2023, 10 out of 18 and 9 out of 17 companies have a separate sustainability section in the CoC scoring well below average in comparison to the reference group. All companies use the CoC to express their core values and beliefs. The 2023 CoC of Lockheed Martin, for example, states that 'at Lockheed Martin, we believe in living our core values, to do what's right, respect others, and perform with excellence' (p.1). According to the President and Chief Executive Officer of Lockheed Martin 'the values serve as our North Star, enabling us to maintain operational excellence and cultivate innovation' (p.1). In addition to explaining the core values and beliefs the 2023 CoC of Airbus explains '[...] this CoC is designed to provide you with user-friendly and practical guidance on the proper conduct needed to build business relationships between Airbus and its stakeholders [...]' (p.3). Therefore, Airbus' CoC provides a clear example of a guideline of expected behaviour in the workplace.

Like Airbus, four companies also include more detailed information about what is expected of their employees. To explain the desired behaviour to their employees the 2023 CoC of Rolls Royce uses different headings. Each page starts with 'our principles' followed by 'what this means for you' and 'where to go for help' (p.34). The CoC 2023 of Thales and Airbus translates companies' principles in a list of 'what employees must not do' and 'what employees should do'. For example, the 2023 CoC of Airbus explains '[...] employees should follow local rules that apply to the storage and use of chemicals and reducing company's environmental impact [...]' but '[...] employees are not allowed to accept environmental practices in the supply chain that are not accepted in Airbus operations [...]'. Even though both Thales' and Airbus' do's and don'ts-lists are not exhaustive, this approach gives an evident view of recommended behaviour and prohibitions. Companies that do not translate general rules into a more detailed set of behavioural rules may

sometimes refer to their sustainability policy. In total, the study reveals that 6 out of 18 companies in 2019 and 6 out of 17 in 2023 included such a reference in their CoC.

8.3.3 *The concept of sustainability in the defence industry*

Corporations in the DI integrated sustainability in their CoC in a variety of ways. Inductive coding of the headings of the sustainability (sub)section found several key words that are listed in the left column of Table 8.2. A distinction is made between 2019 and 2023. Three types of distinct stakeholder groups came to the fore: [1] employees, [2] communities and [3] global. Some CoCs focus on one stakeholder group while others have a multiple stakeholder focus.

Table 8.2. Keywords used in the heading of (sub)sections featuring sustainability classified by targeted stakeholder.

Keywords	Focus	Stakeholder	2019	2023
1) Good corporate citizen 2) Committed to sustainability 3) How we treat our world 4) Responsible corporate citizen	Protecting the world/planet	Global	5	4
5) Environmental protection 6) Engaged in our communities 7) Commitment to our community 8) Respecting our environment 9) Community investment	Environmental protection	Communities	12	11
10) Health, safety 11) Workplace responsibilities 12) Safe workplace 13) Keeping everyone safe and well	Health and Safety	Employees	6	5

Table 8.2 shows that most CoCs focus on the protection of the immediate environment. These CoCs advise the employees to show commitment to their community as the sustainability section deals specifically with ‘respecting the direct environment’ and ‘community investments’. For example, the 2019 CoC of United Technologies, states ‘We are engaged in our communities’, ‘[...] we protect the environment we share and seek out sustainable ways to create value’ (p.48). While the 2019 CoC of General Dynamics explains ‘[...] We protect the environment of the communities in which we work. In all jurisdictions where we do business, we comply with environmental protection laws and regulations, including recycling and waste disposal requirements’ (p.16). There are fewer CoCs that have a ‘health and safety’ or ‘protecting the planet’-approach. When a health and safety-approach has been adopted, the

sustainability section in the CoC is mainly concerned with ‘keeping everyone safe and well’. The 2019 CoC of Raytheon, for instance, states that ‘[t]he company ensures compliance with applicable environmental laws and regulations and provides a safe and healthy workplace for our employees’ (p.9). When companies adopt a protecting the planet-approach, the CoC uses terms such as ‘good corporate citizen’ and ‘how to treat the world’ to explain to the employees the importance of sustainable enterprise and the role the industry can and wants to play in this respect. The 2023 CoC of Airbus is illustrative of such an approach, by using the following sentence ‘We have a responsibility to the global community to protect the environment in our operations and throughout our value chain’ (p.46). These companies often have a broader view on sustainability that goes beyond their own business activities.

8.3.4 Supply-chain approach and horizontal cooperation

A few companies notice in their CoC that the environmental impact of the DI is intricately linked to their supply chain. Six companies, for example, underline the importance of a responsible supply chain while some expect key suppliers to increasingly employ sustainable practices. The 2019 CoC of United Technologies, for example, states ‘We expect our key suppliers to increasingly employ sustainable practices’ and ‘we set goals that motivate us and our key suppliers to seek out constant improvement in conservation and sustainability’ (p.48). Sometimes suppliers are even asked to provide evidence for their environmental responsible behaviour. This is illustrated by the 2019 CoC of Airbus in which the company asks its employees to conduct responsible sourcing and when needed suggests employees to ask suppliers to provide evidence of the application of sustainability principles (p.24). In contrast, other companies do not express such expectations in their CoC. This does not have to mean that there are no requirements as some companies refer to a separate, dedicated supplier code of conduct in their CoC. While these documents are of interest, they are not always publicly available and beyond the scope of the present exploration and therefore left out.

Horizontal cooperation is understood here as the concerted practices between companies operating at the same level in the defence market. Across the CoCs included in the sample, three mentioned engagement with peer groups to reduce the environmental footprint. The 2019 CoC of United Technologies Corp., for example, states ‘[...] we are not content to simply meet our legal obligations when it comes to environmental standards. We want to be a catalyst of positive change, making progress through innovation and showing our peers and our communities that reducing your environmental footprint is not only good for the world, it’s good for business’ (p.48). Likewise, the 2023 Airbus CoC explains ‘[...] we engage with companies throughout the aerospace sector to reduce the environmental footprint’ (p.46). Apart from the

limited references to horizontal cooperation concerning sustainability, these engagements with peer groups concern in particular the development of new technologies.

8.3.5 Corporate motivation for sustainability

Across the CoCs, evidence emerged for different motivations to address the topic of sustainability. Broadly, three types of motivation can be discerned: (1) Social Responsibility, (2) Economic, and (3) Juridical/Legal (see Table 8.3).

The 2019 CoC of Booz Hamilton, for example, states that the company has ‘[...] a responsibility as a corporate citizen to make a positive impact on building a more sustainable society.’ (p.31). In turn, the 2023 Lockheed Martin CoC links their commitment to sustainability to ‘[...] ensure long-term competitiveness of our business.’ (p. 34), while the 2019 CoC by General Dynamics explains that they ‘[...] comply with environmental protection laws and regulations, including recycling and waste disposal requirements.’ (p.16).

Table 8.3 Different types of motivation for sustainability in the 2019 and 2023 CoCs.

Type of Motivation	2019 (18 CoCs)	2023 (17 CoCs)
<i>None</i>	2	2
Social Responsibility (R)	11	11
Economical (E)	4	5
Juridical/Legal (J)	11	12

The motivations, however, are not mutually exclusive. In the majority of the CoCs, different types of motivations are provided alongside each other. For both years, two companies combined economic and social responsibility and five juridical and social responsibility motivations, while in 2019 two and in 2023 three companies included all three types.

For instance, the United Technologies 2019 CoC states that ‘[...] we respect all environmental laws and regulations that apply to us’ (p. 48), but also asserts that for social reasons ‘we are not content to simply meet our legal obligations when it comes to environmental standards.’ (p. 48). At the same time their CoC claims that meeting sustainability goals ‘is not only good for the world, it’s good for business’ (p 48).

Over time, there has been little development in terms of the types of motivation provided by the CoCs. The differences between the two columns of Table 8.12 are accounted for by only one company. Of the eleven companies that updated their CoC in 2023, nine provide a motivation for sustainability that is similar to that of their 2019 CoC. And, although Raytheon went from providing solely a legal motivation

in 2019 to including all three types in 2023, this can be explained by the CoC of their merger partner United Technologies, in which the 2019 CoC also mentioned all three motivations. That only leaves Rolls Royce, in which the 2019 CoC referred only to social responsibility, while in 2023 it mentioned all three types of motivation.

8.3.6 Corroboration of the findings

This research confirmed that the DI has placed sustainability on its agenda, as almost all companies included sustainability in their CoC. Evidence emerged for different motivations to address the topic of sustainability. Broadly, three types of motivation were discerned; (1) Social Responsibility, (2) Economic, and (3) Legal. In the majority of the CoCs different types of motivations are provided alongside each other. The way companies include sustainability in their CoC differs. Some CoCs focus on the protection of the immediate environment and safety of personnel, other CoCs have a much broader view on sustainability and show responsibility for the whole planet. On the one hand, this can be explained by companies' narrow or broad approach to sustainability, on the other hand by the manner in which key values have been anchored in the CoC.

The findings were tested against a purposive sample of five companies from the 2021 nominees of Ethisphere's 2021 World's Most Ethical Companies. This comparison showed that the CoCs of the reference group all contain a separate sustainability section and four of the five CoCs provide all three motivations to address the topic of sustainability. Three out of five of the reference group CoCs underline the importance of a responsible supply chain and two out of five CoCs mentioned engagement with peer groups to reduce the environmental footprint. Compared to the reference group, the CoCs of the defence industry score below average on multiple parameters.

A comparison with the most recent sustainability reports of the companies in the sample shows a different picture (see Table 8.A1 and Table 8.A2 in the appendix). Fifteen sustainability reports pay attention to a sustainable supply chain against four CoCs. The analysis of the sustainability reports also shows thirteen companies that combine their knowledge and skills with peers against only one CoC. There appears to be a difference between the information included in both documents. This difference becomes particularly evident when comparing the CoC and sustainability report of Boeing. The Boeing CoC does not include a separate sustainability section or a motivation for sustainability. It also does not make reference to a supply chain approach or horizontal cooperation with peers. Surprisingly, the Boeing sustainability report incorporates all three motivations to address the topic of sustainability and makes reference to both the supply chain approach and horizontal cooperation. This raises the question of to what extent the CoC is the commonly used management control instrument to display the variety of sustainability responsibilities of companies and their stakeholders. This question is further touched upon in the discussion section.

8.4 Discussion

A CoC provides an understanding of expectations and standards for ethical behaviour and responsible business practices (Erwin, 2011; Stevens, 2008). Compliance with laws and high standards of behaviour are important to protect the reputation and long-term success of a company (Babri et al., 2019). It seems therefore logical to include sustainability in the CoC since not complying with environmental legislation, energy- and climate targets can have a considerable impact on a company's reputation. This research confirms that all companies except one included sustainability in their CoC.

8.4.1 *Staff versus wider stakeholder-groups*

However, the way companies have included sustainability in their CoC varies widely. This can be explained by the way companies pursue sustainability, but also by how key values have been anchored in the CoC. To start with the latter, current research examined how companies use the CoC. It found companies that use the CoC to express their core values and beliefs and companies that use the CoC more as a guide on how to conduct business. A combination of both can also occur. It depends to whom the code of conduct applies. In some cases, the code of conduct only applies to staff members; in other cases, it also promotes the adaptation of sustainability standards by multiple stakeholders in the supply chain (customers, suppliers, partners, contractors). In the latter case, companies sometimes refer in the CoC to a 'responsible supply chain' and 'horizontal cooperation'.

This ties in with the different uses of CoCs described by the literature, which can be focused on external and/or internal stakeholders (e.g. Kaptein & Wempe, 2002; Weber & Wasieleski, 2013). In both cases, a CoC may reflect the importance of sustainability to the company. Nevertheless, except for a small group of companies that integrated the theme across their CoC, the DI CoCs are below that of the level of addressing found across the five companies of the benchmark at both measure points.

8.4.2 *Broad versus narrow view of sustainability responsibility*

Getting back to the question posed in the previous section 'to what extent is the CoC the commonly used management control instrument to display the variety of sustainability responsibilities of companies and their stakeholders', the results show that this is not always the case. Some companies solely discuss sustainability in their CoC concerning the health and safety of their employees and/or on impacts on the communities and direct surroundings in which they are located (see Table 8.11). Consequently, there is less chance of a trickling-down effect towards partners in the supply chain such as suppliers as well as a trickling-up effect towards customers such as MoDs.

This can, therefore, be qualified as a ‘narrow’ view of sustainability responsibility. In contrast, there are also companies that discuss sustainability in terms of protecting the world and planet. Moving beyond their local interests this ‘broad’ of sustainability responsibility also takes into account the impact on the environment and planet as a whole. When taken seriously, this should carry over to the companies’ products and services and hence make trickling up and down more likely. Moreover, it can be seen as evidence of the companies taking the interests of their customers such as MoDs seriously.

8.4.3 Compliance versus integrity strategy

This distinction resonates with three types of motivation for pursuing sustainability that emerged from the results (Table 8.12).

On the one hand, a large group of companies mention legal and economic motives to address the theme of sustainability. This conforms to the (neo)classic economic paradigm that suggests companies pursue their self-interest within the legal boundaries set by the state (or other types of standards of regulations within an organisation). Accordingly, companies will follow a strategy that is limited to complying with legal and other regulatory requirements (Paine, 1994, p. 19; Silverman, 2008; Timmermans, 2022).

On the other hand, a large group of CoCs (also) mentioned social responsibility as their motivation. This suggests that these companies go beyond compliance and pursue a so-called integrity strategy, which aspires to contribute to what is deemed socially and ethically desirable as well (Paine, 1994, p. 19; Silverman, 2008; Timmermans, 2022).

Although pursuing an integrity strategy does not rule out that companies exclusively have a narrow view of sustainability responsibility, companies with such a strategy seem to be more likely to have a broad view of sustainability responsibility. And vice versa, adhering to a compliance strategy may not necessarily preclude concern for sustainability in products and services. At the same time, however, it is unlikely that these concerns will go beyond regulatory and legal requirements.

8.5 Conclusion

This research set out to make a first step towards a better understanding of the current state of affairs of the addressing of environmental sustainability by the DI. Overall, it shows that, although all companies except one have addressed sustainability in their CoC, the integration of the theme is rather shallow. Most of the CoCs spend only a limited number of lines on it across one or two subsections, while targeting a limited

number of stakeholders. Furthermore, this is coupled with a predominantly narrow view of sustainability responsibility that oftentimes is linked to a compliance strategy. Few companies integrate the theme throughout their CoC coupled with a broad view of sustainability responsibility while pursuing an integrity strategy. Moreover, the increase in prominence of sustainability in recent years is also not reflected in the development of the CoCs over the two measurement points: the overall picture has not altered much, despite 12 companies having updated their CoC in the meantime.

When comparing these findings to those of the companies in the benchmark, the snapshot of the DI looks rather bleak. Based on this, the conclusion can be drawn that the interests of the MoDs do not trickle down to their suppliers. This may be due to a reluctance of the suppliers or to the MoDs not yet prioritising sustainability in their dealing with the DI or failing to communicate that interest effectively to their suppliers. In any case, this indicated that there is still much room for improvement for both the suppliers and the MoDs.

Yet, when the sustainability reports of the DI companies are taken into account this conclusion needs nuancing. In most of the reports more attention is given to the theme, multiple stakeholders beyond the community and employees are targeted, and the companies seem to have a broad view of sustainability.

This seems to imply that companies use accountability reporting for sustainability goals rather than their CoCs. However, none of the sustainability reports provide practical guidance to the staff and/or other stakeholders. Instead, in line with their function, the sustainability reports' focus is solely external, namely raising awareness and being accountable to the stakeholders. And, because most of the companies, unlike most companies in the benchmark and a small group of their DI peers, do not use their CoCs to provide guidance instead, there seems to be a gap between the overarching sustainability strategies and operations within the company and towards their supply-chain partners. This highlights a huge opportunity for the companies to take advantage of the main function of CoCs, namely to guide the behaviour of the individual members of their staff.

Besides opening up opportunities for the further addressing of sustainability throughout the supply chain, this research also signals further avenues of inquiry. The limited use of CoCs to address sustainability by the DI highlights a need to look further into the (alleged) functioning and effectiveness of CoCs concerning that theme. As a part of this, the relationship and differences between CoCs and other tools such as sustainability reports and corporate websites should be taken into account, all the more, because present research has shown that sustainability reports evidenced sustainability much more extensively.

Appendix

Table 8.A1. Results of Analysis on Code of Conduct and Sustainability Report.

	Code of Conduct 2019						Code of Conduct 2023						Sustainability Report 2023			
	Sustainability Section in CoC	Reference sustainability policy	Guidelines for behaviour	Supply chain approach	Horizontal cooperation	Motivation for sustainability ²	Sustainability Section in CoC	Reference sustainability policy	Guidelines for behaviour	Supply chain approach	Horizontal cooperation	Motivation for sustainability	Guidelines for behaviour	Supply chain approach	Horizontal cooperation	Motivation for sustainability
1. Lockheed Martin	Yes	Yes	No	No	No	RE	Yes	Yes	No	No	No	RE	No	Yes	No	R
2. Boeing	No	No	No	No	No	N	No	No	No	No	No	No	No	Yes	Yes	ERJ
3. Northrop Grumman Corp.	Yes	No	No	No	No	R	Yes	No	No	No	No	R	No	Yes	Yes	R
4. Raytheon	No	No	No	No	No	J	No	No	No	Yes	No	JRE	No	Yes	Yes	ERJ
5. General Dynamics Corp.	No	No	No	No	No	J	No	No	No	No	No	J	No	Yes	No	R
6. BAE Systems*	Yes	Yes	Yes	No	No	JR	Yes	Yes	Yes	No	No	JR	No	Yes	Yes	ERJ
7. L3Harris Technologies	No	No	No	No	No	J	No	No	No	No	No	J	No	Yes	Yes	ERJ
8. United Technologies Corp.***	Yes	No	No	Yes	Yes	REJ	Yes	No	No	No	No	J	No	Yes	Yes	ERJ

² Motivation for sustainability: J = Juridical/legal; R = Social Responsibility; E = Economical.

9. Leonardo*	Yes	Yes	Yes	Yes	No	No	JRE	Yes	Yes	Yes	No	No	JRE	No	Yes	Yes	ER]
10. Airbus**	Yes	Yes	No	Yes	No	No	RJ	Yes	Yes	Yes	Yes	Yes	RJ	No	Yes	Yes	R
11. Thales	No	No	No	No	No	No	N	No	No	No	No	No	No	Yes	Yes	Yes	ER]
12. Huntington Ingalls Industries	Yes	No	No	No	Yes	No	RJ	Yes	No	No	Yes	No	RJ	No	No	No	RJ
13. Dassault**	No	No	No	No	No	No	RE	No	No	No	No	No	RE	No	No	Yes	RJ
14. Honeywell International	Yes	No	No	No	No	No	RJ	Yes	No	No	No	No	RJ	No	Yes	Yes	R
15. Leidos	No	No	No	No	No	No	J	No	No	No	No	No	J	No	Yes	No	RJ
16. Booz Allen Hamilton**	Yes	Yes	No	No	No	No	RJ	Yes	Yes	No	No	No	RJ	No	Yes	Yes	R
17. General Electric	No	No	Yes	Yes	No	No	J	No	No	No	Yes	No	J	Yes	Yes	Yes	RJ
18. Rolls-Royce**	Yes	Yes	Yes	No	No	No	R	Yes	Yes	Yes	Yes	Yes	JRE	No	Yes	Yes	R
In sum	10	6	4	4	4	1		9	6	4	5	2		2	15	12	
Reference Group CoC 2019 Scores																	
	Code of Conduct 2019																
1. Arm	Y	Y	N	Y	Y	Y	JRE										
2. Schneider Electric	Y	Y	Y	Y	Y	Y	JRE										
3. Schnitzer	Y	Y	Y	Y	Y	N	JRE										
4. Cummings	Y	Y	Y	Y	N	N	JRE										
5. Illy	Y	N	N	N	N	N	JE										
In Sum:	5	3	3	3	3	2											

Table 8.A2. Results of Analysis on sustainability content in Codes of Conduct.

Company ⁵	Lines addressing sustainability ³		Overall number of Pages of CoC ⁴	
	2019	2023	2019	2023
1.Lockheed Martin Corp.	7	7	38	38
2.Boeing	0	0	21	27
3.Northrop Grumman Corp.	5	5	47	45
4.Raytheon	3	8	36	50
5.General Dynamics Corp.	6		21	
6.BAE Systems	12	8	63	89
7.L3Harris Technologies	2		35	
8.United Technologies Corp.	16	N/A	50	
9.Leonardo	18		31	
10.Airbus	8	5	29	55
11.Thales	2	2	12	46
12.Huntington Ingalls Industries	2		36	
13.Dassault Aviation Group	6		9	
14.Honeywell International	14	14	54	56
15.Leidos	3		43	
16.Booz Allen Hamilton	6	6	35	43
17.General Electric	4	4	20	27
18.Rolls-Royce	2	23	33	55
AVERAGE	6.4	7.0	34.1	48.3

³ Colouring of cells: Red = low (i.e. a relatively low number of lines); blue = average; Green = high⁴ Colouring of cells: Ranging from green (a relatively high number of pages) to red (a relatively low number of pages)⁵ A company name displayed in italics indicates that the company has not updated its CoC after 2019.

Notes

- ¹ The CoCs of five companies headquartered in different countries, with an industrial or technical background matching that of the DI sample and with a number of employees comparable to that of the DI sample were selected from five different industries: ARM (UK), Cummins (US), Illy (Italy), Schnitzer (US), and Schneider Electric (France).
- ² As discussed before, the developments of the Raytheon CoC can be accounted for by its merger with United Technologies, whose CoC paid even more attention to sustainability than the CoC of the merged company.

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