

An Exploration of How Large Corporations Use Sustainable Development Goals and Standardized Reporting Structures within their Sustainability Strategies

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Abstract

The purpose of the paper is to determine which of the UN Sustainable Development Goals (SDGs) are being used by the largest US corporations, and to assess the quality of this use. Similarly, we determine which of the most common standardized reporting structures these corporations use. The assessments are done using the websites and annual reports of the top 25 Fortune 100 companies. There are 17 SDGs and four widely used standardized sustainability reporting structures: Sustainability Accounting Standards Board (SASB), Global Reporting Initiative (GRI), Task Force on Climate-Related Financial Disclosures (TCFD), and Carbon Disclosure Project (CDP). Along with these reporting structures, we look at which companies subscribe to the two programs UN Global Compact (UNGC) and the Science-Based Targets Initiative (SBTi). All 17 SDGs are mentioned by at least two companies, and by up to 14 companies for the most popular SDG. Three of the top four companies in terms of SDG usage are in the "consumer discretionary" category. Beyond mere mention of SDGs, 52% of the companies show good evidence of their adoption of the SDGs. The six reporting structures and programs are well represented among the companies, with eight companies using all six, and five more using five of them. The paper contributes to the body of knowledge by showing in structured form to what extent the SDGs have meaningfully penetrated the largest US corporations, and to what degree these corporations are using standardized reporting structures for communicating sustainability information to their stakeholders.

Keywords: UN SDG; UN Global Compact; Sustainable Development Goals; Science-Based Targets Initiative; Fortune 100; Corporate Websites

Purpose and Introduction

The idea of sustainability in the sense of renewable resources use goes back centuries, at least to the time of Hannß Carl von Carlowitz, a late-17th/early 18th German who wrote about forestry and how to use trees without decimating forests (Grober, 1999). Carlowitz was a mining administrator in Saxony, and the silver mines in that state had depleted the old forests in the area by using the trees to smelt the mined ores. In the modern era, the term was broadened from the natural resource view in the UN report Our Common Future (UN, 1987) which defined sustainable development as meeting "the needs of the present without compromising the ability of future generations to meet their own needs". Sustainable business practices as an opportunity started to take root during the 1990s and 2000s as businesses' investors, customers, and consumers

started to expect that companies were not abusing the planet producing their products (Hoffman, 2018). Sustainability has thus become a strategic element of companies' plans. As such, the potential for "greenwashing" (misrepresenting sustainability efforts) has arisen because investor and consumer impressions are increasingly what drive business success in the market (Watson, 2016; Martin and Chasen, 2018). If a company's investors and consumers think a company is doing good things in sustainability, they will favor the company. If the impressions are mistaken because of how the company has positioned things in their public communications, this increased favor will be unjustified. Over the past decade or two several reporting structures (SASB, GRI, TCFD, etc.) have been developed to ensure that corporate sustainability efforts are communicated consistently (across companies) and accurately. These reporting structures help limit the potential for greenwashing.

Today, businesses communicate with their customers/consumers and to a great extent with their investors through their websites. Corporate "sustainability" websites (using various terms as synonyms or extensions of sustainability) have become large and increasingly complicated, particularly as sustainability has largely developed into "ESG" (Environmental, Social, Governance) for many corporations (Temmink and Flynn, 2021). It can be asked whether consumers in particular will really spend the time digging through the details of these sites and corporations' annual sustainability reports to understand the details of what companies are really doing in this area. "Buzzwords" can be used, for example, to give a certain impression on summary pages with the details only found buried in links to less readable pages or reports. As a result, it is possible for a company to drive investor or consumer behavior with incorrect claims. To counter this risk, the U.S. Security and Exchange Commission (SEC) announced in March 2021 the creation of a Climate and ESG Task Force in their Division of Enforcement (SEC, 2021). The purpose of this task force is to "identify ESG-related misconduct" because of "increasing investor focus and reliance on climate and ESG-related disclosure".

The purpose of this paper is to investigate the websites and annual reports of the U.S.'s largest corporations to see what they communicate about their sustainability efforts. While there are a number of elements on these websites that were investigated, this paper will focus solely on two of them: the use of the 17 United Nations Sustainable Development Goals (SDGs), and the use of the 6 main reporting structures and programs that were developed to ensure consistency and transparency of sustainability reporting. The reporting structures are Sustainability Accounting Standards Board (SASB), Global Reporting Initiative (GRI), Task Force on Climate-Related Financial Disclosures (TCFD), and Carbon Disclosure Project (CDP). The associated external programs are the UN Global Compact (UNGC) and the Science-Based Targets Initiative (SBTi).

Review of Relevant Literature

In 2015 the United Nations launched the 17 Sustainable Development Goals program in an effort create a framework of commonality for which individuals, communities, and nations can target sustainable solutions for the common good of all (UN, 2015). The United Nations Development Programme's (UNDP) Human Development Report 2020 shows the importance of sustainability

to the world (UNDP, 2020). The 17 SDGs can be seen in Figure 1 (as obtained from the SDGs website, www.un.org).

Figure 1: UN Sustainable Development Goals



The world's largest initiative for promoting corporate sustainability is the United Nations Global Compact (UNGC, 2015). Announced at the World Economic Forum in 1999, it was officially launched a year later in New York City. The principal purpose of the UN Global Compact is to encourage businesses to adopt sustainable policies that incorporate the ten principles of business activities and align actions with the UN sustainable goals (UNGC, n.d.a). According to the UNGC, "no matter how large or small, and regardless of their industry, all companies can contribute to the SDG's" (UNGC, n.d.a). They further provide a plea for companies to "do business responsibly" as well as working toward "solving societal challenges through business innovation and collaboration" (UNGC, n.d.a). The ten principles of the UN Global Compact focus on a principled approach to doing business through the company's value system. This means incorporating business practices that promote responsible corporate behavior with regard to human rights, labor, the environment, and dissuading corruption (UNGC, 2015). These practices include respecting and protecting human rights as well as ensuring non-violation of human right abuses; upholding the freedom of association and the right to collective bargaining, and eliminating forced and compulsory labor, child labor, and discrimination; supporting a precautionary approach to environmental challenges, promoting greater environmental responsibility, and encouraging the development of environmentally friendly technologies; and finally, businesses should work against corruption in all its forms (UNGC, 2015). In addition to the ten principles of business activities, the UNGC further indicates that for companies to be sustainable they must operate responsibly in alignment with these universal principles and take actions that support society. This can become part of a company's corporate culture if the company exhibits executive level commitment, regularly reports on their efforts, and applies these principles locally where they have a presence (UNGC, 2015).

To assist companies in effectively applying UNGC principles and recommendations, the UN Global Compact Management Model was created. This model is comprised of six management steps, including committing, assessing, defining, implementing, measuring, and communicating their sustainability efforts (UNGC, 2010). The model itself is intended to be circular and iterative, with no specific entry or end point within the six steps. In this manner, there is an implication that by following this ongoing circular management process, companies are able to continuously improve (UNGC, 2010). It is important to note that one of the key elements of the UNGC guidelines is communicating the company's strategies, regularly evaluating the effectiveness of their efforts, and ultimately reporting the company's level of effectiveness. These principles were a direct motivator in performing the research contained in this paper. A 2017 report contains an overview of how companies are implementing the ten principles, as well as the actions that are being taken to advance the SDGs (UNGC, 2017). This report indicates that after two years of effort, 75% of the participating companies say that they have some form of action directly related to the sustainable development goals. Table 1 shows a summary of the activities that companies self-reported targeting in the UNGC Progress Report, 2017 (UNGC, 2017). Although this table doesn't specifically indicate the quality of those efforts, it at least acknowledges some level of corporate action. It should be noted that companies that specifically work to apply the ten principles of the UN Global Compact inherently begin to align corporate strategies with the SDGs. Although this report indicates companies are indeed aligning their efforts with the SDGs, there is a gap in understanding their assessment, reporting, and communication efforts. This research was initiated to explore the transparency of the SDG alignment, communication, and reporting efforts of leading corporations.

Table 1: Ranked Order of Percent of Companies Targeting SDG with some Level of Corporate Action

% Companies with Action	SDG
49%	Goal 8: Good jobs and economic growth
49%	Goal 3: Good health and well-being
45%	Goal 5: Gender equality
42%	Goal 4: Quality education
40%	Goal 12: Responsible consumption
39%	Goal 9: Innovation and infrastructure
37%	Goal 13: Climate action
35%	Goal 7: Clean energy
32%	Goal 10: Reduced inequalities
32%	Goal 6: Clean water and sanitation
30%	Goal 11: Sustainable cities and communities
29%	Goal 17: Partnership for the goals
24%	Goal 1: No poverty
23%	Goal 16: Peace and justice
19%	Goal 2: Zero hunger
18%	Goal 15: Life on land

There have been other studies that have investigated the relationship between corporate strategy and SDG alignment. One recent study indicated that corporate foundations should serve as partnership brokers, thus helping to more effectively achieve the SDGs within the business sector (Gehringer, 2020). Jimenez, et al. (2021), on the other hand, concentrated on how focusing on corporate purpose can lead the more sustainable business practices. This occurs by eliminating the tension between maximizing profits and benefitting society, guiding the evolution of strategies, priorities, and decision making to incorporate long-term commitment to SDG alignment, and prioritizing SDG implementation at the management level. Mattera and Ruiz-Morales (2020) demonstrated that although a company might implement the UNGC management model, these actions did not specifically correlate to the perceptions or performance of the company. With regard to perception, Anwar and El-Bassiouny (2020), indicated that marketing remains an integral part in helping achieve a company's sustainability efforts. This supports the notion that communication and transparency are an important element within a company's sustainability strategy.

Barrese, et al. (2020) explored the motivations behind US companies joining the UN Global Compact. They indicate that two early theories emerged: one where critics argue that with a low barrier to entry and no enforcement or compliance it attracted companies seeking to enhance their reputations; the other where advocates indicate companies join seeking learning and improvement with regard to their corporate social responsibility (CSR) efforts. The Barrese, et al. (2020) study tested the Haack, et al. (2021) CSR model, supporting the idea that companies can adopt these types of strategies "ceremonially under conditions of opacity" and over time evolve to "substantive adoption" as their transparency increases. This research validated the notion that effective transparency is a significant contributor to effective adoption and alignment of sustainability strategies. Kücükgül, et al. (2022) further indicate that companies must have effective measurement and communication criteria for aligning their corporate sustainability and SDG strategies. Another recent study by Izzo, et al. (2020) highlights some of the challenges that are faced with reporting on SDG achievement within Italy. They indicate that awareness of SDGs is high within the business community, and that most highly traded Italian companies have introduced SDG alignment strategies and reporting within their business practices. However, there is a lack of information regarding the exact nature of the implementation requirements, and a lack of definition regarding key performance indicators for measuring the goals. Since this study was conducted solely on leading Italian companies, our research seeks to provide a similar look at leading global companies. Ultimately, the effective implementation of the SDGs in the corporate world depends on partnerships and engagements of local communities spanning a broad array of stakeholders. Through proper sustainability leadership, corporations effectively aligning with the SDGs can provide substantial solutions to some of the world's environmental, social, and economical problems (Filho et al., 2020). In summary, based on the gaps in understanding provided within this literature review, our research takes a fundamental look at how large multinational corporations are doing with regard to the transparency, assessment, and communication efforts, and their overall SDG alignment.

Methodology

This is cross-sectional study and status review of the sustainability-relevant information provided by large corporations on their websites and in their annual reports. This includes evaluating the transparency of this information. The websites of the top 25 companies in the Fortune 100 (F100) ranking were reviewed for "sustainability" content. In the analysis the companies were grouped into industries following the MSCI Global Industry Classification Standard (GICS), as reported by Bloomberg. One of the companies is a holding company composed of many smaller companies and does not have a sustainability program as such for the parent company. This company was nevertheless included in the rankings. As a good-faith effort to not personally "call out" the companies, only the company F100 rankings were included in the tables, not the company names.

The text "[company name] sustainability" was typed into the Google search engine using Google Chrome, and the web pages that were shown were investigated in detail, following all relevant links to other sites, pages, and reports, and reading the appropriate parts of the documents. Since each company's website is uniquely structured, it was not possible to follow the same steps for each company, however the sites were thoroughly investigated. That said, the process was generally as follows. 1) Evidence was sought of a large sustainability goal at some future date, generally from 2030 to 2050, as well as milestones on the way to this major goal. 2) Does the company have a senior manager or executive responsible for sustainability? 3) The quality of the website's sustainability content and the company's annual "sustainability report" was reviewed. 4) The topics of this paper were investigated: the SDGs and reporting structures the companies use.

We define four categories to assess the quality of use of the United Nation's 17 Sustainable Development Goals. For Category 1, the company uses some of the SDGs and gives detailed, comprehensive information on how the SDGs guide the company's decisions (we refer to this as "strong evidence"). For Category 2, the company uses some of the SDGs but only gives highlevel information about how they are being used (we refer to this as "weak evidence"). For Category 3, there is perfunctory mention of the SDGs but no evidence that they are being used in any real way. For Category 4, there is no mention of the SDGs. If a company states that they are using all 17 SDGs, but does not provide any detail, it is not counted in the tally of SDG usage, although the company is ranked as Category 3. By not counting such companies' mention of SDGs in the tally, we ensure that it only includes meaningful usage. The logic behind this is that it is not realistic for a company to genuinely be involved in a meaningful way with all 17 SDGs. This was supported by the fact that the companies that gave strong detail on how they were using the SDGs had identified a subset of them to focus on. No company that claimed they were using all 17 SDGs had any information on how they were using them. Whether a company used a few of the SDGs or a lot (but not all) of them was not ranked. If a company had selected a subset of the SDGs to focus on, this was evidence that they were being used seriously. It therefore didn't matter to our investigation whether that number was large or small. If a company had said they were using all 17 SDGs and gave details, they would have ranked in with the others that used a subset of them, but none did give details if they claimed 17. Table 2 summarizes the four categories for SDG usage.

Table 2: Ranking Categories for Quality of Mention of SDGs

Quality of Mention of SDGs									
Category	Label	Meaning							
1	Strong Evidence	There is detailed, comprehensive information given about their SDG usage							
2	Weak Evidence	The information given on SDG usage is high level and lacking specificity							
3	Vague Mention	SDGs are just mentioned without anything specific or meaningful about their usage							
4	No Mention	No reference to SDGs was to be found							

There are a number of other reporting structures and external programs that companies use to strengthen their sustainability programs. The reporting structures most frequently used are: SASB, GRI, TCFD, and CDP (SASB, n.d.; GRI, n.d.; TCFD, n.d.; CDP, n.d.). SASB is the Sustainability Accounting Standards Board, founded to drive consistent reporting of ESG (Environmental, Social, Governance) data that is financially relevant to investors. GRI is the Global Reporting Initiative, which provides reporting standards on companies' impacts on sustainable development (whereas SASB is an accounting focus on financial materiality). SASB and GRI can be seen as complementary. TCFD is the Task Force on Climate-Related Financial Disclosures, founded to define a climate-related disclosure structure for companies to use with their stakeholders. CDP, or the Carbon Disclosure Project, helps organizations disclose their environmental impact. CDP is similar the somewhat older GRI, but originally intended to focus on companies rather than countries. It now works with regions and governments too. The UNGC and SBTi are programs that help companies focus on sustainability (UNGC, n.d.b; SBTI, n.d.). UNGC is the United Nations Global Compact, a non-binding agreement to encourage organizations to use sustainable policies. SBTi is the Science-Based Targets Initiative, which is a joint effort by the UNGC, CDP, and several other organizations to encourage and help companies set emission targets that are broadly consistent with climate science, and specifically with the Paris Agreement. There are a number of other such programs that companies use, but they are not mentioned frequently enough to include here.

Findings

For the purposes of this conference paper, we focus on the UN SDGs and the reporting structures and external programs. Analysis of the other elements briefly mentioned under Methods will be done in a future paper.

UN Sustainable Development Goals (SDGs)

All 17 SDGs are mentioned by at least two of the companies. The most frequently mentioned SDG is 13 (Climate Action) with 14 companies mentioning it, followed by SDG 8 (Decent Work and Economic Growth) which is mentioned by 13 companies. There is a tie for the third-most mentioned SDG with 3 (Good Health and Well-Being) and 5 (Gender Equality) each being mentioned by eleven companies. SDG 14 (Life Below Water) is only mentioned by two companies. Table 3 shows the distribution of the SDGs across the companies with totals per SDG and per company. The table is sorted by number of SDGs used. The companies that mentioned

all 17 SDGs without giving details are shown as not using any of them because their mention, without evidence, is unrealistic. No company mentioned all 17 SDGs while giving details, which strengthens the idea that mentioning all 17 is unrealistic and can therefore be seen as greenwashing. The highest number of SDGs a company used convincingly was twelve (just one company used twelve of them). There were eleven SDGs used convincingly by two companies, while a third company used eleven SDGs with only weak evidence. The first three companies with convincing usage were all in the Consumer Discretionary category. The fourth company which nominally tied for second in usage, but with weak evidence, was in the Healthcare category. Ten of the companies either only vaguely mention the SDGs or do not mention them at all. (These are ranked as 3 and 4 under Quality of Use in Table 3). These ten companies are in six of the GICS categories, with "Healthcare" having three representatives among the ten. The results of SDG alignment and use mirror the results found in the earlier UN study (UNGC, 2017), but tend to demonstrate less transparency and communication within their reporting structures, an element that has been identified as important in truly making change.

Table 3: SDG use Ranked by Numbers per Company

		l	Jnit	ed N	Natio	ons	Sust	tain	able	De	velc	pm	ent	Goa	ls (k	у с	omp	any	us us	e)
F100	Industry Group	Quality of Use	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Company Totals
22	Consumer Discretionary	1			Х	Х	Х		Х	Х	Х		Х	Х	Х		Х	Х	Х	12
18	Consumer Discretionary	1			Х		Х	Х	Х	Х	Х	Х	Х	Х	Χ		Х			11
21	Consumer Discretionary	1			Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Χ					11
24	Healthcare	2	Х	Х	Х		Х			Х		Х	Х	Х	Х			Χ	Х	11
1	Consumer Staples	1		Х			Х		Х	Х			Х	Х	Х	Х	Х			9
11	Communication Services	1			Х	Х	Х			Х	Х		Х		Х			Х	Х	9
19	Financials	1	Х		Х	Х	Х	Х	Х	Х	Х			Х						9
4	Healthcare	1		Х	Х	Х	Х			Х				Х	Х		Х			8
10	Energy	1	Х		Х	Х	Х		Х	Х				Х	Х					8
12	Consumer Staples	1						Х		Х		Х		Х	Х	Х	Х			7
13	Healthcare	1		Х	Х		Х	Х		Х		Х			Х					7
20	Communication Services	1				Х			Х	Х	Х				Х		Х	Х		7
23	Healthcare	2	Х	Х	Х		Х					Х	Х		Х					7
15	Technology	1				Х				Х					Х			Х		4
7	Healthcare	1			Х							Х			Х					3
2	Consumer Discretionary	3																		0
3	Technology	4																		0
5	Healthcare	4																		0
6	Financials	4																		0
8	Healthcare	3																		0
9	Communication Services	4																		0
14	Healthcare	4																		0
16	Consumer Staples	3																		0
17	Consumer Staples	4																		0
25	Financials	4																		0
	SDG Totals	Totals	4	5	11	8	11	5	7	13	6	7	7	9	14	2	6	5	3	

Beyond the top three convincing users all being in the Consumer Discretionary category, there is no obvious pattern in the use of the SDGs among the GICS groups. Table 4 shows the usage sorted by Fortune 100 order. The apparent bunching at the bottom of the table is due to the four top users being in that area.

Table 4: SDG Use Ranked by Fortune 100 Order

		United Nations Sustainable Development Goals (by Fortune 100 order)													der)					
F100	Industry Group	Quality of Use	1	2	3	4	5	6	7	8	9	10	11	12	13		15		17	Company Totals
1	Consumer Staples	1		Х			Х		Х	Х			Х	Х	Х	Х	Х			9
2	Consumer Discretionary	3																		0
3	Technology	4																		0
4	Healthcare	1		Х	Х	Х	Х			Х				Х	Х		Х			8
5	Healthcare	4																		0
6	Financials	4																		0
7	Healthcare	1			Х							Х			Х					3
8	Healthcare	3																		0
9	Communication Services	4																		0
10	Energy	1	Х		Х	Х	Х		Х	Х				Х	Х					8
11	Communication Services	1			Х	Х	Х			Х	Х		Х		Х			Х	Х	9
12	Consumer Staples	1						Х		Х		Х		Х	Х	Х	Х			7
13	Healthcare	1		Х	Х		Х	Х		Х		Х			Х					7
14	Healthcare	4																		0
15	Technology	1				Х				Х					Х			Х		4
16	Consumer Staples	3																		0
17	Consumer Staples	4																		0
18	Consumer Discretionary	1			Х		Х	Х	Х	Х	Х	Х	Х	Х	Х		Х			11
19	Financials	1	Х		Х	Х	Х	Х	Х	Х	Х			Х						9
20	Communication Services	1				Х			Х	Х	Х				Х		Х	Х		7
21	Consumer Discretionary	1			Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х					11
22	Consumer Discretionary	1			Х	Х	Х		Х	Х	Х		Х	Х	Х		Х	Х	Х	12
23	Healthcare	2	Х	Х	Х		Х					Х	Х		Х					7
24	Healthcare	2	Х	Х	Х		Х			Х		Х	Х	Х	Х			Х	Х	11
25	Financials	4																		0
	SDG Totals	Totals	4	5	11	8	11	5	7	13	6	7	7	9	14	2	6	5	3	

Most (52%) of the companies subscribe to a subset of the 17 SDGs and give meaningful evidence that they are really driving the company's sustainability strategy. Examples of what companies in this category are doing are:

- Donating unsold but still fresh food to food banks and charities, and if it is no longer edible, to organizations who produce animal feed, or compost it (SDGs 2, 12)
- Moving to 100% cage-free eggs supply (SDG 12)
- Operating facilities with ultra-low GWP refrigerants (SDG 13)
- Moving to third-party certified sustainable seafood sources (SDG 14)
- Becoming the largest corporate purchaser of renewable energy in 2020 (SDG 7)
- Significant reductions in Scope 1 and 2 emissions against a baseline within the decade (SDG 13)
- Partnering with UNICEF to provide digital learning platforms in eleven third-world countries (SDG 4)

- Helped 45 million people gain critical digital skills needed in today's economy (SDG 8)
- Developed an open-source software toolkit to allow external verification of election tallies (SDG 16)
- Operating rooftop solar farms on a large number of retail stores (SDG 7)
- Donating significant amounts to community organizations working to reduce social equity or to veterans causes (SDGs 10, 11)
- Cut electrical use by nearly half in their stores over the last decade (SDG 13)
- Reduced "carbon intensity" (company carbon emissions per data carried in company networks) by more than half in three years
- Running engineering-based courses for nearly 3500 school children at 65 schools in the UK (SDG 4)
- Purchasing billions of dollars per year of goods and services from minority- and womenowned businesses (SDG 8)
- Run more than 100 sites with true zero waste to landfill status (SDG 12)
- Partnering with environmental organizations to protect and conserve watersheds and ecosystems in South America (SDGs 6, 13, 15)

There are many more examples. A small group (8%) use a subset of the SDGs but do not give convincing evidence that they are being used in a real way. This does not mean they are not being used, but rather that the websites do not reflect this. To the extent they are not being used meaningfully, this could count as greenwashing. Another small group (12%) only mention the SDGs vaguely. The companies that mentioned all 17 SDGs were all in this category because they did not give evidence that they are being used. This category should be seen as greenwashing. Finally, 28% do not mention the SDGs at all. Figure 2 shows the split into the four categories.

Figure 2: Quality of Mention of SDGs

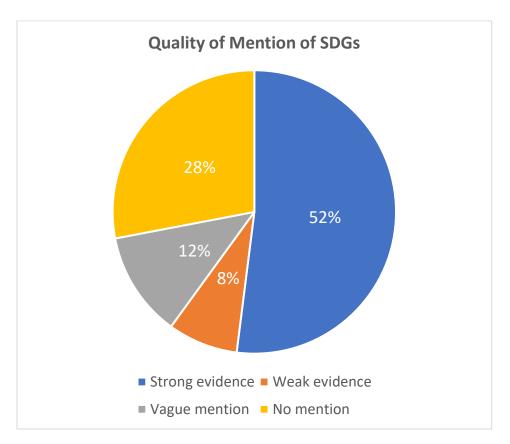


Figure 3 shows the frequency of use of the SDGs, sorted from most frequently used to least. In a strange observation, the decrease in usage from the most to least popular is reasonably linear, although it is not clear what this implies.

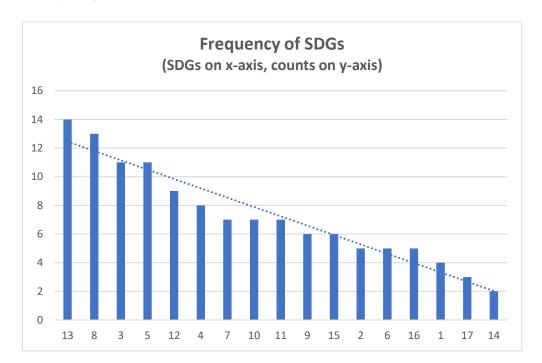


Figure 3: Frequency of Use of SDGs

It is useful to consider why some SDGs are being used by companies more than others. We note that the least frequently used are normally not within the scope of a business, but rather more government domains. For example, those in the lowest half dozen are 2 Zero Hunger, 6 Clean Water and Sanitation, 16 Peace, Justice, and Strong Institutions, 1 No Poverty, 17 Partnerships for the Goals, and 14 Life Below Water, which are to a great extent not typically direct corporate concerns. There could be exceptions though, for example companies that fish the oceans for the seafood they sell. Nevertheless, these half-dozen SDGs will generally be the concern of governments around the world. On the other hand, the most frequently used SDGs include 13 Climate Action, 8 Decent Work and Economic Growth, 3 Good Health and Well-Being, 5 Gender Equality, and 12 Responsible Consumption and Production. All of these are clearly related to companies, which have large carbon footprints (e.g., from energy use), hire people and need to deal with gender equality (e.g., in the context of pay and promotions), quality of jobs, the wellbeing of employees who might not be getting as much exercise or are not eating as well as they should. Companies that produce goods would naturally be concerned about consumption. It seems unsurprising that SDG 13 is the most common concern for companies, given their carbon footprint due to historical levels of energy use.

Reporting Structures and External Programs

Table 5 shows the distribution of the use of the main reporting structures and external sustainability programs. The table is sorted by the number of these programs/structures used. Eight of the 25 companies use all six, with a further five companies using five of the six. Figure 4 shows the most popular reporting structures (SASB) and next most popular (TCFD) have 20 and 19 companies using them, respectively. This isn't surprising given both focus on financial

reporting – TCFD from the climate perspective. SASB from the broader ESG perspective. These are both immediately relevant to today's corporations. GRI's focus is on the even broader sustainable development perspective which often goes beyond corporations' natural field of view. That said, both GRI and CDP (focusing on disclosure of carbon footprint) were both used by 16 companies, so not far behind the other two. The SBTi and UNGC had 14 and 11 companies using them. These programs are meant to motivate sustainability thought and the use of objectively defensible targets for sustainability-relevant actions and goals. As such, one might expect at least the UNGC to be on the periphery of a company's focus, especially if the company is already well focused on sustainability. The SBTi program should stay relevant as companies continue to set new targets in the future. Nevertheless, just over half the companies mention it. Only two companies don't use any of the six, with five companies using just 1-2 of them. This represents just over a quarter of the companies. For those that only use SASB (two of the five in the 1-2 category), it could conceivably be because they feel the broader ESG focus of SASB makes the narrower climate focus of TCFD redundant, as climate is part of ESG too. One of the two companies that don't use any of these is a holding company that does not have a specific sustainability site at the corporate level. It is possible that this company's subsidiaries do use some of them, but their websites were not investigated as they are further down in the F100.

Table 5: Use of Programs and Reporting Structures, Grouped from Most to Least

F100	MSCI GICS (Industry)	SASB	GRI	TCFD	CDP	UNGC	SBTi	Sum
4	Healthcare	Х	Х	Х	Х	Х	Х	6
7	Healthcare	Х	Х	Х	Х	Х	Х	6
11	Communication Services	Х	Х	Х	Х	Х	Х	6
15	Technology	Х	Х	Х	Х	Х	Х	6
20	Communication Services	Х	Х	Х	Х	Х	Х	6
21	Consumer Discretionary	Х	Х	Х	Х	Х	Х	6
22	Consumer Discretionary	Х	Х	Х	Х	Х	Х	6
23	Healthcare	Х	Х	Х	Х	Х	Х	6
1	Consumer Staples	Х	Х	Х	Х		Х	5
8	Healthcare	Х	Х	Х	Х		Х	5
13	Healthcare	Х	Х	Х	Х	Х		5
16	Consumer Staples	Х	Х	Х	Х	Х		5
18	Consumer Discretionary	Х	Х	Х	Х		Х	5
14	Healthcare	Х	Х	Х			Х	4
17	Consumer Staples	Х	Х	Х	Х			4
2	Consumer Discretionary	Х		Х			Х	3
19	Financials	Х	Х	Х				3
24	Healthcare	Х		Х		Х		3
3	Technology			Х			Х	2
5	Healthcare				Х			1
9	Communication Services				Х			1
12	Consumer Staples	Х						1
25	Financials	Х						1
6	Financials							0
10	Energy							0
	Totals	20	16	19	16	11	14	

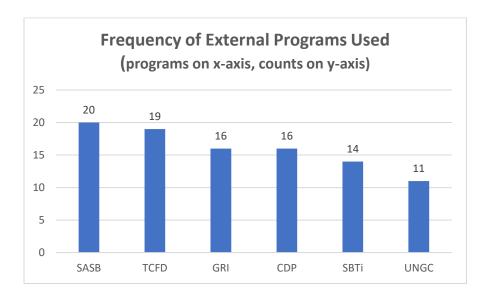


Figure 4: Totals of Use per Reporting Structure and Program

Value of the Paper: Conclusions and Implications

In 2017 companies self-reported their use of the UN Sustainable Development Goals. This study, which is a neutral inspection of companies' websites, shows that the use of the SDGs is inconsistent among the top 25 Fortune 100 companies. Ten of companies (40%) do not talk about the SDGs at all or are so vague about them that their mention could be seen as greenwashing. Most of the rest of the companies (just above 50% of the 25) appear to take the SDGs seriously and give detailed and credible evidence of this on their websites. There is significant variation in the popularity of the SDGs and the numbers of the SDGs used by the companies that do use them seriously. This suggests that the companies that do use them seriously have put quality thought into which ones they will focus on, rather than just following some sort of trend (potentially within their industry group). There is not an obvious pattern in industry groups. Overall, it cannot be said that the higher the Fortune 100 ranking (the lower F100 numbers), the better the usage of the SDGs. If anything, the usage gets stronger in the (roughly) last third of the companies (the higher F100 numbers).

For the reporting structures and external programs the picture is different. There is more consistency in the use of the four reporting structures (SASB, TCFD, GRI, CDP), with 60-80% of the companies using them, and roughly 40-60% of the companies using the two external programs (UNGC, SBTi). There are just a handful of companies that use a low number of these six programs/structures (0-2 of them), with just over half the companies using essentially all of them (5-6 of them).

While individual companies can have various motivations for connecting their strategies to the SDGs, it is clear that investors (and even consumers now) increasingly require this of companies. As more companies meaningfully adopt the SDGs into their cultures, those companies who remain unconnected to the SDGs will likely stand out for this more visibly with today's internet-

savvy investors and consumers. For this reason alone, companies who are not using the SDGs in a meaningful way should consider changing this. Beyond this public and investor relations motivation, adopting the SDGs into company culture is the right thing to do, as confirmed by scientific consensus and the UNDP Human Development Report 2020 (UNDP, 2020).

Limitations

This assessment is based only on the information made public on the company websites. It is possible that companies are doing more but have not communicated it effectively on their sites. However, given the increasing need for public transparency, and strong recommendations regarding documentation and communication of corporate sustainability efforts, it is likely that companies that are doing well are reporting their efforts.

Additionally, most of the assessments made in the study are categorical and therefore necessarily subjective. Since one person made the assessments, it is felt that they were consistent across the companies. The process used was the same for each company, and the company materials were thoroughly reviewed. That said, the two topics assessed in detail in this paper did have countable variables (numbers of SDGs and numbers of programs/structures mentioned), although the quality scoring of SDG usage has potential subjectivity in it.

References

- Anwar, Y. and El-Bassiouny, N., (2020). Marketing and the sustainable development goals (sdgs): a review and research agenda. The future of the UN sustainable development goals, pp.187-207.
- Barrese, J., Phillips, C. and Shoaf, V., (2020). Why do US public companies continue to join the UN global compact: ethics or economics?. International Studies of Management & Organization, 50(3), pp.209-231.
- CDP, (n.d.). Retrieved 31 March 2022 from https://www.cdp.net/en
- Leal Filho, W., Wolf, F., Lange Salvia, A., Beynaghi, A., Shulla, K., Kovaleva, M. and Vasconcelos, C.R., (2020). Heading towards an unsustainable world: some of the implications of not achieving the SDGs. Discover Sustainability, 1(1), pp.1-11.
- Gehringer, T., (2020). Corporate foundations as partnership brokers in supporting the United Nations' sustainable development goals (SDGs). Sustainability, 12(18), p.7820.
- GRI, (n.d.). Retrieved 31 March 2022 from https://www.globalreporting.org/
- Grober, U., (1999). Der Erfinder der Nachhaltigkeit. *Die Zeit*, Nr. 48/ 25.11.1999, P. 98. Retrieved 31 March 2022 from http://www.agenda21-treffpunkt.de/archiv/99/pr/zei4898nachhalt.htm

- Haack, P., Martignoni, D. and Schoeneborn, D., (2021). A bait-and-switch model of corporate social responsibility. Academy of Management Review, 46(3), pp.440-464.
- Hoffman, A., (2018). The Next Phase of Business Sustainability. *Stanford Social Innovation Review*. Retrieved 31 March 2022 from https://ssir.org/articles/entry/the_next_phase_of_business_sustainability#
- Izzo, M.F., Ciaburri, M. and Tiscini, R., (2020). The challenge of sustainable development goal reporting: The first evidence from italian listed companies. Sustainability, 12(8), p.3494.
- Jimenez, D., Franco, I.B. and Smith, T., (2021). A review of corporate purpose: An approach to actioning the Sustainable Development Goals (SDGs). Sustainability, 13(7), p.3899.
- Kücükgül, E., Cerin, P. and Liu, Y., (2022). Enhancing the value of corporate sustainability: An approach for aligning multiple SDGs guides on reporting. Journal of Cleaner Production, 333, p.130005.
- Martin, C., Chasen, C., (2018). Investors Are Increasingly Calling Out Corporate Greenwashing. Retrieved 31 March 2022 from https://www.bnnbloomberg.ca/investors-are-increasingly-calling-out-corporate-greenwashing-1.1125826
- Mattera, M. and Ruiz-Morales, C.A., (2020). UNGC principles and SDGs: perception and business implementation. Marketing Intelligence & Planning.
- SASB, (n.d.). Retrieved 31 March 2022 from https://www.sasb.org/
- SBTI, (n.d.). Retrieved 31 March 2022 from https://sciencebasedtargets.org/
- SEC, (2021). SEC Announces Enforcement Task Force Focused on Climate and ESG Issues. Retrieved 31 March 2022 from https://www.sec.gov/news/press-release/2021-42
- TCFD, (n.d.). Retrieved 31 March 2022 from https://www.fsb-tcfd.org/
- Temmink, C. and Flynn, D., (2021). An environmental, social and governance programme for corporate real estate and facilities departments. Corporate Real Estate Journal, 10(3), pp.295-303.
- UN, (1987). Our Common Future. Retrieved 31 March 2022 from https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf
- UN, (2015). Sustainable Development Goals kick off with start of new year. Retrieved 31 March 2022 from https://www.un.org/sustainabledevelopment/blog/2015/12/sustainabledevelopment-goals-kick-off-with-start-of-new-year/

- UNDP, (2020). Human Development Report 2020. Retrieved 31 March 2022 from https://hdr.undp.org/en/2020-report
- UNGC, (2010). UN Global Compact Management Model. Retrieved 31 March 2022 from https://www.unglobalcompact.org/library/231
- UNGC, (2015). Guide to Corporate Sustainability. United Nations Global Compact. Retrieved 31 March 2022 from https://www.unglobalcompact.org/library/1151
- UNGC, (2017). 2017 United Nations Global Compact Progress Report: Business Solutions to Sustainable Development. Retrieved 31 March 2022 from https://www.unglobalcompact.org/library/5431
- UNGC, (n.d.a). Retrieved 31 March 2022 from https://www.unglobalcompact.org/sdgs/about
- UNGC, (n.d.b). Retrieved 31 March 2022 from https://www.unglobalcompact.org/
- Watson, B., (2016). The troubling evolution of corporate greenwashing. Retrieved 31 March 2022 from https://www.theguardian.com/sustainable-business/2016/aug/20/greenwashing-environmentalism-lies-companies