Opportunities and Challenges of Applying the SDGs to Business

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Abstract

Current efforts to drive business Sustainability are improving but still falling short of the transformational impact needed. This paper explores the potential of the United Nations' Sustainable Development Goals (SDGs) to contribute to improved business Sustainability. Research revealed significant challenges including: a disconnect between the design of the SDGs and the needs of businesses, significant measurement difficulties and an already existing momentum to integrate the SDGs without disrupting the status quo. The big opportunity is that the SDGs are a universally agreed upon definition of Sustainability which fully integrates the "social" side. The specificity and structure of the SDGs also creates the opportunity for accountability based on outcomes and impacts rather than inputs and the development of businesses strategies with the potential for transformation. Work is needed to transform the SDGs themselves into a tool which can usefully contribute to business Sustainability, but the opportunities suggest it will be worthwhile.

Keywords: Sustainable Development Goals; Sustainable Business; Corporate Social Responsibility; Sustainability Science; Sustainability Metrics

Introduction

Businesses around the world have embraced both the rhetoric and the reporting of their progress towards Sustainability. In recent years this has moved beyond anecdotal-filled corporate social responsibility (CSR) reports to more accountable and science-based approaches such as footprinting (Cucek, Klemes, & Kravanja, 2012), life-cycle analysis (Heijungs, Huppes, & Guinée, 2010), and net positive (Hershauer, O'Neill, Lidberg, Vallury, & Lubenow, 2015). Yet, even if combined these efforts are incomplete if not incompatible. This need for a rigorous approach to assessing business Sustainability has contributed to the immediate interest by the private sector in getting involved with the UN's newly launched Sustainable Development Goals (SDGs), but as of yet it is still unclear how and if the SDGs can be applied to businesses. This paper lays out some of the most significant challenges but also finds that the opportunities are great enough that applying the SDGs to business is well worth attempting.

Businesses began to take an interest in Sustainability in the 1990s, focusing principally on improving their own internal resource efficiency (Young & Tilley, 2006). During the 2000s, businesses around the globe began regularly issuing Sustainability reports which slowly moved beyond efficiency. Beyond just reporting on the current impacts, these approaches have helped businesses to both set and make progress towards often ambitious goals. Unfortunately, these reports typically had major shortcoming (Hubbard, 2009). In particular, the reporting clearly had a positive bias, was mostly anecdotal, unaudited by third parties, and generally lacked rigor. In the 2010s businesses responded to these critiques by increasingly adopting third party certifications and other more rigorous analyses of their impacts on Sustainability. More comprehensive and coherent models for business Sustainability have recently been proposed, such as Blended Value and Strongly Sustainable (Upward & Jones, 2015), but are too new to have been deployed widely yet. The SDGs provide a fairly complete framework of environmental, social and economic measures for Sustainability. If they can be translated to businesses they have the potential to be the next step forward.

This research emerged out of a project supported by Dell Giving to explore the question of how the SDGs might be concretely applicable to business. The project itself was bounded by a single SDG--#4 Quality Education--and a single industry—Information and Communication Technologies (ICT). This enabled an in-depth dive to more robustly explore whether and how the SDGs can be applied to business. While the concrete examples in this paper are based on this deeper but narrow exploration, the challenges and opportunities discussed are general and relevant to all sectors and the full range of the SDGs themselves.

The Sustainable Development Goals (SDGs)

Building on the Millennium Development Goals (MDGs) the nations of the world came together in September 2015 to agree on an ambitious global program for human development. The resulting agreement, Agenda 2030, consists of 17 Sustainable Development Goals (SDGs). The SDGs seek to end poverty, protect the planet and ensure prosperity for all. The UN has made a concerted effort to include businesses from the inception and the business community has so far reciprocated the interest. While the enthusiasm and commitment on all sides is commendable, it remains unclear whether an agenda designed specifically to drive public policy can be translated to foster Sustainability among businesses (an age old problem).

The structure of the SDGs has three levels (Figure 1). The Sustainable Development Goals encompass 17 categories that have been deemed essential for global Sustainability, e.g., "Quality Education for all". They are meant to be broad, all-embracing and inspiring. Each of the SDGs has a set of targets that are meant to address the most pressing areas of concern for each SDG. While the targets identify the problems of interest they say nothing about how progress against the targeted problems will be measured. To measure progress, the UN has proposed an initial set of indicators of one or more for each of the 169 targets, currently totaling 230 (http://unstats.un.org/sdgs/iaeg-sdgs/metadata-compilation/).

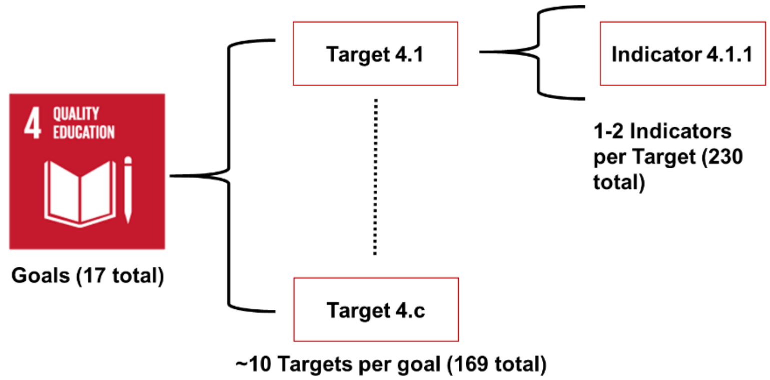

Figure 1 Structure of the SDGs

There are many legitimate critiques and concerns with the SDGs, including those carrying over from the MDGs (see (Hickel, 2016) for example). A focus on the SDG indicators (which underpins the opportunities presented in this paper) also raises issues, as the use of indicators always does (Bell & Morse, 2008). In comparing the proposed SDG indicators with the targets, a typical problem with indicators is immediately apparent, that they are overly narrow. For example, target 4.4 calls for the acquisition of technical and vocational skills but its indicator calls only for measuring a narrow range of (mostly dated) computer skills. Yet for all their flaws, the SDGs represent an inclusive, collaboratively developed, global vision of Sustainability, unlike anything that has ever previously been developed. Agenda 2030 and its Sustainable Development Goals are the common standard with which the world will be operating with for the next dozen plus years.

Challenges

Design

The most obvious challenge businesses face in applying the SDGs is that they were not designed for the private sector at all. While the goals are seen as something that all of society can commit to, progress on achieving the targets and measuring the indicators is something that is done by national governments. This creates a non-trivial challenge of re-interpreting the SDGs for business. The Global Reporting Initiative (GRI), the World Business Council for Sustainable Development (WBCSD) and the UN Global Compact launched an initiative called the SDG Compass (2016) to provide "guidance for companies on how they can align their strategies as well as measure and manage their contribution to the realization of the SDGs." The SDG Compass overcomes the design challenge mostly by avoiding it—proposing that existing business goals and KPIs can be used within an SDG framework. This approach is insufficient and, as I'll discuss later, results mostly in a reshuffling of the status quo.

One critique of the SDGs in general is that they mix together inputs, outputs, outcomes and impacts (W.K. Kellogg, 2004) without clear distinction. Agenda 2030 claims to be striving for outcomes and impacts but, while many targets are ambitiously worded (i.e. outcome-oriented), the indicators proposed to measure them tend to be more conservatively oriented towards inputs and outputs. The inclusion of inputs and outputs is defended on the ground that these targets are seen as necessary intermediaries for achieving other more ambitious outcome- and impact-oriented targets. The input-based targets will be the easiest for a business to impact but the least contributors to transformational Sustainability. As Hubbard (2009) notes, businesses already have a tendency to focus on the inputs of their Sustainability efforts. This problem is particularly acute in the social area with CSR reports full of descriptions of number of volunteer hours or millions of dollar spent.

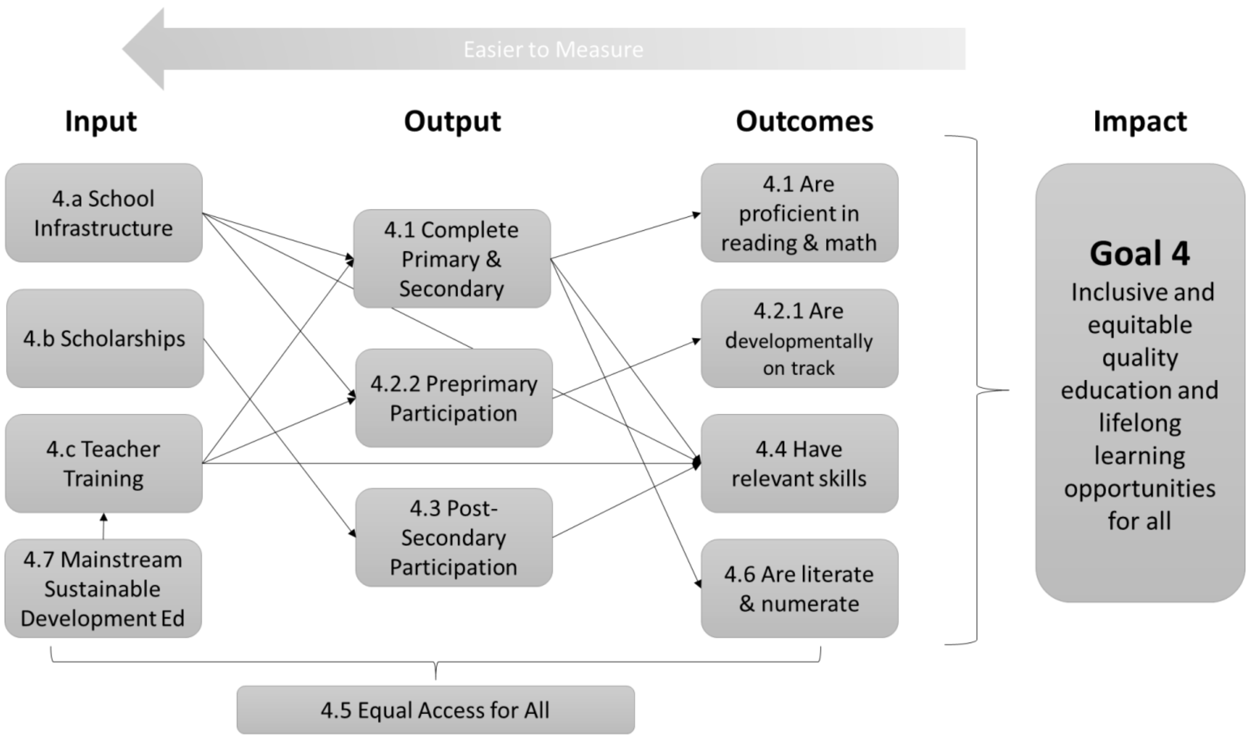

Figure 2 Categorization of SDG 4 Targets with Pathways Shown

Figure 2 illustrates how the targets of just one SDG are a full cross section of inputs, outputs and outcomes. These targets are themselves interconnected by pathways which according to a basic theory of change for education should significantly contribute to the impact sought by SDG 4—Quality Education. But the SDGs are not being presented in this fashion. Instead a hierarchy of goals-targets-indicators is used, as illustrated in figure 1, with all targets being treated as equal for achieving their respective goals. Unfortunately, this encourage businesses (and governments) to pursue the input-type targets, which are the easiest to measure and achieve but also the least meaningful in terms of transformational Sustainability outcomes.

Measurement

In setting the indicators the UN explicitly decided not to consider data availability. The result is that in their current state the indicators range widely from easily measurable right now to those that will require significant data collection infrastructure to be measured in a meaningful way before 2030. Several studies have attempted to measure the status of the SDGs by picking what they determined were representative measurements. Some assessed the goals with a handful of data points (GeSI & Accenture Strategy, 2016; Sachs, Schmidt-Traub, & Durand-Delacre, 2016) while another study looked specifically at 2 targets per SDG (Kroll, 2015).

Overall there is significant variability between the targets and their indicators in terms of the current ability for them to be measured. For the eleven indicators of SDG #4 one was good on all three judging criteria and one was bad on all of them with the rest where somewhere in between. The quality and availability of data should improve over time but this currently mixed bag of measurability is a significant concern. For Sustainability in businesses, transparent data and statistics are essential (Winner, Dickey, & Showalter, 2015).

The indicators are the only data-based part of the SDGs which would enable this mapping from business activities to social impact. Therefore any meaningful application of the SDGs to businesses must focus on the indicators, not just the targets and goals. This is despite the general problem with indicators that they only capture what can be easily measured, not what is most critical for Sustainability. For businesses past holistic proposals for assessing their Sustainability have faltered in large part due to a lack of measurability and this tension will persist with the SDGs.

A final measurement challenge for applying the SDGs to business is that the SDGs are being measured in terms of national progress. Large businesses today are transnational while smaller ones may be only sub-national. In order to have meaning in terms of a business's contribution to the achievement of the SDGs the businesses impact will need to be quantified for each national unit it touches. This is a sharp contrast to current CSR reporting approaches which typically give global totals combined with local anecdotes. Fortunately, this challenge should be fairly straightforward to overcome and itself presents opportunities.

The Status Quo: the SDGs as a Reshuffle

As Clifton (2012) and others have pointed out, the current trajectories of business Sustainability are insufficient and transformational approaches are needed. Unfortunately, the proposals that have so far been published on applying the SDGs to business would mostly perpetuate the status quo. In brief they propose reorganizing current Sustainability related metrics and activities that the business is already reporting on and fitting them into specific goals and targets of Agenda 2030. These approaches do not require that the business show a trail of evidence for how their activities and metrics lead to specific changes in the official SDG indicators.

Two widely circulated reports provide good examples of how the status quo thinking on applying the SDGs to businesses is in danger of being nothing more than a reshuffle. In the Global eSustainbility

Initiative (GeSI) and Accenture Strategy joint report: #SystemTransformation, the authors focused on describing how potential profit-making activities could be categorized so as to fit into the Sustainable Development Goals and targets (GeSI & Accenture Strategy, 2016). The potential connection of these solutions to specific targets is explored briefly but no effort is made to illustrate even a hypothetical pathway for how the solutions would lead to meaningful change against the SDG targets, let alone providing evidence of such pathways; the indicators themselves are ignored completely. The SDG Compass (previously mentioned) provides an online guide (as well as consulting service) to facilitate the matching of currently existing measures with SDG targets. For example, it suggests that the Global Reporting Initiative indicator "Average hours of training per year per employee by gender, and by employee category" be used by businesses to measure their contribution to SDG Target 4.3. Under this approach an ITC company providing training for its (college educated) employees to learn a new programming language would credit this effort towards the SDGs.

Reshuffling to fit the SDGs itself does not move a business beyond its status quo progress, but it can be a good first step towards something bigger. This type reorganization is something that any business already conducting Sustainability reporting can easily take on and complete in few months. Beginning to think of their business in terms of the SDGs instead of just pollution and recycling would be a significant step forward and prepare them to advance to a more transformative application of the SDGs down the road. Ultimately though, if the embrace of the SDGs by business leads only to a reshuffle then all that has been achieved is to turn greenwashing into sustainawashing

Opportunities

Social Sustainability

As environmental concerns among the business community broadened into Sustainability the reporting and metrics lagged behind. Hubbard found that "although there seems to be widespread acceptance in the business world that firms have social responsibilities, a commonly accepted standard of measuring social performance is a long way off (Hubbard, 2009, p. 185)." The focus continues to be on environmental issues (see (De Marchi, Di Maria, & Micelli, 2013) for example), at the expense of "social" Sustainability issues (e.g., social, cultural and other more normative dimensions). Sustainability is predicated on the principal that transformational change requires efforts that interlink economic, environmental and social aspects. Without finding a way to bring the social aspects in Sustainability in the business community can't live up to its name. This year Missimer and colleagues (2017a, 2017b) have proposed science-based social Sustainability principals for enterprises, a key step forward.

Agenda 2030 provides another opportunity to bridge the gap in "social" Sustainability, perhaps in concert with the efforts of Missimer et al. and others. Many of the SDGs and their targets cannot be cleaning categorized as just "social" and the potential interactions between them are just beginning to be systematically studied (Nilsson, Griggs, Visbeck, & Ringler, 2016). Yet, unlike most current business metrics, the social side is dominant within Agenda 2030; being primary for at least half of the Sustainable Development Goals—No Poverty, Quality Education and Peace, Justice and Strong Institutions to name just a few. The key opportunity that the SDGs present to the business community is an independent and global consensus about what the most important “social” Sustainability indicators are by which they as businesses should be measuring their progress.

Accountability

The SDGs have been designed for accountability, with specific indicators to measure progress. Unfortunately the design was explicitly for government accountability, but with work it is possible to use the SDGs to create real accountability for “social” Sustainability in a way that has already been done for some of the “environmental” aspects of Sustainability, such as greenhouse gas emissions. This would be done by creating an evidence based map linking the most impactful activities of a business to the specific SDG indicators in specific countries so as to enable calculation of the contribution of the business to progress on the SDGs. There are very significant exogenous challenges for any business attempting SDG accountability: 1) a lack of evidence to quantify the responsibility for social change (i.e. improvement in SDG indicators), 2) a lack of data on the indicators selected by the UN and 3) issues with the targets and indicators themselves.

The primary hurdle for converting the SDGs from accountability for governments to accountability to businesses is developing theories of change particular to each business. This would involve first identifying the activities and impacts of the businesses that are largest. Second would be to categorize and contextualize the targets/indicators most relevant to the business impacts (as in Figure 2). The biggest issue to resolve is identifying the most important leverage points for the targets independently of the business activities. Here I define leverage points as the critical issues, barriers and problems which are holding countries back from doing well on a particular target/indicator. These leverage points are the mediators which create an evidentiary pathway between the business and its impact on the SDGs. The critical opportunity of the SDGs is that their application should push businesses to move away from reporting on inputs towards “social” Sustainability and quantifiable and verifiable outcomes and impacts of their most important activities.

Strategic

The SDGs are an opportunity for businesses to strategically contribute to transformational Sustainability. This is more than just using the SDGs as one of the key criteria for planning future business activities along with standard metrics such as returns on investment. A business can look to maximize their impact on Sustainability by strategically selecting SDG targets and countries as their focus. This can be done in three basic steps. First, evaluate the targets and indicators based on three criteria: 1. Is there good data available for it; 2. How relevant are the business’s activity; and 3. What magnitude of impact could the businesses activities theoretically have on the target and indicator. That should yield a short list of high potential SDG targets. The next step is to select high opportunity countries. For businesses this can be approximated by identifying those countries with low achievement of an SDG target but good conditions for one’s particular business activities and combining that list with the localities where the business already operates or is looking to expand. Finally, having selected targets and countries, the leverage points and other research can be used to design the business activities for maximum impact on the measured SDG indicator.

A good example of this would be an online education software business is looking to expand globally so is seeks to identify the highest opportunity countries for impact on SDG 4.3. They chose to focus on this target because adequate data is available, ICT is highly relevant to higher education and online education theoretically has no ceiling on the number of students which could be enrolled (magnitude). For online higher education internet access is crucial. Therefore, high opportunity countries are those with relatively high internet access but low higher education enrollment. These countries would have abundant potential enrollment targets. This can easily be calculated with publicly available data, the results of which are mapped in figure 3.

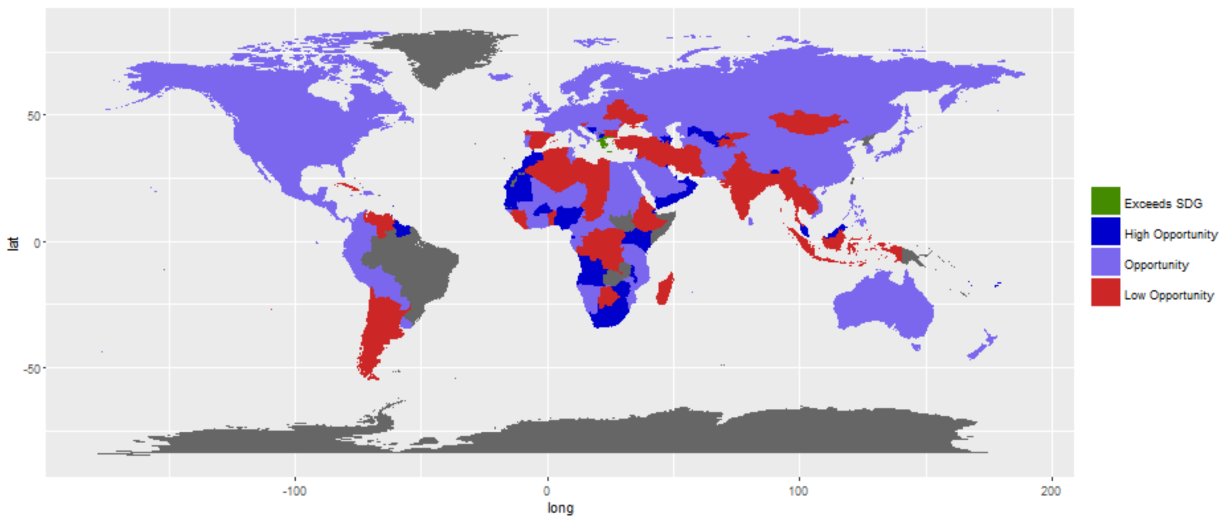

Figure 3 Map of High Opportunity Countries for ICT to Improve Higher Education

A business seeking a more transformative impact could focus in on the “hard” SDG targets and the data or infrastructure poor regions of the world. These are the areas where transformative change is most needed. The other key issue for businesses looking to strategically transform for Sustainability by applying the SDGs is to look at all of them systematically and adopt some variation of the no trade-off rules as elaborated by Gibson (Gibson, 2006). These include maximizing net gains, avoidance of significant adverse effects, protection of the future, explicit justification and a transparent process.

Conclusion

The SDGs present an opportunity for businesses to take the next step forward in contributing to Sustainability, particularly on the “social” side. There are of course, significant challenges, in particular with regards to data and measurement. The more serious challenge though will be ensuring that the SDGs are not just used to reshuffle the status quo, but actually leveraged as an opportunity to create change. But the responsibility for overcoming these challenges does not solely lie with the business community. A lot more information needs to be collected around the specific SDG targets and their indicators, for example trying to quantify the impact of education for Sustainability (SDG Target #4.7) (Redman & Redman, 2017). Sustainability science has a lot to offer in all aspects of this (Orecchini, Valitutti, & Vitali, 2012; Schaltegger, Beckmann, & Hansen, 2013). Public-private, sector specific, partnerships need to be forged which can co-develop detailed approaches such as have been done with certifying forest and fishing products and many other “environmental” Sustainability issues.

These types of collaborative efforts will create the space where businesses can become honestly accountable for the impacts they are having on the achievement of Agenda 2030 in general and specific Sustainable Development Goals in particular. Facilitating easy wins on the SDGs, while insufficient overall, is key to long term success as Papagiannakis, Voudouris, and Lioukas (2014) showed that positive feedback on Sustainability initiatives leads to businesses taking on more ambitious goals the next time. More importantly though, the SDGs can and should be framed as opportunities for business (Hajer et al., 2015). Their structure itself creates the opportunity for businesses to do long term strategic planning which seeks to maximize their impact. Ultimately, the Sustainable Development Goals at long last present the opportunity to bring the social side up to par in the business world with its two siblings.

References

Bell, S., & Morse, S. (2008). *Sustainability Indicators: Measuring the Immeasurable?* Earthscan. Retrieved from https://books.google.com/books?id=6DOC13cd9c0C

Clifton, D. (2012). Sustainable business: Are we heading in the right direction? *Sustainability*, *4*(4), 586–603. https://doi.org/10.3390/su4040586

Cucek, L., Klemes, J. J., & Kravanja, Z. (2012). A review of footprint analysis tools for monitoring impacts on sustainability. *Journal of Cleaner Production*, *34*, 9–20. https://doi.org/10.1016/j.jclepro.2012.02.036

De Marchi, V., Di Maria, E., & Micelli, S. (2013). Environmental Strategies, Upgrading and Competitive Advantage in Global Value Chains. *Business Strategy and the Environment*, *22*(1), 62–72. https://doi.org/10.1002/bse.1738

GeSI, & Accenture Strategy. (2016). *# SystemTransformation: how digital solutions will drive progress towards the sustainable development goals*.

Gibson, R. B. (2006). Sustainability assessment: basic components of a practical approach. *Impact Assessment and Project Appraisal*, *24*(3), 170–182. Retrieved from http://www.ontarioenergyboard.ca/documents/cases/EB-2006-0207/commemts/pembina_attachment_051006.pdf

Global Reporting Initiative, United Nations Global Compact, & WBCSD. (2016). *SDG Compass: The guide for business action on the SDGs*. Retrieved from http://sdgcompass.org/wp-content/uploads/2016/05/019104_SDG_Compass_Guide_2015_v29.pdf%5Cn17goals.org

Hajer, M., Nilsson, M., Raworth, K., Bakker, P., Berkhout, F., de Boer, Y., … Kok, M. (2015). Beyond cockpit-ism: Four insights to enhance the transformative potential of the sustainable development goals. *Sustainability (Switzerland)*, *7*(2), 1651–1660. https://doi.org/10.3390/su7021651

Heijungs, R., Huppes, G., & Guinée, J. B. (2010). Life cycle assessment and sustainability analysis of products, materials and technologies. Toward a scientific framework for sustainability life cycle analysis. *Polymer Degradation and Stability*, *95*(3), 422–428. https://doi.org/10.1016/j.polymdegradstab.2009.11.010

Hershauer, J., O'Neill, D., Lidberg, S., Vallury, S., & Lubenow, C. (2015). *The Net Positive Valuation of Information and Communication Technology in Online Education*.

Hickel, J. (2016). The true extent of global poverty and hunger: Questioning the good news narrative of the Millennium Development Goals. *Third World Quarterly*, *6597*(April), 1–19. https://doi.org/10.1080/01436597.2015.1109439

Hubbard, G. (2009). Measuring organizational performance: Beyond the triple bottom line. *Business Strategy and the Environment*, *18*(December 2006), 177–191. https://doi.org/Doi 10.1002/Bse.564

Kroll, C. (2015). *Sustainable Development Goals: Are the rich countries ready?* Retrieved from https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/Studie_NW_Sustainable-Development-Goals_Are-the-rich-countries-ready_2015.pdf

Missimer, M., Robert, K. H., & Broman, G. (2017a). A strategic approach to social sustainability - Part 1: a principle-based definition. *Journal of Cleaner Production*, *140*, 32–41. https://doi.org/10.1016/j.jclepro.2016.04.059

Missimer, M., Robert, K. H., & Broman, G. (2017b). A strategic approach to social sustainability - Part 2: a principle-based definition. *Journal of Cleaner Production*, *140*, 42–52. https://doi.org/10.1016/j.jclepro.2016.04.059

Nilsson, M., Griggs, D., Visbeck, M., & Ringler, C. (2016). A draft framework for understanding SDG interactions, (June).

Orecchini, F., Valitutti, V., & Vitali, G. (2012). Industry and academia for a transition towards sustainability: Advancing sustainability science through university-business collaborations. *Sustainability Science*, *7*(SUPPL. 1), 57–73. https://doi.org/10.1007/s11625-011-0151-3

Papagiannakis, G., Voudouris, I., & Lioukas, S. (2014). The road to sustainability: Exploring the process of corporate environmental strategy over time. *Business Strategy and the Environment*, *23*(4), 254–271. https://doi.org/10.1002/bse.1781

Redman, A., & Redman, E. (2016). Is Subjective Knowledge the Key to Fostering Sustainable Behavior? Mixed Evidence from an Education Intervention in Mexico. *Education Sciences*, *7*(1), 4. MDPI AG. Retrieved from http://dx.doi.org/10.3390/educsci7010004

Sachs, J. D., Schmidt-Traub, G., & Durand-Delacre, D. (2016). *Preliminary Sustainable Development Goal (SDG) Index and Dashboard*. Retrieved from http://unsdsn.org/resources/publications/sdg-index/

Schaltegger, S., Beckmann, M., & Hansen, E. G. (2013). Transdisciplinarity in Corporate Sustainability: Mapping the Field. *Business Strategy and the Environment*, *22*(4), 219–229. https://doi.org/10.1002/bse.1772

Upward, A., & Jones, P. (2015). An Ontology for Strongly Sustainable Business Models: Defining an Enterprise Framework Compatible With Natural and Social Science. *Organization & Environment*, 1–27. https://doi.org/10.1177/1086026615592933

W.K. Kellogg. (2004). *Using Logic Models to Bring Together Planning, Evaluation and Action*.

Winner, W., Dickey, D., & Showalter, S. (2015). Sustainability and Metrics: Use of Statistics and Independent Auditing. *Sustainability: The Journal of Record*, *8*(2), 54–60. https://doi.org/10.1089/SUS.2015.0019

Young, W., & Tilley, F. (2006). Can businesses move beyond efficiency? The shift toward effectiveness and equity in the corporate sustainability debate. *Business Strategy and the Environment*, *15*(6), 402–415. https://doi.org/10.1002/bse.510