

SUSTAINABLE BUSINESS SYSTEMS



1. Introduction

This critical essay applies a systems perspective to discuss the concept of sustainable business (Ben-Eli, 2018). A systems perspective is the view that long-term sustainability can only be achieved if the whole system of business operations is considered (Meidl, 2021), while also highlighting that the change required in current business practices is not merely incremental, but wholesale. Moreover, considering sustainability from a systems perspective recognises the challenge businesses face in attempting to simultaneously improve outcomes of a social, environmental, and financial nature (Epstein, Buhovac and Yuthas, 2010). The critical essay, furthermore, presents a view of current thinking on how the required change can be both accomplished and mersued and present a real-world example of the complexity associated with sustainable systems a system a real-world example of the complexity offering what are considered environmentally sustainable products.

2. Key concepts of sustainability

Before discussing the complexities associated sustainable systems, it is first important to understand what is meant by the terms 'sustainability' and 'system'. Rather than explaining this is detail, it is perhaps simplest to refer to 2 existing definitions: Sustainability: '...meeting the needs of the present without compromising the needs of future generations to meet their own needs'. (WCED, 1987, pp. 41).
System: '...a set of things working together as parts of a mechanism or an

interconnecting network; a complex whole.' (Oxford Languages, 2021)

2.1 Sustainability

Although at first glance the above definition of sustainability seems quite straightforward, one of the major issues with the topic of sustainability is the myriad or concepts and terminology that have become attached to it. For example, these definitions are often interwoven with the decarbonisation, energy transition and waste minimisation narrative (Miedl, 2021). The interwoven nature of definitions has ed Sne 5 sugges the term entry of te

'sustainability' as being one of the most misconstrued descriptors in modern business (Miedl, 2021; Blowfield, 2013). This complexity makes it difficult for businesses, people, and researchers to understand what sustainability really means and how, in practice, people and organisations can contribute towards creating a more sustainable future (Lankoski, 2016). Even competing organisations in the same sector often have different targets and goals for sustainability, reporting on different challenges and outcomes as indicators of their success in developing sustainable practices. However, the aim of this critical essay is not to address how each company defines its activities in relation to sustainability, but to provide clarity around some of the key concepts of this topic and how they pertain to business in the real world (Blowfield and Murray, 2014).

2.2 Sustainable systems

Firstly, it is worth clarifying an important point; sustainability is not a property of something. That is, things in isolation are not sustainable (for example solar panels, wind turbines, electric vehicles). Sustainability is a quality of a system (Meidl, 2021). A system, as previously defined is a collection of parts working together in an interconnecting way to create a complex whole (Oxford Languages, 2021; Ben-Eli, 2018). Meaning sustainability can only be achieved by understanding, quantifyin rsks and unintended consequences of business operations across an entire product lifecycle and operating system. This, in other words, means considering a wide rang by understanding and mitigating system impacts can a product, policy, action, or service be deemed sustainable. From a business perspective this can be defined as a *...business* approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental, and social developments' (Blowfield, 2013, p. 7). This means that organisations, if they are to be deemed sustainable, need to do much more than just focus on individual parts or an end product, for example an Electric Vehicle... a topic discussed later in this critical essay.

2.3 Sustainable Development

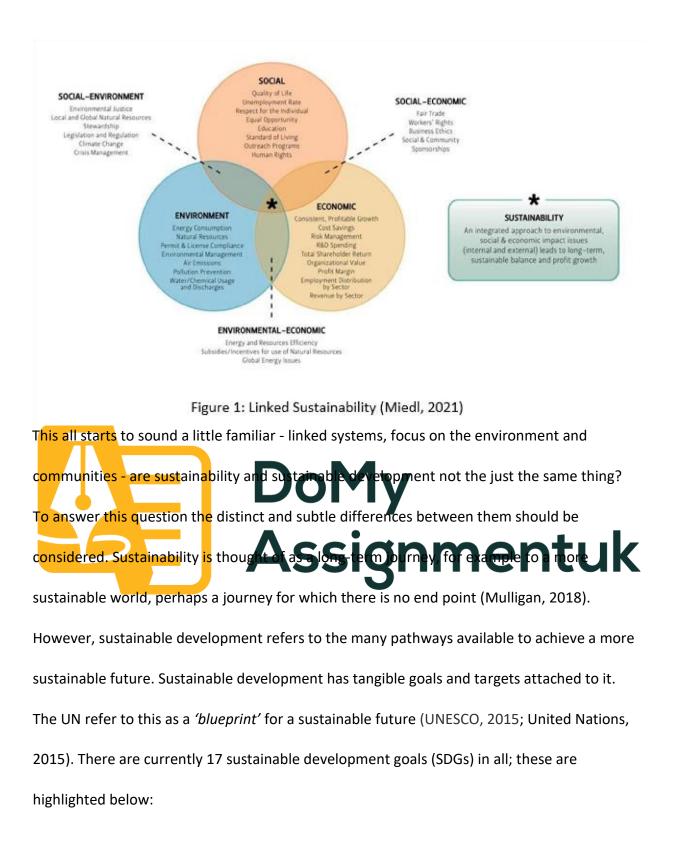
Developing and delivering sustainable business practices is a challenge not to be taken lightly (WBCSD, 2020). In modern businesses a short-term focus on profit is often priority number one. Even companies which undertake relatively long-term horizon planning are still tied to short-term revenue generation; the problem being, there is no short-term fix to sustainability (Lankoski, 2016). The positive news is, sustainability is a journey which society has already embarked upon (Mullian, 2000). My Assignmentukk

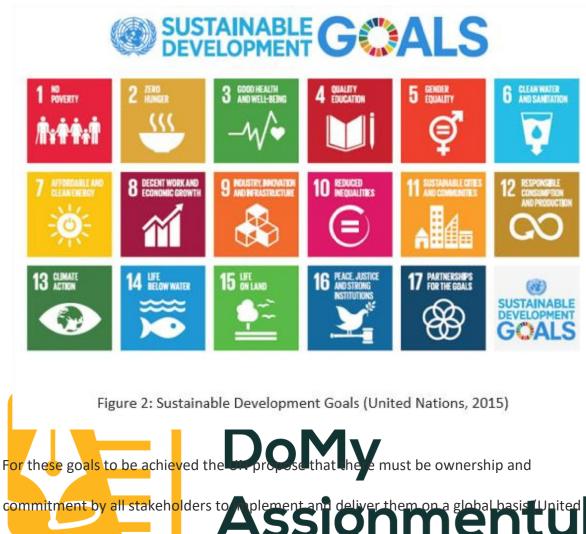
While avoiding providing the full history to date on the evolution of the concept of sustainable development, it is important to provide some context around its origins. A seminal event in the push for a sustainable future was the 1987 report by the United

Nations titled 'Our Common Future' (also known as the Brundtland Report). This report adopted what is often the most quoted definition of sustainability which, as referenced earlier, proposes that sustainability is *'...meeting the needs of the present without compromising the needs of future generations to meet their own needs'* (WCED, 1987, pp. 41). The Brundtland Report also defined four causal links between the economy, society, and the environment (Baker, 2016). These are (WCED, 1987, pp. 37-40):

- 1. 'Environmental stresses are linked one to another'.
- 2. Environmental stresses and patterns of economic development are linked one to another.'
- 3. 'Environmental and economic problems are linked to many social and political factors.'
- 4. 'These systemic features operate not merely within but also between nations.'

Through this definition and its causal links, The Brundtland Report evolved and solidified the concept of sustainable development. Aparolitication and about '...a future in which environmental, societal, and economic considerations are balanced in the pursuit of an improved quality of life' UNESCO, A Sight Concept Contact Concept development as a dynamic concept, a journey that may not have an end state, an ongoing process that will change over time. The key to this is viewing sustainability as linked systems where impact is achieved and sustainable development stimulated at the intersect between the economy, society, and the environment. This is illustrated below:





Nations, 2015). For businesses this often means red in ing their view of stakeholders,

focussing on generating value not only for shareholders, but for multiple stakeholders

including society and the environment (Bocken, Rana and Short, 2014).

3. Critical perspectives on sustainable business

Large private sector corporations are considered critical contributors to the SDGs (Mahajan and Bose, 2018). Without corporate resources such as technological capability, sphere of

influence and the ability to commercialise opportunities associated with sustainable development, society will fail to achieve the SDGs (Maletič, Maletič and Gomišček, 2016).

There are also long-term strategic opportunities and benefits for organisations in this space. It has been suggested that by focussing on only four aspects of the SDGs, health and wellbeing, responsible production and consumption, sustainable cities and clean energy, the private sector can open market opportunities worth up to US\$12 trillion (Mahajan and Bose, 2018). However, the idea of large corporations as the solution to what is perceived a planetary crisis is not without its criticism. As self-interested parties, there is significant concern that businesses will seek to define sustainability and shape the sustainable development debate in their favour. For example, business often talks about sustainability as eco-efficiency, a concept which is walue while reducing environmental impact (Huppes and Ishikawa, 2005). However, critics argue that eco-efficiency merely creates an illusion of sustainable d fei supporting the continued growth of principle business (Isil and Hernke, 2017). To generate the system level changes required, short term incremental improvements are insufficient. Meaningful change requires vast improvements and long-term thinking being applied to business strategy and practices (Isil and Hernke, 2017; Mahajan and Bose, 2018; Huppes and Ishikawa, 2005). However, what should not be underestimated is the challenge businesses face in managing the paradox of simultaneously improving social, environmental, and financial outcomes (Epstein, Buhovac and Yuthas, 2010). Nevertheless, businesses are already rising to this challenge. It was suggested in 2018 that as many as 90 per cent of

corporate CEOs regarded sustainability as important to their company's success (Hoffman,

2018), requiring them to develop sustainability strategies and market sustainable products and services. Ultimately, ensuring within their business they promote *'…sustainable business thinking*' (Bocken, Rana and Short, 2014, pp. 68) that integrates the three dimensions of sustainable development (economic, social, environment) in a way that creates equal value for all stakeholders, including society and the environment.

In reality, sustainable business thinking alone is not enough to make the changes required to achieve long-term sustainability. Many researchers believe problems such as climate change and pollution are getting worse; that integrating the sustainability lexicon into strategies of large corporations alone will not reverse the issues the world is facing (Mulligan, 2018; Blowfield, 2013). Ultimately, sustainable practices medito be embedded into all business practices, with some suggesting sustainable business models as the emerging vehicle to enable such change (Lüdeke-Freund and Dembek 2017).

3.1 Sustainable business model innovation

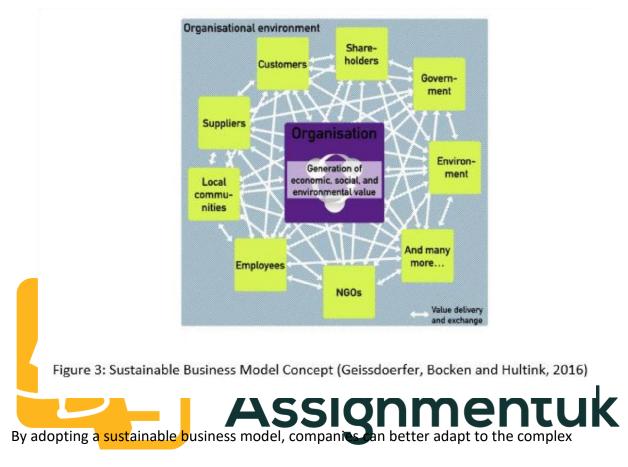
Every firm has a business model (Teece, 2010). In essence, a business model represents how a company conducts its business and creates value for stakeholders (Chesbrough, 2007).

They are essentially a way to operationalise business thinking, values and how companies 'do business' (Bocken, Rana and Short, 2014). However, as highlighted in the previous section, traditional business models and ways of working fall short delivering the quantum shifts

required to meet the challenges of sustainability. Sustainable business models look to address some of this at source by embracing a broader set of stakeholders. They explicitly recognise society and the environment as stakeholders, focussing on them as measures of business performance. Stubbs and Cocklin (2008) proposed the following as key features of sustainable business models:

Simultaneously defines economic, environmental and social purpose
 Leverages the triple bottom line to measure performance
 Considers the needs of several stakeholders while not favouring shareholders
 Treats the environmental social several stakeholders
 Treats the environmental social several stakeholders
 Considers broader systems as well as localised perspectives

Stubbs and Cocklin (2008) continued by suggesting that for organisations to be sustainable, they must go beyond merely supplementing existing business models with sustainability principles and completely overhaul them by prioritising social and environmental impacts alongside the generation of revenue. They should no longer focus solely on the need of the shareholder, but create value for all stakeholders, including the environment and society in a symbiotic way (Biloslavo, Bagnoli and Edgar, 2018; Lüdeke-Freund and Dembek, 2017; Evans, Fernando, and Yang 2017). To illustrate the symbiotic nature of stakeholder value creation in sustainable business models, Geissdoerfer, Bocken and Hultink (2016) proposed the following conceptual model that co-creates and exchanges value in a balanced way across the entire organisational operating system.



requirements of sustainable development and achieve a sustainable competitive advantage.

An approach that some argue sees companies improve their long-term viability within the

market in which they operate (Geissdoerfer, Bocken and Hultink, 2016).

3.2 Triple bottom line

As discussed in the previous section, one of the main features of sustainable business models is that they consider success only that which achieves value creation for several stakeholders while not favouring shareholders (Stubbs and Cocklin, 2008), and measuring their performance through the 'triple bottom line' (TBL) (Biloslavo, Bagnoli and Edgar, 2018). Originally proposed as an accounting framework that incorporates and balances the three dimensions of sustainability (social, economic, environmental), TBL is commonly credited as revolutionising management focus by integrating sustainability into the corporate agenda. Evolving from its initial conception as a reporting tool to become business shorthand for sustainability (Isil and Hernke, 2017), TBL accounting requires organisational performance to extend beyond purely financial measures and include social and environmental impacts (Blowfield, 2013; Slaper, 2011). Often referred to as 'people, planet, and profit', TBL emphasises the importance of organisations being integral members of society rather than independent organisms solely focused on generating shareholder value (Blowfield, 2013). Below is an illustration of TBL and its equal focus on 'people, planet, and profit': ssignmentuk

Figure 4: People, Planet, Profit (Casadei, 2020)

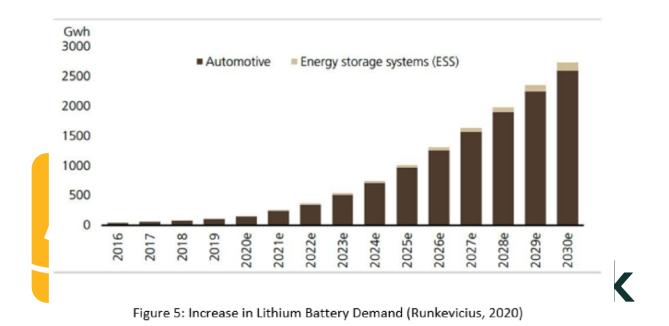
However, TBL is not without its critics. Not least of these concerns is the reality that it is extremely difficult to measure social and environmental impacts. For example, profits are measured in pounds and dollars, but what is societal capital measured in (Slaper, 2011)? Furthermore, TBL allows companies have the freedom to 'cherry pick' what they want to report, allowing them to produce reports in response to public or government pressure (Isil and Hernke, 2017). Even the very person who introduced TBL, John Elkington, has proposed that it has failed to achieve its core objectives. He has stated that the TBL's main goal was systems change, ensuring corporate leaders strived just as hard to hit their people and planetary targets as they did their profits. Yet most organisations merely use TBL to give the impression of having a sustainable business agenda (Elkington, 2018). Elkington continued to suggest that no longer can the TBL approach be considered idealistic, no longer can companies emphasise profit over people and planet. More companies need to embrace the idea that it is possible to 'well' and do 'good', allowing them to continue to generate healthy profits alongside sustainable business practises across the entire system in which they operate (Miller, 2020).

4. Sustainability in the real world

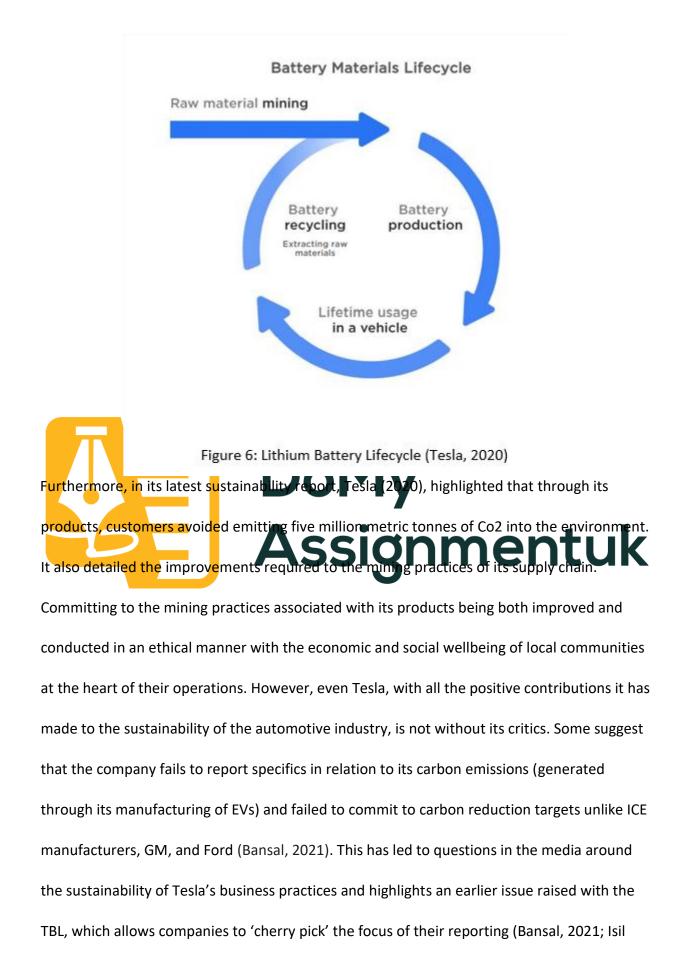
It is far from breaking news that the world is focussed on the development of cleaner and more energy efficient passenger vehicle technologies. The long-term aim is dispensing with internal combustion engines (ICE) that consume huge amounts of fossil fuels while emitting masses of air pollutants (Cihat Onat et al., 2020). Greenpeace UK (2020) highlights that electric vehicles (EVs) are essential to the planet meeting the climate targets associated with the SDGs. In the UK, there is a plan to phase out the production and sale of new ICEs by 2030 (Harrabin, 2020). All this is positive news in the fight against climate change and the push towards a more sustainable future.

However, although EVs might use a more sustainable and environmentally friendly energy source, that alone does not make them sustainable. There is currently an ongoing debate pertaining to the environmental impact of the production of lithium batteries (a key component of EVs), as lithium itself is extracted through a process called 'water-mining' (Mulhern, 2020). This process requires vast amounts of water and the use of various toxic chemicals to process the lithium after extraction. A recent study on lithium mining in the Atacama Salt Flats in Chile (which has the world's largest lithium reserves) found that At act a torre of lithium. As a result of this much 500,000 gallons of water were requ of the area has now dried up, with ere impacts on local communities (Mulhern, 2020), with some experts declaring that cur ent lithium mining practices are unsustainable (Heubl, 2019). This serves as a stark reminder that sustainability is not a quality of a product; only by focussing on the entire system can long-term sustainability be achieved (Meidl, 2021).

The problem and concern is exacerbated by looking to the future. Although EVs only accounted for one percent of the world's cars in 2019, they are becoming more mainstream (Runkevicius, 2020). It is estimated that EVs will reach parity in terms of cost with ICEs by as early as 2024, removing one of the main barriers to greater numbers of sales. This will ultimately provide a broader range of consumers' realistic opportunities to purchase them, dramatically increasing the demand for EVs and the lithium batteries they are powered by. The chart below highlights the estimated increase in demand for lithium powered battery cells over the coming decade (Meidl, 2021):



This problem of increased demand for a product that some feel is mined in an unsustainable way is compounded by the fact that less than one per cent of the lithium mined is currently recycled. This further highlight that even the most eco-friendly of products are not necessarily sustainable from a systems perspective (Meidl, 2021; Mulhern, 2020; Heubl, 2019). The point being made here is not an attempt to dissuade people from buying electric cars, but to highlight the complexity associated with sustainable systems. There is no denying Tesla (2021, pp. 1) has disrupted the automotive industry with their mission to: *'...accelerate the worlds transition to sustainable energy'*, attempting to make mainstream that which was once mere concept. Endeavouring to rise to the challenge of creating a more sustainable future, Tesla themselves have recognised some of the system challenges in the production of EVs and in response have launched a lithium battery recycling system that processes both scrap and end of life batteries (see below), along with a commitment that none of their batteries end the intendfill sites. All great news for the issues raised previously.



and Hernke, 2017). However, all being said, Tesla is committed to producing more environmentally friendly energy systems and developing cleaner technologies for a more sustainable future (Your Green Wealth, 2021).

5. Conclusion

As presented by this critical essay, sustainability is not a property of something but a quality of a system (Meidl, 2021). Sustainability is a journey perhaps without an end point, where businesses must rise to the challenge of improving social, environmental, and financial outcomes simultaneously (Epstein But page of working and implement and ways of measuring success, and in doing so attended to the product and consider the wide-ranging systems impacts related to the production of products and services. Companies need to embrace the reality that it is possible to do *'well'* and do *'good'* and assume the position of success only being that which generates healthy profits alongside sustainable business practises across the entire systems in which they operate (Miller, 2020).

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