GUIDE ON SUSTAINABILITY FOR BPO & IT COMPANIES

A Practical Guidebook for BPO and IT companies in BiH on starting their journey towards sustainability

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Acknowledgements

Abbreviations

BiH	Bosnia and Herzegovina
BPO	Business Process Outsourcing
CDP	Carbon Disclosure Project
CSR	Corporate Social Responsibility
E&S	Environmental and Social
EMS	Environmental Management System
ESG	Environmental, Social and Governance
ESMS	Environmental and Social Management System
EU	European Union
Gen Z	Generation Z (Generation Zoomers)
GHG	Greenhouse Gas
GRI	Global Reporting Initiative
ICT	Information and Communications Technology
ISM	Information Security Management
ISO	International Organisation for Standardization
IT	Information Technology
ITAD	Information Technology Asset Disposition
NDC	Nationally Determined Contribution
OECD	Organisation for Economic Co-operation and Development
SASB	Sustainability Accounting Standards
SDGs	Sustainable Development Goals

Glossary

Term	Definition
Blockchain	Blockchain is a shared digital ledger that allows data to be recorded, time-stamped, and distributed across a blockchain network, but which cannot be edited, deleted, or destroyed.
Clean Technology	Technology that makes it possible to reduce or avoid harm to the environment, for example, technology related to recycling, renewable energy or methods of transport that do not cause pollution.
Climate Change	Refers to long-term shifts in temperatures and weather patterns mainly driven by human activities since the 1800s, primarily due to the burning of fossil fuels (like coal, oil and gas), which produces heat-trapping gases.
Corporate Social Responsibility (CSR)	CSR is a business model that helps a company be socially accountable to itself, its stakeholders and the public.
Decent Work	A concept coined by the International Labour Organisation (ILO), referring to the goal of ensuring that all work is productive, provides fair income, social protection and promotes social dialogue among workers, employers and governments.
Diversity	Diversity is the range of human differences, including but not limited to ethnicity, age, gender, physical ability, sexual orientation, national origin, religious and political beliefs.
Environmental and Social Standards (E&S)	E&S is a set of standards used to evaluate a company's behaviour in terms of how it affects the natural world and people's wellbeing.
Environmental Impacts	Environmental impacts refer to the effects that a company's activities have on the natural environment. These impacts can be both positive and negative.
Environmental, Social, and Corporate Governance (ESG)	ESG is a set of standards and principles that can be used by companies to evaluate their organisation's performance against specific criteria used to measure a company's risk exposure with the aim of improving investment decisions. ESG factors are often used by investors, stakeholders, and rating agencies to assess a company's sustainability and ethical performance.
Fortune 500 Sustainability All-Stars	Fortune 500 is a list published by Fortune magazine that recognizes the top-performing companies in the Fortune 500 based on their ESG performance. The list is based on an analysis of publicly available data and rankings from third-party ESG rating agencies. The list is intended to showcase companies that are leading the way in sustainability and environmental responsibility.
Greenwashing	Greenwashing involves making false, misleading, unsubstantiated, or otherwise incomplete claims about the sustainability of a product, service, or business operation.
Incineration	Incineration is a method of treating waste which involves the combustion of the organic substances found in waste materials. Although incineration does not totally replace the process of landfilling, it does reduce the amount of waste to be disposed.
Inclusion	Inclusion is the practice or policy of providing equal access to opportunities and resources for people who might otherwise be excluded or marginalized, such as those who have physical or intellectual disabilities and members of other minority groups.
Information and Communications Technology (ICT)	ICT is a diverse set of technological tools and resources used to transmit, store, create, share, or exchange information.
International Organisation for Standardization (ISO)	ISO is an independent, non-governmental organisation that develops standards to ensure the quality, safety and efficiency of products, services and systems.
IT Asset Disposition (ITAD) Provider or Recycler	ITAD provides clients with solutions to handle redundant IT assets and computer equipment through secure data destruction services such as hard drive shredding, degaussing and disintegration.

Term	Definition
Internet of Things	This concept refers to a network of physical objects that are connected to the Internet and can communicate with each other without human intervention. These objects are smart devices equipped with sensors and other technologies that enable them to collect and exchange data with other systems and devices.
Millennials	The Millennial Generation comprises all young people who became adults at the turn of the century (year 2000).
Neurodivergent	Differing in mental or neurological function from what is considered typical or normal (frequently used with reference to autistic spectrum disorders).
Neurodiversity	The range of differences in individual brain function and behavioural traits, regarded as part of normal variation in the human population (used especially in the context of autistic spectrum disorders).
Non-financial Reports	Non-financial reports, also known as sustainability reports or corporate social responsibility reports, are documents that companies publish to provide information on their ESG performance; they typically include information on the company's sustainability strategies, goals, and performance metrics, as well as details on its social and environmental impacts and initiatives.
Paris Agreement	The Paris Agreement is an international treaty on climate change, adopted in 2015. The Agreement's long-term temperature goal is to keep the rise in mean global temperature to well below 2 °C (3.6 °F) above pre-industrial levels, and preferably limit the increase to 1.5 °C (2.7 °F). One of the aims of the Agreement is making finance flows consistent with pathways towards low GHG emissions and climate-resilient development.
Philanthropy	The desire to promote the welfare of others, expressed especially by the generous donation of money to good causes.
Pollutants	Any substance, such as certain chemicals, or waste products, that renders the air, soil, water, or other natural resources harmful or unsuitable for a specific purpose. Pollutants can be natural, such as volcanic ash. They can also be created by human activity, such as trash or runoff produced by factories.
Pollution	The introduction of contaminants (chemical elements or compounds that are toxic, persistent, and liable to accumulate) into the environment which have harmful or toxic effects.
Pyrolysis	Pyrolysis offers an attractive way of converting urban wastes into products which can be effectively used for the production of heat, electricity and chemicals.
RE100	A global initiative launched in 2014 (led by the Climate Group in partnership with CDP, a non-profit organisation that runs a global environmental disclosure system) bringing together the world's most influential businesses committed to 100% renewable electricity.
Recycling	Recycling is the process of collecting and processing materials that would otherwise be thrown away as trash and turning them into new products.
Supply Chain Blockchain	Blockchain technology provides complete data visibility and a single source of data, allowing companies to query a product's status and location at any point in time
Sustainability Report	A document that organisations typically voluntarily publish to report on their environmental, social and governance (ESG) performance, providing information on the company's sustainability strategies, goals and performance metrics, as well as details on its social and environmental impacts and initiatives.
Sustainable Development Goals (SDGs)	A set of 17 goals established by the United Nations (UN) in 2015 as part of the 2030 Agenda for Sustainable Development, aimed at ending poverty, protecting the planet, and ensuring peace and prosperity for all people.
Upcycling	Reusing (discarded objects or material) to create products of higher quality or value than the original (reuse, repurpose, and recycle).
Virtualisation technology	Method of creating virtual versions/duplicates, of physical resources such as servers, storage, and networking equipment allowing multiple computer systems to run on one physical machine, making the use of hardware more efficient and flexible.
Waste	Any material, substance or by-product that is no longer needed or has been discarded, and that is the product of human activities.

Concepts Explained

Term	Explanation
Environmental & Social Management System	An ESMS includes policies, procedures, and practices that enable an organisation to continuously improve its environmental and social performance, minimize negative impacts, and enhance positive contributions to sustainable development.
CASCO	CASCO is the ISO committee responsible for conformity assessment in ISO. CASCO develops policy and publishes standards related to conformity assessment, but it does not perform conformity assessment activities.
Obsessive-compulsive disorder (OCD)	"Obsessive-compulsive disorder (OCD) is a common, chronic, and long-lasting disorder in which a person has uncontrollable, reoccurring thoughts ("obsessions") and/or behaviours ("compulsions") that he or she feels the urge to repeat over and over." (NIMH, Retrieved March 6, 2023)
Bipolar disorder	"Bipolar disorder is a mental illness that causes unusual shifts in a person's mood, energy, activity levels, and concentration. These shifts can make it difficult to carry out day-to-day tasks." (NIMH, Retrieved March 6, 2023)
Autism spectrum disorder (ASD)	"Autism spectrum disorder (ASD) is a developmental disability caused by differences in the brain. People with ASD often have problems with social communication and interaction, and restricted or repetitive behaviours or interests. People with ASD may also have different ways of learning, moving, or paying attention." (Centres for Disease Control and Prevention, 2022)
Attention Deficit Hyperactivity Disorder (ADHD)	"ADHD is one of the most common neurodevelopmental disorders of childhood. It is usually first diagnosed in childhood and often lasts into adulthood. Children with ADHD may have trouble paying attention, controlling impulsive behaviours or be overly active." (Centres for Disease Control and Prevention, 2022)
Nitrous oxide	Nitrous oxide is the most significant GHG contributing to climate change after methane and carbon dioxide.
"Right to Repair" (movement)	The "Right to Repair" movement is made up of community repair groups, environmental activists, social economy actors, self-repair advocates and any citizen who would like to claim their right to repair. The movement was launched in September 2019 and currently includes more than 100 organisations in more than 20 European countries.
CDP	CDP is an international non-profit organisation based in the United Kingdom, Japan, India, China, Germany and the United States of America that helps companies and cities disclose their environmental impact.
We Mean Business	We Mean Business is a coalition including many of the world's most influential businesses and investors.

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The purpose of the Guide

Benefits of the journey to becoming a sustainability-oriented company

E&S strategy benefits for investors, consumers, and the environment

Environmental & social aspects

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If you think you are too small to have an
impact, try going to bed with a mosquito

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– Anita Roddick

The purpose of the Guide & benefits of the journey to becoming a sustainability-oriented company
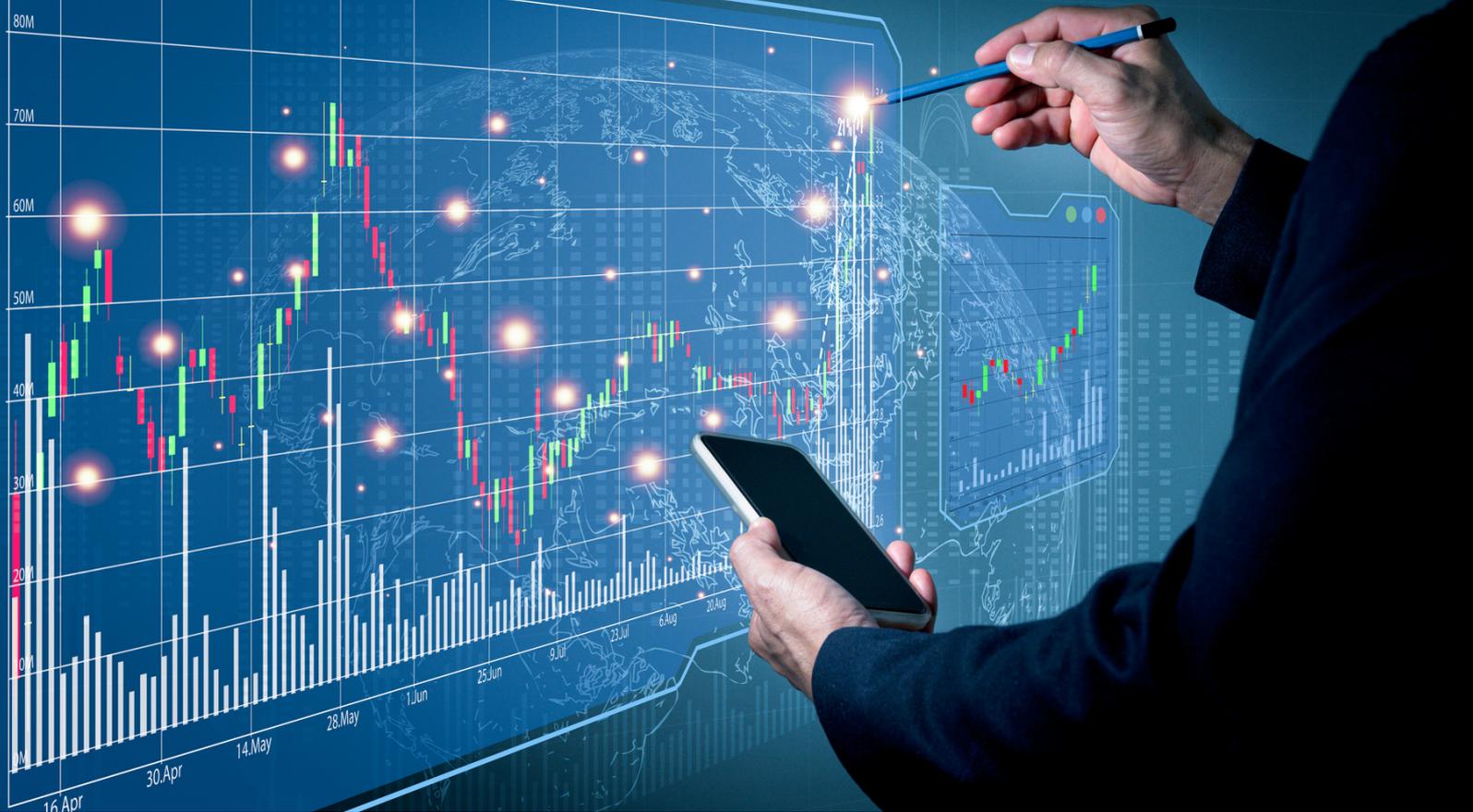
Business Process Outsourcing (BPO) companies, and in particular Information Technology (IT) companies, are at the forefront of business innovation and the adoption of foreign business practices globally. This Guide was created to raise awareness and increase knowledge of BPO and IT companies in BiH in terms of the importance of integrating the concept of sustainability into their strategic decisions and business processes. The opportunity for BPO and IT companies in BiH to adopt sustainability principles presents itself now more than ever, as local export and outsourcing-oriented companies face increasing pressures to rapidly adapt to shifting global market trends to stay competitive.

Recent global trends have shown that investors are increasingly applying non-financial factors, such as Environmental and Social (E&S) policies and E&S reporting to identify potential risks and growth opportunities. An E&S policy defines processes aimed at achieving sustainable growth while simultaneously respecting both the environment and human rights from a client due diligence, business operations, and third-party management perspective. E&S reporting has recently become a global standard, allowing for sustainable business growth based on increased transparency, legal compliance, environmental protection, diversity, and social inclusion.

This Guide aims to help BPO and IT companies identify and manage environmental and social risks but also to identify new opportunities and potential economic, environmental, and social benefits, by addressing the key issues in their processes and supply chains. Additionally, this Guide will illustrate how companies can track their progress, set benchmarks, and communicate them with stakeholders, clients, and partners. By pioneering the concept of sustainability, BPO and IT companies can serve as role models for other companies and industries in BiH. As will be elaborated in later chapters, such a shift could lead to increased competitiveness in local, regional, and international markets and easier access to international funds, which will have a positive impact on the overall BiH economy.

The importance of implementing an effective E&S strategy

Benefits for investors, consumers, & the environment

It has been shown that an effective E&S policy or a more advanced E&S Management System (ESMS), including an E&S reporting framework, attracts more investors and funding. Transparency promotes accountability and both are essential for fostering collaboration and developing actionable solutions. Research has shown that E&S-mandated assets in the United States will account for 50% of all professionally managed investments by 2025 (Collins, 2020). A 2022 study, by Frontiers in Environmental Science, also found that the higher a company scores in E&S categories, the greater the positive effect is on investor returns (Wanday & Ajour El Zein, 2022). This shows that investors will tend to avoid companies that lack E&S reporting, with reduced transparency being a major concern. In addition, reporting allows companies to track their E&S metrics and progress towards achieving E&S goals and benchmarks, as well as share and compare data so that companies can learn from one another and hold each other accountable.

Implementing an environmental strategy also enables companies to assess the potential environmental risks of projects and business processes, and avoid unintended environmental damage. It also allows them to mitigate potential health and safety risks. An effective environmental strategy has proven positive impacts such as long-term and cost-effective energy and water efficiency, resulting in higher profits due to optimised operations and lower overhead costs. Combined with a social responsibility strategy, a commitment to environmental protection leads to a better public image for the company and greater employee satisfaction.

There is increased consumer demand for environmentally friendly and socially responsible brands. A 2020 survey, conducted by the company First Insight, found that 62% of Gen Z respondents would prefer to buy from a sustainable brand, and 73% of them said they would be willing to spend up to 10% more for a sustainable product or service. It was further found that 76% of Millennials consider the sustainability agenda of an employer before making their career choices (First Insight, 2020). It is likely that this trend will continue, and an effective E&S strategy could boost companies' chances of attracting new talent. As global social and economic trends seem to be moving towards an increasingly diverse and inclusive workforce due to economic migrations, a sound E&S strategy will help integrate a more diverse and untapped pool of talent, including vulnerable categories such as people with disabilities. Companies that demonstrate greater social responsibility also tend to have a better public image, which directly affects their ability to attract clients and investors.

It should also be noted that current regulations and policies are leaning towards mandatory sustainability reporting. The European Green Agreement is an example of the ambitious scope of the new EU sustainability regulations. Between 2000 and 2017, a European Corporate Governance Institution study identified 25 countries where companies were required to disclose environmental, social, and governance (ESG) information (Krueger, Sautner, Yongjun Tang, & Zhong, 2021). The trend points to more companies being obliged to disclose sustainability information. By complying with the international legal framework and international sustainability standards, companies can enter new markets and tap into their potential.

Intended Users of the Guide

The intended users of this Guide are companies from the BPO and IT sectors, which have their head office or principal place of business in BiH. While the Guide is primarily aimed at companies from BiH, companies from other countries in the region with similar business models, and operating in similar contexts, may also find it useful.

The Guide is also available for use to anyone entering the market, planning a start-up or considering a career in the BPO and IT sector. The content of this publication provides an insight into the future trajectory of BiH companies in this sector, as it becomes one of the most developed and prosperous in the country.

It is time to focus on environmental & social aspects

Environmental Aspects

Understanding environmental aspects & impacts for effective environmental management

Environmental aspects and impacts are two interrelated concepts commonly used in environmental management systems. Environmental aspects are elements of an organisation's activities, products, or services that interact with the environment, including energy consumption, waste generation, water usage, emissions, pollution of land, and resource consumption. In contrast, environmental impacts are the effects that these aspects have on the environment, such as climate change, pollution, and depletion of natural resources. Identifying and managing environmental aspects and impacts can help organisations minimize their negative environmental effects and promote sustainability (14000Store, 2023).

Intel: Leading the change in environmental sustainability through investment in alternative energy

A household name Intel [...] chooses to reduce their climate footprint by investing in alternative energy and believes so strongly in their environmental golas that they tie a portion of employee compensation to the achievement of certain sustainability metrics. Since 2008, the company has invested more than $145 million in energy conservation products and installed more than 40 on-site projects that use solar, wind, fuel cell, and other alternative energy sources worldwide. They are also the largest voluntary purchaser of green power in the United States. As a global leader in innovation and technology, Intel plays a key role in addressing the planet's sustainability challenges." (Ripplematch, 2021)

The benefits & importance of adopting sustainable business practices for environmental preservation & future generations

Being an environmentally friendly business means committing to conducting business operations in an environmentally sustainable manner. Such companies are aware of the impacts their production processes, products, and services could have on the environment, and take care to minimise any negative impacts by, for example, eliminating unnecessary packaging to reduce waste, using energy-efficient technologies, minimising water consumption, providing sustainable transportation options for employees, and using renewable resources where possible. Companies can further prioritize sustainable supply chains and minimise transportation distances to reduce carbon emissions, demonstrating their commitment to social responsibility and environmental preservation.

Raising awareness of environmental sustainability within companies is crucial for them to adopt sustainable practices. It involves appointing personnel responsible for sustainability monitoring, conducting periodic and topical employee training on topics such as waste reduction and energy conservation, and implementing company-wide initiatives such as planting trees to aid reforestation. Companies must also identify and define environmental sustainability goals within their annual business goals, including creating a sustainability policy, which should be published on the company website, and key stakeholders such as partners, clients, and suppliers should be informed.

Companies can show their commitment to social responsibility by setting environmental sustainability goals as part of their identity. This helps improve their reputation among consumers and investors and contributes to a more sustainable future. To achieve this, companies can work with environmentally responsible suppliers and source materials locally to reduce their carbon footprint. Likewise, this makes them more attractive to consumers who prioritize ethical and environmentally conscious products and services.

Resources such as fossil fuels and timber can have a significant environmental impact, such as air pollution, greenhouse gas emissions, and deforestation, which can reduce biodiversity and disrupt local ecosystems. Resource consumption can have negative impacts on national resources, such as water and soil, leading to water pollution and soil erosion. Overconsumption of resources can also lead to resource depletion, limiting economic growth and development. To mitigate these impacts, it is important to promote sustainable practices such as reducing waste, using resources more efficiently, and investing in renewable energy and other sustainable technologies. By adopting sustainable practices, the negative impacts of resource consumption on both the environment and national resources can be minimized while supporting a more sustainable and resilient future for future generations.

Committing to sustainable business practices and environmental preservation may seem like an investment. However, rather than appearing insurmountable, challenges such as climate change can be seen as an opportunity to make a positive impact on the environment and contribute to a more sustainable future, while establishing the company as a leader in the field. Adopting sustainable business practices can have long-term benefits, such as improving reputation, saving costs, and developing new products, services, and markets. Companies that adopt sustainable practices are better positioned to weather the challenges posed by climate change and other environmental issues and can contribute to a more sustainable future for generations to come.

Sustainability as a strategy

How companies can demonstrate their commitment to the environment

Companies can demonstrate their commitment to environmental sustainability by:

1. Promoting awareness of the company's environmental impact
2. Taking practical steps to reduce it
3. Reducing energy consumption
4. Monitoring and minimising pollution
5. Partnering with environmentally sustainable organisations
6. Procuring environmentally sustainable products

To illustrate with an example, the global management consulting company McKinsey published a 2021 report which focused on the impact of sustainability on business value (McKinsey, 2021). The study surveyed over 2,000 executives from various industries and regions to understand their views on sustainability and its impact on business. The findings showed that companies prioritising sustainability are more likely to see improved financial performance and increased customer engagement. The survey also found that sustainability initiatives can drive innovation, reduce costs, and enhance risk management. The report concluded that companies that integrate sustainability into their strategy are better positioned to create long-term value for their stakeholders. Additionally, the study found that many companies face challenges in fully integrating sustainability into their operations, including a lack of measurement and reporting systems, limited employee engagement, and a lack of understanding of the business benefits of sustainability. The report emphasized the importance of companies taking a holistic approach to sustainability and integrating it into their business strategy to drive value creation.

According to a 2016 report by We Mean Business and CDP, businesses could cut their greenhouse gas emissions globally by 3.7 billion metric tons of CO_2 equivalent a year, or 60% of total emission cuts pledged in the Paris Agreement by NDCs (nationally determined contributions) (We Mean Business, 2016). Commitment to environmental sustainability should not be limited to Fortune 500 companies, as it can benefit start-ups and small and mid-size companies. Some of the many potential benefits include attracting customers who value environmentally friendly practices, as well as attracting staff and business partners who value environmentally friendly products and services. Employees whose personal beliefs regarding environmental sustainability align with the company's values and practices are more likely to stay and contribute to that company's bottom line.

Furthermore, a track record of sustainable practices may attract potential grants and investments for projects. In addition, this may lead to opportunities for developing innovative environmentally friendly practices and products to increase sales. Companies may also achieve significant savings from waste reduction and increased energy efficiency and a positive reputation, which can provide a competitive advantage compared to non-environmentally friendly competitors. In addition, the employees of environmentally conscious companies can take the company mindset home and everywhere they go, to set an example for others, be it family, friends, or the local community, and spread the company's good reputation.

Outsourcing for sustainable performance

The impact of BPO & IT companies on the environment & the opportunity for sustainability

The most important thing that BPO and IT companies have in common is that both usually provide their services as a third party to a company, which has 'outsourced' these services to them, but whose beneficiary is an end-user or customer. Outsourcing is an agreement whereby one company hires another company to be responsible for a planned or existing activity that is or could be carried out internally, i.e., in-house, and sometimes involves transferring employees and assets from one company to another. Many international companies outsource their services or processes to BPO companies, which provide services such as customer support, data recording, human resources, telemarketing, accounting, social media marketing and many others. Sometimes organisations hire BPOs to handle their essential operations instead of hiring internal staff.

A recent 2022 study by Sustainability magazine, titled 'Outsourcing for Sustainable Performance: Insights from Two Studies on Achieving Innovation through Information Technology and Business Process Outsourcing', focusing on the question "What enables organisations to achieve sustainable performance through outsourcing?", has found that "organisations should move away from short-term, cost-focused models. Empirical evidence supports this as there is a growing trend in outsourcing practices in which clients and suppliers collaborate in innovation, using outsourcing deals to develop new products, invent new services, or open new markets.

This new focus on innovation, instead of cost-only models, allows both outsourcing clients and suppliers to overcome their self-interests and transforms the client–supplier relationship into a "win–win" partnership that can potentially achieve both efficiency and innovation and allow both to obtain performance that sustains over time (i.e., sustainable performance) (Leo, Bui, & Adelakun, 2022).

While they mostly deal with services and non-tangible products, there are several ways that products and services offered by BPO and IT companies can have a range of environmental aspects that are impacted by their operations. Table 1 offers some examples.

Energy consumption	BPO and IT companies use a significant amount of energy for data processing and data storage. By 2025, the number of connected devices is expected to reach 55.7 billion, of which 75% will be connected to an Internet of Things (IoT) platform. Furthermore, the data generated by networked IoT devices is expected to grow fourfold (73.1 zettabytes) by 2025. Data centre operations are energy intensive, accounting for nearly 1% of the world's energy demand in 2019. In this context, the largest cloud service providers (Microsoft, Google, etc.) have announced their plans to run their data centres on renewable energy.
Waste generation	BPO and IT companies generate e-waste from discarded electronics and gadgets. E-waste contains toxic substances (lead, mercury and cadmium) that can harm the environment and human health. In 2019, 53.6 million tonnes of e-waste were generated globally, an increase of 21% in five years, and it is expected to increase to 74 million tonnes by 2030. In the same year, only 17.4% of the world's e-waste was recycled.
Water usage	Cooling equipment for data centres is essential to prevent overheating of servers and other equipment in order to avoid system failures or even permanent damage. Water cooling is one of the types of cooling systems (e.g., air cooling, etc.). The location of data centres plays a vital role in energy consumption. For example, an underwater data centre can provide a free and continuous cooling system that is also energy efficient (Microsoft has made some tests regarding aquatic data centres).
Greenhouse gas emissions	Although artificial intelligence (AI) has a huge potential to combat climate change (smart grids, transportation, renewable energy), it can contribute to greenhouse gas emissions (GHG) from energy consumption. As investment in digital technologies is expected to continue, so the company GHG will also increase.

Table 1: The environmental impacts of BPO and IT companies (Source: Sustainable IT, Capgemini)

These environmental aspects can have both negative and positive impacts on the environment, and it is, therefore, important for BPO and IT companies to implement sustainable practices to minimize their impact and contribute to a more sustainable future.

However, by outsourcing processes to another country, such as BiH, the environmental impacts are shifted to that location. Some BPO companies, such as those providing customer support to overseas clients, may work multiple shifts or in different time zones, which can lead to a significant increase in energy consumption, especially affecting those working from home. Likewise, the services that IT companies provide may include more direct effects, such as designing applications and artificial intelligence (AI) systems which help track environmental data and trends. This type of green technology has been on the rise in recent years and may soon become even more popular.

Furthermore, the recent trend towards outsourcing sustainability offers an opportunity for BPO and IT companies. BPO and IT companies may decide to outsource their efforts at achieving sustainable growth by hiring third-party sustainability experts. In this way, companies can focus their resources on their most important business objectives, while at the same time adopting green strategies developed by experts, that effectively improve their public image. In such a manner a company can more effectively allocate its resources to social and environmental engagement, giving it a competitive advantage, better productivity, and higher profits in the long run (Unsustainable, 2022).

Pollution & Waste

Effective waste management strategies for environmental sustainability & secure data disposal in BPO & IT Companies

According to the World Bank's 2018 report titled What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050, global annual waste generation is expected to jump to 3.4 billion tonnes in 2050, compared to 2.01 billion tonnes in 2016 (Kaza, Yao, Bhada-Tata, & Van Woerden, 2018). It is therefore not surprising that, when confronted with such alarming data, any contribution of such a company to sustainable practices is considered too small to be noticed. However, the idea of sustainable development and commitment to environmental protection is one that relies on collaboration, and a steady spread of sustainable practices within a leading sector in the market can have a greater impact on the entire market and thus on society in the long run.

The World Bank also published a report on solid waste management in BiH, in 2018. The report provided insights into key challenges in the waste management sector, including limited capacity for waste collection and treatment, low levels of public awareness and participation, and a lack of regulations and enforcement.

It also highlighted opportunities for improvement in the sector, including the potential for increased recycling and resource recovery, as well as the potential for private sector investment in waste management infrastructure (IEG Review Team, 2018).

BPO and IT companies can produce e-waste such as computers, cables, cords, small appliances, ICT gadgets, etc. The "Right to Repair" movement supports the idea that people should be able to fix their own devices instead of always having to go to a professional. This would save money and reduce waste.

The waste management hierarchy is a concept that prioritizes waste management strategies based on their level of environmental impact. This concept was introduced in the 1970s and consisted of "the three Rs" (reduce, reuse and recycle). Over time, the waste management hierarchy has evolved to include additional levels, with the most preferred actions at the beginning and the least preferred at the end. The waste management hierarchy consists of five levels, as illustrated in Figure 1.

Prevent unnecessary consumption of resources by designing products to be more durable and repairable, avoiding excessive packaging, avoiding the use of disposable items, procuring materials that come with the least packaging, and promoting behaviours that reduce waste generation. By making smarter purchasing decision early on, it becomes easier for a company to prevent the generation of waste.

Waste recovery involves the collection and processing of waste to extract useful materials and energy through processes such as: incineration, gasification, pyrolysis. The recovered energy can be made available for a company use or fed back in the electricity grid.

If any of the previous steps cannot be done, waste should be disposed properly. This last step includes landfilling, incineration or other forms of waste treatment.

Refuse **Recovery** **Residuals**

PREFERABLE **LESS PREFERABLE**

Reuse **Recycle**

Reuse items as much as possible. This can be accomplished by reusing and repurposing items instead of replacing them (e.g., refilling toner and printer cartridges, rechargeable batteries, donating or selling used office equipment and furniture, etc.). This approach contributes to less spending on new goods or virgin materials or paying a service provider to dispose waste.

If waste cannot be prevented, reduced or reused, the next step is recycling. This process involves converting waste materials into new products. Recycling reduces the amount of waste that ends up in landfills and conserves natural resources. However, recycling requires additional resources (e.g., water, electricity, etc.) to transform waste into new products.

Figure 1: Waste hierarchy (Source: Viable alternative energy)

By prioritizing waste management strategies based on their level of environmental impact, it can help to conserve natural resources, reduce greenhouse gas (GHG) emissions and protect the environment for future generations.

The disposal of sensitive data, such as data on hard drives and mobile devices, is also an important issue for BPO and IT companies, as companies often seek to remove data from their retired hardware before sending it to an IT asset disposition (ITAD) provider or recycler for physical destruction. Unfortunately, research done by the international data security company Blancco shows that over a third of all organisations use inappropriate methods such as formatting, overwriting with free tools or other ineffective data removal methods (Cullipher, 2020). According to the research, a local government in Japan has pioneered a method of painstakingly erasing data first, onsite and under supervision by internal staff before reusing or physical destruction. Physical destruction of hard drives should also be implemented under the supervision of internal staff. The ISO standard 27001 (chapter 2.2) for the disposal of data carriers and devices also provides significant guidance in this regard and an additional level of security and confidence for customers and clients. However, hard drives and mobile phones which do not contain sensitive data can also be repurposed after previous data is wiped.

Having a procedure for the disposal of obsolete or unusable electronic equipment, perhaps in partnership with companies specialized in the safe disposal of electronic waste, would not only be beneficial to the environment but would also help to promote the company as an environmentally responsible actor.

Greenwashing

Greenwashing is a form of advertising or marketing in which "green" PR and marketing campaigns are deceptively used to persuade the public that an organisation's products/services, goals, and policies are environmentally friendly.

In other words, greenwashing is when an organisation spends significantly more resources on advertising being "green" than on environmentally friendly practices (Courtnell, 2023). Unfortunately, cases of company misrepresentation, where brands falsely claim environmental responsibility for their own benefit, can be found across the globe.

An example of greenwashing in the IT and BPO sector is a company claiming that its data centres are entirely powered by renewable energy, without providing any actual data or evidence to support this claim. The company might be using some renewable energy, but it's possible that most of the energy is still being generated from non-renewable sources. This type of greenwashing misleads consumers and clients that the company is more environmentally friendly than it actually is.

A recent and famous example is a car manufacturer that advertised their vehicles as using "clean diesel", only to later face international backlash due to intentionally programming their diesel engines to only activate nitrous oxide emissions controls during laboratory emissions testing, in order to meet US emissions standards during regulatory testing. However, their vehicles actually produced up to 40 times more nitrous oxide on the road (Lienert & Gardner, 2015).

Resource Efficiency

Resource efficiency refers to the management and optimisation of resources such as energy, water, and materials, to minimise waste and maximise productivity.

The IT and BPO industry require resources such as electricity, cooling and heating energy, paper, water, and hardware components. Efficient management of these resources can reduce waste, lower costs, and minimise environmental impact. This includes but is not limited to, the use of energy-efficient devices and infrastructure, the use of virtualisation technology to minimise hardware use, the use of recycled materials in production, and the responsible disposal of electronic waste.
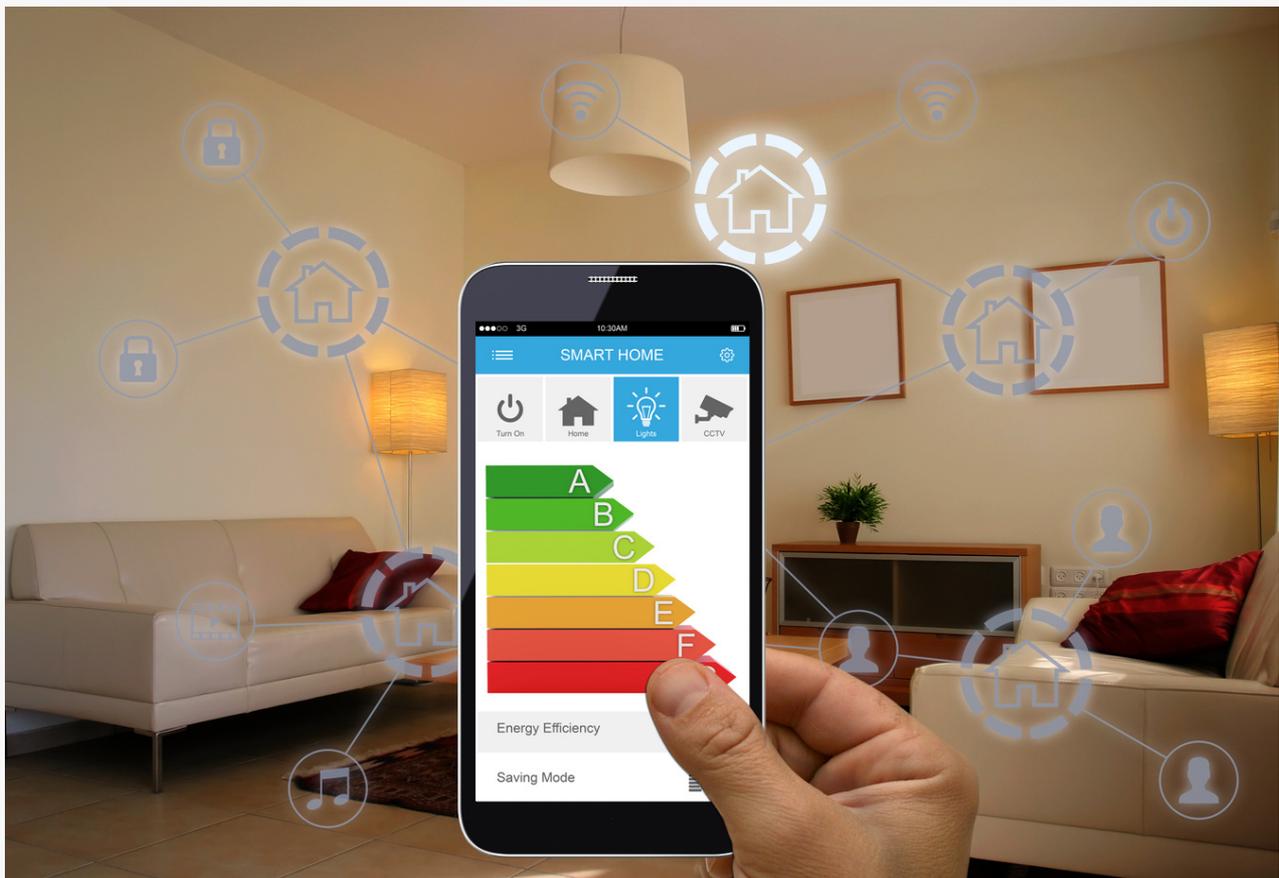
The environmental impact of data centres:
addressing the issue of energy consumption & emissions through resource-efficient practices

It is important for companies in this industry to adopt resource-efficient practices to minimise their impact on the environment and reduce costs associated with resource use. Recently, several international tech giants moved their data centres to Ireland due to its cooler and more favourable climate. According to an article published in *The Guardian*, in 2020, data centres and other large users will consume 29% of Ireland's electricity by 2028, compared to data centres worldwide, which consume about 2% of electricity — a figure set to reach 8% by 2030 (Carroll, 2020).

Additionally, Ireland's national public service media, RTE, published an article in 2022 titled 'Data Centres Metered Electricity Consumption 2021' (CSO Ireland, 2022), which revealed that data centres consume more metered electricity than all rural households in Ireland put together (Figure 2) (Ryan-Christensen, 2022). Many opposition parties and environmental groups have called for a moratorium on new data centres due to a real risk of power grid blackouts due to the energy demand of data centres rapidly —

The environmental impact of data processing in Ireland and the carbon footprint of the Cloud

"The surge in Irish data processing will require significant new energy infrastructure and increase emissions, complicating Ireland's response to the climate crisis. The Cloud can create carbon: It is estimated that when the music video *Despacito* reached 5 billion streamed YouTube views in 2018, the energy consumption was equivalent to powering 40,000 US homes a year (it has now exceeded 6.4 bn views).

The Guardian (Caroll, 2020)

outpacing the country's power output. Switching to available renewable energy sources such as wind power to reduce stress on the power grid has been proposed as an alternative.

Metered electricity consumed by **data centres**	Metered electricity consumed by **urban dwellings**	Metered electricity consumed by **rural dwellings**	In 2021
14% in 2021	**21%** in 2021	**12%** in 2021	Median residential metered electricity consumption **3, 594 kWh** — Around 10% of residential customers consumed less than **1,000 kWh**
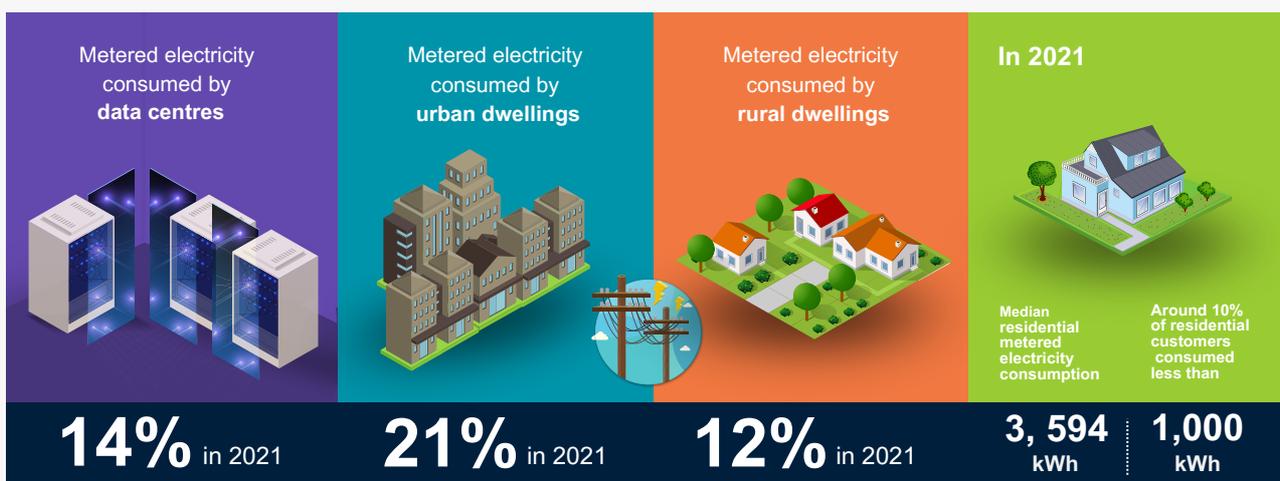
Figure 2: Data centres Metered Electricity Consumption in Ireland in 2021, Central Statistics Office

The IT and BPO industry require resources such as electricity, cooling and heating energy, paper, water, and hardware components. Efficient management of these resources can reduce waste, lower costs, and minimise environmental impact. This includes but is not limited to, the use of energy-efficient devices and infrastructure, the use of virtualisation technology to minimise hardware use, the use of recycled materials in production, and the responsible disposal of electronic waste.

Sustainability and ethical considerations in the tech industry:
from cobalt mining to energy efficiency

Environmentally sustainable practices are also becoming increasingly important due to growing public scrutiny over unsustainable practices, and even established companies have not been immune to public backlash against unsustainable practices. In 2020, several global tech giants were exposed to have profited from child labour in cobalt mines in the Congo, where child workers have even died due to horrible work conditions (Winsor, 2019).

Cobalt is an essential part of the lithium-ion batteries that give electric vehicles the range and durability needed by consumers. Most modern electric vehicles use these battery chemistries in lithium-nickel-manganese-cobalt-oxide batteries, which have a cathode containing 10-20% cobalt (The Cobalt Institute, 2021).

Cobalt-lithium batteries could be replaced soon by recent innovations in battery technology, such as zinc-air batteries for electric cars and laptops. Unlike cobalt or lithium, zinc is recyclable, relatively cheap and abundant, and has a higher energy density.

> ### The dark side of lithium-ion batteries: The role of child labour in cobalt mining
>
> "The lawsuit accuses [five American tech companies] of "knowingly benefiting from and aiding and abetting the cruel and brutal use of young children in the Democratic Republic of the Congo to mine cobalt," which is found in every lithium-ion battery used to recharge the electronic devices that these five American companies manufacture. About two-thirds of the world's supply of cobalt is mined from the mineral-rich Congolese provinces of Haut-Katanga and Lualaba."
>
> ABC News (Winsor, 2019)

Unlike tech companies that have large data centres abroad, as mentioned earlier, smaller companies with dislocated servers may not be exposed to the risks of a power outage. However, they can still contribute to a reduction in energy waste and overhead costs by implementing energy-efficient solutions. Resource efficiency and sustainability are critical considerations for IT and BPO products. The use of technological products consumes a considerable amount of resources, and it is essential to ensure that these products are designed, manufactured, and disposed of in a way that minimises waste and reduces their environmental impact.

Strategies for achieving resource efficiency & reducing waste

Design quality products

Designing products with longevity and repairability so they last longer and can be repaired rather than discarded and replaced.

Choose materials

Utilising sustainable materials such as recycled materials or biodegradable components in product design and manufacturing.

Encourage reuse

Encouraging product reuse such as through product take-back programs or product leasing.

Implement a closed-loop supply chain

Implementing such a supply chain where waste from one part of the production process is used as raw material for another part.

Reduce resource use & waste production

Adapting circular economy principles such as reducing, reusing, and recycling materials and components to minimize waste and reduce resource use.
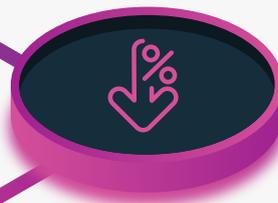
Be accountabie

Communicating transparently about the environmental impact of products and being accountable for their environmental footprint.

Improve environmental performance

Conducting regular environmental assessments and continuously improving the environmental performance of products.

How small changes can make a big impact:
promoting sustainability in the workplace & a remote work environment

Companies using widely available technologies, such as sensor-activated faucets in restrooms, bottle-less water coolers, or sensor-activated lights in their offices, can make significant savings in terms of water and energy costs while encouraging their employees to use ceramic or metal bottles, cups, or mugs instead of disposable plastic when drinking water. Small changes such as these can make an impact in terms of energy efficiency, cost-saving and reducing waste. Perhaps most relevant in recent years, IT and BPO companies can increase resource efficiency and contribute to a more sustainable remote work environment by promoting the use of virtual collaboration tools, providing employees with energy-efficient equipment, educating and engaging employees in sustainable work practices, developing and enforcing sustainability policies, and incentivising employees to contribute to sustainability goals. These practices can help reduce energy consumption, minimise waste, and promote a more environmentally friendly remote work environment.

IT and BPO companies can increase resource efficiency by adopting sustainable practices, such as reducing energy consumption, implementing recycling programs, and utilising virtual communication and collaboration tools to reduce paper consumption. Additionally, companies can encourage their employees to adopt sustainable practices when working from home. By being mindful of their resource usage and waste, IT and BPO companies can reduce their environmental impact and improve their overall sustainability.

Examples of resources efficiency and sustainability in IT and BPO software products	Cloud-based software reduces the need for physical hardware and can result in a reduction of energy consumption compared to traditional software solutions.
	Development of mobile and web-based software reduces the need for physical hardware and can be accessed from anywhere, reducing energy consumption and waste.
	Integrating energy-saving features into software products, such as power management settings and automatic shut-off, reduce energy consumption.
	Implementing sustainable coding practices such as efficient algorithms and code reuse to reduce resource consumption and minimize the environmental impact of software development.

Table 2: Examples of resource efficiency and sustainability in IT and BPO software products

Climate Change

The term Climate Change refers to long-term shifts in temperatures and weather patterns, which may be a product of natural phenomena.

However, extensive research has shown that since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels such as coal, oil, and gas generating emissions of greenhouse gases such as carbon dioxide and methane (IPCC, 2021).

These emissions contribute to a "greenhouse effect", trapping heat in the atmosphere and raising global temperatures (UN.org, 2022). A 2017 report published by the environmental non-profit CDP in collaboration with the Climate Accountability Institute, discovered that just 100 companies have been the source of over 70% of the world's greenhouse gas emissions since 1988 (Griffin, 2017).

The impact of climate change on businesses, including BPO and IT companies, is significant, as it affects various aspects of their operations and long-term sustainability. It is crucial for these companies to understand how climate change affects them and take proactive steps to reduce their environmental impact and contribute to a more sustainable future (Table 3).

Supply Chain Disruptions	Climate change can cause disruptions in the supply chain, making it difficult for IT and BPO companies to access raw materials and components needed to produce their products.
Increased Energy Costs	Climate change can cause energy prices to rise, increasing the cost of energy for IT and BPO companies.
Physical Impacts	Climate change can cause physical impacts, such as natural disasters, that can damage IT and BPO infrastructure and disrupt operations.
Regulations	Governments around the world are increasingly adopting regulations to reduce carbon emissions and limit the impacts of climate change. IT and BPO companies must comply with these regulations, which can add costs and complexity to their operations.
Public Pressure	Consumers are becoming more environmentally conscious and demanding that companies take action to address climate change. Companies must respond to these demands and take steps to reduce their environmental impact.

Table 3: Potential effects of climate change on IT and BPO companies

The Role of IT & BPO Companies in mitigating climate change: implementing sustainable practices, investing in renewable energy, & promoting sustainable business practices

By implementing sustainable practices that reduce their environmental footprint, IT and BPO companies can play a key role in mitigating the impacts of climate change. These practices include reducing energy consumption and emissions through the use of energy-efficient technologies, such as virtual communication tools, and implementing recycling programs. Companies can also reduce their carbon footprint by investing in renewable energy sources. Furthermore, they can promote sustainable business practices, support climate action, and advocate for policies that address climate change to meet the demands of consumers and contribute to the development of sustainable communities.

To illustrate, companies such as Volvo announced in 2017 that all its cars would be electric or hybrid from 2019 (Vaughan, 2017). Furthermore, Apple, Meta, Google, and Ikea have committed to 100% renewable power under the RE100 initiative, which aims to reduce their carbon footprint and encourage businesses to adopt sustainable practices such as investing in renewable energy sources. This initiative is part of a growing number of initiatives which include prominent global brands and companies (Riley, 2017). The global initiative was launched in 2014 and brought together the world's most influential businesses committed to 100% renewable electricity. Led by the Climate Group and in partnership with CDP, their mission is to accelerate the shift towards zero-carbon electricity grids at scale.

Leveraging information & communication technology for climate change mitigation in the IT & BPO industries

The IT and BPO industries make extensive use of Information and Communication Technology (ICT) to deliver services efficiently and effectively, but this has a significant impact on climate change (Sustainability Knowledge Group, 2022). However, it should be noted that while ICT can have both positive and negative impacts on climate change, it can also enable more efficient and sustainable practices in the long term as green technology aimed at energy efficiency and sustainability advances.

There is potential for ICT to play a significant role in reducing carbon emissions in various sectors, such as smart grid systems, teleworking, and virtual meetings. Policy interventions such as carbon taxation and energy efficiency regulations are needed to address the environmental impacts of ICT and promote sustainable practices. It is important to recognize the potential of ICT to mitigate the impacts of climate change and take action to leverage this potential.

Environmental Opportunity

Using technology to reduce environmental impact & improve energy efficiency

Clean technology or "cleantech" refers to the prevention of environmental damage through the use of environmentally friendly materials, practices, processes, products, or services to eliminate or reduce negative environmental impacts through significant energy efficiency improvements, sustainable use of resources, or environmental protection activities. Popular examples of clean technology are electric cars, solar panels, and smart lighting.

A recent article by tech website *Gartner.com* also offers an interesting insight into how Tech companies can significantly contribute to achieving sustainability in the future through the innovative application of available technologies (Wiles, 2022). It proposes that IT and BPO companies can adopt technology solutions such as cloud services, GHG management software, artificial intelligence, supplier sustainability applications, and supply chain blockchain to help reduce their environmental footprint and promote sustainability.

Cloud services enable organisations to increase the utilization of shared resources and reduce environmental impacts, while GHG management software enables them to collect, analyse, and report emissions data. Artificial intelligence (AI) can optimize operations to reduce carbon and environmental footprint, and supplier sustainability applications help companies assess the Environmental, Social and Governance (ESG) performance of suppliers. The supply chain blockchain protects, verifies, and tracks transactions to ensure ethical sourcing. These technology solutions enable IT and BPO companies to take proactive steps towards sustainability and contribute to a more sustainable future.

Balancing sustainability & automation: criticisms & solutions

While solutions such as cloud services, GHG management software, AI, supplier sustainability applications and supply chain blockchain can help IT and BPO companies reduce their environmental impact and promote sustainability, these solutions are not without potential criticisms. Potential negative impacts, such as concerns about privacy, data security, and the potential loss of jobs due to the automation of certain tasks by AI technologies must be taken into account.

The use of AI could lead to job displacement and exacerbate income inequality, particularly for people working in low-skilled jobs that are at risk of being automated. Potential solutions to mitigate these criticisms could include education and training for employees to adapt to the new technology, actively addressing concerns about job losses, and implementing policies to promote the responsible and ethical use of AI. Additionally, companies can strive to find a balance between the benefits and drawbacks of these solutions and take steps to ensure they are implemented in a transparent and accountable manner.

There are several prominent examples of companies that have taken ambitious steps to reduce their carbon footprint, such as Amazon which plans to invest $970 million in electric vehicles for its European operations, as part of its goal of zero net-carbon emissions by 2040 (Isidore, 2022).
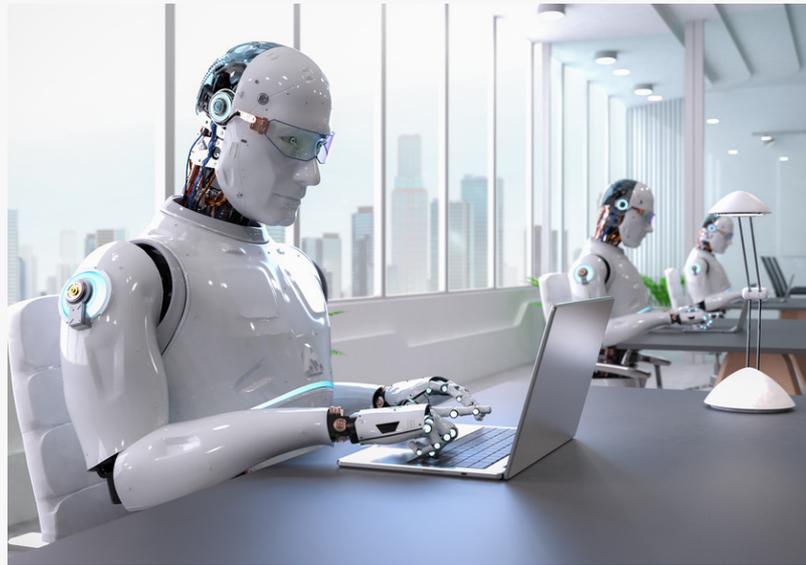
Driving sustainability in unexpected areas: from electric vehicles to sustainable web design

There are trends in finding ways of integrating sustainable development and innovation in areas that are not obvious candidates at first glances, such as sustainable web design, as the Internet currently contributes to 3.8% of global carbon emissions, and is rising in line with increasing data consumption and demand (Sustainable Web Design, 2022). Furthermore, by 2025, communications tech is expected to emit more carbon dioxide than any other country, except for China, India, and the USA. (Internet Health Report, 2018). Actions that can be taken by BPO and IT companies to promote sustainability include educating their employees on sustainable concepts, energy efficiency, waste management and consumption. Training should not be a "one and done" affair but should be repeated at least once a year, for both current and new employees. This should not be limited to employee education, as implementing environmentally friendly procedures and processes in companies, whether in the office or working from home, would lead to an integration of sustainability principles into the company's core culture and more effectively reflect on the company, its employees, services, and reputation.

Social Aspects

Making a difference: the power of Corporate Social Responsibility

Social issues that have risen out of inefficient resource management, as well as unfair treatment of vulnerable communities, have triggered a need for drastic changes in the global conscience – a paradigm shift that will revolutionise the social and economic apparatus from a base level. Thus, the term *corporate social responsibility* (CSR) has become a concept that is coined by companies especially in the modern age, as the need for it has become more prominent in a world awakened by the threat of global warming and COVID-19. It involves companies taking responsibility for their impact on society and the environment and proactively working to address the social, environmental, and economic challenges that they face. CSR initiatives may include a range of activities, such as improving labour conditions, reducing carbon emissions, supporting local communities, engaging in ethical business practices, promoting diversity and inclusion, and investing in sustainable technologies.

CSR has therefore become an important aspect of business strategy, as consumers, investors and other stakeholders increasingly expect companies to act responsibly and contribute positively to society and the environment.

A technology company might decide to implement a CSR initiative to reduce its carbon footprint and promote renewable energy. The initiative could involve installing solar panels on the roofs of the company's offices and data centres and investing in energy-efficient technologies. By reducing its reliance on fossil fuels and promoting renewable energy, the company can help to mitigate the impacts of climate change and contribute to global efforts to transition to a low-carbon economy. This initiative can also help to reduce the company's operating costs, increase its energy efficiency, and enhance its reputation among customers and investors who value environmental sustainability.

An ICT company might decide to implement a CSR initiative to address the digital divide and promote digital inclusion. The initiative could involve providing free or low-cost internet access, devices, and training to underserved communities, including low-income households and schools. By promoting digital inclusion, the company can help to bridge the gap between those who have access to technology and those who do not, promoting greater social and economic equity. This initiative can also help to increase the company's customer base and enhance its reputation among customers and investors who value social responsibility and community engagement.

How businesses can advance sustainable development goals (SDGs) through innovation

In the context of sustainability, social matters claim a large piece of the puzzle. The United Nations acknowledged them as one of the fundamental pillars of a future founded on universal respect for human dignity and rights, non-discrimination, equity and adherence to law and justice. For this reason, the 2030 Agenda, established in 2015 by the UN, sets 17 Sustainable Development Goals (SDGs) that are identified as crucial elements in the blueprint for the realisation of this vision:

The SDGs are key ingredients for the formation of an effective system supporting peace, prosperity, equity, protection of natural resources and the elimination of poverty. However, for this plan to materialise, cooperation between private and public sectors, businesses and citizens is a non-negotiable ingredient. Moreover, considering the level of ambition that this vision requires from global society, three pillars were identified as imperative in corporate social responsibility, and they are complementary to the set SDGs: social inclusion, economic growth and environment protection.

Figure 3: Potential effects of climate change on IT and BPO companies

These pillars are instilled in the CSR business model with the primary objective being the fulfilment of society's needs in a manner that does not endanger future generations. The model is centred on the recognition of moral duties of businesses towards communities in which they operate, for the purpose of preserving the well-being and advancing society as key contributors in the socio-economic system. Core social responsibilities that constitute the CSR model are:

1. Profit generation,
2. Adherence to the law,
3. Enforcement of ethical conduct,
4. Fulfilment of responsibilities towards society and the environment.

As socially responsible businesses, BPO and IT companies should define and incorporate specific measures for protecting and enhancing society and the environment, into their strategies, daily operations, and relationships with stakeholders. Business models based on process outsourcing create an opportunity and a necessity for the adoption of international standards to establish cooperation with clients globally. A request-based model of standard adoption leads to further interest in best practices related to social responsibility, which continues to breed voluntary initiatives and greater motivation for 'moving the needle' when it comes to social and environmental governance. Measures, which are a core part of the CSR model and applied by companies with incorporated best practices, include:

Measures	Description
Responsible sourcing	Managing supply chain risks by committing to consider social and environmental issues when managing and forming long-term cooperation with suppliers.
Stakeholder involvement	Providing a platform for engaged stakeholders to bring forth concerns and issues related to a company's operations, products services, and impact, with the purpose of improving policies and practices or addressing a specific social need.
Labour standards and working conditions	Ensuring the application of fair labour practices, health and safety measures, and forswearing child labour.
Employee and community connections	Strengthening civic engagement and contributing to community well-being by ensuring the alignment of the company's mission with continuous acts of service and bridging gaps in social proximity.
Social equality	Providing equal conditions and opportunities for development, advancement, and leadership in the company's structure.
Gender balance	Minding the level of representation of gender in the company structure, especially gender-balance in executive management.
Human rights	Respecting the social, economic, and environment-related rights of everyone affected internally or externally by the company.
Good governance	Management committed to principles such as openness, transparency, accountability, and participation, that disavows corruption and implements measures against it.

Table 4: Core measures of the CSR business model

Companies that are perceived as most attractive in today's market are those that have a holistic approach that considers the importance of developing human capital, offering fair employment conditions, producing beneficial products/offering services, giving back to the community, and addressing the needs raised through social issues, providing equal access to communication, finance, health care and other important factors.

We are living in the age of awakening, where people are becoming more conscientious when it comes to their choice of service providers and employers depending on the level of accountability that companies claim when it comes to their environmental and social influence. For a business to survive and thrive, it is unavoidable to implement measures that will instil confidence in future employees, investors, and consumers.

From boycotts to investments

The role of CSR in building trust with stakeholders

According to the Global Communications Report from 2016 (The Holmes Report, 2016), 75% of consumers were likely to engage in activities to boycott companies perceived as having a low level of accountability for their environmental and social impacts. Such activities may include posting detrimental content on social media or organising protests. Such controversies lead to a significant loss in the customer base. When it comes to investors, 83% claimed that they are more likely to invest in businesses that have demonstrated a commitment to social responsibility. Considering that these issues have evolved, in 2023, these percentages are expected to be even higher. Businesses that implement a CSR model are perceived more favourably by stakeholders due to the promise and principles of transparency and accountability that need to be applied in daily operations and annual reporting.

The benefits of CSR and commitment to social matters reap numerous benefits for a business, including:

1. Increased interest in employment,
2. Higher employee engagement,
3. Improved bottom-line finances,
4. Greater engagement with local and global communities,
5. Supporting communities and increasing the value of the business as a socio-economic force,
6. Increased interest of investors,
7. Building brand awareness and strengthening the brand image and presence,
8. Creating a desirable employer brand,
9. Higher customer retention.

How the IT & BPO industry is creating impactful change in society

The IT and BPO sector can be characterized as leaders in positive change in terms of social aspects, compared to other sectors in the economy. As the fastest-growing industry in the world, and especially since the COVID-19 pandemic, information technologies have become a major asset in terms of social adjustment with regard to employment, education, environmental protection, and tourism, to name a few (Sava, 2019).

The repercussions of the pandemic have caused a greater interest in remote work for a large percentage of the world population, due to the need for financial security and because of a changing economy. Major BPO hubs, such as the Philippines and India, were affected during the crisis, which created a space for Bosnian and Herzegovinian companies to offer services to clients across Western Europe (Begović, 2020). A large percentage of the global workforce found itself unable to travel for work due to lockdowns and adjustment to remote work was a major time-consuming challenge (Begović, 2020).

BiH is one of the countries that adopted the home-office model quickly, creating an advantage for the highly skilled talent pool to earn a living through outsourcing. In this critical period, the BPO sector was strengthened and has grown significantly due to a favourable geographic location and high skill level of the workforce, in terms of multilingualism and intercultural awareness, especially in the context of EU countries.

Telecom services 5%
Hardware 23%
Tech services 23%
Emerging tech 104%
Software 50%
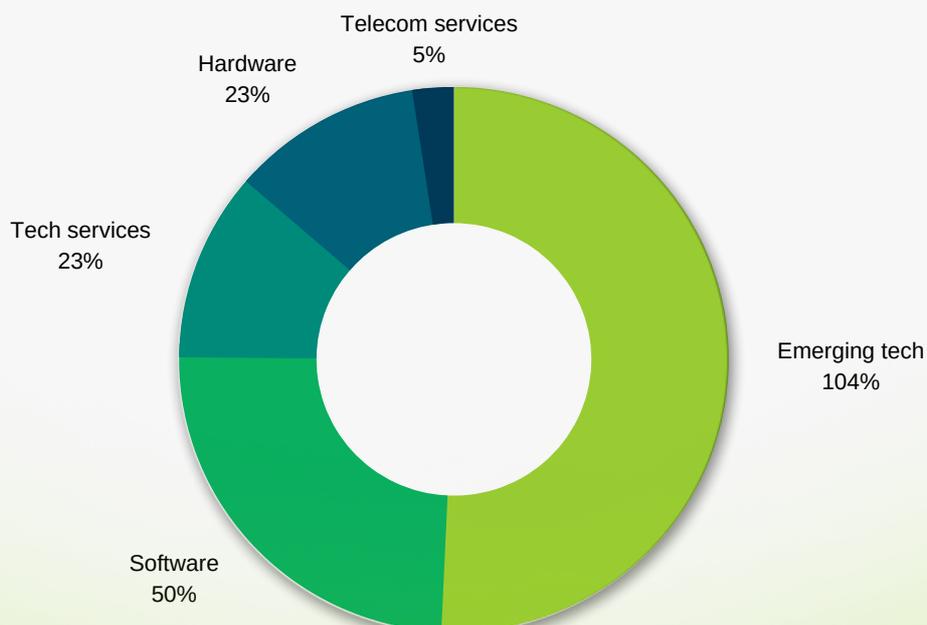
Figure 3: IT industry growth rate forecast worldwide from 2018 to 2023, by segment (Sava, 2019)

Moreover, the flexible work model is not the only aspect of employee benefits that makes this sector among the most desirable ones to work in. Companies that follow a CSR model run based on the principle of inclusion, where the workforce and other stakeholders are involved in the creation of the business strategy by having opportunities to raise their concerns regarding environmental and social issues and views on how to resolve them.

Employees are becoming increasingly more aware of their choice for personal capacity investment into companies that share or complement their passions & vision of the future.

71% of professionals would accept a decrease in salary if the company's mission & values are aligned with their own.

According to LinkedIn's culture Report from 2018, 71% of professionals have declared that they would be willing to accept a decrease in their salary if the company's mission and values are aligned with their own. Moreover, 44% stated that key retention factors are strong workplace benefits such as parental leave and health insurance. Other factors identified as having a high influence on employee retention are flexibility, the ability to find a work-life balance (51%), a culture supporting diversity (47%) and the beneficial influence on the community and society (46%) (McQueen, 2019).

Critical social aspects that IT and BPO companies need to be addressing in their business strategies are presented in the following chapters of the Guide, which include human capital development, health and safety, supply chain labour standards, product safety and quality, privacy and data security, and social opportunities.

How can your products or services improve humanity & local communities while doing business?

Many IT and BPO companies in BiH have started taking steps towards supporting sustainable solutions to global issues in society. However, some of the challenges that present themselves on this path are questions of how to integrate aspects such as philanthropy into the business model and increase positive social and environmental impact, while maintaining a cost-benefit balance. Some of the key measures that can be implemented include:

Building and maintaining a transparent relationship with stakeholders regarding the company's alignment, efforts or plans for implementing the CSR model. Such a relationship can be established through sustainability reporting and other means of communicating initiatives and setting business objectives complementary to the SDGs, such as taking measures to reduce carbon footprint, promote inclusivity and strengthen the company's relationship with local communities, for instance.

Measuring CSR impact and estimating corporate citizenship value, by setting concrete indicators that can be tracked and reported on, using one of the standard frameworks which are detailed in section Sustainability Reporting (3.2) of the Guide.

Actively updating the company's vision, mission, objectives and work model based on best practices applied by leaders in the industry and redefining the company purpose to fit CSR principles. Companies that create software solutions can contribute their genius to addressing aspects of CSR through innovative products and services, thus alleviating specific issues in communities and society at large. In this manner, the business model is built around corporate social responsibility and it accounts for the costs of measures that it entails.

Offering educational programs and training for youth, vulnerable social categories, and employees to raise awareness and encourage involvement in social and environmental activities based on shared values and goals.

Forming a culture of social responsibility inside and outside of the organisation, thus enabling employees and consumers to become a part of the company's efforts through social media campaigns, sponsorships, programs, events, local initiatives, and independent initiatives focused on advancing shared social and environmental goals.

The difference between philanthropy & corporate social responsibility (CSR)

While considering these measures, it is important to distinguish philanthropy from CSR. The former refers to an investment of monetary or other resources through donations, grants, or pro bono services for instance, on a voluntary basis and often as a singular transaction. While philanthropy is an aspect of CSR, the latter entails a transformative approach that aligns acts of service with business strategy and long-term objectives, and there is a mutual benefit that exceeds the benefits of a singular transaction. This approach instils the principles of responsible citizenship in the company model, which is a more permanent solution that ensures cooperation between employees and communities based on reciprocity and trust. This approach entails being an integral part of a solution.

(KPMG in India, 2008).

Exploring the potential of IT as a force for positive change in society & the environment

In the digital age, the IT industry has become an important pillar of society and the global economy. Humans have become dependent on IT for socialisation, work, information, entertainment, finances, problem-solving, travel and more. For this reason, digital transformation is moving more rapidly due to the growing needs and demands of society in almost all respects of life. Keeping in mind the impact that the IT industry has on a changing social, economic and political landscape on a global scale, it is only natural to consider how it can be used as a force of positive change in social and environmental aspects.

An example of how IT can support environmental action is an application called Čuvajmo šume ("Let's protect the forests") which was initiated by a Bosnian NGO, Forestry and Environmental Action (FEA) that was created in collaboration with a Bosnian software development company. The application enables citizens within Sarajevo Canton to report illegal forest activities, such as tree cutting, and be active participants in environmental protection. During the COVID-19 lockdown, applications such as Korpa, Ceger, Glovo and other applications providing order and delivery services played an important role in social adjustment and crisis management.

Nourishing communities: How IT companies can support vulnerable social groups

Considering vulnerable social groups, IT companies could create an application for food donations that are based on the same principles as Korpa and Glovo, through a collaboration with individuals running the initiative called "Tanjir više" (An extra plate) that is devoted to providing those in need with fresh food and drinks.

Breaking barriers: How IT companies can be agents of social change in local communities

An excellent example of how IT companies can be a voice of humanity in local communities is Germany's *Integreat* application. This app was created with the recognition of challenges faced by immigrant communities in attempts to integrate into a new society. Integreat has a mission of removing language barriers and facilitating immigrants' access to crucial information from city services and local organisations. In this way, IT companies can support nonprofit organisations working on the alleviation of social issues in communities.

(Integreat, 2023)

Another instance of positive impact is the potential of technological platforms to inspire and encourage personal philanthropy. For instance, crowdfunding platforms such as Indiegogo and GoFundMe have made social fundraising accessible and personal across the globe. Opportunities for sparking positive change in society are endless in IT.

How BPO companies positively impact society by providing new job opportunities for a diverse workforce

Bridging the gap between social & economic groups

BPO companies have offered a lifeline to a significant amount of the population in the face of repercussions resulting from the COVID-19 crisis. The tourism and hospitality sector suffered significant job losses. Fortunately, the skillset of employees from this sector fits perfectly with the needs of the BPO sector, including high-level mastery in multiple languages, hospitality and so on. Due to the flexibility that characterises major professions in the BPO sector, such as call centres and digital services, employment has become more accessible to individuals living in rural areas with no possibility of moving to the city, as well as persons with physical or mental impairments.

Major BPO companies that were interviewed as a part of the research for the development of this Guide have expressed an open and accepting attitude towards diversity in the workforce. They offer training to all employees to ensure that their skill level is adequate to address professional requirements. The ability of the sector to integrate neglected or overlooked communities is a salient benefit since it complements the SDGs targeting poverty and equal opportunities. Such practices are a force for bridging the gap between social and economic groups and support principles of Decent Work by providing at-risk groups with opportunities to form relationships, become more included in their community and society, and gain a sense of purpose and achievement.

Human potential, health & safety, product safety, privacy & data security

Human Potential

> "
> **The decision to focus on human potential benefits employees & the company in the long run.**
> "

Human potential or capital refers to the abilities and skills that individuals possess, and that can be developed further through training and capacity-building. This term is used instead of human resources because the latter is more concerned with the jobs performed in the organisation. IT and BPO are highly people-oriented sectors, which is why they are focused on investing in people as their most important business assets, for the purpose of shaping a skilled and responsible workforce that can make a positive impact (Ejim, 2023). Human Resources are responsible for creating plans for investment in human capital to boost organisations' long-term benefit. The decision to focus on human potential benefits employees in the long run since their skills and know-how will remain even if they decide to change careers. However, Human resources are part of an organisational structure and they will always be tied to the organisation.

Empowering the Workforce: How companies can invest in employee skills & career growth

Amazon is an example of a company that invests significant resources into human potential. In 2021, they supported 70,000 employees in acquiring new skillsets and advancing in their careers. As a part of their 2025 Upskilling pledge, they launched a programme called Amazon Career Choice, which allows staff from 14 countries to earn degrees and certificates in topics and fields of interest.

(Amazon, 2022)

Urban Company, the largest home service marketplace in India that allows customers to book a variety of services including beauty, home repairments, personal training and similar, have started an online academy for their employees during COVID-19. The Urban Academy is an online platform that allows workers to develop skills in Excel, leadership, feedback provision, problem-solving, SQL and other.

Health & Safety

The health and safety of a workforce are of vital importance since they affect performance and a business's bottom line. CSR-based management entails the consideration of all possible health and safety risks that may endanger employee welfare and productivity, thus implementing preventive measures for protection. Promoting health and safety in the workplace brings numerous positive outcomes such as the reduction of absenteeism, improvement in performance quality and the company image, and overall employee satisfaction (Inouye, 2017).

In Bosnia and Herzegovina, IT and BPO companies must follow the health and safety regulations enforced by the local authorities, which include the Law on Safety and Health at Work, the Law on Fire Protection, and Labour Law, detailed in Chapter 2.

Some solutions that may be offered by employers include financial assistance in moving to better accommodation, acquiring sanitary services, going to medical checkups, switching the heating system in the apartment/house, and others. Another measure that needs to be considered in relation to health and safety is the quality of the equipment used for work, which entails the provision of user-friendly tools for daily operations, in order to prevent repetitive strain injuries and promote good posture. Equipment that can be provided to employees for better care includes ergonomic chairs, adjustable desks, screen protectors which block out blue light or glasses with the same function, additional lighting, accessories for hand and wrist protection, laptop raisers, orthopaedic seats, etc.

Furthermore, apart from equipment, employers should consider that in the increasingly fast-paced professional world, employees require a better quality of sleep with enough hours of rest.

Putting People First: How Amazon practices social responsibility

Amazon is an excellent case study of a socially responsible company, as they decided to provide employees with expanded travel insurance to ensure coverage for medical issues of a non-life-threatening nature, as of 2022.

(Amazon, 2022)

Thus, businesses need to start considering measures for preventing burnout, anxiety and depression in employees which would lead to worker loss in the long term. Some alternatives include a 4-day work week with improved plans for weekly engagement or an increased number of break times during work hours. Moreover, employees should be allowed opportunities to allocate time to "play" or, in other words, activities that are not related to their job, to nurture creative thinking, problem-solving, divergent thinking and so on, leading to the better overall quality of work. Additionally, it is critical for BPO and IT companies to consider offering financial coverage for mental health support of employees if there is no such service within the company itself. Such services include counselling and stress management programs to help employees deal effectively with challenges at work. Companies should also provide training to the workforce to ensure their understanding of health and safety risks and prevention measures, as well as support options offered by the employer.

By adopting these practices, BPO and IT companies can ensure the health and safety of their employees and create a supportive and productive remote work environment.

Product Safety, Privacy & Data Security

Information is a modern currency in a digital world, which is why privacy and data security are among the highest priority concerns in a society highly reliant on digitalization (Ekran, 2022). Companies are facing an increase in pressure to ensure that digital threats such as hacking attempts, phishing, malware, viruses, information leaks or other forms of data compromise do not occur.

Most breached data by category

60% Credentials

50% Personal

10% Medical

9% Bank

8% Payment

8% Internal

Figure 4: Most breached data by category, according to the 2021 Data Breach Investigation Report by Verizon
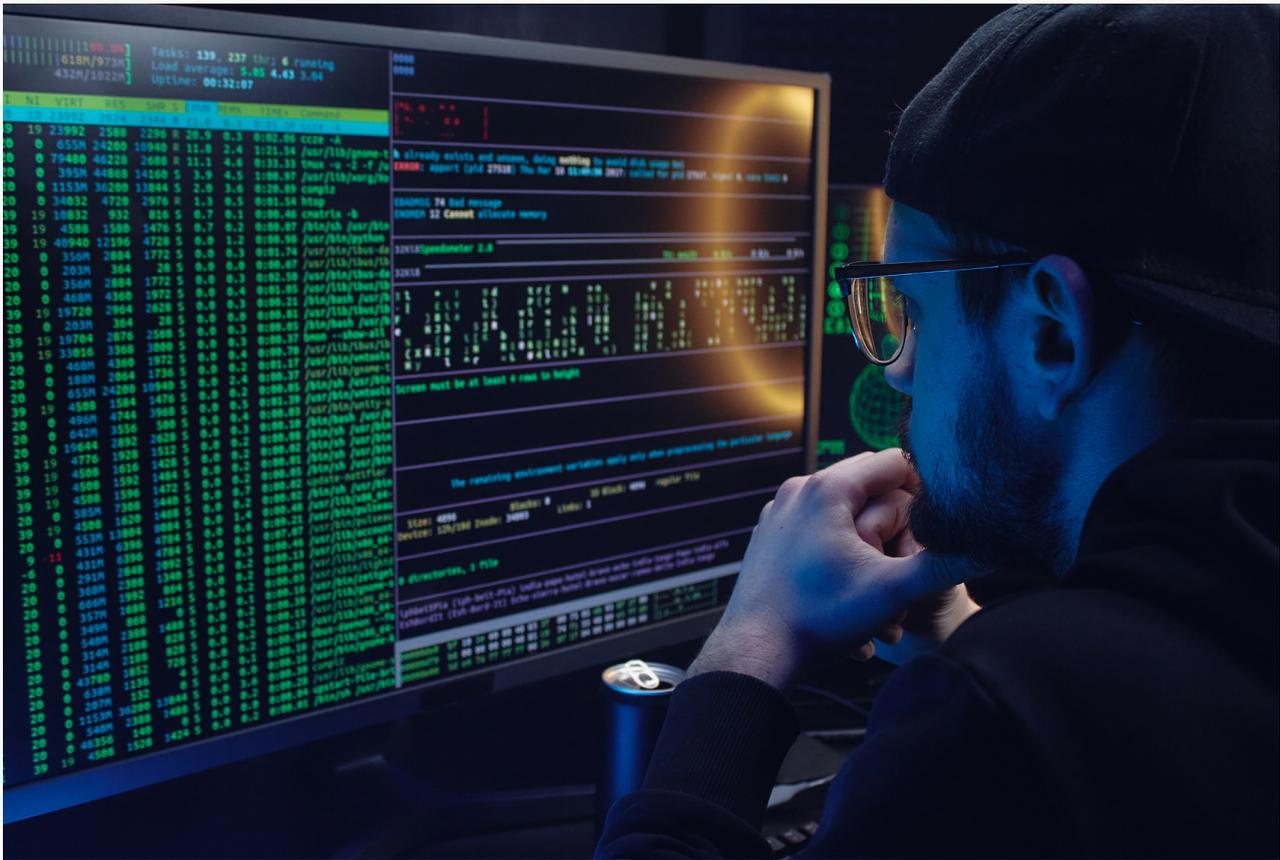
A failure to ensure the safety and privacy of consumer information has adverse effects on both consumers and businesses, including but not limited to:

- Loss of client/consumer trust,
- Lawsuits and legal fines,
- Endangerment of clients'/consumers' well-being by exposure of sensitive data,
- Abuse of information by third parties (e.g., identity theft, fraud, and financial theft)

Information leaks have gained more attention over the past five years due to higher reliance on Cloud storage for personal and professional uses. A well-known example of risks that data leakage presents is the recent case of Meta (Roth, 2022), which was fined $275 million US dollars, for an information leak that resulted in Facebook users' names, numbers, birth dates and locations being publicly posted on a hacking forum. Companies such as Facebook and WhatsApp have also been fined for violations of data American privacy laws, in the past couple of years.

To avoid threats such as this, stakeholders are becoming more demanding with safety and security requirements which are putting more pressure on IT and BPO companies to acquire the highest standards of data privacy and security and establish a trusting relationship with both internal and external stakeholders. For this reason, ISO standards such as 27001 were created by experts in the field and provide recommendations for Information security management (ISM) as detailed in Chapter 2.2. This standard treats the protection of data in all forms, from physical to digital. An example of that is the treatment of hard disks before disposal, which includes memory whipping and physical destruction of the device.

The most common internal human threats to data protection are human negligence or error, malicious insiders, privilege misuse, and third-party threats. Effective data protection practices include encryption, masking for high-value data (replacing sensitive information with random characters), data erasure (with regards to old files) and data resilience (creating full, differential, and incremental backups for critical data) (Ekran, 2022). Furthermore, establishing a cybersecurity policy and incident response plan is highly advised.

Social Opportunity

The world is moving away from old business models and the idea of a working environment that is solely product/service oriented. The modern age has uncovered fruitful results from offering employees ample opportunities for their creative involvement. Depending on the business, this can range from allowing employees to redesign their offices to their liking, offering new solutions for issues recognized in the community, or producing ideas for new initiatives or directions for the company brand. By offering an accepting environment that offers opportunities for professionals regardless of their age, race, gender, nationality, sexuality, political or social affiliation, invalidity, and so on. Such an open-minded hiring model offers ample benefits, which include the expansion of the talent pool. For instance, Microsoft provides an example of how hiring individuals with disorders brings a competitive advantage that most businesses are missing.

Table 5: Competitive advantage of hiring neurodivergent individuals

Type of neurodivergence	Reasons to hire neurodivergent individuals
Asperger's Syndrome	• Above average IQ • Highly level of detail • Excellent analytical skills • Creative thinking • Perseverance In a supportive environment with understanding supervisors: • Dependability • Loyalty • Trustworthiness • High level of performance
Attention Deficit Hyperactivity Disorder (ADHD)	• High level of creativity and innovation • Curiosity • Passion – elevated energy level • Resourcefulness • Entrepreneurial thinking • Pattern-detection • Solution-orientation • Empathy • Continuous learning • Good crisis-management In a supportive environment with understanding supervisors: • Timeliness • Hyper-focus • Production of high-quality work • Intuition • Level of detail • Action-orientation

Type of neurodivergence	Reasons to hire neurodivergent individuals
Obsessive Compulsive Disorder (OCD)	- Higher level of creativity - Exquisite level of detail, precision and attention - Empathy - Following through on set goals - Cautiousness
Bipolar Disorder (BD)	- Creativity - Empathy - Realism - Resilience - High-achiever
Autism spectrum disorder (ASD)	- High concentration level - Reliability - Conscientiousness - Persistence - Accuracy - High level of detail - Ability to detect errors - Technical abilities - Excellent memory and factual knowledge

It has been demonstrated through numerous surveys conducted by the Organisation for Economic Co-operation and Development (OECD) that individuals affected by mental illness are motivated to work but issues such as discrimination, negative stigma, and a lack of a mental-health support system or services within organisations create difficulties for them to find and retain employment. The recognition of this problem creates a need for policy transformation to support the employment of vulnerable social groups. Each employee is a potential agent of change within a community, which is why a healthy working environment, tailored to support inclusion and diversity, can have an immense positive social impact – reflecting on families, social groups, communities, and societies. Both IT and BPO companies are heavily reliant on human potential, and they hold great power of social influence, thus their commitment to these social matters is crucial and a moral responsibility.

The provision of social opportunities for affected communities is an important part of CSR. Companies can work with local NGOs and associations to create positive social changes in their communities. Each company has the freedom to decide how to make a positive impact based on its values and sustainability goals. Expert consultants can also help estimate a company's potential for social influence based on their operations and values.

Unveiling the income advantage: Bipolar individuals earn more than general population's top 5 percent

Research conducted in Denmark found that in relation to individuals in the general population, those with bipolar are seven times more likely to be among the top 5 per cent of wage earners.

(Flanigan, 2022)

Inclusive business practices: Empowering staff with disabilities

IBM Corporation and Cisco Systems have recognized the benefits of employing a disability-friendly approach in business and insist on recruiting and retaining staff regardless of impairments to their physical or mental health. IBM Corporation also offers an awareness training programme for all staff to nurture inclusivity as the company's core cultural value. Such an inclusive approach in business has extensive benefits for the economy and society, including social integration and improved life quality.

(Havens, 2016)

2

EU Directives & National Law

Legislations in BiH relevant to the IT & BPO sector

ISO standards

Navigating the ESG reporting landscape

International instruments & global sustainability frameworks

EU Directives & National Law

Companies need to comply with national, and international laws to avoid potential sanctions, brand damage and supply chain disruption. Since many BPO and IT companies in BiH do business with companies from the EU, an awareness of relevant EU directives and regulations on the topic of sustainability, social responsibility and environmental protection is necessary to avoid potential issues with EU and member states' legal systems. Below is an overview of EU directives relevant to the IT and BPO sector:

Table 6: Overview of EU directives relevant to the IT and BPO sector

Title	Enacted	Description
Non-Financial Reporting Directive (2014/95/EU) - NFRD	22/10/2014	Requires companies to include non-financial statements in their annual reports or in a separate filing from 2018 onwards, including information on environmental protection, social responsibility and treatment of employees, respect for human rights, anti-corruption and bribery, and diversity on company boards. This also applies to non-EU companies established in the EU with over 500 employees.
Enforcement and Modernisation Directive (EU) 2019/2161 ('Omnibus Directive')	27/11/2019	Introduces enhanced enforcement measures and increased transparency requirements, but simultaneously imposes additional obligations on entrepreneurs ("trader") conducting online business (especially B2C [Business-to-Consumer] transactions) and offering digital services in exchange for personal data instead of money as payment ("free services"). It also widens the scope of the consumer protection framework to digital goods, content, and services.
Corporate Sustainability Reporting Directive (CSRD)	16/12/2022	Companies start reporting, under the CSRD, in 2024, in line with mandatory EU sustainability reporting standards and alongside an external assurance of sustainability reporting. Companies that are not European but that are operating in the EU (whether listed or not) may be subject to the CSRD if they meet certain thresholds and/or if such companies have at least one subsidiary or branch in the EU and a net turnover of more than €150 million generated in the internal market. If the non-EU company has an EU subsidiary, the CSRD will only apply if the subsidiary is either large or listed – and is not a micro undertaking. If the non-EU company has an EU branch, the CSRD will only apply where the branch generates a net turnover of more than €40 million.
Regulation (EU) 2020/852 – The EU Taxonomy Regulation	22/6/2020	Establishes a framework to facilitate sustainable investment. It aims to create a 'green list' of environmentally sustainable economic activities. It was designed to support the transformation of the EU economy to meet its European Green Deal objectives, including the 2050 climate-neutrality target. It seeks to provide clarity for companies, capital markets, and policymakers on economic activities that are sustainable and to support investment flows into those activities.

Legislations in BiH relevant to the IT & BPO sector

Table 7: Legislations in BiH relevant to the IT & BPO sector

Title	Number	Enacted	Description
Labour Law of FBiH	Official Gazette of FBiH No. 43/99, 32/00 and 29/03	8/6/2022	This Law regulates the conclusion of employment contracts, working hours, wages, termination of employment contracts, the exercise of rights and obligations from employment, conclusion of collective agreements, peaceful resolution of collective labour disputes and other issues from employment in FBiH.
Labour Law of RS	Official Gazette of RS No. 1/2016, 66/2018 and 91/2021	1/1/2022	This Law regulates labour relations, rights, obligations, and responsibilities arising from employment relations and other relations based on work in the RS.
Law on Occupational Health and Safety of FBiH	Official Gazette of FBiH No. 79/2020	30/10/2020	This Law regulates the rights, obligations and responsibilities of employers and workers in connection with the implementation and improvement of the safety and health protection of workers at work, the general principles of prevention, and the system of safety and health protection. Its application achieves the prevention of injuries, occupational diseases and other diseases related to work, as well as the protection of the working environment, and other related issues.
Law on Occupational Health and Safety of RS	Official Gazette of RS No. 1/2008 and 13/2010	22/2/2010	This Law regulates the safety and health at work as an activity of general interest, determines the holders of the implementation and improvement of safety and health at work, their rights, obligations and responsibilities, preventive measures, as well as other issues related to safety and health at work in RS.

Title	Number	Enacted	Description
Law on Waste Management of FBiH	Official Gazette of FBiH No. 33/03	8/07/2003	This Law regulates all categories of waste (except radioactive waste, gases released into the atmosphere and wastewater), all types of waste management activities, operations, and facilities. The provisions of this Law shall also apply to waste generated by the exploitation of resources, extraction, treatment and exploitation of mineral products and quarry operations, liquid waste, animal waste and other non-hazardous materials of natural origin that can be used for agricultural purposes, disposed explosives, unless regulated by a special regulation.
Law on Waste Management of RS	Official Gazette of RS No. 111/13, 106/15 and 16/18	2/7/2020	This Law regulates the types and classification of waste, waste management planning, waste management entities, responsibilities, and obligations in waste management, waste management, management of special waste streams, licensing process, cross-border movement of waste, waste reporting and databases, financing of waste management, supervision, as well as other issues relevant to waste management in RS.
Law on Environmental Protection of FBiH	Official Gazette of FBiH, No. 15/2021	24/2/2021	This Law regulates the conservation, protection, restoration and enhancement of environmental quality and capacity of the environment and quality of life. Additionally, it regulates the measures and requirements for mandatory and sustainable nature management, conservation and rational utilization of natural resources in the environment. The primary goal of this Law is the reduction of the use of certain sites or aspects aimed to prevent the pollution of the environment, as well as the improvement and restoration of the damaged natural sites; the protection of human health and the conservation and protection of natural resources, rational use of resources.

Title	Number	Enacted	Description
Law on Environmental Protection of RS	Official Gazette of RS No. 71/2012, 79/2015 and 70/2020	10/7/2012	This law regulates the protection of the environment in order to preserve it, reduce the risk to life and human health, and ensure and improve the quality of life, protection of all elements of the environment, information and access to information in the field of environmental protection, planning and environmental protection, strategic impact assessment and environmental impact assessment, procedure for issuing environmental permits and prevention of large-scale accidents, eco-labelling system and environmental management, financing of environmental activities, liability for damage caused to the environment, as well as the rights and obligations of legal and natural persons performing activities established by this Law.
Law on the Use of Renewable Energy Sources and Efficient Cogeneration of FBiH	Official Gazette of FBiH, No. 70/13 and 5/14	11/9/2013	This Law regulates the (i) promotion of the use of renewable energy sources (RES) and efficient cogeneration (EC), (ii) the definition of binding goals of the share of RES in the total final energy consumption in the FBiH, (iii) the definition of binding goals of the share of RES in the production of electricity, heating energy and refrigeration and consumption of RES in transport, (iv) defining technologies for the use of RES and EC, (v) exploring the potential of RES, (vi) incentivising measures for the generation of electricity and heat from RES and EC and incentivising measures for the use of RES in transport, (vii) rules on issuing guarantees of origin for electricity produced from RES and keeping the Register of Issued Guarantees of Origin, their transfers and cancellation, (viii) keeping the Register of Projects and installations of RES and EC, (ix) the status of qualified, privileged and potentially privileged producer of electricity from RES and EC, (x) conditions for the establishment and development of the electricity market produced using RES, (xi) construction of installations for the production of electricity from renewable energy sources and efficient cogeneration, (xii) the connection of RES plants to the electricity grid.
Law on Renewable Energy Sources of RS	Official Gazette of RS No. 15/22	3/3/2022	This Law regulates the planning and stimulation of the production and consumption of energy from renewable sources, technologies for the use of renewable energy sources, certification of production facilities, incentive measures, implementation of production incentive systems, and production of electricity by customers-producers individually or within communities, and the manner of keeping a register.

ISO Standards

ISO standards offer best practices related to quality management, environmental management, health & safety, energy management, food safety, & IT security.

ISO standards are developed by the International Organisation for Standardization (ISO), an independent, non-governmental international organisation with a mission of establishing a collaboration between experts worldwide for the purpose of developing market-relevant standards offering solutions to global issues and supporting innovation. To this date, there are more than 22,000 international standards applied by industries, governments, and individuals to support the realisation of the SDGs (International Organisation for Standardization, 2023). ISO standards offer best practices related to quality management, environmental management, health and safety, energy management, food safety and IT security. ISO standards that we will be focusing on in this Guide are the ones most relevant to the IT and BPO sector, which are: ISO 9001, ISO 14001, ISO 45001, ISO 27001, ISO 22301, ISO 27701, and ISO 26000.

ISO standards are globally accepted, and they assist in identifying safety risks of offered services or products, provide recommended solutions to global problems in industries, and provide recommendations for technological challenges and management practices. Airing certification based on specific ISO standards is a useful asset when it comes to building a company model and image aligned with principles of corporate social responsibility.

As an ISO-certified company, the business bears more credibility and assurance in service safety, reliability, and quality. Furthermore, these standards contribute to cost reductions, increased in access to new markets, meeting regulatory requirements and customer confidence. Figure 5 presents the number of ISO standards that apply to each SDG goal. Standards in the following table are implemented by IT and BPO companies the most (SIS CERT, n.d.), with the aim of incorporating SDGs into business models:
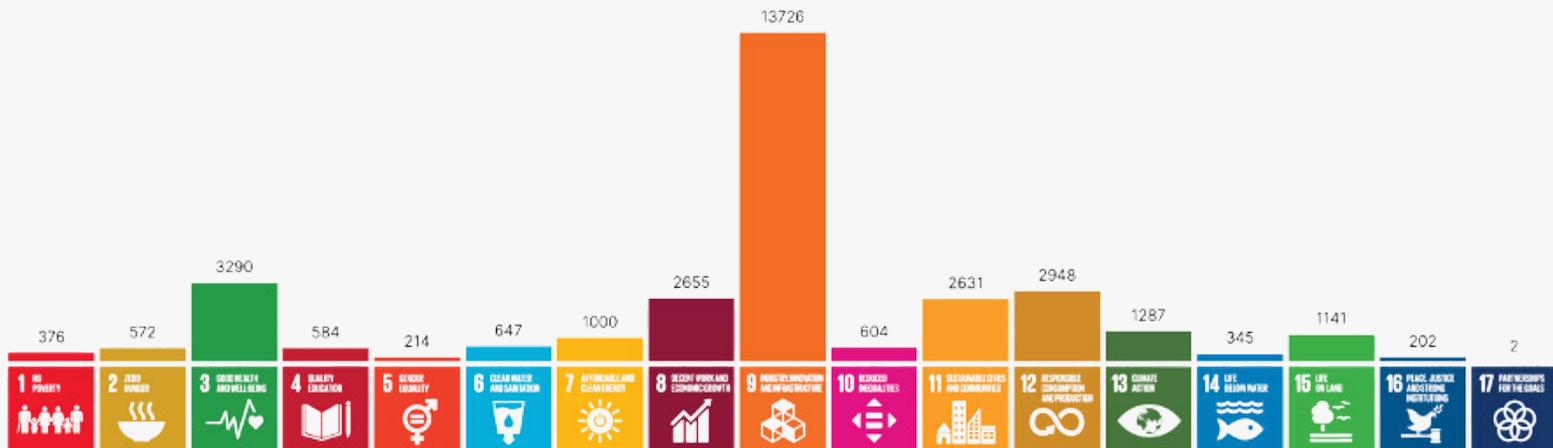

Figure 5: The number of ISO standards that apply to each SDG goal

Table 8: ISO standards

ISO standard	Description
ISO 9001 Quality Management System (QMS)	This ISO specifies the requirements for a company to increase efficiency by implementing quality-focused procedures, increase revenue while identifying cost-saving opportunities, increase employee productivity and reduce errors, access international markets, ensure long-term success based on fact-based decision-making, increase confidence level between the company and suppliers, improve record-keeping for improved efficiency and problem-solving, improve customer satisfaction through a feedback system for resource preservation, continuously improve through trend analysis and reporting.
ISO 14001 Environmental Management System (EMS)	The ISO 14001 standard specifies the requirements for an environmental management system that a company can use to enhance its environmental performance. This standard is intended for use by a company seeking to manage its environmental responsibilities in a systematic manner that contributes to environmental sustainability. It also helps an organisation achieve the intended outcomes of its environmental management system, which provide value for the environment, the company itself and interested parties (ISO, 2015).
ISO 45001 Occupational Health and Safety Management System (OHSMS)	ISO 45001 is relevant to Occupational health and safety, which has a direct impact on employee productivity. The benefits of implementing this standard include ensuring an effective OHS policy, the reduction of occupation-induced injuries, risk identification and management, demonstration of commitment to safety internally and externally, and access to international markets.
ISO 27001 Information Security Management System (ISMS)	The ISO 27001 standard is the most implemented by IT companies. This standard specifies requirements for an information security management system (ISMS), which is a systematic approach to managing sensitive company information so that it remains secure. Best practices presented in this ISO standard provide the necessary know-how for companies, regardless of their size or sector, for managing security assets such as Intellectual property, financial information, and employee data. The benefits offered include securing information of all forms (physical copies or digital data), preventing cyber-attacks, implementing protection organisation-wide, efficiently responding to emerging security threats, reducing costs, and protecting confidentiality, integrity, and availability of data.
ISO 22301 Business Continuity Management System (BCMS)	This standard is relevant to the Business Continuity Management System of a company, and it aids in the preparation of a contingency plan in case of any threat that may disrupt the continuity of the business. The implementation of this standard provides a framework for the creation and application of plans for protecting the business from unforeseen circumstances and emergencies, ensuring operational resilience, recovery plans, risk management and security. In turn. These measures help the business meet strategic goals, gain competitive advantage, increase credibility, improve operations and supply chain resilience, eliminates vulnerabilities, reduces dependence on individuals, and fulfilment of legal requirements.
ISO 27701 Privacy Information Management System (PIMS)	This ISO standard refers to Privacy Information Management and ensures that a company abides by the GDPR requirements, protecting the privacy of data subjects and ensuring its non-disclosure to third parties, without consent, or its unlawful use in any event. This standard also allows for data leak detections and compromises due to an accountability system that requires a company to track which data is accessed, when and by whom. Data breaches must be communicated with customers immediately, as well as terms of use that provide a clear definition of personal data before entering into a relationship with the company.
ISO 26000 Social Responsibility	By applying the ISO 26000 standard, known as the Social Responsibility standard, the company benefits from an improved reputation and increased worker-retention rates as well as investor and customer attraction. This provides a competitive advantage to companies that open doors to international markets.

Certification process

The certification process entails the following steps:

STEP 01

Allocate resources

Allocate human (internal and external) and financial resources for the certification.

STEP 02

Conduct a gap analysis

Conduct a gap analysis to understand the baseline status of a company (preassessment to compare the current management system with the ISO standard).

STEP 03

Develop a system

Develop a system (new processes, new company policies, etc.) that meets the level of the ISO standard. Before applying for certification, the company must ensure that the developed system fulfils the ISO certification standard (internal auditing).

STEP 04

Find & choose a certification body

Find and choose a certification body that applies established CASCO standards and is accredited. The accreditation body will assess all the areas in the company's management system.

STEP 05

Get certified

Get the certification that will be valid for three years. The company will have to maintain and continually improve the system to renew the certification.

When it comes to the certification process, it is important to note that ISO does not provide these services. Certification is conducted by authorized external bodies.

Once a company is ISO certified, its certificate is valid for 3 years, during which audits are conducted on an annual basis to ensure that the company is upholding the required standards. It should be noted that some standards have requirements that overlap, thus when a company is looking to implement a new ISO standard, they only need to fulfil the aspects that have not been covered by the prior.

ISO standards are written as, for instance, ISO 14001: 2015. The first number indicates the family of standards, and the latter number indicates the year of the last review, not the year of viability.

Sustainability reporting: why it matters and how it works

Sustainability reporting is a process of collecting and disclosing information about an organisation's economic, environmental, social & governance (ESG) performance.

The reporting aims to provide transparency and accountability to stakeholders, including customers, employees, investors, and communities.

Such reporting implies the disclosure of company information based on a set of metrics designed to measure the performance of a business in terms of its impact on human relationships and the social construct, the environment, and how it approaches decision-making. Sustainability reporting frameworks help companies conform to global standards of disclosure for employing transparency in operations and contribution to the value chain, ensuring the company's accountability towards all who have a relationship with the company or are affected by its activities.

ESG compels businesses to incorporate practices into their business plans that call for careful consideration of their responsibilities and requires them to diminish or amend any adverse effects that they may have. Moreover, it requires them to direct their activities towards effectively addressing societal needs and motioning positive changes.

Aspects that are covered in ESG reporting are often referred to as being non-financial, however, the way they are treated has significant financial implications for the business. To understand ESG reporting, it is necessary to grasp the scope of concepts that it encompasses, which are presented below.

Environmental				Social				Governance	
Climate change	Natural resources	Pollution& waste	Environment opportunity	Human capital	Product liability	Stakeholder opposition	Social opportunity	Corporate governance	Corporate Behaviour
Carbon emissions	Water stress	Toxic emission & waste	Opportunities in clean technology	Labour management	Product safety & quality	Controversial sourcing	Access to communi-cation	Board diversity	Business ethics
Product carbon footprint	Biodiversity & land use	Packaging material & waste	Opportunities in green building	Health & Safety	Chemical safety		Access to finance	Executive pay	Anti-competitive practices
Financing environmental impact	Raw material sourcing	Electronic waste	Opportunities renewable energy	Human capital development	Financial product satefy		Access to health care	Ownership	Corruption & instability
Climate change vulnerability				Climate change vulnerability	Privacy & data security		Oppportunities in nutrition & health	Accounting	Financial system instability
					Responsible investment				Tax transparency

Figure 6: The number of ISO standards that apply to each SDG goal

Ready, set, report

Essential requirements for reporting

To establish a practice of ESG reporting, a company should consider the following requirements:

Establish who will be responsible for leading ESG reporting, and make sure that the practice is supported by the company management and board of investors.

01

Form a team for ESG reporting, who will be responsible for and dedicated to establishing metrics and tracking progress.

02

Choose key measurements based on SDGs, company assets and operations, and business goals, and concerns emphasized by investors and stakeholders.

03

Decide on a framework that suits the company's needs and those of consumers, funders, and shareholders. This also entails the identification of priority factors within the framework that are to be measured and reported on, as well as defining the company baseline.

04

Partner with experts to conduct audits and provide insights for improvement of processes.

05

06

Communicate progress across the board, with employees, partners and clients.

Submit reports to evaluation bodies for verification, recognition, comparison with other companies and to boost competitiveness of the company.

07
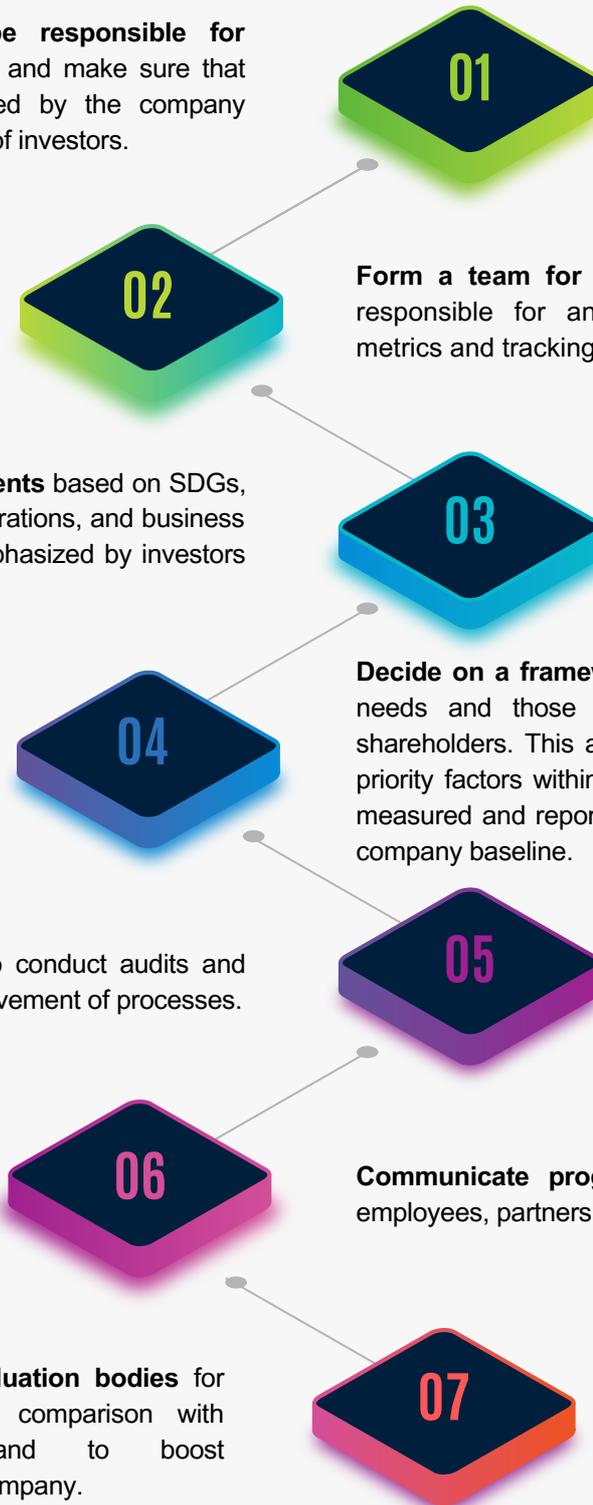
Navigating the ESG reporting landscape
A guide to frameworks

There are several frameworks that allow for ESG reporting, partially or wholistically, and some of the most notable ones are ISO 26000, Global Reporting Initiative (GRI), Sustainability Accounting Standards (SASB), Carbon Disclosure Project (CDP), UN Global Compact, and B Impact Assessment.

Table 9: A comparison of ESG impact assessment frameworks

Term	Primary purpose	Audience of Reporting	Works Well With	Primary Business User
ISO 26000	Introductory guidance on what is needed to develop a Corporate Social Responsibility function	NA	NA	Chief Executive, Finance, and Legal Officers to establish the CSR Function, and then Head of CSR for early guidance
Global Reporting Initiative (GRI)	Help companies understand what ESG and CSR factors it can measure and manage, and guidance on how to do so	All stakeholders, including investors	SASB, CDP, UNGC	Chief Finance, Legal, HR, and Sustainability Officers, primarily managed by the Head of CSR and/or Head of ESG
Sustainability Accounting Standards Board (SASB)	Help companies understand what ESG factors matter to their business and should be disclosed to investors	Primarily investors	GRI	Chief Executive, Finance, and Legal Officers, managed by Head of ESG
Carbon Disclosure Project (CDP)	Help companies understand how effectively they are managing water and greenhouse gas (GHG) emissions, and helping investors rate and rank them	Primarily investors	GRI	Head of ESG, Chief Financial Officer
UN Global Compact (UNGC)	Help companies set ESG and CSR targets in service of the United Nations Sustainable Development Goals	All stakeholders, including investors	GRI	Chief Executive, Finance, and Legal Officers, managed by Head of CSR
B Impact Assessment	An overall assessment on all CSR factors that go into making a business more responsible	All stakeholders, primarily partners and consumers	GRI, UNGC	Chief Executive, Finance, Legal, HR, Sustainability, Product, Technology Officers, and Head of CSR

The most comprehensive approach to ESG reporting is the GRI framework, which is applicable to any industry and recognized globally. The standards in this framework are constantly updated based on innovations in the field of sustainability and emerging best practices. Consequently, alignment with these standards allows a company to follow global trends and gain an advantage over competitors.

Businesses that employ GRI reporting can choose to report at various depths and intervals, and they can apply the framework to various facets of their corporate activities. The guidelines for GRI reporting are as follows:

Balance and thoroughness: GRI reporting should be comprehensive, encompassing all aspects pertinent to the company's social and environmental performance, even if this means including information regarding negative impacts and outcomes.

Inclusivity: Stakeholders' varied perspectives and quality standards should be considered when compiling a GRI report.

Materiality: GRI reporting should emphasize tangible sustainable solutions that are beneficial to the company as well as its stakeholders and that contribute to the company's capacity to realize its sustainability goals.

Relevance: GRI reports must offer stakeholders meaningful and accurate information, such as details on the company's sustainability agenda, governance and management framework, and the implications of its sustainability performance.

Comparison: Information provided through GRI reporting ought to be comparable, enabling stakeholders to evaluate the effectiveness of different companies' practices, and allowing those businesses to gauge their achievements against competitors.

Timeliness: GRI reporting must be done in a timely fashion, reflect the current sustainability practices and initiatives, and convey the latest information regarding the company's social and environmental performance.

Clarity and disclosure: GRI reports should be transparent and easily understood, conveying data in a manner that is simple to comprehend and access.

The GRI Standards are a modular system of interconnected standards. They allow organisations to publicly report the impacts of their activities in a structured way that is transparent to stakeholders and other interested parties (Global Reporting Initiative, 2023). Choosing the right GRI Standard to meet the company's reporting needs is the first necessary step in the process. The standards are categorized into three topic blocks: 200 – Economic topics, 300 – Environmental topics and 400 – Social topics. Step two is establishing a reporting baseline and boundaries, which defines the scope of the report and identifies the operations to be covered by it. Data assembly can be conducted using a variety of sources, such as consumer surveys, company databases, internal or external reports, and other. Next, the format of GRI reporting needs to be adopted and there are two to choose from: core and comprehensive.

The essential components of SRs are included in the core option, which provides the context for how businesses communicate their governance, economic, environmental, and social performance. The comprehensive option, on the other hand, expands upon the Core through additional standard disclosures that relate to organisational strategy and analysis, governance, ethics and integrity. Both options stress material elements, however, the comprehensive option explains all specific disclosure indicators for material aspects whereas the core option simply explains a specific one (Global Reporting Initiative, 2013).

When composing the report, the company should provide insight into environmental and social initiatives and reply on GRI Standards to discuss each of the sustainability-related themes in the report. To ensure the accuracy and credibility of the report, it should be examined and validated by an independent third-party authority, with expertise in social, environmental and governance issues. The last step is communicating the report to stakeholders through the company's website and social media accounts and gaining feedback from stakeholders for future amendments in the company strategy and ESG approach.

3

How to track progress towards

your commitments & communicate with stakeholders

How to track progress towards your committments & communicate with stakeholders

Overseeing E&S aspects by a sustainability manager

Sustainability managers are responsible for overseeing the creation and implementation of a company's sustainability strategy. The role and responsibilities of a Sustainability Manager/Officer in a company is diverse, from tracking sustainability goal indicators, and employee education, to reporting on E&S aspects.

A company's sustainability manager can assist in developing a strategic direction towards sustainability and defining sustainability goals by offering guidance on how to integrate sustainability principles into core business operations, identifying opportunities for improvement, setting targets, and developing action plans to achieve those targets while ensuring compliance with relevant laws and regulations.

A sustainability manager should preferably be someone from senior management, with sufficient authority and organisational influence to ensure that an environmental and social management system —

ESMS can be properly implemented across the organisation. They should also preferably have a reasonable background in, or a familiarity with environmental aspects and finance and be familiar with risk management.

Additionally, a sustainability manager can facilitate communication with stakeholders and coordinate efforts to communicate the company's sustainability policy and goals with clients and suppliers. Social media can also be an effective tool for presenting achievements in reaching sustainability goals and engaging with stakeholders. By involving the entire organisation in sustainability efforts and promoting transparency, a company can not only meet environmental and social objectives but also gain a competitive advantage in the marketplace.

Some key environmental and social steps towards sustainability, and metrics, are:

Table 10: Key steps towards sustainability and E&S metrics

Environmental	Social
• Define sustainability goals (e.g., increase energy efficiency, reduce GHG emissions, use carbon free energy, work with suppliers that adhere to environmentally and socially responsible practices, reduce e-waste, adoption of E&S Policy, etc.) • Identify your data sources (invoices, supplier reports, travel logs, etc.) • Top leadership committed to sustainability • Create a dedicated sustainable IT/BPO team • Align services and the company business model with defined sustainability goals (software architecture includes a sustainability perspective – design and develop software that reduces energy consumption, optimize resource usage, adapt eco-friendly practices, etc.) • Collaborate with suppliers who are engaged in green and sustainable practices • Conduct sustainable awareness sessions/trainings for all employees (at least once a year) • Track metrics such as, but not limited to: number of defined sustainability goals, sustainable IT/BPO team created, software developers attend training on sustainability perspective, number of contracts with green suppliers, number of trainings for employees on sustainability, development of action plan on e-waste reduction, number of components sold for reuse, etc.	• Define sustainability goals (e.g., adoption of policies related to inclusion, diversity, anti-corruption, health and safety, adopting an E&S Policy, integrating a supplier code of conduct and expectations in the contractual agreement, recruiting people with disabilities, launching programme/training for management and hiring team to ensure that hiring process is accessible and equitable for people with autism, etc.) • Review adopted policies (at least once a year) • Top leadership committed to social responsibility • Integrate E&S Policy • Track metrics such as, but not limited to employee diversity - gender (% women in executive/senior level positions), diversity representation in the decision-making team, number of training sessions on inclusion, diversity, anti-corruption and similar, the number of training on disability awareness for management and employees, number of work incidents/accidents, and so forth.

Motivation for Sustainability Reporting

Communities are growing more demanding in terms of estimating the value of companies' contribution to their communities, while employees seek assurance that their company is a positive force in the world, making meaningful changes and promoting good citizenship. Sustainability reporting has become a useful tool for companies to communicate their advancement in commitment to SDGs and corporate responsibility, with all relevant stakeholders (Richards & David, 2009). These reports allow businesses to exchange views on key social and environmental issues and opportunities, and to share ideas on how to address problems through a united and eclectic approach, raising awareness of corporate responsibilities. There are six core reasons for businesses to commit to sustainability reporting:

Enhanced long-term performance
Putting more emphasis on sustainability may result in advancements in supply chain management, waste reduction, and energy efficiency, which would increase savings and boost the company's reputation.

Improved accountability and transparency
Companies can employ the sustainability report as a platform to foster long-lasting relationships with stakeholders, by being transparent about their practices when it comes to governance, social, and environmental performance. Additionally, it enables the business to monitor its development and effects on society, the economy, and the environment in relation to the UN's sustainable development goals. This kind of reporting is a mechanism for documenting the company's responsibility for its operations, which is increasingly seen by investors and customers as a non-negotiable aspect.

A thorough insight into a company's vulnerability and informed risk management
When it comes to sustainability-related risks and problems, such as legal liability, reputational harm, and declining market value, a company acquires more understanding by tracking business operations based on set criteria and can improve internal mechanisms.

Smart decision-making
Companies can take advantage of data from sustainability reporting to allow the recognition of the potential for cost-saving, waste reduction, and optimization of operational effectiveness, among other business objectives.

Enhanced competitiveness
Companies with a strong track record of sustainability can distinguish themselves from their rivals while attracting customers who care about social and environmental concerns. Businesses that exemplify a dedication to environmentally and socially sound practices can strengthen their image and brand credibility, resulting in greater customer loyalty and fairer investor relationships.

Attracting international investors
When making investment decisions, investors are increasingly taking ESG factors into account. Companies can show that they adhere to ESG by compiling sustainability reports, making them more appealing to investors and significantly increasing access to funding.

4

Overcoming bottlenecks

The challenges in implementing ESG strategies & reporting on progress
Overcoming bottlenecks

The performance of a business in areas associated with sustainability, social responsibility, and ethical standards is documented through the process of ESG (Environmental, Social and Governance) reporting. Although this type of reporting is becoming increasingly emphasized by investors, stakeholders, and the wider community, there remain a significant number of obstacles that may prevent it from working effectively. The following are some notable challenges in ESG reporting:

Diversity in frameworks
Reporting can be conducted using divergent frameworks, which may result in inconsistencies in the way companies report sustainability efforts. This limits the possibilities for stakeholders to gauge the differences between companies.

The scarcity of data for a holistic ESG overview of the company profile
In the initial phases of ESG reporting, the company may be missing a significant amount of data due to a previous lack of framework and metrics for tracking environmental, social and governance impact. Thus, businesses may overlook key data or indicators required to report on every facet of their ESG performance.

Insufficient commitment to transparency and misuse of ESG reporting for publicity
Companies that have not considered the aspects of social and corporate responsibility to a sufficient extent previously, may be intimidated by the process of ESG reporting and the publication of the business's status in that regard. Thus, there is a higher level of danger in terms of greenwashing and manipulation of data to portray a more positive image of the company's commitment to ESG. Some businesses could be reluctant to release specific ESG-related data due to worries over confidential information or a lack of dedication to sustainability.

Lack of independent verifications and validation affecting reliability, and incomplete reporting
Instead of giving a thorough overview, companies may merely report on specific ESG performance metrics. This may present a challenge for stakeholders to holistically assess a company's sustainability practices. The process is often done internally by the company staff, and it lacks independent verification and validation, which may bring into question the reliability of the data due to a lack of specialization in these issues.

Business's low degree of readiness for the implementation of operational changes in the long-term
The final stage of ESG reporting is goal-setting for future business operations in order to improve their environmental, social and governance impact. However, many businesses are reluctant to incorporate sustainability practices due to the extra costs that they entail, and many smaller businesses do not consider these as a priority over an increase in salaries and liquidity.

Businesses should consider these factors carefully and estimate how they might compromise their process of ESG reporting to reduce redundancy and maximize benefits for further development of the business and increase its profits. To overcome these obstacles and to maximize the benefits of ESG reporting, it is strongly recommended that IT and BPO companies collaborate with an independent authority that can provide a parametric system and guidance for BiH companies on how to efficiently measure their scope of impact, implement monitoring, profit from waste management, attract investors, and effectively share reports with stakeholders.

Moreover, companies can collaborate with NGOs or other organisations that have expertise in specific ESG issues to successfully incorporate measures into their business strategy. In order to understand how consumers, think about ESG issues, they may leverage data from social media and other sources for creating a more informed plan of initiatives. Additionally, companies can create incremental action plans to progressively introduce new rules and procedures. Businesses can overcome the difficulties in implementing ESG strategies and enjoy the advantages of sustainable operations with improved social responsibility by taking these actions.

IT and BPO companies are drivers of change in society, and they have an ethical responsibility to care for the well-being of future generations and the planet. Current environmental and social practices are leading to the destruction of natural resources, and polluting drinking water, air, and land. Making radical changes in business operations is no longer a voluntary option, it has become an existential matter, making it a non-negotiable imperative.

5

Overview of current practices of the BPO & IT sectors in BiH
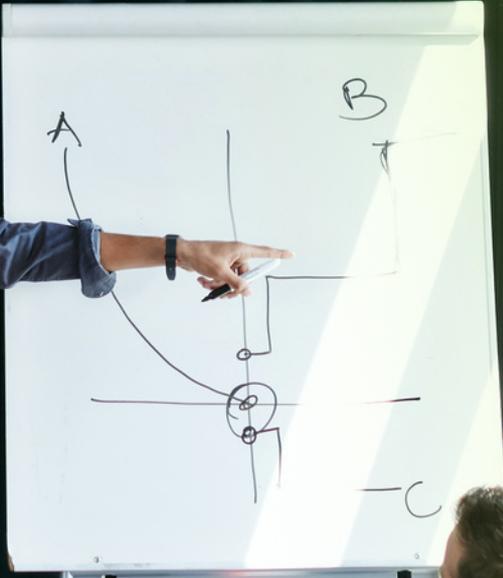
Sustainable performance of BPO & IT companies in BiH

This research was conducted through the exploration of existing qualitative resources as well as through online interviews conducted with IT and BPO associations and companies between November 2022 and January 2023. The questionnaire was designed to outline general information and current practices, summarise environmental and social aspects, and potential avenues of future development for BPO and IT companies. The Interview Guide was structured in accordance with the key challenges previously identified by partners in MarketMakers and IT and BPO associations. The questionnaire contained several open-ended questions allowing in-depth discussion with each interviewee, as well as some close-ended questions related to ratings of employee and management's understanding of sustainability principles.

Social Responsibility

In BiH IT & BPO companies, women occupy leadership roles but significantly less than men.
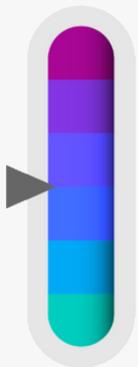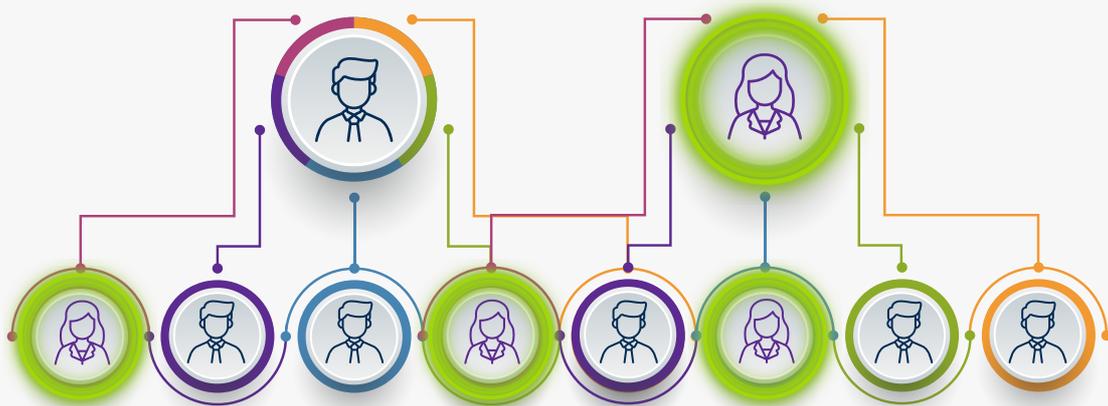
Average familiarity with the concept of sustainability on employee & management levels in BiH companies is rated between basic and moderate.

Common values of IT & BPO companies are:

PEOPLE FIRST

HONESTY

INTEGRITY

CREATIVITY

EXCELLENCE

IT & BPO companies in BiH work:

90% internationally

10% locally

Commitment to Sustainability

Most companies opt for certification if it is required by the client or partner, depending on international laws and company policies.

Most acquired ISO certificates by BiH IT & BPO companies:


QUALITY
MANAGEMENT

INFORMATION
SECURITY
MANAGEMENT

PRIVACY
INFORMATION
MANAGEMENT

Voluntary vs required certification:
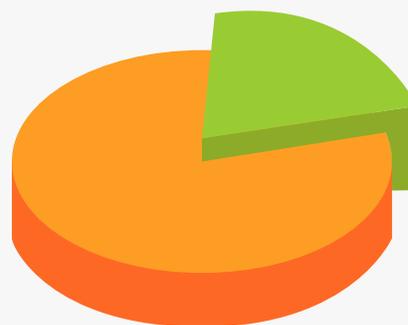
E-waste management

Organisations must have a disposal and destruction policy covering all data and assets, including electronic and paper records.

All companies that are ISO 27001 certified have a policy for the proper disposal and destruction of e-waste and other types of data.

Buying equipment

Purchasing is done through reputable suppliers but companies do not necessarily consider whether those suppliers adhere to environmentally and socially responsible practices.

Move towards renewable energy

Adapt internal codes & guidelines to include more diversity & inclusivity

Help individuals & communities in disadvantaged socio-economic positions

Through several interviews with IT & BPO companies, they shared their greatest wishes and plans for the future of their businesses. The following goals were identified as the most common:

PLANS FOR
THE FUTURE

Attract foreign employers & companies in BiH & their investments

Lessen employee fluctuations

Increase visibility in international markets

01

02

03

04

05

06

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Further reading

No	Further reading	Description
1.	Right to Repair Europe https://repair.eu/about/	The "Right to Repair" movement is made up of community repair groups, environmental activists, social economy actors, self-repair advocates and any citizen who would like to claim their right to repair.
2.	Scam4Chem.app	This application helps to find out whether a consumer article contains substances of very high concern in concentration above 0.1%. It applies to electronic devices, furniture, carpets, sport shoes, textiles, etc.
3.	Cradle to Cradle: Remaking the Way We Make Things	The authors emphasize the importance of designing products and systems that can be reused and recycled indefinitely, instead of being disposed of in landfills or incinerated.
4.	towards the Systematic Reporting of the Energy and Carbon Footprints of Machine Learning https://web.stanford.edu/~phend/papers/ClimateML.pdf	Working paper – tracking real time energy consumption and carbon emissions.