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Comparative analysis of organisational performance using the EFQM Excellence Model: the sustainability perspective

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Abstract

Given the escalating environmental challenges, companies must recognise the impact of their activities on the planet. By acknowledging their environmental responsibilities, organisations can develop practices and foster cultures that minimise waste and enhance value while optimising costs and saving time, thereby improving productivity. Therefore, global organisations have prioritised sustainable business practices safeguarding the environment, economy, and society. Thus, this paper seeks to conduct an in-depth analysis of the sustainability strategies employed by companies within the energy sector. The study utilises the EFQM Excellence Model criteria as a wide framework to achieve a comprehensive evaluation. This model provides a structured and systematic approach to examining and guiding the sustainability practices of these organisations, ensuring a thorough and detailed assessment of their efforts and outcomes. This approach aims to identify and present best practices and common pitfalls in terms of sustainability through comparative analysis. It will highlight key aspects that each analysed organisation employs to enhance organisational performance from a sustainability perspective. This process will compile a complete collection of examples, showcasing both effective practices and common pitfalls in sustainability. These examples will function as a resource for businesses, helping them to improve their organisational performance in the field of sustainability. By learning from these case studies, organisations can adopt successful strategies and avoid common mistakes, ultimately fostering a more sustainable and efficient business environment.

Keywords

sustainability, comparative analysis, EFQM Excellence Model, organisational performance

1. Introduction

As it is known, organisational performance represents the degree of similarity between the actual outputs of an organisation compared to the targeted ones. For a long period, companies primarily focused only on financial indicators (Conțu, 2020), considering them the only relevant outputs worth considering. This approach of measuring performance using only financial indicators narrows the potential of an organisation. Also, it leads to problems such as: "*dealt only with cost components and they quantify performance only in monetary terms, but there are many non-monetarily aspects of quantification such as Quality, customer service and lead-time reduction", "financial measure to assess performance may distort strategic objectives", "modern management techniques which allows autonomous decision making to shop-floor operators cannot be explicated by traditional financial measures*" (Looy and Shafagatova, 2016). Considering these statements, it can be affirmed that analysing organisational performance only from a financial perspective is incomplete. Therefore, organisational performance is just a short-term problem or a result of the moment because long-term performance is related to three main elements:: economics, society and environment. By measuring and constantly tracking a company's impact on these elements and comparing them with the objectives set for each of these branches, organisations can have a comprehensive and real approach to organisational performance. Thereby, it can be said that "*the traditional shareholder-focused perspective, which primarily aimed at maximising financial returns for shareholders, has evolved*" (Chungyalpa, 2021). The fundamental determinants that can significantly influence the achievement of financial performance are

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disclosed; these include the satisfaction of customers and their trust, the contentment of stakeholders, the fulfilment of employees, and the positive environmental impact.

The three elements recommended for analysing organisational performance, i.e., economic, social, and environmental factors, are the pillars of the "Triple Bottom Line" concept of sustainability. Since "*sustainability represents balancing the needs of the existing generation with the needs of the future generations in order to ensure that the next generation is able to meet their own needs in the future (World Commission on Environment and Development, 1987)*" it can be extended to businesses as "*Sustainability Performance (SP) is the organisation's ability to meet existing business and its stakeholders' needs while maintaining and enhancing the natural and human resources needed for the future* (World Commission on Environment and Development, 1987), (Balcıoğlu, Çelik, & Altındağ, 2024)". The "triple bottom line" concept was invented by John Elkington in 1994 and is a framework for integrating the three pillars of sustainability: economic, social and environmental aspects (Figure 1). The figure below illustrates that this concept encompasses all financial aspects while highlighting the environmental and social elements a company must consider. It emphasises the importance of setting clear objectives to ensure comprehensive sustainability. This new approach has, as a result, "*the fact that the responsibility of the company is not only to generate economic welfare (i.e., profit), but also to care for society (e.g., people) and the environment* (i.e., the planet) (Fauzi, Svensson, & Rahman, 2010)". That is why this comparative analysis of organisational performance benchmarks best practices in sustainability within the energy sector. By showcasing these practices, the paper aims to provide insights and recommendations for other companies to adopt similar strategies, enhancing sustainability performance across the industry. Additionally, the structured approach fosters a results-oriented culture within companies, incorporating a strong focus on sustainability. All this considers the increasing attention and pressure of world organisations (i.e. European Union, United Nations, Environmental Protection Agency) and governments to transform companies into "green organisations".

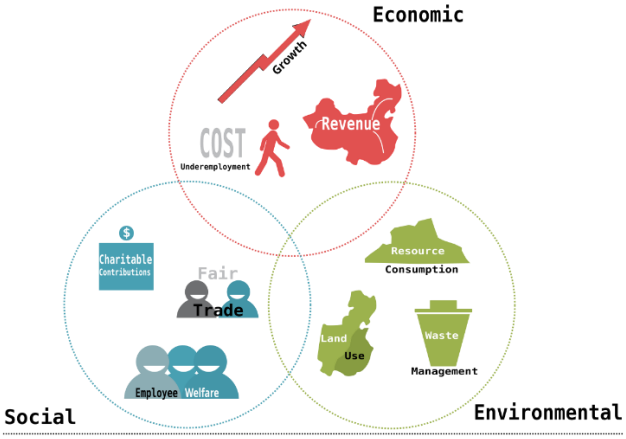

Figure 1. The three pillars of sustainability (Severin, Dijmarescu, & Caramihai, 2022)

Keeping these elements in mind, the present paper represents actual and necessary research for organisations, providing a detailed analysis of the best practices and examples of mistakes made in applying sustainability to culture and activities. The EFQM Excellence Model highlights successful strategies and common pitfalls in a comprehensive view of integrating sustainability in organisations. Through the EFQM Excellence Model criteria, it was possible to target both the external part of the organisation and its internal environment.

The EFQM Excellence Model (European Foundation for Quality Management Excellence Model) was created in 1989 and is a management framework that helps organisations navigate change and enhance performance. The model contains eight fundamental principles for organisational excellence and nine related criteria. Five of these criteria are classified as "Enablers" (leadership, people, policy and strategy, partnerships and resources, and processes), while the remaining four are categorised as "Results" (people results, customer results, societal impact results, and business results). The 'Enabler' criteria describe what an organisation does, while the 'Results' criteria reflect what an organisation achieves. 'Results' are driven by 'Enablers', and 'Enablers' are enhanced through feedback from 'Results' (Santos-Vijande and Alvarez-Gonzalez, 2007). For the present work, it is necessary to approach only the last principle from it, namely "Taking Responsibility for a sustainable future" and to be guided by its criteria ("Leadership", "Strategy", "People", "Partnership, Products and Services",

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"Customer Results", "People Results", "Society Results" and "Key Results") for the comparative analysis of the companies. The Model, recognising the diversity of methods for attaining sustainable excellence across all performance areas, is based on the principle that: "*Excellent results with respect to Performance, Customers, People and Society are achieved through Leadership driving Policy and Strategy that is delivered through People, Partnerships and Resources, and Processes* (EFQM, 2002) (Santos-Vijande & Alvarez-Gonzalez, 2007)". The EFQM Excellence Model is the most used framework in Europe for organisational quality (Eskildsen & Dahlgaard, 2000), and it is the basic model for evaluation for the European Quality Award. Therefore, in this paper, the analysis was guided by the EFQM model, focusing solely on the principle of sustainability (Figure 2) to achieve the proposed objectives.

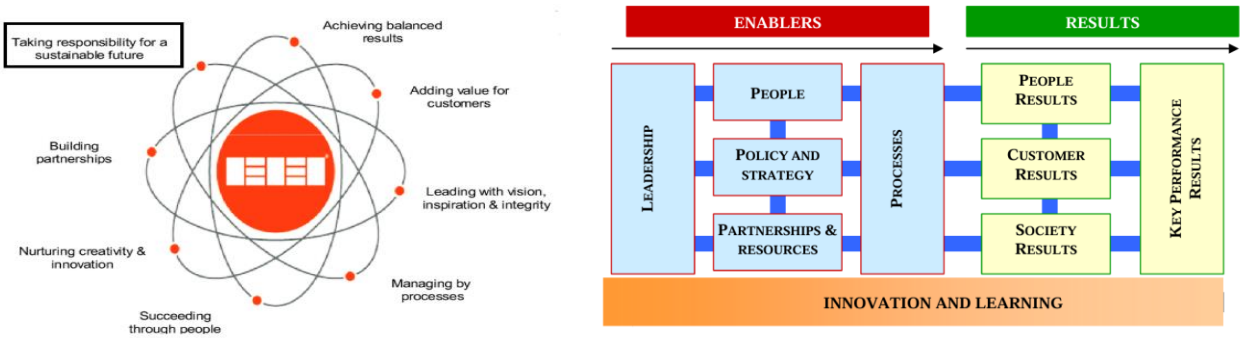

Figure 2. The "Taking responsibility for a sustainable future" principle (Olaru, Stoleriu, & Şandru, 2011) of the EFQM Excellence Model (Santos-Vijande & Alvarez-Gonzalez, 2007)

In this paper, the model facilitates the analysis of how organisations lead, plan, act, assess, and achieve sustainable performance. It identifies each company's environmental policies and strategies, including measures to reduce carbon emissions, manage natural resources, and promote renewable energy. Additionally, it examines operational performance in areas such as energy efficiency, waste management, and environmental impact. The model also highlights efforts and initiatives related to community engagement and corporate social responsibility, assessing their impact on sustainability at both local and global levels.

2. Data and methods

The analysis presented here focused on three large companies in the energy sector, which are market leaders in different areas: Siemens Energy in Europe, General Electric Power in the USA and Mitsubishi Power in Asia. By selecting three companies from different regions of the world, each with unique organisational cultures influenced by their local lifestyles, this paper will conduct a comprehensive benchmark to identify best practices in sustainability and highlight aspects that should be avoided.

Using the comparison criteria from the EFQM Excellence Model's concept of Taking Responsibility for a Sustainable Future, this analysis examines each company's sustainability practices' strengths and areas of improvement. The evaluation is based on each sub-criterion of the EFQM Excellence Model. Public Sustainability Reports from each company's website and information from the press served as sources for this analysis.

To better understand the context in which these three companies operate and their situation in the market, a brief overview of each is presented below.

- Siemens Energy is a global leader in energy business, with its headquarters in Europe. It is present in more than 90 countries, with around 99,000 employees. 16% of global electricity generation is based on their technology (Siemens, 2024);
- General Electric Power is a leading company in the energy sector, with headquarters in the USA. It boasts over 130 years of experience. It has around 75 000 employees globally, and GE's technology base helps generate "approximately 25% of the world's electricity" (GE Vernova, 2024);
- Mitsubishi Power is a leading company in the energy sector, with its headquarters in Japan. It is in over 30 countries and has approximately 18,000 employees across its global network (Mitsubishi Heavy Industries, 2023).

With this foundational information about each company now established, we can proceed with the detailed analysis of their sustainability practices. Therefore, in Table 1 below, criteria related to the chosen principle, "Taking Responsibility for a Sustainable Future", and the three companies are schematically presented. The information collected about the practices of each individual organisation is presented in Table 2, Table 3, and 4.

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Table 1. Criteria for EFQM Excellence Model and the three leading companies in the energy industry

Taking Responsibility for a sustainable future				
Criterion \ Companies		Siemens Energy *Europa*	General Electric Power *U.S.A.*	Mitsubishi Power *Asia*
1	*Leadership*	1.a. Leaders develop the Mission, Vision, Values and ethics and act as role models. 1.b. Leaders define, monitor, review and drive the improvement of the organisation's management system and performance. 1.c. Leaders engage with external stakeholders.		
2	*Strategy*	2.c. Strategy and supporting policies are developed, reviewed and updated.		
3	*People*	3.d. People communicate effectively throughout the organisation. 3.e. People are rewarded, recognised and cared for.		
4	*Partnership & Resources*	4.c. Buildings, equipment, materials and natural resources are managed in a sustainable way.		
5	*Processes, Products & Services*	5.d. Products and Services are produced, delivered and managed.		
6	*Customer Results*		-	
7	*People Results*		-	
8	*Society Results*	8.a. Perception 8.b. Performance Indicators		
9	*Key Results*		-	

Table 2. Criteria for EFQM Excellence Model regarding Siemens Energy

1.Leadership – "*Excellent organisations have leaders who shape the future and make it happen, acting as role models for its values and ethics and inspiring trust all times. They are flexible, enabling the organisation to anticipate and react in a timely manner to ensure the ongoing success of the organisation*" (Severin, 2023/2024).

1.a. Leaders develop the Mission, Vision, Values and ethics and act as role models.	
STRENGTHS	Leaders of Siemens Energy develop the organisation's goals and vision and culture through a sustainable view. Namely, they push the organisation to reduce greenhouse gas emission and produce renewable energy. They are committed to enabling decarbonisation through technology, addressing the lack of social inclusion, and creating sustainable energy solutions for the through partnerships. Leaders demonstrate and modelvalues, ethics and public responsibilities that support the culture by attending, organising and rewarding projects related to climate-neutrality, eco-efficiency, zero pollution, circular economy and zero harm. Siemens Energy Leaders set and communicate the clear direction of the organisation on sustainability by disseminating the three key areas: low- and zero- emission power generation, efficient transmission and storage of electricity and reducing CO_2 emissions from industrial processes. These three key areas are in the strategy of the Siemens Energy (Baldassarre and Finken, 2015).
AREAS FOR IMPROVEMENT (AFI)	Leaders failed to implement robust cybersecurity protocols, which led to a ransomware attack by the Cl0p group exploiting a MOVEit software vulnerability. This incident exposed vulnerabilities in their data protection strategies (SecurityWeek, 2023). The strategic vision for the wind energy sector was not effectively executed. Leadership underestimated the complexity and challenges of scaling up their wind turbine operations, leading to a disconnection between their strategic ambitions and operational capabilities (Siemens, 2024). Leaders did not effectively manage financial risks, as evidenced by the significant drop in share price following their request for government guarantees (SecurityWeek, 2023). Leaders failed to address persistent technical issues within the wind turbine division, which led to significant operational disruptions and increased costs. These unresolved issues have undermined the company's ability to deliver on its renewable energy projects effectively (Siemens, 2024).
1.b. Leaders establish, oversee, evaluate, and propel the enhancement of the organisation's management system and performance.	

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STRENGTHS	Leaders of Siemens Energy had integrated a management system for Business Area, Regional Hubs and Corporate Functions to speed up the services, to simply processes and for transparency in order to implement an ESG (environmental, social, governance) approach. Leaders develop and sustain risk and environmental management systems to improve the processes. Siemens Energy Leaders help in the design and implementation of an establishment, developing and reviewing the process of the organisational management system. Leaders ensure the minimisation of the impact on the environment through environmental management system, and they implement the approach of product stewardship by including all the environmental aspects, with the focus on climate change adaptation and resource efficiency. Leaders create the structure of the organisation in alignment with the policy and strategy according to an integrated management system covering quality (ISO 9001), environment (ISO 14001) and health and safety (ISO 45001) (Baldassarre and Finken, 2015).
AREAS FOR IMPROVEMENT (AFI)	Leaders did not manage financial risks adequately, evidenced by a significant share price drop following a request for government guarantees. This highlights shortcomings in financial planning and crisis management systems (SecurityWeek, 2023). Leaders failed to implement effective cybersecurity measures, leading to a ransomware attack by the Cl0p group exploiting a MOVEit software vulnerability. This exposed weaknesses in their data protection and risk management systems (SecurityWeek, 2023).
1.c. Leaders engage with external stakeholders.	
STRENGTHS	Leaders of Siemens Energy develop and sustain the usage of the Net Promoter Score (NPS) to evaluate and measure customer satisfaction. Leaders analyse the organisational performance in relation with to the satisfaction of customer requirements by evaluating this NPS score. Leaders conduct a materiality analysis in order to establish the Sustainable Program, engaging with selected internal and external stakeholders' groups such as customers, investors and partners. Leaders promote, support and engages in activities and collaborations with stakeholders in order to improve the sustainable improvement of the organisation and also to foster the environment and society. They make efforts to analyse, understand and meet needs and expectations of the stakeholders (Baldassarre and Finken, 2015).
AREAS FOR IMPROVEMENT (AFI)	Leaders did not fully anticipate or identify stakeholder perceptions that could lead to conflicts, which is crucial for ensuring smooth operations and maintaining a good reputation in customer projects (Siemens, 2016). Leaders communicate poorly with stakeholders, including shareholders and government entities. They may not have been as proactive or transparent as needed during times of crisis (MSN, 2024).
1.e. Leaders ensure that the organisation remains adaptable, and handles change efficiently.	
STRENGTHS	The company has partnered with The Institute of Leadership to provide its leaders and managers with development programs aimed at high performance and effective team management (The Institute of Leadership, 2023). Siemens Energy is focused on establishing the next generation of management, which includes making pivotal personnel decisions to navigate the company through transitions (Siemens, 2020). Leaders are distinguished by outstanding performance becoming a motivational engine for their employees. They always seek to exceed their potential and promote employee involvement (Siemens Energy, 2024).
AREAS FOR IMPROVEMENT (AFI)	Leaders need clear and transparent communication channels and engaging employees in the change process (Hall, 2023). The supply chain of Siemens Energy is becoming increasingly complex, with growing risks and requirements. Leaders must manage these effectively to ensure efficiency, flexibility, and customer satisfaction (Siemens, 2023).

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2.Strategy – "*Excellent organisations implement their Mission and Vision by developing a stakeholder focused strategy. Policies, plans, objectives and processes are developed and deployed to deliver the strategy*" (Severin, 2023/2024).

2.c. Strategy and supporting policies are developed, reviewed and updated.	
STRENGTHS	▯ The Siemens Energy strategy is designed, developed and reviewed in accordance with the organisation's Mission and Vision in the direction of sustainability ▯ The Siemens Energy strategy is reaffirmed through the focus on decarbonisation and transformation of green energy. ▯ Siemens Energy's strategy balances the needs and expectations of stakeholders in the short and long term in order to be able to reach its sustainability targets ▯ Siemens Energy has identified its critical success factors through annual sustainability reports. ▯ Siemens Energy adopts robust methods to anticipate future scenarios such as the resulting climate outcomes and a detailed annual forecast for their CO_2 emission footprint of products and management strategic risks (Siemens Energy, 2023).
AREAS FOR IMPROVEMENT (AFI)	▯ Siemens Energy strict government policies and environmental regulations can affect operations, especially as Siemens Energy is an international company operating in various jurisdictions (MBA Skool, 2023). ▯ Rapid technological changes could affect Siemens Energy's business and operating results, requiring constant innovation and adaptation (GlobalData, 2024).

3.People – "*Excellent organisations value their people and create a culture that allows the mutually beneficial achievement of organisational and personal goals. They develop the capabilities of their people and promote fairness and equality. They care for, communicate, reward and recognise, in a way that motivates people, builds commitment and enables them to use their skills and knowledge for the benefit of the organisation*" (Severin, 2023/2024).

3.d. People communicate effectively throughout the organisation.	
STRENGTHS	▯ Siemens Energy sets the prevention and communication as the key factors for implementing a functional health and safety system. ▯ Siemens Energy uses internal communication systems/ channels such as Viva Engage for ongoing communication. ▯ Siemens Energy promotes effective and transparent reporting and communication and develop training around different topics (Siemens Energy, 2023). ▯ Siemens Energy conducts regular surveys on organisational culture and practices integrity on employees to obtain their feedback (Siemens Energy, 2023).
AREAS FOR IMPROVEMENT (AFI)	▯ Siemens Energy faced a crisis that led to a significant loss in market value, partly due to poor communication regarding quality issues in its newest turbine models (The Guardian, 2023). ▯ Siemens Energy commented on media reports stating that order intake and revenue are expected to be lower than market expectations for fiscal year 2024, which indicates a need for better strategic communication to manage investor expectations (Siemens Energy, 2023).
3.e. People are rewarded, recognised and cared for.	
STRENGTHS	▯ Siemens Energy promotes a global campaign for continuous improvement and self-directed learning and development ▯ Siemens Energy promotes an organisational culture of rewarding employees who excel in their work or especially help their colleagues. ▯ Siemens Energy ensure an organisational culture through which it is promoted the variety of people. ▯ Siemens Energy provides a secure and healthy work environment for their employees through the physical safety of the workplace, but also through regular trainings on EHS (environmental, health, safety). ▯ Siemens Energy invests in employees' professional growth through training programs, workshops, and educational opportunities demonstrates a commitment to their long-term success (Siemens Energy, 2023).
AREAS FOR IMPROVEMENT (AFI)	▯ Siemens Energy should implement a system that recognises individual contributions and achievements, as it can can boost morale and productivity (Siemens Energy, n.d.). ▯ Siemens Energy should offer more opportunities for career advancement and professional growth that can serve as a reward and incentive for employees (Siemens Energy, n.d.). ▯ Siemens Energy should improve communication about how rewards are determined and distributed, which can help employees understand and appreciate the reward system (Siemens Energy, n.d.).

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4.Partenership and Resources – "*Excellent organisations plan and manage external partnerships, suppliers and internal resources in order to support strategy and policies and the effective operation of processes. They ensure that they effectively manage their environmental and societal impact*" (Severin, 2023/2024).

4.c. Buildings, equipment, materials and natural resources are managed in a sustainable way	
STRENGTHS	Siemens replaces some of their old equipment such as electric motors of exhauster, vacuum systems, air conditioners, air compressor etc. with the one more efficient in order to energy saving and to obtain less negative environmental impact. Siemens Energy actively demonstrates its commitment to reduce the negative environmental impact of their operations, while producing green energy. Siemens Energy sustains their less negative impact on sustainability by products (such as ground robots) equipped with environmental sensors that can assess air and water quality. Siemens Energy opted for helping the production of steel by electric arc furnaces instead of coal-fired furnaces. Siemens Energy implemented energy-efficient measures such as insulation, efficient HVAC systems, and LED lighting, which can result in the reduction of excessive energy consumption and greenhouse gas emissions. Siemens Energy upgraded machinery and equipment to newer, more energy-efficient models even when they are available (Siemens Energy, 2023).
AREAS FOR IMPROVEMENT (AFI)	Siemens Energy faces high energy costs, and investing in sustainability and energy efficiency is a challenge that also impacts their competitiveness (Siemens, n.d.). Siemens Energy must succeed in decarbonising energy systems along the entire value chain. Achieving this goal is challenging due to technological, financial, and regulatory hurdles (Siemens Energy, n.d.).

5. Processes, Products and Services – "*Excellent organisations design, manage and improve processes, products and services to generate increasing value for customers and other stakeholders*" (Severin, 2023/2024).

5.d. Products and Services are produced, delivered and managed.	
STRENGTHS	Through their products, Siemens Energy supports customers in their transition to a more sustainable world. Siemens Energy manages its products through their entire lifecycle, including reuse and recycling when appropriate, while considering their impact on sustainability. Siemens Energy helps in reducing negative impact on environment through their products. Siemens Energy incorporates environmental sustainability principles into product design, manufacturing processes, and supply chain management to minimise environmental impact. Siemens Energy offers training programs, workshops, and knowledge-sharing platforms to empower customers and enhance their capabilities. Siemens Energy provides personalised customer support and consulting services to address specific needs and challenges, from project planning to operation and maintenance (Siemens Energy, 2023).
AREAS FOR IMPROVEMENT (AFI)	Siemens Energy faces difficulties in aligning products with decarbonisation targets, because the value chain is complex, especially when transitioning to renewable energy sources (Siemens Energy, n.d.). Siemens Energy faces difficulties in adapting to various global regulations and standards for sustainability, because it might be resource-intensive and requires constant vigilance (Siemens Energy, n.d.).

8. Society Results – "*Excellent organisations (1) develop and agree a set of performance indicators and related outcomes to determine the successful deployment of their societal and ecological strategy and related policies, based on the needs and expectations of the relevant external stakeholders, (2) set clear targets for Key Results based on the needs and expectations of their external stakeholders, in line with their chosen strategy, (3) demonstrate positive or sustained good Society over at least 3 years, (4) clearly understand the underlying reasons and drivers of observed trends and the impact these results will have on the performance indicators and related outcomes, (5) anticipate future performance and results, (6) understand how the Key Results*" (Severin, 2023/2024).

8.a. Perception	
STRENGTHS	Siemens Energy is perceived as an expert company in the fight against corruption in the energy sector, which is confirmed by the external perceptions of stakeholders. Siemens Energy conducts surveys that show that Siemens Energy is in the top organisations that focus on efficiency as well as greenhouse emissions. Siemens Energy conducts operational surveys throughout the year that demonstrate the clear progress of NPS (Net Promoter Score – index which measures willingness of customer to recommend a company's products or services to others) score, which indicates improved customer satisfaction concerning sustainability. Based on Siemens Energy's internal surveys, they implement training strategies and develop communication ways for employees. Siemens Energy establishes ongoing communication channels with stakeholders through various means such as surveys, focus groups, interviews, forums, social media, and dedicated websites. Siemens Energy continuously evaluates and refines stakeholder engagement strategies based on feedback, lessons learned, and emerging trends (Siemens Energy, 2023).
AREAS FOR IMPROVEMENT (AFI)	There is a gap between the public perception of Siemens Energy's sustainability efforts and the actual progress the company is making. Bridging this gap is crucial for maintaining credibility and trust (Siemens Energy, n.d.).

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	The company acknowledges the need for speed in global cooperation to tackle climate change, but there is a perception that efforts are not moving quickly enough to meet global warming targets (Siemens Energy, n.d.).
8.b. Performance Indicators	
STRENGTHS	Siemens Energy applies internal measures to monitor and understand the impact on the perceptions of society regarding sustainability. Siemens Energy sets specific energy efficiency targets for its turbines and power generation equipment, regularly monitoring and optimising performance to achieve these goals. They track metrics such as heat rate improvements and fuel consumption reductions to drive efficiency gains. Siemens Energy employs leading safety metrics such as Total Recordable Incident Rate (TRIR) and Lost Time Incident Rate (LTIR) to measure and improve safety performance across its operations. They conduct regular safety audits and provide ongoing safety training to employees. Siemens Energy uses metrics such as NPS (Net Promoter Score) and customer retention rates to measure and improve customer satisfaction, promptly addressing any issues or concerns raised. Siemens Energy utilises operational efficiency metrics such as equipment uptime, maintenance costs, and production throughput to optimise plant performance and maximise productivity. They leverage data analytics and predictive maintenance technologies to proactively identify and address inefficiencies. Siemens Energy tracks financial performance indicators such as revenue growth, profit margins, and return on investment (ROI) to assess business performance and financial health (Siemens Energy, 2023).
AREAS FOR IMPROVEMENT (AFI)	While Siemens Energy reports on its sustainability performance, there may be calls for greater transparency and detail in how these reports are compiled and what metrics are included (Siemens Energy, n.d.). Despite improvements, there might be expectations for Siemens Energy to further increase diversity in leadership positions and throughout the company to better reflect societal diversity (Siemens Energy, n.d.). Although Siemens Energy received a low ESG risk rating, indicating a low risk of experiencing material financial impacts from ESG factors, stakeholders might expect more aggressive targets and quicker implementation of ESG initiatives (Siemens Energy, n.d.).

The next company analysed is General Electric Power (Table 3):

Table 3. Criteria for EFQM Excellence Model regarding General Electric Power

1.a. Leaders develop the Mission, Vision, Values and ethics and act as role models.	
STRENGTHS	Leaders of General Electric Power establish and communicate a clear direction and strategic focus on sustainability, emphasising integrity, continuous improvement of their people, communities and the planet. Leaders develop ethics and responsibilities in order to create a culture of integrity. Leaders act as active role models in sustainability programs due to their implication for developing and bringing back into use the derelict properties of the community (General Electric Power, 2022).
AREAS FOR IMPROVEMENT (AFI)	General Electric's mission statement has been criticised for lacking information about organisational activities and how the company plans to achieve the industry leadership goal of the corporate vision statement (Panmore Institute, 2023). The mission and vision statements are meant to keep GE at the forefront of industrial progress, but rapid changes in market dynamics and technology may outpace the company's strategic adjustments (Panmore Institute, 2023).
1.b. Leaders define, monitor, review and drive the improvement of the organisation's management system and performance.	
STRENGTHS	Leaders of General Electric Power emphasise the development for the next suite of engine technologies that provide at least a 20% increase in fuel efficiency compared to current performance. Leaders of General Electric Power develop and improve the organisation's management through developing platforms and smart applications essential for advancing electrification and decarbonisation across the entire energy system (General Electric Power, 2022).
AREAS FOR IMPROVEMENT (AFI)	There have been challenges in ensuring that employees collaborate effectively and make quick business decisions. GE's real-time performance development system aimed to address this issue, but they faced difficulties in breaking down silos within the organisation (Baldassarre and Finken, 2015). The company's ambitious digital transformation has been slow due to distinct coding systems across global businesses, affecting the functioning of apps and overall management efficiency (Untitled Leader, n.d.).
1.c. Leaders engage with external stakeholders.	
STRENGTHS	Leaders promote sustainability programs like returning unused properties, which helps an economic growth and a community development. Leaders of General Electric Power identify strategic and operational partnerships based on organisational and strategic needs, complementary strengths and capabilities. The reason is that GE is a member of the GridWise Alliance, an organisation representing a wide range of stakeholders involved in designing, building, and operating the electric grid in the USA. The alliance also educates key industry participants about the urgent need to modernise the national electricity system (General Electric Power, 2022).
AREAS FOR IMPROVEMENT	The company has been criticised for not communicating effectively with stakeholders, particularly during times of crisis and significant financial losses (Knowledge at Wharton, 2018).

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(AFI)	□ The reduction of dividends, which once symbolised GE's stability, has been a source of discontent among shareholders (Egan, 2017).
1.e. Leaders ensure that the organisation is flexible and manages change effectively.	
STRENGTHS	□ Leaders have ensured throughout the 130 years of company history that they adapt and face all the challenges and changes of the organisational environment through the programs that support the company's sustainable goals (e.g. Driving Sustainability Through Transformative Technologies, Lowering Emission with Additive Manufacturing). □ Leaders ensure that the organisation remains flexible and manages change effectively due to their kaizen spirit of continuous improvement, regularly reviewing their measures and processes to adapt to changes in the external and internal environment (General Electric Power, 2022).
AREAS FOR IMPROVEMENT (AFI)	□ GE's leadership changes, including the ousting of CEO John Flannery after just 14 months, have been a source of instability and have disrupted the company's change management efforts (Knowledge at Wharton, 2018). □ GE's ambitious digital transformation encountered significant hurdles, leading to the sale of GE Digital, the organisation at the heart of its transformation. This reflects difficulties in adapting to fast-changing business environments (Knowledge at Wharton, 2018).
2.c. Strategy and supporting policies are developed, reviewed and updated.	
STRENGTHS	□ General Electric Power's strategy is crafted, implemented, and regularly evaluated to align with the organisation's Mission and Vision, emphasising sustainability. □ General Electric Power's strategy is reinforced by a strong commitment to decarbonisation and the transition to green energy. □ General Electric Power integrates the needs and expectations of stakeholders in both the short and long term to meet sustainability goals. □ General Electric Power identifies its key success factors through its annual sustainability reports. □ General Electric Power adopts effective methods for anticipating future scenarios such as the resulting climate outcomes and a detailed annual forecast for their CO_2 emission footprint of products and management strategic risks (Siemens Energy, 2023).
AREAS FOR IMPROVEMENT (AFI)	□ GE poured billions of dollars into its digital strategy, which ultimately did not succeed as planned, leading to the company splitting into three separate entities: GE Aviation, GE Power, and GE Healthcare (Mixson, 2022). □ More than $100 billion in market value has vanished from GE since November 2016, reflecting the consequences of strategic missteps (Egan, 2017).
3.d. People communicate effectively throughout the organisation.	
STRENGTHS	□ General Electric Power enables and encourages the sharing information, knowledge and best practices due to their collaboration with universities like Boston University and MIT (General Electric Power, 2022). □ General Electric Power provides clear guidance and strategic focus for their team through the GE Human Rights Statement of Principles (General Electric Power, 2022).
AREAS FOR IMPROVEMENT (AFI)	□ During the digital transformation, there were communication breakdowns within the company. Engineers found that integrating data from various global businesses into a single platform was slow due to distinct coding systems, which affected the functioning of apps and overall management efficiency (Mixson, 2022). □ There was a reported data breach against GE, where threat actors accessed confidential information. This incident points to potential communication issues regarding cybersecurity and the protection of sensitive data (RestorePrivacy, 2023).
3.e. People are rewarded, recognised and cared for.	
STRENGTHS	□ One of General Electric Power's top Priorities is the effort to make the health and well-being of their employees. In recognition of their work, the company received the 2022 Best Employers: Excellence in Health and Well-Being Award from the Business Group on Health (General Electric Power, 2022). □ At General Electric Power, people are rewarded, recognised and cared for through respecting workers' rights to freedom of association, privacy, collective bargaining, immigration, working time, wages and hours, and prohibits forced, compulsory and child labour and employment discrimination in new business operations and partnerships (General Electric Power, 2022).
AREAS FOR IMPROVEMENT (AFI)	□ GE was once respected for its management prowess, but over the last two decades, the company has faced a slow-motion implosion, which likely affected employee morale and the perceived value of rewards (Axios, 2021).
4.c. Buildings, equipment, materials and natural resources are managed in a sustainable way	
STRENGTHS	□ General Electric Power bases its resource utilisation on the principles of circular economy to ensure that their management is sustainable (General Electric Power, 2022). □ General Electric Power uses their resources in a way to protect the environment, namely they use lost materials, redirecting them back to the economy instead of using virgin materials (General Electric Power, 2022).
AREAS FOR IMPROVEMENT (AFI)	□ Supply chain disruptions and shortages continue to impact GE's renewable energy business, affecting the company's ability to manage resources effectively (Mixson, 2022).
5***.d. Products and Services are produced, delivered and managed.***	
STRENGTHS	□ General Electric Power oversee products and services throughout their entire lifecycle driven by their commitment to a more circular economy, including the lifecycle of their engines. Currently, their catalogue includes over 23,000 total repairs to restore worn GE and CFM International engine parts to serviceable condition. Additionally, GE and CFM International industrialised more than 1,700 repairs in 2022, enhancing repair capabilities. Consequently, GE repaired approximately 2.3 million engine components globally in 2022 (General Electric Power, 2022).

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	□ General Electric Power creates and provides products and services that meet or surpass customer expectations through currently having 100% H_2-capability across some of its gas turbine offerings. It is expanding its capability with industry-leading, efficient gas turbines to 100% by 2030 to meet customer needs to future-proof investments as hydrogen becomes available (General Electric Power, 2022).
AREAS FOR IMPROVEMENT (AFI)	□ The company's financial struggles, including a nightmare cash crunch, could impact its ability to manage products effectively and maintain competitive compensation practices (Egan, 2017).
8.a. Perception	
STRENGTHS	□ General Electric Power performs regular surveys to obtain the societies' perception of the organisation, such as employee surveys, customer surveys, supplier surveys, selected members survey, investor surveys, community surveys, 2022 Best Employers: Excellence in Health & Well-being Award (General Electric Power, 2022). □ General Electric Power initiates measures following the questionnaires for the areas of environmental impact and for social impact (General Electric Power, 2022).
AREAS FOR IMPROVEMENT (AFI)	□ GE has experienced one of the greatest downfalls in business history, with a significant reduction in workforce and a precipitous fall in share price. This downfall has impacted the public's perception of GE as a stable and reliable company (Gates, 2021). □ GE's leadership, including former CEOs Jack Welch and Jeff Immelt, has been criticised for questionable deal-making and strategic decisions that have led to the company's current challenges (Egan, 2017).
8.b. Performance Indicators	
STRENGTHS	□ General Electric Power applies Performance Indicators on Sustainability in order to predict and improve the performance of the organisation (e.g. of categories human rights: Supplier Responsibility Program, Environmental Stewardship, Diversity and Inclusion, Safety, Lifting Our Communities) (General Electric Power, 2022). □ General Electric internal indicators provide a clear assessment of the effectiveness of various adoptive approaches such as sustainable progress across its supply chain and individual sustainable performance (General Electric Power, 2022).
AREAS FOR IMPROVEMENT (AFI)	□ Based on a scoring method by GuruFocus, GE was assigned a score that signals poor future outperformance potential (Yahoo Finance, 2023).

The last company analysed according to the EFQM Excellence Model is Mitsubishi Power (Table 4).

Table 4. Criteria for EFQM Excellence Model regarding Mitsubishi Power

1.a. Leaders develop the Mission, Vision, Values and ethics and act as role models.	
STRENGTHS	□ Leaders of Mitsubishi Power develop and set a clear mission for the company in order to contribute to sustainable society through their business activities, likely: Care for the planet, Create a more harmonious society and Inspire the future. □ Leaders of Mitsubishi Power communicate the mission, vision and values to the employees and stakeholders through various channels such as the company website, rapports (Sustainable Rapports), meetings, workshops, visible papers etc. (Mitsubishi Power, 2023).
AREAS FOR IMPROVEMENT (AFI)	□ Leaders should ensure that the mission and vision are communicated clearly and consistently across all levels of the organisation (Mitsubishi Power Americas, n.d.). □ Mitsubishi Power should invest in leadership development programs to ensure leaders at all levels understand and can effectively communicate the mission and vision (Mitsubishi Power Americas, n.d.). □ Mitsubishi Power should integrate the mission and vision into the company culture to guide decision-making and behaviour at all levels (Mitsubishi Power Americas, n.d.).
1.b. Leaders establish, oversee, assess, and advance the enhancement of the organisation's management system and performance.	
STRENGTHS	□ Leaders of Mitsubishi Power define and a improve a Sustainability Promotion System, with a Sustainability Committee which has a general objective promoting a management that considers sustainability in all the activities of the company. □ Leaders of Mitsubishi Power review their sustainability system through the Materiality Council, where problems regarding the progress, project examples and questions/ opinions are discussed (Mitsubishi Power, 2023).
AREAS FOR IMPROVEMENT (AFI)	□ Leaders of Mitsubishi Power should, as the world moves towards a more sustainable future, continue to improve its management system by integrating more renewable energy sources into its portfolio (Power Engineering, 2020). □ Leaders of Mitsubishi Power should strengthen global partnerships and collaborations, which may lead to shared innovation and improved management practices. This can also include integrating systems from other companies to create a more cohesive energy management system (Mitsubishi Power, n.d.).
1.***c. Leaders engage with external stakeholders.***	
STRENGTHS	□ Leaders of Mitsubishi Power maintain a transparent and clear communication with their stakeholders and transfer to them their sustainability priorities and principles, expectations and business activities following a CSR Action Guide. □ Leaders of Mitsubishi Power engage with their stakeholders through a Basic Policy on Environmental Matters and Action Guidelines to promote environmental initiatives and dialogues with their stakeholders (Mitsubishi Power, 2023).

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AREAS FOR IMPROVEMENT (AFI)	□ Leaders should involve stakeholders in the development and refinement of the mission and vision to ensure they are relevant and impactful (Mitsubishi Power Americas, n.d.). □ Strengthening global partnerships and collaborations can lead to shared innovation and improved management practices. This can also include integrating systems from other companies to create a more cohesive energy management system (Mitsubishi Power Americas, n.d.).
1.e. Leaders ensure that the organisation is flexible and manages change effectively.	
STRENGTHS	□ Leaders of Mitsubishi Power stay informed and continuously adapt to societal changes, integrating sustainable AI and digital products to meet company needs. They leverage digitalisation to manage customer demands sustainably and encourage creativity among their employee. □ Leaders of Mitsubishi Power build a flexible, robust and labour-saving system (MBA Skool, 2023), which helps them to contribute to a sustainable society (Mitsubishi Power, 2023).
AREAS FOR IMPROVEMENT (AFI)	□ Leaders of Mitsubishi Power should implement in advanced digital solutions like artificial intelligence and machine learning, which may optimise power plant performance and reduce carbon emissions. Mitsubishi Power's TOMONI suite of intelligent digital solutions is a step in this direction (BusinessWorld Online, 2021).
2.c. Strategy and supporting policies are developed, reviewed and updated.	
STRENGTHS	□ Strategies and supporting policies are continuously developed and updated by the Chief Strategy Officer and Chief Sustainable Officer with the Sustainable Committee, in order to sustain and empower a growth of the company with fairness, integrity and responsibility to society (Mitsubishi Power, 2023). □ Strategies and supporting policies are reviewed continuously based on the outcomes of the company's effectiveness evaluation (MBA Skool, 2023) and are approved by the Board of Directors (Mitsubishi Power, 2023).
AREAS FOR IMPROVEMENT (AFI)	□ Mitsubishi Power can enhance its strategy by staying agile and responsive to the rapid changes in the global energy market, such as shifts in fuel prices, regulatory changes, and the evolving competitive landscape (Mitsubishi Electric, 2023).
3.d. People communicate effectively throughout the organisation.	
STRENGTHS	□ People in Mitsubishi Power communicate effectively in the organisation through a well-established management of the organisation. There is a Chief Sustainable Officer who is responsible for the sustainable direction of the company, namely, to make executive decisions on how to tackle sustainability issues, such as ESG initiatives (Mitsubishi Power, 2023). □ Mitsubishi Power facilitates and promotes the sharing of information and best practices across the organisation dialogues thanks to the MHI Power Human Rights Policy that includes the adherence to laws and regulations regarding human rights, includes targets, education and responsibilities related to respecting human rights, human rights due diligence, dialogue and consultation, and information disclosure (Mitsubishi Power, 2023).
AREAS FOR IMPROVEMENT (AFI)	□ Mitsubishi Power should develop a diverse and versatile talent pool through strategic human resource initiatives, which may foster innovation and business growth (BusinessWorld Online, 2021). □ Mitsubishi Power should implement training programs focused on communication skills, which may help employees convey their ideas more effectively and enhance teamwork (Mitsubishi Power, n.d.)
3.e. People are rewarded, recognised and cared for.	
STRENGTHS	□ Both internal and external members of Mitsubishi Power are encouraged to engage in activities that benefit the broader community such as: Science classes, Factory tours with hands-on learning, Career education, Sports coaching, Study support and Sponsoring of Scholarships. □ Mitsubishi Power ensures an embracement of diversity for the people through the MHI Power Human Rights Policy and through their principle of act with integrity and fairness, always respecting others (Mitsubishi Power, 2023).
AREAS FOR IMPROVEMENT (AFI)	□ Mitsubishi Power should offer career development opportunities, such as tuition reimbursement or training programs, which may help employees grow professionally and feel more invested in the company (Mitsubishi Electric Americas, n.d.). □ Mitsubishi Power should develop recognition programs that celebrate employee achievements, such as 'Employee of the Month' or 'Going the Extra Mile' awards, which may boost morale and encourage a culture of excellence (Mitsubishi Electric Americas, n.d.)
4.c. Buildings, equipment, materials and natural resources are managed in a sustainable way	
STRENGTHS	□ Mitsubishi Power optimises resource and asset use throughout their lifecycle to minimise environmental impact across all company operations, including product R&D and design, raw material procurement, manufacturing, transportation, usage, servicing, and disposal, through pollution prevention, resource conservation, energy efficiency, and waste reduction (Mitsubishi Power, 2023). □ Mitsubishi Power applies suitable policies and strategies to preserve the environment and contribute to solving environmental and energy challenges (Mitsubishi Power, 2023).
AREAS FOR IMPROVEMENT (AFI)	□ Mitsubishi Power should implement advanced digital solutions like artificial intelligence and machine learning, which may optimise power plant performance and reduce carbon emissions. Mitsubishi Power's TOMONI suite of intelligent digital solutions is a step in this direction (BusinessWorld Online, 2021).

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5.d. Products and Services are produced, delivered and managed.	
STRENGTHS	Mitsubishi Power optimises resource and asset use throughout their lifecycle to minimise environmental impact throughout all company activities, from product R&D and design to raw material procurement, manufacturing, transportation, usage, servicing, and disposal, by focusing on pollution prevention, resource conservation, energy efficiency, and waste reduction (Mitsubishi Power, 2023). Mitsubishi Power enforces relevant policies and strategies to preserve the environment and contribute to solving environmental and energy challenges (Mitsubishi Power, 2023).
AREAS FOR IMPROVEMENT (AFI)	Mitsubishi Power should improve customer service by providing innovative technologies to reduce pollutants, manage multi-fuel applications, and supply and manage SCR (selective catalytic reduction) catalysts, which may enhance overall service quality (Mitsubishi Power, n.d.).
8.a. Perception	
STRENGTHS	Mitsubishi Power conducts internal and external surveys to understand the society's perception of their company analysing the human resources aspects, environment impact aspect, quality of the projects etc. (Mitsubishi Power, 2023). Mitsubishi Power has a strong commitment to society and uses transparent communication with stakeholders due their awards in Recognising Outstanding Environmental Contributions through MHI's Best Innovation Awards, and obtained Incentives Toward Management Activities Related to the Issue of Climate Change (Mitsubishi Power, 2023).
AREAS FOR IMPROVEMENT (AFI)	Mitsubishi Power should enhance the customer experience by providing tailored solutions and services, which may strengthen relationships and drive business success (Mitsubishi Electric, 2023).
8.b. Performance Indicators	
STRENGTHS	Mitsubishi Power uses internal measures and indicators to track, analyse, and enhance the company's performance regarding societal and environmental responsibilities, such as reduce co_2 emissions, number of optimal energy infrastructures, level of employees' awareness, increase the ratio of women on the Board of Directors, reduce the number of accidents etc. (Mitsubishi Power, 2023). Mitsubishi Power's indicators provide an understanding of the approaches adopted and their impact on society and environment such as reduction in CO_2 emissions, reduction in water usage, reduction in waste generation (Mitsubishi Power, 2023).
AREAS FOR IMPROVEMENT (AFI)	Mitsubishi Power established performance metrics that are tied to the company's mission and vision to measure progress and drive accountability (Mitsubishi Power Americas, n.d.).

As can be seen, all three companies demonstrate strong sustainability practices, positioning them as market leaders in sustainable organisational performance. However, they also encounter some less favourable activities in this domain, which present opportunities for improvement. By addressing these areas, they can further enhance their achievement of sustainability objectives. The next section will present the results of this analysis.

3. Results and discussion

The results of this paper are based on the preceding analysis of the companies and the identification of practices to adopt or avoid to achieve organisational excellence in sustainability and their impact on the community. Siemens Energy is dedicated to the energy transition and has established ambitious decarbonisation targets across its entire value chain. The company aims to achieve 100% renewable electricity in its operations by 2023 and is on track to meet its decarbonisation goals. Siemens Energy prioritises offering decarbonised products, services, and solutions to its customers, with a goal to reduce absolute Scope 3 greenhouse gas emissions from the use of sold products by 28% by 2030.

Similarly, General Electric adopts a comprehensive approach to sustainability, focusing on decarbonisation through the energy transition, developing smarter aviation solutions, and enabling precision healthcare. The company is committed to achieving carbon neutrality by 2030 and aims for net zero Scope 3 emissions from using sold products by 2050. GE's sustainability strategy includes a strong culture of integrity, product safety and quality, diversity and inclusion. Additionally, GE is preparing to separate its energy businesses into GE Vernova, which will concentrate on electrifying and decarbonising the world.

Lastly, Mitsubishi Power aims to address social issues through its reliable manufacturing technology and seeks to grow alongside the global community. Their sustainability efforts focus on environmentally conscious design, resource recycling initiatives, and developing products and technologies that tackle environmental challenges. Mitsubishi Power has identified five key areas of material importance to solve social challenges through their business operations and strengthen their foundation for sustainable growth.

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A synthetic summary of this comparative analysis could be organised in a table format (see Table 5), in which the main good practices collected from these three companies are highlighted, together with the possibilities of transferring these to another different types of companies or across different industries.

Table 5. Benchmarking Summary

Criterion	Good practices of these analysed companies	Can be transferred/ used to SMEs (small and medium sized enterprises) as well	Can be transferred/ used to other industries
1.a. Leaders develop the Mission, Vision, Values and ethics and act as role models.	Leaders develop and define the companies' main sustainability goals and integrate them in their industrial processes or business activities. Leaders disseminate the sustainability strategy in the company through rapports, meetings, workshops, internal papers etc. and act as role models engaging themselves in projects for achieving these objectives.	✓	✓
1.b. Leaders establish, oversee, assess, and advance the enhancement of the organisation's management system and performance.	Leaders review and drive permanently the improvement of the Integrated Management System of their companies through developing platforms and smart applications for advancing the Management of Documents. They also create adjacent systems such as Sustainability Promotion System and Company Councils to analysed and improved all these systems.	**X** Resources needed	✓
1.c. Leaders engage with external stakeholders.	Leaders engage in market analysis with different stakeholders in order to take part in activities that foster the environmental impact of the companies in the energy sector and create alliances to design, build, operate etc. different electric grids and modernise the energy sector worldwide.	✓	**X** Sector related
1.e. Leaders ensure that the organisation is flexible and manages change effectively.	Leaders ensure that the company remain flexible through different methods like using Kaizen methodology and continuously measuring and reviewing their processes, training their employees and even through using Artificial Intelligence products.	**X** Resources needed	✓
2.c. Strategy and supporting policies are developed, reviewed and updated.	Companies' strategy is developed by specific Sustainable Committees, focusing on the need and expectations of stakeholders in sustainability and present them in reports.	**X** Resources needed	✓
3.d. People communicate effectively throughout the organisation.	Communication in the company is realised through specific channels or systems to facilitate and foster the engagement and create robust procedure framework and guidance.	✓	✓
3.e. People are rewarded, recognised and cared for.	People are cared for through the effort of improving their health and well-being, respecting their rights to freedom, investing in their self-development, sharing knowledge, creating a culture of rewarding and promotion and also a culture of inclusion and diversity.	✓	✓
4.c. Buildings, equipment, materials and natural resources are managed in a sustainable way	The old equipment is changed to new one for improving the energy saving process, natural resources are use for producing green energy, all the equipment and processes are transformed for producing less gas emissions and introducing the concept of circular economy. They also manage the entire lifecycle of a product in a sustainability perspective. Policies and strategies to preserve the environment are also created.	**X** Resources needed	✓
5.d. Products and Services are produced, delivered and managed.	Products are designed and produce in a sustainable way and the maintenance process is also reformulated for a greener economy.	**X** Resources needed	✓
8.a. Perception	A lot of operational surveys are conducted through the company's stakeholders to improve the sustainability approach and stakeholder engagement strategies based on feedback, lessons learned, and emerging trends. Gaining different awards as a recognition of merits in the sustainability field.	**X** Resources needed	✓
8.b. Performance Indicators	Total Recordable Incident Rate (TRIR) and Lost Time Incident Rate (LTIR) are indicators used to measure and improve safety performance across operations. Using also financial indicators, Net Promotion Score, Reduce CO_2 emissions, Number of optimal energy infrastructures, Level of employees' awareness, Increase the ratio of women on the Board of Directors, Performance Indicators in Sustainability (Supplier Responsibility Program, Environmental Stewardship, Diversity and Inclusion, Safety, Lifting Our Communities) helped the companies to understand their position on market regarding sustainability.	**X** Resources needed	✓

Next, based on the analysis and the statements above, we can extract and synthesise both the best practices and those to avoid in the field of sustainability for each company. These practices are influenced by the specific regions where each company is headquartered. The findings are presented below for Siemens Energy first:

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- Investing in Renewable Energy, namely using renewable energy sources for their operations;
- Using or improving a sustainable supply-chain, namely ensuring that suppliers adhere to environmental and social standards;
- Creating energy-efficient products, namely designing and developing products that use less energy and resources that affect the environment.

Further, from General Electric the following good practices must be highlighted:

- Improving and foster employee engagement and sustaining integrity in their organisation;
- Focusing in Innovation and Research & Development, namely they are investing significantly for global innovation to develop sustainable technologies;
- They enhance Product Quality and Safety programs to uphold highest standards;
- Progressing toward a 2030 Carbon Neutrality Commitment and a Net Zero target from the use of sold products by 2050.

From Mitsubishi Power some other good practices may be learnt:

- They aim to create a clean power generation with 100% hydrogen and natural gas-fired cogeneration facilities and also they proceed to fast-forwarding decarbonisation in Taiwan with this and natural gas-fired cogeneration facilities and to develop a new model for sustainable power generation in Jakarta by transitioning from coal to natural gas;
- They focus on implementing processes to minimise waste production and promote recycling and reuse;
- Protect and restore natural habitats and ecosystems, continuously seeking new ways to improve sustainability performance.

Additionally, areas for improvement in sustainability, specifically practices to avoid, have been identified for each company. For Siemens Energy, the practices to be avoided are as follows.

- Siemens Energy underestimated the complexity and challenges of scaling up their wind turbine operations, resulting in a gap between their strategic ambitions and operational capabilities.
- Leaders did not adequately anticipate or identify stakeholder perceptions that could lead to conflicts, essential for ensuring smooth operations and maintaining a good reputation in customer projects.
- Leaders have communicated inadequately with stakeholders, including shareholders and government entities, and may not have been sufficiently proactive or transparent during times of crisis.
- Siemens Energy is challenged by high energy costs, which, along with investing in sustainability and energy efficiency, also affects its competitiveness.

The following points refer to the General Electric company:

- General Electric's mission statement lacks information about organisational activities and how the company plans to achieve the industry leadership goal of the corporate vision statement.
- General Electric's ambitious digital transformation faced significant hurdles, ultimately leading to the sale of GE Digital, the core of its transformation efforts, highlighting the challenges of adapting to rapidly changing business environments.
- During the digital transformation, General Electric experienced communication breakdowns, which negatively impacted app functionality and overall management efficiency.

The last company whose practices to avoid were analysed is Mitsubishi as follows:

- Mitsubishi Power should prioritise investment in leadership development programs to ensure that leaders at every level comprehend and can proficiently communicate the company's mission and vision.
- Leaders of Mitsubishi Power do not invest in advanced digital solutions like artificial intelligence and machine learning. Digital tools can make companies work better and care more for the environment. Using new tech in the EFQM Model helps companies do well by being quick to change and focus on green goals and can optimise power plant performance and reduce carbon emissions (Vokony, Taczi, & Szalmane Csete, 2020).
- Mitsubishi Power does not have a diverse and versatile talent pool through strategic human resource initiatives that can foster innovation and business growth.
- Mitsubishi Power slowly improves customer experience by offering customised solutions and services, which can bolster relationships and contribute to business success.

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4. Conclusion

This paper's goal was to present a comparative analysis of three companies in the energy sector from different regions of the world, focusing on their sustainable practices. This analysis, based on the method of the EFQM Excellence model, aims to provide directions for further improvements and highlight practices to avoid in the realm of sustainability. Siemens Energy, General Electric Power and Mitsubishi Power are industry leaders striving for a more sustainable future, reflecting corporate responsibility and responding to the global demand for environmental stewardship. These aspects represent very interesting approaches to being studied in future works.

Siemens Energy stands out with its commitment to renewable energy and diversity. They set a benchmark with ambitious decarbonisation targets and an inclusive workplace culture. Their proactive approach to achieving 100% renewable electricity and reducing greenhouse gas emissions sets a clear example for others in the industry. General Electric Power (GE), known for its innovation, continues to advance sustainability. GE's dedication to carbon neutrality and developing sustainable technologies shows its understanding that long-term success is tied to the planet's health. Their investment in R&D and product safety makes sustainability a tangible goal. Mitsubishi Power focuses on clean power generation and regional decarbonisation. Their transition from coal to natural gas in Jakarta and promotion of clean power with hydrogen technology highlight the urgent need for change in energy production and consumption.

While these companies exemplify good practices, the sustainability journey is challenging. Avoiding unsustainable practices, such as inadequate emissions controls, poor waste management, and lack of transparency, is as crucial as implementing positive actions. These challenges will test the resolve and innovation of these industry leaders. Looking ahead, the collective actions of Siemens Energy, General Electric Power, and Mitsubishi Power will shape their legacies and our global society. Their ongoing commitment to sustainability will serve as a beacon for others, guiding us towards a more resilient and equitable world. The balance of good and to-avoid practices will determine their success, and the world watches with hopeful anticipation for their next steps on this green journey.

In conclusion, this work presented a comparative analysis of three market-leading companies in the energy sector on the issue of sustainability in achieving organisational performance, having as a guiding framework the criteria of the EFQM Excellence Model, practices with potential transfer to other industries and with complementary resources, to SMEs.

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