

1 General Description and Strategic Analysis

1.1 General Description

FREYR is an international company that seeks to develop and produce advanced, high energy density and cost competitive lithium-ion battery cells (FREYR, 2023a). FREYR's mission is to develop clean battery solutions in order to accelerate the decarbonization of power systems and the transportation sector, while delivering the cleanest battery cells in the world (Rogstad & Raaen, 2023). The company is built upon the proposition of using the best technology available in the market and building manufacturing capacity of battery cells on a gigafactory basis (FREYR, 2023a). Since its founding in 2018 the company has gone from being a Norwegian firm to being an international firm with Norwegian roots. FREYR was listed in the New York Stock Exchange in July 2021, raising 700 million USD in fresh capital. Following rising global rents and higher financial risks FREYR has seen limited returns on their listed stock, with a market capitalization of 1.7 billion USD, below the initial price offering (Rogstad & Raaen, 2023). Today FREYR has about 250 employees with operations in Norway, Japan, Luxembourg and the U.S.

FREYR targets three different markets: energy storage systems (ESS); electric mobility, including marine applications and commercial vehicles; and automotive/electric vehicles (EV). They seek to serve these markets through their strategy of speed, scale, and sustainability (FREYR, 2023a). FREYR operates in a highly competitive landscape, with several established and emerging players competing for market share in most of the markets FREYR seek to enter. However, Rogstad states that FREYR considers the ESS-market the most important, as it is less developed and has a higher potential for exponential growth (Rogstad & Raaen, 2023). FREYR's competitors include major Asian battery manufacturers, such as Panasonic (Japan), CATL (China) and LG Chem (South Korea). Competition is also present in Scandinavia with companies like Morrow Batteries (Norway), Beyonder (Norway) and Northvolt (Sweden), but according to Rogstad and Raaen (2023) FREYR sees the large international rivals as their primary competitors.

FREYR has not yet initiated manufacturing or derived revenue from its principal business activities, but opened its Customer Qualification Plant (CQP) in Mo i Rana on the 28th of March 2023. The CQP will test their battery cells, and validate the industrial scale production (FREYR, 2023a). With the validation, FREYR proves to investors and customers that they can produce high quality battery cells on a large scale. Moreover, FREYR has commenced building their first giga factory close to the CQP in Mo i Rana and has also recently announced plans for a giga factory in Georgia, US. By 2025 FREYR intends to have installed 50 GWh of battery cell capacity (FREYR, 2023a). According to Tom Jensen, CEO of FREYR, FREYR today has offtake and long-term sales agreements that exceed 130 GWh of production (FREYR, 2023b). This demonstrates FREYR's growing commercial presence.

The main product FREYR seeks to offer is lithium-ion battery cells in giga-scale using the patented SemiSolid technology licensed from 24M, a MIT spin-off founded in 2010. Through their licensing and servicing agreement with 24M, FREYR has the rights to produce battery cells using this new and innovative technology. 24M batteries use a unique semi-solid electrode design. This design eliminates many of the manufacturing steps and components required for conventional batteries, resulting in a

simpler and more cost-effective production process. In addition, by using this new technology the environmental footprint and energy consumption is reduced.

As we have discussed, FREYR does not currently provide any services to its customers. However, the company is considering expanding its market offering, through partnerships, to offer associated and complementary services related to packaging and recycling (Rogstad & Raaen, 2023). According to the smiling curve of Mudambi (2008), after-sales services could be a very lucrative endeavor for the company. It therefore seems like FREYR should continue these partnership discussions as well as considering other related offerings.

1.2 Strategic Analysis

This section presents a strategic analysis of FREYR. The review examines both internal conditions and external factors to attempt to get an understanding of FREYR's position, its competitive assets, and how the company differentiates itself from its competitors. Finally, a SWOT analysis is presented to summarize the findings.

Analysis

Firstly, some key external factors influencing FREYR are highlighted. Political, technological and environmental factors are considered as the most important factors. FREYR operates in an industry where government policies influence both supply and demand. By being an international company, regulations and policies vary from country to country, making some regions more attractive for FREYR to invest in. There are increased regulations of emissions and a pressure towards documentation of sustainable actions in the world. Complying with local laws, regulatory requirements, and business practices is therefore necessary for FREYR to succeed. An example is The Inflation Reduction Act (IRA) in the U.S., which includes tax credit incentives for the production of battery cells, lowering production costs (FREYR, 2023a). Such economic incentives and government policies may have a material adverse effect on FREYR, and thus it is important for FREYR to respond quickly to these changes. Additionally, the EU has presented the Green Deal Industrial Plan, where batteries are one of the key clean technologies in focus (FREYR, 2023c). Having operations on an international scale requires close coordination of all the activities across multiple legal systems and laws, time zones and currencies. This will potentially require a large amount of management resources. If FREYR fails to coordinate and manage these activities effectively, it could have an effect on their revenues and business.

The role of batteries in electrifying transportation, balancing power grids and storing energy is increasingly crucial in the transition towards a more sustainable future (Campagnol et. al., 2022). With the increased focus on sustainability in the battery industry, new technological innovations are likely to emerge. Additionally, there will not be any green transition without digitalization (FREYR, 2023a). Technological improvements in the entire supply chain, with efficient resource utilization and optimization across the value chain, are also important for making the industry sustainable. Spanning from the extraction of raw materials to recycling of important materials, the technology and product design of FREYR's batteries can enable them to increase their performance on sustainability both in the manufacturing and in the rates of recycling.

According to the International Energy Agency (2020), about 10,000 installed GWh of batteries and other energy storage by 2040 is needed to achieve our climate and sustainability goals. This shows the

importance of the battery industry. The EU has stated that the battery industry is one of the most important contributors to reducing climate change in the immediate future (EU, 2021).

Porter’s Five Forces framework allows us to explore FREYR’s competitive strengths and market position. The framework is a guide to understanding how five competitive forces affect profitability in a given industry (Porter, 1979) and is summarized in Table 1.1.

Table 1.1: Porter’s five forces

Threat of new entrants	As the market for energy storage solutions grows (FREYR, 2023a), more companies are likely to enter the market, increasing competition and potentially reducing FREYR's market share. New regulations and policies keep coming (like the IRA) and may favor new entrants.
Bargaining power of buyers	The presence of alternative suppliers of battery cells is a potential source of buyer bargaining power. As Rogstad and Raaen (2023) stated, the price of battery cells may still be more important for buyers than the cells being CO2 neutral. Therefore buyers may have some bargaining power if they have multiple options with more favorable terms and prices than FREYR’s.
Bargaining power of suppliers	If a supplier is the only source of critical input or has a strong brand/reputation, its bargaining power may be significant. Raw materials like lithium, cobalt, and nickel, which are key materials in a battery cell, will in the future have increased demand, potentially creating challenges for FREYR. To reduce this risk FREYR attempts to have at least two suppliers for each raw material (Rogstad & Raaen, 2023). In addition, the ESG-concern of FREYR may reduce the number of possible suppliers. Furthermore, FREYR is sensitive to the supply of clean and affordable electricity, giving the suppliers some bargaining power.
Threat of substitute products	Conventional battery cells are the main threat for FREYR today. Additionally, technological advancements may create substitutes like solid-state batteries that offer higher energy density, longer lifetimes, and faster charging times, potentially making them more attractive to customers (Wang & Sun, 2022). Additionally, there are several development-stage companies seeking to improve conventional lithium-ion batteries or to develop new technologies for batteries (FREYR, 2023a).
Rivalry within the industry	As mentioned earlier FREYR has multiple competitors that offer similar products. There are many established actors with huge financial power. For instance, LG is the leading user of lithium, with a 31% market share (Bridge & Faigen, 2022). However, FREYR differentiate its product through the focus on sustainability, compared to their coal-based competitors, making them able to reduce the impact of price competition and maintain or grow its market share. Regulations from the U.S. and EU are important for FREYR, in order to compete against the large actors in Asia.

Based on the analysis FREYR operates in an attractive industry with great potential. However, the industry leading companies still struggle to make a profit (Hardin, 2023). In order to capture the battery value-chain opportunity and make profit, FREYR needs to act according to their strategy of speed, scale and sustainability. Moreover, they need to prove the viability of their business model. The establishment of operations in the U.S. represents an important step towards having a geographical diversification and business resilience, and through this FREYR demonstrates its ability to successfully replicate its business model in both Europe and the United States.

Competitive Assets and Company Differentiation

In order to identify the competitive assets of FREYR, we have utilized the VRIN-framework presented by Barney (1991). The framework helps us identify which asset(s) that can give FREYR a sustained competitive advantage and are presented in Figure 1.1.

Asset	VALUABLE	RARE	IMPERFECTLY IMITABLE	NON-SUBSTITUTIBLE
Partners	Yes	Yes	Yes	Yes
Employees	Yes	Yes	No	Yes
Technology	Yes	Yes	Yes	No
Financial Resources	Yes	No	No	Yes

Figure 1.1: VRIN-analysis

An important asset is partners, and as mentioned earlier, FREYR has secured long-term partnerships throughout their value chain. Securing partnerships helps them to gain access to important raw materials, and is especially important to FREYR since several political factors and ESG concerns may limit the number of suppliers and raw material volumes available to them.

As of today 24M has licensed its technology to multinational companies like Volkswagen, Fujifilm, Lucas TVS and Axxiva (FREYR, 2023a). FREYR is benefitting from the deepening technical and commercial collaboration across the 24M licensee ecosystem, and there are strong incentives from licensee patterns to explore commercial opportunities together (FREYR, 2023c). The partnership and licensing with 24M is not exclusive, but limited to a few partners. Even though the partnership and licensing with 24M is important, the licensing model is subject to various risks. 24M or other future collaborators cannot assure that they will not provide similar licensing to manufacturers that compete directly with FREYR. Thus, it is important for FREYR to maintain their intellectual property established from their partnerships. If they are unable to protect their IP rights, their competitive position would potentially be harmed.

By having a partnership model, FREYR can always be on the lookout for the best technology available for production of battery cells. This reduces the need for their own R&D department, saving them for costs. FREYR has established partnerships and joint ventures both upstream and downstream in the value chain. In August 2022 FREYR entered into a module and pack joint venture for energy storage solutions with Nidec, a Japanese company supplying electric motors and energy systems, announcing a 38GWh li-ion binding battery cell sales agreement (FREYR, 2023a). As stated by Jensen, the joint venture with Nidec is a milestone for FREYR in their journey to bring speed, scale and sustainability to battery storage solutions globally (FREYR, 2022). Through their partnerships FREYR secures expertise from across the globe increasing FREYR's knowledge and intellectual property, which is instrumental for them to become a leading producer of battery cells. Important partnerships may be the way to go for FREYR in order to gain a sustained competitive advantage.

Technology is another important asset for FREYR, where the partnership with 24M is very important for FREYR as their business is built on producing battery cells using this technology. The technology of FREYR's batteries can enable them to achieve better sustainability and therefore they are always on the look for the best technology available. FREYR has a technology center in the U.S, technology resource campus in Japan and a R&D center in Norway, where they constantly are working on improving their technology (FREYR, 2023a).

Employees are important for FREYR, and a critical challenge for them is to retain and attract new employees and key personnel. FREYR is in a phase where growth is important, thus being unable to

hire skilled people may negatively impact FREYR’s ability to operate its business and fulfill their plans of growing. The labor market in the industry is highly competitive, making it even more important for FREYR to attract the most skilled employees in the industry. Employees are therefore considered as a valuable asset for FREYR. Additionally, in order to succeed in scaling operations with speed, the experienced top management is important.

Strong financial resources can give a company a competitive advantage compared to competitors by providing the resources to invest in R&D and expand operations quickly. FREYR’s financial resources may be less mature than established actors like CATL and LG Chem. However, FREYR has secured important partnerships and raised significant funding. This shows both a strong interest from investors and a confidence in FREYR’s business model and overall growth potential. The growing demand for sustainable batteries gives new entrants like FREYR the possibility to disrupt the existing actors and gain market share. By having secured financial resources in a period with economic downturn, FREYR may have a longer runway compared to their competitors.

As seen from the analysis, FREYR differentiates themselves from competitors by focusing on their technology and partnerships. Through establishing partnerships and using the best technology, FREYR wishes to deliver a carbon neutral product. Porter (1992) argues that having a strategy that emphasizes competitive assets may strengthen a firm's competitive advantage without only competing on price. This is supported by de Wit (2020), who states that an efficient way for a firm to capitalize on their competitive assets is to focus on their competitive advantage and not on the price of the product. Nevertheless, pricing remains an important part of the product and affects the competitive landscape. The main goal of FREYR is to have the most sustainable battery cells in the market. To secure this FREYR needs to maintain a strong focus on the entire value chain in order to ensure that their product is both socially, environmentally and governmentally sustainable. Sustaining these strict requirements regarding sustainability may increase the cost of the cells compared to their main competitors. To a significant degree, sustainability is a concern for both investors and purchasers of FREYR, although it is acknowledged that business remains primarily a financial endeavor. Policies and regulations that favor FREYR are therefore important for them in order to profit from their differentiation.

SWOT-analysis

Based on the analysis in this section, we have conducted a SWOT analysis as seen in Figure 1.2. This highlights FREYR’s internal strengths and weaknesses, and external opportunities and threats.

In conclusion, FREYR’s success is heavily dependent on its ability to construct manufacturing facilities and equip them cost-effectively and with speed. With no revenue stream, securing

customers is crucial for them. Therefore they must move quickly to gain a foothold in a fast-growing market. The manufacturing process FREYR has chosen enables reduction of energy, materials and

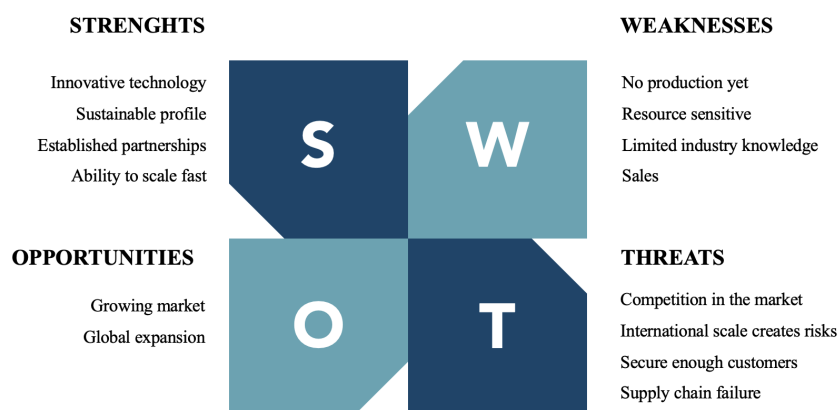


Figure 1.2: SWOT-analysis

people needed. Moreover it offers a capital efficient development of clean battery solutions at scale and enables FREYR to profit from their differentiation strategy of being the most sustainable actor in the market. FREYR has ideally positioned themselves as an environment-friendly alternative to the fossil-based products that are in the market today, clearly showing that they have incorporated sustainability into each operational process.

2 Customer Value and Sustainability

2.1 Relationship between sustainability and profitability

In the business landscape, the relationship between sustainability and firm profitability has increasingly become a topic of significant interest for organizations, shareholders, stakeholders, and scholars alike (McKinsey, 2019). This section aims to explore the dynamics of this relationship, shedding light on the factors that influence and constrain the convergence of sustainable practices and profitability in the corporate world. As environmental and social concerns continue to gain prominence (UN, 2022), it is imperative for businesses to not only recognize the importance of sustainable practices, but also to understand the ways in which these practices can contribute to their long-term financial success (McKinsey, 2019).

The academic literature presents two primary views on sustainability and firm profitability. Traditionalists believe sustainability activities undermine competitiveness, as regulations and green innovations increase costs and reduce profitability, creating a trade-off between ecological, social benefits, and economy (Hermundsdottir & Aspelund, 2020). The double externality problem exemplifies this view, showing that sustainability innovations create environmental, social, and monetary value but often have high costs due to R&D and production investments. Traditionalists argue that the unprofitable gap, resulting from costly green technology, cannot be avoided, making win-win situations unrealistic.

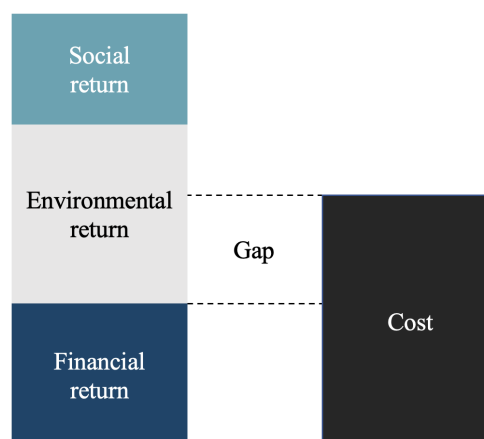


Figure 2.1: The double externality problem

The alternative revisionist view suggests that sustainability and firm profitability can coexist (Hermundsdottir & Aspelund, 2020). Proponents argue that integrating sustainability measures can lead to enhanced competitiveness through cost savings, reduced risks, and increased market opportunities. This perspective highlights the potential for innovation and efficiency gains from sustainable practices. Revisionists emphasize that adopting sustainable strategies can attract environmentally conscious customers, investors, and employees, thus strengthening the firm's reputation and long-term value. They argue that the win-win situations between environmental and economic gains are achievable through effective management, strategic planning, and innovative technology adoption.

Porter and van der Linde (1995) are critical towards the traditionalist view for being too static. They highlight that sustainable innovations do not necessarily drive up costs, as firms operate in a dynamic world, where more efficient production procedures are inevitable in response to pressures from customers, competitors and regulators. This is supported by Porter and Kramer (2011), who pioneered the notion of shared value, which has since become a prominent framework for businesses striving to

achieve sustainable competitiveness. Shared value is a concept that aims to align a company's economic success with the well-being of the communities in which it operates. It recognizes that by adopting sustainable practices and investing in social initiatives, companies can improve their bottom line, while simultaneously benefiting society. The prevalence of including corporate social responsibility in determining value represents a new and growing trend that somewhat challenges the preceding views of Adam Smith's invisible hand and Milton Friedsmans view that companies' only social responsibility is profit to its shareholders (Fink, 2022; Smith, 1776; Friedman, 1970).

Further exploring shared value, the idea is that sustainability should not be viewed as a mere compliance exercise or a way to manage risk (Porter & Kramer, 2011). Instead, it should be integrated into the core strategies and operations of a business, driving innovation and growth. This is accomplished by identifying and addressing social and environmental challenges that intersect with the firm's interests and capabilities, ultimately enhancing competitiveness and profitability. Many sustainable innovations have been shown to reduce the internal costs of a firm, even without the presence of regulations and incentives (Bocken & Geradts, 2020). For instance, reducing excess packaging in products not only benefits the environment through increased circular economy, but it also translates into cost savings for the firm (Porter & Kramer, 2011; Coelho et. al, 2020)

According to Porter and Kramer (2011), embracing sustainability can create new market opportunities for firms. Additionally, as consumer awareness of environmental and social issues grows, businesses that demonstrate genuine commitment to sustainability are increasingly preferred by customers (McKinsey, 2019). This can lead to increased sales, customer loyalty, and market share, ultimately contributing to the firm's competitiveness and profitability. Furthermore, sustainable practices can help attract and retain top talent, as employees increasingly seek to work for companies that prioritize social and environmental responsibility (McKinsey, 2019). In this way, a strong sustainability agenda can contribute to a company's human capital, fueling its innovation capacity and long-term growth potential. In conclusion, shared value highlights the mutually beneficial relationship between sustainability and firm competitiveness. Together with several recent studies finding a positive correlation between sustainability and profitability, this suggests that the traditionalist view of an ecology-economy tradeoff does not hold true, and lends credibility to the win-win situations of the revisionist view (Porter & Kramer, 2011; Bacinello et. al, 2019, Russo & Fouts, 1997)

Influences on the relationship between sustainability and firm profitability

Hermundsdottir and Aspelund (2020) argue that there are contextual factors influencing the relationship between sustainability and profitability. The following two tables present first sustainable practices positively impacting profitability, before exploring how sustainable innovations can limit profitability.

Table 2.1: Positive impacts on profitability

Cost savings	Implementing sustainable practices can lead to cost reductions through resource conservation, waste reduction, and energy efficiency (Porter & Kramer, 2011; Coelho et. al, 2020).
Brand value and customer loyalty	Companies that embrace sustainability often experience enhanced brand value, customer loyalty, and differentiation in the marketplace, leading to increased sales (McKinsey, 2019).
Access to capital	Sustainable firms are often viewed more favorably by investors and financial institutions, granting them better access to capital and financing at lower costs (McKinsey, 2019).
Risk management	Firms that proactively address ESG issues can mitigate potential risks such as regulatory fines, reputational damage, and lawsuits (Hermundsdottir and Aspelund, 2020; Porter & Kramer, 2011).

Employee engagement and retention	Sustainable businesses tend to have higher employee engagement and retention rates, leading to lower turnover costs and higher productivity (McKinsey, 2019).
Innovation	Sustainable business practices can drive innovation and the development of new products and services (Porter & Kramer, 2011).

Table 2.2: Limiting profitability

High initial costs	Implementing sustainable practices and technologies may require significant upfront investments, which can be a barrier for some firms, particularly small businesses (Hermundsdottir and Aspelund, 2020).
Lack of awareness or expertise	Firms may lack the knowledge or experience to effectively implement sustainable practices, limiting their potential impact on profitability (Hermundsdottir and Aspelund, 2020).
Short-term focus	Businesses with a short-term focus on financial performance may not prioritize sustainability initiatives, as they may not see immediate returns on their investments (McKinsey, 2019).
Weak regulatory frameworks	Weak or inconsistent regulations can undermine the business case for sustainability, as firms may not be incentivized or forced to adopt sustainable practices (Porter & van der Linde, 1995).

An important final note is an elaboration regarding the need for regulations, given that sustainable innovation is profitable (Porter & van der Linde, 1995). Porter and van der Linde (1995) suggest that companies will not necessarily pursue these innovations naturally, as they don't have perfect information about sustainable opportunities and organizational incentives are not always aligned with innovation. Subsequently, they claim that regulations are needed to apply pressure to innovate. These regulations can focus on pollution cleanup, potentially driving up costs and lowering profitability, or focus on prevention and promote resource productivity. The second approach allows for strict regulations that encourages competition rather than hinders it, an idea known as the *Porter hypothesis* (Porter, 1996). To conclude, we recognize that the relationship between sustainability and profitability is to a large extent dependent on regulations that help businesses see how they can cover the gap in the double externality problem and achieve profitability through a focus on shared value and sustainable innovation.

2.2 Value Proposal

Payne et al. (2017) defines the value proposition as the strategic tool communicating the firm's ability to offer a superior value package to its customers. Harvard Business School (HBS) (2023) recommends three dimensions that help determine a specific company's value propositions; customers, needs and price.

Customers

FREYR themselves highlight three main customer groups that require modern battery technology; energy storage solutions (ESS), e-mobility and automotive (Rogstad & Raaen, 2023). Each group has different requirements from the battery solution provided, leading to large differences in how the batteries are created and customized between the groups. Battery innovation has so far been driven by automotives and consumer electronics (KILDE). These groups have stringent and customized requirements for every product, requiring highly individualized production processes. ESS on the other hand is a rapidly growing market with less predined requirements. Rogstad and Raaen (2023) highlight

that the lessened focus on high charging speeds allows FREYR's technology to fit well to ESS customers. Based on this and the capacity FREYR is building point to ESS being the main customer group and segment.

Needs

FREYR's licensing agreement with 24M allows them to utilize their SemiSolid battery technology to create both space saving and efficient production lines for batteries (Rogstad & Raaen, 2023). While the production process is optimized, the batteries generally require longer charging times than traditional lithium-ion batteries. This is an important downside when considering the automotive segment, but is as mentioned less important for industrial actors with ESS requirements. FREYR can capitalize on the unique needs of this market segment by optimizing for efficiency in production and long-term performance rather than charging speeds and custom requirements. Furthermore, FREYR can experiment and innovate with new solutions that can be sold to customers that have no predefined notion of the product except for the energy storage needs to be met. This potentially allows for an important value-add step not existing in the automobile segment.

Another key need for ESS customers is scale (Rogstad & Raaen, 2023). FREYR proposes to solve the requirements for stable battery supply from large customers through Giga-factories located close to the customer. This has three main benefits; shortened supply-chain and less negative impacts due to transport, a sustained and secure supply of batteries for the customer and increased cooperation on new technology due to geological colocation. Simultaneously, a major limitation that Rogstad and Rasen (2023) did not address is how they will manage Giga-factories with long lifetimes and customers whose needs are not endless. This could leave Giga-factories in unfavorable locations without nearby customers, and as such needs to be a consideration when FREYR decides on Giga-factory locations, especially regarding the fact that Giga-factory co-location is an explicit part of their strategy.

Price

Pricing is an important aspect of FREYR's value proposition, as their product competes with traditional and more established battery technology (Rogstad & Raaen, 2023). Additionally, their main competitor CATL maintains a dominant and growing market share. **Some point here... larger factories can produce more -> lower price. Quicker production -> lower price.**

FREYR's value proposition is in itself built upon helping the transition from fossil fuels to clean energy through the use of batteries (Rogstad & Raaen, 2023). Simultaneously, this relatively new industry brings with it challenges regarding supply chains and circularity and requires innovative solutions to create lasting and sustainable solutions. **Elaborate shortly.**

Increased customer value is always beneficial to the customer, so to evaluate the customer value of increased sustainability we must look towards customer needs (Anderson and Narus, 1998). An obvious increase in value for all customer segments comes from potentially reduced CO2 tax payments due to lower emissions from the production process. In the ESS segment customers are mostly directed towards other businesses and do not interface directly with consumers. This leads to PR benefits of increased sustainability being lower, while more consumer facing segments can benefit from this marketing effect to a greater degree. Elaborate shortly.

The formulated value proposition should clearly articulate why a customer should buy from you rather than a competitor (Payne et. al., 2017). Based on the dimensions explored earlier, a value proposition for FREYR that focuses on its preferred customers, explains how it meets its needs and highlights what sets it apart from competitors is this:

“Powering a sustainable future with innovative, localized and affordable battery solutions for renewable energy storage and electric mobility.”

2.3 Communicating the value proposal

For a business, the function of communication is to provide information the buyer needs to make the purchasing decision (Hollensen, 2014). Therefore, a company tailor the communication to its relevant customers to convince them to purchase the company’s products. Hollensen (2014) differentiates between a new customer relationship and already established customer relationships, were the less customer relationship the selling company has with the buyer, the more it relies on initiating communication. Seeing how FREYR has limited established customer relationships, it is natural to assume that they will be reliant on initiating communication with most of their customers. Therefore, we will prioritize this angle on communication. Hollensen (2014) argue that marketing communication consists of four parts: sender, message, communication channel and receiver. As a sender, FREYR needs to clearly understand what it needs to communicate to its customers, being the receivers. However, Hollensen (2014) highlights how the receiver is affected by external noise, for example competitor communication, that the sender needs to keep in mind. Additionally, he mentions how there might be other factors influencing, and potentially restricting, the communication. These are amongst other language, economic and competitive differences.

To provide guidelines for how FREYR efficiently can communicate the value proposal we turn first to the five key concepts of marketing and attempt to build a recommendation based on the dimensions presented (Kotler & Keller, 2016):

1. Customer Value: Focuses on understanding and delivering products or services that provide value to customers, ultimately leading to satisfaction, loyalty, and repeat business.
2. Segmentation: Involves dividing the market into smaller groups based on shared characteristics, such as demographics, psychographics, or behavioral patterns.
3. Positioning: The process of creating a unique and favorable image of the brand or product in the minds of target customers by where it is positioned in market channels both physically and digitally.
4. Targeting: Refers to selecting the most suitable segments of the market and tailoring marketing efforts to appeal to these specific groups.
5. Buying Behavior: Helps companies identify the factors that influence purchasing decisions and tailor their approach to better meet customer needs and preferences.

To formulate a fitting message and choosing the right communication channel, it is essential that FREYR has a clear view on who the receiver is. To establish who the customers are, assessing the segmentation dimension is relevant. The segmentation of FREYR’s customers coincide with the presented customer groups in 2.2. Defining these three groups as the receivers, FREYR can customize the message and communication channel to the different receivers. Creating a suitable communication strategy can be done for all three customer groups, but as discussed in 2.2, FREYR target the ESS

customer segment and we therefore find it most relevant to focus on creating a communication plan for this customer group.

3 International Business

3.1 Internationalization theory

Internationalization theories help explain how companies expand their operations across borders and adapt to global markets (Hollensen, 2014). By understanding these theories, FREYR can gain valuable insights into how to realize its international ambitions and ensure long-term success. There exist many established theories in the literature, such as the Uppsala internationalization model, transaction cost theory and the network model (Hollensen, 2014; Bjørgum, 2023a). These traditional theories view internationalization as a slow and incremental process, where organizational learning and gradual international expansion goes hand in hand (Hollensen, 2014). However, there is a growing discrepancy between the stage-based paradigm and the internationalization patterns of modern SMEs (Aspelund & Moen, 2005). The concept of a born global seeks to describe this new group of companies that internationalize early on and thereby contradicts the paradigm of incremental internationalization (Hollensen, 2014; Rennie 1993). The theories build on different assumptions of how companies operate and what barriers companies have to overcome on their way to internationalization. It is therefore important to understand the applicability and interplay between the internationalization theories, in order for FREYR to craft a tailored internationalization strategy that leverages its strengths while adapting to its specific circumstances.

The Uppsala internationalization model, introduced by Johanson & Vahlne (1977), has been a predominant theory in the international marketing literature. The Uppsala internationalization model argues that international activities require market-specific knowledge, which is mainly gained through experience in the market (Hollensen, 2014). Additionally, Johanson & Vahlne introduced the concept of psychic distance, defined as factors that make it difficult to understand foreign environments (Johanson & Vahlne, 2002). The model argued that internationalization happens gradually with sequentially increasing market commitments as experience and market-specific knowledge are gained, starting in markets with low psychic distance. In this way, internationalization develops through stages, starting with low commitment entry modes such as independent local representatives, progressing to establishing foreign sales subsidiaries before finally starting local production (Hollensen, 2014). However, FREYR and many other contemporary companies somewhat contradict this internationalization pattern. Firstly, FREYR started its internationalization process without having fully established itself domestically. Secondly, FREYR's internationalization strategy completely disregards sequential stages of market commitment, as they enter new markets by building a local production facility, which is a much higher market commitment than predicted by the Uppsala internationalization model. Thirdly, the company's first expansion is to the US, which has a greater psychic distance than neighboring European markets (Rogstad & Raaen, 2023; Hollensen, 2014). However, it should be noted that this decision was driven by governmental subsidies and psychic distance seemed to be considered, as Rogstad & Raaen (2023) noted the importance of the relative similarities between FREYR's domestic market and the US. FREYR's internationalization process echoes Nordström's (1990) critique of the Uppsala internationalization model. Where Nordström noted a tendency of firms to leapfrog, establishing operations in markets with greater psychic distance and altogether skipping intermediary entry modes. FREYR's rapid expansion efforts seem to have been enabled by their frequent use of international partners for knowledge and expertise, somewhat circumventing the need for learning that

the Uppsala internationalization model prescribes. To better understand how this has affected FREYR we will now examine the network model.

The network model presents relationships and business networks as important parts of the internationalization process (Hollensen, 2014). Since companies are reliant on other companies' resources, they cannot be analyzed in isolation, but should rather be analyzed in relation to other actors. Becoming part of a business network can be time-consuming as the company has to establish relations with foreign actors and accumulate resources to secure its position (Hollensen, 2014). This might seem to contradict FREYR's internationalization process as it appears to have been quite rapid. However, there has undoubtedly been a longer screening process before finding the right partners and initiating a relationship with them. FREYR is at least currently going through that process in its effort to find potential partners for different steps in the value chain, such as packaging and recycling (Rogstad & Raaen, 2023). Furthermore, it is known that when this process is finished, and a company joins a business network, the internationalization process can be quite rapid, which could explain FREYR's current internationalization progression (Hollensen, 2014). However, there are several problems with the network model. Firstly, the model is primarily descriptive, giving managers at FREYR few guidelines for how to apply the model in their circumstances (Johanson & Mattsson, 1994). Furthermore, the model might overemphasize the importance of relationships for the internationalization process, overshadowing other important factors such as psychic distance and firm capabilities. In conclusion, while the network model might not explain every aspect or give the FREYR clear guidelines, it seems to at least explain an important aspect of FREYR's internationalization process.

Another interesting perspective on internationalization processes of contemporary companies are the concept of born globals. Born globals challenge the traditional stage-based view on internationalization, by seeking out international markets early in their development (Rennie, 1993; Oviatt & McDougall, 1994; Hollensen, 2014). The emergence of born globals are likely based on recent economic developments such as the globalization of markets, internationalized transportation systems and an increase in information technology (Björgum, 2023). FREYR's internationalization process bears many similarities with born global companies, as the company has invested in a large production unit in the US before maturing in its domestic market (Rogstad & Raaen, 2023). However, FREYR's strategy of building regional production centers that only sells to local customers stands in contrast to born global's tendency to view the global market as a single borderless market (Rogstad & Raaen, 2023; Hollensen, 2014). FREYR's partial born-globalness highlights a key problem with the concept of born globals - the lack of a specific and unified definition in the literature (Rennie, 1993; Knight & Cavusgil, 2004; Luostarinen & Gabrielsson, 2004). In order to more accurately classify FREYR, we can use Kuivalainen et al.'s (2007) and Lopez et al.'s (2009) analyses of degree of born-globalness. The authors distinguish between true born globals: focusing on high- and low-distance markets, born internationals: focusing on low-distance markets, and born regionals: focusing on its home region. Although the paper doesn't specifically define how to measure the distance between markets, they used Hofstede's cultural distance. As FREYR highlighted, the low cultural distance to the US as an important criteria, we can conclude that FREYR likely can be categorized as a born international.

Another problem with the concept of born globals is whether they accurately represent a group of companies with homogenous internationalization strategies (Kuivalainen et al., 2007). In the literature, many of the empirical studies on born globals use share of foreign sale as a key criteria (Knight & Cavusgil, 1996; Luostarinen & Gabrielsson, 2004). This might not fully capture a company's degree of internationalization. On the other hand, researchers like Sullivan (1994) define the degree of

internationalization more broadly based on structural, financial and psychological factors. Based on Sullivan's factors, FREYR would likely appear more global than its global international classification reflects. This leads to a concerning problem, where it becomes difficult to make normative statements about a possibly heterogeneous group of born globals. It is therefore of utmost importance to unify, clarify and further research the concept of born globals.

The literature on internationalization theory can be split into process-based and economic-based schools of thought (Gabrielsson & Manek Kirpalani, 2004). We have discussed process-based theories, the Uppsala internationalization model and the network model, which follow a behavioral approach (Cyert & March, 1963). The economic based school of thought, with theories such as transaction cost theory and the eclectic paradigm, is based on rational economic decisions regarding transaction costs (Anderson & Gatignon, 1986; Dunning, 1988; Williamson, 1975). However, there is evidence against the relevancy of economic-based models for born globals, as cost reduction is not the most important factor for their localization or their internationalization efforts (McDougall, Shane & Oviatt, 1994). We will therefore omit discussing the economic-based theories such as the transaction cost theory and the eclectic paradigm as they are of little relevance for FREYR.

Based on our discussion, it is evident that no single internationalization theory fully captures FREYR's internationalization process and its specific circumstances. However, the company bears many similarities with the concept of born internationals. Furthermore, the network model helps explain FREYR's use of business partners to quickly expand internationally, while at the same time overlooking other important factors influencing FREYR. And finally, although FREYR does not mimic the stage process defined by the Uppsala internationalization model, it is clear that the concept of psychic distance has influenced the company and some of its internationalization decisions.

3.2 Supply Chain Activities

When evaluating where to locate FREYR's supply chain activities there are a number of factors that influence the decision. FREYR has already defined a strategy of locating production close to the customers. However, there are a number of supply chain trends in the business world and in the literature that contrast this strategy. We will therefore first reevaluate the general strategy, before diving deeper into specific factors.

Offshoring is a frequent choice for the supply chain activities for both small and large companies (Roza et al. 2011). Using an offshoring strategy involves moving business functions from the home base to foreign sites (Roza et al. 2011). Roza et al. (2011) presents three overarching motivations for offshoring: cost, resources and entrepreneurship. By offshoring, a SME may benefit from lower labor costs and increased efficiency from suppliers' economy of scale. In a resource perspective, a great advantage in information-intensive industries is that offshoring makes personnel resources more available. Additionally, offshoring allows a firm to obtain complementary resources, e.g. technological resources, enabling the firm to become more efficient. Taking an entrepreneurial view on offshoring, this perspective prioritizes that offshoring enables growth and using the greater resource pool to explore new opportunities. The entrepreneurial perspective also highlights how offshoring makes it easier to have a physical presence in the proximity of customers. All these perspectives are relevant for FREYR, but especially an entrepreneurial perspective is relevant considering how it facilitates the proximity to customers, as it is an important part of FREYR's value proposition. **Offshoring can be split into farshoring, locating supply chain activities close to European countries, and farshoring, usually locating the supply chain in international low-cost countries. FREYR deviates somewhat from the**

assumptions postulated by Roza et al (2011), as its core-business spans multiple parts of the world. We will therefore adapt the framework, by making nearshoring mean locating close to core business activities, in FREYR's case meaning the company's core markets.

Seeing how the proximity to customers is important, nearshoring might be the approach to offshoring location. However, choosing an offshore approach also has its drawbacks. In the case of FREYR, the most instrumental drawbacks may be great coordination costs and loss of control of production (Bjørgum, 2023). If settling in low-cost countries in South-East Asia, there might also arise substantial communication challenges. Summarized, offshoring could be an attractive alternative for FREYR's value chain activities with the possibility to gain a close proximity to customers, but might also pose coordination difficulties.

Reshoring is also a possible value chain approach. Lund and Steen (2020) define reshoring as moving the supply chain from low-cost countries back to the higher-cost home country. Because of technological advancements, fewer employees in high-cost countries can outweigh lower labor costs in low-cost countries, enabling reshoring from an economic view (Lund and Steen, 2020). Apart from economic advantages, the increased flexibility and delivery ability is by Kinkel and Maloc (2009) highlighted as the most important factor for backshoring. Additionally, Lund and Steen (2020) emphasize the benefit of greater product development through backshoring, seeing how there is a greater proximity between the development and production. In the case of FREYR, most of these advantages could be substantial. The increased flexibility and delivery ability could become valuable when establishing a customer relationship, and respond to market demands. With regards to the advantages related to technology, FREYR is very reliant on the 24M technology. As 24M is based in the US, the technology development benefits from reshoring to Norway are virtually eliminated. Reshoring also pose some other challenges, such as traditionally higher production costs. As previously discussed, this might be outweighed by the progress in automation leading to lower costs, but is an unclear factor. Furthermore, there might be significant supply chain disruptions when reshoring, leading to increased transportation costs and higher lead times for raw materials and components. These disruptions also changes the established supply chain, forcing the new suppliers to establish new relationships.

FRA CASEPRESENTASJONEN: FREYR vil lokalisere produksjonen for å redusere utslipp

Based on our discussion, **XXX** seems to be the most favorable alternative for FREYR. Based on this approach, FREYR will have a general view of what regions and countries that are possible locations. In order to conclude on specific locations FREYR will have to do additional analyses that reflect the relative advantages and disadvantages of various countries. On a high level, the factors FREYR should look at will be influenced by the company's supply chain strategy, which consists of: profitability, sustainability, joint ventures and licensing, inputs, and lastly technology (Rogstad & Raaen, 2023). Furthermore, they argued that FREYR assesses the energy mix to ensure a sustainable production, the distance to suppliers to secure flexibility and rapid deliveries and prioritize suppliers that show a willingness to cooperate for creating a quality product. Additionally, FREYR also looks for attractive places to work to attract competent people, work to improve human rights in the supply chain and watch out for political risks that could hinder the supply and production. Simultaneously, the company is searching for political opportunities like the IRA to capitalize on market opportunities, proximity to harbors and customers and affordable space. Overall, FREYR also stress having multiple suppliers per material to ensure a reliant and robust supply chain. These are quite specific factors, and in a broad aspect they are part of the following general factors: sustainability, economic, social, infrastructure and logistics, workforce and talent, legal and regulatory, and risks. However, Durach and Wiengarten (2017)

presents culture as an important factor for supply chain. The specific factors **XX** mentioned cover some important aspects of our categories. However, we find that they should be expanded.

We will now turn to outlining analyses that FREYR could use to locate the most promising suppliers based on the above-mentioned factors. To better highlight each of the general factors we highlighted, we will list subfactors touching upon important aspects and how to measure them.

Group	Subfactor	How to measure
ESG	Energy mix	Assess the unique energy mixes in promising locations using tools like IEA's energy country overview (IEA, 2023).
	Environmental protection	Review relevant climate regulations and climate related business practices and assess what impact this will have on FREY's operations.
	Human rights	Use a human rights sustainability framework, like EDI Human Rights Due Diligence Framework (Ethical Trading Initiative, 2016)
Economic	Energy costs	Calculate energy costs through combining electricity usage predictions at different times of day and month to month, compared to predicted energy prices for the same interval.
	Labor costs	Evaluate the number of needed employees combined with the local guiding salary ranges for the positions.
	Land cost/Rent	Evaluate cost level of either purchasing suitable land or renting an industrial space.
	Financing options	FREYR has stated that it ideally wants to finance its expansion with the use of bank issued loans. They will therefore need to review the availability of local financing options.
Infrastructure and logistics	Harbor	Analyze the proximity to harbors in the promising locations using an overview of harbors, provided by e.g. SeaRates world overview (SeaRates, 2023)
	Available space	Investigate whether the country has suitable industrial zones. Review local prospects with realtors, online databases and the local government.
	Supplier proximity	Review the cultural, communicational and geographical distance to the relevant suppliers and customers
	Technology	Ensure that the different suppliers are compliant with the requirements from 24M technology
	Willingness to cooperate	Reach out to the potential suppliers to discuss how a potential partnership could develop
Workforce and talent	Competent workforce	Use public labor market statistics to evaluate the supply of workers to fill the various positions. Investigate the general language proficiency in english, to determine whether they can collaborate with international partners. Consider willingness of international employees to relocate to the country.
	Quality of life	Analyze quality of life, using indexes like World Population Review (2023).
Legal and regulatory	Regulatory environment	Consult global indexed for the country's ease of doing business, such as the one issued by the World Bank (2019). Estimate compliance cost of adhering to local regulations, both in term of how much time it will take and how much it will cost.
	Intellectual property protection	Look at published rankings of intellectual property right protection by country, such as the one from Intellectual Property Rights Alliance (2022). Additionally, check which international agreements regarding IP the country is a part of. Lastly, evaluate the country's enforcement mechanisms such as the legal system and government agencies.

Cultural	Psychic distance	Hollensen (2014) argues that psychic distance consists of two dimensions: country characteristics distance, such as level of economic development and market competitiveness, and people characteristics distance, such as level of education and customer lifestyle.
	Cultural distance	Use the cultural dimensions presented under section 3.3 Perspectives on culture.
Risks	Currency risk	Calculate current currency exposure through totaling capital involved in all transactions divided by capital involved in currency exchange transactions (Forexpedia, 2023)
	Political risk	Schmidt (2022) presents government interference, transfer and conversion, and political violence as the three factors for assessing political risk. He argues that key indicators of increased political risk are political instability, legal and regulatory constraints, tariffs and import restrictions, and labor unrest

To summarize our discussion, FRYER should first conclude on a general strategy. It should then conduct a deeper analysis, comparing the different countries on the factors and different subfactors we have presented. Based on this, FREYR should make a holistic evaluation based on the different country characteristics.

3.3 Perspectives of Culture

Culture serves as an impactor of peoples action, being an underlying factor for their decisions and behaviors (Hollensen, 2014). Across the world, there exists significantly different cultural expressions and customs. Complicating the matter, there also exists different ways to formulate and view culture. As an international company, it is important that FREYR is conscious about the differences in culture it will encounter, and use this knowledge as a guiding tool for conducting business with its suppliers and customers.

Hofstede (2011) presents an approach to categorize significant cultural differences between countries. Initially he published four key dimensions to assess, but has later expanded his theory to include two additional dimensions. The first dimension is power distance, where a high power distance means that there is a clear hierarchical structure where the decisions are made on the top and carried out by those lower down the hierarchy. Comparatively, a low degree means that everyone in the company is involved in decision-making and except to be involved. The second dimension revolves uncertainty avoidance, including both risk-taking and ambiguity in situations. The third dimension is individualism compared to collectivism, meaning how much one values achieving goals as an individual or as a group. The fourth dimension is the tension between masculine and feminine values, where masculine values often relate to achievement, success and money while feminine values are related to quality of life and job enrichment. Hofstede expanded his theory to include time perspective, if the culture has a short- or long-term orientation. Lastly, Hofstede has included the dimension of indulgence versus restraint. This dimension assesses whether the culture cherishes a free lifestyle with one's own choice of action or if the culture value social norms and duty to guide ways of life. Hofstede's six dimensions are useful for businesses to uncover cultural differences, thereby understand how employees and customers behave, making it possible to leverage the differences instead of the differences becoming detrimental.

Trompenaars (1997) also presents a perspective on culture, serving as a seven-dimensional tool for managers to uncover cultural differences. Firstly, he differentiates between universalism and particularism, where universalism implies that the same rules apply to everyone whereas in particularistic cultures different rules apply to different people based on relational status. Individualism versus communitarianism is the second dimension, assessing whether people work as individuals or as a group.

Then, the dimension comparing neutral versus affective cultures explores how people show emotions. Next, specific versus diffuse handles how separate work and personal life is, where cultures that clearly separate work and personal life are categorized as specific while diffuse cultures has an unclear boundary between work and personal life. Thereon, achievement versus ascription assesses whether status is earned through achievements, or ascribed based on other factors such as age or education. Trompenaars also looks at how cultures have different views on time, where a sequential time culture does things in stages, viewing time as important and emphasize completing tasks on time, whereas synchronous time cultures do things all at once, where activities are linked and not done in stages. Lastly, the final dimension is internal versus external direction. Internal direction thinking highlights how one are able to control the environment, while external direction cultures instead affirms that one are controlled by the environment. Applying these seven dimensions, companies are equipped to manage cultural differences that arise when operating internationally.

While there are many similarities between the cultural perspectives of Trompenaars and Hofstede, there are also some key differences. One difference lays in the application of the frameworks. While Hofstede's perspective is mostly suited for analyzing countries as a whole to locate suitable markets or suppliers, Trompenaars' perspective on culture is more tailored to assist managers in their daily challenges in multicultural companies (Björgum, 2023^b). Another difference is the view on how fast culture changes. Hofstede has been criticized for viewing national cultures as static, meaning they rarely change over time and thus do not reflect ongoing cultural changes and evolution (Hamden-Turner & Trompenaars, 1997). On the other side, Trompenaars alleges that his perspective allows for a more dynamic view on how culture develops (Hamden-Turner & Trompenaars, 1997). Meanwhile, Hofstede (1996) has criticized Trompenaars perspective for insufficiently showing differences in national cultures. He emphasize how Trompenaars' perspective and research categorizes countries into two groups: "Left Brain" and "Right Brain", pointing out how the countries Trompenaars studied either all shared attributes as universalists, individualists, neutralists and specific or the opposites. Hofstede (1996) therefore claims that the cultural dimensions presented by Trompenaars has too much intercorrelation, making it possible to distill his perspective into either a left or a right orientation. On the other hand, Hofstede's own cultural dimensions show a lesser correlation compared to Trompenaars', indicating a greater relevance of each dimension (Hofstede, 2001).

Despite the recently assessed criticism of the two perspectives, they both could help FREYR when working with customers and suppliers in foreign countries. Hofstede's perspective on culture is suited for locating both customers and suppliers. According to FREYR , their customers differ from their suppliers where they focus on customers in the Western regions while many suppliers are located in South-East Asia (Rogstad & Raaen, 2023). Therefore, it could be important to discover which major culture differences may exist between the customers and suppliers using Hofstede's cultural dimensions. Simultaneously, FREYR illustrates that their main competitors are South-East Asian producers of conventional battery cells, indicating that the general battery cell market may be influenced by South-East Asian culture (Rogstad & Raaen, 2023). Hollensen (2014) highlights that there usually exists an industry culture developed through a joint history. Since South-East Asian companies have dominated the industry, the industry culture might be influenced by a traditional South-East Asian culture.

Therefore, the Western customers might be used to that culture, meaning that it is highly important that FREYR are able to discover which cultural tendencies are prevalent in the market. This can be done using both Hofstede and Trompenaars' perspectives. Trompenaars' cultural dimensions can be useful when having chosen customers and suppliers to ensure few misunderstandings when collaborating with

them. Additionally, both cultural perspectives show that there are internal cultural differences in FREYR, most notably between the US and Japan (Hofstede, 2023; Hamden-Turner & Trompenaars, 1997). By locating them using the perspectives and becoming conscious of the differences, FREYR can obtain intimate knowledge of how to better cooperate with their suppliers and customers while simultaneously achieving better management of the different business units internally in FREYR.

However, we would like to stress that both perspectives need to be used with care, because of the intricate and nuanced nature of culture and that they don't incorporate all cultural differences. While Trompenaars and Hofstede partly assess communication through dimensions such as neutral versus affective and high versus low power distance respectively, neither has an explicit focus on the communication styles. Hall (1960) emphasizes a different way of communication, differentiating on high- and low-context cultures, where high-context cultures have an implicit and indirect communication style while low-context cultures are more direct and explicit. Furthermore, the two perspectives don't tackle negotiation styles directly, whereas many of the dimensions provide small pictures of a culture's negotiation style. To ensure that FREYR is aware of the different negotiation styles it might encounter, Adair and Brett (2005) builds upon the framework of Hall (1960) to create a framework for different cultural approaches to negotiations. Using their four-stage model, FREYR might be more aware of the negotiation styles of its customers and suppliers, ensuring that FREYR can approach the different cultures to achieve the most efficient deals. It should also be mentioned that the two perspectives on culture might not adequately cover decision-making processes, religion and conflict resolution across cultures.

Based on our discussion, it is clear that FREYR can gain meaningful insights using the two perspectives on culture provided by Hofstede and Trompenaars. Hofstede's cultural dimensions can be most useful when choosing suitable customers and suppliers, while Trompenaars' dimensions can be most useful when collaborating with them on a daily basis. At the same time, FREYR needs to account for the shortcomings of the two perspectives.

References

- Adair, W. L., & Brett, J. M. (2005). The Negotiation Dance: Time, Culture, and Behavioral Sequences in Negotiation. *Organization Science*, 16(1), 33–51. <http://www.jstor.org/stable/25145947>
- Anderson, E., & Gatignon, H. (1986). Modes of foreign entry: A transaction cost analysis and propositions. *Journal of international business studies*, 17, 1-26.
- Aspelund, A., & Moen, Ø. (2005). Small international firms: Typology, performance and implications. *Management International Review*, 45, 37–57.
- Bacinello, E., Tontini, G., and Alberton, A. (2019). "Influence of maturity on corporate social responsibility and sustainable innovation in business performance". In: *Corporate Social Responsibility and Environmental Management*.
- Bjørgum, Ø. (2023a). *Internationalization Theories - Lecture 9 NTNU*.
- Bjørgum, Ø. (2023b). *Culture - Lecture 8 NTNU*.
- Bocken, N. M. P., & Geradts, T. H. J. (2020). Barriers and drivers to sustainable business model innovation: Organization design and dynamic capabilities. *Long Range Planning*, 53(4), 101950. <https://doi.org/10.1016/j.lrp.2019.101950>
- Bridge, G., & Faigen, E. (2022). Towards the lithium-ion battery production network: Thinking beyond mineral supply chains. *Energy Research & Social Science*, 89, 102659. <https://doi.org/10.1016/j.erss.2022.102659>
- Campagnol, N., Pfeiffer, A. and Tryggestad, C. (2022) Capturing the battery value chain opportunity. Retrieved 6 May 2023, from <https://www.mckinsey.com/industries/electric-power-and-natural-gas/our-insights/capturing-the-battery-value-chain-opportunity>
- Coelho, P. M., Corona, B., ten Klooster, R., & Worrell, E. (2020). Sustainability of reusable packaging—Current situation and trends. *Resources, Conservation & Recycling: X*, 6, 100037. <https://doi.org/10.1016/j.rcrx.2020.100037>
- Cyert, R. M., & March, J. G. (1963). A behavioral theory of the firm. Englewood Cliffs, NJ, 2(4), 169-187.
- De Wit, B. (2020) *Strategy, an International Perspective*. Cheriton House, UK: Cengage Learning, 2020.
- Dunning, J. H. (1988). The eclectic paradigm of international production: A restatement and some possible extensions. *Journal of international business studies*, 19(1), 1-31.
- Durach, C. F. & Wiengarten, F. (2017) Exploring the impact of geographical traits on the occurrence of supply chain failures. *Supply Chain Management Volume 22, Issue 2*.
- Ethical Trading Initiative (2016). Human rights due diligence framework. Retrieved 7 May 2023, from: <https://www.ethicaltrade.org/resources/human-rights-due-diligence-framework>
- European Commission, EU (2021) - In focus: Batteries – a key enabler of a low-carbon economy (15.03.2021). Retrieved 7 May 2023 from:

https://commission.europa.eu/news/focus-batteries-key-enabler-low-carbon-economy-2021-03-15_en

Fink L. (2022). The Power of Capitalism. Retrieved 8 May 2023, from: <https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter>

FREYR Battery (2022) — *FREYR Battery and Nidec Corporation Complete Formation of Joint Venture*. (12.06.2022). Retrieved 5 May 2023, from <https://ir.freyrbattery.com/ir-news/press-releases/news-details/2022/FREYR-Battery-and-Nidec-Corporation-Complete-Formation-of-Joint-Venture/default.aspx>

Forexpedia (2023). Currency Exposure. Retrieved 7 May 2023, from: <https://www.babypips.com/forexpedia/currency-exposure#:~:text=Currency%20exposure%20can%20be%20quantified,involved%20in%20currency%20exchange%20transactions>

FREYR (2023a). *Annual Report 2022*. Retrieved 6 May 2023, from: https://s27.q4cdn.com/476984837/files/doc_financials/2022/ar/FREYR-Annual-Report-2022.pdf

FREYR (2023b). FREYR Battery Signs First E-Mobility Offtake Agreement with Impact Clean Power Technology (12.01.2023). Retrieved 7 May 2023, from: <https://ir.freyrbattery.com/ir-news/press-releases/news-details/2023/FREYR-Battery-Signs-First-E-Mobility-Offtake-Agreement-with-Impact-Clean-Power-Technology-to-Support-Up-to-14-GWh-of-LFP-Cells/default.aspx>

FREYR (2023c) . FREYR 4Q and Full Year 2022 Earnings Call (27.02.2023). Retrieved 6 May 2023, from: https://s27.q4cdn.com/476984837/files/doc_financials/2022/q4/FREY-4Q22-Earnings-Deck_MASTER-FINAL-Updated-Title.pdf

Friedman, M. (1970, September 13). A Friedman doctrine - The Social Responsibility Of Business Is to Increase Its Profits. *The New York Times*. <https://www.nytimes.com/1970/09/13/archives/a-friedman-doctrine-the-social-responsibility-of-business-is-to.html>

Gabrielsson, M., & Manek Kirpalani, V. H. (2004). Born globals: How to reach new business space rapidly. *International Business Review*, 13(5), 555–571.

Hall, E.T. (1960) *The Silent Language*. Doubleday, Garden City, NY.

Hampden-Turner, C and Trompenaars F. (1997) 'Riding the Waves of Culture,' 2nd Edition, Boston: Nicholas Brealey.

Harding, R. (2023) - Beware the great battery industry fallacy - ft.com (02.02.2023). Retrieved 7 May 2023, from:

<https://www.ft.com/content/b9a71f90-d28b-4330-adcc-54ca72847ee5>

Hofstede, G. (1996). Riding the waves of commerce: A test of trompenaars' "model" of national culture differences, *International Journal of Intercultural Relations*, Volume 20, Issue 2, 1996, Pages 189-198.

Hofstede, G. (2001). *Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations across Nations*. Thousand Oaks, CA.

Hofstede, G. (2023). Country comparison graphs. Retrieved 7 May 2023, from: <https://geerthofstede.com/country-comparison-graphs/>

IEA (2020) - *A rapid rise in battery innovation is playing a key role in clean energy transitions—News—IEA*. (22.09.2020). Retrieved 5 May 2023, from <https://www.iea.org/news/a-rapid-rise-in-battery-innovation-is-playing-a-key-role-in-clean-energy-transitions>

IEA (2023). Countries & Regions. Retrieved 7 May 2023, from: <https://www.iea.org/countries>

Johanson, J., & Vahlne, J. E. (1977). The internationalization process of the firm—a model of knowledge development and increasing foreign market commitments. *Journal of international business studies*, 8, 23-32.

Johanson, J., & Mattsson, L.-G. (1994). *The Markets-As-Networks Tradition in Sweden* (pp. 321–346). https://doi.org/10.1007/978-94-011-1402-8_10

Johanson, J., & Vahlne, J.-E. (2002). The internationalization process of the firm: A model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, 8.

Keller, K. L., & Kotler, P. (2016). *Marketing Management*. Pearson.

Hofstede, G. (2011). Dimensionalizing Cultures: The Hofstede Model in Context. Online Readings in Psychology and Culture, 2(1). <https://doi.org/10.9707/2307-0919.1014>

Kinkel, S. & Maloca, S. (2009). Drivers and antecedents of manufacturing offshoring and backshoring—A German perspective. *Journal of Purchasing and Supply Management*. Volume 15, Issue 3, September 2009, p. 154-165.

Knight, G. A./Cavusgil, S. T., The Born Global Firm: A Challenge to Traditional Internationalization Theory. *Advances in International Marketing*, 8, 1996 pp. 11-26.

Kuivalainen, O., Sundqvist, S., & Servais, P. (2007). Firms' degree of born-globalness, international entrepreneurial orientation and

export performance. *Journal of World Business*, 42(3), 253–267. <https://doi.org/10.1016/j.jwb.2007.04.010>

Lund, H. B & Steen, M. (2020). Make at home or abroad? Manufacturing reshoring through a GPN lens: A Norwegian case study. *Geoforum*, Volume 113, July 2020, p. 154-164

Luostarinen, R., & Gabrielsson, M. (2006). Globalization and marketing strategies of Born Globals in SMOPECs. *Thunderbird International Business Review*, 48, 773–801. <https://doi.org/10.1002/tie.20122>

Mabert, V.A., Venkataramanan, M.A., (1998) "Special research focus on supply chain linkages: challenges for design and management in the 21st century". *Decision Sciences* 29 (3), pp. 537–552.

McDougall, P. P., Shane, S., & Oviatt, B. M. (1994). Explaining the formation of international new ventures: The limits of theories from international business research. *Journal of business venturing*, 9(6), 469-487.

McKinsey (2019). Five ways that ESG creates value. Retrieved 8 May 2023, from: <https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/five-ways-that-esg-creates-value>

Mudambi, R. (2008), *Location, control and innovation in knowledge-intensive industries*, *Journal of Economic Geography*, Volume 8, Issue 5, September 2008, Pages 699–725

Oviatt, B. M., & McDougall, P. P. (2018). Toward a theory of international new ventures. *International Entrepreneurship: The Pursuit of Opportunities across National Borders*, 31-57.

Payne, A., Frow, P. and Eggert, A. (2017). The customer value proposition: evolution, development, and application in marketing". In: *Journal of the Academy of Marketing Science* 45.4, pp. 467–489

Porter, M. E. (1979, mars 1). How Competitive Forces Shape Strategy. *Harvard Business Review*. <https://hbr.org/1979/03/how-competitive-forces-shape-strategy>

Porter, M. E. Konkurransfortrinn. Tano Aschehoug, 1992.

Porter, M. E. & van der Linde. (1995) "Green and competitive: ending the stalemate". In: *Harvard business review* 73.5 (1995), pp. 120–134.

Porter, M. E. (1996). "America's green strategy". In: *Business and the environment: a reader* 33, p. 1072.

Property Rights Alliance (2022). *International Property Rights Index 2022*. Retrieved 8 May 2023, from:

https://internationalpropertyrightsindex.org/?fbclid=IwAR3SmSXWfftWFVbK9ugdmVh-CKH8skjnFStFt5NgOBltwtYzFL4CT-Azmn_Q

Rennie, M. W. (1993). Born global. *The McKinsey Quarterly*, (4), 45-53.

Rogstad, D. & Raaen, M. (2023). *FREYR - Case presentation held at NTNU*. (02.05.2023)

Roza, M., Van den Bosch, F. A. J., Volberda, H. W. (2011). Offshoring strategy: Motives, functions, locations, and governance modes of small, medium-sized and large firms. *International Business Review* Volume 20, Issue 3, June 2011, p. 314-323.

Russo M. V and Fouts P. A. (1997). A Resource-Based Perspective on Corporate Environmental Performance and Profitability. *Academy of Management Journal* 40(3)

Searates (2023). World sea ports. Retrieved 7 May 2023, from: <https://www.searates.com/maritime/>

Schmidt, C. (2022) What Is Political Risk and How Can I Measure It? Retrieved 8 May 2023, from: <https://www.realized1031.com/blog/what-is-political-risk-and-how-can-i-measure-it>

Smith, A. *The Wealth of Nations: An Inquiry into the Nature and Causes of the Wealth of Nations*. 1776.

Sullivan, D. (1994). Measuring the degree of internationalization of a firm. *Journal of international business studies*, 25, 325-342.

The World Bank (2019). Ease of doing business rank. Retrieved 8 May 2023, from: <https://data.worldbank.org/indicator/IC.BU.S.EASE.XQ>

United Nation - UN (2022). As Humanity's Environment Footprint Becomes Increasingly Unsustainable, Global Leaders Recommit to Joint Climate Action, at

Opening of Stockholm Summit (02.06.2022). Retrieved 8 May 2023, from: https://press.un.org/en/2022/envdev2046.doc.htm?fbclid=IwAR2OXI85gS829V5jmS1iNnMnyMh_XJIPbd405dO0ZztR6hmCaqnNqPBVTE

Wang, C., & Sun, X. (2023). The Promise of Solid-State Batteries for Safe and Reliable Energy Storage. *Engineering*, 21, 32-35. <https://doi.org/10.1016/j.eng.2022.10.008>

Williamson, O. E. (1975). Markets and hierarchies: analysis and antitrust implications: a study in the economics of internal organization. University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship.

World Population Review (2023). Standards of living by country. Retrieved 8 May 2023, from: <https://worldpopulationreview.com/country-rankings/standard-of-living-by-country>