

Nordic businesses on climate transition, competitiveness and growth

– An interview study among leading
businesses in the Nordics



NORDIC BUSINESSES ON THE CLIMATE TRANSIT

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An interview study among leading businesses in the Nordics by the Haga Initiative (SWE), Fossil Free Sweden (SWE), Climate Leadership Coalition (FIN), Icelandic New Energy (ISL) and Norway 203040 (NOR).

The report is financed by the Nordic Council of Ministers.

Nordic co-operation

Nordic co-operation is one of the world's most extensive forms of regional collaboration, involving Denmark, Finland, Iceland, Norway, Sweden, the Faroe Islands, Greenland, and Åland.

Nordic co-operation has firm traditions in politics, the economy, and culture. It plays an important role in European and international collaboration, and aims at creating a strong Nordic community in a strong Europe.

Nordic co-operation seeks to safeguard Nordic and regional interests and principles in the global community. Shared Nordic values help the region solidify its position as one of the world's most innovative and competitive.

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1. Executive summary

In order to investigate how climate efforts and competitiveness are connected and provide opportunities for the Nordic region, CEOs and the top management of some of the leading companies in the five Nordic countries have been interviewed. In total, 38 interviews were conducted (27 CEOs, 3 chairs and 8 others from top-level management) and their answers are summarized and analyzed in this report.

The interviewed company leaders say that the Nordic region can contribute to reaching the goals of the Paris Agreement, and the Nordic impact can be greater than what is proportional for this small region. The following aspects describe how Nordic companies see that they and the Nordic countries can contribute internationally:

- **Showing global leadership**
- **Promoting cooperation between countries**
- **Spreading innovations**
- **Exporting solutions**
- **Being a role-model**

Contributing to reaching global climate goals is not only altruistic. Almost all companies say that climate efforts are also good for business and can boost competitiveness. The main reasons for this, mentioned by the companies, are:

- **New business opportunities are created**
- **Energy and resource efficiency reduces costs**
- **Employer branding is strengthened, and employees are more satisfied**
- **Increased customer demand leads to increased sales**
- **Environmental requirements in public procurement**

In order to reap these company benefits, a lot of enabling factors are mentioned. The most important factors to succeed in making good business out of climate efforts are:

- **Legislation and policy instruments that provide clear long-term frameworks for business**
- **Access to renewable energy**
- **High level of innovation**

Already today, many companies have ambitious climate targets. Still, more than half say they could (or could possibly) have even more ambitious targets if the right policies were in place. More than 75 percent of companies say they could theoretically reach net zero greenhouse gas (GHG) emissions, given the right policy and more than half of those believe they can reach net zero GHG emissions before 2050 and some even before 2030.

In summary, this report clearly shows that

- **Climate change is important to CEOs, chairs and top-level management in Nordic companies.**
- **There is a strong commitment from leading Nordic export companies to reduce both their own emissions and to be part of the global solution to climate change.**
- **There is a clear connection between GHG emission reductions and profitability and competitiveness.**
- **Companies welcome higher targets for speeding up the climate transition.**

Three important opinions can be identified from the interviews, regarding what governments should do:

- **Strong support for the Nordic region to be front runners in global climate efforts.**
- **The Nordic countries should act together to push the EU to adopt more ambitious climate policies.**
- **The Nordics can be a strong force in the international community.**

CONCLUDING REMARKS FROM THE NORDIC CLIMATE BUSINESS NETWORKS


Current policies and pledges will lead to more than 3 degrees of warming. This is not within the safe space for humanity and the risk for much more dramatic warming cannot be disregarded.

Our five organizations suggest the following for the Nordic countries and their business community:

- **Set goals for citizens' carbon footprint**
- **All public procurement must become fossil free/climate neutral**
- **Develop common standards, like NMT in the 1990's and make the Nordic region a permanent world showcase fair for climate solutions**
- **The Nordic countries should develop solutions for financial risk sharing, to promote necessary investments**

In order to reap the benefits of the biggest business opportunity of our time, the Nordics must be on the frontline and create solutions before they will become globally mainstream. This is a unique business opportunity since we know that the demand for new solutions will be there. This report proves that CEOs and chairs of some of the top Nordic companies are willing to take the lead.

This report is produced by the Haga Initiative (SWE), Fossil Free Sweden (SWE), Climate Leadership Coalition (FIN), Icelandic New Energy (ISL) and Norway 203040 (NOR). The report is financed by the Nordic Council of Ministers.

The background of the slide is a collage of four landscape photographs. The top-left photo shows a coastal town with a large parking lot and a blue sea under a clear sky. The top-right photo shows a town with a river and green trees. The bottom-left photo shows a green field with a fence and a forest in the background. The bottom-right photo shows a green field with a fence and a forest in the background.

Together, the respondents represent companies with approximately 540 000 employees across the globe.

The aggregated revenue of the companies is around 200 billion EUR, corresponding to approximately 17 percent of the GDP of the Nordic region.

2. Content

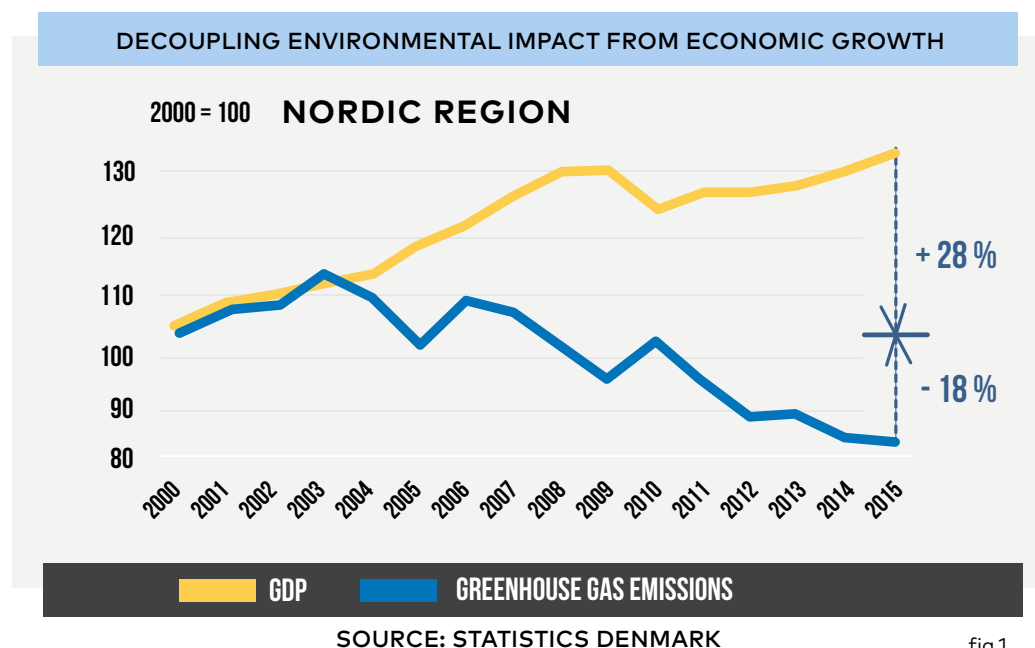
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3. Background

The Nordic countries have, in general, leading climate policy ambitions for a long time.

Besides a willingness to combat climate change, the aspirations are also due to a desire to strengthen energy security and decrease fossil fuel dependency. The abundance of renewable energy resources in the Nordic region is helping in that respect, but progressive policies also explain why the Nordic achievements have been comparatively successful. The Nordic countries have generally set much stronger domestic targets than what is required from international or EU obligations, albeit with differently focused objectives.

While climate legislation, as well as energy and emission taxation are commonly applied in the Nordic countries, the energy strategies vary, often with respect to different national conditions. The contrasts are striking between, for example, the use of geothermal energy in Iceland, wind power in Denmark, biomass in Sweden and Finland and hydro power in Sweden and Norway.



In general, the Nordic countries have in recent decades been able to decouple emissions, in absolute terms, from GDP (see figure 1). The carbon dioxide emissions per electricity unit were one fifth of the global average in 2016, and 37 percent of energy consumption in the region was renewable in 2014.¹

The main focus of this report is not climate efforts per se, but their effect on companies, competitiveness and prosperity. Every year, the World Economic Forum (WEF) ranks the world's countries by competitiveness and the Nordic countries tend to do well. In the 2017-2018 report, Sweden is ranked as the world's seventh most competitive country. Finland, Norway and Denmark take places 10, 11 and 12 respectively and Iceland is 28. However, going back to the 2008-2009 report, Denmark, Sweden and Finland were all in the top six, which suggests a downward trend.² This report investigates whether climate change solutions can change that trend.

WEF defines competitiveness as "the set of institutions, policies and factors that determine the level of productivity of a country". In order to investigate how climate efforts and competitiveness are connected and provide opportunities for the Nordics, CEOs and top management of some of the leading companies in the five countries have been interviewed.

¹ Nordic Council of Ministers, 2017. Nordic action on climate change.

² The Global Competitiveness Report 2017-2018 and 2008-2009: <http://www3.weforum.org/docs/GCR2017-2018/05FullReport/TheGlobalCompetitivenessReport2017-2018.pdf> and http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2008-09.pdf



4. Interview results

This report is based on 38 interviews with Nordic business leaders, conducted during January and February of 2018. In total, three of the interviews were with board presidents/chairmen, 27 with the companies' CEOs and the rest with other top-level management. Every interview consisted of ten open-ended questions and the collected results from the interviews give a cross section view of business climate efforts in the Nordic region today.

Companies were chosen to represent all sectors of the economy, including some fossil fuel companies. Since global competitiveness is one of the issues in focus, a large number of interviewed companies are export oriented, but a few non-export companies were interviewed as well. There are both large traditional companies and start-ups among the interviewed.

Together the respondents represent companies with more than 540 000 employees across the globe. The aggregated revenue of the companies is around 200 billion EUR, corresponding to approximately 17 percent of the GDP of the Nordic region.



5. The Nordic contribution to the Paris Agreement

In December of 2015, leaders of virtually all countries in the world agreed in Paris to strive to keep the global temperature rise well below 2 degrees Celsius and aim for 1.5 degrees. To succeed, radical emission reductions are needed. Clearly, the Nordic countries, emitting less than half a percent of global emissions, cannot play a significant role by focusing only on their own emissions. One of the premises of this report is that if the Nordic region aspires to contribute to reaching the goals of the Paris Agreement, it must in parallel be based on catalyzing global efforts. In order to analyze this, the companies were asked:

- **How can the Nordic region contribute in the world to achieve the goals of the Paris Agreement?**
- **How can Nordic companies contribute?**

CONTRIBUTION FROM THE NORDIC REGION AND ITS COMPANIES TO THE PARIS AGREEMENT:

- **Showing global leadership**
- **Promoting cooperation between countries**
- **Spreading innovation**
- **Exporting solutions**
- **Being a role-model**

According to the companies, the Nordic countries can do more than just reduce their own emissions. Many of the companies claim that the Nordic countries can and should be frontrunners globally on climate action and express that this is in their company's own interest.

The two last bullet points set clear visions for what the Nordic region can do globally. Almost all of the companies say that the Nordic region can contribute by being a role-model internationally, e.g. by showing that radical emission reductions can be made without sacrificing living standards; 63 percent also believe that the Nordic region can contribute by innovating and exporting products and services that reduce emissions abroad. This means that climate action can lead to double benefits: helping the world reduce emissions while simultaneously increasing the market for Nordic companies.

"We can contribute by showing positive stories to the rest of the world. The Nordic market can be an ecosystem for testing new solutions that later can be exported."

[Pekka Lundmark, CEO of Fortum.](#)

"Pöry is a consulting company that has a small carbon footprint but we have a significant "handprint" in helping our customers reduce their fossil carbon footprint. Having good knowledge in this area is good growing business."

[Henrik Ehrnrooth, Chairman of the board at Pöry.](#)

"The Nordic countries can play an important role as a pioneer and a showcase. Our experience is that the world looks with curiosity on what is happening in the Nordic countries and that we can be an inspiration for other nations."

[Odd Arild Grefstad, CEO of Storebrand.](#)

"We have no right to stop others from development, so what we can do is to give them environmentally friendly technology that is accessible and affordable."

[Mika Anttonen, Chairman of the board at ST1.](#)

"I believe that the way we organise our societies, with a so-called mixed economy, creates a certain dynamic that gives us advantages. I think that we can and will contribute more than many other parts of the world, proportionally. We can "over-achieve" and this is a market opportunity for us."

[Anders Byriel, CEO of Kvadrat.](#)

"Nordic companies can contribute by being role models and showing the rest of the world how ambitious climate strategies are not business impeding but business enabling."

Simon Hoffmeyer Boas,
Director Group Sustainability
at Carlsberg.

Reykjavík Energy: A new solution for CCS

Carbon Capture and Storage (CCS) is a technology with large potential of mitigating the concentration of carbon dioxide (CO₂) in the atmosphere. Reykjavík Energy has developed a new CCS method, CarbFix, in collaboration with research institutions in Europe and North America. The method involves converting captured CO₂ into rock in less than two years, by imitating and accelerating chemical reactions that happen naturally between CO₂ and basaltic bed-rock. The CarbFix method has been applied at industrial scale at Hellisheidi geothermal Power Plant since 2014.



"We recognize and appreciate that environmental awareness undoubtedly is a mega trend that is here to stay. A similar pattern is seen in the investor community. Having said that, the full potential of climate responsibility and competitiveness is not here yet."
[Karl-Henrik Sundström, CEO of StoraEnso.](#)

"We can show the rest of the world how to create sustainable markets, based on open ecosystems. We can lead by example and show how it can be done and that it can work. We can be an example market for the future. In previous decades, the Nordic region was able to show the world market evolution in GSM. We should recreate this."
[Sampo Hietanen, CEO of MaaS Global.](#)

5.1. ENABLERS OF CLIMATE ACTION IN THE NORDIC REGION

In many cases, company leaders see that the Nordic region can move more quickly than the rest of the world, because of certain enabling factors that make the region particularly well suited for the task. The companies were asked:

- Looking back 20 years, what factors have been important for enabling Nordic companies to succeed in reducing greenhouse gas (GHG) emissions?
- Which factors have been important in your own company's work to reduce GHG emissions?

IMPORTANT FACTORS FOR REDUCING GHG EMISSIONS IN THE NORDIC REGION:

- Legislation and policy instruments providing clear long-term framework for business (mentioned by 26 companies)
- Access to renewable energy (24)
- High levels of innovation (9)
- Cooperation between businesses and politics (6)
- Energy efficiency (5)
- Demand from consumers (5)
- Emission reduction targets (4)

Many companies say that the business framework, such as regulation and policy instruments, has been an important contributor to the Nordic region's success in emission reductions. The energy system in the Nordic countries, with a comparatively high share of renewables, is also mentioned as an enabler for low-carbon production in virtually all sectors. Here, Nordic cooperation has played an important role, building a well-functioning cross-border electricity market. Almost two thirds of the companies mention access to renewable energy as a success factor.

"Regulation should be adapted to what companies are able to deliver and the Nordic model has helped achieve this. In the Nordic model, there is communication and understanding between businesses, policy-makers and labor organisations. All actors understand that sustainability is needed in all dimensions – companies must be able to pay their workers, pay their taxes and still make a profit. When we work together we can move things forward."

Karl-Henrik Sundström,
 CEO of Stora Enso

Several companies also mention strong governance, political frameworks, ambitious climate targets, high educational levels, strong IT capabilities, high innovation levels and access to natural resources.

Many also mention the Nordic model as an enabler of climate action. Several companies mention the ability to cooperate – between companies as well as between business, politics and academia – as a fundamental enabler to work better to combat climate change.

"Our sustainability strategy is based on finding business benefits in sustainable solutions, i.e. 'Do the right thing' and 'Make business of it'. Examples of factors that have been driving this are the increased transition to battery technology, digitization of products and services, as well as the changing behavior of customers."

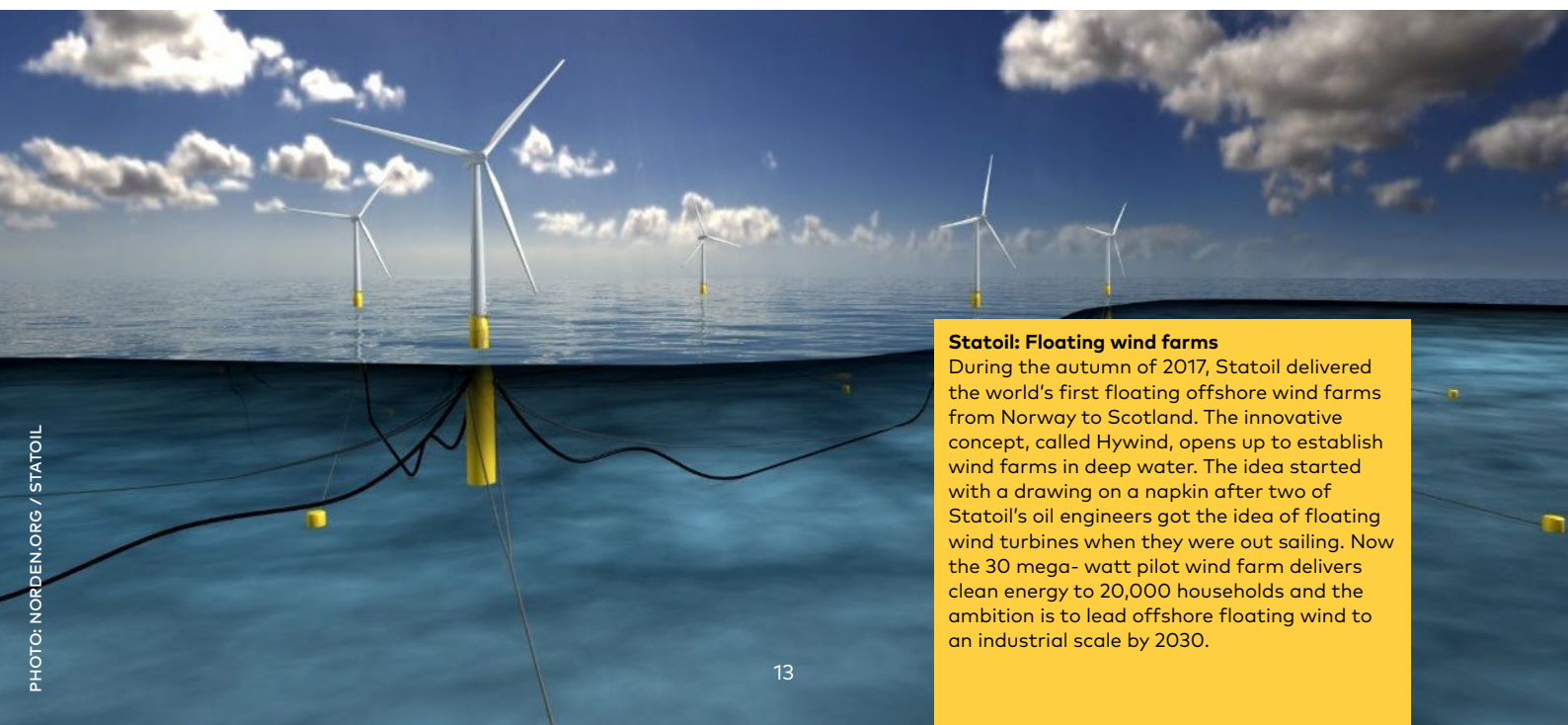
Kai Wärn, CEO of Husqvarna Group.

"I believe that we in the Nordic region have a good track record of cooperation between businesses, academia and politics."

Henrik Henriksson, CEO of Scania.

"We should aim for a common solution for the energy grid and production. If we want common targets for emission reductions on the Nordic level, we also need a common understanding of the energy system and the best local capabilities to produce energy."

Ville Tamminen, Head of division Finland, Caverion.



Statoil: Floating wind farms

During the autumn of 2017, Statoil delivered the world's first floating offshore wind farms from Norway to Scotland. The innovative concept, called Hywind, opens up to establish wind farms in deep water. The idea started with a drawing on a napkin after two of Statoil's oil engineers got the idea of floating wind turbines when they were out sailing. Now the 30 mega-watt pilot wind farm delivers clean energy to 20,000 households and the ambition is to lead offshore floating wind to an industrial scale by 2030.

Several companies emphasize the need for system thinking – often the term “ecosystem” is used – in order to reach climate goals. This is also mentioned as a specific strength of the Nordic region. Not least is system thinking needed in the areas of transportation and construction, where actors from different sectors participate. For example, both sectors are highly dependent on the energy sector to deliver renewable energy in order to reach emissions goals. Digitization is also playing an increasingly important role.

IMPORTANT FACTORS FOR REDUCING THEIR OWN COMPANY'S GHG EMISSIONS:

- Policy instruments and political framework
- Strong leadership and clear targets from management, owners and other stakeholders
- Awareness of the climate issue
- Customer demand
- Energy efficiency and the possibility to purchase green energy
- Societal and political focus on circular economy
- Committed employees
- Purchasing power of the public sector (public procurement)



5.2. DOING IT THE NORDIC WAY

The companies were asked:

Is there anything specifically Nordic about the climate ambitions of companies?

The majority of companies say that there is something uniquely Nordic about the climate ambitions of companies, but what exactly that means it varies a lot between respondents.

SPECIFIC NORDIC QUALITIES OF COMPANIES' CLIMATE AMBITIONS:

- **Responsible society model, including:**
 - Norms and laws
 - High ethical standards
 - High climate ambitions and goals
 - Long term focus
- **Culture of collaboration**
 - Between business and policy
 - Synergies between governmental leadership and innovation
 - Culture emphasizing collaboration in business
- **Large public awareness**
 - People close to nature
 - Strong belief in science
- **Value-driven companies**
 - Environmental focus among the core values of many companies
 - Constructive and proactive companies
- **Identified climate ambitions as an early competitive advantage**
- **Rich in natural resources**
- **High technological competence**

"I think there is a more pronounced focus on climate and responsibility in the Nordic countries. Maybe we have added a layer to the Maslow pyramid. After self-realization we want to realize others. We see this in strong HR functions, a team-based approach to solutions, environmental concerns etc."

Peter Hove, Sales and marketing manager of Refurb.



ABB, a Swedish-Swiss industrial equipment company, on energy efficiency and policy
Policy instruments such as mandated energy audits has helped push the systematic work with energy efficiency in ABB. Digitization and automation are factors behind increased energy efficiency.



"Here in the north we have learned that the winter is coming, and we need to prepare for it early. The same goes with climate change. We know that it is getting worse and worse and will not be resolved just by waiting."

Henrik Ehrnrooth, Chairman of the board at Pöyry.

However, four companies do not see anything uniquely Nordic about the climate ambition of companies.

"Previously, Nordic countries were over-represented among the top performing companies in international sustainability ratings, such as CDP [Carbon Disclosure Project]. We do not see as much of that today."

Jonas Samuelson, CEO of Electrolux.

"The Nordic cooperation model, where business, public, interest organizations and often the unions cooperate, I think is quite unique to the Nordic region. If we succeed in our cooperation initiatives, they can become inspirational models for other societies where we demonstrate both concrete achievement and how we got there."

Hanne Refsholt, CEO of Tine.

Stora Enso, a Finnish forestry company, on the awareness of the climate issue

In the town of Joensuu in Eastern Finland, a 14-storey wooden house is being built and Stora Enso will deliver the wood for the construction. The interest in wooden buildings is increasing due to climate change awareness, providing great business opportunities for companies in the bio-economy.

6. Climate change action as a business strategy

When asked if they see a connection between climate responsibility and competitiveness, all companies responded that there is such a connection.

WHY CLIMATE RESPONSIBILITY GENERATES COMPETITIVENESS:

- New business opportunities are created
- Energy and resource efficiency reduces costs
- Employer branding is strengthened, and employees are more satisfied
- Increased customer demand leads to increased sales
- Environmental requirements in public procurement

Out of the 38 interviews conducted in this project, every single company said that climate responsibility strengthens competitiveness. Some say this has not yet happened, but that future competitiveness depends on climate responsibility. Several examples were given as to why this is the case. In many instances, companies see that demand has shifted towards more sustainable products. Jonas Samuelson, CEO of Swedish home appliance manufacturer Electrolux, say that products with higher environmental standards tend to be more profitable for the company. Henrik Henriksson, CEO of Scania, calls it a question of business survival.

"There is a positive effect on the brand, which of course is good for competitiveness but also positively affects the ability to attract talent. It is likely that climate responsibility is important for the owners, as it is also about risk reduction."

[Johan Söderström, Managing Director of ABB Sweden.](#)

"There are soft values that are very important, for example that a company with credibility in sustainability can more easily recruit the best employees. In retail, it is important to offer climate responsible products to attract dedicated customers."

[Klas Balkow, CEO of Axfood.](#)

"Our customers want renewable and healthy materials. This is important in our marketing message and it is coming more and more. The discussion about climate change and GHG emissions also means increased demand for wood construction."

[Jalo Poijula, retiring CEO of Kontio.](#)

"In the bio-economy, products based on renewable resources can replace fossil and other non-renewable alternatives. The Nordic region has a true competitive edge in the bio economy."

[Karl-Henrik Sundström, CEO of Stora Enso.](#)

"Our view is that within a few years a company's aspiration to be a market leader will not be credible without taking responsibility for – and contributing to – sustainable development. Working actively with climate issues is therefore a prerequisite for competitiveness. Areas that show this are e.x. reinforced brand and customer loyalty, new products and services, cost savings, attractiveness as employers and risk management."

Kai Wörn, CEO of Husqvarna Group.

Many of the companies say that climate change action is part of what will drive innovation and competitiveness in the years to come. By investing in green technology and climate efficient production, they believe that they have a better position to meet the demands of the future.

"The demand for decarbonised or recarbonized products will grow rapidly. CDP gives good indication. When the companies for example in the A list will reduce their carbon emissions by five percent or more annually, they are interested in new, cleaner products and services."

Henrik Ehrnrooth, Chairman of the Board at Pöyry.

"Climate performance gives us a competitive advantage. It's not just a few examples – it's a huge trend for us. We see clearly that there is demand and willingness to pay for climate responsible products."

Henrik Essén, Senior Vice President Communication and Sustainability of BillerudKorsnäs.

"As a global leader in efficient pump solutions, we see business opportunity in pioneering solutions addressing the global water and climate challenges. This is where doing well and doing good can meet."

Pia Yasuko Rask, Senior Engagement and Responsibility Manager of Grundfos.

"I am convinced that we are near a tipping point when it will no longer be possible to run a company in an unsustainable fashion. If you are not transitioning, no one will buy your products, no one will want to work for you and no one will want to invest in your company. This is about survival. We are already at this tipping point in our sector. For other sectors it might be a few years away, but it is coming"

Henrik Henriksson, CEO of Scania

Several of the companies that have embarked on the journey towards lower emissions report that it saves them money. One obvious example is energy efficiency measures, which often start reducing costs as soon as they are implemented. Many companies also see that their climate efforts lead to increased demand, thus raised revenues. Several other aspects are raised as well, about how climate efforts lead to increased competitiveness. Some companies mention employer branding as an important benefit from working on climate change.

"An advantage for us, being on the forefront of sustainability work in our sector, is that we attract great people. They want to work for us, because they see that we are doing good things."

Helene Samuelsson, Head of Corporate Communications at Preem.

6.1. CLIMATE ACTION AND COSTS

Companies' climate efforts can come in many shapes and forms. Some raise costs, and some reduce them. In the interviews, examples of both have come up. For example, steel manufacturer SSAB's investment to produce steel with hydrogen instead of coal is expected to raise costs by 20-30 percent, but the potential upside makes it worthwhile. The focus here is on company costs, disregarding external costs to society of GHG emissions. If companies do not pay for the costs that their emissions incur on others, which is common globally, their business can lead to socio-economic losses for the population in general.

Clearly, one of the most important measures for emission reductions is increased energy and resource efficiency. This is, almost by definition, reducing costs. The question is often when, rather than if, such investments pay off. Even high upfront investment costs can be profitable after a certain pay-back-time.

"At first, we thought that electrification could mean a constant increase in our costs. Now we see that it will save us money in the long run. There are costs related to the transition, but we are moving towards a lower cost transport system."

Bernt Reitan Jenssen, CEO of Ruter.

"Our board has decided to allow climate investments to have lower rate of return than other investments. This does not mean that we invest in loss projects, but we tolerate a little lower return because we think it will bring competitive advantage in the long run."

Torbjørn Johansson, President of the board at Asko.

"It is increasingly important for people that their work is meaningful – they want their values to match with those of the company. The fact that a company is working on sustainability and solving societal challenges increases the attractiveness of the company."

Arne Giske, CEO of Veidekke.

Neste, Finnish oil and bio-fuel company, on high levels of innovation

With a new patented technology called NEXBTL, Neste has been able to produce renewable diesel from a range of different bio-based resources. This biodiesel behaves like conventional diesel, can be blended with fossil diesel in any proportion, and can reduce carbon dioxide emissions by 50-90 percent.



6.2. CLIMATE ACTION AND REVENUES

With high living standards and relatively evenly distributed wealth, the Nordics is a high-cost region. Therefore, many Nordic companies must find other ways to compete on the global market rather than price. Sustainability is one way to do this. Several companies report that increased climate change responsibility has led to new business, increased demand and higher prices.

"During the last 20 years, the Nordic region has built a high-tech society. We have a high degree of digitization, a well-educated population, a high level of trust, and low inequality. We are competitive in a part of the value chain with high value creation. We are well positioned for the future."

[Odd Arild Grefstad, CEO of Storebrand.](#)

Even though many companies see high demand for low-carbon products, this market is clearly not mature, but growing. Many of the companies say that the work they do today is motivated by taking the right position in the market of the future. SSAB's investment in fossil-free steel production is an obvious example. SSAB is aware that the product will be more expensive than conventional steel products but is confident that there will be a market for it.

"We believe that our customers will face increasing expectations from their customers and other stakeholders to take environmental responsibility throughout the value chain. One example is car producers. With electrification, focus will shift from exhaust pipe emissions to production emissions. This will make fossil-free steel increasingly interesting for these companies".

[Martin Lindqvist, CEO of SSAB.](#)

"We often see that in the Swedish / Nordic market we have come further and can achieve our goals more quickly or reach further than the goals. As in renewable energy, for example, as early as 2015 we produced as much renewable energy as we used, when the global target for this was supposed to be met in 2020. There is a great awareness and commitment both among customers and in society in the Nordics, which I think plays its part."

[Håkan Svedman, Country Manager of IKEA Sweden.](#)



Ruter, the public transport provider of Oslo and Akershus, on leadership and clear targets

Ruter is owned by public entities, and therefore directly affected by political targets and goals. One such goal was to become fossil free by the end of 2020. The goal seemed very challenging at the start, but they now conclude it can be met ahead of time.

6.3. THE COST OF INACTION

Companies were also asked **whether weak climate responsibility can affect competitiveness negatively.**

WHY CLIMATE INACTION HAMPERS COMPETITIVENESS:

- Lost business opportunities
- Reduced efficiency
- Weakened brand

"If companies do not meet the expectations of society and customers or energy efficiency requirements, this may result in decreased sales and profitability."

[Jonas Samuelson, CEO of Electrolux.](#)

"Weak action will make investors worried. They are worried if the company has not identified the risks in the future and the lost opportunities to develop new business."

[Henrik Ehrnrooth, Chairman of the board at Pöyry.](#)

"Climate awareness is increasing in governments and among decision-makers in the financial sector, but not among most people. Currently, there is little risk of loss of inaction, but I believe that when the climate threat becomes a reality for most people, there will be a sudden shift, and then the risk of stranded assets is high."

[Jens Ulltveit-Moe, CEO of Umoe.](#)

"Climate responsibility in business and industry has largely yielded poor financial results over the past ten years. There have been over-investments and dependence on subsidies has made the business fluctuate violently. Following the Paris Agreement, initiatives have been taken in Brazil and Norway that dramatically improves the bottom line for renewable energy."

[Jens Ulltveit-Moe, CEO of Umoe.](#)

6.4. CLIMATE ACTION AND JOBS

The companies were also asked **if they see any connection between climate action and employment?** Almost three out of four companies believe that climate efforts can boost employment.

WHY CLIMATE ACTION GENERATES EMPLOYMENT:

- Innovation creates new jobs
- Domestic production of renewable and bio-based energy creates jobs in the Nordic region
- Failure to transform the economy can lead to job losses

"Building up local markets for green technologies has helped new businesses to create new, green jobs and build up a base for exports that can be expected to boom as other regions seek ways to respond to the global climate challenge."

[Pekka Lundmark, CEO of Fortum.](#)

"Just as the Nordics were pioneers in telecommunications technology, there is now an opportunity to increase employment opportunities for skilled workers by meeting the challenges presented by climate change."

[Sindri Sindrason, CEO of Carbon Recycling International.](#)

"The criticism I sometimes get when I say Norway must transform in time is that reducing our oil activity will harm employment. I think the opposite. If we as a nation are unable to change, then we will eventually have an expensive product that nobody wants, while we have not built up new industries that are globally competitive. Therefore, I think employment is in danger if we fail to change."

[Odd Arild Grefstad, CEO of Storebrand.](#)

TraceGrow: Fertilizers from battery recycling

Circular economy solutions are needed to increase the regeneration of material and energy flows and to address problems of resource scarcity. TraceGrow has developed an innovative technology to extract, purify and reuse zinc and manganese-based micro-nutrients from alkaline batteries within agriculture to obtain more productive farmlands.



6.5. NORDIC COMPETITIVENESS DURING THE PAST TWENTY YEARS

The companies were asked about their view of **how Nordic competitiveness has evolved over the past twenty years and which factors can explain this development**. The views differ between companies and many respondents see both positive and negative aspects of the development. In total, 22 companies say that Nordic competitiveness has had a positive development during the past 20 years. However, 11 of the companies mention a negative development in Nordic competitiveness.

FACTORS BEHIND POSITIVE DEVELOPMENT OF COMPETITIVENESS:

- Digitization and high level of technological competence
- High levels of education
- Innovation and R&D
- Automation
- Political stability
- Low government debt
- Good reputation and international credibility
- High quality products
- High energy security
- Weak currency
- Customer Awareness

FACTORS BEHIND NEGATIVE DEVELOPMENT OF COMPETITIVENESS:

- High cost level
- Competitors with production in or employees from low-cost countries
- A sense of self-satisfaction in the Nordics
- China's emergence as a dominant player on world markets

The companies were also asked whether their own corporate competitiveness followed the same development as that of the Nordic countries. More than half believed that they had experienced a positive development for the competitiveness of their own company during the past 20 years. Not all companies were able to respond to this question, some of them being recently founded.

MaaS Global: A new urban transportation system
Mobility as a service (MaaS) is a concept intended to make private ownership of cars obsolete. With an integrated digital solution, consumers are supposed to be able to seamlessly change between bus, train, car, bike etc. The company MaaS Global has launched their app Whim in Helsinki and the West Midlands in the UK.

"At Storebrand we have been working on sustainability issues for 20 years. It takes time to get it into the culture and DNA of the company. Now we are good at seeing the opportunities that come with sustainability and climate efforts and making it part of our business model. That is one of the most important points we've taken with us from this journey – the transition is not only a challenge but also offers great opportunities for a better future."

Odd Arild Grefstad, CEO of Storebrand.

6.6. THE NORDIC BRAND IN THE WORLD

In the report **The Nordic region as a Global Winner Region – Tracing the Nordic Competitiveness model**, the Nordic brand was found to be an important part of the region's future competitiveness strategy. Branding the Nordics as a "value region", would differentiate it in the global marketplace – not on the basis of price, but on the basis of a "higher meaning". Sustainability and "respect for nature" were identified as part of this value region.³ Some of the interviews in the current project give support to this branding strategy, as these companies are helped by the way the Nordic region is being perceived in the world.

"We have a good reputation and brand in the world. We are known for sustainability and good design and these two often go hand in hand."

Ville Tamminen, Head of Division Finland, Caverion.

"There is a lot of paperwork around our product and production, which is fine because it also gives us a competitive advantage. It means that consumers trust our product. Nordic countries in particular have a good reputation for being 'clean' and good on 'clean' technology, which is very beneficial to us."

Tatu Leppänen, CEO of Tracegrow.

"The Nordic region is known globally for its leadership in environment and climate policy. Companies benefit from this reputation, and in turn, contribute to creating it. So it is very synergetic between governments and companies here."

Matti Lievonen, CEO of Neste.



Folksam group, Swedish insurance and pension company, on energy and resource efficiency

Working with re-use and repairs in claims operations is central to reducing Folksam's and their customers' use of energy and materials. It means lower costs and, in the long run, shorter processing times and lower insurance premiums. In 2017, this way of working contributed to avoiding 2 749 tonnes of waste, equivalent to approximately 1 423 tonnes of carbon dioxide emissions. 34 000 claims for mobile phones was settled in a more sustainable manner.

6.7. AMBITIOUS GOALS

Goals for climate action, for example emission reduction goals, were mentioned by several companies as one of the reasons behind taking action. For many companies, the journey towards lower emissions starts with setting a goal. The companies were asked:

- Can your company set more ambitious goals compared to today, provided that policies go in the right direction?
- Is it possible for you to reach net zero GHG emissions or fossil free?
- If yes, until which year?

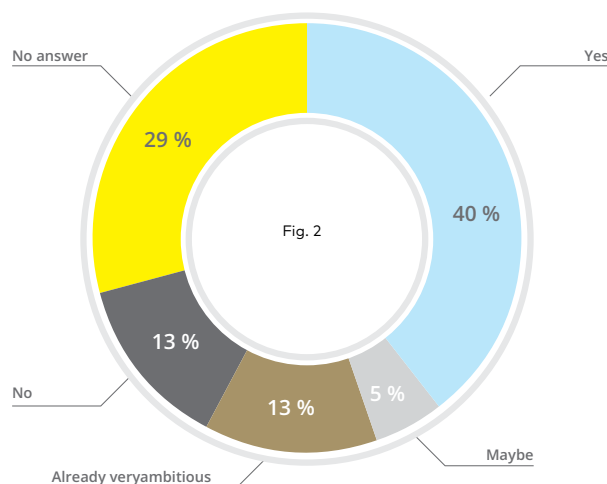
On the question of whether the company can set more ambitious goals than today, provided that policies go in the right direction, 40 percent say yes and a few more say that it might be possible (see figure 2, next page). The question did not focus on the scope of emissions⁴, so each company got to answer the question in the scope that they deemed relevant. It can be assumed that scope 1 is included for all companies and that many take a broader perspective. ABB, for example, claim they can be fossil free in scope 1, provided that fuel can be supplied, and have accepted a challenge to only use fossil free transportation in Sweden by 2030. In addition to this, they have listed what is needed to be fossil free in scope 2 and 3.

"We already have very ambitious goals, regardless of the political climate. But a more favorable and long-term regulatory framework would make it easier for us to work in that direction."

Håkan Svedman, Country manager of IKEA Sweden.

For a thorough discussion on the policy that the companies need to reach these goals, see chapter 7.

MORE AMBITIOUS GOALS POSSIBLE

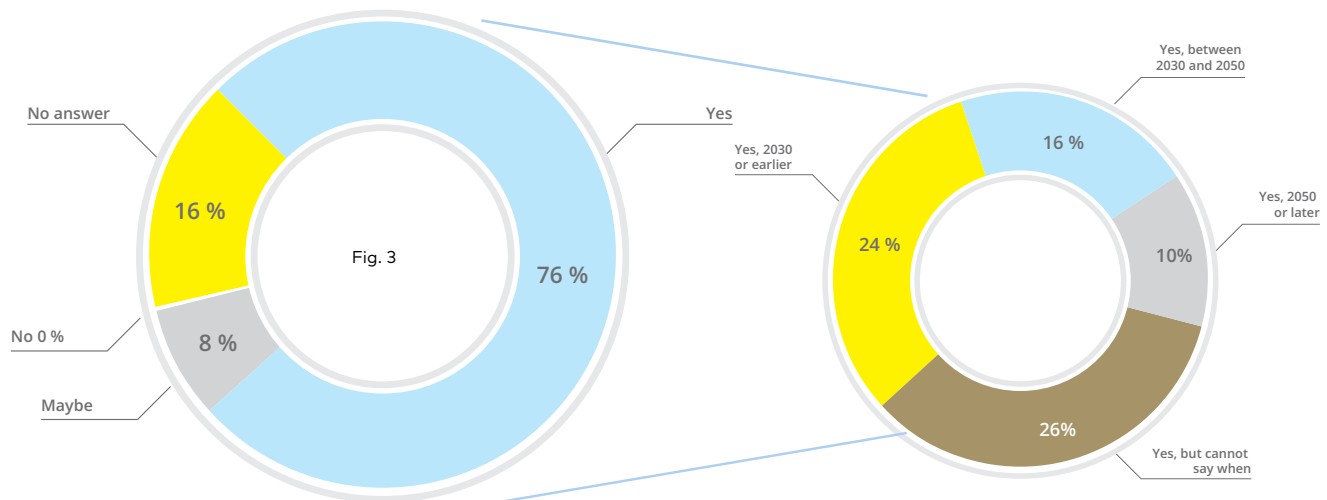


³ Nordic Council of Ministers, 2005. The Nordic region as a Global Winner Region – Tracing the Nordic Competitiveness model.

⁴ In GHG accounting, it is common to define emissions as either scope 1, scope 2 or scope 3. Scope 1 is emissions within company owned entities, scope 2 is emissions from energy supplied by other companies and scope 3 is emissions upstream and downstream in the company's value chain.

More than 75 percent of companies say they could theoretically reach net zero GHG emissions, given the right policy environment (see figure 3). Of those, more than half say they can do so before 2050 and some even before 2030.

POSSIBLE TO REACH NET ZERO GHG?



"Posten and Bring have a highly ambitious environmental ambition to only use fossil-free energy sources in vehicles and buildings by 2025. This is based on today's insight into raw materials, vehicles, costs and technology development. In order to succeed, it is essential that there are available technologies, solutions that are competitive against fossil fuels, long-term framework conditions and full-scale solutions."

[Colin Campbell, Senior Vice President HSE and CSR of Posten and Bring.](#)

"Ambitious goals and policy direction are completely different things from our perspective."

[Henrik Essén, Sustainability manager at Billerud Korsnäs.](#)

"We are constantly improving our operations to decrease the carbon footprint from our operations – regardless of direction of the regulation."

[Matti Lievonon, CEO of Neste.](#)

"We believe that the Paris Agreement creates a stable and long-term political framework for the energy sector steering investments to low-carbon production technologies. We also expect the agreement to accelerate low-carbon transition and to create new business opportunities."

[Pekka Lundmark, CEO of Fortum.](#)

"In 2015, Veidekke decided to run the company in accordance with the 2 degree target, which we are proud of. It was done before the Paris Agreement."

Arne Giske, CEO of Veidekke.

6.8. TRENDS

Companies were asked about which trends they see in the Nordics and in the world, that strengthen their work for reduced emissions.

TRENDS, NORDIC AND GLOBAL, THAT STRENGTHEN WORK TO REDUCE EMISSIONS (SORTED IN ACCORDANCE WITH TIMES MENTIONED):

- Access to cost-efficient renewable energy
- Strengthened international cooperation (Paris Agreement and Sustainable Development Goals)
- Increased focus on climate issues, increased awareness, increased demand
- Increased global competition
- Digitization
- Circular economy
- Tax shift (tax on emissions rather than labor)
- Long-term rules, frameworks and prerequisites
- Urbanization
- Electrification
- Automation
- Sustainable investments and green finance
- An increased focus on food security
- Focus on quality
- Fossil-free transportation

"Increasingly, national policies and measures result in suboptimal solutions and often increase the cost of emission reduction. Harmful subsidies and taxation can prevent low-carbon investments."

Pekka Lundmark, CEO of Fortum.

Storebrand, Norwegian insurance and financial company, on new business opportunities

Storebrand has become an important actor in green finance and the interest for their fossil free financial products has been growing rapidly. The value of Storebrand's fossil free investment funds has grown to 6.1 billion EUR and CEO Odd Arild Grefstad says he has never seen a group of funds grow so quickly.

"The trends which we expect to have the most influence on our industry in the coming years are: Digitalization, Electrification, Urbanization, Food Safety and increased focus on climate change. Each of these trends pose in various degree both challenges and opportunities for further emission reductions."

[Kenth Kærhøg, Senior Vice President group communication at Danfoss.](#)

"Global megatrends such as global warming, population growth, eco-awareness, and urbanization are affecting consumer and corporate decision-making in the Nordic region and all around the world – this is especially relevant for Stora Enso, as we are relying on trade and export from the Nordics."

[Karl-Henrik Sundström, CEO of Stora Enso.](#)

"We become optimists when we see how much China is investing. At the same time, Trump and the United States are deterring."

[Torbjørn Johansson, President of the Board at Asko.](#)

"Overall, I see very little that indicates that we are not facing a major disaster and that we will see an increase of at least 3 degrees in the temperature of the globe during this century."

Jens Ulltveit-Moe,
CEO of Umoe.

Husqvarna Group, Swedish producer of outdoor power products and services, on employer branding

Husqvarna Group seeks to recruit employees who want to influence the development of both the company and society as well as themselves. Husqvarna Group believes that these people are attracted to companies that have a clear agenda in sustainable development.

The companies were also asked: **What trends do you see that counteract your work for reduced emissions?**

TRENDS, NORDIC AND GLOBAL THAT COUNTERACTS WORK TO REDUCE EMISSIONS:

- Unpredictable conditions and policy frameworks, lack of long-term view in policy
- National policies that result in suboptimal solutions
- Donald Trump's presidency
- Protectionism, closed markets, trade barriers
- Population growth, increased middle class in developing countries
- Increased consumption
- International competition on unfair terms
- Lobbying that counteracts development of the bio-economy
- Low oil prices
- Increased greenwash

"Population growth means we cannot manage to develop new solutions at a sufficiently high pace. Climate change in itself counteracts development. It will require additional resources to repair climate damage, resources that we cannot use for climate transition."

[Torbjørn Johansson, President of the board at Asko.](#)

SSAB: Fossil-free steel production

The production of steel represents approximately seven percent of the world's GHG emissions, not least because the process is dependent on coal. With their new investment in steel production based on hydrogen, SSAB believe they will be the first company in the world to produce steel without fossil energy and could revolutionize the way this material is produced.

7. The role of policy

The companies were asked about **which strategies and policy instruments are needed to stimulate climate efforts in Nordic companies**. Overall, there is strong support for the governments taking an active role when it comes to climate change, as long as regulation is long-term and predictable.

HOW POLITICS CAN STIMULATE ACTION IN THE NORDICS (REGARDLESS OF LEVEL OF POLICY-MAKING):

- Long-term and predictable policy instruments
- Instruments as wide as possible – internationally
- Polluter pays principle (PPP)
- Competitive solutions
- Higher ambitions
- Free trade and global competition

"We believe that progressive legislation and regulations on renewable energy and other climate measures are a prerequisite for building a Europe that actively work to address the challenges of climate change, but also to profit from the opportunities that climate measures provide."

[Håkan Svedman, Country manager of IKEA Sweden.](#)

IMPORTANT POLICY INSTRUMENTS AND STRATEGIES ON THE NATIONAL LEVEL:

- Long-term legislation
- Economic incentives, market-based policy instruments
- Funds for R&D – active support for pilot facilities
- High ambition level for climate change mitigation
- Legislation
- Strategies and support policies for circular economy
- Price on carbon
- Fossil free/climate neutral as a requirement for public procurement

"We think that stricter legislation could speed up the process of improvements because in the busy schedule of business, clear and constructive requirements can assist companies in their improvement process."

[Sigurborg Arnarsdóttir, CSR Manager of Össur.](#)

"We know that sooner or later there will be legislation. Probably they aim to make Iceland free from heavy fuel oil. It will be positive and we are prepared for it."

[Vilhjálmur Vilhjálmsson, CEO of HB Grandi.](#)

It is also important, according to several companies, to ensure that national policy does not provide solutions that are suboptimal from a global perspective, which can be the case, for example, when companies within the European Union's emission trading system (EU-ETS) are required to do domestic emission reductions, which could raise the supply of ETS allowances on the European level.

IMPORTANT POLICY INSTRUMENTS AND STRATEGIES ON THE NORDIC LEVEL:

- Pushing the EU, for example, on bio-fuel and transport legislation
- Cooperation between countries and companies
- Joint-policy schemes on energy, R&D
- Public-private partnerships
- Standards and harmonized rules
- Political unity across borders
- Common Nordic energy-market

"The Nordic countries should work together in various international forums, such as the EU and the UN, demonstrating that ambitious and advanced sustainability work is fully compatible with prosperity and economic growth."
Per Olof Nyman, CEO of Lantmännen.

"An efficient carbon pricing system is the most important tool for cost-effective decarbonization. A carbon price changes relative prices for fossil and renewable energy and provides clear signals to the market for what we want more of and what we want less of. Statkraft has together with other Nordic power companies – worked a lot with giving input to a strengthened EU-ETS."
Christian Rynning-Tønnesen, CEO of Statkraft.

"The Nordic countries should compete with each other on a national level but cooperate to put power behind demands on higher international levels. [...] Policy is needed to ensure that global challenges are handled globally. In order to help close the gap between needs and actions, the Nordic region needs to coordinate to operate in the EU and internationally"

Jens Henriksson,
CEO of the Folksam group.

The Nordic cooperation on energy is raised by several companies as a positive type of cooperation that has led to tangible benefits. The Swedish-Norwegian system for renewable energy certificates has also been mentioned as a successful policy instrument, to boost production of renewables.

IMPORTANT POLICY INSTRUMENTS ON THE INTERNATIONAL LEVEL:

- Cooperation for global leadership in the UN and international organizations
- Common regulation and long-term frameworks
- Price on carbon
- Global standards
- Common global visions, such as sustainable development goals

The companies were also asked which policy action was on the **top of their wish list**.

THE CEO POLICY WISH LIST:

- Long-term and predictable policy
- Stronger Nordic voice internationally
- Common global rules, including global standards and a global price on carbon emissions
- Public-private partnerships around innovation

"The Nordic countries should build the smartest green energy market with 27 million customers – the 10th largest energy market and the only one between several countries. In this market everyone should be interconnected and optimized via the internet of energy and we should have common technical standards, like NMT earlier in telecom. [...] In addition, we should actively develop and jointly propose improvements for EU emission reduction systems having readiness to pilot advanced solutions in the Nordics."

Henrik Ehrnrooth,
Chairman of the board at Pöyry.

Kvadrat, Danish textile company, on high levels of innovation

Kvadrat's involvement in innovation and circular economy includes internal development of new fabrics in reused PET bottles and re-spinning from wool fibres from post weaving production. Kvadrat has invested in the R&D based company Really that creates new materials from end-of-life textiles, producing solid textile boards and acoustic felt designed for the furniture and architectural industry. Materials such as polyester, wool and wool blends are being developed to create new circular offers in the future and improving climate impact.

7.1. CAN BUSINESSES CHALLENGE POLITICS?

Traditionally, solving environmental issues has been seen as the responsibility of governments and NGO's. This view is becoming more and more obsolete, as businesses increasingly step up to do their part. The Emissions Gap Report, which is published yearly by the United Nations Environmental Program (UNEP), quantifies the gap between the emission reductions that current national policies can deliver and what is needed to reach the 2 degree or 1.5 degree targets and estimate what companies can deliver.⁵

The companies were asked about **how businesses can contribute to challenge politics on climate change**. Several of the companies believe that bold action from businesses, can push policy-makers to aim higher.

"In the Norwegian business sector, it is a bit too common to call on politicians, instead of getting in the driver's seat and start implementing changes. At Asko we take some risk and believe that policy will follow. What we have implemented has later become policy. We challenge by acting, not by making demands."

Torbjørn Johannson,
President of the board at Asko.

"Companies go from being good corporate citizens – just doing what they have to – to being more like activists. I think many of them have lost patience with politics, because it has been too slow."

Anders Byriel, CEO of Kvadrat.

"The Paris Agreement is a turning point for businesses. It is the beginning of the framework required for companies to transform their business and invest in future low carbon dioxide emissions and services. Now companies need the Paris Rulebook to become clear and long-term."

Håkan Svedman,
Country manager of IKEA Sweden.

"We have met with all ministers who deal with environmental issues and told them what we are doing and what we can do. So we have a positive influence and we can inspire."

Bjarni Bjarnason, CEO of Reykjavík Energy.

"The role of businesses is to demonstrate viable technologies. In order to do this, they need to take initiative and show more willingness to take risks."

Sindri Sindrason, CEO of Carbon Recycling International.

In particular, many believe that cooperation between companies and governments should be part of the way forward. Answering the question **how do politics and businesses cooperate towards reduced emissions?** A third of the companies call for more dialogue and cooperation between politics and business.

⁵ UNEP, 2017. The Emissions Gap Report 2017. https://wedocs.unep.org/bitstream/handle/20.500.11822/22070/EGR_2017.pdf

HOW POLITICS AND BUSINESSES CAN COOPERATE:

- Develop common visions
- Dialogue, knowledge transfers, increased awareness
- Show politics what the business sector needs – participating in commissions and dialogues
- Policy-makers set the goals – businesses find solutions
- Enable test arenas and technology pilot projects, green public procurement, risk-sharing from the public sector
- The Nordic region as a permanent world exhibition.

"By setting common market visions. It's easy to invest in something when you know what type of ecosystem you are investing in" [...]
"For this to happen we need a joint understanding of the conditions between companies and politics. Regulation and legislation should be designed accordingly and be proactive, not just reactive."

[Sampo Hietanen, CEO of Maas Global.](#)

"The climate agreement from Paris can be realized, but it requires new measures and significantly faster changes than what we have seen so far. Statoil will be a driving force for stronger measures and a faster transition."

[Eldar Sætre, CEO of Statoil.](#)

"I think cooperation is a prerequisite to meet the climate challenge. Policy instruments are needed, so policy-makers play an important role. But they must also listen to people in the business sector, who understand which tools are working and what opportunities are available. This is complex for policy."

[Helene Samuelsson, Head of Corporate Communications at Preem.](#)

"Basically, politicians set the goals and targets and businesses have the solutions and, to a large extent, the financing. A close collaboration is needed in order to find the most feasible and cost-efficient solutions."

[Pekka Lundmark, CEO of Fortum.](#)

"If we remove some "red tape" [preventive regulations] we can create test arenas and speed up development. We should have a permanent world exhibition in Sweden for the climate transition, where the world can come to be inspired."

[Henrik Henriksson, CEO of Scania.](#)

8. Key findings

The most important findings of this report:

- Climate change and the transition to a greener economy is a top priority for CEOs, chairs and top-level management in Nordic companies.
- There is a strong commitment from leading Nordic export companies to reduce both their own emissions and be part of the global solution to climate change.
- A clear connection between GHG emission reductions and profitability and competitiveness.
- Companies welcome higher targets for speeding up the climate transition.

8.1. POLICY WISH LIST

Three important standpoints can be identified from the interviews, regarding what the Nordic governments should do:

STRONG SUPPORT FOR THE NORDIC REGION TO BE FRONT RUNNERS IN GLOBAL CLIMATE EFFORTS.

- Increase opportunities for collaboration, networks and joint-policy schemes.
- Be transparent and inspire others.

THE NORDIC COUNTRIES SHOULD ACT TOGETHER TO PUSH THE EU TO ADAPT MORE AMBITIOUS CLIMATE POLICIES.

- Push for higher ambitions and stricter targets.
- Put a price on externalities and aim for a higher price on ETS allowances.
- Implement long-term energy policies.

THE NORDICS CAN BE A STRONG FORCE IN THE INTERNATIONAL COMMUNITY.

- Cooperation for global leadership.
- Take an active role in the United Nations and other international organs.
- Constitute common policies (e.g. a price on carbon) and raise the global standards.

9. Concluding remarks from the Nordic climate business networks

GHG emissions are increasing and according to Climate Action Tracker, an independent science-based assessment, current policies and pledges will lead to over 3 degrees of warming. In an interview by Helsingin Sanomat, Secretary General Petteri Taalas from the World Meteorological Organization, WMO, estimated the most likely warming will be around 3 degrees.⁶ This is not within the safe space for humanity and the risk for much more dramatic warming cannot be disregarded.

In order to reach the targets of the Paris Agreement, GHG emissions must be radically reduced. In the EU, the pace of reductions is around one percent per year between 1990-2030. Between 2030-2050, reductions of two percent per year are needed to reach minus 80 percent or 2.75 percent every year to reach minus 95 percent, which would be consistent with the 1.5 degree target from the Paris Agreement. We are far away from reaching these goals right now.

Taking economic growth into account, absolute reduction volumes need to be much bigger. If the economy grows by two percent per year it will be 27 percent bigger in 2030 and 88 percent bigger in 2050, compared to today, but can only emit a fraction of today's GHG. Climate KIC, Europe's largest public-private innovation partnership, estimates that after 2030 in order to achieve its 1.5 degree Paris target, the EU will need to reduce carbon intensity by 6-8 percent each year until 2050 and beyond.⁷

Even though some leading Nordic companies are on the frontline globally, there are still many companies that have not set climate targets yet. A recent analysis of Nasdaq Helsinki OMX Stock Exchange, revealed that only 7 percent of the companies representing 23 percent of the "weight" of the exchange, have set climate targets compatible with the Paris Agreement (so-called science-based targets).⁸ Of the companies in Nasdaq Helsinki, 31 percent disclose their emissions, compared to 27 percent in Nasdaq Stockholm. However, looking only at the Stockholm Large Cap-list, 70 percent of companies disclose their emissions, according to a report by 2050 Consulting.⁹ Generally, larger companies are more likely to disclose emissions, but as they put pressure on their suppliers and business partners, the trend is clear towards more emissions disclosure.

There will always be leaders and laggards and from the interviews with the companies we can clearly see that leading Nordic companies take climate change very seriously, and many also see it as a huge business opportunity. Nordic businesses want to be a part of the transition to a cleaner, safer and more environmentally aware economy and they are ready to make the innovations and export the solutions that are needed.

⁶ <https://www.hs.fi/kotimaa/art-2000005574026.html>

⁷ Climate-KIC.

⁸ ISS-Ethix, 2018. Climate Impact Report 2017: Companies Listed on Nasdaq Helsinki.

<https://media.sitra.fi/2018/01/19135136/2018-01-16sitranasdaq-helsinkiinvestment-screeningreportfinal2.pdf>

⁹ 2050 Consulting, 2016. Klimatredovisning bland de stora bolagen på Stockholmsbörsen.

<https://www.2050.se/files/Rapporter/transparensborsbolag.pdf>

In order to make this happen, and reap the benefits of the biggest business opportunity of our time, our five organizations suggest the following for the Nordic countries and their business community:

GOALS FOR CITIZEN CARBON FOOTPRINTS

In the Nordics, there are low hanging emission reduction opportunities on the demand side. By finding ways to activate citizens into climate positive actions in their own life, there can be quick direct impacts. Finland has set a policy measure to encouraging consumers to reduce their carbon footprint on average by 50 percent by 2030. The same objective could be considered in all Nordic countries.

ALL PUBLIC PROCUREMENT MUST BECOME FOSSIL FREE/CLIMATE NEUTRAL WHEN APPLICABLE/RELEVANT

Tax-payer money should not be spent to worsen global warming. With Green Public Procurement (GPP) there is potential for reducing emissions, creating markets for new sustainable technologies and stimulate green value chains. The Norwegian ferry industry is a great example of when procurement has been a game changer. A majority vote in the Parliament in 2014 decided that "all upcoming ferry procurements are to have zero emission or low emission technology by 2025, where the technology allows it". Coupled with new regulations and technological development support schemes, many of the 119 ferry stretches are now turning electric. By 2030, over 65 percent of the ferry operations will be running on renewable electric power, the rest on hydrogen and bio fuels.

With more ambitious requirements for GPP, the Nordics can speed up the transition and make sure Nordic companies remain on the frontline of green innovation.

COMMON NORDIC STANDARDS TO CREATE A PERMANENT WORLD SHOWCASE

In the 1980's, the NMT standard was created in the Nordic countries, enabling the boom in mobile communication that made companies like Nokia and Ericsson global players. This success can be recreated and, considering the huge potential for technology and innovation to reduce GHG emissions, this should be a top priority. Is there a possibility for a Nordic standard for the energy markets of the future? To eliminate fragmented solutions, common Nordic standards for key elements such as information exchanges and availability, bio-fuels, digitization for circular economy and many others could be created. As an example, there will rapidly be growing global markets for energy flexibility, i.e. managing demand response and storages, an area in which the Nordics have competence and solutions. Renewable solutions will vary country by country and within geographic areas, but in all of them digital solutions for more flexibility are needed. By developing smart and well-functioning standards, the Nordics can be a permanent world showcase for global solutions.

GOVERNMENT RISK-SHARING

It is challenging – but not impossible – to transform industries like steel and cement production into fossil free production, even in small open economies like the Nordic countries. In the long run, consumers are likely to pay for fossil free products, but the state or other institutions must take some of the financial risk in a short term so that the capital market dares to invest in these projects. There is not a lack of money for green projects on the market, but someone

must bear the political risk when new technologies are introduced. For example, the European Investment Bank is a very important and specialized bank that can handle this type of political risk. The state can also take a similar role through emitting green bonds with a state guarantee. The Nordics should develop solutions for financial risk sharing.

In order to reap the benefits of the biggest business opportunity of our time, the Nordics must be in the frontline and create solutions before they become global mainstream. This is a unique business opportunity since we know that the demand for new solutions will be there.

Currently, the world is not on track to reach the goals of the Paris Agreement. Can the Nordics go faster? Can climate be a possibility for new business opportunities? Can the Nordics be a good example in the world, showing that climate change mitigation and profitability goes hand in hand? For our organizations, the answer to all these questions is YES. This report proves that CEOs and chairs of some of the top Nordic companies are willing to take a lead.

The Nordic climate business networks consists of Climate Leadership Coalition (FIN), Norway203040, Fossil Free Sweden and the Haga Initiative (SWE) and Icelandic New energy is also a member.



10. Appendix A: Interview questions

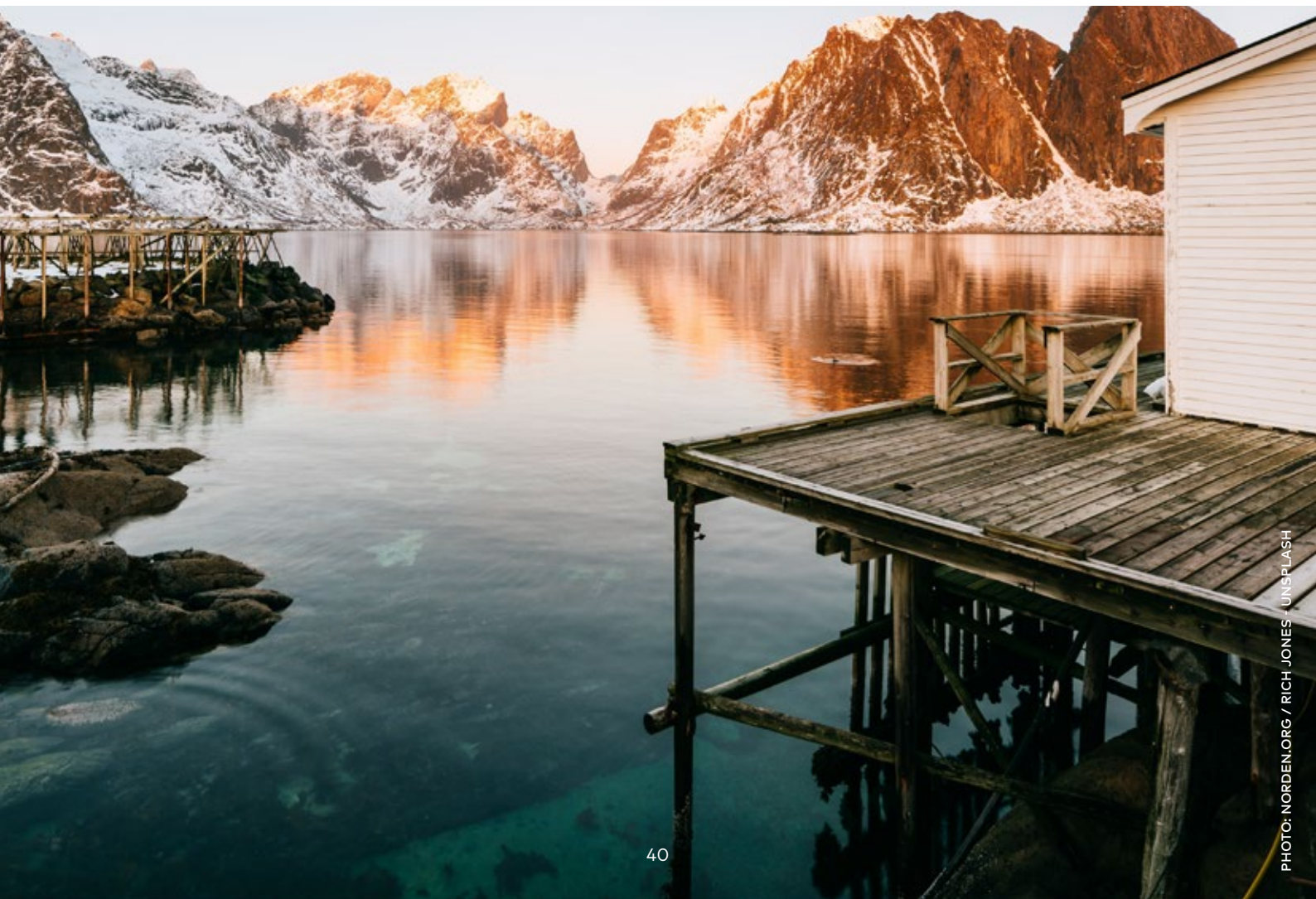
- 1. HOW CAN THE NORDIC REGION CONTRIBUTE IN THE WORLD TO ACHIEVE THE GOALS OF THE PARIS AGREEMENT?**
 - a. How can Nordic companies contribute?
- 2. LOOKING BACK 20 YEARS, WHAT FACTORS HAVE BEEN IMPORTANT FOR ENABLING NORDIC COMPANIES TO SUCCEED IN REDUCING GHG EMISSIONS?**
 - a. Which factors have been important in your own company's work to reduce GHG emissions?
- 3. DO YOU SEE ANY CONNECTION BETWEEN CLIMATE RESPONSIBILITY (E.G. REDUCED EMISSIONS) AND COMPETITIVENESS?**
 - a. If yes, please give examples.
 - b. If yes, is there an equivalent connection between climate responsibility and employment?
 - c. Can a weak climate responsibility affect competitiveness negatively (cost of inaction)?
- 4. IN YOUR OPINION, HOW HAS THE COMPETITIVENESS OF THE NORDIC REGION DEVELOPED DURING THE PAST 20 YEARS?**
 - a. What are the factors behind this development?
 - b. Has your own company followed the same development trajectory?
- 5. IS THERE ANYTHING SPECIFICALLY NORDIC ABOUT THE CLIMATE AMBITIONS OF COMPANIES?**
- 6. WHAT STRATEGIES AND POLICY INSTRUMENTS ARE NEEDED TO STIMULATE CLIMATE EFFORTS FOR NORDIC COMPANIES?**
 - a. ...on a national level?
 - b. ...on a Nordic level?
 - c. ...on a global level?
 - d. What of the answers on questions a, b and c is on the top of your wish list?
- 7. CAN YOUR COMPANY SET MORE AMBITIOUS GOALS COMPARED TO TODAY, PROVIDED THAT POLICIES GO IN THE RIGHT DIRECTION?**
 - a. Is it possible for you to reach net zero GHG emissions or fossil free?
 - b. If yes, until which year?

8. HOW CAN BUSINESSES CONTRIBUTE TO CHALLENGE POLITICS ON CLIMATE CHANGE?

9. HOW CAN POLITICS AND BUSINESS COOPERATE TOWARDS REDUCED EMISSIONS?

10. WHAT TRENDS DO YOU SEE IN THE NORDIC REGION, THAT CAN STRENGTHEN YOUR WORK TOWARDS REDUCED EMISSIONS?

- a. What trends do you see globally that can strengthen your work on reduced emissions?
- b. What trends do you see that can counteract your work on reduced emissions?



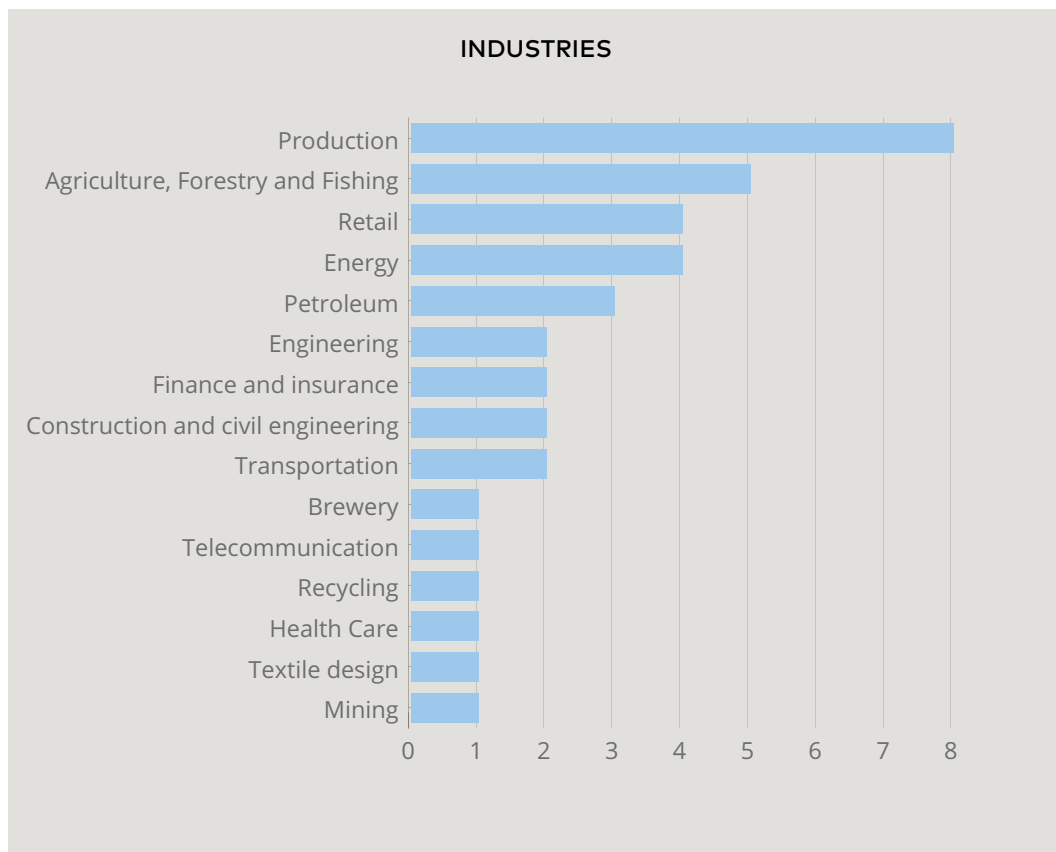
Appendix B: Interviewed companies

Country	Company	Business sector	Interview person	Position
Denmark	Danfoss	Production	Kenth Kærhøg	Senior VP Group Communication
Denmark	Grundfos	Production	Pia Yasuko Rask	Senior Engagement and Responsibility Manager
Denmark	Kvadrat	Production, Design	Anders Byriel	CEO
Denmark	Refurb	Retail	Peter Jensby Hove	Head of Communication
Denmark	Carlsberg	Food and beverage	Simon Boas Hoffmeyer	Sustainability Director
Finland	Caverion	Building services	Ville Tamminen	CEO Finland
Finland	Fortum	Energy	Pekka Lundmark	CEO
Finland	Kontio	Construction	Jalo Poijula	CEO (retiring)
Finland	Maas Global	Logistics, Digital Services	Sampo Hietanen	CEO
Finland	Neste	Energy	Matti Lievonen	CEO
Finland	ST1	Energy, Retail	Mika Anttonen	Chairman
Finland	Stora Enso	Forestry, agriculture, fishery	Karl-Henrik Sundström	CEO
Finland	Trace Grow	Forestry, agriculture, fishery	Tatu Leppänen	CEO
Finland	Pöyry	Services	Henrik Ehrnrooth	Chairman
Iceland	CRI	Recycling	Sindri Sindrason	CEO
Iceland	HBGrandi	Forestry, agriculture, fishery	Vilhjálmur Vilhjálmsson	CEO
Iceland	Orkuveita Reykjavíkur	Energy	Bjarni Bjarnason	CEO
Iceland	Össur	Production	Sigurborg Arnarsdóttir	CSR Manager
Norway	Asko	Logistics	Torbjørn Johannson	Chairman
Norway	Posten/Bring	Logistics	Colin Campbell	Senior Vice President HSE and CSR
Norway	Ruter	Logistics	Bernt Reitan Jenssen	CEO
Norway	Statkraft	Energy	Christian Rynning-Tønnesen	CEO
Norway	Statoil	Energy	Eldar Sætre	CEO
Norway	Storebrand	Finance and insurance	Odd Arild Grefstad	CEO
Norway	TINE	Food and beverage	Hanne Refsholt	CEO
Norway	Veidekke	Construction	Arne Giske	CEO
Norway	UMOE	Finance and insurance	Jens Ulltveit-Moe	CEO

Sweden	ABB	Production	Johan Söderström	CEO
Sweden	Axfood	Retail, Food and beverage	Klas Balkow	CEO
Sweden	BillerudKorsnäs	Forestry, agriculture, fishery	Henrik Essen	Senior VP Communication and Sustainability
Sweden	Electrolux	Production	Jonas Samuelsson	CEO
Sweden	Folksam	Finance and insurance	Jens Henriksson	CEO
Sweden	Husqvarna Group	Production	Kai Wärn	CEO
Sweden	IKEA	Retail	Håkan Svedman	CEO IKEA Sweden
Sweden	Lantmännen	Forestry, agriculture, fishery	Per Olof Nyman	CEO
Sweden	Preem	Energy	Helene Samuelsson	Head of Corporate Communications
Sweden	Scania	Production	Henrik Henriksson	CEO
Sweden	SSAB	Production	Martin Lindqvist	CEO



12. Appendix C: Companies allocation in different industries





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In order to investigate how climate efforts and competitiveness are connected and provide opportunities for the Nordics, CEOs and top management of some of the leading companies in the five countries have been interviewed.

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